HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR THE GALLERIA NORTH-SCHOOL SITE SUB-AREA

BMI COMMON AREAS (EASTSIDE)
CLARK COUNTY, NEVADA

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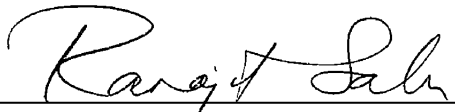
I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable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



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I Metals Distribution Plots, and Metals and Chemicals of Potential Concern Intensity Plots
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ACRONYMS AND ABBREVIATIONS

Aa	alluvial aquifer
ADD	average daily dose
AOC3	Settlement Agreement and Administrative Order on Consent, Phase 3
ARR	asbestos related risk
ASTM	American Society for Testing and Materials
ATSDR	Agency for Toxic Substances and Disease Registry
BCL	Basic Comparison Level
bgs	below ground surface
BMI	Basic Management, Inc.
BRC	Basic Remediation Company
CAMU	Corrective Action Management Unit
COPC	chemical of potential concern
CSF	cancer slope factor
CSM	conceptual site model
DAF	dilution attenuation factor
DOE	U.S. Department of Energy
DQIs	data quality indicators
DQOs	data quality objectives
DVSR	Data Validation Summary Report
ECI	Environmental Conditions Investigation
FSSOP	Field Sampling and Standard Operating Procedures
GES	Geotechnical and Environmental Services
GiSdT®	Guided Interactive Statistical Decision Tools
HEAST	Health Effects Assessment Summary Tables
HHRA	Human Health Risk Assessment
HI	hazard index
HQ	hazard quotient
IEUBK	Integrated Exposure Uptake Biokinetic Model
ILCR	incremental lifetime cancer risk
IUR	Inhalation unit risk
LADD	lifetime average daily dose
LBCL	BCLs for protection of groundwater
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate
LMS	linearized multi-stage
LOAEL	lowest-observed-adverse-effect-level
mg/kg	milligrams per kilogram
MS/MSD	Matrix spike/matrix spike duplicate
msl	mean sea level
NBMG	Nevada Bureau of Mines and Geology
NDEP	Nevada Division of Environmental Protection
NFAD	No Further Action Determination
NOAEL	no-observable-adverse-effect-level
NRS	Nevada Revised Statutes
ORNL	Oak Ridge National Laboratory

ACRONYMS AND ABBREVIATIONS (Continued)

PAHs	polynuclear aromatic hydrocarbons
PARCC	precision, accuracy, representativeness, comparability, and completeness
PBT	persistent, bioaccumulative, and toxic
PCBs	polychlorinated biphenyls
pCi/g	picoCuries per gram
PEF	particulate emission factor
PNNL	Pacific Northwest National Laboratories
PPRTVs	Provisional Peer Reviewed Toxicity Values
ppt	parts per trillion
PQL	practical quantitation limit
QA/QC	quality assurance/quality control
Qal	Quaternary alluvium
QAPP	Quality Assurance Project Plan
RAGS	Risk Assessment Guidance for Superfund
RAIS	Risk Assessment Information System
RAS	Remedial Alternatives Study
RAWP	Removal Action Work Plan
RfC	reference concentration
RfD	Reference dose
ROD	Record of Decision
RPD	relative percent difference
RRF	relative response factor
SAP	Sampling and Analysis Plan
SIM	selective ion mode
SNWA	Southern Nevada Water Authority
SOP	Standard Operating Procedure
SPLP	synthetic precipitation leaching procedure
SQL	sample quantitation limit
SRC	Site-related chemical
SVOCs	semi-volatile organic compounds
TCDD	tetrachlorodibenzo-*p*-dioxin
TDS	total dissolved solids
TEF	toxicity equivalency factor
TEQ	toxicity equivalency
TICs	tentatively identified compounds
TIMET	Titanium Metals Corporation
TMCf	Tertiary Muddy Creek Formation
TPH	total petroleum hydrocarbons
UCL	upper confidence limit
USEPA	U.S. Environmental Protection Agency
VOCs	volatile organic compounds
WRF	Water Reclamation Facility
WSR	Wilcoxon Signed Rank

EXECUTIVE SUMMARY

Basic Remediation Company (BRC) has prepared this Human Health Risk Assessment (HHRA) and Closure Report for the Galleria North-School Site Sub-Area (Site) of the Basic Management, Inc. (BMI) Common Areas (Eastside) in Clark County, Nevada. The Site is a portion of the Eastside sub-area defined as the Galleria North sub-area. The purpose of this report is to support a request for a No Further Action Determination (NFAD) by the Nevada Division of Environmental Protection (NDEP) for the Site. The HHRA evaluates the potential for adverse human health impacts that may occur as a result of potential exposures to residual concentrations of chemicals in soil, groundwater, and air following remediation of the Site. If the residual risks do not pose an unacceptable risk to human health and the environment, then an NFAD will be requested from the NDEP to allow development of the Site to proceed. This report also describes the various remediation actions that were performed and presents the subsequent confirmation data collected in 2009 and 2010 at the Site.

BACKGROUND

An initial confirmation sampling investigation was conducted at the Site in 2009 in accordance with a NDEP-approved Sampling and Analysis Plan (SAP), with follow up sampling in 2010. The SAP addressed sampling procedures such that remaining contaminants and their potential impacts to future Site uses (as discussed in Section 1.1 of the *BRC Closure Plan* for the BMI Common Areas [BRC, ERM, and DBS&A 2007[1]]) can be determined. The Site investigation involved collection of soil matrix and surface flux samples placed throughout the Site. The sampling plan performed for this purpose as described in Section 4 of the SAP (BRC 2008) was consistent with the approach presented in Section 2 of the *Statistical Methodology Report* (NewFields 2006). The *Statistical Methodology Report* describes the statistical methods that are used to confirm the final soils closure at each of the Eastside sub-areas of the BMI Common Areas. Several subsequent rounds of soil remediation and confirmation sampling were performed. The final number of samples collected was determined to be adequate for the completion of a statistically robust dataset upon which to perform an HHRA.

[1] The BRC Closure Plan was finalized and approved by NDEP in 2007. Subsequent to this date revisions have been made to Section 9 of the Closure Plan (Risk Assessment Methodology–Human Health). The latest revision to Section 9 is March 2010. No other sections of the Closure Plan have been revised since 2007.

CONCEPTUAL SITE MODEL

The conceptual site model (CSM) for the Site considers current and potential future land-use conditions. Currently, the Site is undeveloped. Current receptors that may be exposed to Site chemicals of potential concern (COPCs) include on-site trespassers, occasional on-site workers, and off-site residents. Under the prospective redevelopment plan, the Site will be used for construction of a high school, with associated parking, buildings, and recreational fields. Future receptors identified as "on-site receptors" are defined as receptors located within the current Site boundaries (Figure 1), while future "off-site receptors" are those located outside the current Site boundaries. Therefore, future receptors include school staff, students, and visitors, outdoor maintenance workers, construction workers, trespassers, and off-site residents. Due to the requirement for use of default reasonable maximum exposure parameters for future receptors, exposures to future receptors are greater than current exposures. Accordingly, only future receptors were assessed in the HHRA. Potential exposures to off-site residents were qualitatively evaluated.

The HHRA conforms to the methodology included in Section 9 of the *BRC Closure Plan* (BRC, ERM, and DBS&A 2007; Section 9 revised March 2010). This methodology includes the evaluation of residential receptors, but not school receptors. However, potential residential exposures are considered more conservative, and therefore, protective of any potential school receptors. The entire Site will be enhanced by restoration and redevelopment once remediation is complete. Therefore, there is no exposure to ecological receptors because the site will be prepared for human use in a high school setting.

DATA REVIEW AND USABILITY EVALUATION

A data review and usability evaluation was performed to identify appropriate data for use in the HHRA. The results of the data usability evaluation indicate that the data collected in 2009 and 2010 are adequate in terms of quality and quantity for use in a risk assessment.

HUMAN HEALTH RISK ASSESSMENT

An HHRA was conducted to determine if chemical concentrations in Site soils are: (1) either representative of background conditions; or (2) do not pose an unacceptable risk to human health and the environment under current and anticipated future use conditions. The HHRA followed the basic procedures outlined in U.S. Environmental Protection Agency (USEPA) and NDEP guidance documents. As noted above, the HHRA also conforms to the methodology included in

Section 9 of the *BRC Closure Plan* (BRC, ERM, and DBS&A 2007; Section 9 revised March 2010). Radionuclides were not included as COPCs as they were consistent with background conditions. Results of the HHRA are summarized below.

	Future On-Site Resident	**Construction Worker**	**Commercial (Indoor) Worker**	**Maintenance (Outdoor) Worker**
Non-Cancer HI	0.20	0.055	0.073	0.013
Cancer Risk	2×10^{-6}	2×10^{-8}	2×10^{-7}	2×10^{-7}
Asbestos Risk	0 to 4×10^{-7}	0 to 7×10^{-7}	0 to 8×10^{-8}	0 to 2×10^{-7}

Indoor air exposures are evaluated on a sample by sample basis, per NDEP requirements, using the surface flux data measurements. Because of this, the minimum and maximum surface flux risks and HI estimates are summed with the soil risk and HI estimates to provide a range of cumulative risks and HIs. The risk estimates shown above incorporate the maximum surface flux risks. Primary risk contributors are discussed in the main body of the report.

NDEP has recently determined that HHRAs for Eastside property sub-areas do not need to evaluate the pathway of radon migration from groundwater to indoor air for sub-areas with a separation distance of at least 15 feet between any current or future building structure base and the high water table (letter dated November 9, 2010 from Greg Lovato, NDEP to Mark Paris, BRC). Therefore, given the depth to groundwater at the Site is at least 25 feet below ground surface (bgs), the intrusion of radon into indoor air is not evaluated in the HHRA.

EVALUATION OF UNCERTAINTIES

Risk estimates are values that have uncertainties associated with them. These uncertainties, which arise at every step of a risk assessment, are evaluated in the report to provide an indication of the uncertainty associated with a risk estimate. Uncertainties from different sources are compounded in the HHRA. Because the exposure assumptions and toxicity criteria are considered conservative, the risk estimates calculated in this HHRA are likely to overestimate rather than underestimate potential risks. A detailed discussion of these uncertainties is provided in the Uncertainty Analysis (Section 7) of the report.

POTENTIAL IMPACTS TO GROUNDWATER

Potential impacts to groundwater of residual chemicals in soil and considering the future land use of the Site were also evaluated. Potential impacts were evaluated using the VLEACH and

SESOIL vertical unsaturated zone migration models. Because future redevelopment will likely result in increased surface water infiltration due to sources such as buried water lines, sewer lines, irrigation lines and/or over-watering of parks and lawns, three surface water infiltration scenarios were evaluated: 1) baseline, pre-development conditions; 2) normal post-development conditions; and 3) post-development enhanced recharge due to overwatering of open space.

The modeled metals, organochlorine pesticides, and polynuclear aromatic hydrocarbons (PAHs) are not expected to reach groundwater within 100 years for any of the three infiltration scenarios. For other organics, dichloromethane, 1,2,4-trimethylbenzene, and formaldehyde all are predicted to reach groundwater under all three recharge scenarios; however, dichloromethane and 1,2,4-trimethylbenzene are not projected to reach groundwater at concentrations that exceed their respective residential water BCLs. Although the modeling predicts that formaldehyde will reach groundwater at (pore water) concentrations that exceed its residential water BCL under all three scenarios, formaldehyde has not been detected in shallow groundwater in the vicinity of the Site, which would be expected given the length of time since the Eastside property was in use. Formaldehyde has also not been detected in synthetic precipitation leaching procedure (SPLP) data, which was collected specifically for the purpose of evaluating the leaching potential of chemicals in soil at the Site.

Other inorganics are predicted to exceed their respective comparison levels. However, based upon the differences in the model predicted results and observed measurements in groundwater, it is probable that processes not accounted for in the model are reducing/attenuating concentrations as they migrate through the vadose zone. Based on the elapsed time since any Site use, it is unlikely that the concentrations of organics and inorganics detected in Site soils represent a risk to groundwater quality.

SUMMARY

Based on the results of the 2009/2010 sampling, HHRA, and the conclusions in this report, exposures to residual levels of chemicals in soil at the Galleria North-School Site sub-area should not result in adverse health effects to any of the future receptors evaluated, or to groundwater quality beneath the Site. As a result, an NFAD (acknowledging the likely conditions identified in Section 1) for the Galleria North-School Site sub-area is warranted given the following conditions:

1. The NFAD does not pertain to groundwater. BRC retains the responsibility to address any environmental impacts to groundwater beneath the Site. As such, additional investigation

may be necessary on the Site as it relates to BRC's responsibilities. BRC must be granted access to the site for activities such as well or soil boring installations or other investigative or remedial efforts.

2. The soils beneath 10 feet bgs of the current grading plan for the Site have not been evaluated to date. Accordingly, the NFAD does not pertain to soil below the top 10 feet of the current grading plan for the Site. The property owner should note that these soils should not be disturbed without additional investigation or evaluation.

3. The property owner should ensure that activities at the Site do not exacerbate existing, sub-surface, environmental conditions.

4. The site use is otherwise suitable for purposes of residential, recreational, commercial or industrial use (residential use being protective and representative of any potential school use).

1.0 INTRODUCTION

Basic Remediation Company (BRC) has prepared this Human Health Risk Assessment (HHRA) and Closure Report for the Galleria North-School Site Sub-Area (Site) of the Basic Management, Inc. (BMI) Common Areas (Eastside) in Clark County, Nevada. The purpose of this report is to support a request for a No Further Action Determination (NFAD) by the Nevada Division of Environmental Protection (NDEP) for the Site. As presented in Section XVII.1.a. of the *Settlement Agreement and Administrative Order on Consent: BMI Common Areas, Phase 3* (AOC3; NDEP 2006), NDEP acknowledges that discrete Eastside areas may be issued an NFAD as remedial actions are completed for select environmental media. Any such request shall identify the remedial actions and other work completed at the property in question, the results of such remedial actions and other work, the proposed land use(s), and the reasons supporting the eligibility of the Property for an NFAD. This report provides this information for the Site.

BRC recognizes that the following conditions will likely be necessary as part of the NFAD:

1. The NFAD does not pertain to groundwater. BRC retains the responsibility to address any environmental impacts to groundwater beneath the Site. As such, additional investigation may be necessary on the Site as it relates to BRC's responsibilities. BRC must be granted access to the site for activities such as well or soil boring installations or other investigative or remedial efforts.

2. The soils beneath 10 feet below ground surface (bgs) of the current grading plan for the Site have not been evaluated to date. Accordingly, the NFAD does not pertain to soil below the top 10 feet of the current grading plan for the Site. The property owner should note that these soils should not be disturbed without additional investigation or evaluation.

3. The property owner should ensure that activities at the Site do not exacerbate existing, sub-surface, environmental conditions.

4. The site use is suitable for purposes of residential, recreational, commercial or industrial use (residential use being protective and representative of any potential school use).

As stated in Section VI of NDEP's *Record of Decision, Remediation of Soils and Sediments in the Upper and Lower Ponds at the BMI Complex* (ROD; NDEP 2001), cleanup of the Site proceeded under Alternative 4B (soils transferred from the Site to a dedicated Corrective Action

Management Unit [CAMU] within the BMI Complex),[2] as identified and described in Section 9 of the Remedial Alternatives Study (RAS) for the Eastside. The *Remedial Alternatives Study for Soils and Sediments in the Upper and Lower Ponds at the BMI Complex* (ERM 2000) was submitted to NDEP in March, 2000. The RAS is documented via issuance of the ROD, dated November 2, 2001, by the NDEP.

This report is consistent in format with prior closure reports for other study areas, and incorporates comments received from the NDEP on those reports. Consistent with other closure-related documents for Eastside, Appendix A is reserved for potential future NDEP comments on this Closure Report. An electronic version of the entire report, as well as original format files (MS Word and MS Excel) of all text, tables, modeling, and risk calculations are included on the report CD in Appendix B.

1.1 PURPOSE OF THE RISK ASSESSMENT

The purpose of the HHRA is to evaluate the potential for adverse human health impacts that may occur as a result of potential exposures to residual concentrations of chemicals in soil, groundwater, and air following remediation, and to assess whether any additional remedial actions are necessary in order to obtain an NFAD from the NDEP to allow development of the Site to proceed. The results of the risk assessment provide risk managers an understanding of the potential human health risks associated with background conditions and additional risks associated with past Site activities.[3]

As presented in Section 2.5 of the *Sampling and Analysis Plan for the Galleria North Sub-Area, BMI Common Areas (Eastside) Clark County, Nevada* (BRC 2008; hereinafter "SAP"; approved by NDEP on December 12, 2008), the only remediation conducted at the Site prior to sampling in accordance with the SAP involved tamarisk removal. However, the sampling conducted in accordance with the SAP identified areas within the Site that warranted remediation, as discussed

[2] Under this alternative, the Site could be developed in accordance with the current development plan without the need for institutional controls within the Site.

[3] The human health risk assessment presents incremental risks; that is, the risk in addition to background risk caused by Site contamination. Background risk is the risk to which a population is normally exposed, and does not include risks from Site contamination. Total risk includes both incremental and background risks. Because naturally-occurring constituents are typically included in a risk assessment (i.e., metals and radionuclides) the incremental risk will have some element of total risk included. However, because risks are only calculated for a sub-set of metal and radionuclides, a 'total' risk is not calculated. In instances where the incremental risk is calculated to exceed a cancer risk of 10^{-5} (typically when radionuclides are included in the risk assessment calculations), then a background risk, only including those naturally-occurring constituents included in the risk assessment, will also be calculated to provide context to the risk assessment results.

in Section 3.3. It is BRC's intent that media requiring mitigation will have been addressed prior to conducting the risk assessment. The overall goal of the risk assessment presented in this report is to confirm that residual chemical concentrations are: (1) either representative of background conditions; or (2) do not pose an unacceptable risk to human health and the environment under current and anticipated future land use conditions. Findings of the HHRA are intended to support the site closure process.

For human health protection, BRC's goal is to remediate the Site soils such that they are suitable for residential uses, assuring health protective conditions at 1/8th-acre exposure areas. The 1/8th-acre area corresponds to the size of a typical residential lot size, as presented in U.S. Environmental Protection Agency (USEPA 1989) and is applicable to future Site conditions. It should be noted that although 1/8th-acre areas are the target for exposure, sampling has not occurred on many of these 1/8th-acre exposure areas, instead assumptions of similar populations across the Site (or areas larger than 1/8th-acre, as supported by the data) allows estimates to be applied to 1/8th-acre exposure areas. The decision can hence be made simultaneously for many 1/8th-acre exposure areas based on the data and documentation that the exposure areas can be aggregated. This can result in aggregation across the entire Site if concentration distributions appear to be relatively homogeneous and representative of a single population, or within separate sub-areas of the Site if those sub-areas exhibit different distributions. Note that an assumption was made in the SAP for the Galleria North sub-area (see Section 3.4 of that document) that the concentration distribution across the entire Site is relatively homogeneous. This assumption was evaluated prior to performing the risk assessment, and was found to be valid for the Site.

Project-specific risk level and remediation goals consistent with USEPA precedents and guidelines for residential uses have been established, as summarized below. It should be noted that: 1) all comparisons to risk or chemical-specific goals are made on an exposure area basis consistent with likely exposure assumptions, and 2) these comparisons are demonstrated through the use of spatial statistical analysis to apply to each 1/8th-acre exposure area.

Human health risks are represented by estimated theoretical upper-bound cancer risks and non-cancer hazards derived in accordance with standard USEPA and NDEP methods. If the carcinogenic risks or non-cancer hazards exceed USEPA acceptable levels or NDEP risk goals, then remedial action alternatives must be considered. The acceptable risk levels defined by USEPA for the protection of human health, as identified in Section 9.1.1 of the *BRC Closure Plan* (BRC, ERM, and DBS&A 2007; Section 9 revised March 2010), are:

- Post-NFAD chemical and radionuclide concentrations in Site soils are targeted to have an associated residual, cumulative theoretical upper-bound incremental lifetime cancer risk (ILCR) level point of departure of 10^{-6}. This is the target risk goal for the project. For cases where NDEP identifies this goal to be unfeasible, it is BRC's understanding that the NDEP will re-evaluate the goal in accordance with USEPA guidance [USEPA 1991a]). In no case will the residual, cumulative theoretical upper bound carcinogenic risk levels exceed those allowed per USEPA guidance.

- Post-NFAD chemical concentrations in Site soils are targeted to have an associated cumulative, non-carcinogenic hazard index (HI) of 1.0 or less. If the screening HI is determined to be greater than 1.0, target organ-specific HIs will be calculated for primary and secondary organs. The final risk goal will be to achieve target organ-specific non-carcinogenic HIs of less than 1.0.

- Where background levels exceed risk level goals or chemical-specific remediation goals, metals and radionuclides in Site soils are targeted to have risks no greater than those associated with background conditions.

In addition to the risk goals discussed above, chemical-specific remediation goals have been established for lead and dioxins/furans. The target goal for lead is 400 milligrams per kilogram (mg/kg) for residential land use, which is a residential soil concentration identified by USEPA (based on the Integrated Exposure Uptake Biokinetic Model [IEUBK] model) as protective of a residential scenario (USEPA 2004a).

For dioxins/furans, the USEPA toxicity equivalency (TEQ) procedure, developed to describe the cumulative toxicity of these compounds, is used. This procedure involves assigning individual toxicity equivalency factors (TEFs) to the 2,3,7,8 substituted dioxin/furan congeners. TEFs are estimates of the toxicity of dioxin-like compounds relative to the toxicity of 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD), which is assigned a TEF of 1.0. Calculating the TEQ of a mixture involves multiplying the concentration of individual congeners by their respective TEF. One-half the detection limit is used for calculating the TEQ for individual congeners that are non-detect in a particular sample. The sum of the TEQ concentrations for the individual congeners is the TCDD TEQ concentration for the mixture. TEFs from USEPA (2000a) are used. Consistent with the Agency for Toxic Substances and Disease Registry (ATSDR) *Update to the ATSDR Policy Guideline for Dioxins and Dioxin-Like Compounds in Residential Soil* (2008a), the target goal for residential land use is the ATSDR screening value and NDEP residential Basic Comparison Level (BCL; NDEP 2010a) of 50 parts per trillion (ppt) TCDD TEQ.

1.2 METHODOLOGY AND REGULATORY GUIDANCE

This risk assessment follows the basic procedures outlined in USEPA *Risk Assessment Guidance for Superfund: Volume I—Human Health Evaluation Manual* (RAGS; USEPA 1989), and conforms to Section 9 (Risk Assessment Methodology–Human Health) of the *BRC Closure Plan* (BRC, ERM, and DBS&A 2007; Section 9 revised March 2010) which was approved on July 16, 2007. Various NDEP guidance documents are also relied on for the risk assessment (as referenced throughout this report). In addition, NDEP's BCLs (NDEP 2010a) are used for comparison of site characterization data to provide for an initial screening evaluation, to assist in the evaluation of data usability, and determination of extent of contamination. A full list of guidance documents consulted is provided in Section 6, and the Reference section at the end of this document.

This report also relies upon information provided in the *BRC Closure Plan* (BRC, ERM, and DBS&A 2007; Section 9 revised March 2010). The main text of the *BRC 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 5 of this report);
- 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 [2010 revision]);
- The data quality objectives (DQOs; Closure Plan Section 7[4]);
- The RAS process for the Site (Closure Plan Section 8);

[4] As noted in the *BRC Closure Plan*, per discussions with the NDEP, the DQO process is addressed, on an Eastside sub-area by sub-area basis (for soils), in the respective sub-area SAPs developed for each sub-area relating to the soils cleanup. Therefore, the DQO process for the Site is presented in the SAP and is not repeated here. This DQO process was incorporated in the data usability/data adequacy evaluation for the Site data used in the risk assessment.

- Risk assessment procedures that will be used for Site closure (Closure Plan Section 9 for human health [2010 revision] and Section 10 for ecological); and

- Data quality assessment (Closure Plan Section 5).

As discussed in this report, the risk assessment for the Site is conducted primarily using the data collected during implementation of the SAP (BRC 2008), and subsequent confirmation sampling events, which have been designed to produce data representative of the conditions to which current (non-remediation workers) or future users would be exposed.

1.3 REPORT ORGANIZATION

The risk assessment is composed of several sections that are outlined below. This section presents the purpose of the risk assessment, and the methods used in this assessment. Section 2 presents background on the Site, the environmental setting for the Site, and a summary of previous investigations. Section 2 also presents the CSM for the risk assessment. This includes identification of potentially exposed populations, and the potential pathways of human exposure.

Section 3 presents the confirmation data collected in 2009 and 2010, as well as discussions on the various remedial actions that were conducted at the Site. Section 4 presents the data evaluation procedures used, including statistical analysis of background concentrations, and data usability and quality. Section 5 presents the selection of COPCs recommended for further assessment, including comparisons of Site metals and radionuclides to background conditions.

Section 6 presents the HHRA. This includes relevant statistical analyses, determination of representative exposure point concentrations, applicable fate and transport modeling, exposure assessment, toxicity assessment, and risk characterization. In Section 7, the uncertainties associated with the risk assessment are discussed. In each risk estimate, a degree of uncertainty is introduced as a result of the limitations of the exposure and toxicity information, the modeling approaches, and the data used to conduct the evaluation.

A summary of the risk assessment results is provided in Section 8. The results of the analysis of potential impacts to groundwater are presented in Section 9. The data quality assessment for the risk assessment is presented in Section 10. A summary is provided in Section 11, with a list of references provided in Section 12, followed by tables, figures, and appendices.

2.0 SITE DESCRIPTION

This Section presents a description of the Site, including Site background and history, the environmental setting, and a summary of previous investigations. The area known as the "BMI Common Areas," of which the Galleria North-School Site sub-area is a part, is delineated in Appendix A of the AOC3 (NDEP 2006). The subject Site is near the BMI Industrial Complex, in Clark County, Nevada, approximately 13 miles south of the city of Las Vegas, and adjacent to and northeast of the City of Henderson (Figure 1). The total extent of the Site is 44 acres. The Site is a portion of the Eastside sub-area previously defined as the Galleria North sub-area in Section 1 and Figure 1-2 of the *BRC Closure Plan* (BRC, ERM, and DBS&A 2007; Section 9 revised March 2010). The Site is located south of the City of Henderson (City) Rapid Infiltration Basins (RIBs), east of the City Water Reclamation Facility (WRF), and north of the Upper Ponds portion of Eastside.

The Site is essentially undeveloped desert with the exception of a former effluent conveyance ditch, a portion of which traverses the western portion of the Site along the boundary shared with the City WRF. From 1942 through 1976, various plant wastewaters were discharged into this conveyance ditch (named the Beta Ditch). A segment of the Pittman Lateral pipeline passes south and adjacent to the Site. This east-west trending subsurface feature is a major water supply conduit for the Las Vegas Valley. Since 1976, when wastewater discharge to the Beta Ditch ceased, the Site has been vacant and unused.

2.1 SITE HISTORY

The BMI Common Areas contained a network of ditches, canals, flumes, and unlined ponds that were used for the disposal of aqueous waste from the original magnesium plant and, later, other industrial plants and the municipality adjacent to it. Effluent wastes discharged to the ponds of the BMI Common Areas from the war-time Basic Magnesium operations can be characterized as salts from the production process (chloride salts of a variety of metals and radionuclides); organic solids; and inorganic solids and dissolved components of various types. Chlorinated organic chemicals were included in the effluent. Notable processes that contributed to the waste stream from the plants that succeeded Basic Magnesium included effluents from the manufacture of the following types of products: chlorine and sodium hydroxide (caustic soda); a variety of chlorate, perchlorate compounds, and halogenated boron compounds; manganese dioxide; titanium and related compounds; and a variety of pesticides. Among these wastes were salts; organic and inorganic chemicals; and metals. A more detailed description of these processes and

their effluents is found in Sections 2.2 and 2.3 of the *BRC Closure Plan* (BRC, ERM, and DBS&A 2007; Section 9 revised March 2010).

2.2 ENVIRONMENTAL SETTING

The BMI Common Areas and Complex are located in Clark County, Nevada, and are situated approximately two miles west of the River Mountains and one mile north of the McCullough Range. The local surface topography slopes in a westerly to northwesterly direction from the River Mountains and in a northerly to northeasterly direction from the McCullough Range. Near the BMI Common Areas and Complex, the surface topography slopes north toward the Las Vegas Wash. According to the Nevada Bureau of Mines and Geology (NBMG) *Las Vegas SE Folio Geologic Map (1977) and the Geologic Map of the Henderson Quadrangle, Nevada* (NBMG 1980), the River Mountains and McCullough Range consist of volcanic rocks: dacite in the River Mountains and andesite in the McCullough Range.

The Site (Figure 2) comprises approximately 44 acres of undeveloped land with very little surface relief that is gently sloping to the northeast. The Site is currently undeveloped, except for the previously noted Beta Ditch segment along the western edge of the Site. As depicted on Figure 2, the Site has no other features of historical use; this Site has historically been undeveloped and is not known to have been associated with industrial operations at the BMI Complex. The native soils within the ponds are compacted, poorly-sorted, non-plastic, light brown to red silty sand with varying amounts of gravel.

2.2.1 Site Location, Climate and Physical Attributes

The Site is in the northeast quarter of Section 5, Township 22 South, Range 63 East Mount Diablo Base and Meridian (MDBM). The Site is in the Las Vegas Valley, a broad alluvial valley that occupies a structural basin in the Basin and Range Physiographic Province. The valley is about 1,550 square miles in size, and the structural and topographical axis is aligned approximately northwest to southeast. The eastern edge of the valley is about five miles west of Lake Mead, a major multipurpose reservoir on the Colorado River. The Las Vegas Valley is surrounded mostly by mountains, ranging from 2,000 to 10,000 feet higher than the valley floor. The valley floor ranges in elevation from about 3,000 feet above mean sea level (msl), in the west at the mountain front, to 1,500 feet above msl, in the east at the Wash (Southern Nevada Water Authority 1996). The surrounding mountain ranges are:

- Sheep Range to the north;

- Frenchman and Sunrise Mountains to the northeast;
- River Range to the east;
- McCullough Range to the south; and
- Spring Mountains and Sierra Nevada Mountains of California to the west.

The Site is approximately 0.7 mile south of the Las Vegas Wash (Figure 1) and adjacent to and northeast of the city of Henderson, and approximately 13 miles southeast of the city of Las Vegas. The Weston Hills development is located approximately 600 feet east of the Site.

The Site is located in a natural desert area, where evaporation/evapotranspiration rates are very high, due to influence by high temperatures, high winds, and low humidity. Precipitation in this area averages approximately 0.4 inch per month or 4.8 inches per year (WRCC 2008). As discussed in the *Sources/Sinks and Input Parameters for Groundwater Flow Model Revised Technical Memorandum* (DBS&A 2009), in arid settings, recharge from precipitation is typically a small percentage of annual precipitation. Based on values from Scanlon *et al*. (2006), recharge as a percentage of annual precipitation for the Site area was estimated to be between 0.1 percent and 5 percent. Recharge is thus estimated to be between 0.0048 inch and 0.24 inch per year.

According to the Southern Nevada Water Authority's (SNWA) document entitled *Extent and Potential Use of the Shallow Aquifer and Wash Flow in Las Vegas Valley, Nevada* (1996) annual potential evapotranspiration exceeds 86 inches. Pan evaporation data measured from 1985 through 1988 were as high as 17 inches per month; the months with the highest evaporation (May through September) coincide with those months with the highest intensity of rainfall (Law Engineering 1993). However, evaporation and evapotranspiration are functions of vegetation type and density and other site-specific conditions (especially anthropogenic conditions). Therefore, site-specific evaporation/evapotranspiration may vary from these regional conditions. These climatic parameters may be appreciably influenced by future development (*i.e.*, vegetation destruction, pavement extent, and construction).

Wind flow patterns are fairly consistent from one month to another, but vary slightly between measurement stations (McCarran International Airport and a station west of 14th Street adjacent to the employee parking lot at the Titanium Metals Corporation [TIMET] plant entrance). For the McCarran station, the prevailing wind direction is from the southwest. The TIMET station also showed a predominant wind direction from the southwest, with southeasterly components. Wind velocity at both locations tends to be the highest in the spring and early summer months (April through July).

2.2.2 Geology/Hydrology

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 50 feet thick at the Site with variations due, in part, to the non-uniform contact between the Qal and the underlying Tertiary Muddy Creek Formation (TMCf).

The TMCf underlies the Qal. The Muddy Creek formation, of which the TMCf 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 TMCf underlying the Site is typically fine-grained (sandy silt and clayey silt), although layers with increased sand content are sporadically encountered. These TMCf materials have typically low permeability, with hydraulic conductivities on the order of 10^{-6} to 10^{-8} centimeters per second (Weston 1993). The TMCf in the vicinity of the Site was encountered to the maximum explored depth of 430 feet bgs. Lithologic cross sections are shown on Figures 3 and 4.

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 herein as the alluvial aquifer (Aa) and (2) a deep, confined water-bearing zone that occurs in a sandier depth interval within the silts of the deeper TMCf. Both of these water-bearing zones contain high concentrations of total dissolved solids (TDS). Between these two distinct water-bearing zones, a series of saturated sand stringers were sporadically and unpredictably encountered during drilling.

The Aa is an unconfined, shallower, water-bearing zone that occurs across the Site. For the most part, water in the Aa occurs in the Qal. The water surface in the Aa generally follows topography, with the water surface sloping towards the Las Vegas Wash. The depth from the surface to first groundwater at the Site is approximately 25 feet bgs (see Figure 2). Wells

completed in the Aa are not highly productive, with sustainable flows typically less than five gallons per minute.

2.2.3 Surface Water

Surface water flow occurs for brief periods of time during periodic precipitation events. The Las Vegas Wash collects storm water, shallow groundwater, urban runoff, and treated sewage effluent. It is the receiving water body for all major Las Vegas area discharges. In dry weather, flow in the Wash comprises mainly treated effluent from the Clark County Water Reclamation District (76 million gallons per day) and the City of Las Vegas Water Pollution Control Facility (80 million gallons per day). The City of Henderson contributes a smaller amount (8.4 million gallons per day) (Las Vegas Wash Coordination Committee 2000). Discharge from these sources is sufficient to maintain surface flows in the Wash throughout the year. In winter, low-intensity rains fall over broad areas; in the spring and fall, thunderstorms provide short periods of high-intensity rainfall. The latter create high run-off conditions. Run-off is also affected by human development, which tends to 1) create conduits for surface water flow, and 2) decrease infiltration into native soils by covering them with man-made structures or materials (*e.g.*, pavement).

Under current conditions, it is unlikely that surface waters generated within the non-pond areas of the Site will migrate via overland transport to the Las Vegas Wash from the Site due to (1) the distance to the Wash (greater than 4,000 feet); and (2) the intervening presence of the northern RIBs between the Site and the Wash. However, the presence of the drainage ditch in the western portion of the Site suggests the current potential for rainfall to be carried from that portion of the Site to the Wash. After development, when the ditch has been removed, there will be an even lower likelihood that surface waters generated within the Site will migrate via overland transport to the Las Vegas Wash from the Site due to the large distance to the Wash, the intervening presence of other developed properties, and storm water features as part of the future development.

Groundwater seeps currently exist at various locations within the Common Areas near the Las Vegas Wash. No seeps currently exist within the Site, however they may have occurred in the past. An evaluation of historical aerial photos taken between 1964 and 1970 indicates that seeps may have historically appeared at various locations in the northern portions of the Site and at nearby off-site locations in association with past effluent infiltration at the Eastside ponds and with infiltration of municipal wastewater at the southern RIBs. Evidence of seeps was not observed in aerial photographs after 1972. The estimated location of these presumed historical

seeps in the immediate Site vicinity is depicted on Figure 2. 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.

2.3 SUMMARY OF HISTORICAL INVESTIGATIONS

Several historical field investigations were conducted at the Site to characterize the nature and extent of chemical occurrence in Site soils and groundwater. Based on these sampling events, BRC identified portions of the Site that warranted remediation for protection of human health and the environment,[5] and subsequently performed remediation in those areas. The SAP presents a detailed analysis of data collected during the historical field investigations conducted at the Galleria North sub-area. Of those, the following sampling events included sampling within the Site boundaries:

- 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;

- The BMI Exclusion Areas Characterization conducted during April and May 1996 (dataset 1b). The soil investigation activities were performed in accordance with a work plan approved by NDEP in February 1996 (ERM 1996c). The soil sampling results for the investigation activities were presented in the Exclusion Areas Characterization report (ERM 1997). Data validation results are presented in the DVSR for dataset 1b (ERM 2006b), which was approved by NDEP on October 10, 2006;

- Supplemental soil investigation conducted in May/June 2001 (dataset 20c). These data were not collected under a formal NDEP-approved work plan. Data validation results are presented in the DVSRs for dataset 20c (ERM 2007), which was approved by NDEP on February 5, 2007;

[5] It should be noted that this determination was based on comparison of chemical detections to then-applicable human-health risk-based screening levels.

The Site-related data from the above investigations were also presented in Appendix B of the SAP. During these investigations, soil samples at various depths were collected and analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), organochlorine pesticides, organophosphorous pesticides, polychlorinated biphenyls (PCBs), chlorinated herbicides, dioxins/furans, aldehydes, glycols/alcohols, organic acids, metals, perchlorate, radionuclides, and/or asbestos. The data from these investigations have been validated, as noted above. Data validations are presented in the respective DVSRs for each of the datasets, which have been approved by NDEP.

Historical investigations focused on the portion of the Galleria North sub-area that contained the Upper Ponds and ditches; only five of these sampling locations were within the Site boundaries. Furthermore, several of the previous samples were composite samples and were collected at least nine 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; and spatial coverage of the Site is incomplete. Therefore, because of these various factors, the data collected as part of the SAP in 2009 and 2010 (as discussed in Section 3) are considered more representative of current Site conditions,[6] and are relied upon for risk assessment purposes as described in this report.

2.4 HISTORICAL REMEDIAL ACTIVITIES

Prior to 2009, remedial activities had not been conducted within the Site boundaries. However, in 2007 BRC conducted a broad-scale removal of tamarisk plants across the Eastside property. These tamarisk removal efforts covered the majority of the Site (approximately 30 acres; see Figure 2) and involved the removal of minimal amounts of site soil incorporated in the plant roots. In March-April 2000, an IRM was conducted in the adjacent Sunset North Commercial and Upper Ponds sub-areas. This IRM area is also shown on Figure 2.

2.5 CONCEPTUAL SITE MODEL

The CSM is a tool used in risk assessment to describe relationships between chemicals and potentially exposed human receptor populations, thereby delineating the relationships between the suspected sources of chemicals identified at the Site, the mechanisms by which the chemicals might be released and transported in the environment, and the means by which the receptors could come in contact with the chemicals. The CSM provides a basis for defining DQOs, guiding

[6] This determination is also based on the data usability evaluation summarized in Section 4.2.

site characterization, and developing exposure scenarios. The Site history, land uses, climate, physical attributes, including geology and hydrogeology, and various field investigations are fully described in Sections 2.1 through 2.4 of this HHRA. The site history and environmental conditions of the BMI Common Areas are described in Sections 2 and 4 of the *BRC Closure Plan* (BRC, ERM, and DBS&A 2007; Section 9 revised March 2010), and in the Site-Wide CSM (in preparation).

The HHRA evaluates current and potential future land-use conditions. The Site is currently undeveloped. The potential on-site and off-site receptors are currently trespassers, occasional on-site workers, and off-site residents. Exposures to current receptors are being managed through site access control.

Under the prospective redevelopment plan, the Site will have a high school land use, including parking lots, buildings, streets, and recreational fields. The entire Site will be enhanced by restoration and redevelopment once remediation is complete. Therefore, exposures to ecological receptors will be mitigated or removed. Future receptors identified as "on-site receptors" are defined as receptors located within the current Site boundaries (Figure 1), 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 2.5.3.

The current development plan for the Site is shown on Figure 5 (note the high school overlay on this figure was prepared subsequent to the development plan shown). To construct the high school and associated features, the land will be cut and/or filled, paved with roads or foundations, and nurtured with imported top soils[7] as needed. Figure 6 shows the current grading plan for the Site, indicating which areas will be filled and which areas will be cut.

The CSM includes the planned development of the Site. All potential transfer pathways are included in the CSM. The human health aspects of the CSM for the Site are presented on Figure 7.

Numerous release mechanisms influence chemical behavior in environmental media. Under both current and future land use conditions at the Site, the principal release mechanisms involved are:

[7] 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.

- Vertical migration in the vadose zone
- Storm/surface water runoff into surface water and sediments
- Fugitive dust generation and transport
- Vapor emission and transport
- Uptake by plants

Although these release mechanisms are identified here, no quantitative modeling is presented in this Section. Instead, those primary release mechanisms identified for particular receptors are presented in this Section, and are quantitatively evaluated in Section 6.

2.5.1 Impacted Environmental Media

Environmental media at the Site consist of five categories: surface soil, subsurface soil, groundwater, indoor air, and ambient outdoor air. Samples relative to Site baseline conditions have been collected at the Site for soil. Generally, impacted soil is the source of chemical exposures for other media at the Site.

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. Therefore, exposure pathways relating to this type of use are incomplete.

Although direct exposures to groundwater will not occur; indirect exposures are possible. The primary indirect exposure pathway from groundwater is the infiltration of VOCs from soil and groundwater to indoor air. In addition, residual levels of chemicals in soil may leach and impact groundwater quality beneath the Site.

2.5.2 Inter-Media Transfers

Exposure to Site chemicals may be direct, as in the case of impacted surface soil, or indirect following inter-media transfers. Impacted soil is the initial source for inter-media transfers at the Site, which can be primary or secondary. For example, upward migration of VOCs from

impacted subsurface soil into ambient air thereby reaching a point of human inhalation represents a secondary inter-media transfer.

These inter-media transfers represent the potential migration pathways that may transport one or more chemicals to an area away from the Site where a human receptor could be exposed. Discussions of each of the identified potential transfer pathways are presented below. Figure 7 presents a conceptualized diagram of the inter-media transfers and fate and transport modeling for the Site.

Five initial transfer pathways for which chemicals can migrate from impacted soil to other media have been identified. The first of these pathways is volatilization from soil and upward migration from soil into ambient air. Ambient air can be both indoor and outdoor air. The pathway of volatilization from both soil and groundwater and upward migration into ambient air was evaluated using the surface flux measurements collected. The secondary transfer pathway is downward migration of chemicals from soil to groundwater. The third transfer pathway is migration of chemicals in surface soil via surface runoff to sediments or surface water bodies. However, as discussed in Section 2.2.3 because of the intervening City RIBs, it is unlikely that surface waters drain to the Las Vegas Wash from the Site. Therefore, the surface water pathway was not evaluated in this risk assessment. The fourth transfer pathway is on-site fugitive dust generation. Finally, chemicals in soil can be transferred to plants grown on the Site via uptake through the roots. The plant uptake pathway is typically evaluated for residential receptors.

2.5.3 Potential Human Exposure Scenarios

The following section summarizes land use and the human exposure scenarios that are assessed herein.

2.5.3.1 Current and Future Land Use

Current receptors that may use the Site include trespassers, occasional on-site workers, and off-site residents. Current exposures to native soils at the Site are likely to be minimal. In addition, exposures to future receptors will be much greater than current exposures. For example, future receptors evaluated in the HHRA include on-site residents who are assumed to be exposed to soil at the Site for 350 days per year for 30 years, which is much greater than any current exposures. In addition, as discussed above, exposures to current receptors are being managed through site access control. Therefore, a current land use scenario is not quantitatively evaluated in this risk assessment.

USEPA risk assessment guidance (USEPA 1989) states that potential future land use should be considered in addition to current land use when evaluating the potential for human exposure at a Site. As indicated above, under the prospective redevelopment plan, the Site will be used for a high school, including parking lots, buildings, recreational fields, and streets. The entire Site will be enhanced by restoration and redevelopment once remediation is complete.

The entire Eastside property will be redeveloped in several phases. Throughout the redevelopment process, the sub-areas of the Site will be redeveloped sequentially. Future receptors identified as "on-site receptors" are defined as receptors located within the current Site boundaries (Figure 1), while future "off-site receptors" are those located outside the current Site boundaries. "On-site receptors" are those future receptors that will be located within the sub-area under evaluation. "Off-site receptors" are those future receptors that will be located outside of the sub-area under evaluation that may have complete exposure pathways associated with sources within the sub-area. As noted above, remediation of the Site is to on-site residential standards. Consequently, risks to off-site receptors are addressed qualitatively in this risk assessment.

2.5.3.2 Identification of Potentially Exposed Populations and Pathways

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 presented on Figure 7 and summarized below. For a complete exposure pathway to exist, each of the following elements must be present (USEPA 1989):

- A source and mechanism for chemical release;
- An environmental transport medium (*i.e.*, air, water, soil);
- A point of potential human contact with the medium; and
- A route of exposure (*e.g.*, inhalation, ingestion, dermal contact).

As presented in Section 9 of the *BRC Closure Plan* (BRC, ERM, and DBS&A 2007; Section 9 revised March 2010), the following are the primary exposure pathways for each of the potential receptors following remediation at the Site.

- Adult and child residents[8]
  - incidental soil ingestion*
  - external exposure from soil†
  - dermal contact with soil
  - consumption of homegrown produce*
  - outdoor inhalation of dust*‡
  - indoor inhalation of dust*‡
  - outdoor and indoor inhalation of VOCs from soil and groundwater

- Indoor commercial workers
  - incidental soil ingestion*
  - external exposure from soil†
  - indoor inhalation of VOCs from soil and groundwater

- Outdoor maintenance workers
  - incidental soil ingestion*
  - external exposure from soil†
  - dermal contact with soil
  - outdoor inhalation of dust*‡
  - outdoor inhalation of VOCs from soil and groundwater

- Construction workers
  - incidental soil ingestion*
  - external exposure from soil†
  - dermal contact with soil
  - outdoor inhalation of dust*‡
  - outdoor inhalation of VOCs from soil and groundwater

*Includes radionuclide exposures.

†Only radionuclide exposures.

‡Includes asbestos exposures.

[8] The Closure Plan methodology includes the evaluation of residential receptors, but not school receptors. However, potential residential exposures are considered more conservative, and therefore, protective and representative of any potential school receptors. For example, residential versus school exposure rates are assumed to be similar, whereas, the exposure duration for a residential receptor is 30 years (for both child [zero to six years of age] and adult [seven to 30 years of age]) versus four years for a high school student. Worker receptor exposures as defined in the Closure Plan are considered applicable for a school site scenario.

Although trespassers/recreational users and downwind off-site residents are another potential receptor identified in the *BRC Closure Plan* (BRC, ERM, and DBS&A 2007; Section 9 revised March 2010), exposures for these receptors are less than those evaluated above. As noted in Sections 9.1.1 and 9.7.1 of the Closure Plan, potential exposures for trespassers/recreational users will only be evaluated in areas of the BMI Common Areas that are designated as recreational end use (specifically the Western Hook-Open Space sub-area shown on Figure 1). Also, as noted in Section 9.5.4 of the Closure Plan, off-site dust levels based on USEPA's model are much lower than those generated for on-site construction-related activities. Therefore, risks evaluated for an on-site construction worker, as are performed in this HHRA, are considered protective of off-site residents. Thus, trespassers/recreational users and downwind off-site receptors are not evaluated further in this report.

3.0 CONFIRMATION DATA PROCESS AND SUMMARY

Based on the historical data for the Site, no remediation was proposed prior to implementing the sampling presented in the SAP. Decisions for excavation during SAP implementation were based on the initial data (discussed below) in accordance with the Risk Assessment Methodology provided in the *BRC Closure Plan* (BRC, ERM, and DBS&A 2007; Section 9 revised March 2010). The following is the initial scope of work for investigating the Site and meeting the SAP objectives. Much of the discussion below regarding confirmation soil sampling is taken from the *Statistical Methodology Report* (NewFields 2006).

3.1 INITIAL CONFIRMATION SOIL SAMPLING

As per Section 2 of the *Statistical Methodology Report*, the initial confirmation sampling at the Site was conducted on the basis of combined random and biased (judgmental) sampling, as follows:

- **Stratified Random Locations:** For this purpose, the Site was covered by a 3-acre cell grid network. Within each 3-acre cell, a sampling location was randomly selected. Sampling locations were randomly selected within both full and partial grid cells if they were greater than 50 percent of the total grid cell area (based on the project-wide grid cell network and the Site boundaries; those partial grid cells that contain less than 50 percent of their area within the Site were included in the adjacent sub-area SAPs). The main objective of this stratified random sampling was to provide uniform coverage of the Site.

- **Biased Locations:** Additional sampling locations were selected within or near small-scale contamination points of interests, including but not limited to previous debris locations, ponds, and berms. For this purpose, the randomly selected location within a corresponding 3-acre cell was adjusted in order to cover a nearby point of interest. In the event that currently unknown impacted areas were identified during remediation, the presence of these areas were drawn to NDEP's attention, and the need for additional biased sampling points to address those areas was evaluated, and the sampling program modified as needed.

A reconnaissance of the Site was performed in July/August 2008 to check the Site for environmentally significant features such as debris piles or stained soil. Ten debris piles were observed within the Site boundaries during the site reconnaissance (identified as station numbers 17 through 23, 45, 46, and 53 in Table 3 of the SAP; labeled accordingly on Figure 8 of this HHRA). Biased sampling locations were selected at each of the debris piles/soil staining

location. In some cases, random sampling locations were shifted slightly to address the debris locations. A final reconnaissance was performed prior to sampling to check for any additional environmentally significant features since the initial reconnaissance; if found, these additional features would also have been sampled. No such features were found. Biased sampling was also conducted along the length of the Beta Ditch, at an approximate 200-foot linear spacing (six locations within the Site). Figure 8 and accompanying Table 1 show the sampling locations collected within the Site. Rationale for each of the biased sampling locations is presented below:

- GNC1-JS09 through -11 were included to provide coverage within debris areas observed at the Site; and
- GNC1-JD06 through -11 were included to provide coverage within the Beta Ditch.

Elevated detections of dioxins/furans/PCB congeners were reported in initial SAP samples collected from the lower half of the Site. In response, an additional four biased samples (GNC1-JA04 through JA07) were collected from the Site for dioxins/furans/PCB congeners analyses in August 2009. These sampling locations were outside the boundaries of Site soil removal actions initially performed in accordance with the Removal Action Work Plan (RAWP, BRC 2009) (see Section 3.3.1), and triggered an additional removal action at location GNC1-JA04.

The following discusses the multi-depth soil samples that were collected and analyzed for the Site-related chemical (SRC) list at each selected location. Samples were 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[9]) 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

[9] Because sample collection was over a two to three foot depth interval, sample locations with an anticipated cut depth less than three feet were only sampled at the surface and one post-grade subsurface depth. The sample depth designation (*i.e.*, 10 feet bgs) is based on the center depth of the sample collection interval.

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

Additionally, at one sample location (GNC1-BF20), soil physical parameter data were collected at 20 feet and every subsequent 10 feet until groundwater was reached.

The analytical sample results were then 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 was 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 is used to designate its soil layer grouping.

- **Rule 2: IF** the sample was 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 is classified as a surface (0-2 ft depth) sample, and the soil layer grouping of the remaining deeper sampled soil is 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 is classified as a fill material sample, a final (post-graded) surface sample is classified as a surface (0-2 ft depth) sample, and the soil layer grouping of the remaining deeper sampled soil is 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 is 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 is 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 9. The current Site grading plan is shown on Figure 6. 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 1. As discussed

in Section 6.1.1, given the uncertainties in the current grading plan, these samples were classified into two different exposure depths, surface and all (surface and subsurface) depths. These different soil exposure depth classifications are considered to represent all possible exposure potential for all receptors, and thus a reasonable worst case scenario has been assessed.

Although some samples are designated as Fill samples, the grading across the site is anticipated to be primarily shallow grading with limited 'cut' areas. The evaluation of fill data separately is primarily to determine whether fill material from a particular sub-area can be used elsewhere. However, given the limited amount of cut areas across the site, the few samples designated as 'Fill', that more fill areas exist than cut areas, and that the limited amount of fill material will likely be used with the Site, the evaluation of the fill data separately was not conducted for the Site.

Initial sampling for the Site was conducted in January/February 2009; as previously noted. All soil samples were tagged in the database with numeric designations of their corresponding assigned soil layer grouping based on these rules. During these initial sampling events (Table 1), 53 soil samples were collected from 24 locations (including field duplicates, but not including deep samples collected for soil physical parameter data).[10] This included 15 "random"[11] and nine "biased" sample locations. At these locations, BRC initially collected 29 surface samples (one at each location, and duplicates at five locations) and 24 subsurface soil samples. Three of the surface soil samples also represent Fill samples (see discussion above regarding fill samples). All sample results are presented electronically on the report CD in Appendix B, and in Tables B-1 through B-12.

3.2 CHEMICALS SELECTED FOR ANALYSIS

The analyte list for soil samples collected during the initial 2009 investigation comprised the BRC project SRC list, and was consistent with the analytical program presented in Section 3 of the *BRC Closure Plan* (BRC, ERM, and DBS&A 2007; Section 9 revised March 2010)[12] and Table 2, with the following exceptions for this Site:

[10] Note that in Table 4, which summarizes the analyses performed on Site samples, the number of samples reported in that table for a given analysis does not always equal 53. This is due to 1) inclusion in the final dataset of supplemental samples collected to assess the extent of chemical impacts in certain areas; 2) certain analytes were not included in the subsurface samples, as noted in the following section; and 3) rejected data are not included in the statistical summary in Table 4.

[11] As noted before, in some cases, random sampling locations were shifted slightly to address debris locations.

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

- Asbestos, dioxins/furans and PCBs were only analyzed for in surface soil samples (note that all samples collected at the Site were discrete samples, with the exception of asbestos which were composite samples collected as per the NDEP-approved Standard Operating Procedure [SOP]-12 as provided in the *Field Sampling and Standard Operating Procedures* [FSSOP; BRC, ERM and MWH 2009]).

- Only acetaldehyde and formaldehyde were 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 were not 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);

- As specified in the SAP, Aroclors were only analyzed by USEPA Method 8082 in samples in which the results of the analysis of total PCB congeners were greater than 33 ppb (only one sample met this criterion: GSNC1-BE22);

- USEPA Method 8141A for organophosphorous pesticides was not conducted due to limited detections in historical data;

- USEPA Method 8151A for chlorinated herbicides was not conducted due to limited detections in historical data;

- HPLC Method for organic acids was not conducted due to limited detections in historical data;

- USEPA Method 8015B for nonhalogenated organics was not conducted due to limited detections in historical data;

- USEPA Method 8015 for total petroleum hydrocarbons (TPH) was not conducted due to limited detections in historical data. While TPH was not included in the analytical suite, 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 were analyzed for: radium-226, radium-228, thorium-228, thorium-230, thorium-232, uranium-233/234, uranium-235/236, and uranium-238.

The analyte list consisted of 307 of the 418 compounds (including water only parameters) on the project SRC list as well as physical parameters to support the evaluation of potential impacts to groundwater from migration of chemicals from soil. The analytical and preparatory methods (see Table 2) used in accordance with the SAP adhered to the most recent version of the *BRC Quality Assurance Project Plan* (QAPP; BRC and ERM 2009a [see Section B4, Table 4 of that document]). As noted in Section 3.6, the analyte list for surface flux samples was comprised of the list specified in the NDEP-approved SOP-16 (as provided in the FSSOP [BRC, ERM and MWH 2009]). Surface flux samples were analyzed for VOCs by full USEPA Method TO-15 full scan, plus selective ion mode (SIM) analyses for a subset of the analytes.

3.3 INTERMEDIATE SAMPLING AND CLEANUP

3.3.1 2009 Removal Action

All initial data were reviewed and a determination made, in consultation with NDEP, as to whether localized soil removals were warranted. In September 2009, BRC submitted a RAWP (BRC 2009) to NDEP. This RAWP was approved by NDEP on September 22, 2009. The overall goal of the RAWP was to present a cleanup strategy for the Site that effectively reduces, to the extent feasible, the human health risks associated with the identified soil in the impacted areas of the Site.

There were four different remediation areas proposed for the Site: two ditch locations (elevated SVOCs, polynuclear aromatic hydrocarbons (PAHs), and/or dioxins/furans/PCB congeners) and two non-ditch areas (elevated metals and/or dioxins/furans/PCB congeners). The extent of the excavations is depicted in Figure 10.

The non-ditch remediation areas were developed based on a Thiessen map overlaid across the Site. Thiessen maps are constructed from a series of polygons formed around each sample location. Thiessen polygons are created so that every location within a polygon is closer to the sample location in that polygon than any other sample location. These polygons do not take into account the respective concentrations at each sample location. These polygons were used as the basis for the areal extent of remediation for each of the non-ditch locations with elevated dioxins/furans/PCB congeners or metals levels. There were two polygons associated with

elevated chemical levels that were remediated at the Site. These polygons were centered around 1) locations GNC1-BE20/GNC1-JS09/GNC!-JS10; and 2) GNC1-BE22. In August 2009, four supplemental samples (GNC1-JA04 through JA07) were collected in the southern half of the Site and analyzed for dioxins/furans/PCB congeners to provide further delineation of the extent of elevated levels detected in this area.

For the ditch locations, the remediation area was centered about the initial sampling locations that triggered remediation (GNC1-JD07 for dioxins/furans/PCB congeners, and GNC1-JD09 for PAHs and SVOCs) defined as a ditch segment to a width of 50 feet, which extended to half the distance to the adjacent ditch samples to the north and south.

Following remediation, confirmation surface soil samples were collected at each of the original sample locations associated with the remediation area polygons and ditch segments described above (*i.e.*, GNC2-BE20C, GNC2-BE22C, GNC2-JS09C, GNC2-JS10C, GNC2-JD07C, and GNC2-JD09C). All sample locations are shown on Figure 11. The analyte list was composed of those chemicals that triggered the remediation at each sample location. These included dioxins/furans/PCB congeners, metals, SVOCs, and PAHs.

3.3.2 2010 Removal Action

Following the review of data collected from the 2009 removal action, four additional remediation areas were identified for the Site (Figure 10). These remediation areas were part of a larger remediation plan for the northern portion of the entire Eastside property. BRC did not submit a formal work plan to NDEP for conducting remediation at these areas, but discussed the planned excavations with NDEP in June 2010. The rationale for each additional remediation area is presented below.

- Original sample location GNC1-JD06; Arsenic concentration (9.6 mg/kg) associated with this location was higher than background and the highest found at the Site. Therefore, in 2010, additional remediation and confirmation sampling was conducted at this location. This remediation area was defined using the Thiessen polygon method described above. One confirmation sample was collected from this location (GNC2-JD06).

- Supplemental sample location GNC1-JA04; this sample was collected during the first phase of excavation to assess the extent of dioxins/furans/PCB congeners occurrence in the vicinity of the GNC1-BE20/GNC1-JS09/GNC1-JS10 polygon. The detection of dioxins/furans/PCB congeners at TEQ levels above the 50 pg/g triggered additional remediation in this area. The

remediation area was based on a 50-foot square area around this sample location. One confirmation sample and a duplicate were collected from this location (GNC2-JA04). In addition, supplemental samples GNC2-JE01 and -JE02 were collected in the general vicinity in April 2010; these two samples were analyzed for dioxins/furans/PCB congeners to provide further delineation of the extent of elevated levels detected in this area. These two samples did not trigger additional excavation.

- Subsequent to the 2009 removal action, issues regarding the counting rules for asbestos were identified. Based on these issues, the initial asbestos results were re-evaluated. This re-evaluation led to the decision to remediate additional surface areas based on asbestos for sample locations GNC2-BE20C, GNC2-JS09C, and GNC1-JD10. These remediation areas were defined using the Thiessen polygon method. Three confirmation samples were collected from these locations (GNC3-BE20, GNC3-JS09C, and GNC2-JD10).

As before, the analyte list was composed of those chemicals that triggered the remediation at each sample location. These included metals, dioxins/furans/PCB congeners, and/or asbestos.

3.4 FINAL CONFIRMATION DATASET

The final confirmation dataset included the following sampling results:

- SAP sampling data, retaining only the results that were not superseded by subsequent sampling. [Note: Post-scrape analyses associated with follow-up rounds of remediation focused on the analytes triggering that additional remediation, and did not include the full suite analyses of the original analytical program. Therefore, analytical results from the original SAP dataset were retained for all analytes except those that were re-analyzed after additional scraping];

- Data generated after intermediate sampling and cleanup (retaining only the results that were not superseded by subsequent sampling); and

- Additional samples collected for confirmation after completion of remediation activities.

The soil dataset was subjected to a series of statistical analyses in order to determine representative exposure concentrations for the sub-area, as described in Sections 4 and 5 of the *Statistical Methodology Report* (NewFields 2006). Consistent with the project *Statistical Methodology Report* (NewFields 2006), kriging or geostatistical analysis was not performed on the data because each measurement was assumed to be equally representative for that chemical at

any point in each sub-area of the Eastside property. Hence, calculation of the 95 percent UCL by exposure area directly from the data is considered reasonable

As discussed in Section 4, all data have been validated. Results of all confirmation sampling and analysis are presented in Appendix B, and electronically on the report CD in Appendix B, as is the dataset used in the HHRA for the Site. All confirmation sample locations for the Site are shown on Figure 11. Table 3 provides a matrix of which analytical suite was analyzed for in each of the samples collected at the Site. Geotechnical and Environmental Services (GES) conducted all field work at the Site. The GES field reports, including boring logs, for each investigation are provided electronically in Appendix C (included on the report CD in Appendix B).

3.5 FINAL CONFIRMATION DATA SUMMARY

Using the compound-specific information presented in Table 2 of the QAPP (BRC and ERM 2009a), the comparison levels for each chemical included in the investigation were compiled and compared. Specific soil comparison levels used for this effort were as follows:

- NDEP BCLs for residential soil (NDEP 2010a);
- NDEP BCLs for protection of groundwater (LBCL), assuming dilution attenuation factors (DAF) of 1 and 20 (NDEP 2010a); and
- The maximum background concentration (for metals and radionuclides only), derived from the background soil dataset for the BMI Common Areas presented in *Background Soil Compilation Report – BMI Complex and Common Areas, Clark County, Nevada* (ERM, April 2010); the specific dataset used was the 2007 shallow McCullough soils.

A DAF of one is used when little or no dilution or attenuation of soil leachate concentrations is expected, and a DAF of 20 may be used when significant attenuation of the leachate is expected due to site-specific conditions. For the Site, the LBCLs based on a DAF of 1 were used for discussion purposes. A summary of the data for the Site, including identification of number of instances that chemical concentrations exceed each of the comparison levels are listed in Table 4.[13] The constituents with exceedances of the screening criteria are summarized below. It

[13] Pre-scrape data for the target constituents are not included in Table 4, that is, these have been replaced by post-scrape data; however, pre-scrape data for the non-target constituents are included in Table 4. 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 status.

is important to note that these comparisons are used to provide for an initial screening evaluation, to assist in the evaluation of data usability, and determination of extent of contamination. They are not used for decision making purposes, or as an indication of the risks associated with the Site.

Aluminum

Aluminum was detected in all 55 of the Site soil samples in which it was analyzed (31 surface and 24 subsurface samples; Table B-4). All of the detections were lower than the 77,200 mg/kg BCL, but were higher than the 75 mg/kg $LBCL_{DAF1}$. However, none exceeded the 15,300 mg/kg maximum background concentration.

Arsenic

Arsenic was detected in 53 of the Site soil samples in which it was analyzed (55 samples, 31 surface and 24 subsurface samples; Table B-4). All of the detections were higher than the 0.39 mg/kg BCL and the 1 mg/kg $LBCL_{DAF1}$. Of these 53 detections, only the following four were in excess of the maximum shallow soil background level (7.2 mg/kg):

Sample ID	Depth (ft bgs)	Reported Arsenic Value (mg/kg)
GNC1-JD10	0	7.4
GNC1-JD06	10	7.7
GNC1-BE20	10	7.8
GNC1-JS10	10	8.8

In addition, arsenic was reported as a non-detection in two samples (surface soil confirmation samples GNC2-JA04 and a duplicate); the associated reporting limits (5 mg/kg and 5.1 mg/kg, respectively) are higher than the screening levels and it is not known whether arsenic is present at concentrations above the screening levels at this location. However, these reporting limits were sufficiently low to indicate that neither sample contained arsenic at concentrations above background.

Barium

Barium was detected in all 55 of the Site soil samples in which it was analyzed (31 surface and 24 subsurface samples; Table B-4). None of the detections were higher than the 15,300 mg/kg BCL, but all of the barium detections exceeded the 82 mg/kg $LBCL_{DAF1}$. However, none of the detections exceeded the maximum background concentration of 836 mg/kg.

Boron

Boron was detected in seven of the Site soil samples in which it was analyzed (55 samples, 31 surface and 24 subsurface samples; Table B-4). None of the detections were higher than the 15,600 mg/kg BCL; however, two of the detections were higher than the 23.4 mg/kg $LBCL_{DAF1}$. These two detections, which were also higher than the maximum shallow soil background level (11.6 mg/kg), are as follows:

Sample ID	Depth (ft bgs)	Reported Boron Value (mg/kg)
GNC1-BE21	0	38.9 J
GNC1-BE19	0	47.1 J

The majority of the reporting limits were sufficiently low such that BCL or $LBCL_{DAF1}$ exceedances would have been observed. The five boron non-detections with reporting limits above the 23.4 mg/kg $LBCL_{DAF1}$ (ranging from 51.3 to 53 mg/kg) are associated with confirmation samples (GNC2-BE20C, -JS09C, and -JS10C) for locations at which the boron BCL and $LBCL_{DAF1}$ were not exceeded in the original sample.

Cadmium

Cadmium was detected in 40 of the Site soil samples in which it was analyzed (55 samples, 31 surface and 24 subsurface samples; Table B-4). None of the detections were higher than the 38.9 mg/kg BCL; however, one of the detections was higher than the 0.4 mg/kg $LBCL_{DAF1}$. This detection, which was also higher than the maximum shallow soil background level (0.16 mg/kg), was a surface soil sample collected from GNC1-BE22 (0.44 mg/kg). The reporting limits for non-detections were sufficiently low such that BCL or $LBCL_{DAF1}$ exceedances would have been observed.

Cyanide

Cyanide was detected in 12 of the Site soil samples in which it was analyzed (53 samples, 29 surface and 24 subsurface samples; Table B-3). None of the detections were higher than the 1,220 mg/kg BCL; however, one of the detections was higher than the 2 mg/kg $LBCL_{DAF1}$. This detection was a surface soil sample collected from GNC1-BF19 (5.8 mg/kg). The reporting limits for non-detections were sufficiently low such that BCL or $LBCL_{DAF1}$ exceedances would have been observed.

Total Chromium

Total chromium was detected in all 55 of the Site soil samples in which it was analyzed (31 surface and 24 subsurface samples; Table B-4). None of the detections were higher than the 100,000 mg/kg BCL, but all of the total chromium detections were higher than the 2 mg/kg $LBCL_{DAF1}$. Of these, 23 detections were higher than the 16.7 mg/kg maximum background detection. These 23 total chromium exceedances higher than background are as follows:

Sample ID	Depth (ft bgs)	Reported Chromium Value (mg/kg)
GNC1-BF20	0	17
GNC1-BG22	0	17.1
GNC1-BG21	10	17.1
GNC1-BD21	0	17.3
GNC1-JD10	11	17.4
GNC1-JS11	0	18.1
GNC2-JD06	0	18.3
GNC1-BE20	10	18.3
GNC1-JD11	0	18.6
GNC1-BG19	10	18.7
GNC1-BF20	10	19.3
GNC1-BE19	0	19.4

Sample ID	Depth (ft bgs)	Reported Chromium Value (mg/kg)
GNC1-JS11	0	19.4
GNC1-BG19	0	19.9
GNC1-BG20	0	20.7
GNC2-JA04	0	20.9
GNC1-BG21	0	22
GNC1-BG22	10	23
GNC2-JA04	0	23.1
GNC1-BG20	0	23.4
GNC1-BF21	0	24.8
GNC1-JD10	0	31.2
GNC1-BE22	0	62.8

Iron

Iron was detected in all 55 of the Site soil samples in which it was analyzed (31 surface and 24 subsurface samples; Table B-4). None of the detections were higher than the 54,800 mg/kg BCL, but all of the detections were higher than the 7.56 mg/kg $LBCL_{DAF1}$. Of these, 19 detections were higher than the 19,700 mg/kg maximum background detection. These 19 iron exceedances higher than background are as follows:

Sample ID	Depth (ft bgs)	Reported Chromium Value (mg/kg)
GNC1-BE19	10	19800
GNC1-JS11	10	19800
GNC1-BG19	0	19800
GNC1-JD10	11	19800
GNC1-JD11	0	20000
GNC1-JD07	10	20500
GNC1-JD10	0	20500
GNC1-JD09	10	21200
GNC1-BG20	0	21200
GNC2-JS09C	0	21200

Sample ID	Depth (ft bgs)	Reported Chromium Value (mg/kg)
GNC1-JD11	11	21300
GNC1-BF19	11	21400
GNC1-BG22	10	21400
GNC1-BG19	10	21700
GNC1-BF21	0	21800
GNC2-JD06	0	21900
GNC2-JA04	0	25600
GNC1-BE22	0	26900
GNC2-JA04	0	27300

Magnesium

Magnesium was detected in all 55 of the Site soil samples in which it was analyzed (31 surface and 24 subsurface samples; Table B-4). None of the detections were higher than the 100,000 mg/kg BCL, but all of the detections were higher than the 649 mg/kg $LBCL_{DAF1}$. However, all but one of the magnesium detections were lower than the 17,500 mg/kg maximum background detection. That exceedance (28,500 mg/kg) was associated with a soil sample collected from 11 feet bgs at GNC1-BF19.

Manganese

Manganese was detected in all 55 of the Site soil samples in which it was analyzed (31 surface and 24 subsurface samples; Table B-4). Of these detections, none were higher than the 1,080 mg/kg BCL; however, all of the detections were higher than the 3.26 mg/kg $LBCL_{DAF1}$. All of the manganese detections were lower than the maximum background concentration for manganese (1,090 mg/kg).

Mercury

Mercury was detected in 17 of the 55 Site soil samples in which it was analyzed (31 surface and 24 subsurface samples; Table B-4). None of the detections were higher than the 12.5 mg/kg BCL. However, one detection (0.122 mg/kg) was higher than the 0.105 mg/kg $LBCL_{DAF1}$ (surface soil sample collected at GNC2-BE20C). This detection was also higher than the 0.11 mg/kg maximum background detection. The exceedance was associated with a duplicate sample; the original sample detection (0.0614 mg/kg) was lower than the $LBCL_{DAF1}$ and was within the background range. The reporting limits for non-detections were sufficiently low such that BCL or $LBCL_{DAF1}$ exceedances would have been observed.

Nickel

Nickel was detected in all 55 of the Site soil samples in which it was analyzed (31 surface and 24 subsurface samples; Table B-4). None of these detections exceeded the 1,540 mg/kg BCL, but all were higher than the 7 mg/kg $LBCL_{DAF1}$. However, all of the detections were lower than the maximum background concentration for nickel (30 mg/kg).

Selenium

Selenium was detected in one of the 55 Site soil samples in which it was analyzed (31 surface and 24 subsurface samples; Table B-4). That detection (0.47 mg/kg in a soil sample collected from 11 feet bgs at GNC1-JD11) was lower than the 391 mg/kg BCL, but it was higher than the 0.3 mg/kg $LBCL_{DAF1}$. However, this detection was lower than the 0.6 mg/kg maximum background detection. The reporting limits for the non-detections (0.4 mg/kg standard reporting limit) were adequately low for detections of BCL exceedances; however they were higher than the $LBCL_{DAF1}$, such that exceedances would not necessarily have been observed.

Other Inorganics

As seen in Table 4 and Tables B-3 and B-4 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 or the $LBCL_{DAF1}$. The reporting limits for these additional inorganic constituents were generally sufficiently low such that concentrations in excess of the BCL or $LBCL_{DAF1}$, if present, would have been reported.

Exceptions included:

- Antimony, for which the standard reporting limit was 0.315 mg/kg (0.3 mg/kg $LBCL_{DAF1}$); and
- Thallium, for which the standard reporting limit was 0.75 mg/kg (0.4 mg/kg $LBCL_{DAF1}$);

Organochlorine Pesticides

Organochlorine pesticides were analyzed for in 53 Site soil samples (29 surface and 24 subsurface samples; Table B-5). The following analytes were detected in at least one sample:

- 2,4-DDE
- 4,4-DDD
- 4,4-DDE
- 4,4-DDT
- alpha- BHC
- beta-BHC
- alpha-Chlordane
- Chlordane
- Endosulfan sulfate
- Endrin
- Endrin aldehyde
- gamma-Chlordane
- Methoxychlor

4,4-DDE, 4,4-DDT, and beta-BHC were the most commonly detected (in more than 35 percent of the samples in which they were analyzed). None of the detections were higher than the BCL, and most of the detections were lower than the $LBCL_{DAF1}$. The one alpha-BHC detection (0.0022 mg/kg) was higher than the 0.00003 mg/kg $LBCL_{DAF1.}$ In addition, all 19 of the beta-BHC detections were higher than the 0.0001 mg/kg $LBCL_{DAF1}$. The 19 LBCL beta-BHC exceedances were associated with the following samples:

Sample ID	Depth (ft bgs)	Reported Value (mg/kg)
GNC1-JS09	0	0.0022
GNC1-JD06	0	0.0024
GNC1-JS09	0	0.0027
GNC1-JD10	0	0.0027
GNC1-JS11	0	0.0031
GNC1-BD20	0	0.0037
GNC1-BG19	0	0.004
GNC1-BE20	0	0.0043
GNC1-BE19	0	0.0043
GNC1-BE22	0	0.0047

Sample ID	Depth (ft bgs)	Reported Value (mg/kg)
GNC1-BF20	0	0.0048
GNC1-JS11	0	0.0048
GNC1-BF22	0	0.0054
GNC1-BD21	0	0.0095
GNC1-JS10	0	0.0099
GNC1-BG20	0	0.011
GNC1-BE20	0	0.013
GNC1-BG20	0	0.014
GNC1-BF21	0	0.019

The standard reporting limits for most organochlorine pesticides were sufficiently low such that concentrations in excess of the comparison levels, if present, would be reported. The exceptions are alpha- and beta-BHC, for which the reporting limits were routinely higher than the $LBCL_{DAF1}$.

Volatile Organic Compounds

VOCs were analyzed for in 53 Site soil samples (29 surface and 24 subsurface samples; Table B-10). As seen in Table 4 and Table B-10, the following 11 VOCs were detected in at least one sample:

- 1,2,4-Trimethylbenzene
- 1,2-Dichlorobenzene
- 1,3,5- Trimethylbenzene
- 1,3- Dichlorobenzene
- 1,4- Dichlorobenzene
- Acetone
- Dichloromethane
- Ethylbenzene
- Nonanal
- N-Propylbenzene
- Toluene

1,2,4-Trimethylbenzene and dichloromethane were detected the most frequently, in approximately 32 percent and 47 percent of the samples, respectively. None of the detections were above the BCL. With the exception of dichloromethane, the VOC detections were also lower than the $LBCL_{DAF1}$. Dichloromethane was detected in the following 25 soil samples at concentrations in excess of the 0.001 mg/kg $LBCL_{DAF1}$:

Sample ID	Depth (ft bgs)	Reported Value (mg/kg)
GNC1-BE20	0	0.0014
GNC1-JS09	0	0.0027
GNC1-JD07	10	0.0028
GNC1-JD07	0	0.0031
GNC1-BD20	0	0.0032
GNC1-JS09	10	0.0033
GNC1-BD20	10	0.0039
GNC1-JS10	0	0.0041
GNC1-JS10	10	0.0046
GNC1-BD21	0	0.0051
GNC1-BD19	10	0.0083
GNC1-BD19	0	0.0099
GNC1-BE20	0	0.011

Sample ID	Depth (ft bgs)	Reported Value (mg/kg)
GNC1-JD06	0	0.012
GNC1-JD09	10	0.014
GNC1-BD21	10	0.015
GNC1-JD08	10	0.015
GNC1-JD08	0	0.016
GNC1-JD09	0	0.016
GNC1-BG21	10	0.017
GNC1-JD09	0	0.017
GNC1-BG22	0	0.018
GNC1-BG22	10	0.018
GNC1-BE19	0	0.019
GNC1-JS09	0	0.028

It should be noted that the reporting limits for dichloromethane were often higher than the $LBCL_{DAF1}$; therefore concentrations in excess of this comparison level, if present, might not have been reported. For the other VOCs, the standard reporting limits were lower than the BCL and $LBCL_{DAF1}$, and concentrations in excess of these screening levels, if present, would have been reported.

Semi-Volatile Organic Compounds

SVOCs were analyzed for in 51 Site soil samples (28 surface and 23 subsurface samples; Table B-9). As seen in Table 4 and Table B-9, the following SVOCs were detected in one or more samples:

- Benzoic acid
- bis(2-ethylhexyl)Phthalate
- Butylbenzyl phthalate
- Di-n-butyl phthalate
- Fluoranthene
- Phthalic acid

Fluoranthene was detected the most often, in 11.8 percent of the samples. All SVOC detections were lower than the BCL and the $LBCL_{DAF1}$. For SVOC non-detects, the standard reporting limits were lower than the BCL, except for dichloromethyl ether, which routinely had reporting limits higher than the BCL. With the exception of this compound, concentrations in excess of the

BCL, if present, would have been reported for SVOCs. For several other SVOCs the reporting limits 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 analytes with reporting limits routinely higher than the $LBCL_{DAF1}$ are as follows:

- 2,2'-Dichlorobenzil
- 2,4,6-Trichlorophenol
- 2,4-Dichlorophenol
- 2,4-Dinitrophenol
- 2,4-Dinitrotoluene
- 2,6-Dinitrotoluene
- 3,3'-Dichlorobenzidine
- bis(2-chloroethyl)ether
- Hexachloroethane
- Isophorone
- Nitrobenzene
- n-Nitrosodi-n-propylamine
- p-Chloroaniline
- Pentachlorophenol

Dioxins and Furans

For dioxins/furans, as discussed in Section 1.1, the USEPA TEQ procedure, developed to describe the cumulative toxicity of these compounds, is used. Dioxins and furans were analyzed for in 36 Site surface soil samples (Table B-2). All of the individual dioxins and furans congeners analyzed were reported as detections in at least one sample. None of the samples analyzed had calculated TCDD TEQ concentrations in excess of the NDEP BCL of 50 ppt. $LBCL_{DAF1}$ 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.

Polychlorinated Biphenyls

PCBs were analyzed for in 36 Site surface soil samples (individual PCB congeners) (Table B-7). All of the PCB congeners were detected in at least one sample. BCL values have not been established for individual congeners. PCB congeners are included in the calculation of the TCDD TEQ, and are evaluated in this manner, not on an individual congener basis. $LBCL_{DAF1}$ values have not been established for individual PCB congeners.

Polynuclear Aromatic Hydrocarbons

PAHs were analyzed for in 52 Site soil samples (29 surface, 23 subsurface; Table B-6); each PAH analyte was detected in at least one soil sample. The PAH detections were relatively low, and did not exceed either the BCL or the $LBCL_{DAF1}$ where established. The standard PAH reporting limits were lower than the BCL and the $LBCL_{DAF1}$; thus concentrations in excess of these comparison levels, if present, would have been reported.

Aldehydes

Aldehydes were analyzed for in 53 Site soil samples (29 surface and 24 subsurface samples; Table B-9). Acetaldehyde was detected in one sample, and formaldehyde was detected in 30 samples (57 percent). None of the detections exceeded the BCL. The reporting limits were lower than the BCL; thus concentrations in excess of the BCL, if present, would have been reported. $LBCL_{DAF1}$ values have not been established for these compounds.

Radionuclides

Radionuclides were detected in all 52 of the Site soil samples analyzed (29 surface and 23 subsurface soil samples; Table B-8). Exceedances of comparison levels for radionuclides are shown in Table 4 for the eight radionuclides currently included in the project analyte list (radium-226, radium-228, thorium-228, thorium-230, thorium-232, uranium-233/234, uranium-235/236, and uranium-238). Of those activities greater than comparison levels, most are lower than the maximum background activity, as shown in Table 4. Activities higher than comparison levels and background are summarized below for each radionuclide:

- All of the reported Radium-226 activities were higher than the BCL and $LBCL_{DAF1}$ (0.0071 picoCuries per gram (pCi/g) and 0.016 pCi/g, respectively). However, only one of those results was higher than the 2.36 pCi/g maximum background activity: a surface soil sample collected from GNC1-BD19 (2.51 pCi/g).

- All of the reported Thorium-228 activities were higher than the BCL and $LBCL_{DAF1}$ (0.0078 pCi/g and 0.0023 pCi/g, respectively). However, only one of the results was higher than the 2.28 pCi/g maximum background activity: a sample collected from 10 feet bgs at GNC1-BD20 (2.31 pCi/g).

- None of the reported Thorium-232 activities were higher than the BCL (2.8 pCi/g), but all of them were higher than the $LBCL_{DAF1}$ (0.0029 pCi/g). However, only one of the results was

higher than the 2.23 pCi/g maximum background activity: a surface soil sample collected at GNC1-JD11 (2.32 pCi/g).

- Uranium-235/236 activities were higher than the 0.11 pCi/g BCL. However, only three of the detections were higher than the 0.21 pCi/g maximum background activity. Those results are as follows:

Sample ID	Depth (ft bgs)	Reported Value (mg/kg)
GNC1-BG20 (duplicate)	0	0.229
GNC1-BG21	10	0.274
GNC1-JD07	10	0.31

An $LBCL_{DAF1}$ has not been established for this constituent.

As presented in NDEP guidance (NDEP 2009a), as part of the process used to evaluate radionuclide data for the BMI Common Areas, BRC assessed whether radionuclides are in secular equilibrium. The data indicate that radionuclides are in secular equilibrium at the Site. Specifically, the mean radioactivities for the Thorium-232 decay chain (*i.e.*, thorium-232, radium-228, and thorium-228) are comparable (1.4 pCi/g, 1.3 pCi/g, and 1.4 pCi/g, respectively). Similarly, the mean values for the uranium-238 decay chain (uranium-238, uranium-233/234, thorium-230, and radium-226) are also comparable, ranging from 0.96 pCi/g to 1.2 pCi/g. All of the mean values are lower than their respective maximum background activity levels. A quantitative evaluation of secular equilibrium is presented in Section 6.1.

Summary of Soil Exceedances

As summarized above and in the associated data tables (Table 4 and Appendix B), limited BCL and $LBCL_{DAF1}$ exceedances are currently observed in Site soils. The following constituents were reported at concentrations higher than the BCL and the maximum background concentration (where applicable):

- Arsenic (4 samples)
- Radionuclides (6 samples)

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

- Boron (2 samples)
- Cyanide (1 sample)

- Cadmium (1 sample)
- Total chromium (23 samples)
- Iron (19 samples)
- Magnesium (1 sample)
- Mercury (1 sample)
- alpha-BHC (1 sample)
- beta-BHC (19 samples)
- Dichloromethane (25 samples)
- Radionuclides (3 samples)

BRC's evaluation of the data revealed that the surface soil sample at one location (GNC1-BE22) exhibited elevated concentrations of several metals. In fact, this sample exhibited the maximum detections reported for any Site samples for the following metals: cadmium, chromium, hexavalent chromium, cobalt, copper, lead, molybdenum, and tin. Elevated concentrations of dioxins/furans, organochlorine pesticides, PAHs, and PCBs were also reported in this sample, and the dioxins/furans/PCB congeners detections were high enough to trigger remediation. The confirmation sample collected after remediation (GNC2-BE22C) indicated that dioxins/furans/PCB congeners detections had been significantly reduced. Following procedures defined in the SAP, this confirmation sample was not analyzed for constituents that did not trigger remediation, and post-remediation concentrations of metals, organochlorine pesticides and PAHs are unknown for this location. It is assumed that these concentrations have been reduced similarly to the dioxins/furans/PCB congeners concentrations. Sample location GNC1-BE22 was a biased sample location that coincided with debris pile #53. This debris area was described in the Table 3 of the SAP as being an area of approximate 20-foot radius, consisting of: concrete debris, rags, soil stockpiles, carpet, lumber, and circuit boards. Because all of the metal, organochlorine pesticide and PAH detections were lower than their respective BCL (or the maximum background concentration) and because the sample has been over-excavated, it was not necessary to treat the associated data as a hot spot or a separate exposure area in the HHRA.

The limited number of BCL and $LBCL_{DAF1}$ exceedances indicates that there is a relatively low likelihood of adverse impacts to human health and the environment due to residual chemical concentrations in Site soils. Consistent with the methodology in the *BRC Closure Plan* (BRC, ERM, and DBS&A 2007; Section 9 revised March 2010), an HHRA was conducted to further evaluate this possibility, as discussed in subsequent sections of this report. In addition, using the SESOIL and VLEACH unsaturated zone leaching models, BRC evaluated the potential impacts to groundwater quality due to residual chemical concentrations, as summarized in Section 9.

3.6 SURFACE FLUX SAMPLING

Concurrent with the confirmation soil sampling, BRC implemented surface flux sampling across the Site. This sampling conformed to the most recent NDEP-approved version of SOP-16 (BRC, ERM and MWH 2009). The sampling procedure for the effort included the USEPA surface emission isolation flux chamber (flux chamber) sampling to support an air pathway analysis for the Site. It should be noted that while radon samples were collected, they are not included in this HHRA. BRC recently submitted a technical memorandum to NDEP, in which the results of recent radon testing performed in groundwater and indoor air samples were presented. Based on the findings of this memorandum, NDEP concluded that HHRAs for Eastside property sub-areas do not need to evaluate the pathway of radon migration from groundwater to indoor air for sub-areas with a separation distance of at least 15 feet between any current or future building structure base and the high water table (letter dated November 9, 2010 from Greg Lovato, NDEP to Mark Paris, BRC). Based on this conclusion and given the depth to groundwater at the Site is at least 25 feet bgs, the intrusion of radon into indoor air is not evaluated in the HHRA for this Site. Furthermore, as discussed in Section 6.1, other radionuclides are consistent with background levels, which indicates that radon should also be consistent with background, naturally-occurring levels in soil.

The flux chamber sample collection rationale was based on the project goal of obtaining a representative dataset of air emissions per sub-area. Flux chamber samples were collected from 16 locations (Figure 11); 11 random sample locations and four biased locations (and one duplicate)

This density of sample collection is considered adequate for sub-area characterization given: the biased 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.

The analyte list for soil vapor flux samples is comprised of the list provided in the most recent NDEP-approved version of SOP-16 (BRC, ERM and MWH 2009). This analyte list is provided in Table 5, and consists of the full EPA Method TO-15 full scan, plus SIM analyses for a subset of the analytes. The analytical results are summarized in Table B-11 (Appendix B), and the principal investigator report of findings, which includes descriptions of sampling procedures, is

provided in Appendix D (included on the report CD in Appendix B).[14] It should be noted that, in addition to VOC data for the Site, the flux chamber report also contains data for the remainder of the Galleria North sub-area outside the Site boundaries. Data collected from outside the Site boundaries are not included in this HHRA. A data summary for the flux chamber sample results is provided in Table 6.

As seen in Tables 6 and B-11, 35 organic constituents were detected in at least one flux sample. The most commonly detected constituents were benzene, carbon tetrachloride, chloroform, and tetrachloroethene, which were detected in more than 85 percent of the samples using the SIM method. Nearly all of the detections were qualified with "J" flags, indicating the reported concentrations were estimated. All of the detections were lower than 1 $\mu g/m^2,min^{-1}$. The highest concentrations were of acetone (0.247 $\mu g/m^2,min^{-1}$ at GNC1-BE20 and 0.206 $\mu g/m^2,min^{-1}$ at GNC1-BE21) and dichloromethane (0.239 $\mu g/m^2,min^{-1}$ at GNC1-BE21). Both of these constituents are common laboratory contaminants.

As discussed in Section 4, all data have been validated. The HHRA surface flux dataset for the Site is included as Appendix D to the HHRA (found on the CD provided in Appendix B). Surface flux sample locations are shown on Figure 11.

3.7 LEACHATE DATA

As specified in the SAP, one sample collected within the Site during the initial sampling event was submitted for synthetic precipitation leaching procedure (SPLP) analysis, a sample collected from location GNC1-BE21, from 10 feet bgs. This soil sample was analyzed for aldehydes, general chemistry/ions, metals, organochlorine pesticides, PAHs, radionuclides, and SVOCs. Data associated with this SPLP sample are summarized in Appendix B, Table B-12. For reference, Table B-12 includes constituent-specific comparison levels (NDEP's residential water BCLs and USEPA Maximum Contaminant Levels). As summarized in Table B-12, there were few detections in the leachate sample from GNC1-BE21. All of the detections in this leachate sample were inorganic constituents (*i.e.*, general chemistry ions, metals and radionuclides); organic compounds were not detected. Of these detections, only the perchlorate (0.148 mg/L) and arsenic (0.0034 mg/L) detections were higher than their respective comparison levels.

[14] Note that this report was prepared prior to data validation, therefore, data qualifiers may differ than those for those in the remainder of this report.

4.0 DATA EVALUATION

This Section describes the procedures used to evaluate the acceptability of data for use in the risk assessment. Overall quality of sample results is a function of proper sample management. Management of samples began at the time of collection and continued throughout the analysis process. SOPs were followed to ensure that samples were collected and managed properly and consistently and to optimize the likelihood that the resultant data are valid and representative.

The primary objective of the data review and usability evaluation was to identify appropriate data for use in the HHRA. The analytical data were reviewed for applicability and usability following procedures in the *Guidance for Data Usability in Risk Assessment (Part A)* (USEPA 1992a) and USEPA (1989) and NDEP's *Data Usability Guidance for the BMI Complex and Common Areas* (NDEP 2008a). A quality assurance/quality control (QA/QC) review of the analytical results was conducted during the sampling events. According to the USEPA Data Usability Guidance, there are six principal evaluation criteria by which data are judged for usability in risk assessment. The six criteria are:

- reports to risk assessor (availability of information associated with Site data)
- documentation;
- data sources;
- analytical methods and detection limits;
- data review; and
- data quality indicators (DQIs), including precision, accuracy, representativeness, comparability, and completeness.

A summary of these six criteria for determining data usability is provided below. In addition to the six principal evaluation criteria, NDEP's Data Usability Guidance includes a step for data usability analysis, which is discussed after these six USEPA evaluation criteria. Data usability evaluation tables are provided electronically in Appendix E (included on the report CD in Appendix B).

4.1 CRITERION I – REPORTS TO RISK ASSESSOR (AVAILABILITY OF INFORMATION ASSOCIATED WITH SITE DATA)

The usability analysis of the site characterization data requires the availability of sufficient data for review. The required information is available from documentation associated with the Site data and data collection efforts. Data have been validated as described in the following DVSRs, which are provided electronically in Appendix F:

- *Data Validation Summary Report, Galleria North Sub-Area Soil Investigations, January-March 2009; July-August 2009 (Dataset 60)* (BRC and ERM 2010a), which was approved by NDEP on June 14, 2010;

- *Data Validation Summary Report, Sunset North Commercial and Galleria North Sub-Areas 2nd Round Confirmation Soil Investigations – September 2009, December 2009, January 2010 and May 2010 (Dataset 60a)* (BRC and ERM 2010b), which was approved by NDEP on September 10, 2010.; and

- *Data Validation Summary Report, 2010 Eastside North Confirmation Soil Investigations – April through September 2010 – Part I (Dataset 72a)* (BRC and ERM 2010c), which was re-submitted on November 15, 2010; approved by NDEP is pending.

The information sources and the availability of such information for the data usability process are as follows:

- A Site description provided in this report and the NDEP-approved SAPs identifies the location and features of the Site, the characteristics of the vicinity, and contaminant transport mechanisms.

- A site map with sample locations is provided on Figure 11.

- Sampling design and procedures were provided in the NDEP-approved SAPs.

- Analytical methods and sample quantitation limits (SQLs) are provided in the dataset file included on the report CD in Appendix B.

- A complete dataset is provided in the dataset file included on the report CD in Appendix B.

- A narrative of qualified data is provided with each analytical data package, the laboratory provided a narrative of QA/QC procedures and results. These narratives are included as part of the DVSRs (BRC and ERM 2010a,b,c).

- QC results are provided by the laboratory, including blanks, replicates, and spikes. The laboratory QC results are included as part of the DVSRs (BRC and ERM 2010a,b,c).

- Data flags used by the laboratory were defined adequately.

- Electronic files containing the raw data made available by the laboratory are included as part of the DVSRs (BRC and ERM 2010a,b,c).

4.2 CRITERION II – DOCUMENTATION REVIEW

The objective of the documentation review is to confirm that the analytical results provided are associated with a specific sample location and collection procedure, using available documentation. For the purposes of this data usability analysis, the chain-of-custody forms prepared in the field were reviewed and compared to the analytical data results provided by the laboratory to ensure completeness of the dataset as discussed in the DVSRs (BRC and ERM 2010a,b,c). Based on the documentation review, all samples analyzed by the laboratory were correlated to the correct geographic location at the Site, as shown on Figure 11. The samples were collected in accordance with the SAP and RAWP (BRC 2009), and the SOPs developed for the BMI Common Areas as provided in the FSSOP (BRC, ERM and MWH 2009). Field procedures included documentation of sample times, dates and locations, other sample specific information such as sample depth were also recorded. Information from field forms generated during sample collection activities was imported into the project database.

Measurement of asbestos was conducted consistent with NDEP's *Technical Guidance for the Calculation of Asbestos-Related Risk in Soils* (2009b). The analytical data were reported in a format that provides adequate information for evaluation, including appropriate quality control measures and acceptance criteria. Each laboratory report describes the analytical method used, provides results on a sample by sample basis along with sample specific SQLs, and provides the results of appropriate quality control samples such as laboratory control spike samples, sample surrogates and internal standards, and matrix spike samples. All laboratory reports, except for asbestos, provided the documentation required by USEPA's Contract Laboratory Program (USEPA 2003a, 2004b,c) which includes chain of custody records, calibration data, QC results for blanks, duplicates, and spike samples from the field and laboratory, and all supporting raw

data generated during sample analysis. Reported sample analysis results were imported into the project database.

The recommended method for providing asbestos data that are useful for risk assessment purposes was performed by EMSL Analytical Inc in Westmont, New Jersey. This laboratory is not currently certified in the State of Nevada, but has California and national accreditation for asbestos analysis. Because many of the QC procedures associated with other analyses do not apply to asbestos analysis (*e.g.*, laboratory blanks, duplicates and spikes), data validation of the asbestos laboratory reports involved a somewhat lesser level of effort than for other analyses.[15]

4.3 CRITERION III – DATA SOURCES

The review of data sources is performed to determine whether the analytical techniques used in the site characterization process (*i.e.*, SAP sampling) are appropriate for risk assessment purposes. The data collection activities specified in the SAP were developed to characterize a broad spectrum of chemicals potentially present on the Site, including asbestos, aldehydes, general chemistry/ions, VOCs, SVOCs, metals, dioxins/furans, PAHs, organochlorine pesticides, radionuclides, and PCBs (site related chemicals and analyses performed under SAP implementation are listed in Table 2, and Table 5 for surface flux samples). Because of the soil removals that have occurred on the Site, data collected prior to SAP implementation had significant data gaps and inconsistencies in analytical methodology, and as discussed in Section 2, those historical data are not evaluated further in the data usability process, or the HHRA. Only post-remediation data collected under the SAP (and subsequent RAWPs) are being used in the HHRA, and were subjected to the formal data usability evaluation described in this section. Figure 11 demonstrates that samples collected in accordance with the SAP are situated across the entire Site; analyses associated with these samples are summarized in Tables 2 (soil) and 5 (surface flux).

The State of Nevada is in the process of certifying the laboratories used to generate the analytical data. As such, standards of practice in these laboratories follow the quality program developed by the Nevada Revised Statutes (NRS) and are within the guidelines of the analytical methodologies established by the USEPA. Based on the review of the available information, the data sources for chemical and physical parameter measurements are adequate for use in a risk assessment.

[15] Although radon samples were collected and analyzed for the Site, radon has been evaluated has been evaluated through a separate process and is not considered further in the data usability process (see Section …).

4.4 CRITERION IV – ANALYTICAL METHODS AND DETECTION LIMITS

In addition to the appropriateness of the analytical techniques evaluated as part of Criterion III, it is necessary to evaluate whether the detection limits are low enough to allow adequate characterization of risks. At a minimum, this data usability criterion can be met through the determination that routine USEPA and U.S. Department of Energy (DOE) reference analytical methods were used in analyzing samples collected from the Site. The USEPA and DOE methods that were used in conducting the laboratory analysis of soil and surface flux samples are identified in the dataset file included on the report CD in Appendix B. Each of the identified methods is considered the most appropriate method for the respective constituent class and each was approved by NDEP as part of the SAP and RAWPs (BRC 2008, 2009). As recommended by NDEP's guidance on *Detection Limits and Data Reporting* (NDEP 2008b) the laboratory reported SQL was used in evaluating detection limits.

Laboratory practical quantitation limits (PQLs) were based on those outlined in the reference method, the SAP (BRC 2008), and the project QAPP (BRC and ERM 2009a). In accordance with respective laboratory SOPs, the analytical processes included performing instrument calibration, laboratory method blanks, and other verification standards used to ensure quality control during the analyses of collected samples.

The range of SQLs achieved in field samples was compared to NDEP BCLs (NDEP 2010a). As seen in the summary of the Site dataset provided in Tables 4 (soil) and 6 (surface flux), of the standard analytes, only three constituents had SQLs that exceeded their respective BCLs.

- The arsenic SQL in two of 55 sample analyses was higher than the BCL; this constituent was detected in all of the other samples tested. These two results were qualified due to equipment blank contamination and the reporting limits were raised to the PQL.

- Organics with SQLs higher than the BCL were n-nitrosodi-n-propylamine in 39 of 51 samples, and dichloromethyl ether in all 51 samples analyzed. Neither of these compounds was detected in any samples. The n-nitrosodi-n-propylamine SQL was only slightly higher than the BCL. The dichloromethyl ether SQL is greater than 200 times the BCL and a reduction in the SQL is not likely to be easily achieved by the laboratory. Therefore, the analytical SQLs are considered adequate for risk assessment purposes.

As discussed in the *2008 Supplemental Shallow Soil Background Report* (BRC and ERM 2009b), there are differences in SQLs among datasets which may affect data comparability for

datasets comprised primarily of non-detected values. For these datasets, left-censored data can result in difficulties in differentiating whether datasets are actually different or merely an artifact of detection limits.

4.5 CRITERION V – DATA REVIEW

The data review portion of the data usability process focuses primarily on the quality of the analytical data received from the laboratory. Soil and surface flux sample data were subject to data validation. DVSRs were prepared as separate deliverables (BRC and ERM 2010a,b,c; Appendix F). The analytical data were validated according to the internal procedures using the principles of USEPA National Functional Guidelines (USEPA 1999, 2004d, 2005a, 2008) and were designed to ensure completeness and adequacy of the dataset. Additionally, the DVSRs were issued utilizing NDEP's two *Supplemental Guidance on Data Validation* documents (NDEP 2009c,d). Any analytical errors and/or limitations in the data have been addressed and an explanation for data qualification provided in the respective data tables. The results of ERM's data review for these issues are presented in the DVSRs and are summarized below.

Only one of the data points was rejected (an ammonia result for GNBF19-11). The rejection was due to a very low matrix spike/matrix spike duplicate (MS/MSD) recovery, and does not reflect a larger concern for this compound, sample, or method. Data qualifications are discussed in the subsections that follow.

4.5.1 Holding Time Exceedances / Sample Condition Qualifications

Holding time refers to the period of time between sample collection and the preparation and/or analysis of the sample. The accuracy of analytical results may depend upon analysis within specified holding times and sample temperature. In general, a longer holding time is assumed to result in a less accurate measurement due to the potential for loss or degradation of the analyte over time. Sample temperature is of greatest concern for VOCs that may volatilize from the sample at higher temperatures. As described in the DVSRs (BRC and ERM 2010a,b,c) sample results were reviewed for compliance with the method-prescribed preparation and analysis holding times.

USEPA guidance for validation allows professional judgment to be used in evaluating qualification due to holding time exceedances. Sample results that were generated after the required holding time but less than two times after the holding time were qualified as estimated (J or UJ). If the samples were prepared after two times the holding time was exceeded, non-

detect results are qualified as rejected (R). Qualifications to five samples were made on the basis of exceeded holding times (see Table 2-2 of DVSRs 60 and 60a [BRC and ERM 2010a,b]; Appendix F), as follows:

- Hexavalent chromium results for three soil samples in two laboratory batches (TestAmerica batches F9A290238 [GNC1-BD19-0 and GNC1-BD19-10, three days beyond the method-prescribed 4-day period], F9B120206 [SPLP sample GNC1-BE21-10, 4.5 hours past the holding time], were qualified due to holding time exceedances. The results were qualified as estimated with a potential low bias (UJ).

- Dioxin/furan results associated with soil sample GNC1-JD09-0 and its duplicate were associated with analyses performed one day outside the method-prescribed holding time. The results were qualified as estimated with a potential low bias ("J-") for detections or "UJ" for non-detections.

As noted in the DVSRs (BRC and ERM 2010a,b,c), all samples were received at the laboratory within the required temperatures range of 4°± 2° Celsius. No sample results were qualified based on sample temperatures or other sample preservation issues.

4.5.2 Blank Contamination

Blanks are artificial samples designed to evaluate the nature and extent of contamination of environmental samples that may be introduced by field or laboratory procedures. Field and laboratory blanks, consisting of contaminant-free water, were prepared and analyzed as part of standard QA/QC procedures to monitor for potential contamination of field equipment, laboratory process reagents, and sample containers. As presented in the DVSRs (BRC and ERM 2010a,b,c) 427 results were qualified as undetected (U) or estimated (J+) due to laboratory or field blank contamination, as discussed below. Detections of constituents qualified as non-detections due to comparable detections in laboratory or field blanks are known as "censored" data, and are presented in Tables 2-5 and 2-6 of DVSR 60, Tables 2-4 and 2-5 of DVSR 60a, and Tables 2-3 and 2-4 of DVSR 72a (Appendix F). In these cases, non-detections are represented in the database as "< [*the PQL*]" in the case of inorganics detected below the PQL, or as "<[*result value*]" for all others.

These censored data are summarized in Appendix E, Table E-14 (included on the report CD in Appendix B) by compound class. As seen in that table, analytes were initially reported as detections in samples, but were later qualified as non-detections based on the presence of

comparable concentrations of that analyte in blank samples. As seen in Appendix E, compounds most often censored for soil results included the following:

- Acetone (43 samples)
- Dichloromethane (18 samples)
- Styrene (18 samples)
- Cyanide (34 samples)
- Mercury (23 samples)
- 1,2,4-Trimethylbenzene (35 samples)
- Unknown aldol condensate (SVOC TIC) (48 samples)

In addition, benzene was frequently censored for flux samples (14 of 16 TO-15 full scan samples).

4.5.3 Sample/Duplicate Differences Outside Permissible Range or Greater than Permissible Values

During the data validation process, sample/duplicate results are evaluated to determine whether differences in those results suggest potential issues with data quality. Specifically, the analyst reviews the following:

- MS/MSD relative percent difference (RPDs), to determine whether the RPDs are outside acceptance limits;
- Laboratory control sample/laboratory control sample duplicate (LCS/LCSD) RPDs, to determine whether the RPDs are outside acceptance limits;
- Sample/field duplicate results to determine whether differences are greater than the permissible value; and
- Sample/laboratory duplicate results to determine whether differences are greater than the permissible value.

4.5.3.1 Qualifications due to MS/MSD Recoveries Outside Acceptance Criteria

As discussed in the DVSRs (BRC and ERM 2010a,b,c), inorganic constituent results for 345 sample results were qualified as estimated (either UJ for non-detections or J for detections; "+" or " – " added to denote potential high or low bias, respectively) based on MS/MSD recoveries; there was one rejection for data associated with MS/MSD recoveries. The qualifications applied on the basis of MS/MSD recoveries were as follows:

- One ammonia result GNBF19-11 was qualified and rejected due to a recovery much lower than the acceptance criterion.

- The Total Kjeldahl Nitrogen results for the following nine soil samples were qualified as estimated due to a recovery greater than the acceptance criteria:

Sample ID	Lab ID
GNC1-JD07-0	F9A310166004
GNC1-JD07-10	F9A310166005
GNC1-JS09-0	F9A310166006
GNC1-JS09-0-FD	F9A310166007
GNC1-JS09-10	F9A310166008

Sample ID	Lab ID
GNC1-JS10-0	F9A310166011
GNC1-JS11-0	F9A300184006
GNC1-JS11-0-FD	F9A300184007
GNC1-JS11-10	F9A300184008

- Metals results for soil samples in various laboratory data packages were qualified due to recoveries outside the acceptance criteria, as summarized in the table below:

Laboratory Data Package	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Copper	Lead	Lithium	Manganese	Mercury	Molybdenum	Potassium	Selenium	Silver	Strontium	Tin	Titanium	Tungsten	Uranium	Vanadium	Zinc
F9A290238	-		+										+		+				-			
F9A300184	-		+					+							+				-			-
F9A310166	-										+								-			
F9B060191	-		-												+						-	
F9B070176	-		- & +			+	+				-		+		+				-		+	- & +
F9B100109	-		-	+					+						+				-	+		- & +
F9B140120	-				+	-		-					+		+				-		-	-
F9B180129	-				+	-		-					+						-		-	-
F9H140144	-	+	- & +		+		+	+			-		+			-		+	-	+	+	+
F0A090446	-	+	+		+		+	+	+			+	+	+	+	+	+	+		+	+	+
F0H030409	-		+							+			+						-			

+ = Recovery greater than the acceptance limits
- = Recovery less than the acceptance limits
Blank entry signifies that the recovery was within the acceptance limits

Appendix E, Table E-11 (included on the report CD in Appendix B) lists the samples and associated analytes exhibiting MS/MSD percent recoveries below the laboratory control limits. In cases where the recoveries were higher than the acceptance criteria, the results have the potential of being similarly biased high and using these data in the HHRA could result in risks being calculated that are higher than would be associated with actual Site conditions. Of more

concern for the HHRA is underestimation of risk, which could be associated with the use of data that are biased low.

As indicated in that table, reported detections and non-detects for soil data were flagged as estimated ("J-" or "UJ," respectively) due to low MS/MSD recoveries (*i.e.*, from 30 to 74 percent for metals)[16]. Detections associated with "very low" MS/MSD recoveries (*i.e.*, less than 30 percent for metals), are generally rejected as unusable. Because only one of the MS/MSD recoveries was that low, only one sample result was rejected on this basis.

The data flagged as estimated based on low MS/MSD recoveries were subjected to further review in terms of data usability for the Site, as discussed in Section 4.7.4.

4.5.3.2 Qualifications due to LCS/LCSD Recoveries Outside Acceptance Criteria

Organic and inorganic constituent results for four samples were qualified as estimated (either UJ for non-detections or J for detections; "+" or " – " added to denote potential high or low bias, respectively) based on LCS/LCSD recoveries. The qualifications applied on the basis of LCS/LCSD recoveries were as follows:

Sample ID	Lab ID	Analyte	Result	Unit	Recovery	Limits
GNC1-BD19-0	F9A290238010	Cyanide, Total	< 0.087 UJ	mg/kg	83	85-115
GNC1-BD19-10	F9A290238011	Cyanide, Total	<0.53 UJ	mg/kg	83	85-115
GNC1-JS11-0	F9A300184006	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	12 J	pg/g	78	79-140
GNC1-JS11-0-FD	F9A300184007	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	49 J	pg/g	78	79-140

As noted above, recoveries below the lower laboratory limits are of the most concern in terms of data usability. Appendix E, Table E-11 (included on the report CD in Appendix B) lists the samples and associated analytes exhibiting LCS/LCSD percent recoveries below the lower laboratory control limit. No results were rejected as unusable based on very low LCS/LCSD recovery. The data flagged as estimated based on low LCS/LCSD recoveries were subjected to further review in terms of data usability for the Site, as discussed in Section 4.7.4.

4.5.3.3 Qualifications due to Sample/Field Duplicate Differences Outside Acceptance Criteria

The following eight soil field duplicates were collected during the sampling activities

- GNC1-BE20-0-FD
- GNC1-JS11-0-FD

[16] If additional validation criteria (aside from the MS/MSD recoveries) did not suggest a low bias for a given result, the sample result was flagged with "J" (no bias inferred).

- GNC1-BG20-0-FD
- GNC1-JD09-0-FD
- GNC1-JS09-0-FD
- GNC2-BE20C-0-DUP
- GNC2-JS10C-0-DUP
- GNC2-JA04-0-DUP

In addition, the following surface flux field duplicate was also collected during the sampling activities: GNC1-JS11-R.[17]

Field duplicate differences in excess of acceptance limits were noted in eight field duplicate pairs of soil samples. The differences are presented in Appendix E, Table E-12 (included on the report CD in Appendix B). All associated data were flagged as estimated (J/UJ). No data were rejected on the basis of sample/field duplicate differences.

4.5.3.4 Qualifications due to Sample/Laboratory Duplicate Differences Outside Acceptance Criteria

Of the samples representing post-remediation conditions (*i.e.*, not including those data points associated with samples from soil intervals subsequently removed from the Site), the following 26 samples had sample/laboratory duplicate differences greater than the 1 pCi/g permissible value:

Field Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD or Difference
GNC1-BD19-0	F9A290238010	Cation Exchange Capacity	16.7	meq/100g	RPD=22
GNC1-BD19-10	F9A290238011	Cation Exchange Capacity	20.7	meq/100g	RPD=22
GNC1-BE19-0	F9B060191008	Cation Exchange Capacity	22.6	meq/100g	RPD=44
GNC1-BE19-10	F9B060191009	Cation Exchange Capacity	20.2	meq/100g	RPD=44
GNC1-BE22-0	F9B060191016	Cation Exchange Capacity	12.8	meq/100g	RPD=44
GNC1-BE22-10	F9B060191017	Cation Exchange Capacity	13.5	meq/100g	RPD=44
GNC1-BF19-0	F9B060191010	Cation Exchange Capacity	16.4	meq/100g	RPD=44
GNC1-BF19-11	F9B060191011	Cation Exchange Capacity	15.4	meq/100g	RPD=44
GNC1-BF21-0	F9B060191014	Cation Exchange Capacity	18.8	meq/100g	RPD=44
GNC1-BF21-10	F9B060191015	Cation Exchange Capacity	12.9	meq/100g	RPD=44
GNC1-BG19-0	F9B060191012	Cation Exchange Capacity	17.5	meq/100g	RPD=44
GNC1-BG19-10	F9B060191013	Cation Exchange Capacity	13.2	meq/100g	RPD=44
GNC1-BG20-0	F9B060191001	Cation Exchange Capacity	10	meq/100g	RPD=44
GNC1-BG20-0-FD	F9B060191002	Cation Exchange Capacity	16.5	meq/100g	RPD=44
GNC1-BG20-10	F9B060191003	Cation Exchange Capacity	6.3	meq/100g	RPD=44

[17] The Galleria North-School Site includes a sub-set of the entire Galleria North sub-area. Field duplicates noted in this section do not reflect the total number of field duplicates collected during the Galleria North sub-area sampling events.

Field Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD or Difference
GNC1-BG21-0	F9B060191004	Cation Exchange Capacity	14.2	meq/100g	RPD=44
GNC1-BG21-10	F9B060191005	Cation Exchange Capacity	15.4	meq/100g	RPD=44
GNC1-BG22-0	F9B060191006	Cation Exchange Capacity	16.5	meq/100g	RPD=44
GNC1-BG22-10	F9B060191007	Cation Exchange Capacity	11.9	meq/100g	RPD=44
GNC1-JD10-0	224260001	Radium-228	1.14	pCi/g	Difference=1.41
GNC1-JD10-11	224260002	Radium-228	1.38	pCi/g	Difference=1.41
GNC1-JD11-0	224260003	Radium-228	0.958	pCi/g	Difference=1.41
GNC1-JD11-11	224260004	Radium-228	1.11	pCi/g	Difference=1.41
GNC1-JS11-0	223713010	Radium-228	1.3	pCi/g	Difference=1.166
GNC1-JS11-0-FD	223713011	Radium-228	2.18	pCi/g	Difference=1.166
GNC1-JS11-10	223713012	Radium-228	1.52	pCi/g	Difference=1.166

The above data flagged as estimated based on sample/laboratory duplicate differences were subjected to further review in terms of data usability for the Site, as discussed in Section 4.7.4.

4.5.4 Internal Standards Outside Acceptance Criteria

Internal standards are prepared for certain organic GC/MS and ICP/MS analyses by adding compounds similar to target compounds of interest to sample aliquots. Internal standards are used in the quantitation of target compounds in the sample or sample extract. The evaluation of internal standards involved comparing the instrument response and retention time from the target compounds in the sample with the response and retention time of specific internal standards added to the sample extract prior to analysis.

As presented in the DVSRs (BRC and ERM 2010a,b,c), no sample results were rejected based on internal standards. The following results were qualified due to internal standard exceedances:

- SVOC results for one soil sample (GNC1-BE20-10);
- PCB results for two soil samples (GNC1-BF22-0 and GNC1-JD06-0);
- VOC results for 10 flux samples (GNC1-BE22, GNC1-BF19, GNC1-BF20, GNC1-BF21, GNC1-BG19, GNC1-BG20, GNC1-BG21, GNC1-BG22, GNC1-JS09, and GNC1-JS10)
- VOC results for 10 soil samples as follows:

Laboratory Data Package #	Sample ID
F9B060191	GNC1-BE19-0 GNC1-BE22-0 GNC1-BG19-0 GNC1-BG20-0 GNC1-BG20-0-FD
F9B070176	GNC1-BE20-0 GNC1-BE20-0-FD GNC1-BF22-0
F9A300184	GNC1-JS11-0 GNC1-JS11-0-FD

- Dioxins/furans results for three soil samples as follows

Laboratory Data Package #	Sample ID
F9B070176	GNC1-BF22-0 GNC1-BE21-0
FB9100109	GNC1-JD10-0

4.5.5 Surrogate Percent Recoveries Outside Laboratory Control Limit

As discussed in the DVSRs (BRC and ERM 2010a,b,c), surrogate spikes were added to each of the samples submitted for organic analysis to monitor potential interferences from the matrix. Results associated with unacceptable surrogate recoveries were qualified as estimated (J+ or UJ). Generally, when surrogate recoveries are less than 10 percent, associated non-detect results are qualified as rejected (R) because false negatives are a possibility. No sample results were rejected due to surrogate recoveries. The following soil samples were qualified due to surrogate recovery exceedances:

Sample ID	Lab ID	Analysis	Recovery	Acceptable Range
GNC1-BE19-0	F9B060191008	Organochlorine pesticides	160	61-150
GNC1-BE20-0	F9B070176006	Organochlorine pesticides	60	72-130
GNC1-BE20-0-FD	F9B070176007	VOCs	152	46-150
GNC1-BG19-0	F9B060191012	VOCs	170	46-150
GNC1-JD10-0	F9B100109008	Organochlorine pesticides	171	61-150
GNC1-JS10-0	F9A310166011	Organochlorine pesticides	220	61-150

In addition, two flux samples (GNC1-BG19 and GNC1-BG22) were qualified due to surrogate recovery exceedances, both higher than the acceptable range.

Appendix E (included on the report CD in Appendix B) lists the samples and associated analytes exhibiting surrogate percent recoveries below the laboratory control limits. As seen in that appendix, with the exception of the organochlorine pesticide results for GNC1-BE20-0, the recoveries outside the acceptance criteria were higher than the upper laboratory control limit.

The GNC1-BE20-0 organochlorine pesticide results were subjected to further review in terms of data usability for the Site, as discussed in Section 4.7.4.

4.5.6 Calibrations Outside Laboratory Control Limits

Requirements for instrument calibration ensure that the instrument is capable of producing acceptable quantitative data. Initial calibration demonstrates that the instrument is capable of acceptable performance in the beginning of analytical run. Continuing calibrations checks document satisfactory maintenance and adjustment of the instrument on a day-to-day basis. As presented in the DVSRs (BRC and ERM 2010a,b,c), certain data were qualified due to initial or continuing calibration issues. Of specific concern, are analytes with a final qualifier indicating a low bias due to calibration. In the following tables the percentage of analyte recovered is based on the percent difference of the actual amount and recovered amount reported from the continuing calibration. As the percentage decrease the potential for false negatives increases.

The following table summarizes those analytes for SVOCs:

Analyte	# of Samples Qualified	Percent of Qualified Non-detect	Percentage of Analyte Recovered as Indicated by Outlier
1,4-Dioxane	5	100%	57-72%
3,3'-Dichlorobenzidine	5	100%	69-74%
3-Nitroaniline	10	100%	61-74%
4-Nitroaniline	22	100%	64-70%
Acetophenone	5	100%	69-71%
Benzoic Acid	15	100%	67-74%
bis[Chlorophenyl]sulfone	11	100%	74%
bis[p-Chlorophenyl]disulfide	2	100%	72%
Carbazole	10	100%	56-75%
Diphenyl sulfone	11	100%	74%
Hexachlorocyclopentadiene	2	100%	60%
Octachlorostyrene	3	100%	69%
Phthalic Acid	11	100%	45-65%

The following table summarizes those analytes for organochlorine pesticides:

Analyte	# of Samples Qualified	Percent of Qualified Non-detect	Percentage of Analyte Recovered as Indicated by Outlier
4,4'-DDT	3	66%	81-83%
Heptachlor	8	100%	82-83%
Methoxychlor	4	100%	83-84%

The following table summarizes those analytes for VOCs:

Analyte	# of Samples Qualified	Percent of Qualified Non-detect	Percentage of Analyte Recovered as Indicated by Outlier
Freon 12	16	100%	71%
Methyl iodide	5	100%	71%
MTBE	14	100%	73%

In addition, low instrument response was noted for ethanol, acetonitrile and methyl ethyl ketone as indicated by the relative response factor (RRF).

The following table summarizes those analytes for surface flux VOCs:

Analyte	# of Samples Qualified	Percent of Qualified Non-detect	Percentage of Analyte Recovered as Indicated by Outlier
1,2,4-Trichlorobenzene	7	100%	33-70%
1,2,4-Trimethylbenzene	3	0%	67%
2-Methyl-1-propanol	11	91%	55-66%
2,2-Dichloropropane	1	100%	57%
Acetone	9	44%	48-67%
Bromoform	1	100%	61%
Bromomethane	1	100%	39%
Carbon disulfide	4	50%	48-58%
Chloroethane	1	100%	69%
cis-1,3-Dichloropropene	1	100%	66%
Cymene	5	100%	65-69%
Ethanol	3	100%	50%
Methyl ethyl ketone	1	0%	69%
Methyl iodide	1	100%	43%
Naphthalene	4	100%	60%
n-Butylbenzene	8	100%	61-69%
Tert-Butylbenzene	8	100%	62-69%
Trans-1,3-Dichloropropene	1	100%	50%
Trichloroethene	4	100%	65-68%
Vinyl acetate	1	100%	70%

4.5.7 Tentatively Identified Compounds

For the GC/MS methods, a list and estimated concentrations for tentatively identified compounds (TICs) were provided if detected. The majority of the reported TICs were identified as "unknown" or "unknown aldol condensate." Others were as follows:

.beta.-Sitosterol
1-Bromo-11-iodoundecane
1-Bromo-4-bromomethyldecane
1-Decanol, 2-hexyl-
1H-Indene, 5-butyl-6-hexyloctahydro-
2,5-Furandione, 3-dodecyl-
Heptadecane
Heptadecane, 9-octyl
Hexacosane
Hexadecanamide
Hexadecane, 2,6,10,14-tetramethyl-
Hexadecanoic acid

28-Nor-17.alpha.(H)-hopane	Imidazole, 2-fluoro-1-triacetylribofuran
2-Dodecen-1-yl(-)succinic anhydride	Myristin, 2,3-diaceto-1-
2-Naphthalenol, 1-((4-methyl-2-nitrophen	N1-Tetrahydrofuran-2-ylmethyl-2-(4-chlor
5-Bromo-4-oxo-4,5,6,7-tetrahydrobenzofur	n-Hexadecane
6-Isopropenyl-4,8a-dimethyl-4a,5,6,7,8,8	Nonadecane
9-Octadecenamide, (z)-	Nonadecane, 1-chloro-
9-Octadecenoic acid, (e)-	Octacosane
alpha-Methylstyrene	Octadecanamide
Benzamide, N-propyl-	Octadecane, 1-chloro-
Cholestan-3-one, (5.alpha.)-	Octadecanoic acid
Cholestane	PCB 138
Cyclotetradecane, 1,7,11-trimethyl-4-(1-	PCB 156
D-Homoandrostane, (5.alpha.,13.alpha.)-	PCB 167
Eicosane	PCB 175
Eicosane, 9-cyclohexyl-	PCB 187
Erucylamide	Silane, trichlorooctadecyl-
Ethyl acetate	Stearic acid hydrazide
Heneicosane, 11-cyclopentyl-	Tetradecanamide
Heneicosane, 11-pentyl-	Tricosane
Heptacosane, 1-chloro-	Vitamin E

Only six of the identified chemicals, alpha-methylstyrene, ethyl acetate, and the PCBs, have toxicity criteria associated with it. Reported TICs such as siloxanes and amides are indicative of column breakdown and saturated fatty acids. With the exception of the PCBs, vitamin E, and beta-sitosterol, the above named compounds are indicative of column breakdown and are not likely site related. The PCBs are included in the PCB congener analysis EPA method 1668. It is unclear what the source of vitamin E could be; however, it is unlikely to result in adverse health effects to those exposed. Beta-sitosterol is a plant sterol and could be present due to some organic matter collected along with the soil sample. Toxicity criteria have not been established for any of these TICs.

4.5.8 Data Review Summary

For 801 out of 15,968 analytical results, quality criteria were not met and various data qualifiers were added to indicate limitations and/or bias in the data. The definitions for the data qualifiers,

or data validation flags, used during validation are those defined in SOP-40 (BRC, ERM and MWH 2008) and the project QAPP (BRC and ERM 2009a). Sample results are rejected based on findings of serious deficiencies in the ability to properly collect or analyze the sample and meet QC criteria. Only rejected data are considered unusable for decision-making purposes and rejected analytical results are not used in the HHRA.

As noted above, only one sample result (an ammonia result for GNBF19-11) was rejected in the Site dataset and excluded from the HHRA for the reasons previously noted. Other data points were excluded from the risk assessment not due to data quality issues, but for one of the following reasons: sample was re-analyzed by the laboratory; or sample location was removed during a removal action.

4.6 CRITERION VI – DATA QUALITY INDICATORS

DQIs are used to verify that sampling and analytical systems used in support of project activities are in control and the quality of the data generated for this project is appropriate for making decisions affecting future activities. The DQIs address the field and analytical data quality aspects as they affect uncertainties in the data collected for site characterization and risk assessment. The DQIs include precision, accuracy, representativeness, comparability, and completeness (PARCC). The project QAPP provides the definitions and specific criteria for assessing DQIs using field and laboratory QC samples and is the basis for determining the overall quality of the dataset. Data validation activities included the evaluation of PARCC parameters, and all data not meeting the established PARCC criteria were qualified during the validation process using the guidelines presented in the National Functional Guidelines for Laboratory Data Review, Organics and Inorganics and Dioxin/Furans (USEPA 1999, 2004d, 2005a, 2008).

4.6.1 Evaluation of Data Precision

Precision is a measure of the degree of agreement between replicate measurements of the same source or sample. Precision is expressed by RPD between replicate measurements. Replicate measurements can be made on the same sample or on two samples from the same source. Precision is generally assessed using a subset of the measurements made. The precision of the data was evaluated using several laboratory QA/QC procedures. Based on ERM's review of the results of these procedures, the general level of precision for the Site data and the background data (BRC and ERM 2009b) does not appear to limit the usability of a particular analyte, sample, method, or dataset as a whole.

4.6.2 Evaluation of Data Accuracy

Accuracy measures the level of bias that an analytical method or measurement exhibits. To measure accuracy, a standard or reference material containing a known concentration is analyzed or measured and the result is compared to the known value. Several QC parameters are used to evaluate the accuracy of reported analytical results:

- Holding times and sample temperatures;
- LCS percent recovery;
- MS/MSD percent recovery;
- Spike sample recovery (inorganics);
- Surrogate spike recovery (organics); and
- Blank sample results.

Detailed discussions of and tables with specific exceedances, with respect to precision and accuracy, are provided in the DVSRs (BRC and ERM 2010a,b,c) and data qualified as a result of this evaluation are presented with qualifiers in the data usability tables in Appendix E (included on the report CD in Appendix B). As presented in Section 4.5, only one sample result (an ammonia result for GNBF19-11) was rejected in the Site dataset and excluded from the HHRA. The remaining results were considered sufficiently accurate for risk assessment purposes, as discussed in Section 4.7.

4.6.3 Evaluation of Data Representativeness

Representativeness is the degree to which data accurately and precisely represent a characteristic of the population at a sampling point or an environmental condition (USEPA 2002a). There is no standard method or formula for evaluating representativeness, which is a qualitative term. Representativeness is achieved through selection of sampling locations that are appropriate relative to the objective of the specific sampling task, and by collection of an adequate number of samples from the relevant types of locations. The sampling locations at the Site were based on both systematic sampling with random point placement within each grid cell, as well as focused samples collected from specific areas to further investigate potential areas.

The samples were analyzed for a broad spectrum of chemical classes across the Site. Samples were delivered to the laboratory in coolers with ice to minimize the loss of analytes. In a few instances, such as samples being analyzed slightly beyond the holding time or delayed preservation of SPLP samples, the representativeness of the associated data is in question; however, there were limited instances of this, as discussed in Section 4.5.1. As previously noted, no sample results were qualified based on sample temperatures or preservation.

Sample specific results are discussed in the DVSRs. A discussion of representativeness for the background dataset is provided in the *Background Shallow Soil Summary Report, BMI Complex and Common Area Vicinity* (BRC and TIMET 2007).

4.6.4 Evaluation of Data Completeness

Completeness is commonly expressed as a percentage of measurements that are valid and usable relative to the total number of measurements made. Analytical completeness is a measure of the number of overall accepted analytical results, including estimated values, compared to the total number of analytical results requested on samples submitted for analysis after review of the analytical data. Some of the data were eliminated due to data usability concerns. The percent completeness for the Site is 99.99 percent and includes the surface flux chamber data. The percent completeness for the soil only dataset is 99.99 percent. The percent completeness in the background dataset is 98.5 percent (BRC and TIMET 2007).

4.6.5 Evaluation of Data Comparability

Comparability is a qualitative characteristic expressing the confidence with which one dataset can be compared with another. The desire for comparability is the basis for specifying the analytical methods; these methods are generally consistent with those used in previous investigations of the Site. The comparability goal is achieved through using standard techniques to collect and analyze representative samples and reporting analytical results in appropriate units. The ranges of detected sample results from the current investigation are generally comparable to recent results at the Eastside, as well as the site background datasets (see Section 5). There are differences in SQLs among datasets which may affect data comparability for datasets comprised primarily of non-detected values. Examples of the differences in SQLs at the site and in shallow background for several analytes with low detection frequency are shown in the following table.

Analyte	Background Min SQL	Background Max SQL	Site Min SQL	Site Max SQL[18]
Antimony	0.3298	0.3298	0.225	2.7
Boron	3.2	5.4	16.5	53
Mercury	0.0072	0.0072	0.005	0.0373
Selenium	0.1579	0.1579	0.4	2.7
Thallium	0.5428	1.3	0.105	1

All results in units of mg/kg.

Cumulative probability plots and side-by-side boxplots for the background and Site datasets are included in Appendix G. For these datasets, left-censored data can result in difficulties in differentiating whether datasets are actually different or merely an artifact of detection limits. Note that for constituents with SQLs that meet project limit requirements, comparisons between Site and background may be less important as these left-censored data are likely to indicate conditions that pose an "acceptable" risk and further evaluation is not necessary.

4.7 DATA ANALYSIS

Data validation and usability evaluations tend to look at the data on a result by result basis. The data analysis step is intended to take a step back and look at the dataset as a whole. The intent of this is to identify any anomalies or unusual data trends that may indicate any potential laboratory issues. This is performed by reviewing summary statistics, cumulative probability plots and side-by-side boxplots, or other visual aids. The soil dataset used for the HHRA is summarized in tabular format in Table 4. While it is not feasible to present all the detected analytes in a graphical format, cumulative probability plots and side-by-side boxplots are provided in Appendix G for the analytes included in the background comparisons (that is, metals and radionuclides). No anomalies in the dataset were identified.

As discussed in Section 4.5, the data validation process resulted in numerous sample results being qualified as estimated, with only the above-listed results being rejected. Sample results qualified as estimated are likely to be quantitatively biased to some degree; estimated analytical results are used in the HHRA. Data qualified as anomalous, as defined in the DVSRs, refers to data that were qualified ("U") due to blank contamination, and are used in the HHRA. These data usability decisions follow the guidelines provided in the *Guidance for Data Usability in Risk Assessment (Part A)* (USEPA 1992a).

[18] The SQLs reported here may differ from the detection limits reported elsewhere (*e.g.*, background comparisons). Detection limits may be raised due to blank contamination.

For the HHRA, all soil data associated with post-remediation conditions that were not rejected during data validation, replaced by re-analysis results, or removed during a soil removal action were included. Data were often qualified as estimated due to recoveries being outside the acceptance criteria. In cases where the recoveries were higher than the acceptance criteria, the results have the potential of being similarly biased high and using these data in the risk assessment could result in risks being calculated that are higher than would be associated with actual Site conditions. Of more concern for the HHRA is underestimation of risk, which could be associated with the use of data that are biased low. Results associated with the following QA/QC issues could lead to results that are biased low, and were subjected to further scrutiny during the data usability evaluation:

- Results associated with holding time exceedances;
- Detections qualified during the data review as being non-detections due to laboratory or field blank contamination;
- Results associated with calibration violations indicating a low bias;
- Results associated with MS/MSD or LCS/LCSD recoveries below acceptance criteria; and/or
- Results associated with surrogate percent recoveries below laboratory control limits.

Such data, which are listed above in Section 4.5, were evaluated during the data usability process to determine whether it was appropriate to use them in the risk assessment. The data usability evaluation determined that the estimated results listed in Section 4.5 were appropriate for use in the risk assessment and that the rejected data did not constitute significant data gaps and/or was not otherwise likely to lead to an underestimation of risk, as discussed below.

4.7.1 Holding Time Exceedances/Sample Condition

There is a potential for analyte loss if the holding time for a sample is exceeded. As discussed in Section 4.5.1, for the Site, holding times were exceeded in three soil samples for hexavalent chromium analysis (less than one percent of the samples analyzed for that constituent), and in one sample and its duplicate for dioxin/furan analysis (less than one percent of the samples analyzed). All of the samples were qualified as estimated. Based on the limited holding time issues, there is not likely to be a significant potential for a low bias to the hexavalent chromium or dioxin/furan datasets for Site soils.

As presented in the DVSRs (BRC and ERM 2010a,b,c), all Site samples with temperature requirements were received at the laboratory within the required range of 4°± 2° Celsius. No sample results were qualified based on sample temperatures or due to lack of proper preservation.

4.7.2 Blank Contamination

As noted in Section 4.5.2, certain detections were flagged during the data review as being non-detections or estimated with a high bias due to laboratory or field blank contamination. If the associated constituent qualified as being a non-detection, in fact, were present in the samples related to the affected blank sample, revising its status to non-detect could result in risk underestimation. In the dataset for the Site, a total of 339 results were censored due to blank contamination. Affected analytes are as follows:

Analyte	# of Censored Results	Analyte	# of Censored Results
Orthophosphate as P	8	1,2,4-Trimethylbenzene	35
Ammonia [as N]	2	1,2-Dichlorobenzene	1
Total Organic Carbon	8	1,3,5-Trimethylbenzene	1
Radium-226	1	Acetone	43
Thorium-230	3	Methylene chloride	18
Uranium-233/234	11	Ethylbenzene	1
Uranium-235/236	1	Styrene	18
Uranium-238	12	9-Octadecenamide, (z)-	6
Arsenic	2	bis(2-Ethylhexyl) phthalate	2
Antimony	3	Unknown	8
Boron	5	Unknown aldol condensate	48
Cadmium	5	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	2
Molybdenum	8	Octachlorodibenzodioxin	3
Selenium	8	Acetaldehyde	1
Thallium	1	Formaldehyde	5
Tin	9	Cyanide, Total	34
Tungsten	3		
Mercury	23		

The constituents for which this potential concern has the most bearing in risk assessment are those in soil samples for which the detections are close to or exceed either 1) background conditions, or 2) relevant human health comparison levels (*i.e.*, NDEP BCLs). As determined during that evaluation, qualification of detections as non-detections based on blank

contamination are not likely to have an appreciable effect on the risk estimates, as discussed below.

Censored results that are less than the maximum background concentration and the residential BCL would have a negligible impact on risk assessment findings. If a portion of the result reflects an actual site concentration, then the uncertainty related to the censored result is low. However, data censored at values at or above background, where applicable, or the residential BCLs, may pose a potential underestimation of human health risks. Therefore, censored results at values in excess of the residential BCL (or the maximum background concentration, if higher) were evaluated further. With the exception of arsenic and certain radionuclides, none of the soil data censored due to blank contamination were in excess of the BCLs. The only analytes with censored results greater than the BCLs are as follows:

Analyte	Range of Censored Results	BCL	Maximum Background Concentration
Arsenic (2 censored results)	3.8 to 4 mg/kg	0.39 mg/kg	7.2 mg/kg
Radium-226 (1 censored result)	0.773 pCi/g	0.0071 pCi/g	2.36 pCi/g
Uranium-235/236 (1 censored result)	0.247 pCi/g	0.11 pCi/g	0.21 pCi/g
Uranium-238 (12 censored results)	0.533 to 0.989 pCi/g	0.46 pCi/g	2.37 pCi/g

With the exception of the sole uranium-235/236 result, all of the above-listed censored data were lower than the maximum background concentration. The uranium-235/236 results were determined to be in secular equilibrium and within the range of background. Therefore, these censored data do not represent a significant potential for risk underestimation.

Surface flux data are not comparable with BCLs. Benzene was associated with 14 censored data points (of 16 flux samples); the remaining censored analytes were associated with five or fewer flux samples. Benzene was detected at 14 of 16 surface flux locations but was qualified as non-detections in 14 of 16 for the full scan analysis and 0 of 16 in the SIM analysis. There is some uncertainty that there was widespread blank contamination for benzene in the full scan analysis resulting in an overestimation of risks or there is benzene at the Site and there may be an underestimation of risks. Benzene is discussed further in the uncertainty analysis (Section 7).

4.7.3 Calibration Violations Indicating A Low Bias

The instrument calibration checks which resulted in a low bias are summarized in the tables presented in Section 4.5.6. There were five TO-15 surface flux analytes, 1,2,4-trichlorobenzene, acetone, bromomethane, carbon disulfide, and methyl iodide which had recoveries below 50 percent in some samples. 1,2,4-Trichlorobenzene, acetone, and carbon disulfide were qualified in all samples due to calibration violations. However, only 1,2,4-trichlorobenzene was non-detected in all samples. 1,2,4-Trichlorobenzene is evaluated further in the uncertainty analysis (Section 7). For the other non-detect analytes with SQLs, the maximum SQLs were compared to the residential BCL. It is unlikely that even with a potential for a false negative that the bias could affect the result to such a degree that the analyte is present at the Site in excess of the BCL.

4.7.4 MS/MSD or LCS/LCSD Recoveries Below Acceptance Criteria

During the data usability review, results associated with MS/MSD and/or LCS/LCSD recoveries that were only slightly lower than the lower acceptance limit (*i.e.*, 50 to 75 percent recoveries for inorganics and the higher of greater than 30 percent or one-half the statistically-derived lower limit for organics) were accepted as usable without further evaluation. Samples with lower percent recoveries (*i.e.*, recoveries lower than 50 percent for inorganics and one-half the lower limit or 30 percent, whichever is greater, for organics) were reviewed more closely to assess whether it was appropriate to use them in the HHRA. Inorganic results with MS/MSD recoveries less than 50 percent [19] were as follows:

- An ammonia result for one soil sample (GNC1-BF19-11) in TestAmerica data package F9B060191 (a non-detection, which was later rejected on this basis);
- Antimony results for two soil samples in TestAmerica data package F9A290238 (both non-detections); and
- Antimony and tungsten results for three soil samples in TestAmerica data package F9H030409 (all non-detections).

Given the limited number of samples involved, these data points are not likely to have a significant effect on risk assessment. Furthermore, antimony was not detected in any Site soil

[19] Only samples associated with MS/MSD results where both recoveries were below 50% are listed.

samples and it is unlikely that it was present in these five samples listed above. Similarly, tungsten was not routinely detected in Site samples.

No organic results were associated with recoveries below the lower laboratory limit.

As noted in Section 4.5.3, LCS/LCSD recoveries lower than the lower laboratory control limit were observed for cyanide for two soil samples (F9A290238), both non-detections and for two detections of 1,2,3,4,6,7,8-heptachlorodibenzo-p-dioxin (F9A300184). Because the cyanide and dioxin recoveries (83% and 78%, respectively) were only slightly lower than the lower laboratory control limit (85% and 79%, respectively), no concerns were identified regarding their usability.

4.7.5 Surrogate Percent Recoveries Below Laboratory Control Limit

As noted in Section 4.5.5, surrogate recoveries lower than the lower laboratory control limit were observed for organochlorine pesticides in one laboratory batch (F9B070176). Because the recoveries in this analytical batch (60%) were only slightly lower than the lower laboratory control limit (72%), no concerns were identified regarding their usability.

4.7.6 Data Usability Summary

As discussed above, because any qualifications with the potential for low bias were limited in number, the data usability evaluation determined it was unlikely that they could lead to significant risk underestimation. Furthermore, the limited amount of rejected data points (one ammonia result) does not represent a significant data gap in terms of risk assessment.

5.0 SELECTION OF CHEMICALS OF POTENTIAL CONCERN

The broad suite of analytes sampled for was the initial list of potential COPCs at the Site. However, in order to ensure that a risk assessment focuses on those substances that contribute the greatest to the overall risk (USEPA 1989); three procedures were used to eliminate analytes as COPCs for quantitative evaluation in the risk assessment:

- identification of chemicals with detected levels similar to background concentrations (where applicable),
- identification of chemicals with levels in surface soils similar to levels in subsurface soils detected at the Site, and
- identification of chemicals that are infrequently detected at the Site.

Following USEPA guidance (1989), compounds reliably associated with Site activities based on historical information were not eliminated from the risk assessment, even if the results of the procedures given in this Section indicate that such elimination is possible. The procedures for evaluating COPCs relative to background conditions and further selection of COPCs are presented below.

5.1 EVALUATION OF CONCENTRATIONS/ACTIVITES RELATIVE TO BACKGROUND CONDITIONS

Some chemicals at the Site, particularly metals and radionuclides, are known to be naturally-occurring constituents of soils and groundwater. A risk assessment should consider the contribution of background concentrations to overall Site risks, as differentiated from those concentrations associated with historic Site operations or regional anthropogenic conditions. Therefore, it is necessary to establish site-specific background conditions to support the risk assessment.

As indicated in the *Background Shallow Soil Summary Report, BMI Complex and Common Area Vicinity* (BRC and TIMET 2007) the Site is in an area of McCullough lithology (see Figure 12, Qh_1 label). Therefore, comparison of Site-related soil concentrations to background levels was conducted using the shallow soils background dataset (McCullough lithology only) presented in

BRC and TIMET (2007).[20] The background dataset used is included in the dataset file on the enclosed report CD in Appendix B (the background dataset for the deep McCullough soils is also provided).

Background comparisons were performed using the Quantile test, Slippage test, the *t*-test, and the Wilcoxon Rank Sum test with Gehan modification. The computer statistical software program, Guided Interactive Statistical Decision Tools (GiSdT®; Neptune and Company 2009), was used to perform all background comparison statistics. A weight of evidence approach is utilized to interpret the results of these analyses. If the detection frequency in both Site and background datasets are greater than 40 percent then the following rationale is used for evaluation: where one or two results fail, the remaining testing and statistical information (boxplots, summary statistics) are reviewed to support decision making whether the chemical should be considered consistent with background (as described by the rationale in the table below); and where three or more statistical tests fail, the constituent is considered inconsistent with background. If the detection frequency is less than 40 percent in either the background or Site datasets, then the constituent is evaluated based on boxplots and summary statistics.

For samples with primary and field duplicate results, the Site sample and field duplicate are treated as independent samples and both are included in all subsequent data analyses, regardless of whether one or both are non-detect. This is considered appropriate because field duplicate samples represent a discrete and unique measurement of soil chemical conditions proximal to the primary sample (unlike split samples). The field duplicates were compared to the primary sample during the course of data validation. The variances were not out of the line with the variance in results across the Site. Therefore, as distinct soil chemical measurements, they are treated as unique samples in the analyses.

The 2005 McCullough background dataset as a whole was compared to HHRA dataset as a whole. The results of the background comparison evaluation are presented in Table 7, and summarized below.

[20] However, it is noted that the Site, especially sub-surface soil, may also be more representative of deeper McCullough soils than that characterized by the shallow soil background dataset. These soils may be more representative of background soil characterized by the *2008 Deep Soil Background Report - BMI Common Areas (Eastside), Clark County, Nevada* (BRC and ERM 2009c). Therefore, although not evaluated in this report, comparisons could also be conducted using the deep McCullough background dataset. It is noted that preliminary background comparisons to this deeper background dataset indicate results similar to those for the shallow soil dataset used in this evaluation.

Chemical	Greater than Background?	Basis
Aluminum	**YES**	T-test and WRS
Antimony	NO	Non-detect at Site
Arsenic	**YES**	Multiple tests
Barium	**YES**	Multiple tests
Beryllium	**YES**	Site min, max, mean, and median > background
Boron	**YES**	Multiple tests
Cadmium	**YES**	Non-detect in background
Calcium	**YES**	Site min, max, mean, and median > background
Chromium	**YES**	Multiple tests
Chromium (VI)	**YES**	Non-detect in background
Cobalt	**YES**	T-test and WRS
Copper	**YES**	Site min, max, mean, and median > background
Iron	**YES**	Multiple tests
Lead	**YES**	Multiple tests
Lithium	**YES**	Site min, mean, and median > background
Magnesium	**YES**	Site min, max, mean, and median > background
Manganese	**YES**	Site min, mean, and median > background
Mercury	**YES**	Site max, mean, and median > background
Molybdenum	**YES**	Multiple tests
Nickel	**YES**	Site min, mean, and median > background
Potassium	**YES**	Site min, mean, and median > background
Selenium	NO	Site frequency of detection < 5%
Silver	NO	Non-detect in background
Sodium	**YES**	Multiple tests
Strontium	**YES**	Site min, mean, and median > background
Thallium	NO	Non-detect at Site
Tin	**YES**	Low detection frequency; Site max. > background max
Titanium	**YES**	Multiple tests

Chemical	Greater than Background?	Basis
Tungsten	NO	Multiple tests
Uranium	**YES**	Site mean, median > background
Vanadium	**YES**	Multiple tests
Zinc	**YES**	Multiple tests
Radium-226	NO	Multiple tests
Radium-228	NO	Multiple tests
Thorium-228	NO	Multiple tests
Thorium-230	NO	Multiple tests
Thorium-232	NO	Multiple tests
Uranium-233/234	NO	Multiple tests
Uranium-235/236	NO	Multiple tests
Uranium-238	NO	Multiple tests

Cumulative probability plots and side-by-side boxplots[21] were also prepared and are included in Appendix G. These plots give a visual indication of the similarities between the Site and background datasets. The results of this comparison indicate that a large number of metals are statistically significant (greater than) background levels. Due to the large number of sample data in both the Site and background datasets, even small differences between the two are identified as statistically significant. For example, although there were small differences in median concentrations, cobalt, copper, and nickel were found to be statistically greater than background:

Metal	Difference[1] (median concentrations)
Cobalt	0.60 mg/kg
Copper	1.7 mg/kg
Nickel	0.60 mg/kg

1 These differences in median concentrations were small relative to both background median concentrations and residential soil BCLs.

[21] Site and background boxplots were segregated by depth (and all data). This is different than how the data were segregated in the development of exposure point concentrations as presented in Section 6.1.

As statistically significant differences may not represent scientifically/technically relevant differences, the metals identified above as greater than background using statistical tests are evaluated further in Section 5.2.

Secular Equilibrium for Radionuclides. For radionuclides, secular equilibrium exists when the quantity of a radioactive isotope remains constant because its production rate (due to the decay of a parent isotope) is equal to its decay rate. In theory, if secular equilibrium exists, the parent isotope activity should be equivalent to the activity of all daughter radionuclides. Pure secular equilibrium is not expected in environmental samples because of the effect of natural chemical and physical processes. However, approximate secular equilibrium is expected under background conditions (NDEP 2009e). Both the thorium-232 and uranium-238 chains were determined to be in approximate secular equilibrium following equivalence testing outlined in NDEP's *Guidance for Evaluating Secular Equilibrium at the BMI Complex and Common Areas February* (NDEP 2009a). The results of the equivalence testing for secular equilibrium are as follows:

Chain	Equivalence Test		Secular Equilibrium?	Mean Proportion			
	Delta	*p*-value		Ra-226	Th-230	U-233/234	U-238
U-238	0.1	0.0014	Yes	0.2859	0.2556	0.2303	0.2282
				Ra-228	Th-228	Th-232	
Th-232	0.1	<0.0001	Yes	0.317	0.3513	0.3317	

Therefore, since no radionuclides failed any background tests and are in secular equilibrium, all radionuclides are considered to be similar to background. Radionuclides are therefore not evaluated further in the HHRA.

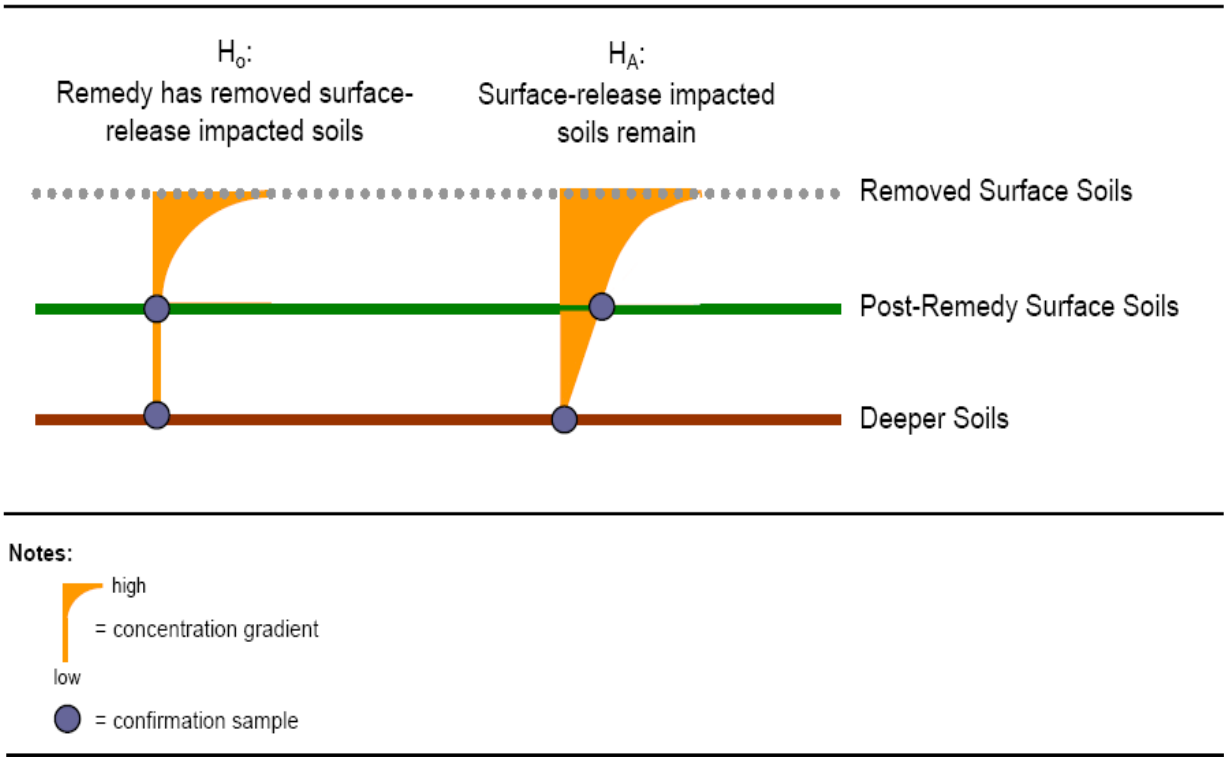
5.2 COMPARISON OF CONCENTRATIONS/ACTIVITIES IN SURFACE AND SUBSURFACE SOILS

Based on the background comparison results in Section 5.1, there are a large number of metals that are above background levels. However, from a CSM perspective this is inconsistent with findings from other areas of the Eastside property where historical contamination is usually limited to only a few metals and/or radionuclides, and is found predominately in surface soils. This is because surface releases of chemicals have been identified as the source of elevated concentrations at the Site (see Section 2). The objective of the remedial actions at the Site was to remove surface soils that were impacted by Site-related surface releases of chemicals. A technique to test the effectiveness of the remedy is to compare metal concentrations in

confirmation surface soils (0 ft bgs) to deep soils (10 ft bgs).[22] Hence, measurements of COPCs in confirmation surface and deep soil samples were used to evaluate the following null hypothesis:

H_o: Metal COPC concentration in remaining surface soils are less than or equal to concentrations in deep soils.

If the null hypothesis is accepted,[23] one may infer that the concentration/activity in soils remaining at the Site is comparable to the concentration/activity in soils not affected by past Site-related surface releases (see figure below).



To evaluate this hypothesis, concentrations in paired surface and deep confirmation samples at the Site were compared using the Wilcoxon Signed Rank (WSR) test, a nonparametric pairwise comparison test. A pairwise comparison test was considered an appropriate test given the paired relationship of presumed remediated surface and reference deep soil samples at each sampling

[22] The assumption is that deep soils are a reference for soils not impacted by Site-related activities (see Section 2).
[23] Note that according to classical statistics, the null hypothesis is never proven as the absence of evidence against the null hypothesis does not establish it. In other words, strictly speaking, one may either "reject" or "fail to reject" the null hypothesis. However, for this study and as commonly used in practice, the term "accept" is used instead of "fail to reject" the null hypothesis (Sokal and Rohlf 1981).

location (Gilbert 1987; Sokal and Rohlf 1981).[24] As pairwise comparison tests are not currently supported by GiSdT®, SPSS v. 17 was used to perform the WSR tests. If pairwise comparisons suggested that surface soil concentrations/activities were greater than deep soil concentrations/activities, then the metal was further evaluated in the HHRA.

The results of the surface and deep soil comparisons are presented in Table 8, and summarized below.

Chemical	Greater than Background?	Greater than Deep Soils?	Basis
Aluminum	YES	NO	WSR Test
Antimony	NO	—	—
Arsenic	YES	NO	WSR Test
Barium	YES	NO	WSR Test
Beryllium	YES	NO	WSR Test
Boron	YES	NO	WSR Test
Cadmium	**YES**	**YES**	Qualitative given prevalence of NDs
Calcium	YES	NO	WSR Test
Chromium	YES	NO	WSR Test
Chromium (VI)	YES	NO	Qualitative given prevalence of NDs
Cobalt	YES	NO	WSR Test
Copper	YES	NO	WSR Test
Iron	YES	NO	WSR Test
Lead	**YES**	**YES**	WSR Test
Lithium	YES	NO	WSR Test
Magnesium	**YES**	**YES**	WSR Test
Manganese	YES	NO	WSR Test
Mercury	**YES**	**YES**	Qualitative given prevalence of NDs
Molybdenum	YES	NO	WSR Test

[24] Whereas the sign test only considers the sign (direction of difference), the WSR test accounts for both the sign and the magnitude of the difference in paired ranks.

Chemical	Greater than Background?	Greater than Deep Soils?	Basis
Nickel	**YES**	**YES**	WSR Test
Potassium	**YES**	**YES**	WSR Test
Selenium	NO	—	—
Silver	NO	—	—
Sodium	YES	NO	WSR Test
Strontium	YES	NO	WSR Test
Thallium	NO	—	—
Tin	YES	NO	WSR Test
Titanium	YES	NO	WSR Test
Tungsten	NO	—	—
Uranium	YES	NO	WSR Test
Vanadium	YES	NO	WSR Test
Zinc	**YES**	**YES**	WSR Test

There may be a question as to why deeper soils have concentrations/activities for some metals greater than surface soils. There are a number of possible explanations, including:

- Background conditions in this portion of the Eastside property are not fully characterized by or representative of the existing background datasets. The available background data were collected approximately two to five miles south of, and up to 800 feet topographically above, the Site; and

- Groundwater is much shallower in the northern portion of the Eastside property, and has daylighted in some areas, which could affect subsurface metal concentrations to an extent greater than surface soils.

Neither of the above potential explanations has been quantitatively evaluated. However, as discussed above, it is doubtful that such widespread higher concentrations in subsurface soils are a result of Site contamination.

There are other possible explanations as to why there is such widespread exceedance of background concentrations throughout the Site. Several other lines of evidence were evaluated to assess whether the levels of metals detected at the Site may be a result of contamination. The

first is the use of intensity plots and plots showing the distribution of the data, both of which indicate that data across the Site are uncorrelated, that is, there is no discernable spatial correlation as would be expected in the case of a contaminant source. These plots for all metals are included in Appendix I.

Additionally, the Site is in an area that historically was considered an exclusion area. That is, no known historical disposal activities took place in this portion of the Eastside property. From a CSM perspective, the mostly likely source of contamination, if any, would be from the beta ditch that runs along the western edge of the Site. If contamination did occur across the Site from this ditch, then a gradation of concentrations would be expected with higher concentrations found closer to the ditch and lower concentrations found further away from the ditch. However, as shown on both the intensity and distribution plots, as well as scatterplots of concentration versus distance from the ditch that are included in Appendix G, this is not the case. In addition, for example, levels of arsenic are similar, and in fact lower than the highest levels measured at the adjacent City of Henderson WRF prior to its NFAD and subsequent development. Figures and tables from the 2003 Environ risk assessment report showing metals and radionuclide concentrations and distributions are included in Appendix G.

Therefore, based on the above discussions and statistical comparisons only metals identified as having surface soil concentrations greater than deep soils (as indicted in **bold** type in the above summary table) were selected as COPCs and evaluated in the HHRA for the Site:

- Cadmium
- Lead
- Magnesium
- Mercury
- Nickel
- Potassium
- Zinc

5.3 FURTHER SELECTION OF COPCS

The procedure for evaluating chemicals relative to background conditions was presented above. Further COPC selection was performed on the remaining chemicals by:

- Considering chemicals positively identified in at least one sample for inclusion as potential COPCs, including: (1) chemicals with no qualifiers attached (excluding non-detect results with unusually high detection limits, if warranted), and (2) chemicals with qualifiers attached that indicate known identities but estimated concentrations (*e.g.*, J-qualified data); and

- Further evaluation of chemicals included those detected at levels significantly elevated above levels of the same chemicals detected in associated blank samples (as described in SOP-40 (BRC, ERM and MWH 2009).

Another criterion that may warrant chemical reduction is the frequency of detection. In general, chemicals exhibiting a low frequency of detection do not contribute significantly to the risk estimates. USEPA (1989) suggests that chemicals with a frequency of detection less than or equal to five percent, with the exception of metals, known human carcinogens, and persistent, bioaccumulative, and toxic (PBT) chemicals as defined by the USEPA PBT program, may be considered for elimination. Prior to eliminating a chemical based on the frequency of detection criteria, (1) any elevated detection limits are addressed, and (2) data distributions within the Site are considered. Results of the selection of COPCs, including the rationale for excluding chemicals as COPCs are presented in Table 9. The chemicals eliminated due to a low frequency of detection are as follows:

- 1,2-Dichlorobenzene
- 1,3,5-Trimethylbenzene
- 1,3-Dichlorobenzene
- 1,4-Dichlorobenzene
- Acetaldehyde
- Acetone
- alpha-BHC
- Benzoic acid
- Butylbenzyl phthalate
- Di-n-butyl phthalate
- Endosulfan sulfate
- Endrin
- Endrin aldehyde
- Nonanal
- n-Propylbenzene
- Phthalic acid
- Toluene

The maximum detections of these chemicals were compared to the residential BCL if available to determine if there was a potential hotspot. None of the maximum detects were greater than the BCL.

Consistent with the Closure Plan, if the TCDD TEQ concentrations do not exceed the NDEP residential BCL of 50 ppt for any sample within the Site,[25] dioxins/furans are not retained as COPCs. Therefore, because this criterion is met for the Site, dioxins/furans are not considered COPCs, and are not evaluated further in the HHRA. Lead was also not evaluated further in the HHRA since all concentrations were below its target goal of 400 mg/kg for residential land use.

The above procedures apply to soil results. Indoor air exposures are evaluated on a sample by sample basis, per NDEP requirements, using the surface flux data measurements. Because of this, selection of COPCs from the surface flux data is not conducted. Instead, every chemical detected in an individual surface flux location is included in the evaluation for that location. Therefore, the minimum and maximum surface flux risk estimates are summed with the soil risk estimates to provide a range of cumulative risks.

[25] See Section 2.5 for a discussion on future land use for the Galleria North-School Site sub-area.

6.0 HUMAN HEALTH RISK ASSESSMENT

This Section presents the HHRA of all COPCs identified in Section 5 for all receptors of concern via all complete pathways. The methods used in the risk assessment follow standard USEPA guidance. Specifically, the methods used in the risk assessment followed basic procedures outlined in the USEPA's *Risk Assessment Guidance for Superfund: Volume I—Human Health Evaluation Manual* (USEPA 1989). Other guidance documents consulted include:

- *Risk Assessment Guidance for Superfund: Volume I—Human Health Evaluation Manual. Supplemental Guidance: Standard Default Exposure Factors*. USEPA. 1991b.
- *Guidelines for Exposure Assessment*. USEPA. 1992b.
- *Soil Screening Guidance: Technical Background Document*. USEPA 1996.
- *Exposure Factors Handbook, Volumes I-III*. USEPA 1997.
- *Soil Screening Guidance for Radionuclides.* USEPA. 2000b.
- *Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites*. USEPA 2002b.
- *Technical Support Document for a Protocol to Assess Asbestos-Related Risk. Final Draft.* USEPA. 2003b.
- *Child-Specific Exposure Factors Handbook*. USEPA 2006.
- *Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment)*. USEPA 2004e.
- *Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part F, Supplemental Guidance for Inhalation Risk Assessment)*. USEPA 2009.

Various NDEP guidance documents are also relied on for the HHRA. These include:

- *Supplemental Guidance for Assessing Data Usability for Environmental Investigations at the BMI Complex and Common Areas in Henderson, Nevada.* NDEP 2008a.
- *Guidance for Evaluating Secular Equilibrium at the BMI Complex and Common Areas.* NDEP 2009a.

- *Technical Guidance for the Calculation of Asbestos-Related Risk in Soils for the Basic Management Incorporated (BMI) Complex and Common Areas.* NDEP 2009b, 2010b.

- *Supplemental Guidance on Data Validation.* NDEP 2009c,d.

- *Guidance for Evaluating Radionuclide Data for the BMI Plant Sites and Common Areas Projects.* NDEP 2009e.

The risk assessment is a deterministic risk assessment; meaning that, single values based on conservative assumptions are used for all modeling, exposure parameters, and toxicity criteria. These conservative estimates compound each other so that the calculated risks likely exceed the true risks at the Site.

The method used in the risk assessment consists of several steps. The first step is the calculation of exposure point concentrations representative of the particular area, for each media of concern. This step includes fate and transport modeling to predict concentrations that may be present when direct measurements are not available. The second step is the exposure assessment for the various receptors present in the particular areas. The next step is to define the toxicity values for each COPC. The final step is risk characterization where theoretical upper-bound cancer risks and non-cancer HIs are calculated.

6.1 DETERMINATION OF EXPOSURE POINT CONCENTRATIONS

A representative exposure concentration is a COPC-specific and media-specific concentration value. In risk assessment, these exposure concentrations are values incorporated into the exposure assessment equations from which potential baseline human exposures are calculated. As described below, the methods, rationale, and assumptions employed in deriving these concentration values follow USEPA guidance and reflect site-specific conditions.

Chemical, physical, and biological processes may affect the fate and transport of chemicals in water, soil, and air. Chemical processes include solubilization, hydrolysis, oxidation-reduction, and photolysis. Physical processes include advection and hydrodynamic dispersion, volatilization, dispersion, and sorption/desorption to soil, sediment, and other solid surfaces. Biological processes include biodegradation, bioaccumulation, and bioconcentration. All of these processes are dependent upon the physical and chemical properties of the chemicals, the physical and chemical properties of the soil and water, and other environmental factors such as temperature, humidity, and the conditions of water recharge and movement. The net effect of these environmental factors is a time-dependent reduction of chemical concentrations in water,

soil, and air. The determination of exposure point concentrations for media other than soil take into account chemical-specific physical parameters and inter-media transfers as discussed below. All modeling input parameters, calculations and results are presented in Appendix H (included on the report CD in Appendix B).

6.1.1 Soil

Due to the uncertainty associated with determining the true average concentration at a site, where direct measurements of the site average are unavailable, the USEPA recommends using the lower of the maximum detected concentration or the 95 percent upper confidence limit (UCL) as the concentration of a chemical to which an individual could be exposed over time (USEPA 1992b). For the 95 percent UCL concentration approach, the 95 percent UCL was computed in order to represent the area-wide exposure point concentrations. The 95 percent UCL is a statistic that quantifies the uncertainty associated with the sample mean. If randomly drawn subsets of site data are collected and the UCL is computed for each subset, the UCL equals or exceeds the true mean roughly 95 percent of the time. The purpose for using the 95 percent UCL is to derive a conservative, upper-bound estimate of the mean concentration, which takes into account the different concentrations a person may be exposed to at the Site. That is, an individual will be exposed to a range of concentrations that exist at an exposure area, from non-detect to the maximum concentration, over an entire exposure period.

The 95 percent UCL statistical calculations were performed using the computer statistical software program GiSdT® (Neptune and Company 2009). See Section 5.1 for how sample locations with field duplicates were treated prior to the 95 percent UCL statistical calculations. For these calculations, chemical non-detect results are assigned a value of one-half the SQL. The formulas for calculating the 95 percent UCL COPC concentration (as the representative exposure concentration) are presented in USEPA (1992c, 2002c) and GiSdT® (Neptune and Company 2009). Three UCL methods are employed in the GiSdT® software. They include the Student's t UCL, the bootstrap percentile UCL and the bootstrap BCa UCL. The maximum UCL of these three methods was used as the exposure point concentration, unless the maximum UCL of the three methods was greater than the maximum detected concentration. In these cases, the maximum detected concentration was selected as the exposure point concentration.

The representativeness of the 95 percent UCLs for the exposure area, that is, a site-wide mean concentration is valid for all receptors at the Site, is further supported by the intensity plot figures included in Appendix I. Figures for each of the COPCs are included in Appendix I (in addition to the figures developed for all metals, as discussed in Section 5.2. A figure is also

presented for TCDD TEQ. Although not COPCs for the Site, TCDD TEQ is a primary chemical of interest for the project). Based on the results of the background comparison tests, a review of the probability plots, boxplots, and distribution and intensity plot figures, data across the Site are assumed to be uncorrelated, that is, there is no discernable spatial correlation.[26] Although there may be spatial correlation of data across the Site, it has not been evaluated directly. Instead the assumption is made for statistical testing purposes that the data are not spatially correlated. This results in lower p-values and hence a greater number of statistical differences than would be the case if spatial correlation is accounted for. Because ignoring correlation causes conservatism in this sense, the need to evaluate spatial correlation is not warranted. Therefore consistent with the project *Statistical Methodology Report* (BRC and NewFields 2006), each measurement is assumed to be equally representative for that chemical at any point in the Site and calculation of the 95 percent UCL is appropriate.

Representative exposure concentrations for soil are based on the potential exposure depth for each of the receptors. For all receptors, two different exposure depths are considered, based on the sample depth rules schematic presented in Section 3: all data (surface and subsurface) and data classified as surface soil only. These different soil exposure classifications are considered to represent all possible exposure potential for all receptors, based on the future grade and use of Site soils. 95 percent UCLs are calculated for both exposure depth scenarios. In order to be conservative, the higher of the two values was used in the risk estimates for each COPC. The 95 percent UCL for each COPC is presented in Table 10. For indirect exposures, this concentration was used in fate and transport modeling.

The exposure point concentrations for asbestos (USEPA 2003b, NDEP 2009b) were based on the pooled analytical sensitivity of the dataset.[27] The asbestos data and analytical sensitivities are presented in Table 11. Therefore, asbestos exposure point concentrations are determined differently than those for the other COPCs. The pooled analytical sensitivity is calculated as follows:

[26] Although the Statistical Methodology Report states that confirmation measurements of each chemical in a given soil layer will be used to compute variograms, as noted in the text above, this was not conducted for the Site, which is a deviation from the *BRC Closure Plan* methodology.

[27] Unlike other analytes, although called field duplicate samples, these samples for asbestos are more accurately characterized as field split samples. That is, these samples were obtained from a split of the sample collected in the field. This split was conducted by the field sample crew prior to sending the samples to the laboratory. Therefore, only the higher of the split sample results are included in the pooled analytical sensitivity or risk calculations for asbestos.

$$Pooled\ Analytical\ Sensitivity = 1/\left[\sum_i (1/analytical\ sensitivity\ for\ trial\ i)\right]$$

Two estimates of the asbestos concentration were evaluated, best estimate and upper bound as defined in the draft methodology (USEPA 2003b). The best estimate concentration is similar to a central tendency estimate, while the upper bound concentration is comparable to a reasonable maximum exposure estimate. The pooled analytical sensitivity is multiplied by the number of chrysotile or amphibole structures to estimate concentration:

$$\text{Estimated Bulk Concentration } (10^6 \text{ s/gPM10}) = \text{Long fiber count} \times \text{Pooled analytical sensitivity}$$

For the best estimate, the number of fibers measured across all samples is incorporated into the calculation above. The upper bound of the asbestos concentration was also evaluated. It is calculated as the 95 percent UCL of the Poisson distribution mean, where the Poisson mean was estimated as the total number of structures detected across all samples. In EXCEL, the following equation may be employed to calculate this value:

95% UCL of Poisson Distribution Mean = CHIINV(1-upper confidence percentile, 2 × (Long fiber count + 1))/2

This value is then multiplied by the pooled analytical sensitivity to estimate the upper bound concentration. The intent of the risk assessment methodology was to predict the risk associated with airborne asbestos. In order to quantify the airborne asbestos concentration, the estimated dust levels or particulate emission factors (PEFs) were used:

$$\text{Estimated Airborne Concentration } (\text{s/cm}^3) = \text{Estimated bulk concentration } (10^6 \text{ s/gPM10}) \times \text{Estimated dust level } (\text{ug/cm}^3)$$

Further explanation of the asbestos risk calculations and estimates are provided in NDEP's *Technical Guidance for the Calculation of Asbestos-Related Risk in Soils* (2009b, 2010b).

6.1.2 Indoor Air

Concentrations of volatile constituents (VOCs and certain SVOCs) in soil and groundwater that may infiltrate buildings to be constructed at the Site through cracks in the foundations are estimated using USEPA surface emission isolation flux chamber (flux chamber) measurements collected at the Site in accordance with USEPA guidance (USEPA 1986) and the Flux Chamber SOP-16 (BRC, ERM, and MWH 2008). The flux chamber is used to measure the emission rates from surfaces emitting gas species. Use of the flux chamber reduces the need for modeling

surface flux rates, which potentially reduces the uncertainty in the air representative exposure concentrations and the risk characterization. Because the flux chamber measurements were conducted outdoors on open soil, an "infiltration factor" is applied to the outdoor flux data to generate data supporting the inhalation of indoor air exposure pathway. The infiltration factor is based on the factors found in the American Society for Testing and Materials (ASTM) *Standard Guide for Risk Based Corrective Action* (2000). The indoor air concentrations are determined from the flux measurements using the following mixing equation:

$$C_a = \frac{J \times \eta}{L \times ER}$$

where:

C_a = indoor air concentration (milligram per cubic meter [mg/m^3])
J = measured flux of chemical (mg/m^2-min)
η = foundation crack fraction (unitless)
L = enclosed space volume/infiltration area ratio (meter [m])
ER = enclosed space air exchange rate (1/min)

Default parameter values from ASTM (2000) for residential buildings were used. These default parameters are presented in the electronic indoor air calculation files in Appendix H (included on the report CD in Appendix B). As noted in Section 5.2, indoor air exposures are evaluated on a sample by sample basis, per NDEP requirements, using the surface flux data measurements. Every chemical detected in an individual surface flux location is included in the evaluation for that location.

Indoor air concentrations based on the surface flux data measurements are shown in the electronic indoor air calculation files in Appendix H (included on the report CD in Appendix B) and are summarized in Table 12. In all cases the maximum of the two flux chamber measurements (TO-15 full scan and TO-15 SIM) is used.

6.1.3 Outdoor Air

Long–term exposure to COPCs bound to dust particles is evaluated using the USEPA's PEF approach (USEPA 2002b). The PEF relates concentrations of a chemical in soil to the concentration of dust particles in the air. The Q/C (Site-Specific Dispersion Factor [USEPA 2002b]) values in this equation are for Las Vegas, Nevada (Appendix D of USEPA 2002b). The equation used is:

$$PEF = Q/C_{wind} \times \frac{3{,}600 \text{ sec/hr}}{0.036 \times (1 - V) \times (U_m / U_t)^3 \times F(x)}$$

where:

PEF = Particulate emission factor (m^3/kg)
Q/C_{wind} = Inverse of the ratio of the geometric mean air concentration to the emission flux at the center of a square source (g/m^2 -s per kg/m^3)
V = Fraction of vegetative cover (unitless)
U_m = Mean annual windspeed (m/s)
U_t = Equivalent threshold value of windspeed at 7m (m/s)
F(x) = Function dependent on U_m/U_t derived using USEPA (1985) (unitless)

and

$$Q/C_{wind} = A \times \exp\frac{(\ln A_{site} - B)^2}{C}$$

where

A_{site} = Source Area (acre)
A, B, C = Air Dispersion Constants for LV (unitless)

The dust model and parameters utilized to generate the PEF are presented in Table 13.

The USEPA guidance for dust generated by construction activities (USEPA 2002b) was used for assessing short-term construction worker exposures:

$$PEF = \frac{1}{\left(\left(\frac{1}{PEF_{sc}}\right) + \left(\frac{1}{PEF_{sc_road}}\right)\right)}$$

where:

PEF_{sc} = Subchronic particulate emission factor for construction activities (m^3/kg)
PEF_{sc_road} = Subchronic particulate emission factor for unpaved road traffic (m^3/kg)

Input soil concentrations for the model are the exposure point concentrations as described above. The construction dust model and all relevant equations and parameters utilized to generate the

construction worker PEF from this guidance are provided in Table 14. Site-specific surface soil moisture data were collected in January, February and August. The average of the surface soil data is 4.31 percent. This is considered an adequate representation of an annual average, therefore, this value is used for the percent moisture in dry road surface parameter instead of the NDEP model default value.

In addition, for receptors with indoor exposures (*i.e.*, residents, indoor commercial workers), a dilution factor is applied to obtain an indoor air concentration of dust particles, based on USEPA (2000b).

The flux chamber measurements as described in Section 6.1.2 above are used for exposures to VOCs and volatile SVOCs in outdoor air if the chemical was present in the TO-15 analyte list. If the VOC or volatile SVOC was measured in soil but not on the TO-15 analyte list, then the exposure point concentration was estimated using USEPA's volatilization factor. Outdoor flux data are divided by the dispersion factor for volatiles (Q/C_{vol} for Las Vegas; from USEPA 2002b) for use in the outdoor air exposure pathway. The same dispersion factor is used for all scenarios. The dispersion factor for the construction worker is not adjusted to account for soil intrusion activities. Outdoor air concentrations based on soil data for all receptors are shown in Table 15. Outdoor air concentrations based on the surface flux data measurements are shown in the electronic indoor air calculation files in Appendix H (included on the report CD in Appendix B) and are summarized in Table 12.

6.1.4 Homegrown Produce

Consistent with the *BRC Closure Plan* (BRC, ERM, and DBS&A 2007; Section 9 revised March 2010) and USEPA guidance, the consumption of homegrown produce is an applicable exposure pathway for residential receptors. Representative exposure concentrations in plants were obtained using the soil 95 percent UCL for each COPC, multiplied by plant uptake factors. As per the Closure Plan, plant uptake factors were obtained from USEPA (2005b) and Baes *et al*. (1984). Plant uptake factors for inorganics were obtained from empirical data, where available. Plant uptake factors for organics are calculated based on the following equations (from USEPA 2005b):

Aboveground plant uptake factor:

$$log\ Br_{above} = 1.588 - 0.578\ log\ K_{ow}$$

Belowground plant uptake factor:

$$Br_{below} = \frac{RCF}{Kd_s} \times VG$$

where:

Br_{above}	=	aboveground plant uptake factor (mg/kg plant DW/mg/kg soil)
Br_{below}	=	belowground plant uptake factor (mg/kg plant DW/mg/kg soil)
K_{ow}	=	octanol/water partitioning coefficient (unitless)
RCF	=	root concentration factor (mg/g plant DW/mg/mL soil water)
Kd_s	=	Soil-water partition coefficient (mL water/g soil)
VG	=	empirical correction factor for belowground produce (unitless)(0.01 for COPCs with a log Kow greater than 4 and 1.0 for COPCs with a log Kow less than 4)

Plant uptake factors are presented in Table 16. See Section 7.2.2 regarding plant uptake of perchlorate.

6.2 EXPOSURE ASSESSMENT

In a risk assessment, the possible exposures of populations are examined to determine if the chemicals at a site could pose a threat to the health of identified receptors. The risks associated with exposure to chemicals depend not only on the concentration of the chemicals in the media, but also on the duration and frequency of exposure to those media. For example, the risks associated with exposure to chemicals for one hour a day are less than those associated with exposure to the same chemicals at the same concentrations for two hours a day. Potential health impacts from chemicals in a medium can occur via one or more exposure pathways. The exposure assessment step of a risk assessment combines information regarding impacted media at a site with assumptions about the people who could come into contact with these media. The result is an estimation of a person's potential rate of contact with impacted media from the Site. The intake rates are evaluated in the risk characterization step to estimate the risks they could pose.

In this section, assumptions regarding people's activities, such as the frequency with which a person could come into contact with impacted media, are discussed. Finally, the daily doses at the points of potential human contact were estimated using these assumptions, the models described in Section 6.1, and the chemical concentrations reported for soil and flux chamber samples collected from the Site.

6.2.1 Exposure Parameters

In this section, the assumptions regarding the extent of exposure are presented for each of the exposure pathways for each medium of concern at the Site. Tables 17 and 18 present each of the exposure parameters used in the risk assessment for each receptor and each pathway. Many of the assumptions regarding the extent of exposure were default factors developed by USEPA's Superfund program. Default values were modified to reflect site-specific conditions, where possible. The exposure parameters used in the risk assessment were those defined in Tables 9-2 through 9-5 of the *BRC Closure Plan* (BRC, ERM, and DBS&A 2007; Section 9 revised March 2010).

6.2.2 Quantification of Exposure

In this section, the concentrations of COPCs at the points of potential human exposure are combined with assumptions about the behavior of the populations potentially at risk in order to estimate the dose of COPCs that may be taken in by the exposed individuals. Later, in the risk characterization step of the assessment, the doses are combined with toxicity parameters for COPCs to estimate whether the calculated intake levels pose a threat to human health.

The method used to estimate the average daily dose (ADD) for non-carcinogens COPCs via each of the complete exposure pathways is based on USEPA (1989, 1992b) guidance. For carcinogens, lifetime ADD (LADD) estimates are based on chronic lifetime exposure, extrapolated over the estimated average lifetime (assumed to be 70 years). This establishes consistency with cancer slope factors (CSFs), which are based on chronic lifetime exposures. For non-carcinogens, ADD estimates are averaged over the estimated exposure period. ADDs and LADDs were calculated for each exposure scenario using the following generic equation:

$$Dose = \frac{C \times IR \times ED \times EF}{BW \times AT \times 365\ d/yr}$$

where:

Dose	=	ADD for non-carcinogens and LADD for carcinogens (in mg/kg-day)
C	=	chemical concentration in the contact medium (*e.g.*, mg/kg soil)
IR	=	intake rate (*e.g.*, mg/day soil ingestion and dermal contact [requires a conversion factor of 10^{-6} kg/mg];
ED	=	exposure duration (years of exposure)
EF	=	exposure frequency (number of days per year)
BW	=	average body weight over the exposure period (kilograms)

BIO = relative bioavailability (unitless)
AF = absorption fraction (percent)
AT = averaging time; same as the ED for non-carcinogens and 70 years (average lifetime) for carcinogens

Risk estimates for inhalation exposures follow USEPA's *Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (Part F, Supplemental Guidance for Inhalation Risk Assessment)* (USEPA 2009). That is, the concentration of a chemical in air is used as the exposure metric (*e.g.*, mg/m^3), rather than inhalation intake of a chemical in air based on inhalation rate and body weight (*e.g.*, mg/kg-day). The generic equation for calculating inhalation exposures is:

$$EC = \frac{C_{air} \times ET \times ED \times EF}{AT}$$

where:

EC = exposure concentration (in mg/m^3)
C_{air} = chemical concentration in air (in mg/m^3)
ET = exposure time (hours per day)
ED = exposure duration (years of exposure)
EF = exposure frequency (number of days per year)
AT = averaging time; same as the ED for non-carcinogens and 613,200 hours (*i.e.*, 70 years; average lifetime) for carcinogens

Pathway-specific equations for calculating ADDs and LADDs are provided in Table 9-6 of the *BRC Closure Plan* (BRC, ERM, and DBS&A 2007; Section 9 revised March 2010).

The relative oral bioavailability (BIO) of all COPCs was assumed to be 100 percent. Chemical-specific dermal absorption values from USEPA guidance (USEPA 2004e [Part E RAGS]) were used in the risk assessment. For other inorganics not included in USEPA (2004e), default dermal absorption values from California EPA (1994) and California South Coast Air Quality Management District (SCAQMD 1988) guidance were used. USEPA does not recommend absorption factors for VOCs based on the rationale that VOCs are volatilized from the soil on skin and exposure is accounted for via inhalation routes.

Exposure levels of potentially-carcinogenic and non-carcinogenic chemicals are calculated separately because different exposure assumptions apply (*i.e.*, ADD for non-carcinogens and

LADD for carcinogens). Exposure levels are estimated for each relevant exposure pathway (*i.e.*, soil, air, and water), and for each exposure route (*i.e.*, oral, inhalation, and dermal). Daily doses for the same route of exposure are summed. The total dose of each chemical is the sum of doses across all applicable exposure routes. As noted previously, radionuclides are consistent with background concentrations and are not addressed in this HHRA.

6.2.3 Asbestos

Although final USEPA guidance is unavailable at this time, USEPA recommends that site-specific risk assessments be performed for asbestos (USEPA 2004f). Risks associated with asbestos in soil are evaluated using NDEP's *Technical Guidance for the Calculation of Asbestos-Related Risk in Soils* (2009b, 2010b) and the draft methodology proposed by USEPA (2003b). This methodology is an update of the method described in *Methodology for Conducting Risk Assessments at Asbestos Superfund Sites-Part 1: Protocol* and *Part 2: Technical Background Document* (Berman and Crump 1999a,b). Because the risk assessment methodology for asbestos is unlike that for other COPCs, asbestos risks are evaluated separately from other chemical risks.

The intent of the risk assessment methodology is to predict the amount of airborne asbestos, which causes an unacceptable risk to a human receptor. Asbestos concentrations are measured in soil, and are then used to predict airborne asbestos concentrations using a dust emissions model. Asbestos data are collected in the top two inches of soil. While asbestos might exist below the top two inches of soil due to soil turnover, the concentrations in the surface soil are likely to be greater than concentrations beneath the surface, and the exposure pathway is to near-surface soils. Therefore, the 'shallow' surface soils asbestos concentration estimate is used to represent the potential exposure to asbestos.

To interpret measurements of asbestos in soils, it is necessary to establish the relationship between the asbestos concentrations observed in soils and concentrations that will occur in air when such soil is disturbed by natural or anthropogenic forces. This is because asbestos is a hazard when inhaled (see, for example, Berman and Crump 2001; USEPA 2003b). In fact, the Modified Elutriator Method (Berman and Kolk 2000), which was the method employed to perform the analyses presented in this report, was designed specifically to facilitate prediction of airborne asbestos exposures based on bulk measurements (see, for example, Berman and Chatfield 1990).

Briefly, the Modified Elutriator Method incorporates a procedure for isolating and concentrating asbestos structures as part of the respirable dust fraction of a sample and analytical

measurements are reported as the number of asbestos structures per mass of respirable dust in the sample. This turns out to be precisely the dimensions required to combine such measurements with published dust emission and dispersion models to convert them to asbestos emission and dispersion models. These models can be combined with measurements from the Modified Elutriator Method to predict airborne exposures and assess the attendant risks.

6.3 TOXICITY ASSESSMENT

This section describes the toxicity of the COPCs at the Site. Numerical toxicity values were developed for use in the calculation of the hazard quotients (HQs; for non-carcinogens) and risks (for carcinogens).

6.3.1 Toxicity Values

Toxicity values, when available, are published by the USEPA in the on-line Integrated Risk Information System [IRIS]; USEPA 2010). CSFs (in units of $[mg/kg\text{-}d]^{-1}$) are chemical-specific and experimentally derived potency values that are used to calculate the risk of cancer resulting from exposure to potentially carcinogenic chemicals. Inhalation unit risks (IURs) represent the upper-bound excess lifetime cancer risk from continuous exposure to a chemical at a concentration of 1 $\mu g/m^3$. A higher value implies a more potent carcinogenic potential. Reference dosages (RfDs) are experimentally derived "no-effect" levels used to quantify the extent of toxic effects other than cancer due to exposure to chemicals (in units of mg/kg-d). Similarly, a reference concentration (RfC) is the derived "no-effect" concentration for a lifetime of continuous inhalation exposure (in units of mg/m^3). With RfDs or RfCs, a lower value implies a more potent toxicant. These criteria are generally developed by USEPA risk assessment work groups and listed in the USEPA risk assessment guidance documents and databases. Available toxicity values for all Site COPCs used in the risk assessment were obtained using the following hierarchy for selecting toxicity criteria (based on USEPA 2003c):

1. IRIS

2. USEPA's Provisional Peer Reviewed Toxicity Values (PPRTVs)

3. National Center for Environmental Assessment (or other current USEPA sources)

4. Health Effects Assessment Summary Tables (HEAST)

5. USEPA Criteria Documents (*e.g.*, drinking water criteria documents, drinking water Health Advisory summaries, ambient water quality criteria documents, and air quality criteria documents)

6. ATSDR toxicological profiles

7. USEPA's Environmental Criteria and Assessment Office

8. Peer-reviewed scientific literature

In addition, toxicity criteria and toxicological surrogates recommended by NDEP are used in the risk assessment. Toxicity criteria are consistent with those used in the development of NDEP's BCLs (NDEP 2010a), unless newer values are available from USEPA. Toxicity criteria have not been developed by BRC for elements or compounds that do not have criteria published in the above sources.

Although USEPA has developed toxicity criteria for the oral and inhalation routes of exposure, it has not developed toxicity criteria for the dermal route of exposure. USEPA has proposed a method for extrapolating oral toxicity criteria to the dermal route in the recently released *Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment)* (USEPA 2004e). USEPA states that the adjustment of the oral toxicity factor for dermal exposures is necessary only when the oral-gastrointestinal absorption efficiency of the chemical of interest is less than 50 percent (due to the variability inherent in absorption studies). For COPCs to which dermal exposure might occur at the Site, the oral-gastrointestinal absorption efficiencies are greater than 50 percent, except for total chromium, hexavalent chromium, mercury, nickel, and vanadium. Therefore, the USEPA indicated adjustment of the oral toxicity criteria to generate dermal criteria was performed for these COPCs.

6.3.2 Non-Carcinogenic Health Effects

For non-carcinogenic health effects, USEPA assumes that a dose threshold exists, below which adverse effects are not expected to occur. A chronic RfD or RfC of a chemical is an estimate of a lifetime daily dose to humans that is likely to be without appreciable deleterious non-carcinogenic health effects. To derive an RfD or RfC, a series of professional judgments is made to assess the quality and relevance of the human or animal data and to identify the critical study and the most critical toxic effect. Data typically used in developing the RfD or RfC are the highest no-observable-adverse-effect-levels (NOAELs) for the critical studies and effects of the

non-carcinogen. For each factor representing a specific area of uncertainty inherent in the extrapolation from the available data, an uncertainty factor is applied. Uncertainty factors generally consist of multiples of 10, although values less than 10 are sometimes used.

Four major types of uncertainty factors are typically applied to NOAELs in the derivation of RfDs or RfCs. Uncertainty factors of 10 are used to (1) account for the variability between humans, (2) extrapolate from animals to humans, (3) account for a NOAEL based on a subchronic study instead of a chronic study, and (4) extrapolate from a lowest-observed-adverse-effect-level (LOAEL) to a NOAEL, if necessary. In addition, a modifying factor can be used to account for adequacy of the database. Typically, the modifying factor is set equal to one.

To obtain the RfD or RfC, all uncertainty factors associated with the NOAEL are multiplied together, and the NOAEL is divided by the total uncertainty factor. Therefore, each uncertainty factor adds a degree of conservatism (usually one order of magnitude) to the RfD or RfC. An understanding of the uncertainties associated with RfDs or RfCs is important in evaluating the significance of the HIs calculated in the risk characterization portion of the risk assessment. When available sub-chronic RfDs or RfCs were used to evaluate construction worker exposures. The COPCs in this assessment with USEPA-established oral/dermal and inhalation RfDs or RfCs are presented in Tables 19 and 20, for surface flux and soil COPCs, respectively.

6.3.3 Carcinogenic Health Effects

USEPA develops CSFs and IURs from chronic animal studies or, where possible, epidemiological data. Because animal studies use much higher doses over shorter periods of time than the exposures generally expected for humans, the data from these studies are adjusted, typically using a linearized multi-stage (LMS) mathematical model. To ensure protectiveness, CSFs/IURs are typically derived from the upper 95th percentile confidence limit of the slope, and thus the actual risks are unlikely to be higher than those predicted using the CSF/IUR, and may be considerably lower. The COPCs in this assessment with USEPA-established oral/dermal and inhalation CSFs/IURs are presented in Tables 19 and 21, for surface flux and soil COPCs, respectively.

6.3.4 Asbestos

Asbestos toxicity criteria were obtained from Table 8-1 of Berman and Crump's (2001) document and Tables 8.2 and 8.3 in the USEPA (2003b) guidance. The toxicity criteria vary based on fiber type, endpoint (lung cancer, mesothelioma, or combined) and percent of fibers

longer than 10µm and less than 0.4 µm in width. For this risk assessment the toxicity criteria were based on a combined endpoint of lung cancer and mesothelioma averaged over the smokers and non-smokers of the population, with the assumption that fifty percent of fibers are greater than 10 µm in length. The resulting unit risk factors (structures/cubic centimeter) are presented in Appendix H (included on the report CD in Appendix B). A complete discussion on issues associated with risk estimates for asbestos is presented in NDEP's *Technical Guidance for the Calculation of Asbestos-Related Risk in Soils* (2009b).

6.4 RISK CHARACTERIZATION

In the last step of a risk assessment, the estimated rate at which a receptor intakes a chemical is compared with information about the toxicity of that COPC to estimate the potential risks posed by exposure to the COPC. This step is known as risk characterization. The methods used for assessing cancer risks and non-cancer adverse health effects are discussed below.

6.4.1 Methods for Assessing Cancer Risks

In the risk characterization, carcinogenic risk is estimated separately as the incremental probability of an individual developing cancer over a lifetime as a result of exposure to chemicals and asbestos. Carcinogenic risks for chemicals were evaluated by multiplying the estimated average exposure rate (*i.e.*, LADD calculated in the exposure assessment) by the chemical's CSF or IUR. The CSF converts estimated daily doses averaged over a lifetime to incremental risk of an individual developing cancer. Because cancer risks are averaged over a person's lifetime, longer-term exposure to a carcinogen results in higher risks than shorter-term exposure to the same carcinogen, if all other exposure assumptions are constant. Theoretical risks associated with low levels of exposure in humans are assumed to be directly related to an observed cancer incidence in animals associated with high levels of exposure while the IUR converts estimated exposure concentrations averaged over a lifetime to incremental risk of an individual developing cancer. According to USEPA (1989), this approach is appropriate for theoretical upper-bound ILCRs of less than 1×10^{-2}. The following equations were used to calculate COPC-specific risks and total risks:

$$Risk = EC \times IUR \quad or \quad LADD \times CSF$$

where:

LADD = lifetime average daily dose (mg/kg-d)
EC = exposure concentration (mg/m^3)

IUR = inhalation unit risk $(mg/m^3)^{-1}$
CSF = cancer slope factor $(mg/kg\text{-}d)^{-1}$

and

$$Total\ Carcinogenic\ Risk = \Sigma\ Individual\ Risk$$

It is assumed that cancer risks for different chemicals and from multiple exposure routes are additive, which may introduce a protective bias in the result of the cancer risk assessment. Carcinogenic risk estimates were compared to the USEPA acceptable risk range of 1 in 10,000 (10^{-4}) and 1 in 1 million (10^{-6}) and NDEP's acceptable level of 10^{-6}. If the estimated risk falls within or below this risk range, the chemical is considered unlikely to pose an unacceptable carcinogenic risk to individuals under the given exposure conditions. A risk level of 1×10^{-5} (1 E-5) represents a probability of one in 100,000 that an individual could develop cancer from exposure to the potential carcinogen under a defined set of exposure assumptions.

6.4.2 Methods for Assessing Non-Cancer Health Effects

Non-cancer adverse health effects are estimated by comparing the estimated average exposure rate (*i.e.*, ADDs estimated in the exposure assessment) with an exposure level at which no adverse health effects are expected to occur for a long period of exposure (*e.g.*, the RfDs or RfCs). ADDs (or ECs) and RfDs (or RfCs) are compared by dividing the ADD by the RfD (or EC by the RfC) to obtain the ADD:RfD (EC:RfC) ratio, as follows:

$$HQ = \frac{EC}{RfC}\ or\ \frac{ADD}{RfD}$$

where:

HQ = hazard quotient
ADD = average daily dose (mg/kg-d)
EC = exposure concentration (mg/m^3)
RfD = reference dose (mg/kg-d)
RfC = reference concentration (mg/m^3)

The ADD-to-RfD (EC-to-RfC) ratio is known as a HQ. If a person's average exposure is less than the RfD or RfC (*i.e.*, if the HQ is less than 1), the chemical is considered unlikely to pose a significant non-carcinogenic health hazard to individuals under the given exposure conditions. Unlike carcinogenic risk estimates, a HQ is not expressed as a probability. Therefore, while both

cancer and non-cancer risk characterizations indicate a relative potential for adverse effects to occur from exposure to a chemical, a non-cancer adverse health effect estimate is not directly comparable with a cancer risk estimate.

If more than one pathway is evaluated, the HQs for each pathway are summed to determine whether exposure to a combination of pathways poses a health concern. This sum of the HQs is known as a HI.

$$Hazard\ Index = \Sigma Hazard\ Quotients$$

Any HI less than 1.0 indicates the exposure is unlikely to be associated with a potential health concern. If the HI is greater than 1.0, then the HQs are summed by the specific target organs affected by a particular chemical or chemicals. This is also summed across pathways and chemicals. Target organs are identified primarily by the source of the toxicity criteria (*e.g.*, IRIS). Since a chemical may affect more than one organ, in addition to the source of the toxicity criteria Oak Ridge National Laboratory's (ORNL) Risk Assessment Information System's toxicity profiles were also searched for target organ information (ORNL 2010).

6.4.3 Methods for Assessing Asbestos Risks

For assessing asbestos risks, Table 8-2 (Based on Optimum Risk Coefficients) of USEPA (2003b) was used. Table 8-2 presents best estimate risks optimized based upon separation of fiber type, size and endpoint (mesothelioma/lung cancer), thereby reducing apparent variation between the studies utilized. The values in Table 8-2 are used because they are the authors "best" estimates of potency based upon all the available data (whereas the "conservative values" presented in Table 8-3 present only the most conservative, and best "behaved" data). As described in USEPA (2003b), because the asbestos risks to male and female smokers/non-smokers are different, population averaged risks are evaluated based on Eqn. 8-1 of USEPA (2003b):

$$URF = 0.5 \times ((0.786 \times (NSM + NSF)) + ((0.214 \times (SM + SF)) \times CF$$

where:

URF = Population Averaged Unit Risk Factor $[s/cm^3]^{-1}$;*g.*, mg/kg, milligrams per cubic meter $[mg/m^3]$)
NSM = risk for male non-smokers
NSF = risk for male non-smokers

SM = risk for male smokers
SF = risk for female smokers
CF = factor to convert risk from risk per 100,000 to risk per 1,000,000

This equation considers male smokers, male non-smokes, female smokers, and female non-smokers. In addition, because both chrysotile and amphibole have been detected at the BMI Common Areas, both amphibole and chrysotile fibers are evaluated in the risk assessments, regardless as to whether either was detected within an exposure area (as calculated using the 95 percent UCL of the mean of the assumed underlying Poisson distribution).

The basic equation for assessing inhalation cancer risk for asbestos is analogous to that recommended by EPA for other inhalation carcinogens. As shown in Equation 11 of *Risk Assessment Guidance for Superfund, Part F* (USEPA, 2009) inhalation cancer risk is the product of an IUR factor and an exposure concentration. The exposure concentration is a function of the asbestos air concentration, the length of time an individual is exposed, and the averaging time for which carcinogenic effects are evaluated for the unit risk factor. This calculation of asbestos related risk (ARR) is also consistent with application of Berman and Crump (2003) to risk calculations described in Berman (2003a; 2003b; 2005). The risk equation used in performing an asbestos inhalation risk assessment is:

$$ARR = \frac{C_{air} \times URF \times ET \times EF \times ED}{AT}$$

where:

C_{air} = air concentration of asbestos (f/cm^3) (fibers per centimeter cubed)
ET = exposure time (hours/day)
EF = exposure frequency (days/year)
ED = exposure duration (years)
AT = averaging time (hours)
URF = unit risk factor (risk per f/cm^3)

Asbestos risk estimates are compared to the USEPA acceptable risk range for carcinogens of 1 in 10,000 (10^{-4}) and 1 in 1 million (10^{-6}) and NDEP's acceptable level of 10^{-6}, although the risk estimates represent the probability of death from mesthelioma or lung cancer rather than the probability of contracting cancer. If the estimated asbestos risk falls within or below this risk range, asbestos is considered unlikely to pose an unacceptable risk to individuals under the given exposure conditions. A risk level of 1×10^{-5} (1 E-5) represents a probability of one in 100,000

that an individual could die from contracting mesothelioma or lung cancer from exposure to asbestos under a defined set of exposure assumptions.

6.4.4 Risk Assessment Results

The calculation of theoretical upper-bound ILCRs and non-cancer health effects are presented by receptor in Tables 22 through 25 and are discussed in Section 8.0. These tables present the theoretical upper-bound ILCRs and non-cancer health effects calculations for residential, construction worker, commercial (indoor) worker, and maintenance (outdoor) worker receptors. The risk of death from lung cancer or mesothelioma as a consequence of exposure to asbestos on a site-wide basis is presented in Table 26. All calculation spreadsheets are provided in Appendix H (included on the report CD in Appendix B).

7.0 UNCERTAINTY ANALYSIS

Risk estimates are values that have uncertainties associated with them. These uncertainties, which arise at every step of a risk assessment, are evaluated to provide an indication of the uncertainty associated with a risk estimate. Risk assessments are not intended to estimate the true risk to a receptor associated with exposure to chemicals in the environment. In fact, estimating the true risk is impossible because of the variability in the exposed or potentially exposed populations. There are always gaps in knowledge because a true exposure for every individual cannot be measured. Therefore, risk assessment is a means of estimating the probability that an adverse health effect (*e.g.*, cancer, impaired reproduction) will occur in a receptor in order to assist in decision making regarding the protection of human health. The use of conservative values for a majority of the assumptions in risk assessments helps guard against the underestimation of risks.

Risk estimates are calculated by combining Site data, assumptions about individual receptor's exposures to impacted media, and toxicity data. The uncertainties in this HHRA can be grouped into four main categories that correspond to these steps:

- Uncertainties in environmental sampling and analysis
- Uncertainties in fate and transport modeling (discussed in Section 9)
- Uncertainties in assumptions concerning exposure scenarios
- Uncertainties in toxicity data and dose-response extrapolations

General uncertainties associated with the HHRA for the Site are summarized in Table 27. In Table 27, "Low," "Moderate," and "High" are qualitative indicators as to whether the source of uncertainty will likely have a small, medium, or large effect on the risk calculations, respectively. In general, the scenarios and parameters evaluated and used in this HHRA are considered conservative based on how the Site will be developed. This is a large source of potential conservative bias in this HHRA. Additional discussion on the uncertainties associated with the HHRA is provided below.

7.1 ENVIRONMENTAL SAMPLING

The HHRA for the Site was based on the sampling results obtained from investigations conducted in 2008 and 2009. Errors in sampling results can arise from the field sampling, laboratory analyses, and data analyses.

The environmental sampling at the Site is one source of uncertainty in the evaluation. However, the number of sampling locations and events is large, widespread and spatially distributed, with consistent analytical results (*i.e.*, no hot spots), and sampling was performed using approved procedures; therefore, the sampling and analysis data is sufficient to characterize the impacts and the associated potential risks.

Because of the surface soil removal for certain chemicals, the new surface layer of the Site could have different chemical concentrations than those that were measured prior to soil removal. Because only the trigger analytes were re-analyzed for in the post-scrape samples, the original measured surface soil data at the Site for all other chemicals was retained for further evaluation. However, it is reasonable to assume that the concentrations are now lower for some chemicals (*e.g.*, metals, if due to contamination), because of the removal of some soil.

The laboratory data are another potential source of uncertainty. The types of analyses were chosen based on historical knowledge of the Site and BMI Common Areas. The data validation and data usability evaluations provided documentation that the HHRA database is adequate to support HHRA conclusions (see Section 4 and Appendix E). Based on the data validation and data usability, the risk estimates are likely to be overestimated rather than underestimated.

Uncertainties are also introduced into the risk assessment by assumptions that are made regarding the grading plan. As described in Section 3.1, the grading plan affects the interpretation of the data in terms of assigning samples to the surface or the subsurface. This was done to avoid the situation in which current surface samples might not be included in the evaluation of exposures to future surface soils. The data were subdivided by depth intervals as described in Section 3.1, and the maximum of the UCLs for the two subsets of data was used as the exposure point concentration. There is some uncertainty in the choice of subsetting on the concentrations of interest, and there is a potential small overestimation of risk by choosing the maximum of the two UCLs as the exposure point concentration. The effects are likely to be small given the data, since there is not much variation in the different UCLs.

7.2 ESTIMATES OF EXPOSURE

The selection of exposure pathways is a process, often based on best professional judgment, which attempts to identify the most probable potentially harmful exposure scenarios. In a risk assessment it is possible that risks are not calculated for all of the exposure pathways that may occur, possibly causing some underestimation of risk.

7.2.1 Aggregation of Exposure Areas

For the residential scenario that is evaluated, default exposure areas are 1/8th acre in size. However, sampling has not been performed at the frequency of guaranteeing at least one sample per exposure area. Instead, sampling has been performed at the scale of approximately once every three acres. This is considered sufficient if the concentration distribution for COPCs appears similar across the Site. To the extent that this assumption is not valid the risk assessment might underestimate risks. However, considering the remediation activities that have been performed, the risk estimates are considered reasonable from this perspective and unlikely to have resulted in an underestimation of risk.

7.2.2 Types of Exposures Examined

In an evaluation, risks are sometimes not calculated for all of the exposure pathways that may occur, possibly causing some underestimation of risk. However, in this case, all principal potential exposure pathways were evaluated. In this assessment, risks were estimated for future on-site residents, and indoor and outdoor worker receptors. Risks for the most likely routes of exposure to these receptors were estimated. For example, risks to residents were estimated for soil ingestion, skin contact with soil, inhalation of outdoor air (including dust generation), inhalation of indoor air, and ingestion of homegrown produce. Although it is possible that other exposure routes could exist (for example, downwind off-site residents), these exposures are expected to be lower than the risks associated with the pathways considered.

As noted in Section 2.5.3, because an NFAD is sought for unrestricted land use (*i.e.*, residential, recreational, commercial or industrial use), the Closure Plan methodology includes the evaluation of residential receptors, but not school receptors. Because of the higher exposure potential for residential receptors versus school receptors (e.g., students), if the Site is developed as a high school as planned, risks are likely overestimated rather than underestimated.

7.2.3 Intake Assumptions Used

The risks calculated depend largely on the assumptions used to calculate the rate of COPC intake. For this assessment, standard default values developed by USEPA are used for reasonable maximum exposures frequency and exposure duration for all receptors. These estimates are conservative values, and the possibility that they underestimate the risk is low. The uncertainties associated with particular parameters used in this risk assessment are described below.

The amount of COPCs the body absorbs may be different from the amount of a COPC contacted. In this HHRA absorption of ingested and inhaled COPCs is conservatively assumed to be 100 percent.

Current USEPA guidance (USEPA 2004e) states that "There are no default dermal absorption values presented for volatile organic compounds nor inorganic classes of compounds. The rationale for this is that in the considered soil exposure scenarios, volatile organic compounds would tend to be volatilized from the soil on skin and should be accounted for via inhalation routes in the combined exposure pathway analysis. For inorganics, the speciation of the compound is critical to the dermal absorption and there are too little data to extrapolate a reasonable default value." However, as requested by NDEP, the risk estimates were calculated using default dermal absorption values for inorganics from California EPA (1994) and California SCAQMD (1988) guidance. While USEPA guidance does not specifically state that this pathway should be dismissed, consistent with the approach utilized in current USEPA guidance, the risk estimates in this HHRA do not include a dermal absorption value for VOCs.

While there have been numerous studies in recent years detailing the presence of perchlorate in produce, the homegrown exposure pathway was not evaluated for perchlorate in the HHRA. BRC has not been able to identify an appropriate soil-to-plant uptake factor for this pathway. The studies predominately focus on water-to-plant uptake. Dr. W. Andrew Jackson at Texas Tech University has been studying perchlorate plant uptake and does not believe that the soil-to-plant pathway for a garden scenario is realistic for perchlorate (Jackson 2010). Perchlorate is extremely soluble and in surface soil would rapidly be flushed away due to application of irrigation water (Jackson 2010). In addition, laboratory experiments have demonstrated that perchlorate may be reduced to chloride in some plants (ATSDR 2008b). Also, concentrations of perchlorate in soils at this site are quite low relative to risk levels of concern, so the contribution of perchlorate to risk is quite small. Adding the soil-to-plant component is unlikely to add significantly to the risk. Consequently, the effect on the risk assessment of excluding perchlorate from the soil-to-plant pathway is likely to be small.

Soil preparation for a backyard garden is not accounted for in the HHRA and would result in reduced soil concentrations. Las Vegas area soils are "*…alkaline, clayish, caliche or hard and salty*" (Mills, 2000). In addition, "*…soils are lacking organic matter and nutrients*" (Mills, 2000). Therefore, residential gardening cannot occur in Site soils in its existing condition. For non-native vegetation to grow, soil amendments must be added. Recommended soil preparations for the area include thoroughly blending equal amounts of organic matter with the soil as well as the addition of other soil amendments (*e.g.*, fertilizers). Also, as noted above, the planned development for the Site is as a high school. It is doubtful that the homegrown produce exposure pathway is a complete pathway under this exposure scenario.

The construction activity dust emissions did not take into account dust control measures which would reduce the amount of dust generated to below those levels used in the HHRA. The Clark County Department of Air Quality and Environmental Management has dust control permitting requirements, and an inhalable particulate matter action level of 50 $\mu g/m^3$. The construction activity dust emissions predicted and used in the HHRA exceeded this level. Therefore, dust suppression activities would need to be implemented, thus reducing dust levels and exposures.

The dispersion factor for the construction worker is not adjusted to account for soil intrusion activities. Because these activities may cause increased air concentrations than that evaluated, risks to VOCs in soil may be underestimated for this receptor. However, VOCs are primarily associated with groundwater, this potential underestimation is considered low.

7.3 TOXICITY ASSESSMENT

The availability and quality of toxicological data is another source of uncertainty in the risk assessment. Uncertainties associated with animal and human studies may have influenced the toxicity criteria. Carcinogenic criteria are classified according to the amount of evidence available that suggests human carcinogenicity. In the establishment of the non-carcinogenic criteria, conservative safety factors, known as uncertainty and modifying factors, are used.

7.3.1 COPCs Lacking Toxicological Data

Toxicity criteria have not been established for some of the chemicals detected at the Site. These chemicals were not quantitatively evaluated in the HHRA. For example, potassium is a COPC for which no USEPA toxicity criteria have been established. The health effects and levels of concern for potassium in soil are not known. While not including potassium may have resulted in a low degree of underestimation of quantitative Site risk estimates, the available toxicological

information suggests that this underestimation will not likely affect the decisions made relative to Site risks.

Because of the inconclusive nature of TICs as potentially site-related chemicals, non-cancer surrogate toxicity criteria were not applied. Non-cancer surrogate toxicity criteria were not applied to the inorganic chemicals because of the complexity of ion and metal toxicity. A quantitative estimation of risk was not conducted for these COPCs. Thus, the risks presented in this assessment could be underestimated as a result.

For the surface flux results, there are a few organic chemicals (*e.g.*, n-heptane, 2-hexanone, cymene) detected that do not have toxicity criteria available. Surrogate toxicity criteria were applied for these chemicals. Thus, the risks presented in this assessment could be under or overestimated as a result.

7.3.2 Uncertainties in Animal and Human Studies

Extrapolation of toxicological data from animal tests is one of the largest sources of uncertainty in a risk assessment. There may be important, but unidentified, differences in uptake, metabolism, and distribution of chemicals in the body between the test species and humans. For the most part, these uncertainties are addressed through use of conservative assumptions in establishing values for RfDs, RfCs, CSFs, and IURs, which results in the likelihood that the risk is overstated.

Typically, animals are administered high doses (*e.g.*, maximum tolerated dose) of a chemical in a standard diet or in air. Humans are generally exposed to much lower doses in the environment, which may affect the toxicity of the chemical. In these studies, animals, often laboratory rodents, are exposed daily to the chemical agent for various periods of time up to their 2-year lifetimes. Humans have an average 70-year lifetime and may be exposed either intermittently or regularly for an exposure period ranging from months to a full lifetime. Because of these differences, it is not surprising that extrapolation error is a large source of uncertainty in a risk assessment.

7.3.3 Non-Carcinogenic Toxicity Criteria

In the establishment of the non-carcinogenic criteria, conservative safety factors, known as uncertainty factors, are used. Most of the chronic non-carcinogenic toxicity criteria that were located in the IRIS database have uncertainty factors of 1,000. This means that the dose corresponding to a toxicological effect level (*e.g.*, LOAEL) is divided by 1,000 to establish a safe, or "reference", dose. The purpose of the uncertainty factor is to account for the

extrapolation of toxicity data from animals to humans and to insure the protection of sensitive individuals.

7.3.4 Sub-Chronic Non-Carcinogenic Toxicity Criteria

Construction worker exposures are evaluated for an exposure duration of one-year, which is more representative of a sub-chronic exposure rather than a chronic exposure. As such, where available, sub-chronic RfDs were used to characterize non-cancer effects for the construction worker. However, for many COPCs a sub-chronic RfD was not available and the chronic RfD was used. This likely presented an overestimation of non-cancer health risks to the construction worker.

7.3.5 Carcinogenic Toxicity Criteria

Uncertainty due to extrapolation of toxicological data for potential carcinogens tested in animals to human response is commonly the case for potentially carcinogenic chemicals. USEPA frequently uses the LMS model, or other non-threshold low dose extrapolation models, to extrapolate the toxicological data to estimate human response. These low dose extrapolation models assume that there is no threshold for carcinogenic substances; that is, exposure to even one molecule, fiber, or picocuries of a carcinogen is sufficient to cause cancer. This is a highly conservative assumption because the body has several mechanisms to protect against cancer.

The use of the LMS model to extrapolate is a well-recognized source of significant uncertainty in the development of carcinogenic toxicity criteria and, subsequently, theoretical carcinogenic risk estimates. At high levels of exposure, there may indeed be a risk of cancer regardless of whether the effect occurs via a threshold mechanism or not. An animal bioassay can't determine what happens at low levels of exposure, however, which are generally typical of human exposure levels.

At low levels of exposure, the probability of cancer cannot be measured but must be extrapolated from higher dosages. To do this, animals are typically exposed to carcinogens at levels that are orders of magnitude greater than those likely to be encountered by humans in the environment. It would be difficult, if not impossible, to perform animal experiments with a large enough number of animals to directly estimate the level of risk at the low exposure levels typically encountered by humans. Thus, to estimate the risk to humans exposed at low levels, dose-response data derived from animals given high dosages are extrapolated downward using mathematical models such as the LMS model, which assumes that there is no threshold of response. The dose-response

curve generated by the model is known as the maximum likelihood estimate. The slope of the 95 percent lower confidence interval (*i.e.*, upper-bound limit) curve, which is a function of the variability in the input animal data, is taken as the CSF. CSFs are then used directly in cancer risk assessment.

The federal government, including USEPA itself, has acknowledged the limitations of the high-to-low dose extrapolation models, particularly the LMS model (USEPA 1991c). In fact, this aspect of cancer risk assessment has been criticized by many scientists (including regulatory scientists) in recent years. USEPA has recently released revised cancer risk assessment guidelines (USEPA 2005c).

Even for genotoxic (*i.e.*, non-threshold) substances, there are two major sources of bias embedded in the LMS model: (1) its inherent conservatism at low doses and (2) the routine use of the linearized form in which the 95 percent upper confidence interval is used instead of the unbiased maximum likelihood estimate. The inherent conservatism at low doses is due in part to the fact that the LMS model ignores all of the numerous biological factors that argue against a linear dose- response relationship for genotoxic effects (*e.g.*, DNA repair, immunosurveillance, toxicokinetic factors).

Several other factors inherent in the LMS model result in overestimated carcinogenic potency: (1) any exaggerations in the extrapolation that can be produced by some high dose responses (if they occur) are generally neglected, (2) upper confidence limits on the actual response observed in the animal study are used rather than the actual response, resulting in upper-bound low dose extrapolations, which can greatly overestimate risk, and (3) non-genotoxic chemicals (*i.e.*, threshold carcinogens) are modeled in the same manner as highly genotoxic chemicals.

7.3.6 Uncertainties with the Asbestos Risk Assessment

For the risk assessment, asbestos concentrations were presented two ways, as a best estimate and upper bound based upon the UCL of the mean of the Poisson distribution. No detections of amphibole fibers were observed. However, when zero fibers are observed, the UCL of the mean is approximately three fibers, and this value is used as the basis for the reasonable maximum exposure point concentration for the asbestos risk assessment. Considering the remediation activities that have been performed, and the observation of zero amphibole fibers, this approach might result in overestimation of amphibole related risks.

Asbestos risk estimates are highly dependent on the number of samples to increase or decrease the pooled analytical sensitivity. That is, a larger number of non-detect samples with similar individual analytical sensitivity results in a lower pooled analytical sensitivity and subsequently a lower estimated asbestos related risk. Whereas, a smaller number of non-detect samples results in a higher asbestos related risk. Uncertainty is, thus, reduced as more samples are collected.

7.4 CUMULATIVE EFFECT OF UNCERTAINTIES

Uncertainties from different sources are compounded in the HHRA. For example, if a person's daily intake rate for a chemical is compared to an RfD to determine potential health risks, the uncertainties in the concentration measurements, exposure assumptions, and toxicities are all expressed in the result. Because the exposure assumptions and toxicity criteria are considered conservative, the risk estimates calculated in this HHRA are likely to overestimate rather than underestimate potential risks.

8.0 SUMMARY OF RESULTS

This HHRA has evaluated potential risks to human health associated with chemicals and asbestos detected in soil at the Galleria North-School Site sub-area located within the BMI Common Areas in Clark County, Nevada. The calculation of chemical theoretical upper-bound ILCRs and non-cancer health effects are presented in Appendix H (included on the report CD in Appendix B). Asbestos risk calculations are also presented in Appendix H (included on the report CD in Appendix B). All calculation spreadsheets for this HHRA are included in Appendix H (included on the report CD in Appendix B).

The risk estimates are based on reasonable maximum exposure scenarios, which results in estimates of the potential reasonable maximum, or high-end, risks associated with the Site. The calculated chemical theoretical upper-bound ILCRs and HIs are presented in Tables 22 through 25 for residential, construction worker, commercial (indoor) worker, and maintenance (outdoor) worker receptors, respectively. Asbestos estimated risk of death from lung cancer or mesothelioma on a site-wide basis are presented in Table 26.

8.1 RESIDENTS

For chemical exposures, the total cumulative non-cancer HI for future residential receptors at the Site is 0.20 (including the surface flux air risk estimates[28]) (see Table 22) with perchlorate soil exposures the primary contributor. The HI does not exceed the target HI of 1.0.

The maximum theoretical upper-bound ILCR for future residential receptors at the Site is 2×10^{-6} (including the surface flux air risk estimates see Table 22). The range of ILCRs is 1×10^{-6} to 2×10^{-6}. The ILCR is near the low end of the risk goal of 1×10^{-6} and is driven by the soil ILCR due to beta-BHC and indoor air ILCR for flux sample GNC1-BE21 due to 1,2-dibromoethane (note that this chemical is not an SRC).

The estimated risks for death from lung cancer or mesothelioma for asbestos exposures to future residential receptors were below 1×10^{-6}. For residential receptors, the best estimate and upper bound concentrations for chrysotile fibers are 1×10^{-9} and 6×10^{-9}; and zero and 4×10^{-7} for amphibole fibers (Table 26). These estimated risks are below the low end of the risk goal of

[28] The minimum and maximum surface flux risk estimates are summed with the soil risk estimates to provide a range of cumulative risks. The minimum and maximum surface flux risk estimates are provided in Appendix H (included on the report CD in Appendix B) and the receptor-specific chemical risk summary tables. The risks shown are cumulative risks using the maximum surface flux risk estimate.

1×10^{-6}. The upper bound estimated risk of death from lung cancer or mesothelioma is estimated based on the 95 percent UCL of the count of the number of fibers detected, assuming a Poisson distribution for the count. Note that when the observed count is zero, the 95 percent UCL is approximately three fibers. Therefore, the high-end risk estimate for deaths from lung cancer or mesothelioma is a conservative value since it is based on a 95 percent UCL of the Poisson distribution of three long amphibole structures although no long amphibole structures have been detected at the Site.

8.2 CONSTRUCTION WORKERS

For chemical exposures, the total cumulative non-cancer HI for construction worker receptors at the Site is 0.055 (including the surface flux air risk estimates) (see Table 23), with perchlorate soil exposures the primary contributor. The HI does not exceed the target HI of 1.0.

The maximum theoretical upper-bound ILCR for construction worker receptors at the Site is 2×10^{-8} (including the surface flux air risk estimates see Table 23) with benzo(a)pyrene and dibenzo(a,h)anthracene soil exposures the primary contributors. The flux ILCRs range from 2×10^{-10} to 4×10^{-9} with 1,2-dibromoethane at flux sample location of GNC1-BE21 the primary contributor. The ILCRs are all below the low end of the risk goal of 1×10^{-6}.

The estimated risks for death from lung cancer or mesothelioma for asbestos exposures to construction workers were below 1×10^{-6}. For construction worker receptors, the best estimate and upper bound concentrations for chrysotile fibers are 2×10^{-9} and 1×10^{-8}; and zero and 7×10^{-7} for amphibole fibers (Table 26). These estimated risks are below the low end of the risk goal of 1×10^{-6}.

8.3 COMMERCIAL (INDOOR) WORKERS

For chemical exposures, the total cumulative non-cancer HI for commercial (indoor) worker receptors at the Site is 0.073 (including the surface flux air risk estimates) (see Table 24), with perchlorate soil exposures the primary contributor. The HI does not exceed the target HI of 1.0.

The maximum theoretical upper-bound ILCR for commercial (indoor) worker receptors at the Site is 2×10^{-7} (including the surface flux air risk estimates see Table 24) with the indoor air ILCR for flux sample GNC1-BE21 due to 1,2-dibromoethane the primary contributor. The ILCRs are all below the low end of the risk goal of 1×10^{-6}.

The estimated risks for death from lung cancer or mesothelioma for asbestos exposures to commercial (indoor) workers were below 1×10^{-6}. For commercial (indoor) worker receptors, the best estimate and upper bound concentrations for chrysotile fibers are 2×10^{-10} and 1×10^{-9}; and zero and 8×10^{-8} for amphibole fibers (Table 26). These estimated risks are below the low end of the risk goal of 1×10^{-6}.

8.4 MAINTENANCE (OUTDOOR) WORKERS

For chemical exposures, the total cumulative non-cancer HI for commercial (outdoor) worker receptors at the Site is 0.013 (including the surface flux air risk estimates) (see Table 25) with perchlorate soil exposures the primary contributor. The HI does not exceed the target HI of 1.0.

The maximum theoretical upper-bound ILCR for commercial (outdoor) worker receptors at the Site is 2×10^{-7} (including the surface flux air risk estimates see Table 25) with the soil ILCRs for dibenzo(a,h)anthracene and benzo(a)pyrene the primary contributors. The ILCRs are all below the low end of the risk goal of 1×10^{-6}.

The estimated risks for death from lung cancer or mesothelioma for asbestos exposures to maintenance (outdoor) workers were below 1×10^{-6}. For maintenance (outdoor) worker receptors, the best estimate and upper bound concentrations for chrysotile fibers range from 5×10^{-10} to 3×10^{-9} and zero and 2×10^{-7} for amphibole fibers (Table 26). These estimated risks are below the low end of the risk goal of 1×10^{-6}.

9.0 POTENTIAL IMPACTS TO GROUNDWATER

This Section presents the evaluation of the potential impacts to groundwater of residual chemicals in soil and considering the future land use of the Site. This evaluation has been conducted using two basic analytical tools: 1) screening of COPCs, resulting in selection of indicator COPCs for modeling, and 2) use of both the VLEACH and SESOIL vertical unsaturated zone migration models and site-specific analytical results of soil samples collected from the Site. The SESOIL modeling was conducted for all non-volatile COPCs identified in the HHRA and selected for modeling.[29] The SESOIL modeling was selected because it can provide a consistent framework for evaluating potential groundwater impacts for the non-volatile COPCs. However, SESOIL does not simulate downward vapor-phase diffusion. Therefore, VLEACH was used for the volatile COPCs identified in the HHRA in the soil matrix and selected for modeling. The evaluation was conducted using the SESOIL and VLEACH models as distributed by Waterloo Hydrogeologic, Inc. in the model software package WHI UnSat Suite Plus 2.2.03.

9.1 PRELIMINARY IMPACTS TO GROUNDWATER SCREENING

A tiered process is carried out for the evaluation of potential impacts to groundwater. Consistent with Section 9.6.1 of the *BRC Closure Plan* (BRC, ERM, and DBS&A 2007; Section 9 revised March 2010), several criteria are utilized to evaluate whether chemicals may present a potential threat to groundwater quality prior to inclusion in quantitative unsaturated zone modeling.

9.1.1 Comparison to Leaching-Based Basic Comparison Levels

Only those chemicals selected as COPCs in the HHRA (Section 5) are considered further for evaluation as a potential threat to groundwater quality. The COPCs considered in the evaluation are listed in Table J-1. Initial quantitative evaluation of the potential for residual COPC concentrations to impact groundwater quality was conducted by comparison of detected concentrations of each COPC to NDEP (2010a) LBCLs. While this comparison is also conducted as part of the confirmation and data process summary (Table 4), in Section 3 this process is utilized for discussion and comparative purposes only.

[29] Although the *BRC Closure Plan* identifies the use of SESOIL for inorganic compounds, PESTAN for pesticides, and VLEACH for other organic compounds; subsequent information indicates that PESTAN is inappropriate for this type of modeling. Therefore, because SESOIL is an appropriate model for inorganics, pesticides, and other organic compounds, for consistency, SESOIL was used for all non-VOCs at the Site.

LBCLs have been developed by NDEP (2010a), and are based on a simple, conservative soil/water partitioning and groundwater dilution model provided in the USEPA's *Soil Screening Guidance* (1996). This process is described in detail in Section 9.6.1 of the *BRC Closure Plan* (BRC, ERM, and DBS&A 2007; Section 9 revised March 2010). In calculating the LBCL, a DAF is applied. A DAF of one is used when little or no dilution or attenuation of soil leachate concentrations is expected, and a DAF of 20 may be used when significant attenuation of the leachate is expected due to site-specific conditions.

For the Site, the LBCLs based on a DAF of 1 were used for comparison purposes ($LBCL_{DAF1}$). Those chemicals with detected concentrations less than the $LBCL_{DAF1}$ for that COPC are considered unlikely to pose a significant threat to groundwater quality, and are eliminated from further consideration. This comparison is presented in Table J-1. Of the 36 chemicals selected as COPCs in Section 5, 18 do not have detected concentrations greater than their respective $LBCL_{DAF1}$. Therefore, these 18 chemicals are considered unlikely to present a significant threat to future groundwater quality and are eliminated from further evaluation. Six COPCs have one or more concentrations greater than their respective LBCLs, and 12 do not have LBCLs. These COPCs are considered further.

9.1.2 Selection of Representative COPCS for Modeling

For those COPCs that exceeded their respective conservative LBCLs or do not have LBCLs, further evaluation was conducted to select a subset of COPCs for modeling considered representative of these chemicals. In selecting representative chemicals for modeling, evaluation criteria included: physical/chemical parameters, 2) anticipated vadose mobility relative to other members of the chemical class, 3) relative relationship between maximum detected concentrations and LBCL (Max/LBCL ratio), and 4) relative relationship between residential soil BCLs (indications of relative toxicity). The results of this evaluation are presented in Table J-1. As a result of the evaluation, the following chemicals were selected for quantitative unsaturated zone modeling: nickel, benzo(g,h,i)perylene, 2,4'-DDE, beta-BHC, ammonia, nitrate, perchlorate, cyanide, 1,2,4-trimethylbenzene, dichloromethane, and formaldehyde.

9.2 SESOIL MODEL

SESOIL is designed for long-term environmental hydrologic, sediment, and pollutant fate simulations. The model is structured around three cycles: (1) the hydrologic cycle, which takes into account rainfall, infiltration, soil moisture, surface runoff, exfiltration, evapotranspiration, groundwater discharge, and capillary rise; (2) the sediment cycle, which is currently not

available in the model; and (3) the pollutant cycle, which takes into account advection, diffusion, volatilization, adsorption/desorption, chemical degradation/decay, biological transformation and uptake, hydrolysis, photolysis, oxidation, and cation exchange. A complete description of the model equations and assumptions is provided in *SESOIL A Seasonal Soil Compartment Model* (Bonazountas and Wagner 1984). Extensive modifications to the original version of SESOIL are described in Hetrick *et al*. (1989). The most current version of SESOIL incorporates these modifications.

Because the SESOIL model ignores a number of possible attenuating factors, it is likely that it over predicts the actual chemical migration rate in the vadose zone. However, because of its simplicity, this approach provides a simple method to estimate the likely maximum rate at which chemicals would be transported in the vadose zone down to groundwater. All input parameters used in the model simulations are presented in Appendix J (included on the report CD in Appendix B).

Inputs for SESOIL are broken out into the following elements:

- Climate Data (Table J-2): consists of nine monthly climatological inputs. Data for this file are accessed from the climatic dataset incorporated into WHI UnSat Suite Plus. This dataset contains monthly averages for over 200 first order weather stations throughout the U.S.

- Soil Data (Table J-3): consists of several parameters that describe the soil properties for the Site.

- Chemical Data (Table J-4): consists of several parameters used to describe the properties of the COPC.

- Application Data (Table J-5): consists of a number of inputs that describe soil layer specific data and the chemical application load.

- Initial Concentrations (Table J-6): consists of the COPC concentrations used at time zero.

Data for Las Vegas, the closest first order weather station to the Site with similar meteorological conditions, are considered representative of the Site and input into this file. Input parameters for this data file include temperature, cloud cover, relative humidity, precipitation, and albedo, which relates to the fraction of light or electromagnetic radiation reflected by a surface. Evapotranspiration is calculated by the model based on temperature, cloud cover, relative humidity, and albedo (precipitation is not included as part of this calculation). Greater

evapotranspiration inhibits infiltration, leading to slower downward migration of the chemicals. The climate dataset used is shown in Table J-2, in Appendix J.

The soil model input data consists of several parameters which describe soil properties. Average values of measured site-specific data of soil porosity, density and organic carbon content were used in the model (Table J-3, in Appendix J). For parameters without measured Site data (cation exchange coefficient, Freundlich exponent), default inputs consistent with a sand soil type were used, with the exception of soil disconnectedness index. The default sand soil disconnectedness index of 3.7 was modified to 4.53 such that the overall recharge rate to groundwater predicted by the model would be consistent with the default, pre-development recharge rate predicted in the groundwater flow model developed for the Eastside property (DBS&A 2009). A recharge rate of 0.08 inches per year (for undeveloped areas) was estimated as part of that model.

The chemical model input data consists of several parameters used to describe the properties of the chemical of concern. USEPA Soil Screening Guidance (2002b) default chemical properties were used where available. NDEP's BCL guidance (NDEP 2009a) was a secondary source for these parameters. Chemical parameters used in the evaluation are presented in Table J-4, in Appendix J.

The application model input data consists of a number of inputs that describe infiltration-layer-specific data and the chemical application load. The model was run without application load. For purposes of this evaluation, the soil column was divided into four infiltration layers (Table J-5, in Appendix J). The designation of each layer and the width of each infiltration layer were:

Designation	Thickness (feet)	Boundary Depths (feet)
Infiltration Layer One	10	0 – 10
Infiltration Layer Two	5	10 – 15
Infiltration Layer Three	5	15 – 20
Infiltration Layer Four	5	20 – 25

For the purposes of inputting the initial soil chemical concentrations, the first layer was divided into ten individual one foot thick sub-layers, and the three remaining layers were divided into five individual 1.0 foot thick sub-layers. The initial soil chemical concentration in each sub-layer

for the simulation was the maximum detected concentration in each soil depth horizon corresponding to each sub-layer (Table J-6, in Appendix J).

The depth to groundwater has been observed to vary from approximately 25 to 33 feet bgs in recent (July-August 2009) sampling (see Figure 2). Therefore, groundwater was conservatively assumed to be at a depth of 25 feet bgs. The SESOIL model is one dimensional, that is, it is limited to calculations and predictions within the soil column defined by the input parameters.

9.3 VLEACH MODEL

VLEACH is a USEPA one-dimensional finite-difference vadose zone leaching model that describes the movement of an organic contaminant within and between three phases: (1) as a solute dissolved in water, (2) as a gas in the vapor phase, and (3) as an adsorbed compound in the solid phase. Similar to SESOIL, the VLEACH model ignores a number of possible attenuating factors. The VLEACH model is based on several assumptions that typically result in conservative evaluations of migration potential. These assumptions include:

- The model simulates one-directional flow only;
- Liquid phase dispersion is neglected. Hence, the migration of the chemical will be simulated as a plug. This assumption causes higher dissolved concentrations and lower travel time predictions than would occur in reality, and;
- Instantaneous equilibrium between phases is assumed within each cell. After the mass is exchanged between the cells, the total mass in each cell is recalculated and re-equilibrated between the different phases and applied to the full depth of each cell. Thus assuming that some portion of the mass transferred into the top of one cell instantaneously reaches the bottom of the cell.

Therefore, it likely over predicts the actual chemical migration rate in the vadose zone. VLEACH requires the following soil input parameters: bulk density; effective porosity, moisture content and organic carbon content. All soil and chemical input parameters used in the SESOIL model were used in the VLEACH model. For soil moisture, which is an input for VLEACH but is calculated by SESOIL, the soil moisture calculated by SESOIL for each of the recharge scenarios was utilized in VLEACH to maintain consistency between the models. Additional model input parameters specific to the VLEACH model are presented in Table J-7, in Appendix J.

9.4 POTENTIAL IMPACTS TO CHEMICAL MIGRATION MECHANISMS FOLLOWING REDEVELOPMENT

Migration of chemicals in soil to groundwater may be affected following redevelopment. Future redevelopment will likely result in increased surface water infiltration due to sources such as buried water lines, sewer lines, irrigation lines and/or over-watering of parks and lawns. These sources have the potential to enhance the migration to groundwater of the post-remediation levels of chemicals remaining in soils. Subsequently, three surface water infiltration scenarios were evaluated.

The first scenario evaluates recharge relative to baseline, pre-development conditions. This scenario assesses the potential for surface precipitation on unimproved ground surface (titled a "baseline" scenario), to influence migration of chemicals to groundwater. This is consistent with recharge rate predicted in the groundwater flow model developed for the Eastside property (DBS&A 2009). A recharge rate of 0.08 inches per year (for undeveloped areas) was estimated as part of that model.

The second scenario evaluates recharge relative to normal post-development conditions. This scenario assesses the potential for surface water recharge in improved areas associated with commercial and residential construction, to influence migration of chemicals to groundwater. This is consistent with recharge rate predicted in the groundwater flow model developed for the Eastside property (DBS&A 2009). A recharge rate of 0.57 inches per year (for undeveloped areas) was estimated as part of that model (titled the "normal" scenario).

Lastly, a scenario of post-development enhanced recharge was also evaluated as part of the groundwater flow model developed for the Eastside property (DBS&A 2009), and incorporated into the vadose zone modeling. This scenario evaluates surface water recharge associated with overwatering of open space. A recharge rate of 8.672 inches per year was estimated as part of that model (titled the "enhanced" scenario).

Therefore, additional modeling runs were conducted using the SESOIL and VLEACH models to account for the potential increased recharge to groundwater for each of the two post-development scenarios. For SESOIL, the only modification was to increase the monthly rainfall to 1.522 cm/month for the normal post development scenario, and 5.42 cm/month for the enhanced recharge scenario. While the input of additional applied precipitation is more than the amount of post-development modeled water infiltration (DBS&A 2009), this is necessary to offset the effect of model estimated evapotranspiration (because the model only applies

infiltration as a surface rather than as a sub-surface source). The values of 1.522 and 5.42 cm/month are values selected by iterative model runs conducted to identify a precipitation rate that approximates and results in the desired recharge(s) to groundwater. The modified rainfall totals used for this modeling run are provided in Table J-2, in Appendix J.

9.5 MODEL UNCERTAINTY

Use of site-specific values, where available, is recommended. A number of limitations exist for the models. These include:

- Data gaps/ uncertainties in site-specific properties
- Omission of certain chemical and physical processes
- Lack of an appropriate model validation opportunity

Data gaps, uncertain and/or variable input values that may exist for the Site include:

- Site specific meteorological data (uncertain/variable)
- Soil input parameter measurements for the different soil layers incorporated in the model (*e.g.*, intrinsic permeability, organic carbon content [uncertain/variable])
- Site specific chemical data (*e.g.*, degradation rates [gap])

Any interactions that may occur among the different chemicals present in the soil which may influence the migration and/or fate of the various chemicals is not taken into account in the model (*e.g.*, chemical mobility may decrease or increase in the presence of other solvent-related chemical components). Reasonable effort has been made to obtain results that provide reasonable estimates of actual Site conditions. Uncertain input values were selected based on available scientific and regulatory information to err on the conservative side.

9.6 RESULTS

SESOIL and VLEACH results are provided in Tables J-8 through J-10 in Appendix J, and are summarized in Table 28. The results include maximum depth of infiltration, the maximum pore water concentrations in the vadose zone at the groundwater interface and the maximum measured groundwater concentration (observed during the latest groundwater monitoring event; July-August 2009). The SESOIL and VLEACH outputs provided electronically in Appendix J (included on the report CD in Appendix B) contain the results of the evaluation for each of the COPCs and scenarios.

The modeled metals, organochlorine pesticides, and PAHs are not expected to reach groundwater within 100 years for any of the three recharge scenarios (baseline, normal, and enhanced). For organics, dichloromethane, 1,2,4-trimethylbenzene, and formaldehyde all are predicted to reach groundwater under all three recharge scenarios. Under all three recharge scenarios, dichloromethane (0.19 µg/L, 0.21 µg/L, and 0.82 µg/L, respectively) and 1,2,4-trimethylbenzene (0.00042 µg/L, 0.00043 µg/L, and 0.00077 µg/L, respectively) are not projected to reach groundwater at concentrations that exceed their respective residential water BCLs (5 µg/L and 51.1 µg/L , respectively; NDEP 2010a). Neither dichloromethane nor 1,2,4-trimethylbenzene have been observed in shallow groundwater in the vicinity of the Site (either recently or historically).

Formaldehyde is estimated to reach groundwater at concentrations that exceed its residential water BCL (1.5 µg/L) under all three scenarios (3,500 µg/L, 15,900 µg/L, and 12,600 µg/L, respectively). However, contrary to the model run results, formaldehyde has not been detected in shallow groundwater in the vicinity of the Site (either recently or historically), which would be expected given the length of time since the ponds were in use. Formaldehyde has also not been detected in the SPLP data, which was collected specifically for the purpose of evaluating the leaching potential of chemicals in soil at the Site.

Cyanide is projected to reach groundwater under all three scenarios as well. Under the baseline scenario, estimated cyanide in soil moisture at the groundwater interface (9.2 µg/L) is less than the residential BCL (200 µg/L), but greater than the measured concentrations in shallow groundwater (4.1 µg/L). Estimated soil moisture concentrations for the normal (1370 µg/L) and enhanced (32,600 µg/L) recharge scenarios exceed both the residential BCL (200 µg/L) and measured shallow groundwater concentration (4.1 µg/L).

For the remaining inorganics selected for modeling, ammonia (1,100,000 µg/L, 2,000,000µg/L, and 175,000 µg/L, respectively), nitrate (2,000,000 µg/L, 2,000,000 µg/L, and 1,950,000 µg/L, respectively), and perchlorate (2,000,000 µg/L, 2,000,000 µg/L, and 5,950,000 µg/L, respectively) are all predicted to reach groundwater at concentrations that exceed their respective residential water BCLs (730 µg/L, 10,000 µg/L, and 18 µg/L, respectively) under all three scenarios. Of note is that for nitrate and perchlorate, these concentrations approach or equal the COPCs solubility shortly into the simulation.

Also relevant to this discussion is consideration that some constituents such as nitrate have naturally-occurring/background concentrations; however, only metals and radionuclides are evaluated in the background comparison analyses. Thus, it is plausible that naturally occurring concentrations of nitrate, when modeled, might also produce estimated water concentrations that exceed BCLs and measured groundwater concentrations. To test this hypothesis under the

baseline scenario, the maximum detected and average (non-detects at one-half the SQL) background concentrations of nitrate (102 mg/kg and 8.27 mg/kg, respectively) were modeled similarly to the site-measured concentrations. The input concentrations are presented in Table J-6. All other modeling parameters were held consistent with the site-related modeling. The results of this modeling effort are presented in Table J-8 (conservatively, only the baseline scenario was modeled). The modeled water concentrations approach (average background nitrate) or equal (maximum background nitrate) the solubility limit as well, and are similar to the results for the site-related modeling. These results provide a line of evidence suggesting that for the highly soluble COPCs with low Kd values, even background concentrations when modeled may yield concentrations that both exceed residential BCLs as well as measured concentrations.

This is consistent with the physical chemical parameters selected for the inorganics (non-metals). Because for ammonia, nitrate, perchlorate, and cyanide the adsorption to soils is very variable and uncertain, the modeling assumed very low Kd values for these constituents to maximize the downward migration to groundwater. With such low adsorption coefficients the model also predicted such rapid mass migration to groundwater that all would hit groundwater within seven to 20 years and exceed their BCLs within two years thereafter. However, while these chemicals are detected in shallow groundwater at the Site, the concentrations are from approximately two (nitrate) to more than four (ammonia) orders of magnitude less than predicted (it is also noted that use of the Summers groundwater mixing model would likely do little to affect these results). Further, ammonia (89.6 µg/L) and perchlorate (148 µg/L) are detected in SPLP data collected in the soil source material (cyanide and nitrate were not analyzed for), but are detected at concentrations that are significantly less than the soil moisture concentrations predicted at the groundwater interface through modeling.

The time since discontinued use of the ponds exceeds the timeframes for COPCs to reach groundwater at the concentrations predicted to exceed BCLs. Based upon the differences in the modeling predicted results and the observed measurements in groundwater, it is considered probable that processes not accounted for in the model are reducing/attenuating concentrations of COPCs as they migrate through the vadose zone towards groundwater. Based on the elapsed time since any Site use, the lack of observations of the evaluated chemicals in groundwater at the Site or concurrence between measured and predicted concentrations, and the reasonably mobile nature of the COPCs evaluated, these cumulative lines of evidence suggest that 1) the modeling environment utilized in this evaluation is likely to be overly conservative, and 2) there is insufficient evidence to suggest that the concentrations of organics and inorganics detected in Site soils represent a risk to groundwater quality.

10.0DATA QUALITY ASSESSMENT

Sample size calculations were conducted for 11 analytes (arsenic, total chromium, hexavalent chromium, cobalt, formaldehyde, radium-226, TCDD TEQ, and vanadium) for the Site. Rationale for the inclusion of these analytes in the sample size calculations are provided below:

- Arsenic – a chemical of primary concern for the overall project, often exceeding comparison levels;
- Benzo(a)pyrene – a COPC representative of SVOCs and PAHs with several detected results and a low residential BCL;
- beta-BHC – a COPC representative of organochlorine pesticides with several detected results and a low residential BCL;
- Chromium – a metal with several results in excess of background concentrations resulting in high sample variability;
- Hexavalent chromium – the metal (besides arsenic) with the most exceedances of background concentrations;
- Total Cyanide – a COPC representative of inorganics other than metals with a relatively low BCL and several detects;
- Formaldehyde – the non-dioxins/furans/PCB congeners organic chemical with the highest number of detected results;
- Lead – a metal with a single high value in comparison to other results across the Site;
- Perchlorate – an inorganic chemical that is a primary risk contributor;
- 2,3,7,8-TCDD – a chemical of primary concern for the overall project; and
- Vanadium – a metal with several results in excess of background concentrations resulting in high sample variability.

The formula used here for calculation of sample size is based on a non-parametric test (the Wilcoxon signed rank test), and on simulation studies performed by Pacific Northwest National Laboratories (PNNL 2009) that formed the basis for an approximate formula that is based on the normal distribution. Essentially, the formula is the one that would be used if a normal-based test

were being performed, but an adjustment is made (multiply by 1.16) to account for the intent to perform a non-parametric test. The formula is as follows:

$$n = 1.16\left[\frac{s^2}{\Delta^2}(z_{1-\alpha} + z_{1-\beta(\mu)})^2 + 0.5z_{1-\alpha}^2\right]$$

where,

n = number of samples
s = estimated standard deviation of concentrations/fibers
Δ = width of the gray region (the difference between the threshold value stated in the null hypothesis and the point at which β is specified)
α = significance level or Type I error tolerance
β (μ) = Type II error tolerance; and
z = quantile from the standard normal distribution

For each chemical, inputs for the calculations include an estimate of the variance from the measured data, a desired significance level, and desired power of the test that must be specified at a concentration of interest (which determines the tolerable difference from the threshold value). For arsenic, the Site mean concentration exceeds its BCL based on the target cancer risk level of 10^{-6}. It is not appropriate to apply this calculation where the threshold value is less than the mean concentration. Therefore, the maximum shallow background concentration was used for its threshold value. The calculations provided here cover a range of Type I and Type II error tolerances, and the point at which the Type II error is specified. Results are presented in Table 29. In Table 29, various combinations of input values are used, including: values of α of 5%, 10% and 15%; values of β of 15%, 20%, and 25%; and a gray region of width 10%, 20% and 30% of the threshold level. It is clear from Table 29 that the number of samples collected is adequate for the Site. That is, all calculated adequate sample numbers are less than those actually collected at the Site for use in the HHRA.

Note also that there are 26 samples for amphibole asbestos. Amphibole was not detected in any of these samples, however, because of the number of samples collected, the asbestos related risks are all less than 1×10^{-6}. Consequently, sufficient samples have been collected to address asbestos related risks.

11.0 SUMMARY

BRC has prepared this HHRA and Closure Report for the Site. The purpose of this report is to request an NFAD by the NDEP. As noted in Section 1, NDEP acknowledges that discrete portions of the Eastside may be issued an NFAD as remedial actions are completed for select environmental media (NDEP 2006).

The HHRA evaluated the potential for adverse human health impacts that may occur as a result of potential exposures to residual concentrations of chemicals in soil, groundwater, and air following remediation, and assessed whether any additional remedial actions are necessary in order to obtain an NFAD from the NDEP to allow development of the Site to proceed. The results of the risk assessment provide risk managers with an understanding of the potential human health risks associated with background conditions and additional risks associated with past Site activities.

For human health protection, BRC's goal is to remediate the Site soils such that they are suitable for unrestricted residential uses. Human health risks are represented by estimated theoretical upper-bound cancer risks and non-cancer hazards derived in accordance with standard USEPA and NDEP methods. If the carcinogenic risks or non-cancer hazards exceed USEPA acceptable levels or NDEP risk goals, then remedial action alternatives must be considered. Findings of the HHRA are intended to support the Site closure process. Major finding of this report are that:

- data collected for use in the HHRA are adequate and usable for their intended purpose;
- all relevant and reasonable exposure scenarios and pathway have been evaluated;
- residential, construction worker, commercial (indoor) worker, and maintenance (outdoor) worker cancer and non-cancer risk estimates are within or below the risk goals for the project; and
- residual levels of chemicals in soil should not pose an unacceptable risk to groundwater quality beneath the Site.

Therefore, based on the results of the HHRA, and the conclusions in this report, exposures to residual levels of chemicals in soil at the Galleria North-School Site sub-area should not result in adverse health effects to all future receptors, or to groundwater quality beneath the Site. Therefore, BRC concludes that an NFAD for the Galleria North-School Site sub-area is warranted.

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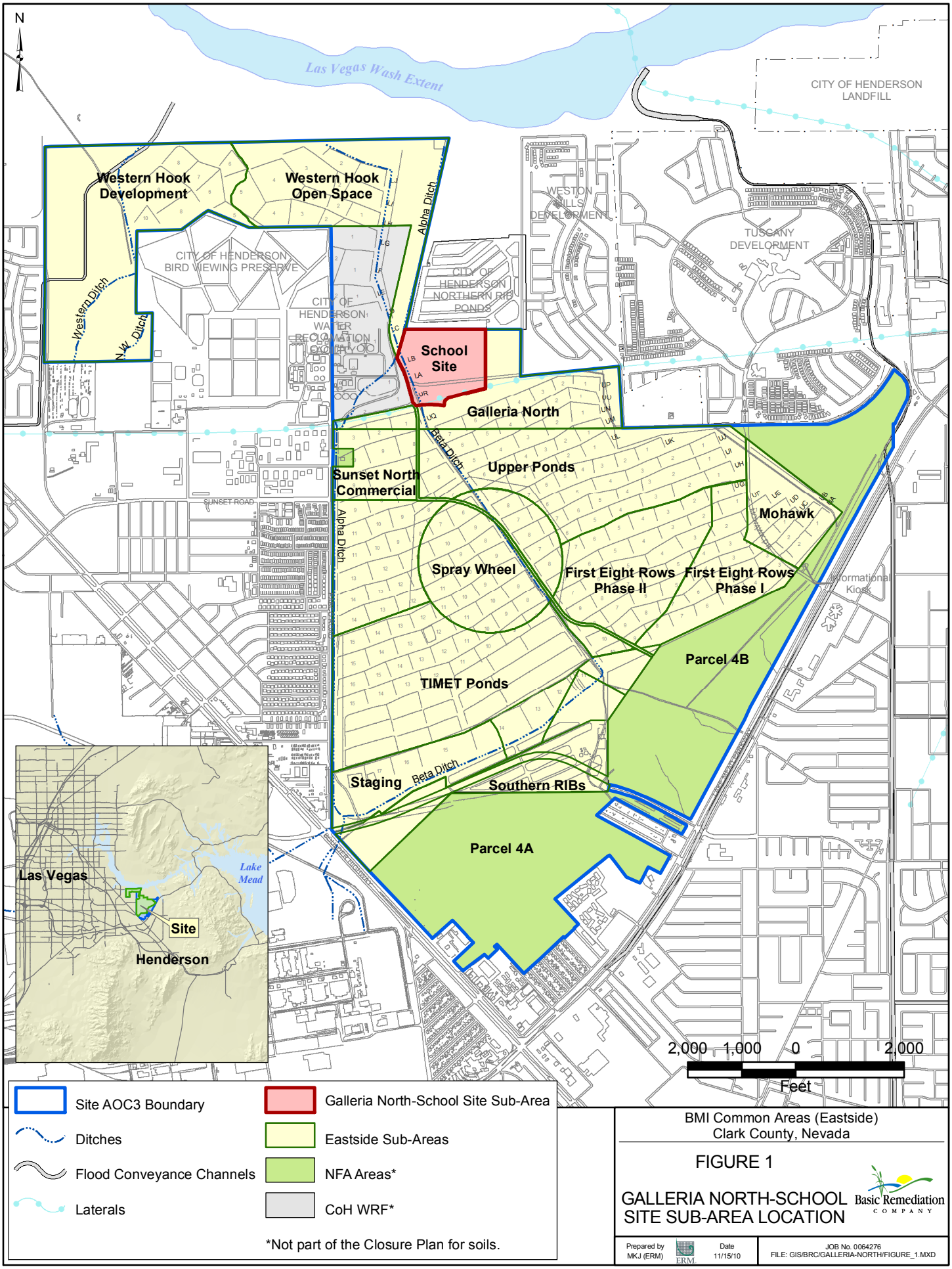
FIGURES



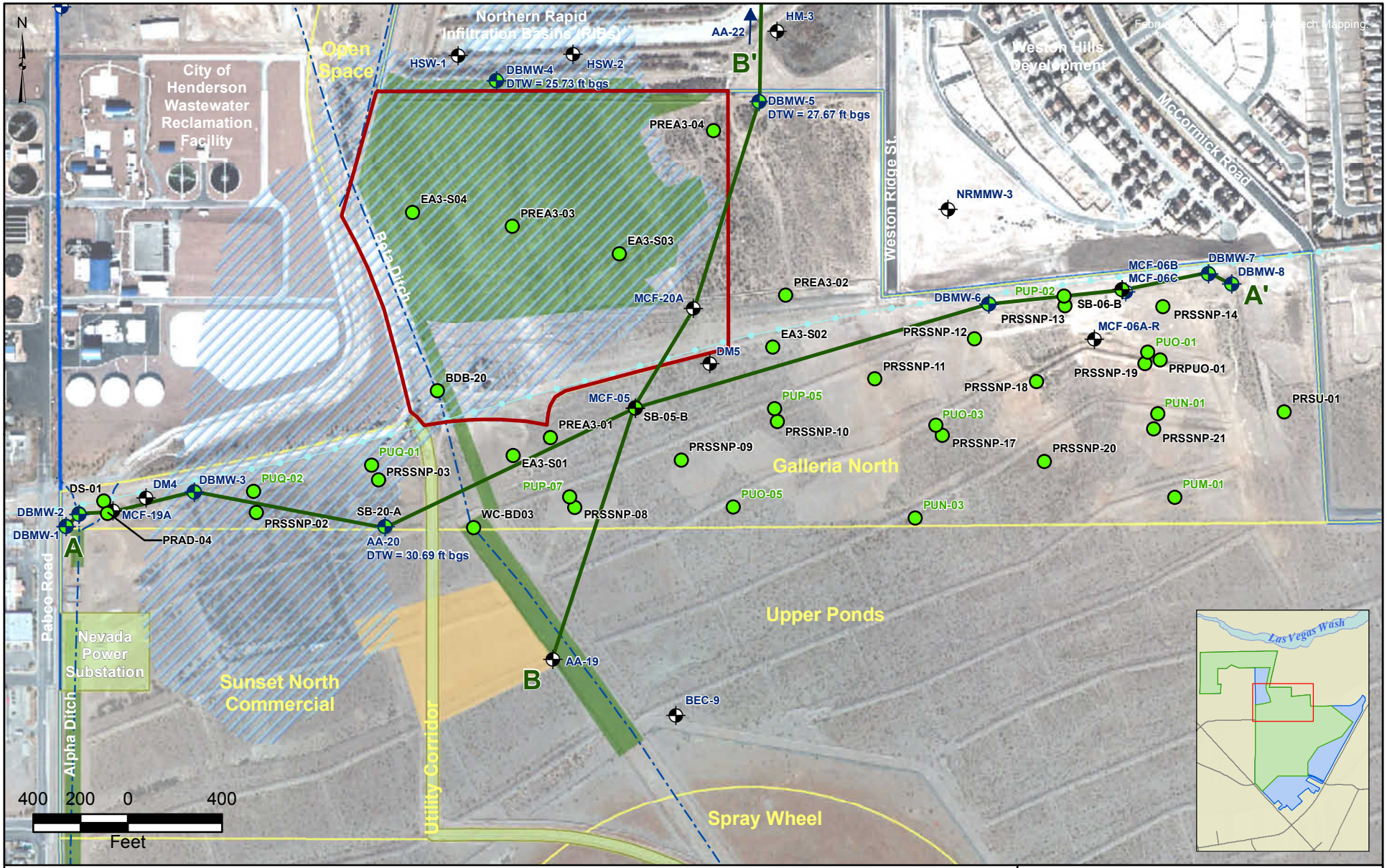
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE 1

GALLERIA NORTH-SCHOOL SITE SUB-AREA LOCATION

Basic Remediation Company

Prepared by	Date	JOB No. 0064276
MKJ (ERM)	11/15/10	FILE: GIS/BRC/GALLERIA-NORTH/FIGURE_1.MXD



Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Interim Remedial Measure Areas
Approximate Historical Seep Area
Tamarisk Removal Area
NFA Areas
Pittman Lateral
Historical Soil Sample Location
Monitoring Wells
Alluvial Wells with Groundwater Data
Other Monitoring Wells

PREA3-04 - Discrete Sample
PUP-02 - Composite Sample
*Indicates multiple samples with same prefix.

BMI Common Areas (Eastside)
Clark County, Nevada

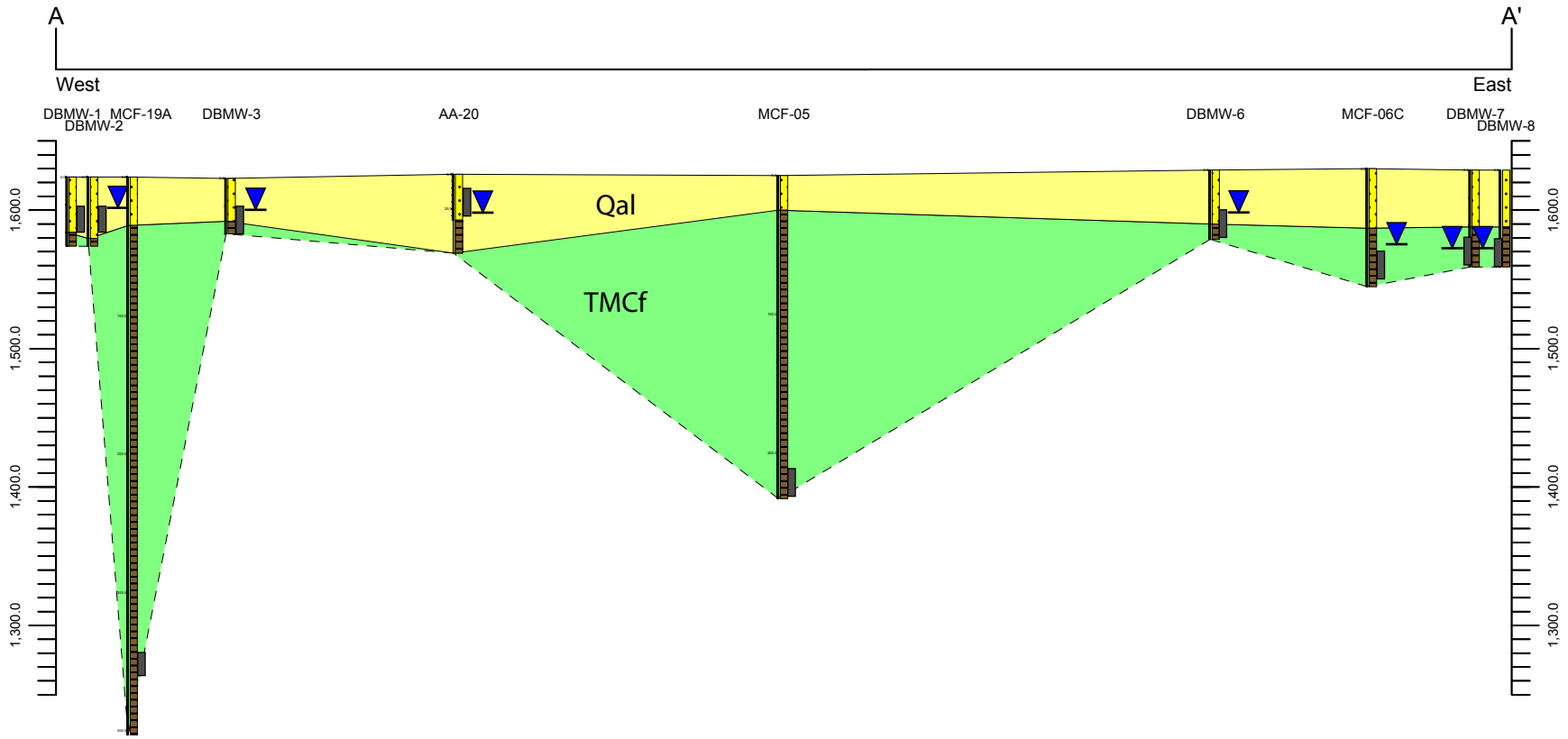
FIGURE 2

SITE PLAN WITH HISTORIC SOIL SAMPLE LOCATIONS AND MONITORING WELLS

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/15/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/FIGURE_2.MXD

Cross-Section A-A'



= Screen Interval
= Qal Water Level
= Qal = Quaternary alluvium
= TMCf = Tertiary 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

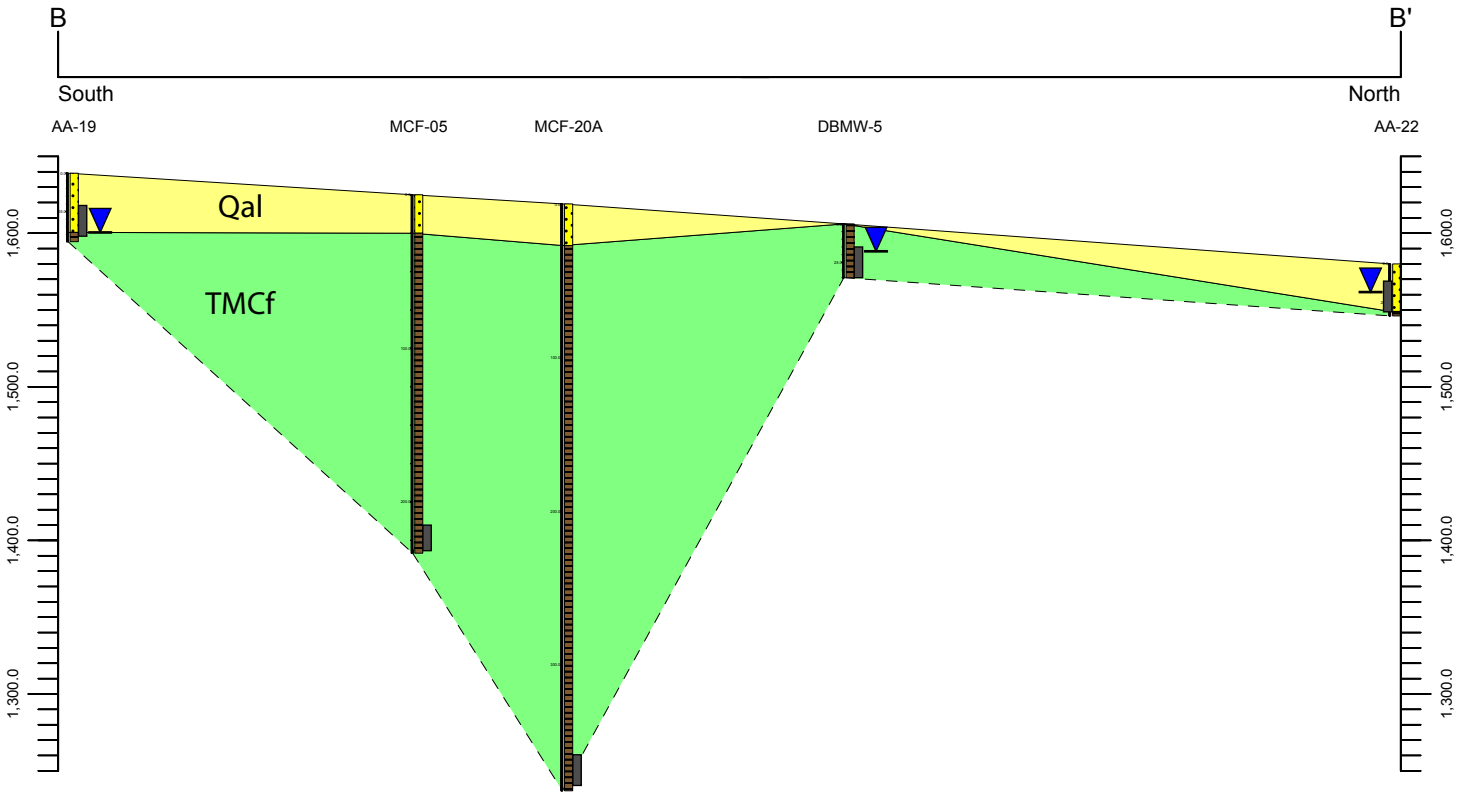
FIGURE 3

GALLERIA NORTH
SCHOOL SITE SUB-AREA
CROSS-SECTION A-A'

Basic Remediation COMPANY

Prepared by	Date	JOB No. 0064276
MKJ (ERM)	11/15/10	FILE: GIS/BRC/GALLERIA-NORTH/FIGURE3.AI

Cross-Section B-B'



= Screen Interval
= Qal Water Level
= Qal = Quaternary alluvium
= TMCf = Tertiary 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

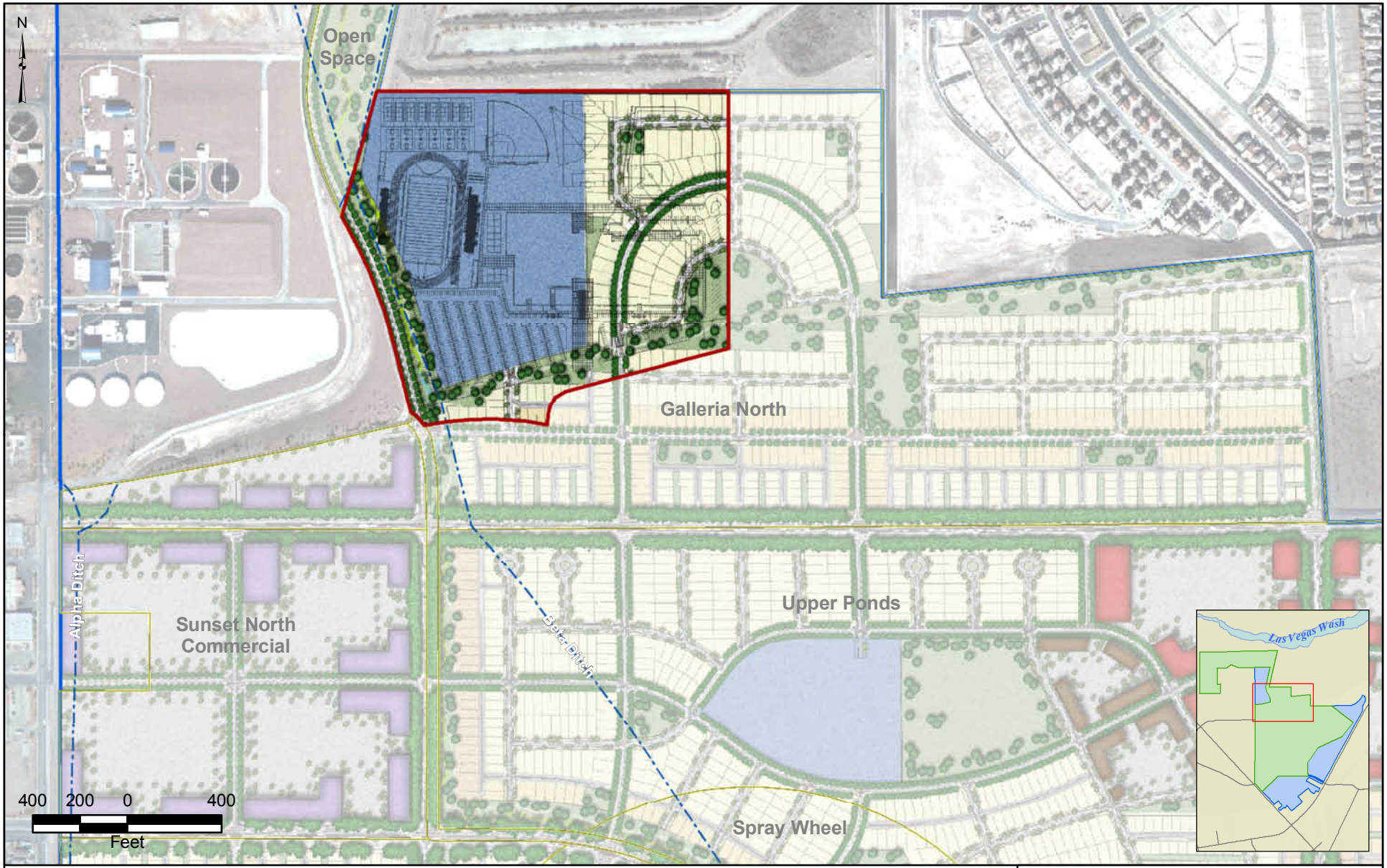
FIGURE 4

GALLERIA NORTH
SCHOOL SITE SUB-AREA
CROSS-SECTION B-B'

Basic Remediation COMPANY

Prepared by	Date	JOB No.
MKJ (ERM)	11/15/10	0064276

FILE: GIS/BRC/GALLERIA-NORTH/FIGURE4.AI



Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas

Current Development Plan

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

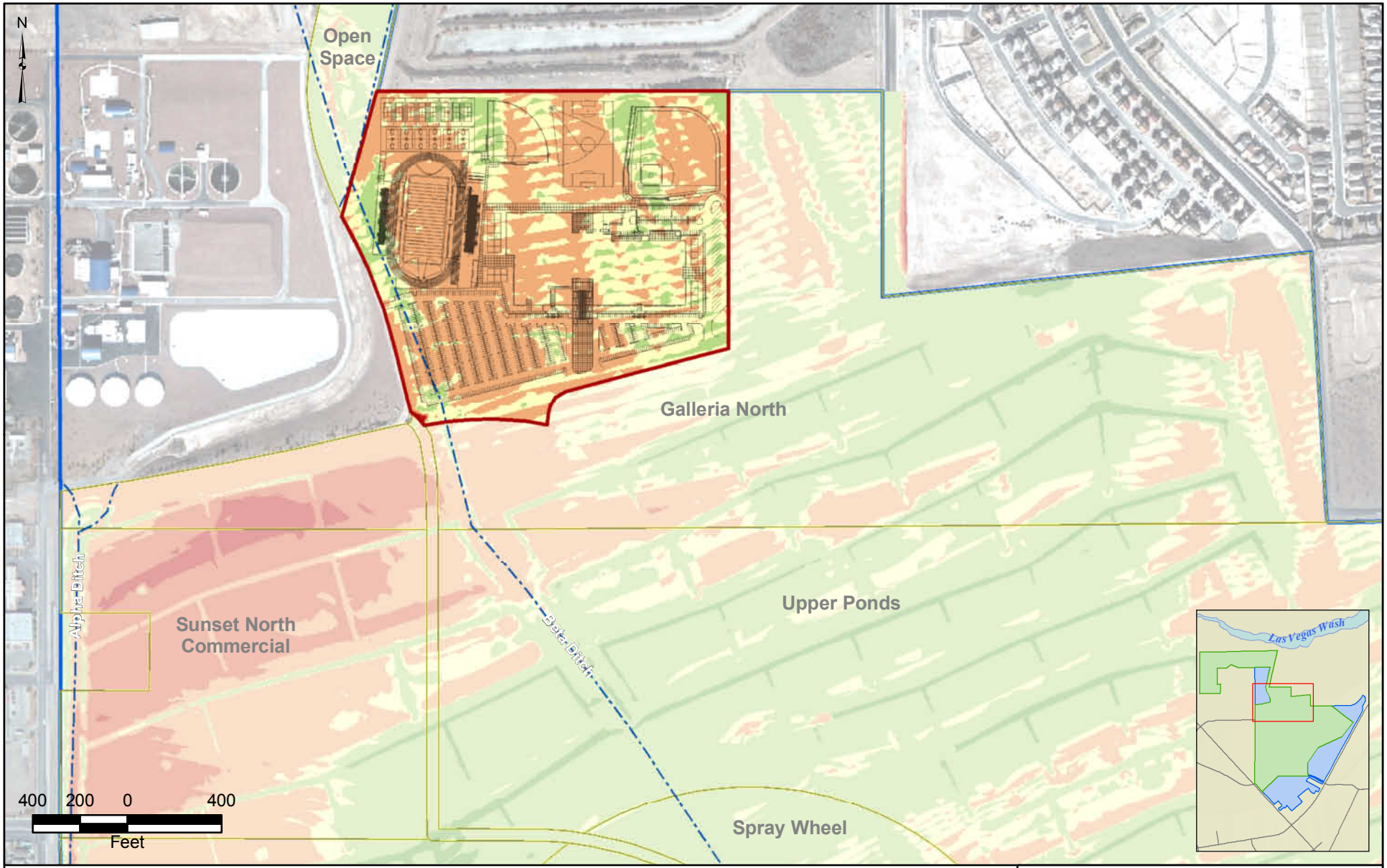
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE 5

CURRENT DEVELOPMENT PLAN

Basic Remediation Company

Prepared by MKJ (ERM) | ERM | Date 11/15/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/FIGURES5,6,12.MXD



Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas

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

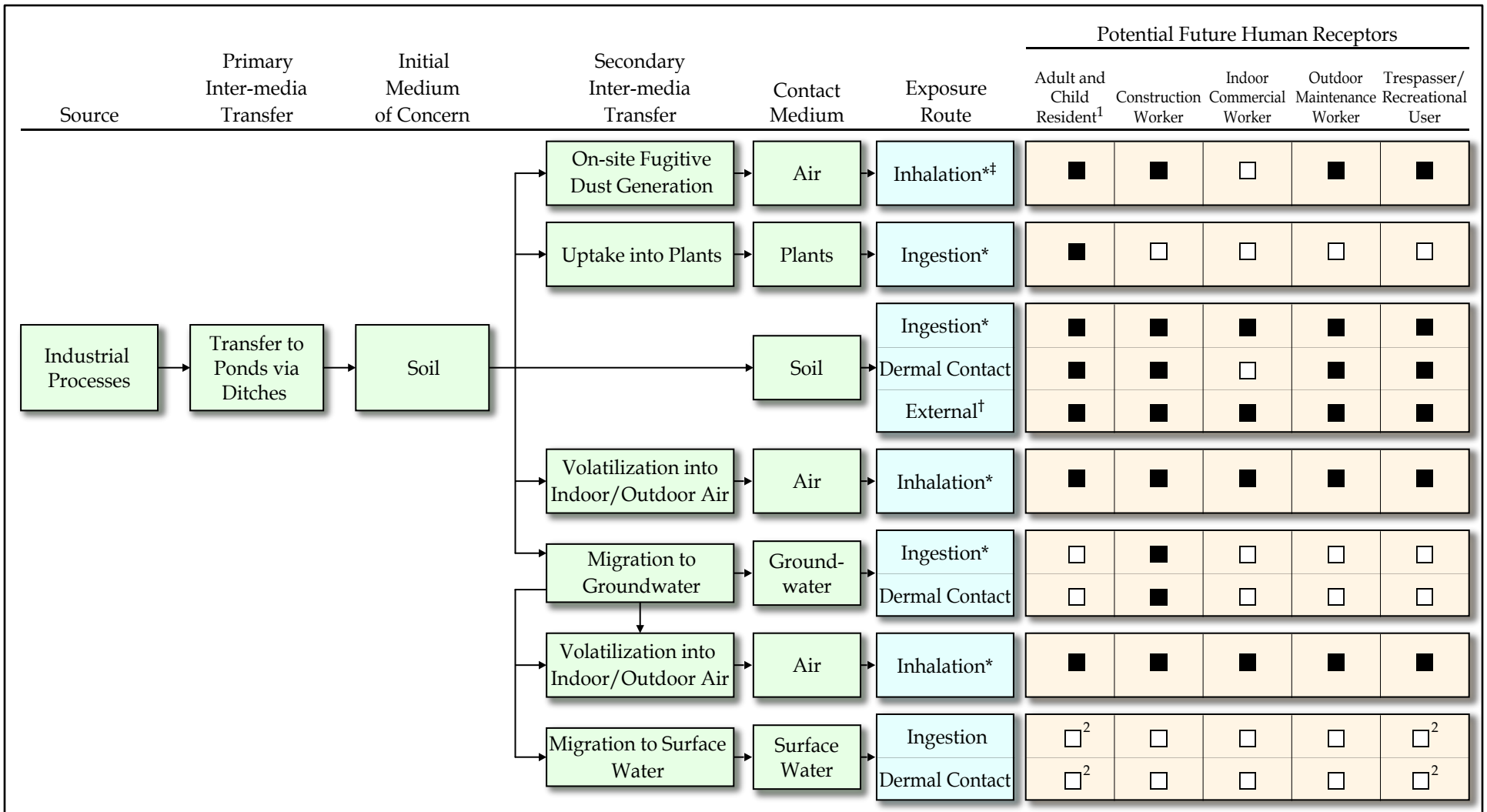
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE 6

CURRENT GRADING PLAN

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/15/10 | JOB No. 0064276
FILE: GIS/BRC/GALLERIA-NORTH/FIGURES5,6,12.MXD



□ - Incomplete or insignificant exposure pathway.

■ - Complete or potentially complete exposure pathway.

Note: All potential exposure pathways are shown; however, a particular pathway shown as complete may be incomplete depending on the COPCs evaluated in the human health risk assessment.

[1]Although the current development plan is for a school, a residential receptor, as discussed in the Closure Plan, is considered representative and health protective for potential future school receptors.

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

*Includes radionuclide exposures.

†Only radionuclide exposures.

‡Includes asbestos exposures.

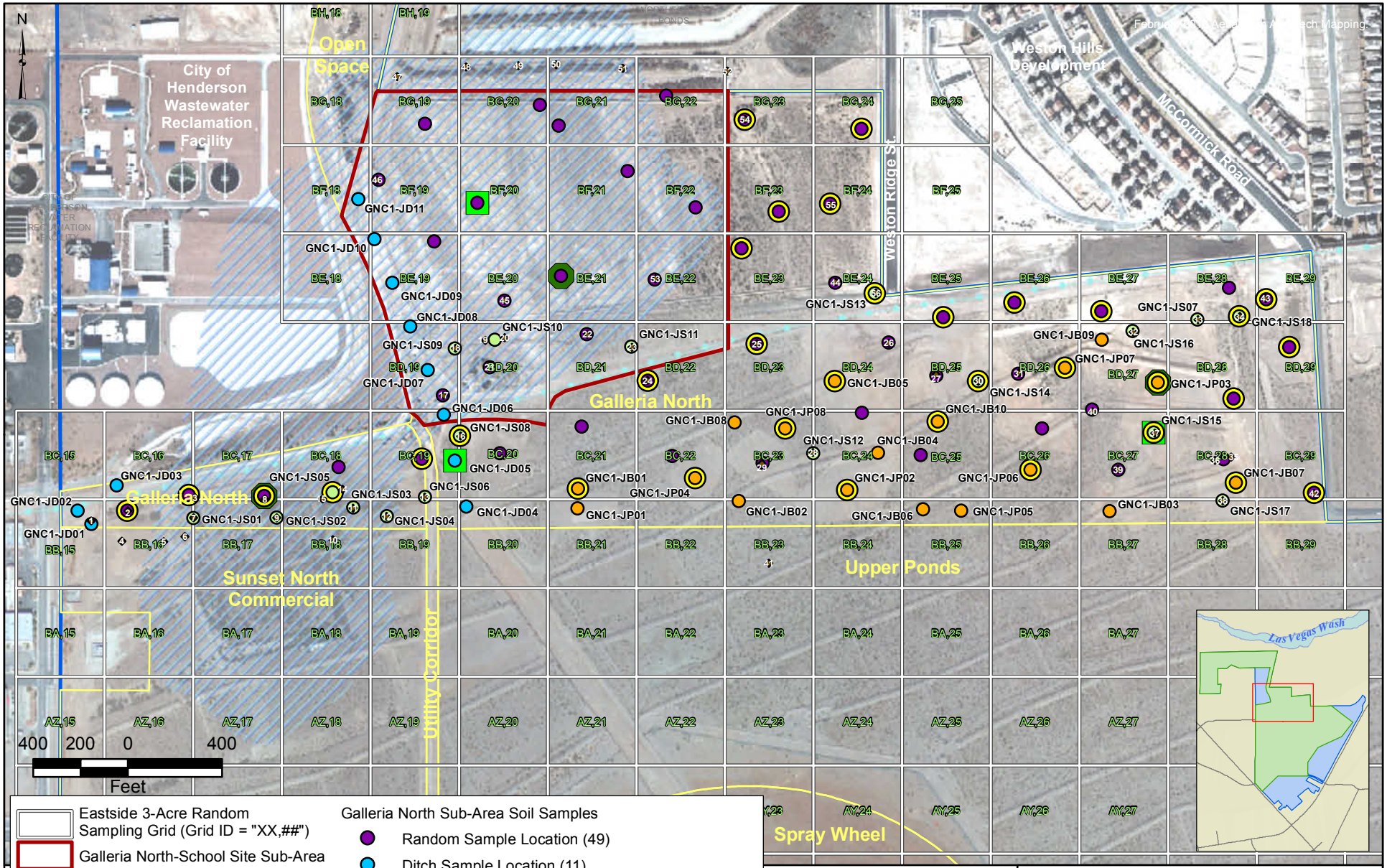
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE 7

CONCEPTUAL SITE MODEL DIAGRAM FOR POTENTIAL HUMAN EXPOSURES

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 11/15/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/FIGURE7.AI



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

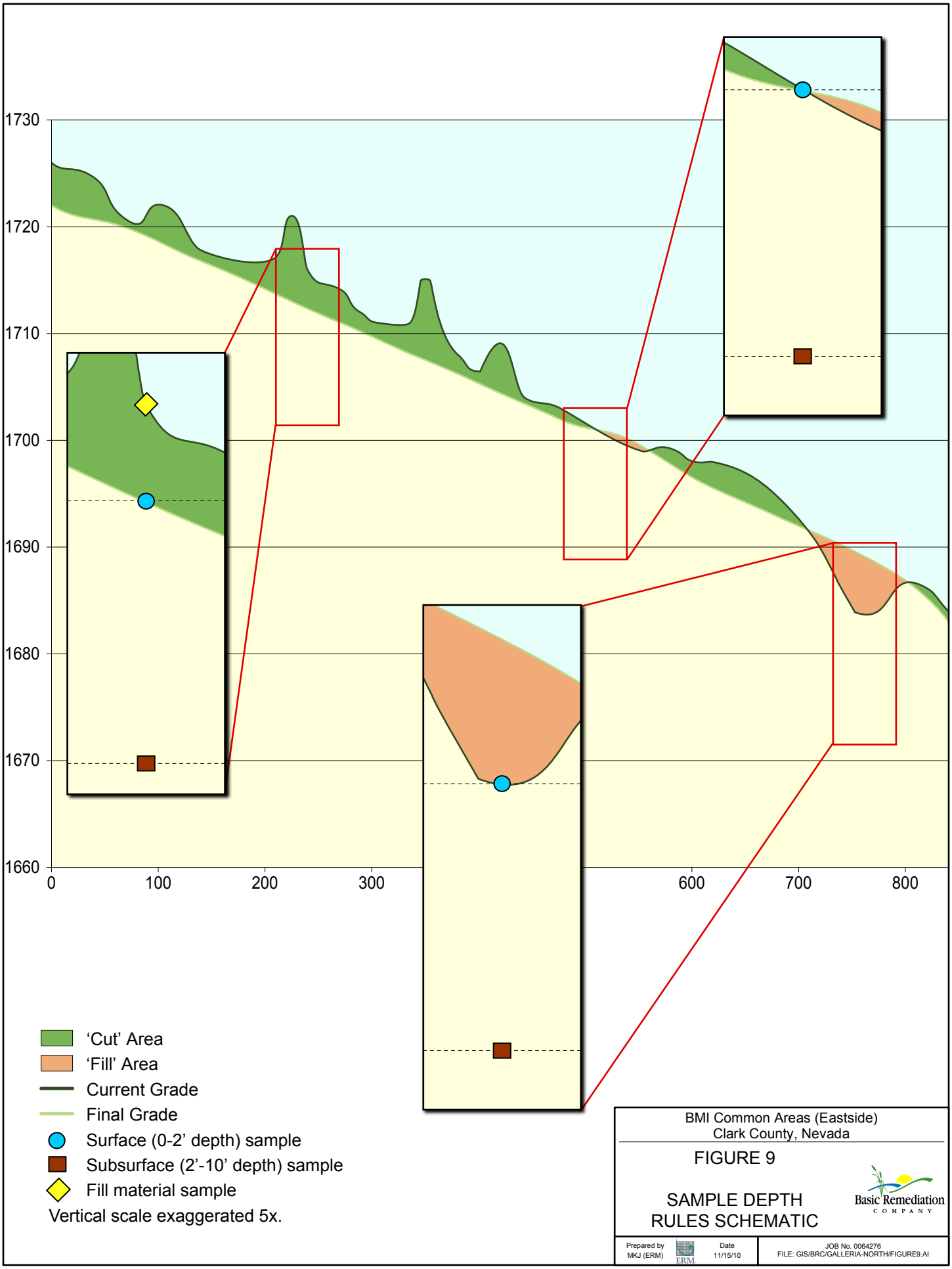
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE 8

INITIAL SOIL AND SOIL VAPOR FLUX SAMPLING LOCATIONS

Basic Remediation Company

Prepared by	Date	JOB No. 0064276
MKJ (ERM)	11/15/10	FILE: GIS/BRC/GALLERIA-NORTH/FIGURE_8.MXD



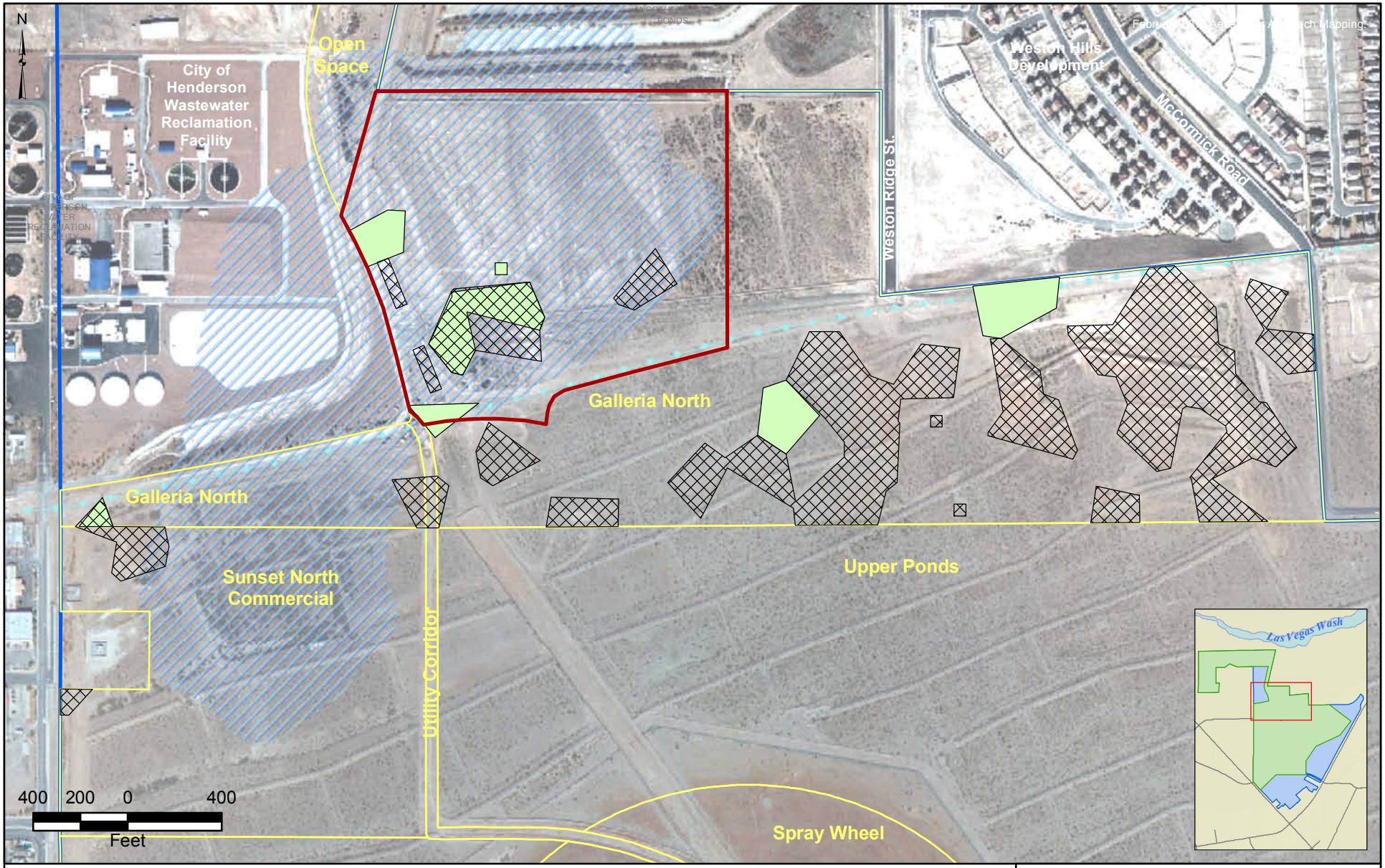
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE 9

SAMPLE DEPTH
RULES SCHEMATIC

Basic Remediation Company

Prepared by		Date	JOB No. 0064276
MKJ (ERM)	ERM	11/15/10	FILE: GIS/BRC/GALLERIA-NORTH/FIGURE9.AI



Galleria North-School Site Sub-Area

Site AOC3 Boundary

Eastside Soil Sub-Areas

Approximate Historical Seep Area

2009 Remediation Areas

2010 Remediation Areas

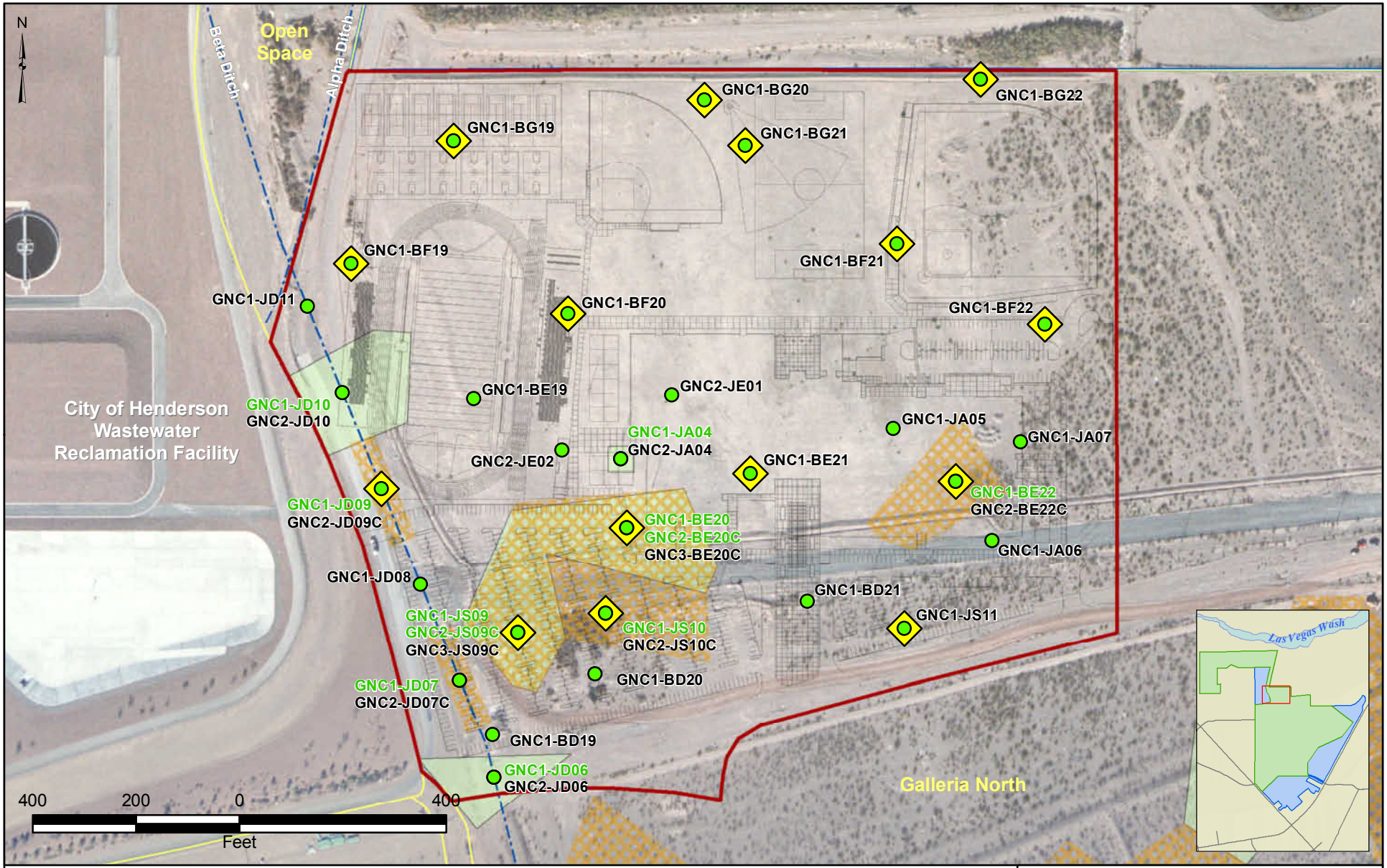
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE 10

GALLERIA NORTH
SCHOOL SITE SUB-AREA
SOIL REMEDIATION AREAS

Basic Remediation COMPANY

Prepared by MKJ (ERM)	Date 11/15/10	JOB No. 0064276
		FILE: GIS/BRC/GALLERIA-NORTH/FIGURE_10.MXD



Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
2009 Remediation Areas
2010 Remediation Areas

Soil Sample Location(1)
Surface Flux Sample Location

GNC2-JD07C - Existing Sample Location
GNC1-JD07 - Scraped Sample Location

(1) Although soil removal would affect the concentrations of all analytes, confirmatory sampling only analyzed for the constituent suites that triggered the soil removal. Therefore, in the absence of post-scrape data, the pre-scrape data are used for all other analytes in the human health risk assessment (see text).

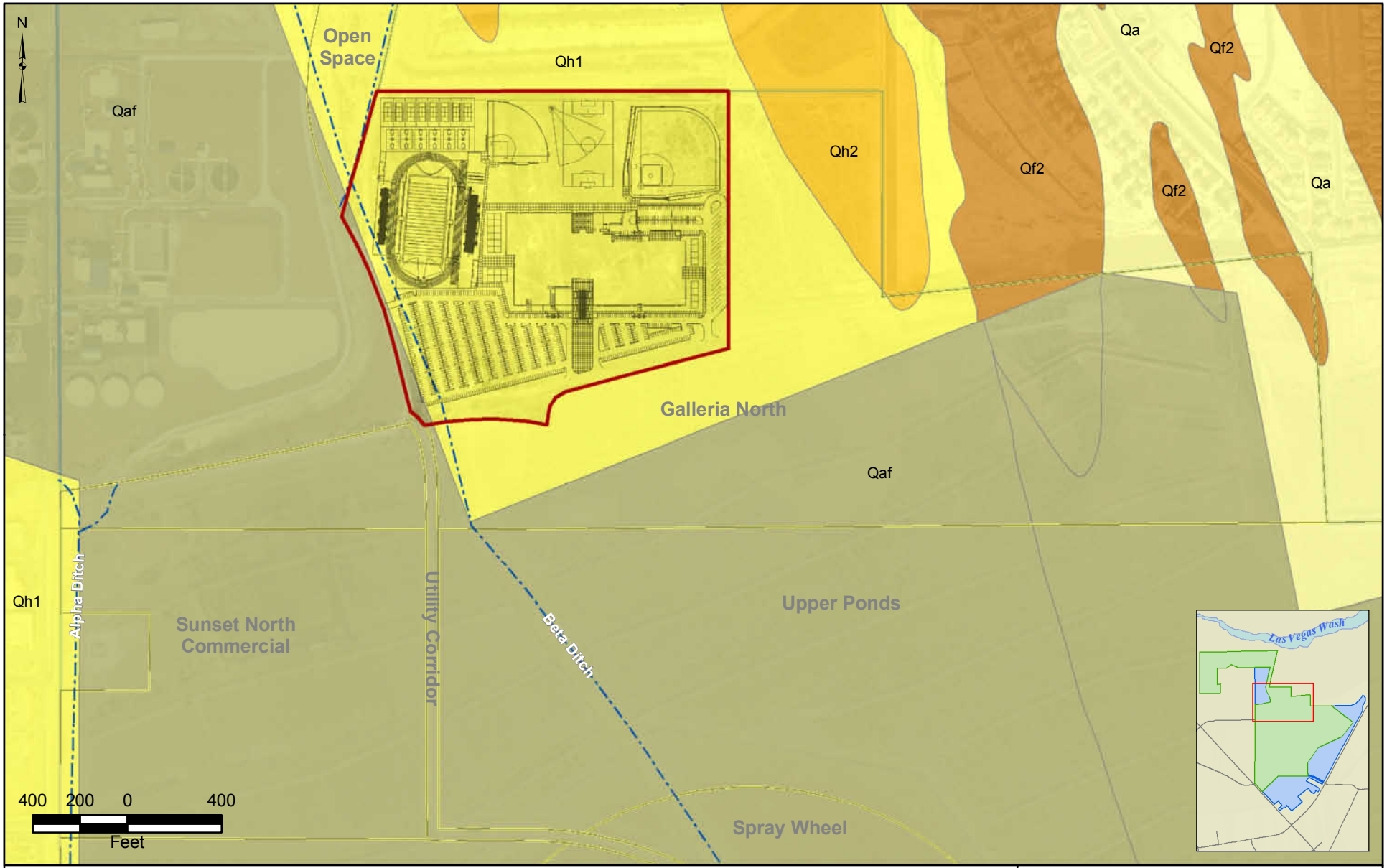
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE 11

FINAL SOIL AND SOIL VAPOR FLUX SAMPLING LOCATIONS

Basic Remediation Company

Prepared by MKJ (ERM) | ERM | Date 11/15/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/FIGURE11.MXD



Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas

Lithology

Qa-Mixed
Qaf-Disturbed
Qh1-McCullough
Qh2-McCullough
Qf2-McCullough/River

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE 12

GALLERIA NORTH
SCHOOL SITE SUB-AREA
LITHOLOGIES

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 11/15/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/FIGURES5,6,12.MXD

TABLES

TABLE 1
SAMPLE-SPECIFIC COLLECTION DEPTHS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample Location	Sample Type	Grading Plan		Sample Depth 1	Sample Depth 2	Sample Depth 3
Initial Sampling Event						
GNC1-BD19	Random	--	0	0 (Surface)	10 (Subsurface)	--
GNC1-BD20	Random	Fill	+2	0 (Surface)	10 (Subsurface)	--
GNC1-BD21	Random	Fill	+1	0 (Surface)	10 (Subsurface)	--
GNC1-BE19	Random	Fill	+2	0 (Surface)	10 (Subsurface)	--
GNC1-BE20	Random with Flux	Fill	+1	0 (Surface)	10 (Subsurface)	--
GNC1-BE21	Random with Flux	Fill	+1	0 (Surface)	10 (Subsurface)	--
GNC1-BE22	Random with Flux	--	0	0 (Surface)	10 (Subsurface)	--
GNC1-BF19	Random with Flux	Cut	-1	0 (Fill/Surface)	11 (Subsurface)	--
GNC1-BF20	Random with Flux	Fill	+1	0 (Surface)	10 (Subsurface)	--
GNC1-BF21	Random with Flux	Fill	+1	0 (Surface)	10 (Subsurface)	--
GNC1-BF22	Random with Flux	--	0	0 (Surface)	10 (Subsurface)	--
GNC1-BG19	Random with Flux	Fill	+1	0 (Surface)	10 (Subsurface)	--
GNC1-BG20	Random with Flux	--	0	0 (Surface)	10 (Subsurface)	--
GNC1-BG21	Random with Flux	Fill	+1	0 (Surface)	10 (Subsurface)	--
GNC1-BG22	Random with Flux	--	0	0 (Surface)	10 (Subsurface)	--
GNC1-JD06	Ditch	--	0	0 (Surface)	10 (Subsurface)	--
GNC1-JD07	Ditch	Fill	+2	0 (Surface)	10 (Subsurface)	--
GNC1-JD08	Ditch	--	0	0 (Surface)	10 (Subsurface)	--
GNC1-JD09	Ditch with Flux	--	0	0 (Surface)	10 (Subsurface)	--
GNC1-JD10	Ditch	Cut	-1	0 (Fill/Surface)	11 (Subsurface)	--
GNC1-JD11	Ditch	Cut	-1	0 (Fill/Surface)	11 (Subsurface)	--
GNC1-JS09	Debris with Flux	Fill	+1	0 (Surface)	10 (Subsurface)	--
GNC1-JS10	Debris with Flux	Fill	+3	0 (Surface)	10 (Subsurface)	--
GNC1-JS11	Debris with Flux	--	0	0 (Surface)	10 (Subsurface)	--
Confirmation/Supplemental Sampling Events						
GNC1-JA04	Supplemental	--	0	0 (Surface)	--	--
GNC1-JA05	Supplemental	--	0	0 (Surface)	--	--
GNC1-JA06	Supplemental	--	0	0 (Surface)	--	--
GNC1-JA07	Supplemental	--	0	0 (Surface)	--	--
GNC2-BE20C	Confirm	Fill	+1	0 (Surface)	--	--
GNC2-BE22C	Confirm	--	0	0 (Surface)	--	--
GNC2-JA04	Confirm	--	0	0 (Surface)	--	--
GNC2-JD06	Confirm	--	0	0 (Surface)	--	--

TABLE 1
SAMPLE-SPECIFIC COLLECTION DEPTHS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample Location	Sample Type	Grading Plan		Sample Depth 1	Sample Depth 2	Sample Depth 3
Initial Sampling Event						
GNC2-JD07C	Confirm	Fill	+2	0 (Surface)	--	--
GNC2-JD09C	Confirm	--	0	0 (Surface)	--	--
GNC2-JD10	Confirm	Cut	-1	0 (Surface)	--	--
GNC2-JE01	Supplemental	--	0	0 (Surface)	--	--
GNC2-JE02	Supplemental	--	0	0 (Surface)	--	--
GNC2-JS09C	Confirm	Fill	+1	0 (Surface)	--	--
GNC2-JS10C	Confirm	Fill	+3	0 (Surface)	--	--
GNC3-BE20C	Confirm	Fill	+1	0 (Surface)	--	--
GNC3-JS09C	Confirm	Fill	+1	0 (Surface)	--	--

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 only sampled at the surface and one post-grade subsurface depth.
Yellow shaded location (GNC1-BF20) indicates deep soil sample collected for physical parameter analyses.
Green shaded location (GNC1-BE21) indicates subsurface soil sample also included synthetic precipitation leaching procedure (SPLP) sampling and analysis.
Depths are in feet bgs (current grade).

TABLE 2
SITE-RELATED CHEMICALS AND INITIAL SAMPLE ANALYSES AND DEPTHS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter of Interest	Preparation Method	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 1)		
					Depth 1	Depth 2/3	Deep
Ions	**EPA 300.0**	**EPA 300.0**	Bromide	24959-67-9	✓	✓	(d)
			Chlorate	14866-68-3	✓	✓	(d)
			Chloride	16887-00-6	✓	✓	(d)
			Fluoride	16984-48-8	✓	✓	(d)
			Nitrate (as N)	14797-55-8	✓	✓	(d)
			Nitrite (as N)	14797-65-0	✓	✓	(d)
			Orthophosphate	14265-44-2	✓	✓	(d)
			Sulfate	14808-79-8	✓	✓	(d)
	EPA 314.0	**EPA 314.0**	Perchlorate	14797-73-0	✓	✓	(d)
Chlorinated Compounds	**EPA 551.1**	**EPA 551.1**	Chloral	75-87-6	(e)	(e)	(d)
			Dichloroacetaldehyde	79-02-7	(e)	(e)	(d)
Polychlorinated Dibenzodioxins/ Dibenzofurans	**EPA 8290**	**EPA 8290**	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	✓	(b)	(b)
			1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	✓	(b)	(b)
			1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	✓	(b)	(b)
			1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	✓	(b)	(b)
			1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	✓	(b)	(b)
			1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	✓	(b)	(b)
			1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	✓	(b)	(b)
			1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	✓	(b)	(b)
			1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	✓	(b)	(b)
			1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	✓	(b)	(b)
			1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	✓	(b)	(b)
			1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	✓	(b)	(b)
			1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	✓	(b)	(b)
			2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	✓	(b)	(b)
			2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	✓	(b)	(b)
			2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	✓	(b)	(b)
			2,3,7,8-Tetrachlororodibenzo-p-dioxin	1746-01-6	✓	(b)	(b)
Asbestos	**Elutrator**	**Elutriator/TEM**	Asbestos	1332-21-4	✓	(c)	(c)
General Chemistry Parameters	**EPA 350.1**	**EPA 350.2**	Ammonia (as N)	7664-41-7	✓	✓	(d)
	EPA 9012A	**EPA 9010/9014**	Cyanide (Total)	57-12-5	✓	✓	(d)
	NA	**EPA 9045C**	pH in soil	pH	✓	✓	✓
	EPA 376.1/376.2	**EPA 376.1/376.2**	Sulfide	18496-25-8	✓	✓	(d)
	Mod. EPA 415.1	**Mod. EPA 415.1**	Total inorganic carbon	7440-44-0	✓	✓	(d)
	EPA 351.2	**EPA 351.2**	Total Kjeldahl nitrogen (TKN)	TKN	✓	✓	(d)
	EPA 9060	**EPA 415.1**	Total organic carbon (TOC)	7440-44-0	✓	✓	✓

TABLE 2
SITE-RELATED CHEMICALS AND INITIAL SAMPLE ANALYSES AND DEPTHS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter of Interest	Preparation Method	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 1)		
					Depth 1	Depth 2/3	Deep
Metals	**EPA 3050M**	**EPA 6020/6010B**	Aluminum	7429-90-5	✓	✓	(d)
			Antimony	7440-36-0	✓	✓	(d)
			Arsenic	7440-38-2	✓	✓	(d)
			Barium	7440-39-3	✓	✓	(d)
			Beryllium	7440-41-7	✓	✓	(d)
			Boron	7440-42-8	✓	✓	(d)
			Cadmium	7440-43-9	✓	✓	(d)
			Calcium	7440-70-2	✓	✓	(d)
			Chromium	7440-47-3	✓	✓	(d)
			Cobalt	7440-48-4	✓	✓	(d)
			Copper	7440-50-8	✓	✓	(d)
			Iron	7439-89-6	✓	✓	(d)
			Lead	7439-92-1	✓	✓	(d)
			Lithium	1313-13-9	✓	✓	(d)
			Magnesium	7439-95-4	✓	✓	(d)
			Manganese	7439-96-5	✓	✓	(d)
			Molybdenum	7439-98-7	✓	✓	(d)
			Nickel	7440-02-0	✓	✓	(d)
			Niobium	7440-03-1	(e)	(e)	(d)
			Palladium	7440-05-3	(e)	(e)	(d)
			Phosphorus	7723-14-0	(e)	(e)	(d)
			Platinum	7440-06-4	(e)	(e)	(d)
			Potassium	7440-09-7	✓	✓	(d)
			Selenium	7782-49-2	✓	✓	(d)
			Silicon	7440-21-3	(e)	(e)	(d)
			Silver	7440-22-4	✓	✓	(d)
			Sodium	7440-23-5	✓	✓	(d)
			Strontium	7440-24-6	✓	✓	(d)
			Sulfur	7704-34-9	(e)	(e)	(d)
			Thallium	7440-28-0	✓	✓	(d)
			Tin	7440-31-5	✓	✓	(d)
			Titanium	7440-32-6	✓	✓	(d)
			Tungsten	7440-33-7	✓	✓	(d)
			Uranium	7440-61-1	✓	✓	(d)
			Vanadium	7440-62-2	✓	✓	(d)
			Zinc	7440-66-6	✓	✓	(d)
			Zirconium	7440-67-7	(e)	(e)	(d)

TABLE 2
SITE-RELATED CHEMICALS AND INITIAL SAMPLE ANALYSES AND DEPTHS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter of Interest	Preparation Method	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 1)		
					Depth 1	Depth 2/3	Deep
Metals (continued)	**EPA 3060A**	**EPA 7196A**	Chromium (VI)	18540-29-9	✓	✓	(d)
	EPA 7471A	**EPA 7470/7471A**	Mercury	7439-97-6	✓	✓	(d)
Organophosphorous Pesticides	**EPA 8141A**	**EPA 8141A**	Azinphos-ethyl	264-27-19	(a)	(a)	(a)
			Azinphos-methyl	86-50-0	(a)	(a)	(a)
			Carbophenothion	786-19-6	(a)	(a)	(a)
			Chlorpyrifos	2921-88-2	(a)	(a)	(a)
			Coumaphos	56-72-4	(a)	(a)	(a)
			Demeton-O	298-03-3	(a)	(a)	(a)
			Demeton-S	126-75-0	(a)	(a)	(a)
			Diazinon	333-41-5	(a)	(a)	(a)
			Dichlorvos	62-73-7	(a)	(a)	(a)
			Dimethoate	60-51-5	(a)	(a)	(a)
			Disulfoton	298-04-4	(a)	(a)	(a)
			EPN	2104-64-5	(a)	(a)	(a)
			Ethoprop	13194-48-4	(a)	(a)	(a)
			Ethyl parathion	56-38-2	(a)	(a)	(a)
			Fampphur	52-85-7	(a)	(a)	(a)
			Fenthion	55-38-9	(a)	(a)	(a)
			Malathion	121-75-5	(a)	(a)	(a)
			Methyl carbophenothion	953-17-3	(a)	(a)	(a)
			Methyl parathion	298-00-0	(a)	(a)	(a)
			Mevinphos	7786-34-7	(a)	(a)	(a)
			Naled	300-76-5	(a)	(a)	(a)
			O,O,O-Triethyl phosphorothioate (TEPP)	297-97-2	(a)	(a)	(a)
			Phorate	298-02-2	(a)	(a)	(a)
			Phosmet	732-11-6	(a)	(a)	(a)
			Ronnel	299-84-3	(a)	(a)	(a)
			Stirophos (Tetrachlorovinphos)	22248-79-9	(a)	(a)	(a)
			Sulfotep	3689-24-5	(a)	(a)	(a)
Chlorinated Herbicides	**EPA 8151A**	**EPA 8151A**	2,4,5-T	93-76-5	(a)	(a)	(a)
			2,4,5-TP (Silvex)	93-72-1	(a)	(a)	(a)
			2,4-D	94-75-7	(a)	(a)	(a)
			2,4-DB	94-82-6	(a)	(a)	(a)
			Dalapon	75-99-0	(a)	(a)	(a)
			Dicamba	1918-00-9	(a)	(a)	(a)

TABLE 2
SITE-RELATED CHEMICALS AND INITIAL SAMPLE ANALYSES AND DEPTHS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter of Interest	Preparation Method	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 1)		
					Depth 1	Depth 2/3	Deep
Chlorinated Herbicides (continued)	**EPA 8151A**	**EPA 8151A**	Dichloroprop	120-36-5	(a)	(a)	(a)
			Dinoseb	88-85-7	(a)	(a)	(a)
			MCPA	94-74-6	(a)	(a)	(a)
			MCPP	93-65-2	(a)	(a)	(a)
Organic Acids	**HPLC**	**HPLC**	4-Chlorobenzene sulfonic acid	98-66-8	(a)	(a)	(a)
			Benzenesulfonic acid	98-11-3	(a)	(a)	(a)
			O,O-Diethylphosphorodithioic acid	298-06-6	(a)	(a)	(a)
			O,O-Dimethylphosphorodithioic acid	756-80-9	(a)	(a)	(a)
Nonhalogenated Organics	**EPA 8015B**	**EPA 8015B**	Ethylene glycol	107-21-1	(a)	(a)	(a)
			Ethylene glycol monobutyl ether	111-76-2	(a)	(a)	(a)
			Methanol	67-56-1	(a)	(a)	(a)
			Propylene glycol	57-55-6	(a)	(a)	(a)
Organochlorine Pesticides	**EPA 3550B**	**EPA 8081A**	2,4-DDD	53-19-0	✓	✓	(d)
			2,4-DDE	3424-82-6	✓	✓	(d)
			4,4-DDD	72-54-8	✓	✓	(d)
			4,4-DDE	72-55-9	✓	✓	(d)
			4,4-DDT	50-29-3	✓	✓	(d)
			Aldrin	309-00-2	✓	✓	(d)
			alpha-BHC	319-84-6	✓	✓	(d)
			alpha-Chlordane	5103-71-9	✓	✓	(d)
			beta-BHC	319-85-7	✓	✓	(d)
			Chlordane	57-74-9	✓	✓	(d)
			delta-BHC	319-86-8	✓	✓	(d)
			Dieldrin	60-57-1	✓	✓	(d)
			Endosulfan I	959-98-8	✓	✓	(d)
			Endosulfan II	33213-65-9	✓	✓	(d)
			Endosulfan sulfate	1031-07-8	✓	✓	(d)
			Endrin	72-20-8	✓	✓	(d)
			Endrin aldehyde	7421-93-4	✓	✓	(d)
			Endrin ketone	53494-70-5	✓	✓	(d)
			gamma-BHC (Lindane)	58-89-9	✓	✓	(d)
			gamma-Chlordane	5103-74-2	✓	✓	(d)
			Heptachlor	76-44-8	✓	✓	(d)
			Heptachlor epoxide	1024-57-3	✓	✓	(d)
			Methoxychlor	72-43-5	✓	✓	(d)
			Toxaphene	8001-35-2	✓	✓	(d)

TABLE 2
SITE-RELATED CHEMICALS AND INITIAL SAMPLE ANALYSES AND DEPTHS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter of Interest	Preparation Method	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 1)		
					Depth 1	Depth 2/3	Deep
Polychlorinated Biphenyls	**EPA 3510C**	**EPA 8082**	Aroclor 1016	12674-11-2	✓	(b)	(b)
			Aroclor 1221	11104-28-2	✓	(b)	(b)
			Aroclor 1232	11141-16-5	✓	(b)	(b)
			Aroclor 1242	53469-21-9	✓	(b)	(b)
			Aroclor 1248	12672-29-6	✓	(b)	(b)
			Aroclor 1254	11097-69-1	✓	(b)	(b)
			Aroclor 1260	11096-82-5	✓	(b)	(b)
		EPA 1668	PCB-77	32598-13-3	✓	(b)	(b)
			PCB-81	70362-50-4	✓	(b)	(b)
			PCB-105	32598-14-4	✓	(b)	(b)
			PCB-114	74472-37-0	✓	(b)	(b)
			PCB-118	31508-00-6	✓	(b)	(b)
			PCB-123	65510-44-3	✓	(b)	(b)
			PCB-126	57465-28-8	✓	(b)	(b)
			PCB-156	38380-08-4	✓	(b)	(b)
			PCB-157	69782-90-7	✓	(b)	(b)
			PCB-167	52663-72-6	✓	(b)	(b)
			PCB-169	32774-16-6	✓	(b)	(b)
			PCB-189	39635-31-9	✓	(b)	(b)
			PCB-209	2051-24-3	✓	(b)	(b)
Polynuclear Aromatic Hydrocarbons	**EPA 3550**	**EPA 8310 or EPA 8270SIM**	Acenaphthene	83-32-9	✓	✓	(d)
			Acenaphthylene	208-96-8	✓	✓	(d)
			Anthracene	120-12-7	✓	✓	(d)
			Benzo(a)anthracene	56-55-3	✓	✓	(d)
			Benzo(a)pyrene	50-32-8	✓	✓	(d)
			Benzo(b)fluoranthene	205-99-2	✓	✓	(d)
			Benzo(g,h,i)perylene	191-24-2	✓	✓	(d)
			Benzo(k)fluoranthene	207-08-9	✓	✓	(d)
			Chrysene	218-01-9	✓	✓	(d)
			Dibenzo(a,h)anthracene	53-70-3	✓	✓	(d)
			Indeno(1,2,3-cd)pyrene	193-39-5	✓	✓	(d)
			Phenanthrene	85-01-8	✓	✓	(d)
			Pyrene	129-00-0	✓	✓	(d)
Radionuclides	**HASL 3003**	**EPA 903.0 / 903.1**	Radium-226	13982-63-3	✓	✓	(d)
		EPA 904.0	Radium-228	15262-20-1	✓	✓	(d)

TABLE 2
SITE-RELATED CHEMICALS AND INITIAL SAMPLE ANALYSES AND DEPTHS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter of Interest	Preparation Method	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 1)		
					Depth 1	Depth 2/3	Deep
Radionuclides (continued)	**HASL 300 (Total Dissolution)** HASL 300 (Total Dissolution)	**HASL A-01-R**	Thorium-228	7440-29-1	✓	✓	(d)
			Thorium-230	14274-82-9	✓	✓	(d)
			Thorium-232	14269-63-7	✓	✓	(d)
			Uranium-233/234	13966-29-5	✓	✓	(d)
			Uranium-235/236	15117-96-1	✓	✓	(d)
			Uranium-238	7440-61-1	✓	✓	(d)
Aldehydes	**EPA 8315A**	**EPA 8315A**	Acetaldehyde	75-07-0	✓	✓	(d)
			Chloroacetaldehyde	107-20-0	(e)	(e)	(d)
			Dichloroacetaldehyde	79-02-7	(e)	(e)	(d)
			Formaldehyde	50-00-0	✓	✓	(d)
			Trichloroacetaldehyde	75-87-6	(e)	(e)	(d)
Semivolatile Organic Compounds	**EPA 3550B**	**EPA 8270C**	1,2,4,5-Tetrachlorobenzene	95-94-3	✓	✓	(d)
			1,2-Diphenylhydrazine	122-66-7	✓	✓	(d)
			1,4-Dioxane	123-91-1	✓	✓	(d)
			2,2'/4,4'-Dichlorobenzil	3457-46-3	✓	✓	(d)
			2,4,5-Trichlorophenol	95-95-4	✓	✓	(d)
			2,4,6-Trichlorophenol	88-06-2	✓	✓	(d)
			2,4-Dichlorophenol	120-83-2	✓	✓	(d)
			2,4-Dimethylphenol	105-67-9	✓	✓	(d)
			2,4-Dinitrophenol	51-28-5	✓	✓	(d)
			2,4-Dinitrotoluene	121-14-2	✓	✓	(d)
			2,6-Dinitrotoluene	606-20-2	✓	✓	(d)
			2-Chloronaphthalene	91-58-7	✓	✓	(d)
			2-Chlorophenol	95-57-8	✓	✓	(d)
			2-Methylnaphthalene	91-57-6	✓	✓	(d)
			2-Nitroaniline	88-74-4	✓	✓	(d)
			2-Nitrophenol	88-75-5	✓	✓	(d)
			3,3-Dichlorobenzidine	91-94-1	✓	✓	(d)
			3-Nitroaniline	99-09-2	✓	✓	(d)
			4,4'-Dichlorobenzil	3457-46-3	✓	✓	(d)
			4-Bromophenyl phenyl ether	101-55-3	✓	✓	(d)
			4-Chloro-3-methylphenol	59-50-7	✓	✓	(d)
			4-Chlorophenyl phenyl ether	7005-72-3	✓	✓	(d)
			4-Chlorothioanisole	123-09-1	✓	✓	(d)
			4-Chlorothiophenol	106-54-7	✓	✓	(d)

TABLE 2
SITE-RELATED CHEMICALS AND INITIAL SAMPLE ANALYSES AND DEPTHS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter of Interest	Preparation Method	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 1)		
					Depth 1	Depth 2/3	Deep
Semivolatile Organic Compounds (continued)	**EPA 3550B**	**EPA 8270C**	4-Nitroaniline	100-01-6	✓	✓	(d)
			4-Nitrophenol	100-02-7	✓	✓	(d)
			Acetophenone	98-86-2	✓	✓	(d)
			Aniline	62-53-3	✓	✓	(d)
			Azobenzene	103-33-3	✓	✓	(d)
			Benzoic acid	65-85-0	✓	✓	(d)
			Benzyl alcohol	100-51-6	✓	✓	(d)
			bis(2-Chloroethoxy)methane	111-91-1	✓	✓	(d)
			bis(2-Chloroethyl) ether	111-44-4	✓	✓	(d)
			bis(2-Chloroisopropyl) ether	108-60-1	✓	✓	(d)
			bis(2-Ethylhexyl) phthalate	117-81-7	✓	✓	(d)
			bis(Chloromethyl) ether	542-88-1	✓	✓	(d)
			bis(p-Chlorophenyl) sulfone	80-07-9	✓	✓	(d)
			bis(p-Chlorophenyl)disulfide	1142-19-4	✓	✓	(d)
			Butylbenzyl phthalate	85-68-7	✓	✓	(d)
			Carbazole	86-74-8	✓	✓	(d)
			Dibenzofuran	132-64-9	✓	✓	(d)
			Dichloromethyl ether	542-88-1	✓	✓	(d)
			Diethyl phthalate	84-66-2	✓	✓	(d)
			Dimethyl phthalate	131-11-3	✓	✓	(d)
			Di-n-butyl phthalate	84-74-2	✓	✓	(d)
			Di-n-octyl phthalate	117-84-0	✓	✓	(d)
			Diphenyl disulfide	882-33-7	✓	✓	(d)
			Diphenyl sulfide	139-66-2	✓	✓	(d)
			Diphenyl sulfone	127-63-9	✓	✓	(d)
			Fluoranthene	206-44-0	✓	✓	(d)
			Fluorene	86-73-7	✓	✓	(d)
			Hexachlorobenzene	118-74-1	✓	✓	(d)
			Hexachlorobutadiene	87-68-3	✓	✓	(d)
			Hexachlorocyclopentadiene	77-47-4	✓	✓	(d)
			Hexachloroethane	67-72-1	✓	✓	(d)
			Hydroxymethyl phthalimide	118-29-6	✓	✓	(d)
			Isophorone	78-59-1	✓	✓	(d)
			m,p-Cresol	106-44-5	✓	✓	(d)
			Naphthalene	91-20-3	✓	✓	(d)
			Nitrobenzene	98-95-3	✓	✓	(d)

TABLE 2
SITE-RELATED CHEMICALS AND INITIAL SAMPLE ANALYSES AND DEPTHS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter of Interest	Preparation Method	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 1)		
					Depth 1	Depth 2/3	Deep
Semivolatile Organic Compounds (continued)	**EPA 3550B**	**EPA 8270C**	N-nitrosodi-n-propylamine	621-64-7	✓	✓	(d)
			N-nitrosodiphenylamine	86-30-6	✓	✓	(d)
			o-Cresol	95-48-7	✓	✓	(d)
			Octachlorostyrene	29082-74-4	✓	✓	(d)
			p-Chloroaniline (4-Chloroaniline)	106-47-8	✓	✓	(d)
			p-Chlorobenzenethiol	106-54-7	✓	✓	(d)
			Pentachlorobenzene	608-93-5	✓	✓	(d)
			Pentachlorophenol	87-86-5	✓	✓	(d)
			Phenol	108-95-2	✓	✓	(d)
			Phthalic acid	88-99-3	✓	✓	(d)
			Pyridine	110-86-1	✓	✓	(d)
			Thiophenol	108-98-5	✓	✓	(d)
			Tentatively Identified Compounds (TICs)		✓	✓	(d)
Volatile Organic Compounds	**EPA 5030B/ EPA 5035**	**EPA 8260B**	1,1,1,2-Tetrachloroethane	630-20-6	✓	✓	(d)
			1,1,1-Trichloroethane	71-55-6	✓	✓	(d)
			1,1,2,2-Tetrachloroethane	79-34-5	✓	✓	(d)
			1,1,2-Trichloroethane	79-00-5	✓	✓	(d)
			1,1-Dichloroethane	75-34-3	✓	✓	(d)
			1,1-Dichloroethene	75-35-4	✓	✓	(d)
			1,1-Dichloropropene	563-58-6	✓	✓	(d)
			1,2,3-Trichlorobenzene	87-61-6	✓	✓	(d)
			1,2,3-Trichloropropane	96-18-4	✓	✓	(d)
			1,2,4-Trichlorobenzene	120-82-1	✓	✓	(d)
			1,2,4-Trimethylbenzene	95-63-6	✓	✓	(d)
			1,2-Dichlorobenzene	95-50-1	✓	✓	(d)
			1,2-Dichloroethane	107-06-2	✓	✓	(d)
			1,2-Dichloroethene	540-59-0	✓	✓	(d)
			1,2-Dichloropropane	78-87-5	✓	✓	(d)
			1,3,5-Trichlorobenzene	108-70-3	✓	✓	(d)
			1,3,5-Trimethylbenzene	108-67-8	✓	✓	(d)
			1,3-Dichlorobenzene	541-73-1	✓	✓	(d)
			1,3-Dichloropropene	542-75-6	✓	✓	(d)
			1,3-Dichloropropane	142-28-9	✓	✓	(d)
			1,4-Dichlorobenzene	106-46-7	✓	✓	(d)
			2,2-Dichloropropane	594-20-7	✓	✓	(d)
			2,2-Dimethylpentane	590-35-2	✓	✓	(d)
			2,2,3-Trimethylbutane	464-06-2	✓	✓	(d)

TABLE 2
SITE-RELATED CHEMICALS AND INITIAL SAMPLE ANALYSES AND DEPTHS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter of Interest	Preparation Method	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 1)		
					Depth 1	Depth 2/3	Deep
Volatile Organic Compounds (continued)	**EPA 5030B/ EPA 5035**	**EPA 8260B**	2,3-Dimethylpentane	565-59-3	✓	✓	(d)
			2,4-Dimethylpentane	108-08-7	✓	✓	(d)
			2-Chlorotoluene	95-49-8	✓	✓	(d)
			2-Hexanone	591-78-6	✓	✓	(d)
			2-Methylhexane	591-76-4	✓	✓	(d)
			2-Nitropropane	79-46-9	✓	✓	(d)
			3,3-Dimethylpentane	562-49-2	✓	✓	(d)
			3-Ethylpentane	617-78-7	✓	✓	(d)
			3-Methylhexane	589-34-4	✓	✓	(d)
			4-Chlorobenzene	108-90-7	✓	✓	(d)
			4-Chlorotoluene	106-43-4	✓	✓	(d)
			4-Methyl-2-pentanone (MIBK)	108-10-1	✓	✓	(d)
			Acetone	67-64-1	✓	✓	(d)
			Acetonitrile	75-05-8	✓	✓	(d)
			Benzene	71-43-2	✓	✓	(d)
			Bromobenzene	108-86-1	✓	✓	(d)
			Bromodichloromethane	75-27-4	✓	✓	(d)
			Bromoform	75-25-2	✓	✓	(d)
			Bromomethane	74-83-9	✓	✓	(d)
			Carbon disulfide	75-15-0	✓	✓	(d)
			Carbon tetrachloride	56-23-5	✓	✓	(d)
			Chlorobenzene	108-90-7	✓	✓	(d)
			Chlorobromomethane	74-97-5	✓	✓	(d)
			Chlorodibromomethane	124-48-1	✓	✓	(d)
			Chloroethane	75-00-3	✓	✓	(d)
			Chloroform	67-66-3	✓	✓	(d)
			Chloromethane	74-87-3	✓	✓	(d)
			cis-1,2-Dichloroethene	156-59-2	✓	✓	(d)
			cis-1,3-Dichloropropene	10061-01-5	✓	✓	(d)
			Cymene (Isopropyltoluene)	99-87-6	✓	✓	(d)
			Dibromochloroethane	73506-94-2	✓	✓	(d)
			Dibromochloromethane	124-48-1	✓	✓	(d)
			Dibromochloropropane	96-12-8	✓	✓	(d)
			Dibromomethane	74-95-3	✓	✓	(d)
			Dichloromethane (Methylene chloride)	75-09-2	✓	✓	(d)
			Dimethyldisulfide	624-92-0	✓	✓	(d)
			Ethanol	64-17-5	✓	✓	(d)

TABLE 2
SITE-RELATED CHEMICALS AND INITIAL SAMPLE ANALYSES AND DEPTHS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter of Interest	Preparation Method	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 1)		
					Depth 1	Depth 2/3	Deep
Volatile Organic Compounds (continued)	**EPA 5030B/ EPA 5035**	**EPA 8260B**	Ethylbenzene	100-41-4	✓	✓	(d)
			Freon-11	75-69-4	✓	✓	(d)
			Freon-113	76-13-1	✓	✓	(d)
			Freon-12	75-71-8	✓	✓	(d)
			Heptane	142-82-5	✓	✓	(d)
			Isoheptane	31394-54-4	✓	✓	(d)
			Isopropylbenzene	98-82-8	✓	✓	(d)
			m,p-Xylene	mp-XYL	✓	✓	(d)
			Methyl ethyl ketone (2-Butanone)	78-93-3	✓	✓	(d)
			Methyl iodide	74-88-4	✓	✓	(d)
			MTBE (Methyl tert-butyl ether)	1634-04-4	✓	✓	(d)
			n-Butyl benzene	104-51-8	✓	✓	(d)
			n-Propylbenzene	103-65-1	✓	✓	(d)
			Nonanal	124-19-6	✓	✓	(d)
			o-Xylene	95-47-6	✓	✓	(d)
			sec-Butylbenzene	135-98-8	✓	✓	(d)
			Styrene	100-42-5	✓	✓	(d)
			tert-Butyl benzene	98-06-6	✓	✓	(d)
			Tetrachloroethene	127-18-4	✓	✓	(d)
			Toluene	108-88-3	✓	✓	(d)
			trans-1,2-Dichloroethene	156-60-5	✓	✓	(d)
			trans-1,3-Dichloropropene	10061-02-6	✓	✓	(d)
			Trichloroethene	79-01-6	✓	✓	(d)
			Vinyl acetate	108-05-4	✓	✓	(d)
			Vinyl chloride	75-01-4	✓	✓	(d)
			Xylenes (total)	1330-20-7	✓	✓	(d)
			Tentatively Identified Compounds (TICs)		✓	✓	(d)
Flashpoint	**NA**	**EPA 1010**	Flammables	NA	(a)	(a)	(a)
Total Petroleum Hydrocarbons	**EPA 3550 EPA 3550 EPA 1664A**	**EPA 8015**	Diesel	64742-46-7	(a)	(a)	(a)
			Gasoline	8006-61-9	(a)	(a)	(a)
			Grease	68153-81-1	(a)	(a)	(a)
			Mineral Spirits	NA	(a)	(a)	(a)
White Phosphorus	**EPA 7580M**	**EPA 7580M**	White phosphorus	12185-10-3	(a)	(a)	(a)
Methyl Mercury	**EPA 1630**	**EPA 1630**	Methyl mercury	22967-92-6	(a)	(a)	(a)

TABLE 2
SITE-RELATED CHEMICALS AND INITIAL SAMPLE ANALYSES AND DEPTHS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter of Interest	Preparation Method	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 1)		
					Depth 1	Depth 2/3	Deep
Soil Physical Parameters	**NA**	**ASTM D2937/ MOSA1Ch .13**	Dry bulk density	NA	(d)	✓	✓
		ASTM D2435/ MOSA1Ch .18	Total porosity	NA	(d)	✓	✓
		ASTM D5084	Soil permeability/saturated hydraulic cond.	NA	(d)	✓	✓
		ASTM D854	Specific gravity of soils	NA	(d)	✓	✓
		SW846 Method 9081	Cation exchange capacity	NA	(d)	✓	✓
		ASTM D2216/D4643/D2974	Volumetric water content	NA	(d)	✓	✓
		ASTM D422	Grain size analysis by sieve and hydrometer	NA	(d)	✓	✓
		EPA 415.1/ASTM 2947	Fractional organic carbon content	NA	(d)	✓	✓

Notes:

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

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

NA = Not applicable.

a - Removed based on rationale provided in the text.

b - Dioxins/furans and PCBs analyzed for in fill and surface soil samples only.

c - Asbestos analyzed for in current grade surface soil samples only.

d - Soil physical parameters collected from at-depth samples only; from one sample location (see Table 1).

e - Removed based on Revisions to the Analyte List Technical Memorandum approved by NDEP on 10/16/2008. Note this was done subsequent to the initial confirmation sampling conducted in June 2008.

TABLE 3
FINAL CONFIRMATION SOIL SAMPLE LOCATIONS AND ANALYSES
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample Location	Sample Depth	Sample Type	Scraped?	Asbestos	Alde-hydes	Dioxins	Gen Chem	Metals	OCPs	PAHs	Aroclors	PCBs	Rads	SVOCs	VOCs
GNC1-BD19	0	Initial		X	X	X	X	X	X	X		X	X	X	X
	10	Initial			X		X	X	X	X			X	X	X
GNC1-BD20	0	Initial		X	X	X	X	X	X	X		X	X	X	X
	10	Initial			X		X	X	X	X			X	X	X
GNC1-BD21	0	Initial		X	X	X	X	X	X	X		X	X	X	X
	10	Initial			X		X	X	X	X			X	X	X
GNC1-BE19	0	Initial		X	X	X	X	X	X	X		X	X	X	X
	10	Initial			X		X	X	X	X			X	X	X
GNC1-BE20	0	Initial	YES	X	X	X	X	X	X	X		X	X	X	X
	10	Initial			X		X	X	X	X			X	X	X
GNC2-BE20C	0	Confirmation	YES	X		X		X				X			
GNC3-BE20C	0	Confirmation		X											
GNC1-BE21	0	Initial		X	X	X	X	X	X	X		X	X	X	X
	10	Initial			X		X	X	X						X
GNC1-BE22	0	Initial	YES	X	X	X	X	X	X	X	X	X	X	X	X
	10	Initial			X		X	X	X	X			X	X	X
GNC2-BE22C	0	Confirmation				X						X			
GNC1-BF19	0	Initial		X	X	X	X	X	X	X		X	X	X	X
	11	Initial			X		X	X	X	X			X	X	X
GNC1-BF20	0	Initial		X	X	X	X	X	X	X		X	X	X	X
	10	Initial			X		X	X	X	X			X	X	X
GNC1-BF21	0	Initial		X	X	X	X	X	X	X		X	X	X	X
	10	Initial			X		X	X	X	X			X	X	X
GNC1-BF22	0	Initial		X	X	X	X	X	X	X		X	X	X	X
	10	Initial			X		X	X	X	X			X	X	X
GNC1-BG19	0	Initial		X	X	X	X	X	X	X		X	X	X	X
	10	Initial			X		X	X	X	X			X	X	X
GNC1-BG20	0	Initial		X	X	X	X	X	X	X		X	X	X	X
	10	Initial			X		X	X	X	X			X	X	X
GNC1-BG21	0	Initial		X	X	X	X	X	X	X		X	X	X	X
	10	Initial			X		X	X	X	X			X	X	X
GNC1-BG22	0	Initial		X	X	X	X	X	X	X		X	X	X	X
	10	Initial			X		X	X	X	X			X	X	X
GNC1-JA04	0	Suppl	YES			X		X		X					
GNC2-JA04	0	Confirmation				X		X				X			
GNC1-JA05	0	Suppl				X						X			
GNC1-JA06	0	Suppl				X						X			
GNC1-JA07	0	Suppl				X						X			

TABLE 3
FINAL CONFIRMATION SOIL SAMPLE LOCATIONS AND ANALYSES
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample Location	Sample Depth	Sample Type	Scraped?	Asbestos	Alde-hydes	Dioxins	Gen Chem	Metals	OCPs	PAHs	Aroclors	PCBs	Rads	SVOCs	VOCs
GNC1-JD06	0	Initial	YES	X	X	X	X	X	X	X		X	X	X	X
	10	Initial			X		X	X	X	X			X	X	X
GNC2-JD06	0	Confirmation						X							
GNC1-JD07	0	Initial	YES	X	X	X	X	X	X	X		X	X	X	X
	10	Initial			X		X	X	X	X			X	X	X
GNC2-JD07C	0	Confirmation				X						X			
GNC1-JD08	0	Initial		X	X	X	X	X	X	X		X	X	X	X
	10	Initial			X		X	X	X	X			X	X	X
GNC1-JD09	0	Initial	YES	X	X	X	X	X	X	X		X	X	X	X
	10	Initial			X		X	X	X	X			X	X	X
GNC2-JD09C	0	Confirmation								X				X	
GNC1-JD10	0	Initial	YES	X	X	X	X	X	X	X		X	X	X	X
	11	Initial			X		X	X	X	X			X	X	X
GNC2-JD10	0	Confirmation		X											
GNC1-JD11	0	Initial		X	X	X	X	X	X	X		X	X	X	X
	11	Initial			X		X	X	X	X			X	X	X
GNC2-JE01	0	Suppl				X						X			
GNC2-JE02	0	Suppl				X						X			
GNC1-JS09	0	Initial	YES	X	X	X	X	X	X	X		X	X	X	X
	10	Initial			X		X	X	X	X			X	X	X
GNC2-JS09C	0	Confirmation	YES	X		X		X				X			
GNC3-JS09C	0	Confirmation		X											
GNC1-JS10	0	Initial	YES	X	X	X	X	X	X	X		X	X	X	X
	10	Initial			X		X	X	X	X			X	X	X
GNC2-JS10C	0	Confirmation				X		X				X			
GNC1-JS11	0	Initial		X	X	X	X	X	X	X		X	X	X	X
	10	Initial			X		X	X	X	X			X	X	X

= Location removed. As noted in the text, post-scrape analyses associated with follow-up rounds of remediation focused on the analytes triggering that additional remediation, and did not include the full suite analyses of the original analytical program. Therefore, analytical results from the original SAP dataset were retained for all analytes except those that were re-run after additional scraping.

TABLE 4
FINAL HUMAN HEALTH RISK ASSESSMENT SOIL DATASET RESULTS SUMMARY
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter of Interest	Compound List	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data							Detected Data[1]							Residential Soil BCL	Count of Detects > BCL	LBCL (DAF 1)	Count of Detects > DAF 1	LBCL (DAF 20)	Count of Detects > DAF 20	Max. Bkgrnd[2]	Count of Detects > Bkgrnd
					Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max								
Asbestos[3]	Amphibole	Structures	26	0%	26	--	--	--	--	--	--	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chrysotile	Structures	26	3.8%	25	--	--	--	--	--	--	1	1	--	--	--	--	1	--	--	--	--	--	--	--	--
Aldehydes	Acetaldehyde	mg/kg	53	1.9%	52	0.306	0.31	0.32	0.32	0.32	0.503	1	0.338	--	0.34	0.34	--	0.338	13.9	0	--	--	--	--	--	--
	Formaldehyde	mg/kg	53	56.6%	23	0.208	0.21	0.21	0.25	0.26	0.385	30	0.205	0.23	0.29	0.37	0.49	0.887	10.6	0	--	--	--	--	--	--
Dioxins/Furans	1,2,3,4,6,7,8-Heptachlorodibenzofuran[4]	pg/g	36	97.2%	1	5.1	--	5.1	5.1	--	5.1	35	3.6	16	33	66	120	200	--	--	--	--	--	--	--	--
	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin[4]	pg/g	36	75.0%	9	1.2	2	3.8	3.6	5	5.1	27	2.7	4.8	13	80	40	1600	--	--	--	--	--	--	--	--
	1,2,3,4,7,8,9-Heptachlorodibenzofuran[4]	pg/g	36	88.9%	4	1.2	2.1	4.9	4	5.1	5.1	32	2.6	8.7	17	27	50	76	--	--	--	--	--	--	--	--
	1,2,3,4,7,8-Hexachlorodibenzofuran[4]	pg/g	36	88.9%	4	1.5	2.4	4.9	4.1	5.1	5.1	32	3.9	9.4	21	31	51	85	--	--	--	--	--	--	--	--
	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin[4]	pg/g	36	5.6%	34	0.075	0.46	1.8	2.6	5.1	5.8	2	2.6	--	3	3	--	3.3	--	--	--	--	--	--	--	--
	1,2,3,6,7,8-Hexachlorodibenzofuran[4]	pg/g	36	86.1%	5	0.89	2.9	4.9	4.2	5.1	5.1	31	3	6.8	15	22	36	57	--	--	--	--	--	--	--	--
	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin[4]	pg/g	36	38.9%	22	0.23	0.63	1.1	2.4	4.9	5.3	14	2.9	3.2	3.8	5.4	5.9	22	--	--	--	--	--	--	--	--
	1,2,3,7,8,9-Hexachlorodibenzofuran[4]	pg/g	36	38.9%	22	0.41	0.95	1.9	2.7	4.9	5.3	14	2.7	4.5	5.6	5.7	6.7	9	--	--	--	--	--	--	--	--
	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin[4]	pg/g	36	36.1%	23	0.26	0.63	1.4	2.5	4.9	5.3	13	3.1	3.4	4.2	4.7	5	12	--	--	--	--	--	--	--	--
	1,2,3,7,8-Pentachlorodibenzofuran[4]	pg/g	36	88.9%	4	0.76	1.8	4.9	3.9	5.1	5.1	32	2.8	5.7	14	19	32	51	--	--	--	--	--	--	--	--
	1,2,3,7,8-Pentachlorodibenzo-p-dioxin[4]	pg/g	36	13.9%	31	0.1	0.57	2.1	2.6	5	5.5	5	3.3	3.4	3.6	3.5	3.7	3.8	--	--	--	--	--	--	--	--
	2,3,4,6,7,8-Hexachlorodibenzofuran[4]	pg/g	36	52.8%	17	0.5	1.3	2.5	2.8	5	5.3	19	2.7	4.1	9.2	8.9	14	18	--	--	--	--	--	--	--	--
	2,3,4,7,8-Pentachlorodibenzofuran[4]	pg/g	36	66.7%	12	0.39	1.6	3.7	3.3	5.1	5.3	24	3.3	5	10	12	20	27	--	--	--	--	--	--	--	--
	2,3,7,8-Tetrachlorodibenzofuran[4]	pg/g	36	97.2%	1	0.5	--	0.5	0.5	--	0.5	35	0.54	3.2	7.9	13	18	66	--	--	--	--	--	--	--	--
	2,3,7,8-Tetrachlorodibenzo-p-dioxin[4]	pg/g	36	33.3%	24	0.051	0.24	0.34	0.54	0.98	1.1	12	0.66	0.73	0.86	0.91	1.1	1.3	--	--	--	--	--	--	--	--
	Octachlorodibenzodioxin[4]	pg/g	36	80.6%	7	4.3	7.2	10	11	18	20	29	5.4	16	42	490	190	11000	--	--	--	--	--	--	--	--
	Octachlorodibenzofuran[4]	pg/g	36	97.2%	1	10	--	10	10	--	10	35	10	59	95	230	420	840	--	--	--	--	--	--	--	--
	TCDD TEQ	pg/g	36	--[4]	--	--	--	--	--	--	--	36	0.58	6	9.9	17	28	49.1	50	0	--	--	--	--	--	--
General Chemistry/ Ions	Ammonia (as N)	mg/kg	52	19.2%	42	0.79	0.82	0.82	1	0.83	5.5	10	0.89	1.1	2.3	2.9	3.9	8.2	--	--	--	--	--	--	--	--
	Bromide	mg/kg	53	13.2%	46	0.26	0.27	0.27	0.27	0.28	0.29	7	0.39	0.44	0.78	0.83	1.1	1.3	--	--	--	--	--	--	--	--
	Chlorate	mg/kg	53	50.9%	26	0.48	0.49	0.49	0.49	0.5	0.52	27	0.6	1.1	2.2	5.3	5.9	41.3	--	--	--	--	--	--	--	--
	Chloride	mg/kg	53	100.0%	0	--	--	--	--	--	--	53	0.38	43	110	320	410	2830	--	--	--	--	--	--	--	--
	Cyanide, Total	mg/kg	53	22.6%	41	0.083	0.52	0.52	0.45	0.53	0.57	12	0.099	0.55	0.63	1	0.81	5.8	1220	0	2	1	40	0	--	--
	Fluoride	mg/kg	53	77.4%	12	0.1	0.1	0.1	0.1	0.1	0.11	41	0.15	0.56	0.77	0.85	1.2	2.1	3670	0	--	--	--	--	--	--
	Nitrate	mg/kg	53	100.0%	0	--	--	--	--	--	--	53	1.3	3.8	6	16	15	121	--	--	--	--	--	--	--	--
	Nitrite	mg/kg	53	17.0%	44	0.033	0.035	0.035	0.22	0.035	3.4	9	0.087	0.18	0.76	0.82	1.4	2.1	--	--	--	--	--	--	--	--
	Orthophosphate as P	mg/kg	53	35.8%	34	0.51	0.53	0.53	1.6	1.7	5.7	19	0.74	2.1	6	6.3	11	14.4	--	--	--	--	--	--	--	--
	Perchlorate	mg/kg	52	100.0%	0	--	--	--	--	--	--	52	0.0163	0.29	0.7	3.2	3	28.6	54.8	0	--	--	--	--	--	--
	Sulfate	mg/kg	53	100.0%	0	--	--	--	--	--	--	53	6.8	600	1800	3500	5600	17300	--	--	--	--	--	--	--	--
	Sulfide	mg/kg	53	0%	53	1.8	1.8	1.9	1.9	1.9	2	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Total Kjeldahl Nitrogen (TKN)	mg/kg	53	100%	0	--	--	--	--	--	--	53	44.4	71	110	240	300	1660	--	--	--	--	--	--	--	--
Metals	Aluminum	mg/kg	55	100%	0	--	--	--	--	--	--	55	6210	9600	11000	11000	11000	14700	77200	0	75	55	1500	55	15300	0
	Antimony	mg/kg	55	0%	55	0.225	0.32	0.32	0.46	0.32	2.7	0	--	--	--	--	--	--	31.3	--	0.3	--	6	--	0.5	--
	Arsenic	mg/kg	55	96.4%	2	5	--	5.1	5.1	--	5.1	53	2.6	3.9	4.7	4.9	5.6	8.8	0.39	53	1	53	20	0	7.2	4
	Barium	mg/kg	55	100%	0	--	--	--	--	--	--	55	142	280	340	340	380	613	15300	0	82	55	1640	0	836	0
	Beryllium	mg/kg	55	100%	0	--	--	--	--	--	--	55	0.4	0.57	0.63	0.64	0.68	1.1	155	0	3	0	60	0	0.89	3
	Boron	mg/kg	55	12.7%	48	16.5	17	17	20	17	53	7	17.2	18	21	26	39	47.1	15600	0	23.4	2	467	0	11.6	7
	Cadmium	mg/kg	55	72.7%	15	0.1	0.1	0.1	0.15	0.26	0.27	40	0.092	0.12	0.14	0.17	0.18	0.44	38.9	0	0.4	1	8	0	0.16	14
	Calcium	mg/kg	55	100%	0	--	--	--	--	--	--	55	15400	24000	30000	31000	35000	103000	--	--	--	--	--	--	82800	1
	Chromium	mg/kg	55	100%	0	--	--	--	--	--	--	55	7.3	14	16	17	19	62.8	100000	0	2	55	40	1	16.7	23
	Chromium (VI)	mg/kg	55	61.8%	21	0.1	0.1	0.1	0.1	0.11	0.11	34	0.11	0.15	0.19	0.26	0.3	1.8	229	0	2	0	40	0	0.251	9
	Cobalt	mg/kg	55	100%	0	--	--	--	--	--	--	55	5.2	8.7	9.6	9.6	11	12.8	23.4	0	33	0	660	0	16.3	0
	Copper	mg/kg	55	100%	0	--	--	--	--	--	--	55	13.3	18	20	20	22	32.5	2910	0	35.2	0	704	0	30.5	1
	Iron	mg/kg	55	100%	0	--	--	--	--	--	--	55	10200	17000	19000	19000	21000	27300	54800	0	7.56	55	151.2	55	19700	19
	Lead	mg/kg	55	100%	0	--	--	--	--	--	--	55	7	12	16	23	21	272	400	0	--	--	--	--	35.1	5
	Lithium	mg/kg	55	100%	0	--	--	--	--	--	--	55	11.8	14	15	15	16	20.9	156	0	--	--	--	--	26.5	0
	Magnesium	mg/kg	55	100%	0	--	--	--	--	--	--	55	7670	11000	11000	11000	12000	28500	100000	0	649	55	13000	5	17500	1
	Manganese	mg/kg	55	100%	0	--	--	--	--	--	--	55	295	480	540	540	610	808	1080	0	3.26	55	65.2	55	1090	0

TABLE 4
FINAL HUMAN HEALTH RISK ASSESSMENT SOIL DATASET RESULTS SUMMARY
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter of Interest	Compound List	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data							Detected Data[1]							Residential Soil BCL	Count of Detects > BCL	LBCL (DAF 1)	Count of Detects > DAF 1	LBCL (DAF 20)	Count of Detects > DAF 20	Max. Bkgrnd[2]	Count of Detects > Bkgrnd
					Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max								
Metals	Mercury	mg/kg	55	30.9%	38	0.005	0.005	0.035	0.023	0.035	0.0373	17	0.0056	0.037	0.048	0.055	0.068	0.122	12.5	0	0.105	1	2.09	0	0.11	1
	Molybdenum	mg/kg	55	83.6%	9	0.47	2.5	2.6	2.4	2.6	2.7	46	0.58	0.76	0.93	1	1.1	3.2	391	0	3.64	0	72.7	0	2	1
	Nickel	mg/kg	55	100%	0	--	--	--	--	--	--	55	13	16	17	17	19	28.2	1540	0	7	55	140	0	30	0
	Potassium	mg/kg	55	100%	0	--	--	--	--	--	--	55	1380	1900	2300	2300	2700	3710	--	--	--	--	--	--	3890	0
	Selenium	mg/kg	55	1.8%	54	0.4	0.4	0.4	0.72	0.4	2.7	1	0.47	--	0.47	0.47	--	0.47	391	0	0.3	1	6	0	0.6	0
	Silver	mg/kg	55	69.1%	17	0.04	0.11	0.11	0.098	0.11	0.11	38	0.083	0.12	0.13	0.13	0.14	0.28	391	0	2	0	40	0	0.2609	1
	Sodium	mg/kg	55	100%	0	--	--	--	--	--	--	55	247	530	800	940	1200	4420	--	--	--	--	--	--	1320	8
	Strontium	mg/kg	55	100%	0	--	--	--	--	--	--	55	189	270	310	330	400	623	46900	0	--	--	--	--	808	0
	Thallium	mg/kg	55	0%	55	0.105	0.75	0.75	0.68	0.75	1	0	--	--	--	--	--	--	5.48	--	0.4	--	8	--	1.8	--
	Tin	mg/kg	55	14.5%	47	0.75	0.75	0.75	0.8	0.75	1.1	8	1	1.1	1.5	3	3.9	10.4	46900	0	--	--	--	--	0.8	8
	Titanium	mg/kg	55	100%	0	--	--	--	--	--	--	55	435	680	800	810	930	1350	100000	0	150000	0	3000000	0	1010	9
	Tungsten	mg/kg	55	5.5%	52	0.185	1.3	1.3	1.2	1.3	2.6	3	1.4	1.4	2.9	2.5	3.2	3.2	587	0	41.2	0	823	0	2.5	2
	Uranium	mg/kg	55	100%	0	--	--	--	--	--	--	55	0.59	0.87	1.1	1.2	1.3	2.5	235	0	13.5	0	270	0	2.7	0
	Vanadium	mg/kg	55	100%	0	--	--	--	--	--	--	55	28.2	50	56	56	63	82.7	391	0	300	0	6000	0	59.1	21
	Zinc	mg/kg	55	100%	0	--	--	--	--	--	--	55	33.6	45	52	56	59	155	23500	0	620	0	12400	0	121	2
Organochlorine Pesticides	2,4-DDD	mg/kg	53	0%	53	0.00031	0.00032	0.00032	0.00035	0.00032	0.0016	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4-DDE	mg/kg	53	22.6%	41	0.00021	0.00021	0.00021	0.00023	0.00021	0.001	12	0.002	0.0026	0.0036	0.0051	0.0066	0.015	--	--	--	--	--	--	--	--
	4,4-DDD	mg/kg	53	1.9%	52	0.00009	0.000093	0.000094	0.0001	0.000095	0.00046	1	0.0044	--	0.0044	0.0044	--	0.0044	2.44	0	0.8	0	16	0	--	--
	4,4-DDE	mg/kg	53	43.4%	30	0.0002	0.0002	0.0002	0.00023	0.00021	0.00099	23	0.0018	0.0031	0.0063	0.0079	0.0094	0.031	1.72	0	3	0	60	0	--	--
	4,4-DDT	mg/kg	53	39.6%	32	0.00021	0.00021	0.00021	0.00024	0.00022	0.001	21	0.0018	0.0023	0.0031	0.0048	0.0042	0.016	1.72	0	2	0	40	0	--	--
	Aldrin	mg/kg	53	0%	53	0.000096	0.000099	0.0001	0.00011	0.0001	0.00049	0	--	--	--	--	--	--	0.0286	--	0.02	--	0.4	--	--	--
	alpha-BHC	mg/kg	53	1.9%	52	0.00028	0.00029	0.0003	0.00032	0.0003	0.0014	1	0.0022	--	0.0022	0.0022	--	0.0022	0.0902	0	0.00003	1	0.0006	1	--	--
	alpha-Chlordane	mg/kg	53	3.8%	51	0.00021	0.00022	0.00022	0.00024	0.00022	0.0011	2	0.0022	--	0.004	0.004	--	0.0057	--	--	--	--	--	--	--	--
	beta-BHC	mg/kg	53	35.8%	34	0.00019	0.0002	0.0002	0.00022	0.0002	0.00096	19	0.0022	0.0031	0.0047	0.0066	0.0099	0.019	0.316	0	0.0001	19	0.002	19	--	--
	Chlordane	mg/kg	53	3.8%	51	0.0024	0.0024	0.0025	0.0027	0.0025	0.012	2	0.02	--	0.032	0.032	--	0.043	1.62	0	0.5	0	10	0	--	--
	delta-BHC	mg/kg	53	0%	53	0.00017	0.00017	0.00018	0.00019	0.00018	0.00086	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Dieldrin	mg/kg	53	0%	53	0.000092	0.000095	0.000096	0.0001	0.000097	0.00047	0	--	--	--	--	--	--	0.0304	--	0.0002	--	0.004	--	--	--
	Endosulfan I	mg/kg	53	0%	53	0.00011	0.00011	0.00011	0.00012	0.00011	0.00054	0	--	--	--	--	--	--	367	--	0.9	--	18	--	--	--
	Endosulfan II	mg/kg	53	0%	53	0.000094	0.000097	0.000098	0.00011	0.000099	0.00048	0	--	--	--	--	--	--	367	--	0.9	--	18	--	--	--
	Endosulfan sulfate	mg/kg	53	1.9%	52	0.00026	0.00027	0.00028	0.0003	0.00028	0.0013	1	0.019	--	0.019	0.019	--	0.019	--	--	--	--	--	--	--	--
	Endrin	mg/kg	53	1.9%	52	0.000084	0.000087	0.000088	0.000094	0.000088	0.00043	1	0.0021	--	0.0021	0.0021	--	0.0021	18.3	0	0.05	0	1	0	--	--
	Endrin aldehyde	mg/kg	53	1.9%	52	0.00018	0.00019	0.00019	0.0002	0.00019	0.00092	1	0.015	--	0.015	0.015	--	0.015	--	--	--	--	--	--	--	--
	Endrin ketone	mg/kg	53	0%	53	0.00016	0.00017	0.00017	0.00018	0.00017	0.00084	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	gamma-BHC (Lindane)	mg/kg	53	0%	53	0.00012	0.00013	0.00013	0.00014	0.00013	0.00063	0	--	--	--	--	--	--	0.437	--	0.0005	--	0.01	--	--	--
	gamma-Chlordane	mg/kg	53	5.7%	50	0.000084	0.000087	0.000088	0.000095	0.000088	0.00043	3	0.0022	0.0022	0.0028	0.004	0.007	0.007	--	--	--	--	--	--	--	--
	Heptachlor	mg/kg	53	0%	53	0.00017	0.00018	0.00018	0.00019	0.00018	0.00088	0	--	--	--	--	--	--	0.108	--	1	--	20	--	--	--
	Heptachlor epoxide	mg/kg	53	0%	53	0.00013	0.00014	0.00014	0.00015	0.00014	0.00067	0	--	--	--	--	--	--	0.0535	--	0.03	--	0.6	--	--	--
	Methoxychlor	mg/kg	53	13.2%	46	0.00032	0.00033	0.00033	0.00036	0.00033	0.0016	7	0.0023	0.0034	0.0086	0.011	0.016	0.025	306	0	8	0	160	0	--	--
	Toxaphene	mg/kg	53	0%	53	0.0059	0.0061	0.0061	0.0066	0.0062	0.03	0	--	--	--	--	--	--	0.442	--	2	--	40	--	--	--
Polynuclear Aromatic Hydrocarbons	Acenaphthene	mg/kg	52	1.9%	51	0.00169	0.0017	0.0018	0.0018	0.0018	0.00183	1	0.00209	--	0.0021	0.0021	--	0.00209	4690	0	29	0	580	0	--	--
	Acenaphthylene	mg/kg	52	1.9%	51	0.00169	0.0017	0.0018	0.0018	0.0018	0.00183	1	0.00206	--	0.0021	0.0021	--	0.00206	147	0	--	--	--	--	--	--
	Anthracene	mg/kg	52	15.4%	44	0.00169	0.0017	0.0018	0.0018	0.0018	0.00183	8	0.0019	0.0021	0.0028	0.003	0.0033	0.00599	23500	0	590	0	11800	0	--	--
	Benzo(a)anthracene	mg/kg	52	15.4%	44	0.00169	0.0017	0.0018	0.0018	0.0018	0.00183	8	0.00225	0.0035	0.0042	0.012	0.015	0.0576	0.622	0	0.08	0	1.6	0	--	--
	Benzo(a)pyrene	mg/kg	52	34.6%	34	0.00169	0.0017	0.0018	0.0018	0.0018	0.00182	18	0.00185	0.0025	0.0042	0.0094	0.0094	0.0585	0.0622	0	0.4	0	8	0	--	--
	Benzo(b)fluoranthene	mg/kg	52	40.4%	31	0.0017	0.0017	0.0018	0.0018	0.0018	0.00183	21	0.0022	0.0041	0.0084	0.019	0.019	0.129	0.622	0	0.2	0	4	0	--	--
	Benzo(g,h,i)perylene	mg/kg	52	15.4%	44	0.00169	0.0017	0.0018	0.0018	0.0018	0.00183	8	0.00224	0.0026	0.0036	0.0074	0.0088	0.0295	2350	0	--	--	--	--	--	--
	Benzo(k)fluoranthene	mg/kg	52	11.5%	46	0.00169	0.0017	0.0018	0.0018	0.0018	0.00182	6	0.00229	0.0025	0.0033	0.0038	0.0053	0.00658	6.21	0	2	0	40	0	--	--
	Chrysene	mg/kg	52	32.7%	35	0.00169	0.0017	0.0018	0.0018	0.0018	0.00182	17	0.00231	0.0035	0.0061	0.016	0.02	0.0904	62.1	0	8	0	160	0	--	--
	Dibenzo(a,h)anthracene	mg/kg	52	7.7%	48	0.00169	0.0017	0.0018	0.0018	0.0018	0.00182	4	0.00208	0.0023	0.0082	0.019	0.047	0.0587	0.0622	0	0.08	0	1.6	0	--	--
	Indeno(1,2,3-cd)pyrene	mg/kg	52	9.6%	47	0.00169	0.0017	0.0018	0.0018	0.0018	0.00183	5	0.00195	0.0023	0.0042	0.0092	0.019	0.0311	0.622	0	0.7	0	14	0	--	--
	Phenanthrene	mg/kg	52	32.7%	35	0.0017	0.0017	0.0018	0.0018	0.0018	0.00183	17	0.0022	0.0029	0.004	0.009	0.014	0.0343	24.5	0	--	--	--	--	--	--
	Pyrene	mg/kg	52	42.3%	30	0.0017	0.0017	0.0018	0.0018	0.0018	0.00182	22	0.00209	0.004	0.0074	0.018	0.016	0.12	2350	0	210	0	4200	0	--	--

TABLE 4
FINAL HUMAN HEALTH RISK ASSESSMENT SOIL DATASET RESULTS SUMMARY
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter of Interest	Compound List	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data							Detected Data[1]							Residential Soil BCL	Count of Detects > BCL	LBCL (DAF 1)	Count of Detects > DAF 1	LBCL (DAF 20)	Count of Detects > DAF 20	Max. Bkgrnd[2]	Count of Detects > Bkgrnd
					Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max								
Polychlorinated Biphenyls	PCB 105[4]	pg/g	36	97.2%	1	2.1	--	2.1	2.1	--	2.1	35	2.2	13	39	96	78	710	--	--	--	--	--	--	--	--
	PCB 114[4]	pg/g	36	72.2%	10	1.9	2	2.1	2.1	2.1	2.1	26	2.1	3.7	6.2	9.7	13	43	--	--	--	--	--	--	--	--
	PCB 118[4]	pg/g	36	100%	0	--	--	--	--	--	--	36	4.7	20	75	170	130	1200	--	--	--	--	--	--	--	--
	PCB 123[4]	pg/g	36	2.8%	35	1.9	2.1	3.4	8.6	7	54	1	6.8	--	6.8	6.8	--	6.8	--	--	--	--	--	--	--	--
	PCB 126[4]	pg/g	36	61.1%	14	1.9	2	2.1	2.1	2.1	2.1	22	2.2	3.2	5.1	5.9	7.5	17	--	--	--	--	--	--	--	--
	PCB 156[4]	pg/g	36	91.7%	3	2	2	2.1	2.1	2.1	2.1	33	2.6	6.8	21	32	33	160	--	--	--	--	--	--	--	--
	PCB 157[4]	pg/g	36	66.7%	12	1.9	2	2.1	2.1	2.1	2.1	24	2.4	4.2	5.7	10	8.9	39	--	--	--	--	--	--	--	--
	PCB 167[4]	pg/g	36	75.0%	9	1.9	2	2.1	2.1	2.1	2.1	27	2.1	7.7	12	16	16	65	--	--	--	--	--	--	--	--
	PCB 169[4]	pg/g	36	13.9%	31	1.9	2.1	2.1	2.1	2.1	2.3	5	2.2	2.3	2.3	3.2	4.5	6.2	--	--	--	--	--	--	--	--
	PCB 189[4]	pg/g	36	69.4%	11	1.9	2	2.1	2.1	2.1	2.1	25	2.8	5.2	8.5	9.2	13	19	--	--	--	--	--	--	--	--
	PCB 209[4]	pg/g	36	100%	0	--	--	--	--	--	--	36	30	330	870	1400	2300	6300	--	--	--	--	--	--	--	--
	PCB 77[4]	pg/g	36	5.6%	34	2	3.4	11	18	22	150	2	2.1	--	4.8	4.8	--	7.4	--	--	--	--	--	--	--	--
	PCB 81[4]	pg/g	36	5.6%	34	1.9	2.1	3.3	6.3	6.1	34	2	3.4	--	5.4	5.4	--	7.4	--	--	--	--	--	--	--	--
Radionuclides	Radium-226	pCi/g	52	100%	0	--	--	--	--	--	--	52	0.497	1	1.2	1.2	1.4	2.51	0.0071	52	0.016	52	0.32	52	2.36	1
	Radium-228	pCi/g	52	92.3%	4	--	--	--	--	--	--	48	0.405	0.95	1.3	1.3	1.5	2.41	0.013	48	0.016	48	0.32	48	2.94	0
	Thorium-228	pCi/g	52	98.1%	1	--	--	--	--	--	--	51	0.421	1.2	1.5	1.4	1.7	2.31	0.0078	51	0.0023	51	0.045	51	2.28	1
	Thorium-230	pCi/g	52	98.1%	1	--	--	--	--	--	--	51	0.537	0.92	1	1.1	1.2	2.11	3.2	0	0.00084	51	0.017	51	3.01	0
	Thorium-232	pCi/g	52	100%	0	--	--	--	--	--	--	52	0.509	1.1	1.4	1.4	1.6	2.32	2.8	0	0.0029	52	0.058	52	2.23	1
	Uranium-233/234	pCi/g	52	96.2%	2	--	--	--	--	--	--	50	0.13	0.83	1	1	1.2	1.79	4.2	0	--	--	--	--	2.84	0
	Uranium-235/236	pCi/g	52	11.5%	46	--	--	--	--	--	--	6	-0.0987	0.038	0.071	0.1	0.12	1	0.11	6	--	--	--	--	0.21	3
	Uranium-238	pCi/g	52	98.1%	1	--	--	--	--	--	--	51	-0.0422	0.8	1	0.96	1.2	1.58	0.46	49	--	--	--	--	2.37	0
Semivolatile Organic Compounds	1,2,4,5-Tetrachlorobenzene	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	18.3	--	--	--	--	--	--	--
	1,2-Diphenylhydrazine	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	0.608	--	--	--	--	--	--	--
	1,4-Dioxane	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	44.2	--	--	--	--	--	--	--
	2,2'-Dichlorobenzil	mg/kg	51	0%	51	0.112	0.12	0.12	0.12	0.12	0.121	0	--	--	--	--	--	--	23.5	--	0.0003	--	0.006	--	--	--
	2,4,5-Trichlorophenol	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	6110	--	14	--	280	--	--	--
	2,4,6-Trichlorophenol	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	44.2	--	0.008	--	0.16	--	--	--
	2,4-Dichlorophenol	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	183	--	0.05	--	1	--	--	--
	2,4-Dimethylphenol	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	1220	--	0.4	--	8	--	--	--
	2,4-Dinitrophenol	mg/kg	51	0%	51	0.129	0.13	0.13	0.13	0.14	0.139	0	--	--	--	--	--	--	122	--	0.01	--	0.2	--	--	--
	2,4-Dinitrotoluene	mg/kg	51	0%	51	0.0338	0.035	0.035	0.035	0.036	0.0366	0	--	--	--	--	--	--	1.57	--	0.00004	--	0.0008	--	--	--
	2,6-Dinitrotoluene	mg/kg	51	0%	51	0.0338	0.035	0.035	0.035	0.036	0.0366	0	--	--	--	--	--	--	61.1	--	0.00003	--	0.0006	--	--	--
	2-Chloronaphthalene	mg/kg	51	0%	51	0.0118	0.012	0.012	0.012	0.012	0.0128	0	--	--	--	--	--	--	6260	--	--	--	--	--	--	--
	2-Chlorophenol	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	391	--	0.2	--	4	--	--	--
	2-Methylnaphthalene	mg/kg	51	0%	51	0.00677	0.007	0.007	0.007	0.0071	0.00733	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-Nitroaniline	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	183	--	--	--	--	--	--	--
	2-Nitrophenol	mg/kg	51	0%	51	0.0338	0.035	0.035	0.035	0.036	0.0366	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3,3-Dichlorobenzidine	mg/kg	51	0%	51	0.102	0.1	0.11	0.11	0.11	0.11	0	--	--	--	--	--	--	1.08	--	0.0003	--	0.006	--	--	--
	3-Nitroaniline	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-Bromophenyl phenyl ether	mg/kg	51	0%	51	0.0338	0.035	0.035	0.035	0.036	0.0366	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-Chloro-3-methylphenol	mg/kg	51	0%	51	0.0338	0.035	0.035	0.035	0.036	0.0366	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-Chlorophenyl phenyl ether	mg/kg	51	0%	51	0.0338	0.035	0.035	0.035	0.036	0.0366	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-Chlorothioanisole	mg/kg	51	0%	51	0.112	0.12	0.12	0.12	0.12	0.121	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-Nitroaniline	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-Nitrophenol	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	489	--	--	--	--	--	--	--
	Acetophenone	mg/kg	51	0%	51	0.0338	0.035	0.035	0.035	0.036	0.0366	0	--	--	--	--	--	--	1740	--	--	--	--	--	--	--
	Aniline	mg/kg	51	0%	51	0.118	0.12	0.12	0.12	0.12	0.128	0	--	--	--	--	--	--	85.3	--	--	--	--	--	--	--
	Benzenethiol	mg/kg	51	0%	51	0.112	0.12	0.12	0.12	0.12	0.121	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzoic acid	mg/kg	51	2.0%	50	0.169	0.17	0.18	0.18	0.18	0.183	1	0.32	--	0.32	0.32	--	0.32	100000	0	20	0	400	0	--	--
	Benzyl alcohol	mg/kg	51	0%	51	0.102	0.1	0.11	0.11	0.11	0.11	0	--	--	--	--	--	--	30600	--	--	--	--	--	--	--
	bis(2-Chloroethoxy)methane	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	bis(2-Chloroethyl) ether	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	0.244	--	0.00002	--	0.0004	--	--	--

TABLE 4
FINAL HUMAN HEALTH RISK ASSESSMENT SOIL DATASET RESULTS SUMMARY
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter of Interest	Compound List	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data							Detected Data[1]							Residential Soil BCL	Count of Detects > BCL	LBCL (DAF 1)	Count of Detects > DAF 1	LBCL (DAF 20)	Count of Detects > DAF 20	Max. Bkgrnd[2]	Count of Detects > Bkgrnd
					Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max								
Semivolatile Organic Compounds	bis(2-Chloroisopropyl) ether	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	3.38	--	--	--	--	--	--	--
	bis(2-Ethylhexyl) phthalate	mg/kg	51	9.8%	46	0.0677	0.07	0.07	0.072	0.071	0.11	5	0.0747	0.076	0.11	0.34	0.71	1.04	34.7	0	180	0	3600	0	--	--
	bis(p-Chlorophenyl) sulfone	mg/kg	51	0%	51	0.112	0.12	0.12	0.12	0.12	0.121	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	bis(p-Chlorophenyl)disulfide	mg/kg	51	0%	51	0.112	0.12	0.12	0.12	0.12	0.121	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Butylbenzyl phthalate	mg/kg	51	2.0%	50	0.0677	0.07	0.07	0.07	0.071	0.0733	1	126	--	130	130	--	126	240	0	810	0	16200	0	--	--
	Carbazole	mg/kg	51	0%	51	0.0102	0.01	0.011	0.011	0.011	0.011	0	--	--	--	--	--	--	24.3	--	0.03	--	0.6	--	--	--
	Dibenzofuran	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	156	--	--	--	--	--	--	--
	Dichloromethyl ether	mg/kg	51	0%	51	0.112	0.12	0.12	0.12	0.12	0.121	0	--	--	--	--	--	--	0.000242	--	--	--	--	--	--	--
	Diethyl phthalate	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	48900	--	--	--	--	--	--	--
	Dimethyl phthalate	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	100000	--	--	--	--	--	--	--
	Di-n-butyl phthalate	mg/kg	51	2.0%	50	0.0338	0.035	0.035	0.035	0.036	0.0366	1	0.115	--	0.12	0.12	--	0.115	6110	0	270	0	5400	0	--	--
	Di-n-octyl phthalate	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Diphenyl disulfide	mg/kg	51	0%	51	0.112	0.12	0.12	0.12	0.12	0.121	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Diphenyl sulfide	mg/kg	51	0%	51	0.112	0.12	0.12	0.12	0.12	0.121	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Diphenyl sulfone	mg/kg	51	0%	51	0.112	0.12	0.12	0.12	0.12	0.121	0	--	--	--	--	--	--	183	--	--	--	--	--	--	--
	Diphenylamine	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Fluoranthene	mg/kg	51	11.8%	45	0.0102	0.01	0.011	0.011	0.011	0.011	6	0.0127	0.014	0.047	0.05	0.071	0.127	2290	0	210	0	4200	0	--	--
	Fluorene	mg/kg	51	0%	51	0.0102	0.01	0.011	0.011	0.011	0.011	0	--	--	--	--	--	--	3130	--	28	--	560	--	--	--
	Hexachlorobenzene	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	0.304	--	0.1	--	2	--	--	--
	Hexachlorobutadiene	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	6.24	--	0.1	--	2	--	--	--
	Hexachlorocyclopentadiene	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	366	--	20	--	400	--	--	--
	Hexachloroethane	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	34.7	--	0.02	--	0.4	--	--	--
	Hydroxymethyl phthalimide	mg/kg	51	0%	51	0.112	0.12	0.12	0.12	0.12	0.121	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Isophorone	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	512	--	0.03	--	0.6	--	--	--
	m,p-Cresols	mg/kg	51	0%	51	0.135	0.14	0.14	0.14	0.14	0.147	0	--	--	--	--	--	--	306	--	--	--	--	--	--	--
	Naphthalene	mg/kg	51	0%	51	0.0102	0.01	0.011	0.011	0.011	0.011	0	--	--	--	--	--	--	3.1	--	4	--	80	--	--	--
	Nitrobenzene	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	2.69	--	0.007	--	0.14	--	--	--
	N-nitrosodi-n-propylamine	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	0.0695	--	0.000002	--	0.00004	--	--	--
	o-Cresol	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	3060	--	0.8	--	16	--	--	--
	Octachlorostyrene	mg/kg	51	0%	51	0.112	0.12	0.12	0.12	0.12	0.121	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	p-Chloroaniline	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	244	--	0.03	--	0.6	--	--	--
	p-Chlorobenzenethiol	mg/kg	51	0%	51	0.112	0.12	0.12	0.12	0.12	0.121	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Pentachlorobenzene	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	48.9	--	--	--	--	--	--	--
	Pentachlorophenol	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	2.98	--	0.001	--	0.02	--	--	--
	Phenol	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	18300	--	5	--	100	--	--	--
	Phthalic acid	mg/kg	51	2.0%	50	0.112	0.12	0.12	0.12	0.12	0.121	1	0.387	--	0.39	0.39	--	0.387	100000	0	--	--	--	--	--	--
	Pyridine	mg/kg	51	0%	51	0.0677	0.07	0.07	0.07	0.071	0.0733	0	--	--	--	--	--	--	61.1	--	--	--	--	--	--	--
Volatile Organic Compounds	1,1,1,2-Tetrachloroethane	mg/kg	53	0%	53	0.00018	0.00019	0.00019	0.00019	0.00019	0.0002	0	--	--	--	--	--	--	3.69	--	--	--	--	--	--	--
	1,1,1-Trichloroethane	mg/kg	53	0%	53	0.00011	0.00011	0.00011	0.00011	0.00011	0.00012	0	--	--	--	--	--	--	1390	--	0.1	--	2	--	--	--
	1,1,2,2-Tetrachloroethane	mg/kg	53	0%	53	0.000079	0.000081	0.000082	0.000082	0.000083	0.000088	0	--	--	--	--	--	--	0.472	--	0.0002	--	0.004	--	--	--
	1,1,2-Trichloroethane	mg/kg	53	0%	53	0.000068	0.00007	0.000071	0.000071	0.000071	0.000076	0	--	--	--	--	--	--	1.05	--	0.0009	--	0.018	--	--	--
	1,1-Dichloroethane	mg/kg	53	0%	53	0.000071	0.000073	0.000074	0.000074	0.000074	0.000079	0	--	--	--	--	--	--	4.19	--	1	--	20	--	--	--
	1,1-Dichloroethene	mg/kg	53	0%	53	0.00012	0.00013	0.00013	0.00013	0.00013	0.00014	0	--	--	--	--	--	--	285	--	0.003	--	0.06	--	--	--
	1,1-Dichloropropene	mg/kg	53	0%	53	0.000088	0.000091	0.000092	0.000092	0.000092	0.000098	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,2,3-Trichlorobenzene	mg/kg	53	0%	53	0.00039	0.0004	0.00041	0.00041	0.00041	0.00044	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,2,3-Trichloropropane	mg/kg	53	0%	53	0.00025	0.00026	0.00026	0.00026	0.00027	0.00028	0	--	--	--	--	--	--	0.32	--	--	--	--	--	--	--
	1,2,4-Trichlorobenzene	mg/kg	53	0%	53	0.00033	0.00034	0.00035	0.00035	0.00035	0.00037	0	--	--	--	--	--	--	143	--	0.3	--	6	--	--	--
	1,2,4-Trimethylbenzene	mg/kg	53	32.1%	36	0.00014	0.00042	0.00055	0.0005	0.00059	0.00073	17	0.00069	0.0007	0.00077	0.00089	0.001	0.0017	144	0	--	--	--	--	--	--
	1,2-Dichlorobenzene	mg/kg	53	1.9%	52	0.00012	0.00013	0.00013	0.00013	0.00013	0.00015	1	0.00021	--	0.00021	0.00021	--	0.00021	373	0	0.9	0	18	0	--	--
	1,2-Dichloroethane	mg/kg	53	0%	53	0.000067	0.000069	0.00007	0.00007	0.00007	0.000075	0	--	--	--	--	--	--	0.433	--	0.001	--	0.02	--	--	--
	1,2-Dichloroethene	mg/kg	53	0%	53	0.00011	0.00011	0.00011	0.00011	0.00011	0.00012	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,2-Dichloropropane	mg/kg	53	0%	53	0.00011	0.00011	0.00012	0.00012	0.00012	0.00012	0	--	--	--	--	--	--	0.82	--	0.001	--	0.02	--	--	--

TABLE 4
FINAL HUMAN HEALTH RISK ASSESSMENT SOIL DATASET RESULTS SUMMARY
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter of Interest	Compound List	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data							Detected Data[1]							Residential Soil BCL	Count of Detects > BCL	LBCL (DAF 1)	Count of Detects > DAF 1	LBCL (DAF 20)	Count of Detects > DAF 20	Max. Bkgrnd[2]	Count of Detects > Bkgrnd
					Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max								
Volatile Organic Compounds	1,3,5-Trichlorobenzene	mg/kg	53	0%	53	0.00037	0.00039	0.00039	0.00039	0.00039	0.00042	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,3,5-Trimethylbenzene	mg/kg	53	1.9%	52	0.000098	0.0001	0.0001	0.0001	0.0001	0.00014	1	0.00012	--	0.00012	0.00012	--	0.00012	49.8	0	--	--	--	--	--	--
	1,3-Dichlorobenzene	mg/kg	53	1.9%	52	0.00013	0.00014	0.00014	0.00014	0.00014	0.00015	1	0.00022	--	0.00022	0.00022	--	0.00022	235	0	--	--	--	--	--	--
	1,3-Dichloropropane	mg/kg	53	0%	53	0.000051	0.000053	0.000054	0.000054	0.000054	0.000058	0	--	--	--	--	--	--	1130	--	0.001	--	0.02	--	--	--
	1,4-Dichlorobenzene	mg/kg	53	1.9%	52	0.00014	0.00014	0.00014	0.00014	0.00014	0.00015	1	0.00024	--	0.00024	0.00024	--	0.00024	2.59	0	0.1	0	2	0	--	--
	2,2,3-Trimethylbutane	mg/kg	53	0%	53	0.00021	0.00022	0.00022	0.00022	0.00022	0.00024	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,2-Dichloropropane	mg/kg	53	0%	53	0.00023	0.00024	0.00024	0.00024	0.00025	0.00026	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,2-Dimethylpentane	mg/kg	53	0%	53	0.00028	0.00029	0.00029	0.00029	0.00029	0.00031	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,3-Dimethylpentane	mg/kg	53	0%	53	0.00023	0.00023	0.00024	0.00024	0.00024	0.00025	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4-Dimethylpentane	mg/kg	53	0%	53	0.00019	0.0002	0.0002	0.0002	0.0002	0.00022	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-Chlorotoluene	mg/kg	53	0%	53	0.00025	0.00026	0.00026	0.00026	0.00026	0.00028	0	--	--	--	--	--	--	511	--	--	--	--	--	--	--
	2-Hexanone	mg/kg	53	0%	53	0.00024	0.00025	0.00025	0.00025	0.00025	0.00027	0	--	--	--	--	--	--	460	--	--	--	--	--	--	--
	2-Methylhexane	mg/kg	53	0%	53	0.0002	0.00021	0.00021	0.00021	0.00022	0.00023	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-Nitropropane	mg/kg	53	0%	53	0.00061	0.00063	0.00063	0.00063	0.00064	0.00068	0	--	--	--	--	--	--	0.0681	--	--	--	--	--	--	--
	3,3-Dimethylpentane	mg/kg	53	0%	53	0.0002	0.00021	0.00021	0.00021	0.00022	0.00023	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3-Ethylpentane	mg/kg	53	0%	53	0.00021	0.00022	0.00022	0.00022	0.00022	0.00024	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3-Methylhexane	mg/kg	53	0%	53	0.00014	0.00015	0.00015	0.00015	0.00015	0.00016	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-Chlorotoluene	mg/kg	53	0%	53	0.00017	0.00018	0.00018	0.00018	0.00018	0.00019	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-Methyl-2-pentanone (MIBK)	mg/kg	53	0%	53	0.00029	0.0003	0.0003	0.0003	0.00031	0.00033	0	--	--	--	--	--	--	5800	--	--	--	--	--	--	--
	Acetone	mg/kg	53	3.8%	51	0.0018	0.0051	0.011	0.011	0.018	0.021	2	0.013	--	0.015	0.015	--	0.017	60000	0	0.8	0	16	0	--	--
	Acetonitrile	mg/kg	53	0%	53	0.0055	0.0056	0.0057	0.0057	0.0057	0.0061	0	--	--	--	--	--	--	1470	--	--	--	--	--	--	--
	Benzene	mg/kg	53	0%	53	0.000088	0.000091	0.000092	0.000092	0.000092	0.000098	0	--	--	--	--	--	--	0.81	--	0.002	--	0.04	--	--	--
	Bromobenzene	mg/kg	53	0%	53	0.00012	0.00013	0.00013	0.00013	0.00013	0.00014	0	--	--	--	--	--	--	63.5	--	--	--	--	--	--	--
	Bromodichloromethane	mg/kg	53	0%	53	0.00021	0.00022	0.00022	0.00022	0.00023	0.00024	0	--	--	--	--	--	--	10.3	--	0.03	--	0.6	--	--	--
	Bromoform	mg/kg	53	0%	53	0.00006	0.000062	0.000062	0.000062	0.000063	0.000067	0	--	--	--	--	--	--	61.6	--	0.04	--	0.8	--	--	--
	Bromomethane	mg/kg	53	0%	53	0.00013	0.00014	0.00014	0.00014	0.00014	0.00015	0	--	--	--	--	--	--	8.7	--	0.01	--	0.2	--	--	--
	Carbon disulfide	mg/kg	53	0%	53	0.00012	0.00013	0.00013	0.00013	0.00013	0.00014	0	--	--	--	--	--	--	721	--	2	--	40	--	--	--
	Carbon tetrachloride	mg/kg	53	0%	53	0.00021	0.00021	0.00022	0.00022	0.00022	0.00023	0	--	--	--	--	--	--	0.3	--	0.003	--	0.06	--	--	--
	Chlorobenzene	mg/kg	53	0%	53	0.00011	0.00011	0.00011	0.00011	0.00011	0.00012	0	--	--	--	--	--	--	273	--	0.07	--	1.4	--	--	--
	Chlorobromomethane	mg/kg	53	0%	53	0.00023	0.00023	0.00024	0.00024	0.00024	0.00025	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chloroethane	mg/kg	53	0%	53	0.00047	0.00048	0.00049	0.00049	0.00049	0.00052	0	--	--	--	--	--	--	221	--	--	--	--	--	--	--
	Chloroform	mg/kg	53	0%	53	0.0001	0.0001	0.00011	0.00011	0.00011	0.00011	0	--	--	--	--	--	--	0.306	--	0.03	--	0.6	--	--	--
	Chloromethane	mg/kg	53	0%	53	0.00027	0.00028	0.00028	0.00028	0.00028	0.0003	0	--	--	--	--	--	--	1.6	--	--	--	--	--	--	--
	cis-1,2-Dichloroethene	mg/kg	53	0%	53	0.000055	0.000056	0.000057	0.000057	0.000057	0.000061	0	--	--	--	--	--	--	782	--	0.02	--	0.4	--	--	--
	cis-1,3-Dichloropropene	mg/kg	53	0%	53	0.0001	0.0001	0.00011	0.00011	0.00011	0.00011	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cymene (Isopropyltoluene)	mg/kg	53	0%	53	0.00013	0.00013	0.00013	0.00013	0.00013	0.00014	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Dibromochloromethane	mg/kg	53	0%	53	0.00012	0.00012	0.00012	0.00012	0.00013	0.00013	0	--	--	--	--	--	--	1.12	--	0.02	--	0.4	--	--	--
	Dibromochloropropane	mg/kg	53	0%	53	0.00021	0.00022	0.00022	0.00022	0.00022	0.00024	0	--	--	--	--	--	--	0.0104	--	--	--	--	--	--	--
	Dibromomethane	mg/kg	53	0%	53	0.00017	0.00017	0.00017	0.00018	0.00018	0.00019	0	--	--	--	--	--	--	782	--	--	--	--	--	--	--
	Dichloromethane (Methylene chloride)	mg/kg	53	47.2%	28	0.00071	0.00073	0.0026	0.0026	0.0039	0.0077	25	0.0014	0.0036	0.011	0.011	0.017	0.028	11	0	0.001	25	0.02	1	--	--
	Dimethyldisulfide	mg/kg	53	0%	53	0.00018	0.00018	0.00019	0.00019	0.00019	0.0002	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Ethanol	mg/kg	53	0%	53	0.048	0.049	0.05	0.05	0.05	0.053	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Ethylbenzene	mg/kg	53	7.5%	49	0.000059	0.000061	0.000061	0.000063	0.000062	0.00015	4	0.000062	0.000062	0.00007	0.0001	0.00017	0.0002	3.79	0	0.7	0	14	0	--	--
	Freon-11 (Trichlorofluoromethane)	mg/kg	53	0%	53	0.00022	0.00023	0.00023	0.00023	0.00023	0.00025	0	--	--	--	--	--	--	883	--	--	--	--	--	--	--
	Freon-113 (1,1,2-Trifluoro-1,2,2-trichloroetha	mg/kg	53	0%	53	0.00015	0.00015	0.00015	0.00015	0.00015	0.00016	0	--	--	--	--	--	--	5550	--	--	--	--	--	--	--
	Freon-12 (Dichlorodifluoromethane)	mg/kg	53	0%	53	0.00029	0.0003	0.0003	0.00031	0.00031	0.00033	0	--	--	--	--	--	--	218	--	--	--	--	--	--	--
	Heptane	mg/kg	53	0%	53	0.00016	0.00017	0.00017	0.00017	0.00017	0.00018	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Isopropylbenzene	mg/kg	53	0%	53	0.0001	0.00011	0.00011	0.00011	0.00011	0.00012	0	--	--	--	--	--	--	371	--	--	--	--	--	--	--
	m,p-Xylene	mg/kg	53	0%	53	0.00017	0.00017	0.00017	0.00018	0.00018	0.00019	0	--	--	--	--	--	--	214	--	10	--	200	--	--	--
	Methyl ethyl ketone (2-Butanone)	mg/kg	53	0%	53	0.00088	0.0009	0.00091	0.00092	0.00092	0.00098	0	--	--	--	--	--	--	32100	--	--	--	--	--	--	--
	Methyl iodide	mg/kg	53	0%	53	0.00013	0.00013	0.00013	0.00013	0.00013	0.00014	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MTBE (Methyl tert-butyl ether)	mg/kg	53	0%	53	0.00009	0.000093	0.000094	0.000094	0.000095	0.0001	0	--	--	--	--	--	--	39.2	--	--	--	--	--	--	--

TABLE 4
FINAL HUMAN HEALTH RISK ASSESSMENT SOIL DATASET RESULTS SUMMARY
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 6 of 6)

Parameter of Interest	Compound List	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data							Detected Data[1]							Residential Soil BCL	Count of Detects > BCL	LBCL (DAF 1)	Count of Detects > DAF 1	LBCL (DAF 20)	Count of Detects > DAF 20	Max. Bkgrnd[2]	Count of Detects > Bkgrnd
					Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max								
Volatile Organic Compounds	n-Butylbenzene	mg/kg	53	0%	53	0.00018	0.00019	0.00019	0.00019	0.00019	0.0002	0	--	--	--	--	--	--	237	--	--	--	--	--	--	--
	Nonanal	mg/kg	53	3.8%	51	0.00047	0.00049	0.00049	0.00049	0.0005	0.00053	2	0.0008	--	0.00089	0.00089	--	0.00098	--	--	--	--	--	--	--	--
	n-Propylbenzene	mg/kg	53	1.9%	52	0.00011	0.00011	0.00011	0.00011	0.00012	0.00012	1	0.00017	--	0.00017	0.00017	--	0.00017	237	0	--	--	--	--	--	--
	o-Xylene	mg/kg	53	0%	53	0.000077	0.000079	0.00008	0.00008	0.000081	0.000086	0	--	--	--	--	--	--	282	--	9	--	180	--	--	--
	sec-Butylbenzene	mg/kg	53	0%	53	0.00011	0.00011	0.00011	0.00011	0.00011	0.00012	0	--	--	--	--	--	--	223	--	--	--	--	--	--	--
	Styrene	mg/kg	53	0%	53	0.00018	0.00018	0.00018	0.00019	0.0002	0.00027	0	--	--	--	--	--	--	1730	--	0.2	--	4	--	--	--
	tert-Butylbenzene	mg/kg	53	0%	53	0.0001	0.0001	0.00011	0.00011	0.00011	0.00011	0	--	--	--	--	--	--	393	--	--	--	--	--	--	--
	Tetrachloroethene	mg/kg	53	0%	53	0.000088	0.000091	0.000092	0.000092	0.000092	0.000098	0	--	--	--	--	--	--	0.624	--	0.003	--	0.06	--	--	--
	Toluene	mg/kg	53	1.9%	52	0.00033	0.00033	0.00034	0.00034	0.00034	0.00036	1	0.00036	--	0.00036	0.00036	--	0.00036	521	0	0.6	0	12	0	--	--
	trans-1,2-Dichloroethene	mg/kg	53	0%	53	0.000091	0.000094	0.000095	0.000095	0.000096	0.0001	0	--	--	--	--	--	--	122	--	0.03	--	0.6	--	--	--
	trans-1,3-Dichloropropene	mg/kg	53	0%	53	0.0001	0.0001	0.00011	0.00011	0.00011	0.00011	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Trichloroethene	mg/kg	53	0%	53	0.0001	0.00011	0.00011	0.00011	0.00011	0.00012	0	--	--	--	--	--	--	1.06	--	0.003	--	0.06	--	--	--
	Vinyl acetate	mg/kg	53	0%	53	0.00024	0.00025	0.00025	0.00025	0.00025	0.00027	0	--	--	--	--	--	--	988	--	8	--	160	--	--	--
	Vinyl chloride	mg/kg	53	0%	53	0.00011	0.00012	0.00012	0.00012	0.00012	0.00013	0	--	--	--	--	--	--	0.349	--	0.0007	--	0.014	--	--	--
	Xylenes (total)	mg/kg	53	0%	53	0.00023	0.00024	0.00024	0.00024	0.00025	0.00026	0	--	--	--	--	--	--	214	--	10	--	200	--	--	--

Notes:
This table includes only data included in the risk assessment. 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 status.
The values used are simply a comparison to NDEP BCL values for information purposes only.
Because both non-detect and detected radionuclides have reported activity levels, calculated summary statistics (and exceedances of comparison levels) are presented as detected regardless of the lab detect flag. Lab detect flags are represented by the censored (non-detect) and detect count fields in the table.
Values for Q1, median, mean, and Q3 are rounded to 2 significant figures. BCLs are rounded to 3 significant figures.
BCL = Basic Comparison Levels (BCLs) from NDEP 2010a.
LBCL = Leaching-based BCLs from NDEP 2010a.
Max = Maximum
Min = Minimum
Q1 = 1st quartile (25th percentile)
Q3 = 3rd quartile (75th percentile)
(1) 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.
(2) Values used are the maximum from the BRC and TIMET background report (BRC and TIMET 1997), and comparisons are for information purposes only.
(3) Asbestos results shown are for long protocol structures (>10um). The minimum and maximum values represent the number of protocol structures in an individual sample. The detect count represents the number of samples with at least one detected protocol structure, not the total number of structures.
(4) TCDD TEQ values are calculated from congener-specific (dioxins, furans, and PBCs) 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 5
SOIL VAPOR FLUX SAMPLE ANALYSES
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

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

TABLE 5
SOIL VAPOR FLUX SAMPLE ANALYSES
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Compound	CAS Number	MDL ppbv	RL ppbv	MDL µg/m^3	RL µg/m^3
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
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

TABLE 5
SOIL VAPOR FLUX SAMPLE ANALYSES
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Compound	CAS Number	MDL ppbv	RL ppbv	MDL µg/m^3	RL µg/m^3
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
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

TABLE 5
SOIL VAPOR FLUX SAMPLE ANALYSES
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Compound	CAS Number	MDL ppbv	RL ppbv	MDL µg/m^3	RL µg/m^3
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

TABLE 6
SOIL VAPOR FLUX SAMPLE RESULTS SUMMARY
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 1 of 3)

Parameter of Interest	Compound List	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data							Detected Data[(1)]						
					Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max
Volatile Organic Compounds (Full Scan)	1,1,1,2-Tetrachloroethane	$\mu g/m^2,min^{-1}$	16	0%	16	0.015	0.0154	0.0158	0.0161	0.0158	0.0231	0	--	--	--	--	--	--
	1,1,1-Trichloroethane	$\mu g/m^2,min^{-1}$	16	0%	16	0.0138	0.0139	0.0142	0.0146	0.0145	0.0212	0	--	--	--	--	--	--
	1,1,2,2-Tetrachloroethane	$\mu g/m^2,min^{-1}$	16	0%	16	0.0173	0.0177	0.0181	0.0185	0.0181	0.0265	0	--	--	--	--	--	--
	1,1,2-Trichloroethane	$\mu g/m^2,min^{-1}$	16	0%	16	0.0138	0.0139	0.0142	0.0146	0.0145	0.0212	0	--	--	--	--	--	--
	1,1-Dichloroethane	$\mu g/m^2,min^{-1}$	16	0%	16	0.01	0.0104	0.0104	0.0108	0.0107	0.0154	0	--	--	--	--	--	--
	1,1-Dichloroethene	$\mu g/m^2,min^{-1}$	16	0%	16	0.01	0.01	0.0104	0.0106	0.0104	0.0154	0	--	--	--	--	--	--
	1,1-Dichloropropene	$\mu g/m^2,min^{-1}$	16	0%	16	0.00962	0.00962	0.00962	0.01	0.01	0.0146	0	--	--	--	--	--	--
	1,2,3-Trichloropropane	$\mu g/m^2,min^{-1}$	16	0%	16	0.0127	0.0131	0.0135	0.0137	0.0135	0.0196	0	--	--	--	--	--	--
	1,2,4-Trichlorobenzene	$\mu g/m^2,min^{-1}$	16	0%	16	0.0381	0.0386	0.0392	0.0403	0.0396	0.0581	0	--	--	--	--	--	--
	1,2,4-Trimethylbenzene	$\mu g/m^2,min^{-1}$	16	25.0%	12	0.025	0.0254	0.0258	0.0268	0.0264	0.0381	4	0.0254	0.0322	0.0545	0.0521	0.0697	0.0742
	1,2-Dibromoethane	$\mu g/m^2,min^{-1}$	16	0%	16	0.02	0.0201	0.0204	0.0211	0.0208	0.0304	0	--	--	--	--	--	--
	1,2-Dichlorobenzene	$\mu g/m^2,min^{-1}$	16	0%	16	0.03	0.0304	0.0308	0.0317	0.0312	0.0458	0	--	--	--	--	--	--
	1,2-Dichloroethane	$\mu g/m^2,min^{-1}$	16	0%	16	0.0104	0.0105	0.0108	0.0111	0.0108	0.0158	0	--	--	--	--	--	--
	1,2-Dichloropropane	$\mu g/m^2,min^{-1}$	16	0%	16	0.0119	0.0119	0.0123	0.0125	0.0123	0.0181	0	--	--	--	--	--	--
	1,3,5-Trimethylbenzene	$\mu g/m^2,min^{-1}$	16	0%	16	0.0258	0.0263	0.0265	0.0274	0.0269	0.0396	0	--	--	--	--	--	--
	1,3-Dichlorobenzene	$\mu g/m^2,min^{-1}$	16	0%	16	0.0304	0.0309	0.0315	0.0323	0.0318	0.0465	0	--	--	--	--	--	--
	1,3-Dichloropropane	$\mu g/m^2,min^{-1}$	16	0%	16	0.00962	0.00962	0.01	0.0101	0.01	0.0146	0	--	--	--	--	--	--
	1,4-Dichlorobenzene	$\mu g/m^2,min^{-1}$	16	0%	16	0.0304	0.0309	0.0315	0.0323	0.0318	0.0465	0	--	--	--	--	--	--
	1,4-Dioxane	$\mu g/m^2,min^{-1}$	16	6.3%	15	0.00769	0.00808	0.00808	0.00836	0.00808	0.0119	1	0.0177	--	0.0177	0.0177	--	0.0177
	2,2-Dichloropropane	$\mu g/m^2,min^{-1}$	16	0%	16	0.0104	0.0108	0.0108	0.0112	0.0108	0.0162	0	--	--	--	--	--	--
	2-Hexanone	$\mu g/m^2,min^{-1}$	16	18.8%	13	0.00885	0.00923	0.00923	0.00958	0.00923	0.0138	3	0.01	0.01	0.0131	0.0173	0.0288	0.0288
	2-Methyl-1-propanol	$\mu g/m^2,min^{-1}$	16	6.3%	15	0.0185	0.0188	0.0192	0.0197	0.0192	0.0285	1	0.0488	--	0.0488	0.0488	--	0.0488
	4-Methyl-2-pentanone (MIBK)	$\mu g/m^2,min^{-1}$	16	6.3%	15	0.00923	0.00962	0.00962	0.00995	0.00962	0.0142	1	0.0131	--	0.0131	0.0131	--	0.0131
	Acetone	$\mu g/m^2,min^{-1}$	16	50.0%	8	0.00538	0.00538	0.00693	0.0236	0.0418	0.0858	8	0.0273	0.0515	0.117	0.126	0.2	0.247
	Acetonitrile	$\mu g/m^2,min^{-1}$	16	18.8%	13	0.01	0.0104	0.0104	0.0112	0.0108	0.0158	3	0.015	0.015	0.0419	0.0382	0.0577	0.0577
	Benzene	$\mu g/m^2,min^{-1}$	16	0%	16	0.00846	0.00972	0.0375	0.0429	0.065	0.13	0	--	--	--	--	--	--
	Benzyl chloride	$\mu g/m^2,min^{-1}$	16	0%	16	0.0231	0.0236	0.0238	0.0246	0.0242	0.0354	0	--	--	--	--	--	--
	Bromodichloromethane	$\mu g/m^2,min^{-1}$	16	0%	16	0.0135	0.0135	0.0138	0.0141	0.0138	0.0204	0	--	--	--	--	--	--
	Bromoform	$\mu g/m^2,min^{-1}$	16	0%	16	0.0238	0.0243	0.0246	0.0254	0.025	0.0365	0	--	--	--	--	--	--
	Bromomethane	$\mu g/m^2,min^{-1}$	16	0%	16	0.01	0.0101	0.0104	0.0107	0.0104	0.0154	0	--	--	--	--	--	--
	Carbon disulfide	$\mu g/m^2,min^{-1}$	16	43.8%	9	0.00692	0.00692	0.00692	0.00705	0.00731	0.00731	7	0.00846	0.0123	0.0269	0.0228	0.0319	0.0385
	Carbon tetrachloride	$\mu g/m^2,min^{-1}$	16	6.3%	15	0.0158	0.0162	0.0165	0.0169	0.0165	0.0242	1	0.0188	--	0.0188	0.0188	--	0.0188
	Chlorobenzene	$\mu g/m^2,min^{-1}$	16	0%	16	0.0115	0.0119	0.0119	0.0123	0.0123	0.0177	0	--	--	--	--	--	--
	Chlorobromomethane	$\mu g/m^2,min^{-1}$	16	0%	16	0.0112	0.0115	0.0115	0.0119	0.0119	0.0173	0	--	--	--	--	--	--
	Chloroethane	$\mu g/m^2,min^{-1}$	16	18.8%	13	0.00692	0.00692	0.00692	0.00725	0.00712	0.0104	3	0.0338	0.0338	0.112	0.0926	0.132	0.132
	Chloroform	$\mu g/m^2,min^{-1}$	16	12.5%	14	0.0123	0.0127	0.0127	0.0128	0.0128	0.0131	2	0.0177	--	0.0189	0.0189	--	0.02
	Chloromethane	$\mu g/m^2,min^{-1}$	16	6.3%	15	0.00538	0.00538	0.00538	0.00559	0.00538	0.00808	1	0.0169	--	0.0169	0.0169	--	0.0169

TABLE 6
SOIL VAPOR FLUX SAMPLE RESULTS SUMMARY
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 2 of 3)

Parameter of Interest	Compound List	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data							Detected Data[(1)]						
					Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max
Volatile Organic Compounds (Full Scan)	cis-1,2-Dichloroethene	$\mu g/m^2,min^{-1}$	16	0%	16	0.01	0.0104	0.0104	0.0108	0.0107	0.0154	0	--	--	--	--	--	--
	cis-1,3-Dichloropropene	$\mu g/m^2,min^{-1}$	16	0%	16	0.0119	0.0123	0.0123	0.0127	0.0126	0.0185	0	--	--	--	--	--	--
	Cymene (Isopropyltoluene)	$\mu g/m^2,min^{-1}$	16	0%	16	0.0246	0.0251	0.0258	0.0264	0.0261	0.0381	0	--	--	--	--	--	--
	Dibromochloromethane	$\mu g/m^2,min^{-1}$	16	0%	16	0.0188	0.0192	0.0192	0.0199	0.0196	0.0288	0	--	--	--	--	--	--
	Dibromochloropropane	$\mu g/m^2,min^{-1}$	16	0%	16	0.115	0.117	0.119	0.122	0.121	0.176	0	--	--	--	--	--	--
	Dibromomethane	$\mu g/m^2,min^{-1}$	16	0%	16	0.0154	0.0158	0.0162	0.0165	0.0162	0.0238	0	--	--	--	--	--	--
	Dichloromethane (Methylene chloride)	$\mu g/m^2,min^{-1}$	16	12.5%	14	0.00885	0.00923	0.00923	0.00959	0.00933	0.0138	2	0.0162	--	0.128	0.128	--	0.239
	Ethanol	$\mu g/m^2,min^{-1}$	16	18.8%	13	0.0115	0.0115	0.0115	0.0121	0.0119	0.0173	3	0.0304	0.0304	0.0646	0.0883	0.17	0.17
	Ethylbenzene	$\mu g/m^2,min^{-1}$	16	25.0%	12	0.0112	0.0115	0.0115	0.0121	0.0119	0.0173	4	0.0154	0.016	0.0187	0.0199	0.0251	0.0269
	Freon-11 (Trichlorofluoromethane)	$\mu g/m^2,min^{-1}$	16	18.8%	13	0.0146	0.0146	0.015	0.0155	0.0152	0.0223	3	0.0196	0.0196	0.0265	0.0255	0.0304	0.0304
	Freon-113 (1,1,2-Trifluoro-1,2,2-trichloroe	$\mu g/m^2,min^{-1}$	16	0%	16	0.0192	0.0197	0.02	0.0206	0.0203	0.0296	0	--	--	--	--	--	--
	Freon-12 (Dichlorodifluoromethane)	$\mu g/m^2,min^{-1}$	16	18.8%	13	0.0131	0.0131	0.0131	0.0138	0.0135	0.0196	3	0.04	0.04	0.0473	0.0494	0.0608	0.0608
	Heptane	$\mu g/m^2,min^{-1}$	16	12.5%	14	0.00846	0.00885	0.00885	0.00918	0.00895	0.0131	2	0.0119	--	0.0141	0.0141	--	0.0162
	Hexachlorobutadiene	$\mu g/m^2,min^{-1}$	16	0%	16	0.0546	0.0555	0.0562	0.0579	0.0571	0.0835	0	--	--	--	--	--	--
	Isopropylbenzene	$\mu g/m^2,min^{-1}$	16	18.8%	13	0.0115	0.0119	0.0119	0.0125	0.0123	0.0177	3	0.0473	0.0473	0.0515	0.0532	0.0608	0.0608
	m & p-Xylenes	$\mu g/m^2,min^{-1}$	16	37.5%	10	0.0223	0.0227	0.0231	0.026	0.0261	0.0427	6	0.0246	0.0246	0.0466	0.0505	0.0755	0.0896
	Methyl ethyl ketone (2-Butanone)	$\mu g/m^2,min^{-1}$	16	43.8%	9	0.00654	0.00654	0.00654	0.00838	0.00827	0.0196	7	0.00923	0.0112	0.0196	0.0374	0.085	0.101
	Methyl iodide	$\mu g/m^2,min^{-1}$	16	0%	16	0.0296	0.0301	0.0304	0.0314	0.0311	0.0454	0	--	--	--	--	--	--
	MTBE (Methyl tert-butyl ether)	$\mu g/m^2,min^{-1}$	16	0%	16	0.00692	0.00702	0.00731	0.00743	0.00731	0.0108	0	--	--	--	--	--	--
	n-Butylbenzene	$\mu g/m^2,min^{-1}$	16	0%	16	0.025	0.0255	0.0258	0.0266	0.0262	0.0385	0	--	--	--	--	--	--
	n-Propylbenzene	$\mu g/m^2,min^{-1}$	16	18.8%	13	0.0104	0.0104	0.0108	0.0111	0.0108	0.0158	3	0.0115	0.0115	0.0131	0.0135	0.0158	0.0158
	o-Xylene	$\mu g/m^2,min^{-1}$	16	18.8%	13	0.0112	0.0112	0.0115	0.014	0.0144	0.0288	3	0.0146	0.0146	0.0281	0.0285	0.0427	0.0427
	sec-Butylbenzene	$\mu g/m^2,min^{-1}$	16	6.3%	15	0.0246	0.025	0.0258	0.0264	0.0262	0.0381	1	0.0265	--	0.0265	0.0265	--	0.0265
	Styrene	$\mu g/m^2,min^{-1}$	16	0%	16	0.0108	0.0112	0.0112	0.0116	0.0114	0.0165	0	--	--	--	--	--	--
	tert-Butylbenzene	$\mu g/m^2,min^{-1}$	16	0%	16	0.0246	0.025	0.0254	0.0261	0.0257	0.0377	0	--	--	--	--	--	--
	Tetrachloroethene	$\mu g/m^2,min^{-1}$	16	6.3%	15	0.0173	0.0173	0.0177	0.0183	0.0181	0.0262	1	0.02	--	0.02	0.02	--	0.02
	Toluene	$\mu g/m^2,min^{-1}$	16	37.5%	10	0.00962	0.00991	0.01	0.0119	0.0148	0.02	6	0.0312	0.0387	0.0543	0.0627	0.0859	0.121
	Total Xylenes	$\mu g/m^2,min^{-1}$	16	43.8%	9	0.0167	0.0169	0.0173	0.0197	0.0215	0.0325	7	0.0262	0.0304	0.0337	0.0616	0.0989	0.132
	trans-1,2-Dichloroethene	$\mu g/m^2,min^{-1}$	16	0%	16	0.00846	0.00885	0.00885	0.00914	0.00885	0.0131	0	--	--	--	--	--	--
	trans-1,3-Dichloropropene	$\mu g/m^2,min^{-1}$	16	0%	16	0.0115	0.0119	0.0119	0.0124	0.0123	0.0181	0	--	--	--	--	--	--
	Trichloroethene	$\mu g/m^2,min^{-1}$	16	6.3%	15	0.0138	0.0142	0.0142	0.0206	0.0146	0.0627	1	0.114	--	0.114	0.114	--	0.114
	Vinyl acetate	$\mu g/m^2,min^{-1}$	16	0%	16	0.00769	0.00769	0.00769	0.00798	0.00769	0.0115	0	--	--	--	--	--	--
	Vinyl chloride	$\mu g/m^2,min^{-1}$	16	0%	16	0.00654	0.00664	0.00692	0.00702	0.00692	0.01	0	--	--	--	--	--	--

TABLE 6
SOIL VAPOR FLUX SAMPLE RESULTS SUMMARY
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 3 of 3)

Parameter of Interest	Compound List	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data							Detected Data[(1)]						
					Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max
Volatile Organic Compounds (SIM)	1,1,2,2-Tetrachloroethane	$\mu g/m^2,min^{-1}$	16	0%	16	0.00173	0.00177	0.00181	0.00198	0.00184	0.00465	0	--	--	--	--	--	--
	1,1,2-Trichloroethane	$\mu g/m^2,min^{-1}$	16	0%	16	0.00138	0.00139	0.00142	0.00161	0.00146	0.00442	0	--	--	--	--	--	--
	1,2,3-Trichloropropane	$\mu g/m^2,min^{-1}$	16	0%	16	0.00119	0.00123	0.00123	0.00124	0.00126	0.00127	0	--	--	--	--	--	--
	1,2-Dibromoethane	$\mu g/m^2,min^{-1}$	16	6.3%	15	0.002	0.00204	0.00204	0.0027	0.00212	0.00969	1	0.00885	--	0.00885	0.00885	--	0.00885
	1,2-Dichlorobenzene	$\mu g/m^2,min^{-1}$	16	12.5%	14	0.0015	0.00153	0.00154	0.00169	0.00162	0.00273	2	0.00165	--	0.00242	0.00242	--	0.00319
	1,2-Dichloroethane	$\mu g/m^2,min^{-1}$	16	6.3%	15	0.00104	0.00108	0.00108	0.00109	0.00108	0.00112	1	0.00196	--	0.00196	0.00196	--	0.00196
	1,2-Dichloropropane	$\mu g/m^2,min^{-1}$	16	6.3%	15	0.00119	0.00123	0.00123	0.00124	0.00127	0.00127	1	0.00135	--	0.00135	0.00135	--	0.00135
	1,3-Dichlorobenzene	$\mu g/m^2,min^{-1}$	16	6.3%	15	0.00154	0.00158	0.00158	0.00178	0.00162	0.00331	1	0.00208	--	0.00208	0.00208	--	0.00208
	1,4-Dichlorobenzene	$\mu g/m^2,min^{-1}$	16	6.3%	15	0.00154	0.00158	0.00158	0.00179	0.00162	0.00319	1	0.00235	--	0.00235	0.00235	--	0.00235
	Benzene	$\mu g/m^2,min^{-1}$	16	93.8%	1	0.00085	--	0.00085	0.00085	--	0.00085	15	0.00331	0.00412	0.00612	0.00742	0.0105	0.0162
	Benzyl chloride	$\mu g/m^2,min^{-1}$	16	0%	16	0.00096	0.001	0.001	0.00101	0.00103	0.00104	0	--	--	--	--	--	--
	Bromodichloromethane	$\mu g/m^2,min^{-1}$	16	0%	16	0.00112	0.00115	0.00115	0.00117	0.00119	0.00123	0	--	--	--	--	--	--
	Carbon tetrachloride	$\mu g/m^2,min^{-1}$	16	100%	0	--	--	--	--	--	--	16	0.00269	0.00531	0.00716	0.0074	0.00904	0.0167
	Chloroform	$\mu g/m^2,min^{-1}$	16	100%	0	--	--	--	--	--	--	16	0.00412	0.00807	0.0187	0.0178	0.0281	0.0333
	Dibromochloromethane	$\mu g/m^2,min^{-1}$	16	0%	16	0.00158	0.00159	0.00162	0.00162	0.00164	0.00169	0	--	--	--	--	--	--
	Dibromochloropropane	$\mu g/m^2,min^{-1}$	16	0%	16	0.00512	0.00524	0.00531	0.00532	0.00537	0.0055	0	--	--	--	--	--	--
	Dichloromethane (Methylene chloride)	$\mu g/m^2,min^{-1}$	16	6.3%	15	0.00089	0.00092	0.00092	0.00093	0.00092	0.00096	1	0.00408	--	0.00408	0.00408	--	0.00408
	Hexachlorobutadiene	$\mu g/m^2,min^{-1}$	16	0%	16	0.00277	0.00281	0.00285	0.00285	0.00287	0.00296	0	--	--	--	--	--	--
	Naphthalene	$\mu g/m^2,min^{-1}$	16	0%	16	0.00277	0.00285	0.00288	0.00288	0.00291	0.003	0	--	--	--	--	--	--
	Tetrachloroethene	$\mu g/m^2,min^{-1}$	16	87.5%	2	0.00177	--	0.0037	0.0037	--	0.00562	14	0.00254	0.00382	0.00619	0.00794	0.0134	0.018
	Trichloroethene	$\mu g/m^2,min^{-1}$	16	6.3%	15	0.00138	0.00142	0.00146	0.00186	0.00242	0.00346	1	0.00281	--	0.00281	0.00281	--	0.00281
	Vinyl chloride	$\mu g/m^2,min^{-1}$	16	0%	16	0.00065	0.00066	0.00069	0.00068	0.00069	0.00069	0	--	--	--	--	--	--

Notes:

Values for Q1, median, mean, and Q3 are rounded to 3 significant figures.

Max = Maximum

Min = Minimum

Q1 = 1st quartile (25th percentile)

Q3 = 3rd quartile (75th percentile)

(1) Range of detections include estimated values of detect results ("J" flagged values).

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

TABLE 7
BACKGROUND COMPARISON SUMMARY
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 1 of 6)

	Galleria North - School Site															
			Censored (Non-Detect) Data							Detected Data[1]						
Chemical	Total Count	Detect Freq.	Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max
Aluminum	55	100%	0	--	--	--	--	--	--	55	6210	9620	10600	10500	11400	14700
Antimony	55	0%	55	0.225	0.315	0.315	0.462	0.315	2.7	0	--	--	--	--	--	--
Arsenic	55	96%	2	5	--	5.05	5.05	--	5.1	53	2.6	3.85	4.7	4.9	5.6	8.8
Barium	55	100%	0	--	--	--	--	--	--	55	142	282	338	340	383	613
Beryllium	55	100%	0	--	--	--	--	--	--	55	0.4	0.57	0.63	0.645	0.68	1.1
Boron	55	13%	48	16.5	16.5	16.5	20.3	16.5	53	7	17.2	18.3	20.7	26.3	38.9	47.1
Cadmium	55	73%	15	0.1	0.1	0.1	0.155	0.26	0.27	40	0.092	0.12	0.14	0.167	0.18	0.44
Calcium	55	100%	0	--	--	--	--	--	--	55	15400	24300	29500	31400	34700	103000
Chromium	55	100%	0	--	--	--	--	--	--	55	7.3	14.2	16.1	17.3	18.7	62.8
Chromium (VI)	55	62%	21	0.1	0.1	0.1	0.105	0.11	0.11	34	0.11	0.15	0.19	0.264	0.3	1.8
Cobalt	55	100%	0	--	--	--	--	--	--	55	5.2	8.7	9.6	9.64	10.5	12.8
Copper	55	100%	0	--	--	--	--	--	--	55	13.3	18.2	19.9	20	22	32.5
Iron	55	100%	0	--	--	--	--	--	--	55	10200	17000	18500	18600	20500	27300
Lead	55	100%	0	--	--	--	--	--	--	55	7	12	15.7	22.6	21	272
Lithium	55	100%	0	--	--	--	--	--	--	55	11.8	13.6	14.9	15.3	16.3	20.9
Magnesium	55	100%	0	--	--	--	--	--	--	55	7670	10500	11100	11400	11800	28500
Manganese	55	100%	0	--	--	--	--	--	--	55	295	475	543	539	607	808
Mercury	55	31%	38	0.005	0.005	0.0347	0.0235	0.0354	0.0373	17	0.0056	0.0368	0.0484	0.0554	0.0678	0.122
Molybdenum	55	84%	9	0.47	2.5	2.6	2.35	2.6	2.7	46	0.58	0.755	0.93	1.02	1.1	3.2
Nickel	55	100%	0	--	--	--	--	--	--	55	13	15.7	17	17.3	19	28.2
Potassium	55	100%	0	--	--	--	--	--	--	55	1380	1850	2300	2330	2710	3710
Selenium	55	2%	54	0.4	0.4	0.4	0.724	0.4	2.7	1	0.47	--	0.47	0.47	--	0.47
Silver	55	69%	17	0.04	0.11	0.11	0.0977	0.11	0.11	38	0.083	0.12	0.125	0.133	0.14	0.28

TABLE 7
BACKGROUND COMPARISON SUMMARY
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 2 of 6)

Chemical	Galleria North - School Site															
			Censored (Non-Detect) Data							Detected Data[1]						
	Total Count	Detect Freq.	Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max
Sodium	55	100%	0	--	--	--	--	--	--	55	247	527	801	937	1190	4420
Strontium	55	100%	0	--	--	--	--	--	--	55	189	273	306	331	399	623
Thallium	55	0%	55	0.105	0.75	0.75	0.679	0.75	1	0	--	--	--	--	--	--
Tin	55	15%	47	0.75	0.75	0.75	0.804	0.75	1.1	8	1	1.05	1.45	2.95	3.88	10.4
Titanium	55	100%	0	--	--	--	--	--	--	55	435	676	800	812	926	1350
Tungsten	55	5%	52	0.185	1.25	1.25	1.23	1.25	2.6	3	1.4	1.4	2.9	2.5	3.2	3.2
Uranium	55	100%	0	--	--	--	--	--	--	55	0.59	0.87	1.1	1.15	1.3	2.5
Vanadium	55	100%	0	--	--	--	--	--	--	55	28.2	50.3	55.5	56.3	62.7	82.7
Zinc	55	100%	0	--	--	--	--	--	--	55	33.6	45	51.8	56.1	59.2	155
Radium-226	52	98%	1	1	--	1	1	--	1	51	0.497	0.997	1.2	1.24	1.45	2.51
Radium-228	52	92%	4	0.405	0.431	0.529	0.574	0.762	0.832	48	0.628	1.04	1.32	1.37	1.58	2.41
Thorium-228	52	98%	1	0.421	--	0.421	0.421	--	0.421	51	0.608	1.22	1.47	1.47	1.75	2.31
Thorium-230	52	92%	4	0.537	0.653	1	0.884	1	1	48	0.605	0.921	1.05	1.12	1.24	2.11
Thorium-232	52	100%	0	--	--	--	--	--	--	52	0.509	1.08	1.36	1.36	1.61	2.32
Uranium-233/234	52	75%	13	0.13	1	1	0.893	1	1	39	0.429	0.809	0.992	1.05	1.23	1.79
Uranium-235/236	52	10%	47	-0.0987	0.0358	0.0596	0.0869	0.116	1	5	0.129	0.148	0.229	0.222	0.292	0.31
Uranium-238	52	75%	13	-0.0422	0.95	1	0.895	1	1	39	0.376	0.774	1	0.975	1.2	1.58

Note: Background comparison statistics were performed using one-half the detection limit for metals and using GiSdT® (Neptune and Company 2009).
Max = Maximum
Min = Minimum
Q1 = 1st quartile (25th percentile)
Q3 = 3rd quartile (75th percentile)
(1) 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.
BOLD with Highlight indicates Site concentrations are greater than background.
WRS = Wilcoxon Rank Sum Test with the Gehan Modification

TABLE 7
BACKGROUND COMPARISON SUMMARY
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 3 of 6)

	Background															
			Censored (Non-Detect) Data							Detected Data[1]						
Chemical	Total Count	Detect Freq.	Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max
Aluminum	95	100%	0	--	--	--	--	--	--	95	3740	6730	8400	9000	11200	15300
Antimony	95	45%	52	0.3298	0.33	0.33	0.33	0.33	0.3298	43	0.12	0.15	0.22	0.241	0.29	0.5
Arsenic	95	100%	0	--	--	--	--	--	--	95	2.5	3.4	4	4.21	5	7.2
Barium	95	100%	0	--	--	--	--	--	--	95	73	139	171	177	215	445
Beryllium	95	100%	0	--	--	--	--	--	--	95	0.16	0.46	0.57	0.59	0.73	0.89
Boron	95	36%	61	3.2	3.2	5.1	4.46	5.2	5.4	34	5.2	5.8	6.8	7.11	8.3	11.6
Cadmium	95	0%	95	0.1291	0.129	0.129	0.129	0.129	0.1291	0	--	--	--	--	--	--
Calcium	95	100%	0	--	--	--	--	--	--	95	9440	18400	24500	29000	37300	82800
Chromium	95	100%	0	--	--	--	--	--	--	95	2.6	6.8	9	9.08	11.3	16.7
Chromium (VI)	95	0%	95	0.25	0.25	0.26	0.258	0.26	0.32	0	--	--	--	--	--	--
Cobalt	95	100%	0	--	--	--	--	--	--	95	3.7	7.3	9	8.78	10.1	16.3
Copper	95	100%	0	--	--	--	--	--	--	95	10.2	15.2	18.2	17.8	20.3	25.9
Iron	95	100%	0	--	--	--	--	--	--	95	5410	10500	13200	13100	15700	19700
Lead	95	100%	0	--	--	--	--	--	--	95	3	6	7.2	8.22	9.3	35.1
Lithium	95	100%	0	--	--	--	--	--	--	95	7.5	10.8	12.9	14	17.1	26.5
Magnesium	95	100%	0	--	--	--	--	--	--	95	4690	8470	10300	10300	12500	17500
Manganese	95	100%	0	--	--	--	--	--	--	95	151	323	407	415	495	863
Mercury	95	77%	22	0.0072	0.0072	0.0072	0.0072	0.0072	0.0072	73	0.0084	0.012	0.018	0.0225	0.0275	0.11
Molybdenum	95	100%	0	--	--	--	--	--	--	95	0.3	0.41	0.49	0.547	0.61	2
Nickel	95	100%	0	--	--	--	--	--	--	95	7.9	13.7	16.4	16.2	18.8	30
Potassium	95	100%	0	--	--	--	--	--	--	95	625	1180	1580	1750	2230	3890
Selenium	95	35%	62	0.1579	0.158	0.158	0.158	0.158	0.1579	33	0.23	0.28	0.31	0.328	0.36	0.6
Silver	95	0%	95	0.2609	0.261	0.261	0.261	0.261	0.2609	0	--	--	--	--	--	--

TABLE 7
BACKGROUND COMPARISON SUMMARY
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 4 of 6)

	Background															
			Censored (Non-Detect) Data							Detected Data[1]						
Chemical	Total Count	Detect Freq.	Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max
Sodium	95	100%	0	--	--	--	--	--	--	95	128	214	487	498	693	1320
Strontium	95	100%	0	--	--	--	--	--	--	95	75.5	143	192	232	267	808
Thallium	95	22%	74	0.5428	0.543	1	0.896	1	1.3	21	1.1	1.2	1.4	1.41	1.65	1.8
Tin	95	100%	0	--	--	--	--	--	--	95	0.24	0.41	0.51	0.499	0.57	0.8
Titanium	95	100%	0	--	--	--	--	--	--	95	262	461	539	561	659	1010
Tungsten	95	0%	95	2.5	2.5	2.6	2.58	2.6	3.2	0	--	--	--	--	--	--
Uranium	94	100%	0	--	--	--	--	--	--	94	0.62	0.84	0.97	1.03	1.1	2.7
Vanadium	95	100%	0	--	--	--	--	--	--	95	20.2	33.5	38.4	39.1	45.1	59.1
Zinc	95	100%	0	--	--	--	--	--	--	95	15.4	30.4	37.9	37.8	43.1	121
Radium-226	95	96%	4	0.939	0.949	0.978	0.973	0.994	0.999	91	0.494	0.952	1.12	1.16	1.28	2.36
Radium-228	81	80%	16	0.946	1.38	1.57	1.58	1.85	2	65	1.15	1.72	2.02	1.97	2.2	2.92
Thorium-228	95	100%	0	--	--	--	--	--	--	95	1.15	1.5	1.79	1.74	1.93	2.28
Thorium-230	95	100%	0	--	--	--	--	--	--	95	0.73	1.04	1.22	1.31	1.5	3.01
Thorium-232	95	100%	0	--	--	--	--	--	--	95	1.22	1.43	1.69	1.66	1.89	2.23
Uranium-233/234	95	47%	50	0.63	0.83	0.945	0.935	1.03	1.17	45	0.7	1.16	1.25	1.5	1.87	2.84
Uranium-235/236	95	44%	53	0	0.03	0.048	0.0482	0.0665	0.11	42	0.037	0.0573	0.088	0.0915	0.12	0.21
Uranium-238	95	100%	0	--	--	--	--	--	--	95	0.65	0.94	1.06	1.18	1.36	2.37

Note: Background comparison statistics were performed using one-half the detection limit for metals and using GiSdT® (Neptune and Company 2009).
Max = Maximum
Min = Minimum
Q1 = 1st quartile (25th percentile)
Q3 = 3rd quartile (75th percentile)
(1) 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.
BOLD with Highlight indicates Site concentrations are greater than background.
WRS = Wilcoxon Rank Sum Test with the Gehan Modification

TABLE 7
BACKGROUND COMPARISON SUMMARY
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 5 of 6)

Chemical	T Test *p*	Quantile Test *p*	Slippage Test *p*	WRS Test *p*	Greater than Background?	Units	Basis
Aluminum	6.6 E-6	8.7 E-1	1.0 E+0	1.7 E-4	YES	mg/kg	T-test and WRS
Antimony	2.0 E-1	1.0 E+0	1.0 E+0	9.7 E-1	NO	mg/kg	ND at Site
Arsenic	4.0 E-3	4.7 E-2	1.7 E-2	6.1 E-4	YES	mg/kg	Multiple tests
Barium	2.2 E-20	7.9 E-6	2.0 E-3	0.0 E+0	YES	mg/kg	Multiple tests
Beryllium	1.1 E-2	9.6 E-1	4.8 E-2	2.7 E-2	YES	mg/kg	Site min, max, mean, and median > background
Boron	1.2 E-9	2.1 E-1	5.4 E-11	0.0 E+0	YES	mg/kg	Multiple tests
Cadmium	1.2 E-10	2.4 E-7	NA	2.6 E-3	YES	mg/kg	ND in background
Calcium	1.5 E-1	9.6 E-1	3.7 E-1	1.2 E-2	YES	mg/kg	Site min, max, mean, and median > background
Chromium	4.1 E-11	7.3 E-8	2.5 E-12	0.0 E+0	YES	mg/kg	Multiple tests
Chromium (VI)	5.4 E-2	2.4 E-7	NA	1.0 E+0	YES	mg/kg	ND in background
Cobalt	2.5 E-3	7.1 E-1	1.0 E+0	3.6 E-3	YES	mg/kg	T-test and WRS
Copper	1.3 E-4	2.1 E-1	4.8 E-2	4.1 E-4	YES	mg/kg	Site min, max, mean, and median > background
Iron	9.5 E-18	7.3 E-8	5.1 E-10	6.7 E-16	YES	mg/kg	Multiple tests
Lead	2.1 E-3	4.3 E-5	5.9 E-3	0.0 E+0	YES	mg/kg	Multiple tests
Lithium	1.2 E-2	9.6 E-1	1.0 E+0	5.2 E-4	YES	mg/kg	Site min, mean, and median > background
Magnesium	1.1 E-2	9.9 E-1	3.7 E-1	3.4 E-2	YES	mg/kg	Site min, max, mean, and median > background
Manganese	1.0 E-9	4.7 E-2	1.0 E+0	2.4 E-9	YES	mg/kg	Site min, mean, and median > background
Mercury	3.5 E-2	1.3 E-2	3.7 E-1	2.4 E-4	YES	mg/kg	Site max, mean, and median > background
Molybdenum	6.2 E-12	8.3 E-4	3.3 E-1	0.0 E+0	YES	mg/kg	Multiple tests
Nickel	2.3 E-2	8.7 E-1	1.0 E+0	3.7 E-2	YES	mg/kg	Site min, mean, and median > background
Potassium	8.8 E-8	4.9 E-1	1.0 E+0	7.2 E-8	YES	mg/kg	Site min, mean, and median > background
Selenium	2.6 E-4	1.0 E+0	1.0 E+0	0.0 E+0	NO	mg/kg	Site frequency of detection < 5%
Silver	1.0 E+0	3.7 E-1	NA	1.0 E+0	NO	mg/kg	ND in background

TABLE 7
BACKGROUND COMPARISON SUMMARY
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Chemical	T Test *p*	Quantile Test *p*	Slippage Test *p*	WRS Test *p*	Greater than Background?	Units	Basis
Sodium	5.6 E-6	7.9 E-6	2.3 E-4	4.4 E-8	YES	mg/kg	Multiple tests
Strontium	3.7 E-7	1.3 E-1	1.0 E+0	3.2 E-9	YES	mg/kg	Site min, mean, and median > background
Thallium	1.0 E+0	1.0 E+0	1.0 E+0	1.0 E+0	NO	mg/kg	ND in site
Tin	8.7 E-2	8.6 E-2	8.2 E-5	0.0 E+0	YES	mg/kg	Low detection frequency; Site max > 10 times background max
Titanium	3.8 E-13	4.3 E-5	7.7 E-5	3.9 E-13	YES	mg/kg	Multiple tests
Tungsten	1.0 E+0	1.4 E-1	NA	1.0 E+0	NO	mg/kg	Multiple tests
Uranium	2.1 E-2	5.4 E-2	1.0 E+0	9.8 E-3	YES	mg/kg	Site mean, median > background
Vanadium	7.7 E-20	7.3 E-8	3.7 E-11	0.0 E+0	YES	mg/kg	Multiple tests
Zinc	1.4 E-7	4.2 E-4	1.3 E-1	6.7 E-14	YES	mg/kg	Multiple tests
Radium-226	9.1 E-2	2.4 E-1	3.5 E-1	1.1 E-1	NO	mg/kg	Multiple tests
Radium-228	1.0 E+0	1.0 E+0	1.0 E+0	1.0 E+0	NO	mg/kg	Multiple tests
Thorium-228	1.0 E+0	8.5 E-1	3.5 E-1	1.0 E+0	NO	mg/kg	Multiple tests
Thorium-230	1.0 E+0	9.5 E-1	1.0 E+0	1.0 E+0	NO	mg/kg	Multiple tests
Thorium-232	1.0 E+0	9.9 E-1	3.5 E-1	1.0 E+0	NO	mg/kg	Multiple tests
Uranium-233/234	7.5 E-1	9.9 E-1	1.0 E+0	9.8 E-1	NO	mg/kg	Multiple tests
Uranium-235/236	3.1 E-1	6.0 E-1	3.9 E-2	1.2 E-1	NO	mg/kg	Multiple tests
Uranium-238	1.0 E+0	1.0 E+0	1.0 E+0	1.0 E+0	NO	mg/kg	Multiple tests

Note: Background comparison statistics were performed using one-half the detection limit for metals and using GiSdT® (Neptune and Company 2009).
Max = Maximum
Min = Minimum
Q1 = 1st quartile (25th percentile)
Q3 = 3rd quartile (75th percentile)
(1) 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.
BOLD with Highlight indicates Site concentrations are greater than background.
WRS = Wilcoxon Rank Sum Test with the Gehan Modification

TABLE 8
PAIRED COMPARISONS BETWEEN SURFACE AND DEEP SOILS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

	Paired Comparison Data								
	Descriptive Statistics						WSR Test		
Constituent	N	#ND	%ND	#surf > deep	#surf = deep	#surf < deep	Z	Signif?	**COPC?**
Aluminum	24	0	0%	12	1	11	-0.2	ns	No
Arsenic	24	0	0%	8	0	16	-1.6	ns	No
Barium	24	0	0%	10	0	14	-0.4	ns	No
Beryllium	24	0	0%	15	0	9	-0.6	ns	No
Boron	24	23	96%	9	15	0	1.4	ns	No
Cadmium	24	10	42%	20	2	2	4.3	*	Yes[1]
Calcium	24	0	0%	12	0	12	-0.2	ns	No
Chromium	24	0	0%	14	0	10	-1.8	ns	No
Chromium (VI)	24	13	54%	6	8	10	3.2	*	No[1]
Cobalt	24	0	0%	12	2	10	-0.6	ns	No
Copper	24	0	0%	15	0	9	-1.6	ns	No
Iron	24	0	0%	14	0	10	-0.8	ns	No
Lead	24	0	0%	18	0	6	-3.3	***	Yes
Lithium	24	0	0%	7	1	16	-2.1	*	No
Magnesium	24	0	0%	17	0	7	-2.6	*	Yes
Manganese	24	0	0%	16	0	8	-1.6	ns	No
Mercury	24	21	88%	18	2	4	3.2	*	Yes[1]
Molybdenum	24	5	21%	9	1	14	-0.5	ns	No
Nickel	24	0	0%	19	0	5	-2.1	*	Yes
Potassium	24	0	0%	19	0	5	-3.3	***	Yes
Sodium	24	0	0%	9	0	15	-0.8	ns	No
Strontium	24	0	0%	4	0	20	-2.9	**	No
Tin	24	24	100%	12	11	1	-0.3	ns	No
Titanium	24	0	0%	15	0	9	-1.9	ns	No
Uranium	24	0	0%	2	2	20	-3.8	***	No
Vanadium	24	0	0%	13	0	11	-1.0	ns	No
Zinc	24	0	0%	19	0	5	-3.4	***	Yes

Notes:
N = number of surface/deep sample pairs
#ND = number of pairs where at least one member of a pair was a non-detected value
%ND = percent of pairs where at least one member of a pair was a non-detected value
#surf > deep = number of pairs where the concentration in surface soils was greater than deeper soils
#surf = deep = number of pairs where the concentration in surface soils was equal to deeper soils (= ties)
#surf < deep = number of pairs where the concentration in surface soils was less than deeper soils
WSR = Wilcoxon Signed Rank Test
Z = Z-statistic value
p = probability

Signif? = concentrations in surface soils are significantly different than deep soils based on paired comparisons
* = $p \leq 0.05$
** = $p \leq 0.01$
*** = $p \leq 0.001$
NS = not significant

COPC = concentrations in surface soils are significantly greater than deep soils
Yes = concentration/activity in surface soil is significantly greater than in deep soil based on paired comparison
Yes[1] = given prevalence of NDs, COPC based on qualitative evaluation of # surf > deep, ties, and # surf < deep
No = concentration/activity in surface soil is equal to or significantly less than in deep soil based on paired comparison
No[1] = given prevalence of NDs, not a COPC based on qualitative evaluation of # surf > deep, ties, and # surf < deep

TABLE 9
SELECTION OF CHEMICALS OF POTENTIAL CONCERN (COPC)
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 1 of 9)

Chemical	Units	Number of Detects	Total Count	Detect Freq.	Min ND	Max ND	Min Detect	Max Detect	Mean	Standard Deviation	Greater than Background?	PBT(1) or Class A Carcinogen?	COPC?	Rationale
Aldehydes														
Acetaldehyde	mg/kg	1	53	2%	0.306	0.503	0.338	0.338	0.17	0.029	N/A	No	No	(4)(12)
Formaldehyde	mg/kg	30	53	57%	0.208	0.385	0.205	0.887	0.26	0.18	N/A	No	Yes	(5)
Asbestos														
Asbestos	Structures	1	1	4%	N/A	N/A	1	1	N/A	N/A	N/A	Yes	Yes	(1)
Dioxins / Furans														
1,2,3,4,6,7,8-Heptachlorodibenzofuran	mg/kg	35	36	97%	0.0000051	0.0000051	0.0000036	0.0002	0.000064	0.000062	N/A	Yes	No	(1)(3)
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	mg/kg	27	36	75%	0.0000012	0.0000051	0.0000027	0.0016	0.000061	0.00026	N/A	Yes	No	(1)(3)
1,2,3,4,7,8,9-Heptachlorodibenzofuran	mg/kg	32	36	89%	0.0000012	0.0000051	0.0000026	0.000076	0.000025	0.000024	N/A	Yes	No	(1)(3)
1,2,3,4,7,8-Hexachlorodibenzofuran	mg/kg	32	36	89%	0.0000015	0.0000051	0.0000039	0.000085	0.000028	0.000027	N/A	Yes	No	(1)(3)
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	mg/kg	2	36	6%	7.5E-08	0.0000058	0.0000026	0.0000033	0.0000014	0.0000011	N/A	Yes	No	(1)(3)
1,2,3,6,7,8-Hexachlorodibenzofuran	mg/kg	31	36	86%	8.9E-07	0.0000051	0.000003	0.000057	0.000019	0.000018	N/A	Yes	No	(1)(3)
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	mg/kg	14	36	39%	2.3E-07	0.0000053	0.0000029	0.000022	0.0000029	0.0000037	N/A	Yes	No	(1)(3)
1,2,3,7,8,9-Hexachlorodibenzofuran	mg/kg	14	36	39%	4.1E-07	0.0000053	0.0000027	0.000009	0.000003	0.0000026	N/A	Yes	No	(1)(3)
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	mg/kg	13	36	36%	2.6E-07	0.0000053	0.0000031	0.000012	0.0000025	0.0000023	N/A	Yes	No	(1)(3)
1,2,3,7,8-Pentachlorodibenzofuran	mg/kg	32	36	89%	7.6E-07	0.0000051	0.0000028	0.000051	0.000017	0.000016	N/A	Yes	No	(1)(3)
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	mg/kg	5	36	14%	0.0000001	0.0000055	0.0000033	0.0000038	0.0000016	0.0000013	N/A	Yes	No	(1)(3)
2,3,4,6,7,8-Hexachlorodibenzofuran	mg/kg	19	36	53%	0.0000005	0.0000053	0.0000027	0.000018	0.0000054	0.0000051	N/A	Yes	No	(1)(3)
2,3,4,7,8-Pentachlorodibenzofuran	mg/kg	24	36	67%	3.9E-07	0.0000053	0.0000033	0.000027	0.0000088	0.0000083	N/A	Yes	No	(1)(3)
2,3,7,8-Tetrachlorodibenzofuran	mg/kg	35	36	97%	0.0000005	0.0000005	5.4E-07	0.000066	0.000012	0.000014	N/A	Yes	No	(1)(3)
2,3,7,8-Tetrachlorodibenzo-p-dioxin	mg/kg	12	36	33%	5.1E-08	0.0000011	6.6E-07	0.0000013	4.8E-07	3.6E-07	N/A	Yes	No	(1)(3)
Octachlorodibenzodioxin	mg/kg	29	36	81%	0.0000043	0.00002	0.0000054	0.011	0.00039	0.0018	N/A	Yes	No	(1)(3)
Octachlorodibenzofuran	mg/kg	35	36	97%	0.00001	0.00001	0.00001	0.00084	0.00022	0.00024	N/A	Yes	No	(1)(3)
TCDD TEQ	ppt	36	36	100%	NA	NA	0.58	49.1	17	15	N/A	Yes	No	(1)(3)
Inorganics														
Aluminum	mg/kg	55	55	100%	NA	NA	6210	14700	11000	1500	NO	No	No	(6)
Ammonia (as N)	mg/kg	10	52	19%	0.79	5.5	0.89	8.2	0.98	1.4	N/A	No	Yes	(5)
Antimony	mg/kg	0	55	0%	0.225	2.7	NA	NA	0.23	0.27	NO	No	No	(2)(6)
Arsenic	mg/kg	53	55	96%	5	5.1	2.6	8.8	4.8	1.4	NO	Yes	No	(1)(6)
Barium	mg/kg	55	55	100%	NA	NA	142	613	340	88	NO	No	No	(6)
Beryllium	mg/kg	55	55	100%	NA	NA	0.4	1.1	0.64	0.13	NO	No	No	(6)
Boron	mg/kg	7	55	13%	16.5	53	17.2	47.1	12	8.5	NO	No	No	(6)
Bromide	mg/kg	7	53	13%	0.26	0.29	0.39	1.3	0.23	0.26	N/A	No	No	(9)
Cadmium	mg/kg	40	55	73%	0.1	0.27	0.092	0.44	0.14	0.075	YES	No	Yes	(8)
Calcium	mg/kg	55	55	100%	NA	NA	15400	103000	31000	12000	NO	No	No	(6)(9)
Chromium	mg/kg	55	55	100%	NA	NA	7.3	62.8	17	7.5	NO	No	No	(6)

TABLE 9
SELECTION OF CHEMICALS OF POTENTIAL CONCERN (COPC)
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Chemical	Units	Number of Detects	Total Count	Detect Freq.	Min ND	Max ND	Min Detect	Max Detect	Mean	Standard Deviation	Greater than Background?	PBT(1) or Class A Carcinogen?	COPC?	Rationale
Chromium (VI)	mg/kg	34	55	62%	0.1	0.11	0.11	1.8	0.18	0.25	NO	Yes	No	(1)(6)
Cobalt	mg/kg	55	55	100%	NA	NA	5.2	12.8	9.6	1.4	NO	No	No	(6)
Copper	mg/kg	55	55	100%	NA	NA	13.3	32.5	20	3.4	NO	No	No	(6)
Chlorate	mg/kg	27	53	51%	0.48	0.52	0.6	41.3	2.8	6.4	N/A	No	No	(9)
Chloride	mg/kg	53	53	100%	NA	NA	0.38	2830	320	570	N/A	No	No	(9)
Cyanide, Total	mg/kg	12	53	23%	0.083	0.57	0.099	5.8	0.41	0.78	N/A	No	Yes	(5)
Fluoride	mg/kg	41	53	77%	0.1	0.11	0.15	2.1	0.67	0.55	N/A	No	Yes	(5)
Iron	mg/kg	55	55	100%	NA	NA	10200	27300	19000	3100	NO	No	No	(6)
Lead	mg/kg	55	55	100%	NA	NA	7	272	23	36	YES	Yes	No	(11)
Lithium	mg/kg	55	55	100%	NA	NA	11.8	20.9	15	2.1	NO	No	No	(6)
Magnesium	mg/kg	55	55	100%	NA	NA	7670	28500	11000	2700	YES	No	No	(13)
Manganese	mg/kg	55	55	100%	NA	NA	295	808	540	100	NO	No	No	(6)
Mercury	mg/kg	17	55	31%	0.005	0.0373	0.0056	0.122	0.025	0.026	YES	No	Yes	(8)
Molybdenum	mg/kg	46	55	84%	0.47	2.7	0.58	3.2	1	0.42	NO	No	No	(6)
Nickel	mg/kg	55	55	100%	NA	NA	13	28.2	17	2.7	YES	No	Yes	(8)
Nitrate	mg/kg	53	53	100%	NA	NA	1.3	121	16	27	N/A	No	Yes	(5)(9)
Nitrite	mg/kg	9	53	17%	0.033	3.4	0.087	2.1	0.23	0.47	N/A	No	Yes	(5)
Orthophosphate as P	mg/kg	19	53	36%	0.51	5.7	0.74	14.4	2.8	4	N/A	No	No	(9)
Perchlorate	mg/kg	52	52	100%	NA	NA	0.0163	28.6	3.2	6.3	N/A	No	Yes	(5)
Potassium	mg/kg	55	55	100%	NA	NA	1380	3710	2300	520	YES	No	No	(9)
Selenium	mg/kg	1	55	2%	0.4	2.7	0.47	0.47	0.36	0.39	NO	No	No	(4)(6)(12)
Silver	mg/kg	38	55	69%	0.04	0.11	0.083	0.28	0.11	0.049	NO	No	No	(6)
Sodium	mg/kg	55	55	100%	NA	NA	247	4420	940	650	NO	No	No	(6)
Strontium	mg/kg	55	55	100%	NA	NA	189	623	330	97	NO	No	No	(6)
Sulfate	mg/kg	53	53	100%	NA	NA	6.8	17300	3500	4200	N/A	No	No	(9)
Sulfide	mg/kg	0	53	0%	1.8	2	NA	NA	0.94	0.026	N/A	No	No	(2)
Thallium	mg/kg	0	55	0%	0.105	1	NA	NA	0.34	0.1	NO	No	No	(2)(6)
Total Kjeldahl Nitrogen (TKN)	mg/kg	53	53	100%	NA	NA	44.4	1660	240	330	N/A	No	No	(9)
Tin	mg/kg	8	55	15%	0.75	1.1	1	10.4	0.77	1.5	NO	No	No	(6)
Titanium	mg/kg	55	55	100%	NA	NA	435	1350	810	190	NO	No	No	(6)
Tungsten	mg/kg	3	55	5%	0.185	2.6	1.4	3.2	0.72	0.52	NO	No	No	(6)
Uranium	mg/kg	55	55	100%	NA	NA	0.59	2.5	1.2	0.36	NO	No	No	(6)
Vanadium	mg/kg	55	55	100%	NA	NA	28.2	82.7	56	9.4	NO	No	No	(6)
Zinc	mg/kg	55	55	100%	NA	NA	33.6	155	56	22	YES	No	Yes	(8)

TABLE 9
SELECTION OF CHEMICALS OF POTENTIAL CONCERN (COPC)
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 3 of 9)

Chemical	Units	Number of Detects	Total Count	Detect Freq.	Min ND	Max ND	Min Detect	Max Detect	Mean	Standard Deviation	Greater than Background?	PBT(1) or Class A Carcinogen?	COPC?	Rationale
Organochlorine Pesticides														
2,4-DDD	mg/kg	0	53	0%	0.00031	0.0016	NA	NA	0.00017	0.000088	N/A	Yes	No	(2)
2,4-DDE	mg/kg	12	53	23%	0.00021	0.001	0.002	0.015	0.0012	0.0027	N/A	Yes	Yes	(1)(5)
4,4-DDD	mg/kg	1	53	2%	0.00009	0.00046	0.0044	0.0044	0.00013	0.0006	N/A	Yes	Yes	(7)
4,4-DDE	mg/kg	23	53	43%	0.0002	0.00099	0.0018	0.031	0.0035	0.0061	N/A	Yes	Yes	(1)(5)
4,4-DDT	mg/kg	21	53	40%	0.00021	0.001	0.0018	0.016	0.002	0.0035	N/A	Yes	Yes	(1)(5)
Aldrin	mg/kg	0	53	0%	0.000096	0.00049	NA	NA	0.000054	0.000027	N/A	Yes	No	(2)
alpha-BHC	mg/kg	1	53	2%	0.00028	0.0014	0.0022	0.0022	0.0002	0.00029	N/A	No	No	(4)(12)
alpha-Chlordane	mg/kg	2	53	4%	0.00021	0.0011	0.0022	0.0057	0.00026	0.00082	N/A	Yes	Yes	(7)
beta-BHC	mg/kg	19	53	36%	0.00019	0.00096	0.0022	0.019	0.0024	0.0042	N/A	No	Yes	(5)
Chlordane	mg/kg	2	53	4%	0.0024	0.012	0.02	0.043	0.0025	0.0063	N/A	Yes	Yes	(7)
delta-BHC	mg/kg	0	53	0%	0.00017	0.00086	NA	NA	0.000095	0.000047	N/A	No	No	(2)
Dieldrin	mg/kg	0	53	0%	0.000092	0.00047	NA	NA	0.000051	0.000026	N/A	Yes	No	(2)
Endosulfan I	mg/kg	0	53	0%	0.00011	0.00054	NA	NA	0.000059	0.00003	N/A	No	No	(2)
Endosulfan II	mg/kg	0	53	0%	0.000094	0.00048	NA	NA	0.000053	0.000026	N/A	No	No	(2)
Endosulfan sulfate	mg/kg	1	53	2%	0.00026	0.0013	0.019	0.019	0.0005	0.0026	N/A	No	No	(4)
Endrin	mg/kg	1	53	2%	0.000084	0.00043	0.0021	0.0021	0.000086	0.00028	N/A	No	No	(4)(12)
Endrin aldehyde	mg/kg	1	53	2%	0.00018	0.00092	0.015	0.015	0.00038	0.002	N/A	No	No	(4)
Endrin ketone	mg/kg	0	53	0%	0.00016	0.00084	NA	NA	0.000092	0.000046	N/A	No	No	(2)
gamma-Chlordane	mg/kg	3	53	6%	0.000084	0.00043	0.0022	0.007	0.00027	0.0011	N/A	Yes	Yes	(1)(5)
Heptachlor	mg/kg	0	53	0%	0.00017	0.00088	NA	NA	0.000097	0.000048	N/A	No	No	(2)
Heptachlor epoxide	mg/kg	0	53	0%	0.00013	0.00067	NA	NA	0.000075	0.000036	N/A	No	No	(2)
gamma-BHC (Lindane)	mg/kg	0	53	0%	0.00012	0.00063	NA	NA	0.00007	0.000034	N/A	No	No	(2)
Methoxychlor	mg/kg	7	53	13%	0.00032	0.0016	0.0023	0.025	0.0016	0.0046	N/A	No	Yes	(5)
Toxaphene	mg/kg	0	53	0%	0.0059	0.03	NA	NA	0.0033	0.0016	N/A	Yes	No	(2)
Radionuclides														
Radium-226	pCi/g	51	52	98%	1	1	0.497	2.51	1.2	0.42	NO	Yes	No	(1)(6)
Radium-228	pCi/g	48	52	92%	0.405	0.832	0.628	2.41	1.3	0.49	NO	Yes	No	(1)(6)
Thorium-228	pCi/g	51	52	98%	0.421	0.421	0.608	2.31	1.4	0.41	NO	Yes	No	(1)(6)
Thorium-230	pCi/g	48	52	92%	0.537	1	0.605	2.11	1.1	0.33	NO	Yes	No	(1)(6)
Thorium-232	pCi/g	52	52	100%	NA	NA	0.509	2.32	1.4	0.37	NO	Yes	No	(1)(6)
Uranium-233/234	pCi/g	39	52	75%	0.13	1	0.429	1.79	1	0.32	NO	Yes	No	(1)(6)
Uranium-235/236	pCi/g	5	52	10%	-0.0987	1	0.129	0.31	0.1	0.15	NO	Yes	No	(1)(6)
Uranium-238	pCi/g	39	52	75%	-0.0422	1	0.376	1.58	0.96	0.3	NO	Yes	No	(1)(6)

TABLE 9
SELECTION OF CHEMICALS OF POTENTIAL CONCERN (COPC)
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Chemical	Units	Number of Detects	Total Count	Detect Freq.	Min ND	Max ND	Min Detect	Max Detect	Mean	Standard Deviation	Greater than Background?	PBT(1) or Class A Carcinogen?	COPC?	Rationale
Semi-Volatile Organic Compounds														
1,2,4,5-Tetrachlorobenzene	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
1,2-Diphenylhydrazine	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
1,4-Dioxane	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
2,2'-Dichlorobenzil	mg/kg	0	51	0%	0.112	0.121	NA	NA	0.058	0.00097	N/A	No	No	(2)
2,4,5-Trichlorophenol	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
2,4,6-Trichlorophenol	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
2,4-Dichlorophenol	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
2,4-Dimethylphenol	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
2,4-Dinitrophenol	mg/kg	0	51	0%	0.129	0.139	NA	NA	0.067	0.0011	N/A	No	No	(2)
2,4-Dinitrotoluene	mg/kg	0	51	0%	0.0338	0.0366	NA	NA	0.018	0.0003	N/A	No	No	(2)
2,6-Dinitrotoluene	mg/kg	0	51	0%	0.0338	0.0366	NA	NA	0.018	0.0003	N/A	No	No	(2)
2-Chloronaphthalene	mg/kg	0	51	0%	0.0118	0.0128	NA	NA	0.0061	0.0001	N/A	No	No	(2)
2-Chlorophenol	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
2-Methylnaphthalene	mg/kg	0	51	0%	0.00677	0.00733	NA	NA	0.0035	0.000059	N/A	No	No	(2)
2-Nitroaniline	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
2-Nitrophenol	mg/kg	0	51	0%	0.0338	0.0366	NA	NA	0.018	0.0003	N/A	No	No	(2)
3,3-Dichlorobenzidine	mg/kg	0	51	0%	0.102	0.11	NA	NA	0.053	0.0009	N/A	No	No	(2)
3-Nitroaniline	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
4-Bromophenyl phenyl ether	mg/kg	0	51	0%	0.0338	0.0366	NA	NA	0.018	0.0003	N/A	No	No	(2)
4-Chloro-3-Methylphenol	mg/kg	0	51	0%	0.0338	0.0366	NA	NA	0.018	0.0003	N/A	No	No	(2)
4-Chlorophenyl phenyl ether	mg/kg	0	51	0%	0.0338	0.0366	NA	NA	0.018	0.0003	N/A	No	No	(2)
4-Chlorothioanisole	mg/kg	0	51	0%	0.112	0.121	NA	NA	0.058	0.00097	N/A	No	No	(2)
4-Nitrophenol	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
Acetophenone	mg/kg	0	51	0%	0.0338	0.0366	NA	NA	0.018	0.0003	N/A	No	No	(2)
Aniline	mg/kg	0	51	0%	0.118	0.128	NA	NA	0.061	0.001	N/A	No	No	(2)
Benzenethiol	mg/kg	0	51	0%	0.112	0.121	NA	NA	0.058	0.00097	N/A	No	No	(2)
Benzoic acid	mg/kg	1	51	2%	0.169	0.183	0.32	0.32	0.092	0.033	N/A	No	No	(4)(12)
Benzyl alcohol	mg/kg	0	51	0%	0.102	0.11	NA	NA	0.053	0.0009	N/A	No	No	(2)
Butylbenzyl phthalate	mg/kg	1	51	2%	0.0677	0.0733	126	126	2.5	18	N/A	No	No	(4)(12)
bis(2-Chloroethoxy)methane	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	Yes	No	(2)
bis(2-Chloroethyl) ether	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
bis(2-Chloroisopropyl) ether	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
bis(2-Ethylhexyl) phthalate	mg/kg	5	51	10%	0.0677	0.11	0.0747	1.04	0.065	0.15	N/A	No	Yes	(5)
bis(p-Chlorophenyl)disulfide	mg/kg	0	51	0%	0.112	0.121	NA	NA	0.058	0.00097	N/A	No	No	(2)
bis(p-Chlorophenyl) sulfone	mg/kg	0	51	0%	0.112	0.121	NA	NA	0.058	0.00097	N/A	No	No	(2)

TABLE 9
SELECTION OF CHEMICALS OF POTENTIAL CONCERN (COPC)
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Chemical	Units	Number of Detects	Total Count	Detect Freq.	Min ND	Max ND	Min Detect	Max Detect	Mean	Standard Deviation	Greater than Background?	PBT(1) or Class A Carcinogen?	COPC?	Rationale
Carbazole	mg/kg	0	51	0%	0.0102	0.011	NA	NA	0.0053	0.00009	N/A	No	No	(2)
Dibenzofuran	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
Di-n-butyl phthalate	mg/kg	1	51	2%	0.0338	0.0366	0.115	0.115	0.019	0.014	N/A	No	No	(4)(12)
Dichloromethyl ether	mg/kg	0	51	0%	0.112	0.121	NA	NA	0.058	0.00097	N/A	No	No	(2)
Diethyl phthalate	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
Dimethyl phthalate	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
Di-n-octyl phthalate	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
Diphenyl sulfone	mg/kg	0	51	0%	0.112	0.121	NA	NA	0.058	0.00097	N/A	No	No	(2)
Diphenylamine	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
Fluoranthene	mg/kg	6	51	12%	0.0102	0.011	0.0127	0.127	0.011	0.02	N/A	No	No	(5)
Fluorene	mg/kg	0	51	0%	0.0102	0.011	NA	NA	0.0053	0.00009	N/A	No	No	(2)
Hexachlorobutadiene	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
Hexachlorobenzene	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	Yes	No	(2)
Hexachlorocyclopentadiene	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
Hexachloroethane	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
Hydroxymethyl phthalimide	mg/kg	0	51	0%	0.112	0.121	NA	NA	0.058	0.00097	N/A	No	No	(2)
Isophorone	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
m,p-Cresols	mg/kg	0	51	0%	0.135	0.147	NA	NA	0.07	0.0012	N/A	No	No	(2)
Naphthalene	mg/kg	0	51	0%	0.0102	0.011	NA	NA	0.0053	0.00009	N/A	No	No	(2)
Nitrobenzene	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
N-nitrosodi-n-propylamine	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	Yes	No	(2)
o-Cresol	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
Octachlorostyrene	mg/kg	0	51	0%	0.112	0.121	NA	NA	0.058	0.00097	N/A	No	No	(2)
p-Chloroaniline	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
p-Chlorobenzenethiol	mg/kg	0	51	0%	0.112	0.121	NA	NA	0.058	0.00097	N/A	No	No	(2)
Pentachlorobenzene	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
Pentachlorophenol	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
Phenol	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
Diphenyl disulfide	mg/kg	0	51	0%	0.112	0.121	NA	NA	0.058	0.00097	N/A	No	No	(2)
Diphenyl sulfide	mg/kg	0	51	0%	0.112	0.121	NA	NA	0.058	0.00097	N/A	No	No	(2)
Phthalic acid	mg/kg	1	51	2%	0.112	0.121	0.387	0.387	0.064	0.046	N/A	No	No	(4)(12)
4-Nitroaniline	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
Pyridine	mg/kg	0	51	0%	0.0677	0.0733	NA	NA	0.035	0.00059	N/A	No	No	(2)
Polynuclear Aromatic Hydrocarbons														
Acenaphthene	mg/kg	1	52	2%	0.00169	0.00183	0.00209	0.00209	0.0009	0.00017	N/A	No	Yes	(4)(10)
Acenaphthylene	mg/kg	1	52	2%	0.00169	0.00183	0.00206	0.00206	0.0009	0.00016	N/A	No	Yes	(4)(10)

TABLE 9
SELECTION OF CHEMICALS OF POTENTIAL CONCERN (COPC)
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Chemical	Units	Number of Detects	Total Count	Detect Freq.	Min ND	Max ND	Min Detect	Max Detect	Mean	Standard Deviation	Greater than Background?	PBT(1) or Class A Carcinogen?	COPC?	Rationale
Anthracene	mg/kg	8	52	15%	0.00169	0.00183	0.0019	0.00599	0.0012	0.00091	N/A	No	Yes	(5)
Benzo(a)anthracene	mg/kg	8	52	15%	0.00169	0.00183	0.00225	0.0576	0.0026	0.0082	N/A	No	Yes	(5)
Benzo(a)pyrene	mg/kg	18	52	35%	0.00169	0.00182	0.00185	0.0585	0.0038	0.0091	N/A	Yes	Yes	(1)(5)
Benzo(b)fluoranthene	mg/kg	21	52	40%	0.0017	0.00183	0.0022	0.129	0.0083	0.021	N/A	No	Yes	(5)
Benzo(g,h,i)perylene	mg/kg	8	52	15%	0.00169	0.00183	0.00224	0.0295	0.0019	0.0042	N/A	No	Yes	(5)
Benzo(k)fluoranthene	mg/kg	6	52	12%	0.00169	0.00182	0.00229	0.00658	0.0012	0.0011	N/A	No	Yes	(5)
Chrysene	mg/kg	17	52	33%	0.00169	0.00182	0.00231	0.0904	0.0057	0.014	N/A	No	Yes	(5)
Dibenzo(a,h)anthracene	mg/kg	4	52	8%	0.00169	0.00182	0.00208	0.0587	0.0023	0.0082	N/A	No	Yes	(5)
Indeno(1,2,3-cd)pyrene	mg/kg	5	52	10%	0.00169	0.00183	0.00195	0.0311	0.0017	0.0043	N/A	No	Yes	(5)
Phenanthrene	mg/kg	17	52	33%	0.0017	0.00183	0.0022	0.0343	0.0035	0.0064	N/A	No	Yes	(5)
Pyrene	mg/kg	22	52	42%	0.0017	0.00182	0.00209	0.12	0.008	0.019	N/A	No	Yes	(5)
Polychlorinated Biphenyls														
PCB 105	mg/kg	35	36	97%	0.0000021	0.0000021	0.0000022	0.00071	0.000093	0.00017	N/A	Yes	No	(1)(3)
PCB 114	mg/kg	26	36	72%	0.0000019	0.0000021	0.0000021	0.000043	0.0000073	0.0000088	N/A	Yes	No	(1)(3)
PCB 118	mg/kg	36	36	100%	NA	NA	0.0000047	0.0012	0.00017	0.0003	N/A	Yes	No	(1)(3)
PCB 123	mg/kg	1	36	3%	0.0000019	0.000054	0.0000068	0.0000068	0.0000044	0.000006	N/A	Yes	No	(1)(3)
PCB 126	mg/kg	22	36	61%	0.0000019	0.0000021	0.0000022	0.000017	0.000004	0.0000036	N/A	Yes	No	(1)(3)
PCB 156	mg/kg	33	36	92%	0.000002	0.0000021	0.0000026	0.00016	0.000029	0.00004	N/A	Yes	No	(1)(3)
PCB 157	mg/kg	24	36	67%	0.0000019	0.0000021	0.0000024	0.000039	0.000007	0.0000095	N/A	Yes	No	(1)(3)
PCB 167	mg/kg	27	36	75%	0.0000019	0.0000021	0.0000021	0.000065	0.000012	0.000015	N/A	Yes	No	(1)(3)
PCB 169	mg/kg	5	36	14%	0.0000019	0.0000023	0.0000022	0.0000062	0.0000013	9.4E-07	N/A	Yes	No	(1)(3)
PCB 189	mg/kg	25	36	69%	0.0000019	0.0000021	0.0000028	0.000019	0.0000067	0.0000055	N/A	Yes	No	(1)(3)
PCB 209	mg/kg	36	36	100%	NA	NA	0.00003	0.0063	0.0014	0.0016	N/A	Yes	No	(1)(3)
PCB 77	mg/kg	2	36	6%	0.000002	0.00015	0.0000021	0.0000074	0.0000088	0.000013	N/A	Yes	No	(1)(3)
PCB 81	mg/kg	2	36	6%	0.0000019	0.000034	0.0000034	0.0000074	0.0000033	0.0000039	N/A	Yes	No	(1)(3)
Volatile Organic Compounds														
1,1,1,2-Tetrachloroethane	mg/kg	0	53	0%	0.00018	0.0002	NA	NA	0.000094	0.0000027	N/A	No	No	(2)
1,1,1-Trichloroethane	mg/kg	0	53	0%	0.00011	0.00012	NA	NA	0.000055	0.0000013	N/A	No	No	(2)
1,1,2,2-Tetrachloroethane	mg/kg	0	53	0%	0.000079	0.000088	NA	NA	0.000041	8.5E-07	N/A	No	No	(2)
1,1,2-Trichloroethane	mg/kg	0	53	0%	0.000068	0.000076	NA	NA	0.000035	7.9E-07	N/A	No	No	(2)
1,1-Dichloroethane	mg/kg	0	53	0%	0.000071	0.000079	NA	NA	0.000037	7.9E-07	N/A	No	No	(2)
1,1-Dichloroethene	mg/kg	0	53	0%	0.00012	0.00014	NA	NA	0.000064	0.0000023	N/A	No	No	(2)
1,1-Dichloropropene	mg/kg	0	53	0%	0.000088	0.000098	NA	NA	0.000046	9.7E-07	N/A	No	No	(2)
1,2,3-Trichlorobenzene	mg/kg	0	53	0%	0.00039	0.00044	NA	NA	0.0002	0.0000046	N/A	No	No	(2)
1,2,3-Trichloropropane	mg/kg	0	53	0%	0.00025	0.00028	NA	NA	0.00013	0.0000032	N/A	No	No	(2)
1,2,4-Trichlorobenzene	mg/kg	0	53	0%	0.00033	0.00037	NA	NA	0.00017	0.0000038	N/A	No	No	(2)

TABLE 9
SELECTION OF CHEMICALS OF POTENTIAL CONCERN (COPC)
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
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Chemical	Units	Number of Detects	Total Count	Detect Freq.	Min ND	Max ND	Min Detect	Max Detect	Mean	Standard Deviation	Greater than Background?	PBT(1) or Class A Carcinogen?	COPC?	Rationale
1,2,4-Trimethylbenzene	mg/kg	17	53	32%	0.00014	0.00073	0.00069	0.0017	0.00046	0.00034	N/A	No	Yes	(5)
Dibromochloropropane	mg/kg	0	53	0%	0.00021	0.00024	NA	NA	0.00011	0.0000027	N/A	No	No	(2)
1,2-Dichlorobenzene	mg/kg	1	53	2%	0.00012	0.00015	0.00021	0.00021	0.000068	0.00002	N/A	No	No	(4)(12)
1,2-Dichloroethane	mg/kg	0	53	0%	0.000067	0.000075	NA	NA	0.000035	7.9E-07	N/A	No	No	(2)
1,2-Dichloroethene	mg/kg	0	53	0%	0.00011	0.00012	NA	NA	0.000056	0.000002	N/A	No	No	(2)
1,2-Dichloropropane	mg/kg	0	53	0%	0.00011	0.00012	NA	NA	0.000059	0.0000023	N/A	No	No	(2)
1,3,5-Trichlorobenzene	mg/kg	0	53	0%	0.00037	0.00042	NA	NA	0.00019	0.0000047	N/A	No	No	(2)
1,3,5-Trimethylbenzene	mg/kg	1	53	2%	0.000098	0.00014	0.00012	0.00012	0.000052	0.00001	N/A	No	No	(4)(12)
1,3-Dichlorobenzene	mg/kg	1	53	2%	0.00013	0.00015	0.00022	0.00022	0.000073	0.000021	N/A	No	No	(4)(12)
1,3-Dichloropropane	mg/kg	0	53	0%	0.000051	0.000058	NA	NA	0.000027	6.1E-07	N/A	No	No	(2)
1,4-Dichlorobenzene	mg/kg	1	53	2%	0.00014	0.00015	0.00024	0.00024	0.000074	0.000023	N/A	No	No	(4)(12)
Nonanal	mg/kg	2	53	4%	0.00047	0.00053	0.0008	0.00098	0.00027	0.00013	N/A	No	No	(4)
2,2,3-Trimethylbutane	mg/kg	0	53	0%	0.00021	0.00024	NA	NA	0.00011	0.0000023	N/A	No	No	(2)
2,2-Dichloropropane	mg/kg	0	53	0%	0.00023	0.00026	NA	NA	0.00012	0.0000035	N/A	No	No	(2)
2,2-Dimethylpentane	mg/kg	0	53	0%	0.00028	0.00031	NA	NA	0.00014	0.0000032	N/A	No	No	(2)
2,3-Dimethylpentane	mg/kg	0	53	0%	0.00023	0.00025	NA	NA	0.00012	0.0000031	N/A	No	No	(2)
2,4-Dimethylpentane	mg/kg	0	53	0%	0.00019	0.00022	NA	NA	0.0001	0.0000028	N/A	No	No	(2)
2-Chlorotoluene	mg/kg	0	53	0%	0.00025	0.00028	NA	NA	0.00013	0.0000027	N/A	No	No	(2)
2-Nitropropane	mg/kg	0	53	0%	0.00061	0.00068	NA	NA	0.00032	0.0000068	N/A	No	No	(2)
sec-Butylbenzene	mg/kg	0	53	0%	0.00011	0.00012	NA	NA	0.000055	0.0000015	N/A	No	No	(2)
3,3-dimethylpentane	mg/kg	0	53	0%	0.0002	0.00023	NA	NA	0.00011	0.000003	N/A	No	No	(2)
3-ethylpentane	mg/kg	0	53	0%	0.00021	0.00024	NA	NA	0.00011	0.0000023	N/A	No	No	(2)
3-Methylhexane	mg/kg	0	53	0%	0.00014	0.00016	NA	NA	0.000074	0.0000022	N/A	No	No	(2)
4-Chlorotoluene	mg/kg	0	53	0%	0.00017	0.00019	NA	NA	0.00009	0.0000018	N/A	No	No	(2)
Acetone	mg/kg	2	53	4%	0.0018	0.021	0.013	0.017	0.0057	0.0037	N/A	No	No	(4)(12)
Acetonitrile	mg/kg	0	53	0%	0.0055	0.0061	NA	NA	0.0029	0.000062	N/A	No	No	(2)
Benzene	mg/kg	0	53	0%	0.000088	0.000098	NA	NA	0.000046	9.7E-07	N/A	Yes	No	(2)
Bromobenzene	mg/kg	0	53	0%	0.00012	0.00014	NA	NA	0.000065	0.0000017	N/A	No	No	(2)
Bromodichloromethane	mg/kg	0	53	0%	0.00021	0.00024	NA	NA	0.00011	0.000003	N/A	No	No	(2)
Bromomethane	mg/kg	0	53	0%	0.00013	0.00015	NA	NA	0.000069	0.0000025	N/A	No	No	(2)
Carbon disulfide	mg/kg	0	53	0%	0.00012	0.00014	NA	NA	0.000065	0.0000017	N/A	No	No	(2)
Carbon tetrachloride	mg/kg	0	53	0%	0.00021	0.00023	NA	NA	0.00011	0.0000031	N/A	No	No	(2)
Freon-11 (Trichlorofluoromethane)	mg/kg	0	53	0%	0.00022	0.00025	NA	NA	0.00012	0.0000024	N/A	No	No	(2)
Freon-12 (Dichlorodifluoromethane)	mg/kg	0	53	0%	0.00029	0.00033	NA	NA	0.00015	0.0000039	N/A	No	No	(2)
Freon-113 (1,1,2-Trifluoro-1,2,2-trichloroethane)	mg/kg	0	53	0%	0.00015	0.00016	NA	NA	0.000076	0.0000017	N/A	No	No	(2)
Chlorobenzene	mg/kg	0	53	0%	0.00011	0.00012	NA	NA	0.000056	0.000002	N/A	No	No	(2)

TABLE 9
SELECTION OF CHEMICALS OF POTENTIAL CONCERN (COPC)
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
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Chemical	Units	Number of Detects	Total Count	Detect Freq.	Min ND	Max ND	Min Detect	Max Detect	Mean	Standard Deviation	Greater than Background?	PBT(1) or Class A Carcinogen?	COPC?	Rationale
Chlorobromomethane	mg/kg	0	53	0%	0.00023	0.00025	NA	NA	0.00012	0.0000029	N/A	No	No	(2)
Dibromochloromethane	mg/kg	0	53	0%	0.00012	0.00013	NA	NA	0.000061	0.0000023	N/A	No	No	(2)
Chloroethane	mg/kg	0	53	0%	0.00047	0.00052	NA	NA	0.00024	0.0000052	N/A	No	No	(2)
Chloroform	mg/kg	0	53	0%	0.0001	0.00011	NA	NA	0.000053	0.0000025	N/A	No	No	(2)
Chloromethane	mg/kg	0	53	0%	0.00027	0.0003	NA	NA	0.00014	0.000003	N/A	No	No	(2)
cis-1,2-Dichloroethene	mg/kg	0	53	0%	0.000055	0.000061	NA	NA	0.000028	5.7E-07	N/A	No	No	(2)
cis-1,3-Dichloropropene	mg/kg	0	53	0%	0.0001	0.00011	NA	NA	0.000053	0.0000025	N/A	No	No	(2)
Cymene (Isopropyltoluene)	mg/kg	0	53	0%	0.00013	0.00014	NA	NA	0.000065	0.0000015	N/A	No	No	(2)
Dibromomethane	mg/kg	0	53	0%	0.00017	0.00019	NA	NA	0.000088	0.0000029	N/A	No	No	(2)
Dichloromethane (Methylene chloride)	mg/kg	25	53	47%	0.00071	0.0077	0.0014	0.028	0.0058	0.0068	N/A	No	Yes	(5)
Ethanol	mg/kg	0	53	0%	0.048	0.053	NA	NA	0.025	0.00052	N/A	No	No	(2)
Ethylbenzene	mg/kg	4	53	8%	0.000059	0.00015	0.000062	0.0002	0.000037	0.000025	N/A	No	Yes	(5)
2-methylhexane	mg/kg	0	53	0%	0.0002	0.00023	NA	NA	0.00011	0.000003	N/A	No	No	(2)
Isopropylbenzene	mg/kg	0	53	0%	0.0001	0.00012	NA	NA	0.000055	0.0000014	N/A	No	No	(2)
m,p-Xylene	mg/kg	0	53	0%	0.00017	0.00019	NA	NA	0.000088	0.0000029	N/A	No	No	(2)
Dimethyldisulfide	mg/kg	0	53	0%	0.00018	0.0002	NA	NA	0.000093	0.0000028	N/A	No	No	(2)
Methyl ethyl ketone (2-Butanone)	mg/kg	0	53	0%	0.00088	0.00098	NA	NA	0.00046	0.0000096	N/A	No	No	(2)
Methyl iodide	mg/kg	0	53	0%	0.00013	0.00014	NA	NA	0.000065	0.0000015	N/A	No	No	(2)
4-Methyl-2-pentanone (MIBK)	mg/kg	0	53	0%	0.00029	0.00033	NA	NA	0.00015	0.0000037	N/A	No	No	(2)
2-hexanone	mg/kg	0	53	0%	0.00024	0.00027	NA	NA	0.00013	0.0000027	N/A	No	No	(2)
MTBE (Methyl tert-butyl ether)	mg/kg	0	53	0%	0.00009	0.0001	NA	NA	0.000047	0.000001	N/A	No	No	(2)
n-Butylbenzene	mg/kg	0	53	0%	0.00018	0.0002	NA	NA	0.000095	0.000002	N/A	No	No	(2)
Heptane	mg/kg	0	53	0%	0.00016	0.00018	NA	NA	0.000085	0.0000019	N/A	No	No	(2)
n-Propylbenzene	mg/kg	1	53	2%	0.00011	0.00012	0.00017	0.00017	0.000059	0.000016	N/A	No	No	(4)(12)
o-Xylene	mg/kg	0	53	0%	0.000077	0.000086	NA	NA	0.00004	8.5E-07	N/A	No	No	(2)
Styrene	mg/kg	0	53	0%	0.00018	0.00027	NA	NA	0.000097	0.000012	N/A	No	No	(2)
tert-Butylbenzene	mg/kg	0	53	0%	0.0001	0.00011	NA	NA	0.000053	0.0000025	N/A	No	No	(2)
Tetrachloroethene	mg/kg	0	53	0%	0.000088	0.000098	NA	NA	0.000046	9.7E-07	N/A	No	No	(2)
Toluene	mg/kg	1	53	2%	0.00033	0.00036	0.00036	0.00036	0.00017	0.000026	N/A	No	No	(4)(12)
trans-1,2-Dichloroethene	mg/kg	0	53	0%	0.000091	0.0001	NA	NA	0.000047	9.6E-07	N/A	No	No	(2)
trans-1,3-Dichloropropene	mg/kg	0	53	0%	0.0001	0.00011	NA	NA	0.000053	0.0000025	N/A	No	No	(2)
Bromoform	mg/kg	0	53	0%	0.00006	0.000067	NA	NA	0.000031	6.6E-07	N/A	No	No	(2)
Trichloroethene	mg/kg	0	53	0%	0.0001	0.00012	NA	NA	0.000055	0.0000012	N/A	No	No	(2)
Vinyl acetate	mg/kg	0	53	0%	0.00024	0.00027	NA	NA	0.00013	0.0000028	N/A	No	No	(2)
Vinyl chloride	mg/kg	0	53	0%	0.00011	0.00013	NA	NA	0.00006	0.0000014	N/A	No	No	(2)
Xylenes (total)	mg/kg	0	53	0%	0.00023	0.00026	NA	NA	0.00012	0.000003	N/A	No	No	(2)

TABLE 9
SELECTION OF CHEMICALS OF POTENTIAL CONCERN (COPC)
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
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Chemical	Units	Number of Detects	Total Count	Detect Freq.	Min ND	Max ND	Min Detect	Max Detect	Mean	Standard Deviation	Greater than Background?	PBT(1) or Class A Carcinogen?	COPC?	Rationale

mg/kg - milligrams per kilogram
pCi/g - picoCuries per gram
ppt - parts per trillion
N/A - Not available or not applicable.
ND - Not detected.
Highlight indicates selected as COPC.

(1) Persistent, Bioaccumulative, and Toxic (PBT) Program.
(2) Not detected.
(3) Dioxin and PCB congeners are not evaluated separately. Dioxin and PCB congeners are evaluated as TCDD TEQs. The maximum TCDD TEQ was less than the 50 ppt residential BCL.
(4) Chemical detected in less than 5 percent of the samples and is not a PBT or Class A carcinogen.
(5) Chemical detected in greater than 5 percent of samples.
(6) Chemical concentrations are equivalent to background.
(7) Chemical detected in less than 5 percent of the samples, but is a PBT or Class A carcinogen.
(8) Based on statistical tests, Site concentrations are elevated compared to background.
(9) No toxicity criteria or applicable surrogate criteria are available.
(10) One carcinogenic polynuclear aromatic hydrocarbon (PAH) is a COPC, therefore all carcinogenic PAHs are COPCs.
(11) Lead was not selected as a COPC because the maximum concentration is below 400 mg/kg.
(12) Chemical detected in less than 5 percent of samples and below the residential BCL.
(13) USEPA (1989) states that “Chemicals that are (1) essential human nutrients, (2) present at low concentrations (i.e., only slightly elevated above naturally occurring levels), and (3) toxic only at very high doses (i.e., much higher than those that could be associated with contact at the site) need not be considered further in the quantitative risk assessment. Examples of such chemicals are iron, magnesium, calcium, potassium, and sodium.”

TABLE 10
EXPOSURE POINT CONCENTRATIONS IN SOIL
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 1 of 4)

Chemical	Units	Number of Detects	Total Count	Detect Freq.	Min ND	Max ND	Min Detect	Max Detect	Mean	Standard Deviation
Aldehydes										
Formaldehyde	mg/kg	30	53	57%	0.208	0.385	0.205	0.887	0.26	0.18
Inorganics										
Ammonia (as N)	mg/kg	10	52	19%	0.79	5.5	0.89	8.2	0.98	1.4
Cadmium	mg/kg	40	55	73%	0.1	0.27	0.092	0.44	0.14	0.075
Cyanide, Total	mg/kg	12	53	23%	0.083	0.57	0.099	5.8	0.41	0.78
Fluoride	mg/kg	41	53	77%	0.1	0.11	0.15	2.1	0.67	0.55
Mercury	mg/kg	17	55	31%	0.005	0.0373	0.0056	0.122	0.025	0.026
Nickel	mg/kg	55	55	100%	NA	NA	13	28.2	17	2.7
Nitrate	mg/kg	53	53	100%	NA	NA	1.3	121	16	27
Nitrite	mg/kg	9	53	17%	0.033	3.4	0.087	2.1	0.23	0.47
Perchlorate	mg/kg	52	52	100%	NA	NA	0.0163	28.6	3.2	6.3
Zinc	mg/kg	55	55	100%	NA	NA	33.6	155	56	22
Organochlorine Pesticides										
2,4-DDE	mg/kg	12	53	23%	0.00021	0.001	0.002	0.015	0.0012	0.0027
4,4-DDD	mg/kg	1	53	2%	0.00009	0.00046	0.0044	0.0044	0.00013	0.0006
4,4-DDE	mg/kg	23	53	43%	0.0002	0.00099	0.0018	0.031	0.0035	0.0061
4,4-DDT	mg/kg	21	53	40%	0.00021	0.001	0.0018	0.016	0.002	0.0035
alpha-Chlordane	mg/kg	2	53	4%	0.00021	0.0011	0.0022	0.0057	0.00026	0.00082
beta-BHC	mg/kg	19	53	36%	0.00019	0.00096	0.0022	0.019	0.0024	0.0042
Chlordane	mg/kg	2	53	4%	0.0024	0.012	0.02	0.043	0.0025	0.0063
gamma-Chlordane	mg/kg	3	53	6%	0.000084	0.00043	0.0022	0.007	0.00027	0.0011
Methoxychlor	mg/kg	7	53	13%	0.00032	0.0016	0.0023	0.025	0.0016	0.0046
Semi-Volatile Organic Compounds										
bis(2-Ethylhexyl) phthalate	mg/kg	5	51	10%	0.0677	0.11	0.0747	1.04	0.065	0.15
Polynuclear Aromatic Hydrocarbons										
Acenaphthene	mg/kg	1	52	2%	0.00169	0.00183	0.00209	0.00209	0.0009	0.00017
Acenaphthylene	mg/kg	1	52	2%	0.00169	0.00183	0.00206	0.00206	0.0009	0.00016
Anthracene	mg/kg	8	52	15%	0.00169	0.00183	0.0019	0.00599	0.0012	0.00091
Benzo(a)anthracene	mg/kg	8	52	15%	0.00169	0.00183	0.00225	0.0576	0.0026	0.0082
Benzo(a)pyrene	mg/kg	18	52	35%	0.00169	0.00182	0.00185	0.0585	0.0038	0.0091
Benzo(b)fluoranthene	mg/kg	21	52	40%	0.0017	0.00183	0.0022	0.129	0.0083	0.021
Benzo(g,h,i)perylene	mg/kg	8	52	15%	0.00169	0.00183	0.00224	0.0295	0.0019	0.0042
Benzo(k)fluoranthene	mg/kg	6	52	12%	0.00169	0.00182	0.00229	0.00658	0.0012	0.0011
Chrysene	mg/kg	17	52	33%	0.00169	0.00182	0.00231	0.0904	0.0057	0.014
Dibenzo(a,h)anthracene	mg/kg	4	52	8%	0.00169	0.00182	0.00208	0.0587	0.0023	0.0082

TABLE 10
EXPOSURE POINT CONCENTRATIONS IN SOIL
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Chemical	Units	Number of Detects	Total Count	Detect Freq.	Min ND	Max ND	Min Detect	Max Detect	Mean	Standard Deviation
Indeno(1,2,3-cd)pyrene	mg/kg	5	52	10%	0.00169	0.00183	0.00195	0.0311	0.0017	0.0043
Phenanthrene	mg/kg	17	52	33%	0.0017	0.00183	0.0022	0.0343	0.0035	0.0064
Pyrene	mg/kg	22	52	42%	0.0017	0.00182	0.00209	0.12	0.008	0.019
Volatile Organic Compounds										
1,2,4-Trimethylbenzene	mg/kg	17	53	32%	0.00014	0.00073	0.00069	0.0017	0.00046	0.00034
Dichloromethane (Methylene chloride)	mg/kg	25	53	47%	0.00071	0.0077	0.0014	0.028	0.0058	0.0068
Ethylbenzene	mg/kg	4	53	8%	0.000059	0.00015	0.000062	0.0002	0.000037	0.000025

(1) The EPC is either the maximum of the All and Surface 95 UCLs unless it exceeds the maximum detection concentration, then it is the maximum detected concentration.

EPC - Exposure point concentration.

UCL - Upper Confidence Limit

NA - Not applicable.

Units are in mg/kg.

TABLE 10
EXPOSURE POINT CONCENTRATIONS IN SOIL
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Chemical	Units	All		Surface		EPC[1]
		95% UCL	UCL Calc Method	95% UCL	UCL Calc Method	
		Aldehydes				
Formaldehyde	mg/kg	0.312	Bootstrap BCa UCL	0.399	Bootstrap BCa UCL	0.399
		Inorganics				
Ammonia (as N)	mg/kg	1.41	Bootstrap BCa UCL	2.15	Bootstrap BCa UCL	2.15
Cadmium	mg/kg	0.161	Bootstrap BCa UCL	0.202	Bootstrap BCa UCL	0.202
Cyanide, Total	mg/kg	0.721	Bootstrap BCa UCL	0.44	Bootstrap BCa UCL	0.721
Fluoride	mg/kg	0.795	Bootstrap Percentile UCL	0.462	Bootstrap BCa UCL	0.795
Mercury	mg/kg	0.0317	Bootstrap BCa UCL	0.0445	Bootstrap BCa UCL	0.0445
Nickel	mg/kg	18	Bootstrap Percentile UCL	19.2	Bootstrap BCa UCL	19.2
Nitrate	mg/kg	24.7	Bootstrap BCa UCL	33.8	Bootstrap BCa UCL	33.8
Nitrite	mg/kg	0.386	Bootstrap BCa UCL	0.624	Bootstrap BCa UCL	0.624
Perchlorate	mg/kg	5.08	Bootstrap BCa UCL	7.41	Bootstrap BCa UCL	7.41
Zinc	mg/kg	62.4	Bootstrap BCa UCL	74	Bootstrap BCa UCL	74
		Organochlorine Pesticides				
2,4-DDE	mg/kg	0.00191	Bootstrap BCa UCL	0.00385	Bootstrap BCa UCL	0.00385
4,4-DDD	mg/kg	0.000383	Bootstrap BCa UCL	0.000724	Bootstrap BCa UCL	0.000724
4,4-DDE	mg/kg	0.00533	Bootstrap BCa UCL	0.00988	Bootstrap BCa UCL	0.00988
4,4-DDT	mg/kg	0.003	Bootstrap BCa UCL	0.00538	Bootstrap BCa UCL	0.00538
alpha-Chlordane	mg/kg	0.000667	Bootstrap BCa UCL	0.00113	Bootstrap BCa UCL	0.00113
beta-BHC	mg/kg	0.00367	Bootstrap BCa UCL	0.00658	Bootstrap BCa UCL	0.00658
Chlordane	mg/kg	0.00509	Bootstrap BCa UCL	0.00839	Bootstrap BCa UCL	0.00839
gamma-Chlordane	mg/kg	0.000717	Bootstrap BCa UCL	0.00122	Bootstrap BCa UCL	0.00122
Methoxychlor	mg/kg	0.00294	Bootstrap BCa UCL	0.00182	Bootstrap BCa UCL	0.00294
		Semi-Volatile Organic Compounds				
bis(2-Ethylhexyl) phthalate	mg/kg	0.131	Bootstrap BCa UCL	0.23	Bootstrap BCa UCL	0.23
		Polynuclear Aromatic Hydrocarbons				
Acenaphthene	mg/kg	0.000971	Bootstrap BCa UCL	0.00105	Bootstrap BCa UCL	0.00105
Acenaphthylene	mg/kg	0.000973	Bootstrap BCa UCL	0.00105	Bootstrap BCa UCL	0.00105
Anthracene	mg/kg	0.00152	Bootstrap BCa UCL	0.00194	Bootstrap BCa UCL	0.00194
Benzo(a)anthracene	mg/kg	0.00579	Bootstrap BCa UCL	0.0104	Bootstrap BCa UCL	0.0104
Benzo(a)pyrene	mg/kg	0.00727	Bootstrap BCa UCL	0.0125	Bootstrap BCa UCL	0.0125
Benzo(b)fluoranthene	mg/kg	0.0155	Bootstrap BCa UCL	0.028	Bootstrap BCa UCL	0.028
Benzo(g,h,i)perylene	mg/kg	0.00355	Bootstrap BCa UCL	0.00606	Bootstrap BCa UCL	0.00606
Benzo(k)fluoranthene	mg/kg	0.00158	Bootstrap BCa UCL	0.00214	Bootstrap BCa UCL	0.00214
Chrysene	mg/kg	0.0113	Bootstrap BCa UCL	0.0201	Bootstrap BCa UCL	0.0201
Dibenzo(a,h)anthracene	mg/kg	0.00589	Bootstrap BCa UCL	0.0118	Bootstrap BCa UCL	0.0118

TABLE 10
EXPOSURE POINT CONCENTRATIONS IN SOIL
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Chemical	Units	All		Surface		EPC[1]
		95% UCL	UCL Calc Method	95% UCL	UCL Calc Method	
Indeno(1,2,3-cd)pyrene	mg/kg	0.00376	Bootstrap BCa UCL	0.00586	Bootstrap BCa UCL	0.00586
Phenanthrene	mg/kg	0.00547	Bootstrap BCa UCL	0.00852	Bootstrap BCa UCL	0.00852
Pyrene	mg/kg	0.0152	Bootstrap BCa UCL	0.0258	Bootstrap BCa UCL	0.0258
		Volatile Organic Compounds				
1,2,4-Trimethylbenzene	mg/kg	0.000545	Bootstrap BCa UCL	0.000687	Bootstrap BCa UCL	0.000687
Dichloromethane (Methylene chloride)	mg/kg	0.00735	Bootstrap BCa UCL	0.00987	Bootstrap BCa UCL	0.00987
Ethylbenzene	mg/kg	0.0000458	Bootstrap BCa UCL	0.0000648	Bootstrap BCa UCL	0.0000648

(1) The EPC is either the maximum of the All and Surface 95 UCLs unless concentration, then it is the maximum detected concentration.

EPC - Exposure point concentration.

UCL - Upper Confidence Limit

NA - Not applicable.

Units are in mg/kg.

TABLE 11
ASBESTOS RESULTS AND ANALYTICAL SENSITIVITIES
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 1 of 1)

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Analytical Sensitivity (10^6 s/gPM$_{10}$)	Concentration Protocol Structures[1]		Number of Protocol Structures[2]			
					Chrysotile	Amphibole	Chrysotile		Amphibole	
					(10^6 s/gPM$_{10}$)	(10^6 s/gPM$_{10}$)	Total	Long	Total	Long
GNC1-BD19	0	NORM	1/29/09	2.987	< 8.930 E+6	< 8.930 E+6	0	0	0	0
GNC1-BD20	0	NORM	1/26/09	2.991	1.418 E+7	< 8.944 E+6	4	1	0	0
GNC1-BD21	0	NORM	1/29/09	2.967	< 8.870 E+6	< 8.870 E+6	0	0	1	0
GNC1-BE19	0	NORM	1/29/09	2.991	< 8.944 E+6	< 8.944 E+6	0	0	0	0
GNC1-BE21	0	NORM	1/29/09	2.979	< 8.908 E+6	< 8.908 E+6	0	0	0	0
GNC1-BE22	0	NORM	1/29/09	2.987	< 8.930 E+6	< 8.930 E+6	0	0	0	0
GNC1-BF19	0	NORM	1/29/09	2.979	< 8.908 E+6	< 8.908 E+6	0	0	0	0
GNC1-BF20	0	NORM	1/29/09	2.990	< 8.939 E+6	< 8.939 E+6	0	0	0	0
GNC1-BF21	0	NORM	1/29/09	2.943	< 8.799 E+6	< 8.799 E+6	0	0	0	0
GNC1-BF22	0	NORM	1/29/09	2.979	< 8.908 E+6	< 8.908 E+6	0	0	0	0
GNC1-BG19	0	NORM	1/29/09	2.900	< 8.671 E+6	< 8.671 E+6	0	0	0	0
GNC1-BG20	0	NORM	1/29/09	2.987	< 8.930 E+6	< 8.930 E+6	0	0	0	0
GNC1-BG20	0	FD	1/29/09	2.991	< 8.944 E+6	< 8.944 E+6	0	0	0	0
GNC1-BG21	0	NORM	1/29/09	2.960	< 8.851 E+6	< 8.851 E+6	0	0	0	0
GNC1-BG22	0	NORM	1/26/09	2.987	< 8.930 E+6	< 8.930 E+6	0	0	0	0
GNC1-JD06	0	NORM	1/29/09	2.983	< 8.919 E+6	< 8.919 E+6	0	0	0	0
GNC1-JD07	0	NORM	1/29/09	2.987	< 8.930 E+6	< 8.930 E+6	0	0	0	0
GNC1-JD08	0	NORM	1/29/09	2.966	< 8.869 E+6	< 8.869 E+6	0	0	0	0
GNC1-JD09	0	NORM	1/29/09	2.959	< 8.846 E+6	< 8.846 E+6	0	0	0	0
GNC1-JD11	0	NORM	1/29/09	2.967	< 8.870 E+6	< 8.870 E+6	0	0	0	0
GNC1-JS10	0	NORM	1/29/09	2.961	< 8.854 E+6	< 8.854 E+6	0	0	0	0
GNC1-JS11	0	NORM	1/26/09	2.987	< 8.930 E+6	< 8.930 E+6	0	0	0	0
GNC2-JD10	0	NORM	6/25/10	2.970	< 8.870 E+6	< 8.870 E+6	0	0	0	0
GNC3-BE20C	0	NORM	6/25/10	2.990	< 8.940 E+6	< 8.940 E+6	0	0	0	0
GNC3-BE20C	0	FD	6/25/10	3.000	< 8.960 E+6	< 8.960 E+6	0	0	0	0
GNC3-JS09C	0	NORM	8/4/10	2.990	< 8.940 E+6	< 8.940 E+6	0	0	0	0

[1]Fiber dimensions are presented in the respective analytical reports for each sample.

[2]Only long structures (>10μm) present a potential risk and are used for estimating asbestos risks. Total fiber concentrations are presented for informational purposes only. Protocol structures are structures longer than 10 μm and thinner than 0.4 μm.

TABLE 12
EXPOSURE POINT CONCENTRATIONS FROM SURFACE FLUX
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 1 of 8)

Chemical	GNC1-BE20				GNC1-BE21				GNC1-BE22				GNC1-BF19			
	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air
1,1,1,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	--	--	--	--	F	1.5 E-5	6.1 E-6	5.1 E-6	--	--	--	--	--	--	--	--
1,2-Dibromoethane	--	--	--	--	S	5.3 E-6	2.1 E-6	1.8 E-6	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	--	--	--	--	--	--	--	--	S	9.9 E-7	4.0 E-7	3.3 E-7	S	1.9 E-6	7.7 E-7	6.4 E-7
1,2-Dichloroethane	--	--	--	--	--	--	--	--	S	1.2 E-6	4.7 E-7	3.9 E-7	--	--	--	--
1,2-Dichloropropane	--	--	--	--	--	--	--	--	S	8.1 E-7	3.2 E-7	2.7 E-7	--	--	--	--
1,3,5-Trimethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	--	--	--	--	--	--	--	--	S	1.2 E-6	5.0 E-7	4.2 E-7	--	--	--	--
1,3-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	--	--	--	--	--	--	--	--	S	1.4 E-6	5.6 E-7	4.7 E-7	--	--	--	--
1,4-Dioxane	F	1.1 E-5	4.2 E-6	3.5 E-6	--	--	--	--	--	--	--	--	--	--	--	--
2,2-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	F	6.0 E-6	2.4 E-6	2.0 E-6	--	--	--	--	--	--	--	--	F	1.7 E-5	6.9 E-6	5.8 E-6
2-Methyl-1-propanol	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone (MIBK)	--	--	--	--	--	--	--	--	--	--	--	--	F	7.9 E-6	3.1 E-6	2.6 E-6
Acetone	F	1.5 E-4	5.9 E-5	5.0 E-5	F	1.2 E-4	4.9 E-5	4.1 E-5	F	1.6 E-5	6.6 E-6	5.5 E-6	F	7.4 E-5	3.0 E-5	2.5 E-5
Acetonitrile	F	3.5 E-5	1.4 E-5	1.2 E-5	--	--	--	--	--	--	--	--	F	9.0 E-6	3.6 E-6	3.0 E-6
Benzene	S	3.5 E-6	1.4 E-6	1.2 E-6	S	5.5 E-6	2.2 E-6	1.8 E-6	S	2.0 E-6	7.9 E-7	6.6 E-7	S	3.7 E-6	1.5 E-6	1.2 E-6
Benzyl chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon disulfide	F	2.3 E-5	9.2 E-6	7.7 E-6	--	--	--	--	--	--	--	--	F	1.6 E-5	6.5 E-6	5.4 E-6
Carbon tetrachloride	S	3.3 E-6	1.3 E-6	1.1 E-6	S	5.3 E-6	2.1 E-6	1.8 E-6	S	1.9 E-6	7.8 E-7	6.5 E-7	S	5.0 E-6	2.0 E-6	1.7 E-6
Chlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	F	6.7 E-5	2.7 E-5	2.2 E-5	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	S	1.2 E-5	5.0 E-6	4.2 E-6	S	9.3 E-6	3.7 E-6	3.1 E-6	S	4.6 E-6	1.9 E-6	1.6 E-6	S	1.7 E-5	7.0 E-6	5.8 E-6
Chloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cymene (Isopropyltoluene)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichloromethane (Methylene chloride)	F	9.7 E-6	3.9 E-6	3.2 E-6	F	1.4 E-4	5.7 E-5	4.8 E-5	--	--	--	--	--	--	--	--
Ethanol	F	1.0 E-4	4.1 E-5	3.4 E-5	--	--	--	--	--	--	--	--	F	1.8 E-5	7.3 E-6	6.1 E-6
Ethylbenzene	--	--	--	--	F	1.2 E-5	4.7 E-6	3.9 E-6	--	--	--	--	--	--	--	--

TABLE 12
EXPOSURE POINT CONCENTRATIONS FROM SURFACE FLUX
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 2 of 8)

Chemical	GNC1-BE20				GNC1-BE21				GNC1-BE22				GNC1-BF19			
	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air
Freon-11 (Trichlorofluoromethane)	F	1.6 E-5	6.4 E-6	5.3 E-6	--	--	--	--	--	--	--	--	--	--	--	--
Freon-113 (1,1,2-Trifluoro-1,2,2-trichloroeth	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Freon-12 (Dichlorodifluoromethane)	F	2.4 E-5	9.6 E-6	8.0 E-6	--	--	--	--	--	--	--	--	--	--	--	--
Heptane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
m & p-Xylenes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl ethyl ketone (2-Butanone)	F	5.1 E-5	2.0 E-5	1.7 E-5	--	--	--	--	--	--	--	--	F	6.1 E-5	2.4 E-5	2.0 E-5
Methyl iodide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MTBE (Methyl tert-butyl ether)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
n-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
n-Propylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
sec-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
tert-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	S	7.8 E-6	3.1 E-6	2.6 E-6	S	4.6 E-6	1.8 E-6	1.5 E-6	S	1.5 E-6	6.1 E-7	5.1 E-7	S	3.7 E-6	1.5 E-6	1.2 E-6
Toluene	F	2.5 E-5	9.9 E-6	8.3 E-6	F	7.3 E-5	2.9 E-5	2.4 E-5	--	--	--	--	--	--	--	--
Total Xylenes	F	1.8 E-5	7.3 E-6	6.1 E-6	F	5.9 E-5	2.4 E-5	2.0 E-5	--	--	--	--	F	1.6 E-5	6.3 E-6	5.3 E-6
trans-1,2-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl acetate	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

All units in mg/m^3.

Method represents the surface flux measurement used in the risk calculations for that particular chemical/location: S = SIM; F = Full Scan.

See Appendix H for all indoor and outdoor air concentration calculations from surface flux measurement data. See Table 15 for outdoor air exposure point concentrations for non-volatile COPCs in soil.

Exposure point concentrations for surface flux data are based on a sample by sample basis. Averaging of the data was not conducted. Therefore only those chemicals detected in a particular sample were included in the risk estimates. A "--" is presented for those chemical not detected and not included in the risk estimates for each sample location. The exposure point concentration is the maximum of the full scan or SIM analysis results (when both had detected values, otherwise the detected value from one or the other is used). Thus, summary statistics are not presented in this table (see Table 6 for the surface flux data summary).

TABLE 12
EXPOSURE POINT CONCENTRATIONS FROM SURFACE FLUX
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
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	GNC1-BF20				GNC1-BF21				GNC1-BF22				GNC1-BG19			
Chemical	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air
1,1,1,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dioxane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	--	--	--	--	--	--	--	--	F	7.9 E-6	3.1 E-6	2.6 E-6	--	--	--	--
2-Methyl-1-propanol	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone (MIBK)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	--	--	--	--	F	6.7 E-5	2.7 E-5	2.2 E-5	F	1.1 E-4	4.3 E-5	3.6 E-5	F	2.9 E-5	1.1 E-5	9.6 E-6
Acetonitrile	--	--	--	--	--	--	--	--	F	2.5 E-5	1.0 E-5	8.4 E-6	--	--	--	--
Benzene	S	2.6 E-6	1.0 E-6	8.6 E-7	S	9.7 E-6	3.9 E-6	3.2 E-6	S	7.0 E-6	2.8 E-6	2.3 E-6	S	6.9 E-6	2.8 E-6	2.3 E-6
Benzyl chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon disulfide	--	--	--	--	--	--	--	--	F	1.9 E-5	7.7 E-6	6.4 E-6	--	--	--	--
Carbon tetrachloride	S	3.3 E-6	1.3 E-6	1.1 E-6	S	3.3 E-6	1.3 E-6	1.1 E-6	S	5.8 E-6	2.3 E-6	1.9 E-6	S	5.4 E-6	2.1 E-6	1.8 E-6
Chlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	--	--	--	--	--	--	--	--	F	7.9 E-5	3.2 E-5	2.6 E-5	--	--	--	--
Chloroform	S	1.7 E-5	6.6 E-6	5.5 E-6	S	3.1 E-6	1.2 E-6	1.0 E-6	S	1.7 E-5	6.8 E-6	5.7 E-6	S	1.3 E-5	5.2 E-6	4.3 E-6
Chloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cymene (Isopropyltoluene)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichloromethane (Methylene chloride)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethanol	--	--	--	--	--	--	--	--	F	3.9 E-5	1.6 E-5	1.3 E-5	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 12
EXPOSURE POINT CONCENTRATIONS FROM SURFACE FLUX
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
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Chemical	GNC1-BF20				GNC1-BF21				GNC1-BF22				GNC1-BG19			
	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air
Freon-11 (Trichlorofluoromethane)	--	--	--	--	--	--	--	--	F	1.8 E-5	7.3 E-6	6.1 E-6	--	--	--	--
Freon-113 (1,1,2-Trifluoro-1,2,2-trichloroeth	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Freon-12 (Dichlorodifluoromethane)	--	--	--	--	--	--	--	--	F	3.6 E-5	1.5 E-5	1.2 E-5	--	--	--	--
Heptane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	--	--	--	--	--	--	--	--	F	3.1 E-5	1.2 E-5	1.0 E-5	--	--	--	--
m & p-Xylenes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl ethyl ketone (2-Butanone)	--	--	--	--	--	--	--	--	F	1.2 E-5	4.8 E-6	4.0 E-6	F	5.5 E-6	2.2 E-6	1.9 E-6
Methyl iodide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MTBE (Methyl tert-butyl ether)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
n-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
n-Propylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
sec-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
tert-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	S	5.3 E-6	2.1 E-6	1.8 E-6	--	--	--	--	S	2.7 E-6	1.1 E-6	8.9 E-7	S	2.7 E-6	1.1 E-6	9.0 E-7
Toluene	F	3.0 E-5	1.2 E-5	1.0 E-5	--	--	--	--	F	1.9 E-5	7.5 E-6	6.3 E-6	--	--	--	--
Total Xylenes	F	2.0 E-5	8.1 E-6	6.8 E-6	--	--	--	--	F	1.8 E-5	7.3 E-6	6.1 E-6	--	--	--	--
trans-1,2-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl acetate	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

All units in mg/m^3.

Method represents the surface flux measurement used in the risk calculations for that particular chemical/location: S = SIM; F = Full Scan.

See Appendix H for all indoor and outdoor air concentration calculations from surface flux measurement data. See Table 15 for outdoor air exposure point concentrations for non-volatile COPCs in soil.

Exposure point concentrations for surface flux data are based on a sample by sample basis. Averaging of the data was not conducted. Therefore only those chemicals detected in a particular sample were included in the risk estimates. A "--" is presented for those chemical not detected and not included in the risk estimates for each sample location. The exposure point concentration is the maximum of the full scan or SIM analysis results (when both had detected values, otherwise the detected value from one or the other is used). Thus, summary statistics are not presented in this table (see Table 6 for the surface flux data summary).

TABLE 12
EXPOSURE POINT CONCENTRATIONS FROM SURFACE FLUX
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Chemical	GNC1-BG20				GNC1-BG21				GNC1-BG22				GNC1-JD09			
	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air
1,1,1,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dioxane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methyl-1-propanol	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone (MIBK)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	--	--	--	--	--	--	--	--	F	3.8 E-5	1.5 E-5	1.3 E-5	--	--	--	--
Acetonitrile	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	S	6.3 E-6	2.5 E-6	2.1 E-6	S	5.7 E-6	2.3 E-6	1.9 E-6	--	--	--	--	S	2.2 E-6	8.8 E-7	7.3 E-7
Benzyl chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon disulfide	--	--	--	--	F	5.1 E-6	2.0 E-6	1.7 E-6	F	7.9 E-6	3.1 E-6	2.6 E-6	--	--	--	--
Carbon tetrachloride	S	1.0 E-5	4.0 E-6	3.3 E-6	S	5.4 E-6	2.2 E-6	1.8 E-6	S	3.6 E-6	1.4 E-6	1.2 E-6	S	5.0 E-6	2.0 E-6	1.7 E-6
Chlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	S	1.2 E-5	4.9 E-6	4.1 E-6	S	1.7 E-5	6.9 E-6	5.8 E-6	S	1.0 E-5	4.1 E-6	3.4 E-6	S	2.5 E-6	9.9 E-7	8.3 E-7
Chloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cymene (Isopropyltoluene)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichloromethane (Methylene chloride)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethanol	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 12
EXPOSURE POINT CONCENTRATIONS FROM SURFACE FLUX
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 6 of 8)

Chemical	GNC1-BG20				GNC1-BG21				GNC1-BG22				GNC1-JD09			
	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air
Freon-11 (Trichlorofluoromethane)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Freon-113 (1,1,2-Trifluoro-1,2,2-trichloroeth	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Freon-12 (Dichlorodifluoromethane)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
m & p-Xylenes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl ethyl ketone (2-Butanone)	F	6.7 E-6	2.7 E-6	2.2 E-6	F	1.2 E-5	4.7 E-6	3.9 E-6	F	9.5 E-6	3.8 E-6	3.2 E-6	--	--	--	--
Methyl iodide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MTBE (Methyl tert-butyl ether)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
n-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
n-Propylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
sec-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
tert-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	S	1.1 E-5	4.3 E-6	3.6 E-6	S	3.7 E-6	1.5 E-6	1.2 E-6	S	2.3 E-6	9.3 E-7	7.8 E-7	S	2.2 E-6	8.8 E-7	7.3 E-7
Toluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Xylenes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	--	--	--	--	F	6.8 E-5	2.7 E-5	2.3 E-5	--	--	--	--	--	--	--	--
Vinyl acetate	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

All units in mg/m^3.

Method represents the surface flux measurement used in the risk calculations for that particular chemical/location: S = SIM; F = Full Scan.

See Appendix H for all indoor and outdoor air concentration calculations from surface flux measurement data. See Table 15 for outdoor air exposure point concentrations for non-volatile COPCs in soil.

Exposure point concentrations for surface flux data are based on a sample by sample basis. Averaging of the data was not conducted. Therefore only those chemicals detected in a particular sample were included in the risk estimates. A "--" is presented for those chemical not detected and not included in the risk estimates for each sample location. The exposure point concentration is the maximum of the full scan or SIM analysis results (when both had detected values, otherwise the detected value from one or the other is used). Thus, summary statistics are not presented in this table (see Table 6 for the surface flux data summary).

TABLE 12
EXPOSURE POINT CONCENTRATIONS FROM SURFACE FLUX
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Chemical	GNC1-JS09				GNC1-JS10				GNC1-JS11				GNC1-JS11R			
	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air
1,1,1,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	--	--	--	--	F	3.4 E-5	1.3 E-5	1.1 E-5	F	3.2 E-5	1.3 E-5	1.1 E-5	F	4.5 E-5	1.8 E-5	1.5 E-5
1,2-Dibromoethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dioxane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methyl-1-propanol	--	--	--	--	F	2.9 E-5	1.2 E-5	9.8 E-6	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone (MIBK)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetonitrile	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	S	2.9 E-6	1.1 E-6	9.6 E-7	S	2.5 E-6	9.9 E-7	8.3 E-7	S	2.5 E-6	9.9 E-7	8.3 E-7	S	3.9 E-6	1.6 E-6	1.3 E-6
Benzyl chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon disulfide	F	7.4 E-6	3.0 E-6	2.5 E-6	--	--	--	--	F	1.7 E-5	6.7 E-6	5.6 E-6	--	--	--	--
Carbon tetrachloride	S	6.5 E-6	2.6 E-6	2.2 E-6	S	1.6 E-6	6.5 E-7	5.4 E-7	S	3.2 E-6	1.3 E-6	1.1 E-6	F	1.1 E-5	4.5 E-6	3.8 E-6
Chlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	--	--	--	--	--	--	--	--	F	2.0 E-5	8.1 E-6	6.8 E-6	--	--	--	--
Chloroform	S	2.0 E-5	8.0 E-6	6.7 E-6	S	5.9 E-6	2.4 E-6	2.0 E-6	S	4.7 E-6	1.9 E-6	1.6 E-6	S	5.3 E-6	2.1 E-6	1.8 E-6
Chloromethane	--	--	--	--	--	--	--	--	F	1.0 E-5	4.1 E-6	3.4 E-6	--	--	--	--
cis-1,2-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cymene (Isopropyltoluene)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichloromethane (Methylene chloride)	--	--	--	--	--	--	--	--	--	--	--	--	S	2.4 E-6	9.8 E-7	8.2 E-7
Ethanol	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	F	9.2 E-6	3.7 E-6	3.1 E-6	F	1.1 E-5	4.2 E-6	3.5 E-6	F	1.6 E-5	6.5 E-6	5.4 E-6

TABLE 12
EXPOSURE POINT CONCENTRATIONS FROM SURFACE FLUX
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Chemical	GNC1-JS09				GNC1-JS10				GNC1-JS11				GNC1-JS11R			
	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air	Method	Residential Indoor Air	Commercial Indoor Air	Outdoor Air
Freon-11 (Trichlorofluoromethane)	--	--	--	--	--	--	--	--	F	1.2 E-5	4.7 E-6	3.9 E-6	--	--	--	--
Freon-113 (1,1,2-Trifluoro-1,2,2-trichloroeth	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Freon-12 (Dichlorodifluoromethane)	--	--	--	--	--	--	--	--	F	2.8 E-5	1.1 E-5	9.5 E-6	--	--	--	--
Heptane	--	--	--	--	--	--	--	--	F	7.1 E-6	2.9 E-6	2.4 E-6	F	9.7 E-6	3.9 E-6	3.2 E-6
Hexachlorobutadiene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	--	--	--	--	--	--	--	--	F	2.8 E-5	1.1 E-5	9.5 E-6	F	3.6 E-5	1.5 E-5	1.2 E-5
m & p-Xylenes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl ethyl ketone (2-Butanone)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl iodide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MTBE (Methyl tert-butyl ether)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
n-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
n-Propylbenzene	--	--	--	--	F	7.9 E-6	3.1 E-6	2.6 E-6	F	6.9 E-6	2.8 E-6	2.3 E-6	F	9.5 E-6	3.8 E-6	3.2 E-6
o-Xylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
sec-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	F	1.6 E-5	6.4 E-6	5.3 E-6
Styrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
tert-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	S	8.7 E-6	3.5 E-6	2.9 E-6	F	1.2 E-5	4.8 E-6	4.0 E-6	S	1.7 E-6	6.7 E-7	5.6 E-7	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	F	3.5 E-5	1.4 E-5	1.2 E-5	F	4.5 E-5	1.8 E-5	1.5 E-5
Total Xylenes	--	--	--	--	--	--	--	--	F	4.8 E-5	1.9 E-5	1.6 E-5	F	7.9 E-5	3.2 E-5	2.6 E-5
trans-1,2-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	--	--	--	--	S	1.7 E-6	6.7 E-7	5.6 E-7	--	--	--	--	--	--	--	--
Vinyl acetate	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

All units in mg/m^3.

Method represents the surface flux measurement used in the risk calculations for that particular chemical/location: S = SIM; F = Full Scan.

See Appendix H for all indoor and outdoor air concentration calculations from surface flux measurement data. See Table 15 for outdoor air exposure point concentrations for non-volatile COPCs in soil.

Exposure point concentrations for surface flux data are based on a sample by sample basis. Averaging of the data was not conducted. Therefore only those chemicals detected in a particular sample were included in the risk estimates. A "--" is presented for those chemical not detected and not included in the risk estimates for each sample location. The exposure point concentration is the maximum of the full scan or SIM analysis results (when both had detected values, otherwise the detected value from one or the other is used). Thus, summary statistics are not presented in this table (see Table 6 for the surface flux data summary).

TABLE 13
PARTICULATE EMISSION FACTOR (PEF) FOR ON-SITE RESIDENTIAL SCENARIO
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter	Abbrev.	Units	Value
Wind Erosion and Construction Activities			
Fraction of vegetative cover[(1)]	V	--	0.5
Mean annual wind speed[(2)]	U_m	m/s	4.10
Equivalent threshold value of wind speed[(1)]	U_t	m/s	11.32
Function dependent on U/U_t[(1)]	F(x)	--	0.19
Air Dispersion Factor for Area Source[(4)]	**Q/C_{wind}**	**g/m^2-sec per kg/m^3**	**40.78**
Constant A[(1)]	A	--	13.31
Constant B[(1)]	B	--	19.84
Constant C[(1)]	C	--	230.17
Areal Extent of site surface contamination[(3)]	A_{surf}	acres	44.00
Onsite Residential PEF[(5)]	**$PEF_{Onsite\ Resident}$**	**m^3/kg**	**8.85E+08**
Total outdoor ambient air dust concentration[(6)]	**$D_{Onsite\ Resident}$**	**kg/m^3**	**1.13E-09**

(1) Assumed value for the site based upon USEPA (2002b). Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response, Washington, DC. OSWER 9355.4-24. December.

(2) Derived by averaging data from the Las Vegas Airport and Nellis AFB stations.

(3) Site area.

(4) From USEPA 2002b - $Q/C_{sa} = A \times \exp[(\ln(A_{surf}) - B)^2/C]$.

$$\{[2.6 \times (s/12)^{0.8} \times (W/3)^{0.4}/(M/0.2)^{0.3}] \times [(365\text{-}p)/365] \times 281.9 \times \sum VKT_{road}\}.$$

(5) From USEPA 2002b - $PEF_{Onsite\ Resident} = Q/C_{wind} * (3600/(0.036*(1\text{-}V)*((U_m/U_t)\text{^}3)*F(x)))$

(6) $D_{Onsite\ Resident} = 1/PEF_{Onsite\ Resident}$

TABLE 14
PARTICULATE EMISSION FACTOR (PEF) FOR CONSTRUCTION SCENARIO
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 1 of 3)

Parameter	Abbrev.	Units	Value
Wind Erosion and Construction Activities			
Fugitive dust from wind erosion[1]	M_{wind}	g	**5.2E+05**
Fraction of vegetative cover[2]	V	--	0.00
Mean annual wind speed[3]	U_m	m/s	4.10
Equivalent threshold value of wind speed[2]	U_t	m/s	11.32
Function dependent on U/U_t[2]	F(x)	--	0.194
Areal Extent of site surface contamination[4]	A_{surf}	m^2	178068.00
Exposure duration[5]	ED	year	1
Fugitive dust from excavation soil dumping[6]	M_{excav}	g	**4.6E+04**
In situ wet soil bulk density[7]	ρ_{soil}	Mg/m^3	1.83
Gravimetric Soil Moisture Content %[8]	M	%	4.98
Areal extent of site excavation[9]	A_{excav}	m^2	35613.60
Average depth of site excavation[2]	d_{excav}	m	1.00
Number of times soil is dumped[2]	N_A	--	2.00
Fugitive dust from dozing[10]	M_{doz}	g	**1.2E+04**
Soil silt content %[7]	s	%	6.90
Gravimetric Soil Moisture Content %[8]	M	%	4.98
Average dozing speed[2]	S_{doz}	km/hr	11.40
Number of times area is dozed	N_{doze}	--	3.00
Length of dozer blade	B_d	m	2.44
Sum dozing kilometers traveled[11]	VKT_{doz}	km	218.94
Fugitive dust from grading[12]	M_{grade}	g	**9.6E+04**
Average grading speed[2]	S_{grade}	km/hr	11.40
Number of times area is graded	N_{grade}	--	3.00
Length of grading blade	B_g	m	2.44
Sum grading kilometers traveled[12]	VKT_{grade}	km	218.94

TABLE 14
PARTICULATE EMISSION FACTOR (PEF) FOR CONSTRUCTION SCENARIO
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 2 of 3)

Parameter	Abbrev.	Units	Value
Fugitive dust from tilling[13]	M_{till}	g	**2.5E+04**
Soil silt content %[7]	s	%	6.90
Areal extent of site tilling[9]	A_{till}	acre	8.80
Number of times soil is tilled[2]	N_A	--	2.00
Total Time Averaged PM_{10} Emission[14]	**J'_T**	g/m2-sec	**1.24E-07**
Duration of construction[2]	T	sec	3.15E+07
Subchronic Dispersion Factor for Area Source[15]	**Q/C_{sa}**	g/m^2-sec per kg/m^3	**6.70**
Constant A[2]	A	--	2.45
Constant B[2]	B	--	17.57
Constant C[2]	C	--	189.04
Areal Extent of site surface contamination[4]	A_{surf}	acres	44.00
Dispersion correction factor[16]	**F_D**	--	**0.186**
Duration of construction (time period during which construction activities occur)	t_c	hr	8760
Subchronic PEF for Construction Activities[17]	**PEF_{sc}**	**m^3/kg**	**2.91E+08**
Unpaved Road Traffic			
Length of road segment[18]	L_R	m	421.98
Width of road segment[2]	W_R	m	6.10
Surface area of contaminated road segment[19]	A_R	m^2	2572.40
Road surface silt content %[20]	s	%	8.50
Mean vehicle weight[2]	W	tons	8.00
Percent moisture in dry road surface[20]	M	%	4.31
Number of days/year with at least 0.01 inches of precipitation[3]	p	days	27.00
Number of vehicles for duration of construction	N_V	vehicles	30.00
Length of road traveled per day	L_D	m/day	421.98
Sum of fleet vehicle kilometers traveled during the exposure duration[21]	VKT_{road}	km	1645.73

TABLE 14
PARTICULATE EMISSION FACTOR (PEF) FOR CONSTRUCTION SCENARIO
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter	Abbrev.	Units	Value
Subchronic Dispersion Factor for road segment[22]	Q/C_{sr}	g/m^2-sec per kg/m^3	13.64
Constant A[2]	A		12.94
Constant B[2]	B		5.74
Constant C[2]	C		71.77
Subchronic PEF for Unpaved Road Traffic[23]	**PEF_{sc_road}**	**m^3/kg**	**1.19E+07**
Total construction related PEF[24]	**PEF_{sc_total}**	**m^3/kg**	**1.15E+07**
Total outdoor ambient air dust concentration[25]	**$D_{construct}$**	**kg/m^3**	**8.73E-08**

(1) From USEPA. (2002b). Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response, Washington, DC. OSWER 9355.4-24. December. - $Mwind = 0.036 \times (1-V) \times (Um/Ut)^3 \times F(x) \times Asurf \times ED \times 8760hr/yr$.

(2) Assumed value for the site based upon USEPA (2002b).

(3) Derived by averaging data from the Las Vegas Airport and Nellis AFB stations.

(4) Site area.

(5) Construction worker ED

(6) From USEPA 2002b - $M_{excav} = 0.35 \times 0.0016 \times [(U_m/2.2)^{1.3}/(M/2)^{1.4}] \times \rho_{soil} \times A_{excav} \times d_{excav} \times N_A \times 10^3 g/kg$.

(7) This value can change based on site specific characteristics

(8) Based on the average of percent moisture across the site.

(9) Assumed value of one fifth of the site based upon USEPA (2002b).

(10) From USEPA 2002b - $M_{doz} = 0.75 \times [(0.45 \times s^{1.5})/(M)^{1.4}] \times \sum VKT_{doz}/S_{doz} \times 10^3 g/kg$.

(11) From USEPA 2002b - $VKT_{doz} = [(A_{surf}^{0.5}/2.44m) \times A_{surf}^{0.5} \times 3]/1{,}000$ m/km.

(12) From USEPA 2002b - $M_{grade} = 0.60 \times (0.0056 \times S^{2.0}) \times \sum VKT_{grade} \times 10^3 g/kg$.

(13) From USEPA 2002b - $M_{till} = 1.1 \times s^{0.6} \times A_{till} \times 4{,}047 m^2/acre \times 10^{-4} ha/m^2 \times 10^3 g/kg \times N_A$.

(14) From USEPA 2002b - $J'_T = (M_{wind} + M_{excav} + M_{doz} + M_{grade} + M_{till})/(A_{surf} \times T)$.

(15) From USEPA 2002b - $Q/C_{sa} = A \times \exp[(\ln(A_{surf}) - B)^2/C]$.

(16) From USEPA 2002b - $F_D = 0.1852 + (5.3537/t_c) + (-9.6318/t_c^2)$, $t_c = T/(3{,}600sec/hour)$.

(17) From USEPA 2002b - $PEF_{sc} = Q/C_{sa} \times (1/F_D) \times (1/J'_T)$.

(18) Assumed value of the square root of the site area, based upon USEPA (2002b).

(19) From USEPA 2002b - $A_R = L_R \times W_R * 0.092903$ m2/ft2

(20) Average of surface soil percent moisture results.

(21) From USEPA 2002b - $VKT_{road} = 30$ vehicles $\times L_R \times [(52$ wks/yr$)/2] \times (5$ days/week$) / (1000$ m/km).

(22) From USEPA 2002b - $Q/C_{sr} = A \times \exp[(\ln(A_{surf}) - B)^2/C]$.

(23) From USEPA 2002b - $PEF_{sc_road} = Q/C_{sr} \times (1/F_D) \times T \times A_R / \{[2.6 \times (s/12)^{0.8} \times (W/3)^{0.4}/(M/0.2)^{0.3}] \times [(365-p)/365] \times 281.9 \times \sum VKTroad\}$.

(24) $PEF_{sc_total} = \{1/[(1/PEF_{sc})+(1/PEF_{sc_road})]\}$.

(25) $D_{construct} = 1/PEF_{sc_total}$.

TABLE 15
OUTDOOR AIR EXPOSURE POINT CONCENTRATIONS FROM SOIL
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 1 of 2)

Chemical	Soil Conc. (mg/kg)	Construction Worker Outdoor Air		Non-Construction Worker Outdoor Air	
		PEF/VF[1] (kg/m^3)	Air Conc.[2] (mg/m^3)	PEF/VF[3] (kg/m^3)	Air Conc.[2] (mg/m^3)
Aldehydes					
Formaldehyde[4]	4.0 E-1	2.0 E-5	7.9 E-6	2.0 E-5	7.9 E-6
Inorganics					
Ammonia (as N)	2.2 E+0	8.7 E-8	1.9 E-7	1.0 E-9	2.3 E-9
Cadmium	2.0 E-1	8.7 E-8	1.8 E-8	1.0 E-9	2.1 E-10
Cyanide, Total	7.2 E-1	8.7 E-8	6.3 E-8	1.0 E-9	7.6 E-10
Fluoride	8.0 E-1	8.7 E-8	6.9 E-8	1.0 E-9	8.3 E-10
Mercury	4.5 E-2	8.7 E-8	3.9 E-9	1.0 E-9	4.7 E-11
Nickel	1.9 E+1	8.7 E-8	1.7 E-6	1.0 E-9	2.0 E-8
Nitrate	3.4 E+1	8.7 E-8	3.0 E-6	1.0 E-9	3.5 E-8
Nitrite	6.2 E-1	8.7 E-8	5.4 E-8	1.0 E-9	6.5 E-10
Perchlorate	7.4 E+0	8.7 E-8	6.5 E-7	1.0 E-9	7.8 E-9
Zinc	7.4 E+1	8.7 E-8	6.5 E-6	1.0 E-9	7.8 E-8
Organochlorine Pesticides					
2,4-DDE	3.9 E-3	8.7 E-8	3.4 E-10	1.0 E-9	4.0 E-12
4,4-DDD	7.2 E-4	8.7 E-8	6.3 E-11	1.0 E-9	7.6 E-13
4,4-DDE	9.9 E-3	8.7 E-8	8.6 E-10	1.0 E-9	1.0 E-11
4,4-DDT	5.4 E-3	8.7 E-8	4.7 E-10	1.0 E-9	5.6 E-12
alpha-Chlordane	1.1 E-3	8.7 E-8	9.9 E-11	1.0 E-9	1.2 E-12
beta-BHC	6.6 E-3	8.7 E-8	5.7 E-10	1.0 E-9	6.9 E-12
Chlordane	8.4 E-3	8.7 E-8	7.3 E-10	1.0 E-9	8.8 E-12
gamma-Chlordane	1.2 E-3	8.7 E-8	1.1 E-10	1.0 E-9	1.3 E-12
Methoxychlor	2.9 E-3	8.7 E-8	2.6 E-10	1.0 E-9	3.1 E-12
Polynuclear Aromatic Hydrocarbons					
Acenaphthene	1.1 E-3	8.7 E-8	9.2 E-11	1.0 E-9	1.1 E-12
Acenaphthylene	1.1 E-3	8.7 E-8	9.2 E-11	1.0 E-9	1.1 E-12
Anthracene	1.9 E-3	8.7 E-8	1.7 E-10	1.0 E-9	2.0 E-12
Benzo(a)anthracene	1.0 E-2	8.7 E-8	9.1 E-10	1.0 E-9	1.1 E-11
Benzo(a)pyrene	1.3 E-2	8.7 E-8	1.1 E-9	1.0 E-9	1.3 E-11
Benzo(b)fluoranthene	2.8 E-2	8.7 E-8	2.4 E-9	1.0 E-9	2.9 E-11
Benzo(g,h,i)perylene	6.1 E-3	8.7 E-8	5.3 E-10	1.0 E-9	6.4 E-12

TABLE 15
OUTDOOR AIR EXPOSURE POINT CONCENTRATIONS FROM SOIL
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Chemical	Soil Conc. (mg/kg)	Construction Worker Outdoor Air		Non-Construction Worker Outdoor Air	
		PEF/VF[(1)] (kg/m^3)	Air Conc.[(2)] (mg/m^3)	PEF/VF[(3)] (kg/m^3)	Air Conc.[(2)] (mg/m^3)
Benzo(k)fluoranthene	2.1 E-3	8.7 E-8	1.9 E-10	1.0 E-9	2.2 E-12
Chrysene	2.0 E-2	8.7 E-8	1.8 E-9	1.0 E-9	2.1 E-11
Dibenzo(a,h)anthracene	1.2 E-2	8.7 E-8	1.0 E-9	1.0 E-9	1.2 E-11
Indeno(1,2,3-cd)pyrene	5.9 E-3	8.7 E-8	5.1 E-10	1.0 E-9	6.1 E-12
Phenanthrene	8.5 E-3	8.7 E-8	7.4 E-10	1.0 E-9	8.9 E-12
Pyrene	2.6 E-2	8.7 E-8	2.3 E-9	1.0 E-9	2.7 E-11
Semi-Volatile Organic Compounds					
bis(2-Ethylhexyl) phthalate	2.3 E-1	8.7 E-8	2.0 E-8	1.0 E-9	2.4 E-10
Volatile Organic Compounds					
1,2,4-Trimethylbenzene	6.9 E-4	NA	NA	NA	NA
Dichloromethane (Methylene chlo	9.9 E-3	NA	NA	NA	NA
Ethylbenzene	6.5 E-5	NA	NA	NA	NA

Notes:

(1) Construction worker PEF from Table 14; PEF was used for the soil VOCs with exception of the aldehydes.

(2) Soil concentration × PEF

(3) Default PEF from Closure Plan used.

(4) Surface flux data were used to estimate exposures to volatiles (see Table 12), however, aldehydes were not included on the surface flux analyte list. Therefore outdoor volatililization exposures for aldehydes were modeled using the VF.

TABLE 16
PLANT UPTAKE FACTORS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Chemical	Aboveground Plant[1] Uptake Factor mg/kg plant DW/mg/kg soil	Belowground Plant[1] Uptake Factor mg/kg plant DW/mg/kg soil	Reference
Inorganics			
Ammonia (as N)	NA	NA	Closure Plan
Cadmium	1.3 E-1	6.4 E-2	USEPA 2005b
Cyanide, Total	NA	NA	Closure Plan
Fluoride	NA	NA	Closure Plan
Mercury	NA	NA	Closure Plan
Nickel	NA	NA	Closure Plan
Nitrate	NA	NA	Closure Plan
Nitrite	NA	NA	Closure Plan
Perchlorate	NA	NA	see text
Zinc	NA	NA	Closure Plan
Aldehydes			
Formaldehyde	2.4 E+1	4.3 E-1	USEPA 2005b
Organochlorine Pesticides			
2,4-DDE	9.4 E-5	7.4 E-4	USEPA 2005b
4,4-DDE	9.4 E-5	7.4 E-4	USEPA 2005b
4,4-DDD	1.3 E-4	2.2 E-3	USEPA 2005b
4,4-DDT	1.2 E-4	9.0 E-4	USEPA 2005b
alpha-Chlordane	1.4 E-4	1.6 E-2	USEPA 2005b
beta-BHC	2.4 E-1	1.6 E+0	USEPA 2005b
Chlordane	1.4 E-4	1.6 E-2	USEPA 2005b
gamma-Chlordane	1.4 E-4	1.6 E-2	USEPA 2005b
Methoxychlor	4.5 E-4	4.2 E-3	USEPA 2005b
Semi-Volatile Organic Compounds			
Acenaphthene	2.1 E-1	1.1 E+0	USEPA 2005b
Acenaphthylene	2.0 E-1	3.6 E+0	USEPA 2005b
Anthracene	1.0 E-3	5.7 E-3	USEPA 2005b
Benzo(a)anthracene	2.0 E-4	3.0 E-3	USEPA 2005b
Benzo(a)pyrene	1.1 E-4	2.6 E-3	USEPA 2005b
Benzo(b)fluoranthene	1.0 E-4	2.4 E-3	USEPA 2005b
Benzo(g,h,i)perylene	8.4 E-1	8.6 E-3	USEPA 2005b
Benzo(k)fluoranthene	1.0 E-4	2.4 E-3	USEPA 2005b

TABLE 16
PLANT UPTAKE FACTORS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 2 of 2)

Chemical	Aboveground Plant[1] Uptake Factor mg/kg plant DW/mg/kg soil	Belowground Plant[1] Uptake Factor mg/kg plant DW/mg/kg soil	Reference
bis(2-Ethylhexyl) phthalate	1.6 E-5	2.4 E-3	USEPA 2005b
Chrysene	1.9 E-4	3.3 E-3	USEPA 2005b
Dibenzo(a,h)anthracene	4.9 E-5	2.0 E-2	USEPA 2005b
Indeno(1,2,3-cd)pyrene	3.9 E-5	3.1 E-3	USEPA 2005b
Phenanthrene	1.0 E-3	3.7 E-2	USEPA 2005b
Pyrene	2.3 E+0	2.0 E-3	USEPA 2005b
Volatile Organic Compounds			
1,2,4-Trimethylbenzene	4.4 E+0	3.8 E-3	USEPA 2005b
Dichloromethane (Methylene chloride)	7.3 E+0	6.0 E-1	USEPA 2005b
Ethylbenzene	6.1 E-1	3.6 E+0	USEPA 2005b

(1) Calculations were performed as identified in the Closure Plan (BRC and ERM 2007) as shown in USEPA 2005 - Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities.

TABLE 17
RESIDENTIAL EXPOSURE FACTORS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 1 of 1)

Parameter	Abbrev.	Value	Units	Reference
Dermal absorption fraction	ABS	---chemical-specific---		see text
Soil-plant bioconcentration factors	Br	---chemical-specific---		see text
Dermal adherence factor, adult	AF_a	0.07	mg/cm^2	Closure Plan
Dermal adherence factor, child	AF_c	0.2	mg/cm^2	Closure Plan
Averaging time, carcinogenic	AT_c	70	years	Closure Plan
Averaging time, carcinogenic (inhalation)	AT_c	613200	hours	Closure Plan
Averaging time, non-carcinogenic	AT_{nc}	6	years	Closure Plan
Averaging time, non-carcinogenic (inhalation)	AT_{nc}	52560	hours	Closure Plan
Adult body weight	BW_a	70	kg	Closure Plan
Child body weight	BW_c	15	kg	Closure Plan
Exposure frequency	EF_r	350	days/year	Closure Plan
Exposure duration - child	ED_{rc}	6	years	Closure Plan
Exposure duration - child (inhalation)	ED_{rc}	52560	hours	Closure Plan
Exposure duration - adult (for age-weighted)	ED_{ra}	24	years	Closure Plan
Exposure duration - adult (for age-weighted; inhalation)	ED_{ra}	210240	hours	Closure Plan
Exposure duration	EDr	30	years	Closure Plan
Exposure duration (inhalation)	EDr	262800	hours	Closure Plan
Exposure time - outdoors (inhalation only)	ET_o	2.0	hours	Closure Plan
Exposure time - indoors (inhalation only)	ET_i	16.7	hours	Closure Plan
Dilution factor for outdoor-to-indoor air	DF_i	0.4	unitless	Closure Plan
Available skin surface area, adult	SA_a	5,700	cm^2/day	Closure Plan
Available skin surface area, child	SA_c	2,800	cm^2/day	Closure Plan
Fruit/vegetable ingestion rate, aboveground, child	$CR_{ag,c}$	0.0179	kg DW/d	Closure Plan
Fruit/vegetable ingestion rate, belowground, child	$CR_{bg,c}$	0.0033	kg DW/d	Closure Plan
Fruit/vegetable ingestion rate, aboveground, adult	$CR_{ag,a}$	0.0609	kg DW/d	Closure Plan
Fruit/vegetable ingestion rate, belowground, adult	$CR_{bg,a}$	0.0098	kg DW/d	Closure Plan
Contaminated plant fraction from the site	CPF	0.25	--	Closure Plan
Adult soil ingestion rate	$IR_{s,a}$	100	mg/day	Closure Plan
Child soil ingestion rate	$IR_{s,c}$	200	mg/day	Closure Plan
Soil ingestion, noncancer	--	1.28 E-5	day^{-1}	Calculated
Soil ingestion, cancer	--	1.57 E-6	day^{-1}	Calculated
Soil dermal contact, noncancer	--	3.58 E-5	day^{-1}	Calculated
Soil dermal contact, cancer	--	4.94 E-6	day^{-1}	Calculated
Inhalation, soil-dust, outdoor, noncancer	--	7.99 E-2	unitless	Calculated
Inhalation, soil-dust, outdoor, cancer	--	3.42 E-2	unitless	Calculated
Inhalation, soil-volatiles, outdoor, noncancer	--	6.85 E-3	unitless	Calculated
Inhalation, soil-volatiles, outdoor, cancer	--	3.42 E-2	unitless	Calculated
Fruit/Vegetable ingestion, noncancer - aboveground	--	2.86 E-4	day^{-1}	Calculated
Fruit/Vegetable ingestion, noncancer - belowground	--	5.27 E-5	day^{-1}	Calculated
Fruit/Vegetable ingestion, cancer - aboveground	--	9.60 E-5	day^{-1}	Calculated
Fruit/Vegetable ingestion, cancer - belowground	--	1.60 E-5	day^{-1}	Calculated
Inhalation, soil-dust, indoor, noncancer	--	2.67 E-1	unitless	Calculated
Inhalation, soil-dust, indoor, cancer	--	1.14 E-1	unitless	Calculated

TABLE 18
WORKERS EXPOSURE FACTORS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter	Abbrev.	Value	Units	Reference
Dermal absorption fraction	ABS	---chemical-specific--		see text
Maintenance worker dermal adherence factor	AF_{mw}	0.2	mg/cm^2	Closure Plan
Commercial worker dermal adherence factor	AF_{cmw}	NA	mg/cm^2	Closure Plan
Construction worker dermal adherence factor	AF_{cw}	0.3	mg/cm^2	Closure Plan
Averaging time, carcinogenic	AT_c	70	years	Closure Plan
Averaging time, carcinogenic (inhalation)	AT_c	613200	hours	Closure Plan
Averaging time, non-carcinogenic, maintenance/commercial worker	AT_{nc}	25	years	Closure Plan
Averaging time, non-carcinogenic, maintenance/commercial worker (inhalation)	AT_{nc}	219000	hours	Closure Plan
Averaging time, non-carcinogenic, construction worker	$AT_{nc,c}$	1	years	Closure Plan
Averaging time, non-carcinogenic, construction worker (inhalation)	$AT_{nc,c}$	8760	hours	Closure Plan
Adult body weight	BW_a	70	kg	Closure Plan
Maintenance worker exposure frequency	EF_{mw}	225	days/year	Closure Plan
Commercial worker exposure frequency	EF_{cmw}	250	days/year	Closure Plan
Construction worker exposure frequency	EF_{cmw}	250	days/year	Closure Plan
Exposure duration, maintenance/commercial worker	ED	25	years	Closure Plan
Exposure duration, maintenance/commercial worker (inhalation)	ED	219000	hours	Closure Plan
Exposure duration, construction worker	ED	1	years	Closure Plan
Exposure duration, construction worker (inhalation)	ED	8760	hours	Closure Plan
Maintenance worker exposed surface area	SA_{mw}	3,300	cm^2/day	Closure Plan
Construction worker exposed surface area	SA_{mw}	3,300	cm^2/day	Closure Plan
Commercial worker exposed surface area	SA_{cmw}	NA	cm^2/day	Closure Plan
Maintenance worker soil ingestion rate	$IR_{s,mw}$	100	mg/day	Closure Plan
Commercial worker soil ingestion rate	$IR_{s,cmw}$	50	mg/day	Closure Plan
Construction worker soil ingestion rate	$IR_{s,cmw}$	330	mg/day	Closure Plan
Commercial worker exposure time, indoors	$ET_{cmw,i}$	8	based on 8 hr/d	Closure Plan
Commercial worker exposure time, outdoors	$ET_{cmw,o}$	0	indoor worker	Closure Plan
Maintenance worker exposure time, indoors	$ET_{mw,i}$	0	outdoor worker	Closure Plan
Maintenance worker exposure time, outdoors	$ET_{mw,o}$	8	based on 8 hr/d	Closure Plan
Soil ingestion, non-cancer, commercial worker	--	4.89 E-7	day^{-1}	Calculated
Soil ingestion, cancer, commercial worker	--	1.75 E-7	day^{-1}	Calculated
Soil ingestion, non-cancer, maintenance worker	--	8.81 E-7	day^{-1}	Calculated
Soil ingestion, cancer, maintenance worker	--	3.15 E-7	day^{-1}	Calculated
Soil dermal contact, non-cancer, maintenance worker	--	5.81 E-6	day^{-1}	Calculated
Soil dermal contact, cancer, maintenance worker	--	2.08 E-6	day^{-1}	Calculated
Inhalation, fugitive-dust, outdoor, non-cancer, maintenance worker	--	2.05 E-1	unitless	Calculated
Inhalation, fugitive-dust, outdoor, cancer, maintenance worker	--	7.34 E-2	unitless	Calculated
Soil ingestion, noncancer, construction worker	--	3.23 E-6	day^{-1}	Calculated
Soil ingestion, cancer, construction worker	--	4.61 E-8	day^{-1}	Calculated
Soil dermal contact, noncancer, construction worker	--	9.69 E-6	day^{-1}	Calculated
Soil dermal contact, cancer, construction worker	--	1.38 E-7	day^{-1}	Calculated
Inhalation, soil-dust, outdoor, noncancer, construction worker	--	2.28 E-1	unitless	Calculated
Inhalation, soil-dust, outdoor, cancer, construction worker	--	3.26 E-3	unitless	Calculated

Note: Exposure parameters for maintenance workers and commerical workers are based on outdoor and indoor commercial/industrial worker exposure factors, respectively, from USEPA, 2002b.

TABLE 19
TOXICITY CRITERIA FOR SURFACE FLUX
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Compound	Cancer IUR 1/(µg/m^3)		Non-Cancer RfC (mg/m^3)	
1,1,1,2-Tetrachloroethane	7.4 E-6	I	--	
1,1,1-Trichloroethane	--		5.0 E+0	I
1,1,2,2-Tetrachloroethane	5.8 E-5	I	--	
1,1,2-Trichloroethane	1.6 E-5	I	--	
1,1-Dichloroethane	1.6 E-6	CA	--	
1,1-Dichloroethene	--		2.0 E-1	I
1,1-Dichloropropene	--		2.0 E-2	S
1,2,3-Trichloropropane	--		3.0 E-4	I
1,2,4-Trichlorobenzene	--		4.0 E-3	P
1,2,4-Trimethylbenzene	--		7.0 E-3	P
1,2-Dibromoethane	6.0 E-4	I	9.0 E-3	I
1,2-Dichlorobenzene	--		2.0 E-1	H
1,2-Dichloroethane	2.6 E-5	I	2.4 E+0	A
1,2-Dichloropropane	1.0 E-5	CA	4.0 E-3	I
1,3,5-Trimethylbenzene	--		7.0 E-3	P
1,3-Dichlorobenzene	--		2.0 E-1	S
1,3-Dichloropropane	--		4.0 E-3	S
1,4-Dichlorobenzene	1.1 E-5	CA	8.0 E-1	I
1,4-Dioxane	7.7 E-6	CA	3.6 E+0	A
2,2-Dichloropropane	--		4.0 E-3	S
2-Hexanone	--		3.0 E-2	I
2-Methyl-1-propanol	--		7.0 E+0	S
4-Methyl-2-pentanone (MIBK)	--		3.0 E+0	I
Acetone	--		3.1 E+1	A
Acetonitrile	--		6.0 E-2	I
Benzene	7.8 E-6	I	3.0 E-2	I
Benzyl chloride	--		1.0 E-3	P
Bromodichloromethane	--		1.0 E+0	S
Bromoform	1.1 E-6	I	--	
Bromomethane	--		5.0 E-3	I
Carbon disulfide	--		7.0 E-1	I
Carbon tetrachloride	1.5 E-5	I	1.9 E-1	A
Chlorobenzene	--		5.0 E-2	P
Chlorobromomethane	--		4.0 E-3	S
Chloroethane	--		1.0 E+1	I
Chloroform	2.3 E-5	I	9.8 E-2	A
Chloromethane	1.8 E-6	H	9.0 E-2	I
cis-1,2-Dichloroethene	--		6.0 E-2	S

TABLE 19
TOXICITY CRITERIA FOR SURFACE FLUX
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Compound	Cancer IUR 1/(µg/m^3)		Non-Cancer RfC (mg/m^3)	
cis-1,3-Dichloropropene	4.0 E-6	I	2.0 E-2	I
Cymene (Isopropyltoluene)	--		4.0 E-1	S
Dibromochloromethane	2.7 E-5	CA	--	
Dibromochloropropane	6.0 E-3	P	2.0 E-4	I
Dibromomethane	--		4.0 E-3	S
Dichloromethane (Methylene chloride)	4.7 E-7	I	1.1 E+0	A
Ethanol	--		1.0 E+2	CA
Ethylbenzene	2.5 E-6	CA	1.0 E+0	I
Freon-11 (Trichlorofluoromethane)	--		7.0 E-1	H
Freon-113 (1,1,2-Trifluoro-1,2,2-trichloroethane)	--		3.0 E+1	H
Freon-12 (Dichlorodifluoromethane)	--		2.0 E-1	H
Heptane	--		7.0 E+0	S
Hexachlorobutadiene	2.2 E-5	I	--	
Isopropylbenzene	--		4.0 E-1	I
m & p-Xylenes	--		1.0 E-1	I
Methyl ethyl ketone (2-Butanone)	--		5.0 E+0	I
Methyl iodide	--		1.7 E-1	S
MTBE (Methyl tert-butyl ether)	2.6 E-7	CA	3.0 E+0	I
Naphthalene	3.4 E-5	CA	3.0 E-3	I
n-Butylbenzene	--		4.0 E-1	S
n-Propylbenzene	--		4.0 E-1	S
o-Xylene	--		1.0 E-1	I
sec-Butylbenzene	--		4.0 E-1	S
Styrene	--		1.0 E+0	I
tert-Butylbenzene	--		4.0 E-1	S
Tetrachloroethene	5.9 E-6	CA	2.7 E-1	A
Toluene	--		5.0 E+0	I
Total Xylenes	--		1.0 E-1	I
trans-1,2-Dichloroethene	--		6.0 E-2	P
trans-1,3-Dichloropropene	4.0 E-6	I	2.0 E-2	I
Trichloroethene	2.0 E-6	CA	--	
Vinyl acetate	--		2.0 E-1	I
Vinyl chloride	4.4 E-6	I	1.0 E-1	I

Key:
A = ATSDR
H = HEAST (USEPA 1997)
I = IRIS (USEPA 2010)
CA = Cal/EPA (from NDEP 2010a)
P = USEPA EPA PPRTV (from NDEP 2010a)
S = NDEP Surrogate (from NDEP 2010a)

TABLE 20
NON-CANCER TOXICITY CRITERIA FOR SOIL
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 1 of 2)

Chemical	Inhalation - Chronic		Inhalation - Subchronic		Oral[(1)] - Chronic		Oral[(1)] - Subchronic		Oral BIO	Dermal ABS[(2)]
	Value (mg/m^3)	Reference	Value (mg/m^3)	Reference	Value (mg/kg/day)	Reference	Value (mg/kg/day)	Reference		
Inorganics										
Ammonia (as N)	1.0 E-1	USEPA 2010	1.0 E-1	Chronic	NA		NA		1.0	NA
Cadmium	1.0 E-5	ATSDR	1.0 E-5	Chronic	1.0 E-3	USEPA 2010	1.0 E-3	Chronic	1.0	0.001
Cyanide, Total	8.0 E-4	USEPA 2010	8.0 E-4	Chronic	6.0 E-4	USEPA 2010	6.0 E-4	Chronic	1.0	0.1
Fluoride	NA		NA		6.0 E-2	USEPA 2010	6.0 E-2	Chronic	1.0	0.1
Mercury	NA		NA		3.0 E-4	USEPA 2010	3.0 E-4	Chronic	1.0	NA
Nickel	9.0 E-5	ATSDR	9.0 E-5	Chronic	2.0 E-2	USEPA 2010	2.0 E-2	USEPA 1997	1.0	NA
Nitrate	NA		NA		NA		NA		1.0	NA
Nitrite	NA		NA		NA		NA		1.0	NA
Perchlorate	NA		NA		7.0 E-4	USEPA 2010	7.0 E-4	Chronic	1.0	NA
Zinc	NA		NA		3.0 E-1	USEPA 2010	3.0 E-1	Chronic	1.0	NA
Organic Compounds										
1,2,4-Trimethylbenzene	7.0 E-3	PPRTV	7.0 E-3	Chronic	NA		NA		NA	NA
2,4-DDE	NA		NA		NA		NA		1.0	0.03
4,4-DDE	NA		NA		NA		NA		1.0	0.03
4,4-DDD	NA		NA		NA		NA		1.0	0.03
4,4-DDT	NA		NA		5.0 E-4	USEPA 2010	5.0 E-4	USEPA 1997	1.0	0.03
Acenaphthene	3.0 E-3	naphthalene as surrogate	3.0 E-3	Chronic	6.0 E-2	USEPA 2010	6.0 E-2	Chronic	1.0	0.13
Acenaphthylene	3.0 E-3	naphthalene as surrogate	3.0 E-3	Chronic	3.0 E-2	pyrene as surrogate	3.0 E-2	Chronic	1.0	0.13
Anthracene	3.0 E-3	naphthalene as surrogate	3.0 E-3	Chronic	3.0 E-1	USEPA 2010	3.0 E-1	Chronic	1.0	0.13
alpha-Chlordane	7.0 E-4	USEPA 2010	7.0 E-4	Chronic	5.0 E-4	USEPA 2010	5.0 E-4	USEPA 2010	1.0	0.04
Benzene	3.0 E-2	USEPA 2010	3.0 E-2	Chronic	NA		NA		NA	NA
Benzo(a)anthracene	NA		NA		3.0 E-2	pyrene as surrogate	3.0 E-2	Chronic	1.0	0.13
Benzo(a)pyrene	NA		NA		3.0 E-2	pyrene as surrogate	3.0 E-2	Chronic	1.0	0.13
Benzo(b)fluoranthene	NA		NA		3.0 E-2	pyrene as surrogate	3.0 E-2	Chronic	1.0	0.13
Benzo(g,h,i)perylene	3.0 E-3	naphthalene as surrogate	NA		3.0 E-2	pyrene as surrogate	3.0 E-2	Chronic	1.0	0.13
Benzo(k)fluoranthene	NA		NA		3.0 E-2	USEPA 2010	3.0 E-2	Chronic	1.0	0.13
beta-BHC	NA		NA		NA		NA		1.0	0.04
bis(2-Ethylhexyl) phthalate	NA		NA		2.0 E-2	USEPA 2010	2.0 E-2	Chronic	1.0	0.1
Chlordane	7.0 E-4	USEPA 2010	7.0 E-4	Chronic	5.0 E-4	USEPA 2010	5.0 E-4	Chronic	1.0	0.04
Chrysene	NA		NA		3.0 E-2	pyrene as surrogate	3.0 E-2	Chronic	1.0	0.13
Dibenzo(a,h)anthracene	NA		NA		3.0 E-2	pyrene as surrogate	3.0 E-2	Chronic	1.0	0.13
Dichloromethane (Methylene chloride)	1.1 E+0	ATSDR	3.0 E+0	USEPA 1997	6.0 E-2	USEPA 2010	6.0 E-2	USEPA 1997	1.0	0.1
Ethylbenzene	1.0 E+0	USEPA 2010	1.0 E+0	Chronic	1.0 E-1	USEPA 2010	1.0 E-1	Chronic	1.0	0.1

TABLE 20
NON-CANCER TOXICITY CRITERIA FOR SOIL
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Chemical	Inhalation - Chronic		Inhalation - Subchronic		Oral[(1)] - Chronic		Oral[(1)] - Subchronic		Oral BIO	Dermal ABS[(2)]
	Value (mg/m^3)	Reference	Value (mg/m^3)	Reference	Value (mg/kg/day)	Reference	Value (mg/kg/day)	Reference		
Formaldehyde	9.8 E-3	ATSDR	9.8 E-3	Chronic	2.0 E-1	USEPA 2010	2.0 E-1	USEPA 1997	1.0	0.1
gamma-Chlordane	7.0 E-4	USEPA 2010	7.0 E-4	Chronic	5.0 E-4	USEPA 2010	5.0 E-4	Chronic	1.0	0.04
Indeno(1,2,3-cd)pyrene	NA		NA		3.0 E-2	pyrene as surrogate	3.0 E-2	Chronic	1.0	0.13
Methoxychlor	NA		NA		5.0 E-3	USEPA 2010	5.0 E-3	Chronic	1.0	0.1
Phenanthrene	3.0 E-3	naphthalene as surrogate	3.0 E-3	Chronic	3.0 E-2	pyrene as surrogate	3.0 E-2	Chronic	1.0	0.13
Pyrene	NA		NA		3.0 E-2	USEPA 2010	3.0 E-2	Chronic	1.0	0.13

Notes

Values obtained from NDEP (2010a).

NA = Not applicable. Data is either not applicable for this chemical or not available.

BIO = bioavailability

ABS = dermal absorption efficiency

ATSDR = Agency of Toxic Substances and Disease Registry, as referenced in NDEPs BCL Tables (NDEP 2010a).

PPRTV = Provisional Peer Reviewed Toxicity Values, National Center for Environmental Assessment (USEPA), as referenced in NDEPs BCL Tables (NDEP 2010a).

(1) Cr(III), Cr(VI), mercury, nickel and vanadium required the adjustment of the oral toxicity criteria for the dermal soil exposure pathway (USEPA 2004e).

(2) Dermal absorption factors obtained from USEPA 2004e.

TABLE 21
CANCER TOXICITY CRITERIA FOR SOIL
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Chemical	Inhalation		Oral[1]		Oral BIO	Dermal ABS[2]
	Value $(\mu g/m^3)^{-1}$	Reference	Value $(mg/kg\text{-}day)^{-1}$	Reference		
Inorganics						
Ammonia (as N)	NA		NA		1.0	NA
Cadmium	1.8 E-3	USEPA 2010	NA		1.0	0.001
Cyanide, Total	NA		NA		1.0	0.1
Fluoride	NA		NA		1.0	0.1
Mercury	NA		NA		1.0	NA
Nickel	2.6 E-4	Cal/EPA	NA		1.0	NA
Nitrate	NA		NA		1.0	NA
Nitrite	NA		NA		1.0	NA
Perchlorate	NA		NA		1.0	NA
Zinc	NA		NA		1.0	NA
Organic Compounds						
1,2,4-Trimethylbenzene	NA		NA		NA	NA
2,4-DDE	9.7 E-5	4,4-DDE as surrogate	3.4 E-1	4,4-DDE as surrogate	1.0	0.03
4,4-DDE	9.7 E-5	Cal/EPA	3.4 E-1	USEPA 2010	1.0	0.03
4,4-DDD	6.9 E-5	Cal/EPA	2.4 E-1	USEPA 2010	1.0	0.03
4,4-DDT	9.7 E-5	Cal/EPA	3.4 E-1	USEPA 2010	1.0	0.03
Acenaphthene	NA		NA		1.0	0.13
Acenaphthylene	NA		NA		1.0	0.13
Anthracene	NA		NA		1.0	0.13
alpha-Chlordane	1.0 E-4	USEPA 2010	3.5 E-1	USEPA 2010	1.0	0.04
Benzene	7.8 E-6	USEPA 2010	NA		NA	NA
Benzo(a)anthracene	1.1 E-4	Cal/EPA	7.3 E-1	USEPA 1993	1.0	0.13
Benzo(a)pyrene	1.1 E-3	Cal/EPA	7.3 E+0	USEPA 2010	1.0	0.13
Benzo(b)fluoranthene	1.1 E-4	Cal/EPA	7.3 E-1	USEPA 1993	1.0	0.13
Benzo(g,h,i)perylene	NA		NA		1.0	0.13
Benzo(k)fluoranthene	1.1 E-4	Cal/EPA	7.3 E-2	USEPA 1993	1.0	0.13
beta-BHC	5.3 E-4	USEPA 2010	1.8 E+0	USEPA 2010	1.0	0.04
bis(2-Ethylhexyl) phthalate	2.4 E-6	Cal/EPA	1.4 E-2	USEPA 2010	1.0	0.10
Chlordane	1.0 E-4	USEPA 2010	3.5 E-1	USEPA 2010	1.0	0.04
Chrysene	1.1 E-5	Cal/EPA	7.3 E-3	USEPA 1993	1.0	0.13
Dibenzo(a,h)anthracene	1.2 E-3	Cal/EPA	7.3 E+0	USEPA 1993	1.0	0.13
Dichloromethane (Methylene chloride)	4.7 E-7	USEPA 2010	7.5 E-3	USEPA 2010	1.0	0.10
Ethylbenzene	2.5 E-6	Cal/EPA	1.1 E-2	Cal/EPA	NA	NA

TABLE 21
CANCER TOXICITY CRITERIA FOR SOIL
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 2 of 2)

Chemical	Inhalation		Oral[(1)]		Oral BIO	Dermal ABS[(2)]
	Value $(\mu g/m^3)^{-1}$	Reference	Value $(mg/kg\text{-}day)^{-1}$	Reference		
Formaldehyde	1.3 E-5	USEPA 2010	NA		1.0	0.10
gamma-Chlordane	1.0 E-4	USEPA 2010	3.5 E-1	USEPA 2010	1.0	0.04
Indeno(1,2,3-cd)pyrene	1.1 E-4	Cal/EPA	7.3 E-1	USEPA 1993	1.0	0.13
Methoxychlor	NA		NA		1.0	0.10
Phenanthrene	NA		NA		1.0	0.13
Pyrene	NA		NA		1.0	0.13

Notes

Values obtained from NDEP (2010a).

NA = Not applicable. Data is either not applicable for this chemical (*i.e.* , not carcinogenic) or not available.

BIO = bioavailability - NOTE: The basis for the arsenic oral bioavailability is presented in Closure Plan.

ABS = dermal absorption efficiency

(1) No COPCs required oral toxicity criteria adjustment for the dermal soil exposure pathway (USEPA 2004e).

(2) Dermal absorption factors obtained from USEPA 2004e.

TABLE 22
CHEMICAL RISK SUMMARY FOR RESIDENTIAL RECEPTORS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 1 of 2)

Receptor	HI	Target Organ	Target Organ HIs	ILCR
Future On-Site Resident				
Soil, Dermal, Homegrown Produce and Dust	0.20			1 E-6
Volatile Inhalation (from Flux)[1]	0.00009-0.0053	--	--	5 E-8 - 1 E-6
Combined	0.20			1 E-6 - 2 E-6

Chemical	Soil Conc. (mg/kg)	Oral HQ	Dermal HQ	Homegrown Produce HQ	Indoor Dust Inhal HQ	Outdoor Dust Inhal HQ	Total HI	Oral ILCR	Dermal ILCR	Homegrown Produce ILCR	Indoor Dust Inhal ILCR	Outdoor Dust Inhal ILCR	Total ILCR
Aldehydes[2]													
Formaldehyde	4.0 E-1	2.6 E-5	7.1 E-6	1.4 E-2	2.2 E-4	6.4 E-5	1.4 E-2	NA	NA	NA	1 E-8	4 E-9	2 E-8
Inorganics													
Ammonia (as N)	2.2 E+0	NA	NA	NA	6.7 E-9	2.0 E-9	8.7 E-9	NA	NA	NA	NA	NA	NA
Cadmium	2.0 E-1	2.6 E-3	2.9 E-4	7.9 E-3	4.2 E-6	1.3 E-6	1.1 E-2	NA	NA	NA	5 E-11	1 E-11	6 E-11
Cyanide, Total	7.2 E-1	1.5 E-2	4.3 E-3	NA	2.8 E-7	8.4 E-8	2.0 E-2	NA	NA	NA	NA	NA	NA
Fluoride	8.0 E-1	1.7 E-4	4.7 E-5	NA	NA	NA	2.2 E-4	NA	NA	NA	NA	NA	NA
Mercury	4.5 E-2	1.9 E-3	NA	NA	NA	NA	1.9 E-3	NA	NA	NA	NA	NA	NA
Nickel	1.9 E+1	1.2 E-2	NA	NA	6.6 E-5	2.0 E-5	1.2 E-2	NA	NA	NA	7 E-10	2 E-10	9 E-10
Nitrate	3.4 E+1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	6.2 E-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Perchlorate	7.4 E+0	1.4 E-1	NA	NA	NA	NA	1.4 E-1	NA	NA	NA	NA	NA	NA
Zinc	7.4 E+1	3.2 E-3	NA	NA	NA	NA	3.2 E-3	NA	NA	NA	NA	NA	NA
Organochlorine Pesticides													
2,4-DDE	3.9 E-3	NA	NA	NA	NA	NA	NA	2 E-9	2 E-10	3 E-11	5 E-14	1 E-14	2 E-9
4,4-DDD	7.2 E-4	NA	NA	NA	NA	NA	NA	3 E-10	3 E-11	8 E-12	7 E-15	2 E-15	3 E-10
4,4-DDE	9.9 E-3	NA	NA	NA	NA	NA	NA	5 E-9	5 E-10	7 E-11	1 E-13	4 E-14	6 E-9
4,4-DDT	5.4 E-3	1.4 E-4	1.2 E-5	8.8 E-7	NA	NA	1.5 E-4	3 E-9	3 E-10	5 E-11	7 E-14	2 E-14	3 E-9
alpha-Chlordane	1.1 E-3	2.9 E-5	3.2 E-6	2.0 E-6	5.0 E-10	1.5 E-10	3.4 E-5	6 E-10	8 E-11	1 E-10	2 E-14	5 E-15	8 E-10
beta-BHC	6.6 E-3	NA	NA	NA	NA	NA	NA	2 E-8	2 E-9	6 E-7	5 E-13	1 E-13	6 E-7
Chlordane	8.4 E-3	2.1 E-4	2.4 E-5	1.5 E-5	3.7 E-9	1.1 E-9	2.5 E-4	5 E-9	6 E-10	8 E-10	1 E-13	3 E-14	6 E-9
gamma-Chlordane	1.2 E-3	3.1 E-5	3.5 E-6	2.1 E-6	5.4 E-10	1.6 E-10	3.7 E-5	7 E-10	8 E-11	1 E-10	2 E-14	5 E-15	9 E-10
Methoxychlor	2.9 E-3	7.5 E-6	2.1 E-6	2.1 E-7	NA	NA	9.8 E-6	NA	NA	NA	NA	NA	NA
Polynuclear Aromatic Hydrocarbons													
Acenaphthene	1.1 E-3	2.2 E-7	8.1 E-8	2.0 E-6	1.1 E-10	3.3 E-11	2.3 E-6	NA	NA	NA	NA	NA	NA
Acenaphthylene	1.1 E-3	4.5 E-7	1.6 E-7	8.7 E-6	1.1 E-10	3.3 E-11	9.4 E-6	NA	NA	NA	NA	NA	NA
Anthracene	1.9 E-3	8.3 E-8	3.0 E-8	3.9 E-9	2.0 E-10	6.0 E-11	1.2 E-7	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	1.0 E-2	4.4 E-6	1.6 E-6	7.5 E-8	NA	NA	6.1 E-6	1 E-8	5 E-9	5 E-10	2 E-13	5 E-14	2 E-8
Benzo(a)pyrene	1.3 E-2	5.3 E-6	1.9 E-6	7.0 E-8	NA	NA	7.3 E-6	1 E-7	6 E-8	5 E-9	2 E-12	5 E-13	2 E-7

TABLE 22
CHEMICAL RISK SUMMARY FOR RESIDENTIAL RECEPTORS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Receptor	HI	Target Organ	Target Organ HIs	ILCR
Future On-Site Resident				
Soil, Dermal, Homegrown Produce and Dust	0.20			1 E-6
Volatile Inhalation (from Flux)(1)	0.00009-0.0053	--	--	5 E-8 - 1 E-6
Combined	0.20			1 E-6 - 2 E-6

Chemical	Soil Conc. (mg/kg)	Oral HQ	Dermal HQ	Homegrown Produce HQ	Indoor Dust Inhal HQ	Outdoor Dust Inhal HQ	Total HI	Oral ILCR	Dermal ILCR	Homegrown Produce ILCR	Indoor Dust Inhal ILCR	Outdoor Dust Inhal ILCR	Total ILCR
Benzo(b)fluoranthene	2.8 E-2	1.2 E-5	4.3 E-6	1.5 E-7	NA	NA	1.6 E-5	3 E-8	1 E-8	1 E-9	4 E-13	1 E-13	5 E-8
Benzo(g,h,i)perylene	6.1 E-3	2.6 E-6	9.4 E-7	4.9 E-5	6.3 E-10	1.9 E-10	5.2 E-5	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	2.1 E-3	9.1 E-7	3.3 E-7	1.1 E-8	NA	NA	1.3 E-6	2 E-10	1 E-10	8 E-12	3 E-14	9 E-15	4 E-10
Chrysene	2.0 E-2	8.6 E-6	3.1 E-6	1.5 E-7	NA	NA	1.2 E-5	2 E-10	9 E-11	1 E-11	3 E-14	9 E-15	3 E-10
Dibenzo(a,h)anthracene	1.2 E-2	5.0 E-6	1.8 E-6	4.2 E-7	NA	NA	7.3 E-6	1 E-7	6 E-8	3 E-8	2 E-12	6 E-13	2 E-7
Indeno(1,2,3-cd)pyrene	5.9 E-3	2.5 E-6	9.1 E-7	3.4 E-8	NA	NA	3.4 E-6	7 E-9	3 E-9	2 E-10	9 E-14	3 E-14	1 E-8
Phenanthrene	8.5 E-3	3.6 E-6	1.3 E-6	6.4 E-7	8.8 E-10	2.6 E-10	5.6 E-6	NA	NA	NA	NA	NA	NA
Pyrene	2.6 E-2	1.1 E-5	4.0 E-6	5.7 E-4	2.7 E-9	8.0 E-10	5.8 E-4	NA	NA	NA	NA	NA	NA
Semi-Volatile Organic Compounds													
bis(2-Ethylhexyl) phthalate	2.3 E-1	1.5 E-4	4.1 E-5	1.5 E-6	NA	NA	1.9 E-4	5 E-9	2 E-9	1 E-10	7 E-14	2 E-14	7 E-9
Volatile Organic Compounds													
1,2,4-Trimethylbenzene	6.9 E-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichloromethane (Methylene chlor	9.9 E-3	2.1 E-6	0.0 E+0	3.5 E-4	NA	NA	3.5 E-4	1 E-10	0 E+0	5 E-8	NA	NA	5 E-8
Ethylbenzene	6.5 E-5	8.3 E-9	0.0 E+0	2.3 E-7	NA	NA	2.4 E-7	1 E-12	0 E+0	8 E-11	NA	NA	8 E-11
Total		0.17	0.0048	0.023	0.00029	0.000086	0.20	4 E-7	1 E-7	7 E-7	1 E-8	4 E-9	1 E-6

HQ = hazard quotient
HI - hazard index
ILCR = incremental lifetime cancer risk
(1) Note that risk estimates for surface flux data were done on a sample-by-sample basis, therefore, risks are presented as a range. See Appendix H for sample-specific risk estimates.
(2) For the aldehydes, the volatilization factor was used for inhalation exposures since they are not included on the surface flux analyte list.

TABLE 23
CHEMICAL RISK SUMMARY FOR CONSTRUCTION WORKER RECEPTORS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Receptor	HI	ILCR
Future On-Site Construction Worker		
Soil, Dermal and Dust	0.049	2 E-8
Volatile Inhalation (from Flux)[1]	0.000010-0.0058	2 E-10 - 4 E-9
Combined	0.049 - 0.055	2 E-8

Chemical	Soil Concentration (mg/kg)	Oral HQ	Dermal HQ	Outdoor Inhal HQ	Total HI	Oral ILCR	Dermal ILCR	Outdoor Inhal ILCR	Total ILCR
Aldehydes[2]									
Formaldehyde	4.0 E-1	6.4 E-6	1.9 E-6	1.8 E-4	1.9 E-4	NA	NA	3 E-10	3 E-10
Metals									
Ammonia (as N)	2.2 E+0	NA	NA	4.3 E-7	4.3 E-7	NA	NA	NA	NA
Cadmium	2.0 E-1	6.5 E-4	7.8 E-5	2.7 E-4	1.0 E-3	NA	NA	1 E-10	1 E-10
Cyanide, Total	7.2 E-1	3.9 E-3	1.2 E-3	1.8 E-5	5.1 E-3	NA	NA	NA	NA
Fluoride	8.0 E-1	4.3 E-5	1.3 E-5	NA	5.6 E-5	NA	NA	NA	NA
Mercury	4.5 E-2	4.8 E-4	0.0 E+0	NA	4.8 E-4	NA	NA	NA	NA
Nickel	1.9 E+1	3.1 E-3	0.0 E+0	4.3 E-3	7.4 E-3	NA	NA	1 E-9	1 E-9
Nitrate	3.4 E+1	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	6.2 E-1	NA	NA	NA	NA	NA	NA	NA	NA
Perchlorate	7.4 E+0	3.4 E-2	0.0 E+0	NA	3.4 E-2	NA	NA	NA	NA
Zinc	7.4 E+1	8.0 E-4	0.0 E+0	NA	8.0 E-4	NA	NA	NA	NA
Organochlorine Pesticides									
2,4-DDE	3.9 E-3	NA	NA	NA	NA	6 E-11	5 E-12	1 E-13	7 E-11
4,4-DDD	7.2 E-4	NA	NA	NA	NA	8 E-12	7 E-13	1 E-14	9 E-12
4,4-DDE	9.9 E-3	NA	NA	NA	NA	2 E-10	1 E-11	3 E-13	2 E-10
4,4-DDT	5.4 E-3	3.5 E-5	3.1 E-6	NA	3.8 E-5	8 E-11	8 E-12	1 E-13	9 E-11
alpha-Chlordane	1.1 E-3	7.3 E-6	8.8 E-7	3.2 E-8	8.2 E-6	2 E-11	2 E-12	3 E-14	2 E-11
beta-BHC	6.6 E-3	NA	NA	NA	NA	5 E-10	7 E-11	1 E-12	6 E-10
Chlordane	8.4 E-3	5.4 E-5	6.5 E-6	2.4 E-7	6.1 E-5	1 E-10	2 E-11	2 E-13	2 E-10
gamma-Chlordane	1.2 E-3	7.9 E-6	9.5 E-7	3.5 E-8	8.9 E-6	2 E-11	2 E-12	3 E-14	2 E-11
Methoxychlor	2.9 E-3	1.9 E-6	5.7 E-7	NA	2.5 E-6	NA	NA	NA	NA
Polynuclear Aromatic Hydrocarbons									
Acenaphthene	1.1 E-3	5.7 E-8	2.2 E-8	7.0 E-9	8.6 E-8	NA	NA	NA	NA
Acenaphthylene	1.1 E-3	1.1 E-7	4.4 E-8	7.0 E-9	1.6 E-7	NA	NA	NA	NA
Anthracene	1.9 E-3	2.1 E-8	8.1 E-9	1.3 E-8	4.2 E-8	NA	NA	NA	NA

TABLE 23
CHEMICAL RISK SUMMARY FOR CONSTRUCTION WORKER RECEPTORS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Receptor	HI	ILCR
Future On-Site Construction Worker		
Soil, Dermal and Dust	0.049	2 E-8
Volatile Inhalation (from Flux)(1)	0.000010-0.0058	2 E-10 - 4 E-9
Combined	0.049 - 0.055	2 E-8

Chemical	Soil Concentration (mg/kg)	Oral HQ	Dermal HQ	Outdoor Inhal HQ	Total HI	Oral ILCR	Dermal ILCR	Outdoor Inhal ILCR	Total ILCR
Benzo(a)anthracene	1.0 E-2	1.1 E-6	4.4 E-7	NA	1.6 E-6	4 E-10	1 E-10	3 E-13	5 E-10
Benzo(a)pyrene	1.3 E-2	1.3 E-6	5.2 E-7	NA	1.9 E-6	4 E-9	2 E-9	4 E-12	6 E-9
Benzo(b)fluoranthene	2.8 E-2	3.0 E-6	1.2 E-6	NA	4.2 E-6	9 E-10	4 E-10	9 E-13	1 E-9
Benzo(g,h,i)perylene	6.1 E-3	6.5 E-7	2.5 E-7	4.0 E-8	9.5 E-7	NA	NA	NA	NA
Benzo(k)fluoranthene	2.1 E-3	2.3 E-7	9.0 E-8	NA	3.2 E-7	7 E-12	3 E-12	7 E-14	1 E-11
Chrysene	2.0 E-2	2.2 E-6	8.4 E-7	NA	3.0 E-6	7 E-12	3 E-12	6 E-14	9 E-12
Dibenzo(a,h)anthracene	1.2 E-2	1.3 E-6	5.0 E-7	NA	1.8 E-6	4 E-9	2 E-9	4 E-12	6 E-9
Indeno(1,2,3-cd)pyrene	5.9 E-3	6.3 E-7	2.5 E-7	NA	8.8 E-7	2 E-10	8 E-11	2 E-13	3 E-10
Phenanthrene	8.5 E-3	9.2 E-7	3.6 E-7	5.7 E-8	1.3 E-6	NA	NA	NA	NA
Pyrene	2.6 E-2	2.8 E-6	1.1 E-6	1.7 E-7	4.0 E-6	NA	NA	NA	NA
Semi-Volatile Organic Compounds									
bis(2-Ethylhexyl) phthalate	2.3 E-1	3.7 E-5	1.1 E-5	NA	4.8 E-5	1 E-10	4 E-11	2 E-13	2 E-10
Volatile Organic Compounds									
1,2,4-Trimethylbenzene	6.9 E-4	NA	NA	NA	NA	NA	NA	NA	NA
Dichloromethane (Methylene chlor	9.9 E-3	5.3 E-7	0.0 E+0	NA	5.3 E-7	3 E-12	0 E+0	NA	3 E-12
Ethylbenzene	6.5 E-5	2.1 E-9	0.0 E+0	NA	2.1 E-9	3 E-14	0 E+0	NA	3 E-14
Total		0.043	0.0013	0.0047	0.049	1 E-8	4 E-9	2 E-9	2 E-8

HQ = hazard quotient
HI - hazard index
ILCR = incremental lifetime cancer risk
(1) Note that risk estimates for surface flux data were done on a sample-by-sample basis, therefore, risks are presented as a range. See Appendix H for sample-specific risk estimates.
(2) For the aldehydes, the volatilization factor was used for inhalation exposures since they are not included on the surface flux analyte list.

TABLE 24
CHEMICAL RISK SUMMARY FOR COMMERCIAL (INDOOR) WORKER RECEPTORS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 1 of 2)

Receptor	HI	ILCR
Future On-Site Commercial Worker		
Soil and Dust	0.0067	4 E-8
Volatile Inhalation (from Flux)[1]	0.000012-0.00069	2 E-9 - 2 E-6
Combined	0.066-0.073	5 E-8 - 2 E-7

Chemical	Soil Concentration (mg/kg)	Oral HQ	Indoor Dust Inhal HQ	Total HI	Oral ILCR	Indoor Dust Inhal ILCR	Total ILCR
Aldehydes[2]							
Formaldehyde	4.0 E-1	9.8 E-7	7.4 E-5	0.000075	NA	3 E-9	3 E-9
Metals							
Ammonia (as N)	2.2 E+0	NA	2.1 E-9	0.0000000021	NA	NA	NA
Cadmium	2.0 E-1	9.9 E-5	1.3 E-6	0.00010	NA	1 E-11	1 E-11
Cyanide, Total	7.2 E-1	5.9 E-4	8.6 E-8	0.00059	NA	NA	NA
Fluoride	8.0 E-1	6.5 E-6	NA	0.0000065	NA	NA	NA
Mercury	4.5 E-2	7.3 E-5	NA	0.000073	NA	NA	NA
Nickel	1.9 E+1	4.7 E-4	2.0 E-5	0.00049	NA	2 E-10	2 E-10
Nitrate	3.4 E+1	NA	NA	NA	NA	NA	NA
Nitrite	6.2 E-1	NA	NA	NA	NA	NA	NA
Perchlorate	7.4 E+0	5.2 E-3	NA	0.0052	NA	NA	NA
Zinc	7.4 E+1	1.2 E-4	NA	0.00012	NA	NA	NA
Organochlorine Pesticides							
2,4-DDE	3.9 E-3	NA	NA	NA	2 E-10	1 E-14	2 E-10
4,4-DDD	7.2 E-4	NA	NA	NA	3 E-11	2 E-15	3 E-11
4,4-DDE	9.9 E-3	NA	NA	NA	6 E-10	3 E-14	6 E-10
4,4-DDT	5.4 E-3	5.3 E-6	NA	0.0000053	3 E-10	2 E-14	3 E-10
alpha-Chlordane	1.1 E-3	1.1 E-6	1.5 E-10	0.0000011	7 E-11	4 E-15	7 E-11
beta-BHC	6.6 E-3	NA	NA	NA	2 E-9	1 E-13	2 E-9
Chlordane	8.4 E-3	8.2 E-6	1.1 E-9	0.0000082	5 E-10	3 E-14	5 E-10
gamma-Chlordane	1.2 E-3	1.2 E-6	1.7 E-10	0.0000012	7 E-11	4 E-15	7 E-11
Methoxychlor	2.9 E-3	2.9 E-7	NA	0.00000029	NA	NA	NA
Polynuclear Aromatic Hydrocarbons							
Acenaphthene	1.1 E-3	8.6 E-9	3.4 E-11	8.6E-09	NA	NA	NA
Acenaphthylene	1.1 E-3	1.7 E-8	3.4 E-11	1.7E-08	NA	NA	NA
Anthracene	1.9 E-3	3.2 E-9	6.2 E-11	3.2E-09	NA	NA	NA
Benzo(a)anthracene	1.0 E-2	1.7 E-7	NA	1.7E-07	1 E-9	4 E-14	1 E-9

TABLE 24
CHEMICAL RISK SUMMARY FOR COMMERCIAL (INDOOR) WORKER RECEPTORS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 2 of 2)

Receptor	HI	ILCR
Future On-Site Commercial Worker		
Soil and Dust	0.0067	4 E-8
Volatile Inhalation (from Flux)[1]	0.000012-0.00069	2 E-9 - 2 E-6
Combined	0.066-0.073	5 E-8 - 2 E-7

Chemical	Soil Concentration (mg/kg)	Oral HQ	Indoor Dust Inhal HQ	Total HI	Oral ILCR	Indoor Dust Inhal ILCR	Total ILCR
Benzo(a)pyrene	1.3 E-2	2.0 E-7	NA	2.0E-07	2 E-8	5 E-13	2 E-8
Benzo(b)fluoranthene	2.8 E-2	4.6 E-7	NA	4.6E-07	4 E-9	1 E-13	4 E-9
Benzo(g,h,i)perylene	6.1 E-3	9.9 E-8	1.9 E-10	9.9E-08	NA	NA	NA
Benzo(k)fluoranthene	2.1 E-3	3.5 E-8	NA	3.5E-08	3 E-11	8 E-15	3 E-11
Chrysene	2.0 E-2	3.3 E-7	NA	3.3E-07	3 E-11	8 E-15	3 E-11
Dibenzo(a,h)anthracene	1.2 E-2	1.9 E-7	NA	1.9E-07	2 E-8	5 E-13	2 E-8
Indeno(1,2,3-cd)pyrene	5.9 E-3	9.6 E-8	NA	9.6E-08	7 E-10	2 E-14	7 E-10
Phenanthrene	8.5 E-3	1.4 E-7	2.7 E-10	1.4E-07	NA	NA	NA
Pyrene	2.6 E-2	4.2 E-7	8.2 E-10	4.2E-07	NA	NA	NA
Semi-Volatile Organic Compounds							
bis(2-Ethylhexyl) phthalate	2.3 E-1	5.6 E-6	NA	5.6E-06	6 E-10	2 E-14	6 E-10
Volatile Organic Compounds							
1,2,4-Trimethylbenzene	6.9 E-4	NA	NA	NA	NA	NA	NA
Dichloromethane (Methylene chlor	9.9 E-3	8.0 E-8	NA	8.0E-08	1 E-11	NA	1 E-11
Ethylbenzene	6.5 E-5	3.2 E-10	NA	3.2E-10	1 E-13	NA	1 E-13
Total		0.0066	0.000096	0.0067	4 E-8	4 E-9	4 E-8

HQ = hazard quotient
HI - hazard index
ILCR = incremental lifetime cancer risk
(1) Note that risk estimates for surface flux data were done on a sample-by-sample basis, therefore, risks are presented as a range. See Appendix H for sample-specific risk estimates.
(2) For the aldehydes, the volatilization factor was used for inhalation exposures since they are not included on the surface flux analyte list.

TABLE 25
CHEMICAL RISK SUMMARY FOR MAINTENANCE (OUTDOOR) WORKER RECEPTORS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Receptor	HI	ILCR
Future On-Site Maintenance Worker		
Soil, Dermal, and Dust	0.013	1 E-7
Volatile Inhalation (from Flux)[1]	0.0000091-0.00052	4 E-9 - 9 E-8
Combined	0.013	1 E-7 - 2 E-7

Chemical	Soil Conc. (mg/kg)	Oral HQ	Dermal HQ	Outdoor Inhal HQ	Total HI	Oral ILCR	Dermal ILCR	Outdoor Inhal ILCR	Total ILCR
Aldehydes[2]									
Formaldehyde	4.0 E-1	1.8 E-6	1.2 E-6	1.7 E-4	1.7 E-4	NA	NA	8 E-9	8 E-9
Metals									
Ammonia (as N)	2.2 E+0	NA	NA	4.6 E-9	4.6 E-9	NA	NA	NA	NA
Cadmium	2.0 E-1	1.8 E-4	4.7 E-5	2.9 E-6	2.3 E-4	NA	NA	3 E-11	3 E-11
Cyanide, Total	7.2 E-1	1.1 E-3	7.0 E-4	1.9 E-7	1.8 E-3	NA	NA	NA	NA
Fluoride	8.0 E-1	1.2 E-5	7.7 E-6	NA	1.9 E-5	NA	NA	NA	NA
Mercury	4.5 E-2	1.3 E-4	0.0 E+0	NA	1.3 E-4	NA	NA	NA	NA
Nickel	1.9 E+1	8.5 E-4	0.0 E+0	4.6 E-5	8.9 E-4	NA	NA	4 E-10	4 E-10
Nitrate	3.4 E+1	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	6.2 E-1	NA	NA	NA	NA	NA	NA	NA	NA
Perchlorate	7.4 E+0	9.3 E-3	0.0 E+0	NA	9.3 E-3	NA	NA	NA	NA
Zinc	7.4 E+1	2.2 E-4	0.0 E+0	NA	2.2 E-4	NA	NA	NA	NA
Organochlorine Pesticides									
2,4-DDE	3.9 E-3	NA	NA	NA	NA	4 E-10	8 E-11	3 E-14	5 E-10
4,4-DDD	7.2 E-4	NA	NA	NA	NA	5 E-11	1 E-11	4 E-15	7 E-11
4,4-DDE	9.9 E-3	NA	NA	NA	NA	1 E-9	2 E-10	7 E-14	1 E-9
4,4-DDT	5.4 E-3	9.5 E-6	1.9 E-6	NA	1.1 E-5	6 E-10	1 E-10	4 E-14	7 E-10
alpha-Chlordane	1.1 E-3	2.0 E-6	5.3 E-7	3.5 E-10	2.5 E-6	1 E-10	3 E-11	9 E-15	2 E-10
beta-BHC	6.6 E-3	NA	NA	NA	NA	4 E-9	1 E-9	3 E-13	5 E-9
Chlordane	8.4 E-3	1.5 E-5	3.9 E-6	2.6 E-9	1.9 E-5	9 E-10	2 E-10	6 E-14	1 E-9
gamma-Chlordane	1.2 E-3	2.1 E-6	5.7 E-7	3.8 E-10	2.7 E-6	1 E-10	4 E-11	9 E-15	2 E-10
Methoxychlor	2.9 E-3	5.2 E-7	3.4 E-7	NA	8.6 E-7	NA	NA	NA	NA
Polynuclear Aromatic Hydrocarbons									
Acenaphthene	1.1 E-3	1.5 E-8	1.3 E-8	7.5 E-11	2.9 E-8	NA	NA	NA	NA
Acenaphthylene	1.1 E-3	3.1 E-8	2.6 E-8	7.5 E-11	5.7 E-8	NA	NA	NA	NA
Anthracene	1.9 E-3	5.7 E-9	4.9 E-9	1.4 E-10	1.1 E-8	NA	NA	NA	NA

TABLE 25
CHEMICAL RISK SUMMARY FOR MAINTENANCE (OUTDOOR) WORKER RECEPTORS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 2 of 2)

Receptor	HI	ILCR
Future On-Site Maintenance Worker		
Soil, Dermal, and Dust	0.013	1 E-7
Volatile Inhalation (from Flux)(1)	0.0000091-0.00052	4 E-9 - 9 E-8
Combined	0.013	1 E-7 - 2 E-7

Chemical	Soil Conc. (mg/kg)	Oral HQ	Dermal HQ	Outdoor Inhal HQ	Total HI	Oral ILCR	Dermal ILCR	Outdoor Inhal ILCR	Total ILCR
Benzo(a)anthracene	1.0 E-2	3.1 E-7	2.6 E-7	NA	5.7 E-7	2 E-9	2 E-9	9 E-14	4 E-9
Benzo(a)pyrene	1.3 E-2	3.7 E-7	3.1 E-7	NA	6.8 E-7	3 E-8	2 E-8	1 E-12	5 E-8
Benzo(b)fluoranthene	2.8 E-2	8.2 E-7	7.1 E-7	NA	1.5 E-6	6 E-9	6 E-9	2 E-13	1 E-8
Benzo(g,h,i)perylene	6.1 E-3	1.8 E-7	1.5 E-7	4.4 E-10	3.3 E-7	NA	NA	NA	NA
Benzo(k)fluoranthene	2.1 E-3	6.3 E-8	5.4 E-8	NA	1.2 E-7	5 E-11	4 E-11	2 E-14	9 E-11
Chrysene	2.0 E-2	5.9 E-7	5.1 E-7	NA	1.1 E-6	5 E-11	4 E-11	2 E-14	9 E-11
Dibenzo(a,h)anthracene	1.2 E-2	3.5 E-7	3.0 E-7	NA	6.4 E-7	3 E-8	2 E-8	1 E-12	5 E-8
Indeno(1,2,3-cd)pyrene	5.9 E-3	1.7 E-7	1.5 E-7	NA	3.2 E-7	1 E-9	1 E-9	5 E-14	2 E-9
Phenanthrene	8.5 E-3	2.5 E-7	2.1 E-7	6.1 E-10	4.7 E-7	NA	NA	NA	NA
Pyrene	2.6 E-2	7.6 E-7	6.5 E-7	1.9 E-9	1.4 E-6	NA	NA	NA	NA
Semi-Volatile Organic Compounds									
bis(2-Ethylhexyl) phthalate	2.3 E-1	1.0 E-5	6.7 E-6	NA	1.7 E-5	1 E-9	7 E-10	4 E-14	2 E-9
Volatile Organic Compounds									
1,2,4-Trimethylbenzene	6.9 E-4	NA	NA	NA	NA	NA	NA	NA	NA
Dichloromethane (Methylene chlor	9.9 E-3	1.4 E-7	0.0 E+0	NA	1.4 E-7	2 E-11	0 E+0	NA	2 E-11
Ethylbenzene	6.5 E-5	5.7 E-10	0.0 E+0	NA	5.7 E-10	2 E-13	0 E+0	NA	2 E-13
Total		0.012	0.00077	0.00021	0.013	7 E-8	6 E-8	8 E-9	1 E-7

HQ = hazard quotient
HI - hazard index
ILCR = incremental lifetime cancer risk
(1) Note that risk estimates for surface flux data were done on a sample-by-sample basis, therefore, risks are presented as a range. See Appendix H for sample-specific risk estimates.
(2) For the aldehydes, the volatilization factor was used for inhalation exposures since they are not included on the surface flux analyte list.

TABLE 26
ASBESTOS RISK SUMMARY
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Asbestos Risk Calculations ***Risk = (C_{soil} *URF*(ET_{out} +(ET_{in} *ATT_{in}))*EF*ED) / (PEF*AT)***

ESTIMATED RISK	Units	*CHRYSOTILE*				*AMPHIBOLE*			
		Construction	Outdoor Worker	Indoor Worker	Onsite Resident	Construction	Outdoor Worker	Indoor Worker	Onsite Resident
Estimated Risk (Total Structures)	Unitless	2 E-9	5 E-10	2 E-10	1 E-9	0 E+0	0 E+0	0 E+0	0 E+0
95% UCL (Total Structures)	Unitless	1 E-8	3 E-9	1 E-9	6 E-9	7 E-7	2 E-7	8 E-8	4 E-7
ESTIMATED AIR CONCENTRATIONS									
Estimated Airborne Concentration, C_{air} (best estimate)[A]	f/m^3	1.08E+01	1.30E-01	1.30E-01	1.40E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Estimated Airborne Concentration (upper bound)[B]	f/m^3	5.13E+01	6.17E-01	6.17E-01	6.64E-01	3.24E+01	3.90E-01	3.90E-01	4.20E-01

[A] *Estimated Airborne Concentration = Estimated C_{soil} * 1/PEF*

[B] *Estimated Airborne Concentration = 95% UCL (upper bound) * 1/PEF*

TABLE 27
UNCERTAINTY ANALYSIS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Source of Uncertainty	May Underestimate Risk	May Overestimate Risk	May Under or Overestimate Risk
Environmental Sampling and Analysis			
Sampling and laboratory analyses may have been inadequate to fully characterize the concentrations at the site.			Moderate
Systematic or random errors in the chemical analyses may yield erroneous data.			Low
The risk estimates are based on the COPCs only. Other chemicals were not quantified.	Moderate		
There was one result that was rejected through data validation (an ammonia result for GNBF19-11). The rejection was due to a very low matrix spike/matrix spike duplicate (MS/MSD) recovery.	Low		
Although radon flux sampling was performed, the results were not evaluated in the human health risk assessment based on results of recent radon testing performed in groundwater and indoor air samples.	Low		
Exposure Assumptions			
Fate and transport modeling did not take into account biodegradation or other degradation processes.		Moderate	
Modeling did not take into account interactions that may occur among the different chemicals which may influence their migration.		Moderate	
Only primary receptors of concern were evaluated. Other populations (*e.g.* , students) were not assessed.	Low		
Only primary exposure pathways were evaluated. Other pathways were not assessed.	Low		
Residential receptors were evaluated; however, the planned development of the Site is as a high school. Potential residential exposures are considered more conservative, and therefore, protective and representative of any potential school receptors.		Moderate	
Some of the exposure point concentrations used in the exposure assessment were based on modeled, rather than measured, levels in various media (*e.g.* , air).			Moderate

TABLE 27
UNCERTAINTY ANALYSIS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Source of Uncertainty	May Underestimate Risk	May Overestimate Risk	May Under or Overestimate Risk
Reasonable maximum exposure values were combined to arrive at the ADD and LADD estimates. There is a low probability that all of the various upper bound assumptions used in the exposure assessment would occur in conjunction with the 95 percent UCL chemical concentration.		Moderate	
Exposure point concentrations and the amount of media intake were assumed to be constant over time.		Low	
Toxicological Data			
Sub-chronic RfDs are appropriate to characterize non-cancer effects for short-term expo-sures (*i.e.* , construction workers). However, sub-chronic RfDs were not available and therefore, chronic RfDs were used.		Moderate	
RfDs are derived and extrapolated from laboratory animal studies that expose animals to relatively high intakes. Errors are inherent in the extrapolation of data from animals to humans, from high to low doses, and from one exposure route to another.			Moderate
RfDs used to estimate non-carcinogenic risk are derived from NOAELs which are based on the sensitive endpoints in the sensitive species. As a result, extrapolation of toxicity data from animals to humans is uncertain. There may be differences in metabolism, uptake, or distribution of chemicals in the body between animals and humans. To account for this, NOAELs are divided by uncertainty factors spanning several orders of magnitude to establish the RfD. The combination of these two conservative assumptions may establish RfDs which greatly overprotect human health.		Moderate	

TABLE 27
UNCERTAINTY ANALYSIS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Source of Uncertainty	May Underestimate Risk	May Overestimate Risk	May Under or Overestimate Risk
CSFs used for the animal carcinogens are the 95% UCL derived from the linearized multistage model using animal chronic bioassay data, which tends to greatly overestimate carcinogenic risk in humans. The linearized multistage model ignores many known factors that have been documented to protect humans against the carcinogenic actions of chemicals, such as DNA repair and immunosurveillence.		High	
RfDs, CSFs and defensible carcinogenicity data were not available for some COPCs, which were therefore not quantitatively evaluated.	Low		
Aggregation of Exposure Units			
Aggregating the exposure areas or extrapolating from Site analytical results to estimated concentrations for individual 1/8-acre exposure areas.	Low		

TABLE 28
IMPACTS TO GROUNDWATER MODELING RESULTS SUMMARY
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

COPC	Depth to Ground-water (ft bgs)	Baseline Rainfall		Normal Post-Development		Enhanced Recharge		Maximum Measured Groundwater Concentration[1] (µg/L)	Residential Water BCL (µg/L)
		Maximum Migration Depth (ft bgs)	Maximum Soil Moisture Conc. at Groundwater Interface (µg/L)	Maximum Migration Depth (ft bgs)	Maximum Soil Moisture Conc. at Groundwater Interface (µg/L)	Maximum Migration Depth (ft bgs)	Maximum Soil Moisture Conc. at Groundwater Interface (µg/L)		
Nickel	25	11	NA	11	NA	12	NA	12.1	730
Benzo(g,h,i)perylene	25	11	NA	11	NA	11	NA	--	1000
Ammonia	25	GW	1108000	GW	638000	GW	166800	13.5	730
Nitrate (as N)	25	GW	2000000	GW	2000000	GW	1946000	27700	10000
Nitrate (as N)-Avg Background	25	GW	1820000	--	--	--		27700	10000
Nitrate (as N)-Max Background	25	GW	2000000	--	--	--		27700	10000
Perchlorate	25	GW	2000000	GW	2000000	GW	588000	7600	18
2,4'-DDE	25	10	NA	10	NA	10	NA	<0.01	0.2
beta-BHC	25	12	NA	13	NA	22	NA	<0.01	0.037
Cyanide, Total	25	GW	9.2	GW	1370	GW	32600	4.1	200
1,2,4-Trimethylbenzene	25	GW	0.000418	GW	0.000433	GW	0.000777	<0.062	51.1
Dichloromethane	25	GW	0.191	GW	0.209	GW	0.815	<0.1	5
Formaldehyde	25	GW	3500	GW	15940	GW	12630	--	1.5

(1) From 2009 Round Groundwater Monitoring Report for the BMI Common Areas (Eastside).

TABLE 29
DATA QUALITY ASSESSMENT
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Table 29a: Sample Size Results for Arsenic with Background = 7.2 mg/kg

Number of samples = 55		s = 1.40		
Threshold = 7.2 mg/kg		α = 5%	α = 10%	α = 15%
MDD = 10% (0.72 mg/kg)	β = 15%	33	25	19
	β = 20%	29	21	16
	β = 25%	25	18	13
MDD = 20% (1.4 mg/kg)	β = 15%	9	7	5
	β = 20%	8	6	4
	β = 25%	7	5	4
MDD = 30% (2.2 mg/kg)	β = 15%	5	4	3
	β = 20%	5	3	2
	β = 25%	4	3	2

Table 29b: Sample Size Results for Benzo(a)pyrene with BCL = 0.0622 mg/kg

Number of samples = 52		s = 0.0091		
Threshold = 0.0622 mg/kg		α = 5%	α = 10%	α = 15%
MDD = 10% (0.00622 mg/kg)	β = 15%	19	14	11
	β = 20%	17	12	9
	β = 25%	15	10	8
MDD = 20% (0.0124 mg/kg)	β = 15%	6	4	3
	β = 20%	5	4	3
	β = 25%	5	3	2
MDD = 30% (0.0187 mg/kg)	β = 15%	4	2	2
	β = 20%	3	2	2
	β = 25%	3	2	1

Table 29c: Sample Size Results for beta-BHC with BCL = 0.316 mg/kg

Number of samples = 53		s = 0.0042		
Threshold = 0.316 mg/kg		α = 5%	α = 10%	α = 15%
MDD = 10% (0.0316 mg/kg)	β = 15%	2	1	1
	β = 20%	2	1	1
	β = 25%	2	1	1
MDD = 20% (0.0632 mg/kg)	β = 15%	2	1	1
	β = 20%	2	1	1
	β = 25%	2	1	1
MDD = 30% (0.0948 mg/kg)	β = 15%	2	1	1
	β = 20%	2	1	1
	β = 25%	2	1	1

TABLE 29
DATA QUALITY ASSESSMENT
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Table 29d: Sample Size Results for Chromium with BCL = 100,000 mg/kg

Number of samples = 55		s = 7.5		
Threshold = 100,000 mg/kg		α = 5%	α = 10%	α = 15%
MDD = 10% (10,000 mg/kg)	β = 15%	2	1	1
	β = 20%	2	1	1
	β = 25%	2	1	1
MDD = 20% (20,000 mg/kg)	β = 15%	2	1	1
	β = 20%	2	1	1
	β = 25%	2	1	1
MDD = 30% (30,000 mg/kg)	β = 15%	2	1	1
	β = 20%	2	1	1
	β = 25%	2	1	1

Table 29e: Sample Size Results for Chromium (VI) with BCL = 229 mg/kg

Number of samples = 55		s = 0.25		
Threshold = 229 mg/kg		α = 5%	α = 10%	α = 15%
MDD = 10% (22.9 mg/kg)	β = 15%	2	1	1
	β = 20%	2	1	1
	β = 25%	2	1	1
MDD = 20% (45.8 mg/kg)	β = 15%	2	1	1
	β = 20%	2	1	1
	β = 25%	2	1	1
MDD = 30% (68.7 mg/kg)	β = 15%	2	1	1
	β = 20%	2	1	1
	β = 25%	2	1	1

Table 29f: Sample Size Results for Total Cyanide with BCL = 1,220 mg/kg

Number of samples = 53		s = 0.78		
Threshold = 1,220 mg/kg		α = 5%	α = 10%	α = 15%
MDD = 10% (122 mg/kg)	β = 15%	2	1	1
	β = 20%	2	1	1
	β = 25%	2	1	1
MDD = 20% (244 mg/kg)	β = 15%	2	1	1
	β = 20%	2	1	1
	β = 25%	2	1	1
MDD = 30% (366 mg/kg)	β = 15%	2	1	1
	β = 20%	2	1	1
	β = 25%	2	1	1

TABLE 29
DATA QUALITY ASSESSMENT
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Table 29g: Sample Size Results for Formaldehyde with BCL = 10.6 mg/kg

Number of samples = 53		s = 0.18		
Threshold = 10.6 mg/kg		α = 5%	α = 10%	α = 15%
MDD = 10% (1.06 mg/kg)	β = 15%	2	1	1
	β = 20%	2	1	1
	β = 25%	2	1	1
MDD = 20% (2.12 mg/kg)	β = 15%	2	1	1
	β = 20%	2	1	1
	β = 25%	2	1	1
MDD = 30% (3.18 mg/kg)	β = 15%	2	1	1
	β = 20%	2	1	1
	β = 25%	2	1	1

Table 29h: Sample Size Results for Lead with BCL = 400 mg/kg

Number of samples = 55		s = 36.0		
Threshold = 400 mg/kg		α = 5%	α = 10%	α = 15%
MDD = 10% (40 mg/kg)	β = 15%	8	6	5
	β = 20%	7	5	4
	β = 25%	7	5	3
MDD = 20% (80 mg/kg)	β = 15%	3	2	2
	β = 20%	3	2	1
	β = 25%	3	2	1
MDD = 30% (120 mg/kg)	β = 15%	2	2	1
	β = 20%	2	1	1
	β = 25%	2	1	1

Table 29i: Sample Size Results for Perchlorate with BCL = 54.8 mg/kg

Number of samples = 52		s = 6.30		
Threshold = 54.8 mg/kg		α = 5%	α = 10%	α = 15%
MDD = 10% (5.48 mg/kg)	β = 15%	13	9	7
	β = 20%	11	8	6
	β = 25%	10	7	5
MDD = 20% (10.96 mg/kg)	β = 15%	4	3	2
	β = 20%	4	3	2
	β = 25%	4	2	2
MDD = 30% (16.4 mg/kg)	β = 15%	3	2	1
	β = 20%	3	2	1
	β = 25%	2	2	1

TABLE 29
DATA QUALITY ASSESSMENT
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Table 29j: Sample Size Results for 2,3,7,8-TCDD with BCL = 0.0000039 mg/kg

Number of samples = 36		s = 0.00000036		
Threshold = 0.0000039 mg/kg		α = 5%	α = 10%	α = 15%
MDD = 10% (0.00000039 mg/kg)	β = 15%	9	6	5
	β = 20%	8	5	4
	β = 25%	7	5	4
MDD = 20% (0.00000078 mg/kg)	β = 15%	3	2	2
	β = 20%	3	2	1
	β = 25%	3	2	1
MDD = 30% (0.0000012 mg/kg)	β = 15%	2	2	1
	β = 20%	2	1	1
	β = 25%	2	1	1

Table 29k: Sample Size Results for Vanadium with BCL = 390 mg/kg

Number of samples = 55		s = 9.4		
Threshold = 390 mg/kg		α = 5%	α = 10%	α = 15%
MDD = 10% (39 mg/kg)	β = 15%	2	1	1
	β = 20%	2	1	1
	β = 25%	2	1	1
MDD = 20% (78 mg/kg)	β = 15%	2	1	1
	β = 20%	2	1	1
	β = 25%	2	1	1
MDD = 30% (117 mg/kg)	β = 15%	2	1	1
	β = 20%	2	1	1
	β = 25%	2	1	1

α = alpha
β = beta
s = standard deviation of sample data

APPENDIX A

NDEP COMMENTS AND BRC'S RESPONSE TO COMMENTS AND REDLINE/STRIKEOUT TEXT TEXT

This is a placeholder for Appendix A.

APPENDIX B

GALLERIA NORTH SCHOOL-SITE SUB-AREA INVESTIGATION DATA TABLES

(Note that all report files, including the database, are on the report CD included in this appendix)

LIST OF TABLES (APPENDIX B)

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Table B-2 Soil Dioxins/Furans Data

Table B-3 Soil General Chemistry/Ions Data

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Table B-5 Soil Organochlorine Pesticides Data

Table B-6 Soil Polynuclear Aromatic Hydrocarbons (PAHs) Data

Table B-7 Soil Polychlorinated Biphenyls (PCBs) Data

Table B-8 Soil Radionuclides Data

Table B-9 Soil Aldehydes and Semi-Volatile Organic Compounds (SVOCs) Data

Table B-10 Soil Volatile Organic Compounds (VOCs) Data

Table B-11 Surface Flux Data

Table B-12 SPLP Data Summary

TABLE B-1
ASBESTOS RESULTS AND ANALYTICAL SENSITIVITIES
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Analytical Sensitivity (10^6 s/gPM$_{10}$)	Concentration Protocol Structures[1]		Number of Protocol Structures[2]			
					Chrysotile	Amphibole	Chrysotile		Amphibole	
					(10^6 s/gPM$_{10}$)	(10^6 s/gPM$_{10}$)	Total	Long	Total	Long
GNC1-BD19	0	NORM	1/29/09	2.987	< 8.930 E+6	< 8.930 E+6	0	0	0	0
GNC1-BD20	0	NORM	1/26/09	2.991	1.418 E+7	< 8.944 E+6	4	1	0	0
GNC1-BD21	0	NORM	1/29/09	2.967	< 8.870 E+6	< 8.870 E+6	0	0	1	0
GNC1-BE19	0	NORM	1/29/09	2.991	< 8.944 E+6	< 8.944 E+6	0	0	0	0
GNC1-BE20	0	NORM	1/29/09	2.981	< 8.912 E+6	< 8.912 E+6	1	0	0	0
GNC1-BE21	0	NORM	1/29/09	2.979	< 8.908 E+6	< 8.908 E+6	0	0	0	0
GNC1-BE22	0	NORM	1/29/09	2.987	< 8.930 E+6	< 8.930 E+6	0	0	0	0
GNC1-BF19	0	NORM	1/29/09	2.979	< 8.908 E+6	< 8.908 E+6	0	0	0	0
GNC1-BF20	0	NORM	1/29/09	2.990	< 8.939 E+6	< 8.939 E+6	0	0	0	0
GNC1-BF21	0	NORM	1/29/09	2.943	< 8.799 E+6	< 8.799 E+6	0	0	0	0
GNC1-BF22	0	NORM	1/29/09	2.979	< 8.908 E+6	< 8.908 E+6	0	0	0	0
GNC1-BG19	0	NORM	1/29/09	2.900	< 8.671 E+6	< 8.671 E+6	0	0	0	0
GNC1-BG20	0	NORM	1/29/09	2.987	< 8.930 E+6	< 8.930 E+6	0	0	0	0
GNC1-BG20	0	FD	1/29/09	2.991	< 8.944 E+6	< 8.944 E+6	0	0	0	0
GNC1-BG21	0	NORM	1/29/09	2.960	< 8.851 E+6	< 8.851 E+6	0	0	0	0
GNC1-BG22	0	NORM	1/26/09	2.987	< 8.930 E+6	< 8.930 E+6	0	0	0	0
GNC1-JD06	0	NORM	1/29/09	2.983	< 8.919 E+6	< 8.919 E+6	0	0	0	0
GNC1-JD07	0	NORM	1/29/09	2.987	< 8.930 E+6	< 8.930 E+6	0	0	0	0
GNC1-JD08	0	NORM	1/29/09	2.966	< 8.869 E+6	< 8.869 E+6	0	0	0	0
GNC1-JD09	0	NORM	1/29/09	2.959	< 8.846 E+6	< 8.846 E+6	0	0	0	0
GNC1-JD10	0	NORM	1/29/09	2.963	< 8.859 E+6	< 8.859 E+6	0	0	0	0
GNC1-JD11	0	NORM	1/29/09	2.967	< 8.870 E+6	< 8.870 E+6	0	0	0	0
GNC1-JS09	0	NORM	1/29/09	2.967	< 8.870 E+6	< 8.870 E+6	0	0	0	0
GNC1-JS10	0	NORM	1/29/09	2.961	< 8.854 E+6	< 8.854 E+6	0	0	0	0
GNC1-JS11	0	NORM	1/26/09	2.987	< 8.930 E+6	< 8.930 E+6	0	0	0	0
GNC2-JD10	0	NORM	6/25/10	2.970	< 8.870 E+6	< 8.870 E+6	0	0	0	0
GNC3-BE20C	0	NORM	6/25/10	2.990	< 8.940 E+6	< 8.940 E+6	0	0	0	0
GNC3-BE20C	0	FD	6/25/10	3.000	< 8.960 E+6	< 8.960 E+6	0	0	0	0
GNC3-JS09C	0	NORM	8/4/10	2.990	< 8.940 E+6	< 8.940 E+6	0	0	0	0

[1]Fiber dimensions are presented in the respective analytical reports for each sample.

[2]Only long structures present a potential risk and are used for estimating asbestos risks. Total fiber concentrations are presented for informational purposes only.

= Data not included in risk assessment. Sample location excavated and data replaced with post-excavation data.

TABLE B-2
SOIL DIOXINS/FURANS DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 1 of 4)

Sample ID	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-HCDF	1,2,3,7,8,9-HxCDD
GNC1-BD19	0	NORM	1/28/2009	13	5.6	4.7 J	4.6 J	< 0.3 U	4.2 J	< 0.67 U	< 0.41 U	< 0.71 U
GNC1-BD20	0	NORM	1/30/2009	180	39	60	71	2.6 J	49	6	5.8	5.7
GNC1-BD21	0	NORM	1/30/2009	150	1600	48	51	3.3 J	36	22	4.9 J	12
GNC1-BE19	0	NORM	2/5/2009	130	40	50	55	< 1.7 U	36	3.3 J	6.5 J+	3.6 J
GNC1-BE20	0	NORM	2/6/2009	250 J	53	120 J	100 J	3.6 J	82	8.5 J	14 J	5.8
GNC1-BE20	0	FD	2/6/2009	64 J	40	28 J	16 J	< 1.5 U	22	2.8 J	< 2.5 UJ	2.7 J
GNC1-BE21	0	NORM	2/6/2009	22	3.2 J	9.1	8.3	< 0.3 U	6.8	< 0.72 U	< 1.1 U	< 0.74 U
GNC1-BE22	0	NORM	2/5/2009	240	5800 J	59	96	76	63	230	6.8 J+	410
GNC1-BF19	0	NORM	2/5/2009	22	4.8 J	9.6	11	< 0.48 U	7.3	< 0.88 U	< 1.5 U	< 0.97 U
GNC1-BF20	0	NORM	2/6/2009	54	7.7	21	20	< 0.72 U	16	< 1.5 U	< 2.2 U	< 1.5 U
GNC1-BF21	0	NORM	2/5/2009	28	7.6	10	13	< 0.39 U	9.6	< 0.99 U	< 2.3 U	< 0.74 U
GNC1-BF22	0	NORM	2/6/2009	71	14	29	24	< 0.98 U	20	< 2.5 U	3.1 J	< 2.1 U
GNC1-BG19	0	NORM	2/5/2009	22	< 2.2 U	9.7	12	< 0.37 U	8.3	< 0.64 U	< 1.2 U	< 0.71 U
GNC1-BG20	0	NORM	2/5/2009	110	24 J	39 J	46	< 1.7 U	31 J	3.2 J	5.3 J+	4 J
GNC1-BG20	0	FD	2/5/2009	69	45 J	22 J	32	< 1.8 U	21 J	3.5 J	3.4 J+	4.2 J
GNC1-BG21	0	NORM	2/5/2009	16	< 1.8 U	5.7	6.7	< 0.63 U	5.2	< 0.51 U	< 0.81 U	< 0.54 U
GNC1-BG22	0	NORM	2/5/2009	22	3 J	8.5	9.3	< 0.48 U	6.6	< 0.59 U	< 1 U	< 0.56 U
GNC1-JA04	0	NORM	8/13/2009	240	97	75	100	3.6 J	69	8.7	7.6	7.5
GNC1-JA05	0	NORM	8/13/2009	23	2.7 J	7.8	9.5	< 5 U	6.5	< 5 U	< 5 U	< 5 U
GNC1-JA06	0	NORM	8/13/2009	33	51	12	21	< 4.8 U	11	3.1 J	< 4.8 U	< 4.8 U
GNC1-JA07	0	NORM	8/13/2009	35	3.4 J	11	16	< 4.9 U	10	< 4.9 U	< 4.9 U	< 4.9 U
GNC1-JD06	0	NORM	2/13/2009	150	28	68	77	< 2.3 U	55	5.8	8.9	4.7 J
GNC1-JD07	0	NORM	1/30/2009	8.5	3.9 J	3.7 J	4.4 J	< 0.55 U	2.7 J	< 0.44 U	< 0.47 U	< 0.44 U
GNC1-JD08	0	NORM	1/30/2009	3.6 J	< 1.2 U	< 1.2 U	< 1.5 U	< 0.075 U	< 0.89 U	< 0.23 U	< 0.41 U	< 0.26 U
GNC1-JD09	0	NORM	1/30/2009	13	< 3.8 U	4.6 J	5.2 J	< 0.25 U	3 J	< 0.5 U	< 0.49 U	< 0.42 U
GNC1-JD09	0	FD	1/30/2009	14	< 3 U	5.5 J	7.7 J	< 0.24 U	4.3 J	< 0.55 U	< 0.56 U	< 0.53 U
GNC1-JD10	0	NORM	2/9/2009	120	11	60	51	< 1.9 U	44	4 J	9	3.7 J
GNC1-JD11	0	NORM	2/9/2009	24	3.6 J	9.3	10	< 0.4 U	7.4	< 0.81 U	< 1.1 U	< 0.63 U
GNC1-JS09	0	NORM	1/30/2009	87	46	29	38	< 1.4 U	23	3.7 J	2.8 J	3.1 J
GNC1-JS09	0	FD	1/30/2009	82	63	26	30	< 1.3 U	21	3.8 J	2.7 J	3 J
GNC1-JS10	0	NORM	1/30/2009	550	84	190	210	7.5	130	16	19	15
GNC1-JS11	0	NORM	1/29/2009	32 J	12 J	13 J	14 J	< 0.58 U	11 J	< 1.3 U	< 1.5 U	< 1.4 U
GNC1-JS11	0	FD	1/29/2009	66 J	49 J	21 J	26 J	< 1.3 U	17 J	3.2 J	2.7 J	3.2 J
GNC2-BE20C	0	NORM	1/8/2010	190	94 J	76	79	< 5.2 U	53	6.1	6	5.1 J
GNC2-BE20C	0	FD	1/8/2010	200	44 J	76	85	< 5.1 U	57	5.6	6.5	4.8 J

TABLE B-2
SOIL DIOXINS/FURANS DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	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-HCDF	1,2,3,7,8,9-HxCDD
GNC2-BE22C	0	NORM	1/6/2010	10	2.9 J	4.8 J	6	< 5.3 U	3.7 J	< 5.3 U	< 5.3 U	< 5.3 U
GNC2-JA04	0	NORM	8/2/2010	3.9 J	< 4.9 U	< 4.9 U	< 4.9 U	< 4.9 U	< 4.9 U	< 4.9 U	< 4.9 U	< 4.9 U
GNC2-JA04	0	FD	8/2/2010	6	< 4.9 U	< 4.9 U	< 4.9 U	< 4.9 U	< 4.9 U	< 4.9 U	< 4.9 U	< 4.9 U
GNC2-JD07C	0	NORM	1/6/2010	6	< 5.1 U	2.6 J	3.9 J	< 5.1 U	< 5.1 U	< 5.1 U	< 5.1 U	< 5.1 U
GNC2-JE01	0	NORM	4/26/2010	170 J	19 J	64 J	83	< 5.8 U	49	4.2 J	7.3	4.3 J
GNC2-JE02	0	NORM	4/26/2010	110 J	29 J	38 J	53	< 5.5 U	30	3.3 J	4.8 J	3.1 J
GNC2-JS09C	0	NORM	1/8/2010	< 5.1 U	< 5.1 U	< 5.1 U	< 5.1 U	< 5.1 U	< 5.1 U	< 5.1 U	< 5.1 U	< 5.1 U
GNC2-JS10C	0	NORM	1/8/2010	120 J	13 J	51 J	51 J	< 5.2 U	36 J	2.9 J	5.4	3.2 J
GNC2-JS10C	0	FD	1/8/2010	56 J	6 J	23 J	24 J	< 5.3 U	15 J	< 5.3 U	< 5.3 U	< 5.3 U

All units in pg/g.

-- = no sample data.

= Data not included in risk assessment. Sample location excavated and data replaced with post-excavation data.

TABLE B-2
SOIL DIOXINS/FURANS DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 3 of 4)

Sample ID	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	OCDF	OCDD	TCDD TEQ
GNC1-BD19	0	NORM	1/28/2009	3.5 J	< 0.32 U	< 0.97 U	< 2.1 U	4.3	< 0.19 U	42	55	4.1
GNC1-BD20	0	NORM	1/30/2009	43	3.6 J	18	23	25	0.93 J	160	670	40.3
GNC1-BD21	0	NORM	1/30/2009	31	< 2.5 U	12	16	17	0.73 J	11000	420	47
GNC1-BE19	0	NORM	2/5/2009	32	< 2.4 U	9.9	16	22	1.1	420	440	28.6
GNC1-BE20	0	NORM	2/6/2009	83 J	5.6	25 J	42 J	43 J	1.7 J	210 J	770 J	66.2
GNC1-BE20	0	FD	2/6/2009	22 J	< 1.5 U	6.4 J	11 J	14 J	< 0.41 UJ	360 J	210 J	16.5
GNC1-BE21	0	NORM	2/6/2009	6.8	< 0.41 U	< 2 U	3.3 J	3.2	< 0.18 U	9.5 J	66 J	4.8
GNC1-BE22	0	NORM	2/5/2009	41	50	18	39	37	7.5	16000 J	530	307
GNC1-BF19	0	NORM	2/5/2009	7.8	< 0.75 U	< 2.6 U	4 J	7.9	< 0.35 U	30	110	6.4
GNC1-BF20	0	NORM	2/6/2009	16	< 1.1 U	5 J	8.5	9.3	< 0.33 U	45	180	12.1
GNC1-BF21	0	NORM	2/5/2009	6.5	< 0.58 U	< 2.5 U	3.3 J	3.3	< 0.28 U	42	70	5.9
GNC1-BF22	0	NORM	2/6/2009	19	< 1.3 U	6.3	9.9	9.1	< 0.42 U	27 J	250 J	14.8
GNC1-BG19	0	NORM	2/5/2009	7.9	< 0.57 U	< 2.5 U	3.9 J	5.5	< 0.23 U	< 4.3 U	61	6.8
GNC1-BG20	0	NORM	2/5/2009	26 J	< 2.3 U	11	12	14	0.73 J	130 J	280 J	23
GNC1-BG20	0	FD	2/5/2009	20 J	< 2.1 U	6.8	10	13	0.81 J	340 J	160 J	18.4
GNC1-BG21	0	NORM	2/5/2009	3.3 J	< 0.54 U	< 1.6 U	< 1.2 U	1.7	< 0.27 U	5.4 J	44	2.8
GNC1-BG22	0	NORM	2/5/2009	5.4	< 0.48 U	< 2 U	< 2.5 U	2.9	< 0.3 U	7.3 J	57	3.9
GNC1-JA04	0	NORM	8/13/2009	53	4.8 J	18	27	29	1.1	2200	670	50.8
GNC1-JA05	0	NORM	8/13/2009	4.5 J	< 5 U	< 5 U	< 5 U	3.2	< 1 U	< 8.1 U	59	8.1
GNC1-JA06	0	NORM	8/13/2009	13	< 4.8 U	3 J	6.2	8.6	< 0.97 U	120	71	13.5
GNC1-JA07	0	NORM	8/13/2009	10	< 4.9 U	2.7 J	5	7.1	< 0.97 U	< 7.2 U	88	11.5
GNC1-JD06	0	NORM	2/13/2009	51	3.8 J	15	27	66 J+	1.3	120	760	49.1
GNC1-JD07	0	NORM	1/30/2009	3.2 J	< 0.3 U	< 0.73 U	< 1.7 U	3.4	< 0.092 U	24	42	2.4
GNC1-JD08	0	NORM	1/30/2009	< 0.76 U	< 0.1 U	< 0.5 U	< 0.39 U	< 0.5 U	< 0.051 U	< 10 U	10	0.58
GNC1-JD09	0	NORM	1/30/2009	2.8 J	< 0.26 U	< 0.79 U	< 1.5 U	2.6 J	< 0.09 U	< 20 U	61	2.2
GNC1-JD09	0	FD	1/30/2009	4.3 J	< 0.32 U	< 0.85 U	< 1.7 U	4.1 J	< 0.13 U	< 18 U	67	3
GNC1-JD10	0	NORM	2/9/2009	46	3.6 J	11	21	57	1.2	19 J	840 J	38.3
GNC1-JD11	0	NORM	2/9/2009	6.6	< 0.65 U	< 1.6 U	3.3 J	6.7	< 0.27 U	13	95	5.8
GNC1-JS09	0	NORM	1/30/2009	19	< 1.8 U	7.6	9.4	13	< 0.37 U	300 J	380	19.1
GNC1-JS09	0	FD	1/30/2009	17	< 1.7 U	6.9	9	11	< 0.47 U	540 J	390	17.7
GNC1-JS10	0	NORM	1/30/2009	120	10	45	63	75	2.9	290	2300	113
GNC1-JS11	0	NORM	1/29/2009	10 J	< 0.77 U	2.8 J	5.1 J	7.6	< 0.27 U	69 J	85 J	8.3
GNC1-JS11	0	FD	1/29/2009	17 J	< 1.7 U	4.1 J	7.7	11	< 0.42 U	280 J	180 J	14.6
GNC2-BE20C	0	NORM	1/8/2010	41	< 5.2 U	14	24	23	0.66 J	670 J	510	40.5
GNC2-BE20C	0	FD	1/8/2010	48	3.4 J	14	26	26	0.84 J	220 J	530	43.7

TABLE B-2
SOIL DIOXINS/FURANS DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	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	OCDF	OCDD	TCDD TEQ
GNC2-BE22C	0	NORM	1/6/2010	3.2 J	< 5.3 U	< 5.3 U	< 5.3 U	2.2	< 1.1 U	9.2 J	34	7.7
GNC2-JA04	0	NORM	8/2/2010	< 4.9 U	< 4.9 U	< 4.9 U	< 4.9 U	0.78 J	< 0.97 U	16	11	6.3
GNC2-JA04	0	FD	8/2/2010	< 4.9 U	< 4.9 U	< 4.9 U	< 4.9 U	0.84 J	< 0.98 U	15	12	6.3
GNC2-JD07C	0	NORM	1/6/2010	2.9 J	< 5.1 U	< 5.1 U	< 5.1 U	3.2	< 1 U	6.9 J	26	7
GNC2-JE01	0	NORM	4/26/2010	42	3.3 J	14	22	22	1 J	66 J	610 J	39.5
GNC2-JE02	0	NORM	4/26/2010	27	< 5.5 U	7.1	14	18	0.71 J	220 J	390 J	27
GNC2-JS09C	0	NORM	1/8/2010	< 5.1 U	< 5.1 U	< 5.1 U	< 5.1 U	0.54 J	< 1 U	< 10 U	< 10 U	6.5
GNC2-JS10C	0	NORM	1/8/2010	32 J	< 5.2 U	9.2	18 J	21 J	0.87 J	41 J	450 J	29.6
GNC2-JS10C	0	FD	1/8/2010	15 J	< 5.3 U	4.1 J	8 J	9.7 J	< 1.1 U	21 J	210 J	15.4

All units in pg/g.

-- = no sample data.

= Data not included in risk assessment. Sample location excavated and data replaced with post-excavation data.

TABLE B-3
SOIL GENERAL CHEMISTRY/IONS DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 1 of 2)

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	General Chemistry/Ions												
				Ammonia	Bromide	Chlorate	Chloride	Cyanide (Total)	Fluoride	Nitrate (as N)	Nitrite (as N)	Orthophosphate as P	Perchlorate	Sulfate	Sulfide	Total Kjeldahl Nitrogen (TKN)
GNC1-BD19	0	NORM	1/28/2009	2.6 J	1.1 J	< 0.52 U	123	< 0.087 UJ	0.55 J	6.6	< 0.036 U	< 0.55 U	0.0841	308	< 1.9 U	106
GNC1-BD19	10	NORM	1/28/2009	< 0.83 U	< 0.28 U	< 0.5 U	32.2	< 0.53 UJ	1.1	1.3	< 0.035 U	< 0.53 U	0.449	791	< 1.9 U	65.9
GNC1-BD20	0	NORM	1/30/2009	< 0.79 U	< 0.26 U	< 0.48 U	3.9	< 0.5 U	< 0.1 U	5.2	< 0.033 U	5.3	0.161	153	< 1.8 U	242 J+
GNC1-BD20	10	NORM	1/30/2009	< 0.82 U	< 0.27 U	1.2 J	153	< 0.53 U	1.1	8.7	< 0.035 U	< 0.53 U	0.657	589	< 1.9 U	44.4 J+
GNC1-BD21	0	NORM	1/30/2009	3.3 J	< 0.27 U	0.99 J	463	< 0.53 U	0.18 J	31.8	2.1	9	5.99	17000	< 1.9 U	76.6
GNC1-BD21	10	NORM	1/30/2009	< 0.82 U	< 0.27 U	< 0.5 U	55.3	< 0.52 U	1.2	1.6	< 0.035 U	< 0.52 U	0.318	196	< 1.9 U	47.1 J
GNC1-BE19	0	NORM	2/5/2009	8.2	1.3 J	12.2	1490	0.59	0.21 J	107	< 3.4 U	11.4	23.2	8820	< 1.8 U	1600
GNC1-BE19	10	NORM	2/5/2009	< 0.83 U	0.44 J	10.7	689	< 0.53 U	0.89 J	9.1	< 1.8 U	0.85 J	3.83	5410	< 1.9 U	106
GNC1-BE20	0	NORM	2/6/2009	< 0.82 U	< 0.27 U	< 0.49 U	34.2	< 0.52 U	0.71 J	4.7	< 0.035 U	12.5	0.382	7960	< 1.9 U	463
GNC1-BE20	0	FD	2/6/2009	< 0.82 U	< 0.27 U	< 0.49 U	52.5	0.65	0.62 J	5.8	0.13 J	14.4	0.338	9710	< 1.9 U	430
GNC1-BE20	10	NORM	2/6/2009	< 0.85 U	< 0.28 U	2.2 J	94.8	< 0.55 U	0.99 J	3	< 0.036 U	< 0.55 U	1.5	13700	< 1.9 U	108
GNC1-BE21	0	NORM	2/6/2009	0.89 J	0.67 J	41.3	2570	< 0.53 U	0.25 J	31.6	< 0.7 U	6.2	21.1	10200	< 1.9 U	230
GNC1-BE21	10	NORM	2/6/2009		< 0.28 U	6.7	490	< 0.54 U	1.9	8.3	< 0.035 U	< 0.54 U		9460	< 1.9 U	113
GNC1-BE22	0	NORM	2/5/2009	< 0.81 U	< 0.27 U	< 0.49 U	7.5	< 0.52 U	< 0.1 U	3.4	< 0.034 U	2.1 J	0.0172 J	375	< 1.8 U	320
GNC1-BE22	10	NORM	2/5/2009	< 0.82 U	< 0.27 U	< 0.5 U	94.4	< 0.083 U	0.6 J	7	< 0.035 U	< 0.53 U	0.737	195	< 1.9 U	76.9
GNC1-BF19	0	NORM	2/5/2009	< 0.82 U	< 0.27 U	0.71 J	142	5.8	1 J	30.9	0.23	2.1 J	1.27	1110	< 1.9 U	354
GNC1-BF19	11	NORM	2/5/2009	R	< 0.27 U	2.9 J	151	< 0.53 U	0.56 J	8.5	< 0.035 U	< 0.53 U	1.83	2330	< 1.9 U	103
GNC1-BF20	0	NORM	2/6/2009	< 0.81 U	< 0.27 U	< 0.49 U	15.9	< 0.52 U	< 0.1 U	2.5	< 0.034 U	< 5.2 U	0.0555	5810	< 1.8 U	156
GNC1-BF20	10	NORM	2/6/2009	< 0.88 U	< 0.29 U	5.5 J	242	< 0.57 U	0.36 J	4.1	< 0.037 U	< 5.7 U	4.55	17300	< 2 U	79.7
GNC1-BF21	0	NORM	2/5/2009	< 0.82 U	< 0.27 U	< 0.49 U	127	< 0.52 U	< 0.1 U	5.7	0.55	1.2 J	1.6	2740	< 1.9 U	229
GNC1-BF21	10	NORM	2/5/2009	< 0.82 U	< 0.27 U	0.6 J	171	< 0.53 U	0.77 J	2.7	< 0.035 U	< 0.53 U	1.22	1260	< 1.9 U	79.1
GNC1-BF22	0	NORM	2/6/2009	5.2	< 0.27 U	< 0.49 U	40.3	< 0.52 U	< 0.1 U	6	< 0.034 U	14.2	0.375	6300	< 1.8 U	387
GNC1-BF22	10	NORM	2/6/2009	< 0.82 U	< 0.27 U	< 0.5 U	446	< 0.53 U	0.78 J	16	< 0.035 U	< 5.3 U	0.955	3620	< 1.9 U	88
GNC1-BG19	0	NORM	2/5/2009	1.2 J	0.78 J	1.1 J	472	< 0.52 U	0.28 J	118	0.76	9.7	1.96	3420	< 1.9 U	94.5
GNC1-BG19	10	NORM	2/5/2009	< 0.82 U	< 0.27 U	0.77 J	67.3	< 0.53 U	0.72 J	2.8	< 0.035 U	0.74 J	0.419	894	< 1.9 U	72.2
GNC1-BG20	0	NORM	2/5/2009	3.4 J	0.39 J	1.4 J	1210 J	0.68	< 0.1 U	52.4 J	< 1.7 U	6.2	6.89 J	5890	< 1.8 U	493 J
GNC1-BG20	0	FD	2/5/2009	1.5 J	< 0.27 U	< 0.49 U	478 J	0.61	0.15 J	27.5 J	1.4	3.3 J	28.6 J	8870	< 1.8 U	939 J
GNC1-BG20	10	NORM	2/5/2009	< 0.8 U	< 0.27 U	0.98 J	112	< 0.52 U	0.6 J	4.8	< 0.034 U	0.91 J	0.805	361	< 1.8 U	56.9
GNC1-BG21	0	NORM	2/5/2009	< 0.81 U	< 0.27 U	< 0.49 U	50.4	< 0.52 U	0.16 J	4.6	< 0.034 U	2.3 J	0.165	5770	< 1.8 U	148
GNC1-BG21	10	NORM	2/5/2009	< 0.82 U	< 0.27 U	1.9 J	164	< 0.53 U	0.76 J	4.5	< 0.035 U	< 0.53 U	0.81	2060	< 1.9 U	64.8
GNC1-BG22	0	NORM	2/5/2009	< 0.81 U	< 0.27 U	< 0.49 U	118	0.59	< 0.1 U	25.6	< 0.034 U	6	0.326	2110	< 1.8 U	324
GNC1-BG22	10	NORM	2/5/2009	< 0.81 U	< 0.27 U	< 0.49 U	57.8	< 0.52 U	0.8 J	4.3	< 0.035 U	< 0.52 U	0.278	547	< 1.9 U	58.5
GNC1-JD06	0	NORM	2/13/2009	< 0.82 U	< 0.28 U	< 0.5 U	0.38 J	0.11 J	0.25 J	3.5	< 0.035 U	< 5.2 U	0.0163 J	6.8	< 1.9 U	308
GNC1-JD06	10	NORM	2/17/2009	< 0.82 U	< 0.28 U	1.9 J	153	0.099	1.2	6.8	< 0.035 U	< 0.53 U	2.18	303	< 1.9 U	70.5
GNC1-JD07	0	NORM	1/30/2009	< 0.83 U	< 0.28 U	< 0.5 U	19.4	< 0.53 U	0.98 J	4.3	< 0.035 U	< 0.53 U	0.0337 J	1210	< 1.9 U	88.3 J+

TABLE B-3
SOIL GENERAL CHEMISTRY/IONS DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 2 of 2)

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	General Chemistry/Ions												
				Ammonia	Bromide	Chlorate	Chloride	Cyanide (Total)	Fluoride	Nitrate (as N)	Nitrite (as N)	Orthophosphate as P	Perchlorate	Sulfate	Sulfide	Total Kjeldahl Nitrogen (TKN)
GNC1-JD07	10	NORM	1/30/2009	< 0.83 U	< 0.28 U	14.7	798	< 0.53 U	1.7	22.9	< 0.035 U	< 0.53 U	10.1	1790	< 1.9 U	61 J+
GNC1-JD08	0	NORM	1/30/2009	1.9 J	1.1 J	0.88 J	807	< 0.51 U	0.98 J	13.6	< 0.034 U	< 0.51 U	3.76	2360	< 1.8 U	172
GNC1-JD08	10	NORM	1/30/2009	< 0.83 U	< 0.28 U	1.8 J	91.9	< 0.53 U	1.2	3.2	< 0.035 U	< 0.53 U	0.311	1560	< 1.9 U	55.3
GNC1-JD09	0	NORM	1/30/2009	< 0.82 U	< 0.27 U	< 0.5 U	15	0.54	1.2	2.4	0.087 J	< 0.53 U	0.116 J	808	< 1.9 U	149
GNC1-JD09	0	FD	1/30/2009	< 0.84 U	< 0.28 U	< 0.51 U	45.5	< 0.54 U	1 J	9.3	< 0.035 U	< 0.54 U	0.0652 J	2450	< 1.9 U	103
GNC1-JD09	10	NORM	1/30/2009	< 0.83 U	< 0.28 U	5.9	383	< 0.53 U	1.5	22.3	< 0.035 U	< 0.53 U	3.31	1120	< 1.9 U	71.7
GNC1-JD10	0	NORM	2/9/2009	< 5.3 U	< 0.28 U	14.1	2830	< 0.084 U	0.4 J	121	< 0.71 U	< 0.53 U	20.1	2370	< 1.9 U	151
GNC1-JD10	11	NORM	2/9/2009	< 0.83 U	< 0.28 U	3.1 J	107	< 0.084 U	< 0.11 U	3.4	< 0.035 U	< 0.53 U	0.176	2970	< 1.9 U	59.4
GNC1-JD11	0	NORM	2/9/2009	< 5.5 U	< 0.29 U	2.7 J	505	< 0.087 U	0.61 J	21.3	< 0.036 U	< 0.55 U	7.48	1810	< 1.9 U	108
GNC1-JD11	11	NORM	2/9/2009	< 0.87 U	< 0.29 U	2.3 J	74	< 0.088 U	0.62 J	2.1	< 0.037 U	< 0.56 U	0.462	616	< 2 U	57.3
GNC1-JS09	0	NORM	1/30/2009	< 0.81 U	< 0.27 U	< 0.49 U	67.7	< 0.52 U	< 0.1 U	11.8	0.82	< 5.2 U	1.55	891 J	< 1.8 U	300 J+
GNC1-JS09	0	FD	1/30/2009	0.98 J	< 0.26 U	< 0.48 U	81.4	< 0.5 U	< 0.1 U	11.1	1.3	< 5 U	3.36	3120 J	< 1.8 U	191 J+
GNC1-JS09	10	NORM	1/30/2009	< 0.83 U	< 0.28 U	3.3 J	189	< 0.084 U	2.1	5.1	< 0.035 U	< 0.53 U	0.653	407	< 1.9 U	78.3 J+
GNC1-JS10	0	NORM	1/30/2009	< 0.83 U	< 0.28 U	< 0.5 U	28.2	< 0.53 U	< 0.11 U	13.9	< 0.035 U	12.1	0.637	943	< 1.9 U	1660 J+
GNC1-JS10	10	NORM	1/30/2009	< 0.82 U	< 0.27 U	< 0.49 U	21.6	< 0.52 U	1.8	5.9	< 0.035 U	< 0.52 U	0.602	4070	< 1.9 U	69.7
GNC1-JS11	0	NORM	1/29/2009	< 0.81 U	< 0.27 U	< 0.49 U	3.3 J	0.81	0.65 J	1.3 J	< 0.034 U	< 5.2 U	0.0553	48.4	< 1.8 U	513 J+
GNC1-JS11	0	FD	1/29/2009	< 0.81 U	< 0.27 U	< 0.49 U	5.5 J	0.81	< 0.1 U	4.9 J	< 0.034 U	< 5.2 U	0.0282 J	58.8	< 1.8 U	474 J+
GNC1-JS11	10	NORM	1/29/2009	< 0.82 U	< 0.27 U	2 J	288	1.1	1.4	7	< 0.035 U	< 0.52 U	1.65	1390	< 1.9 U	64.6 J+

All units in mg/kg.
-- = no sample data.

TABLE B-4
SOIL METALS DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Metals							
				Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium
GNC1-BD19	0	NORM	1/28/2009	7940	< 0.315 UJ	5.8	235 J+	0.53 J	< 16.5 U	< 0.1 U	27700
GNC1-BD19	10	NORM	1/28/2009	9250	< 0.315 UJ	7.1	378 J+	0.5 J	< 16.5 U	< 0.1 U	28900
GNC1-BD20	0	NORM	1/30/2009	9620 J	< 0.315 UJ	4.3 J	281	0.59	< 16.5 U	0.23 J	24400
GNC1-BD20	10	NORM	1/30/2009	8700 J	< 0.315 UJ	3.4 J	284	0.5 J	< 16.5 U	< 0.1 U	27000
GNC1-BD21	0	NORM	1/30/2009	10100 J	< 0.315 UJ	4.4 J	272	0.54	< 16.5 U	0.28	42500
GNC1-BD21	10	NORM	1/30/2009	9400 J	< 0.315 UJ	7	391	0.52 J	< 16.5 U	0.12 J	43000
GNC1-BE19	0	NORM	2/5/2009	9440	< 0.315 UJ	3.8 J	253 J	0.55	47.1 J	0.17 J	40100
GNC1-BE19	10	NORM	2/5/2009	12000	< 0.315 UJ	3 J	328 J	0.68	< 16.5 U	0.12 J	24000
GNC1-BE20	0	NORM	2/6/2009	8900	< 0.315 UJ	4.7 J	306 J	0.55	21.5 J	0.22 J	72000
GNC1-BE20	0	FD	2/6/2009	9480	< 2.6 UJ	4 J	307 J	0.58	20 J	0.29	66500
GNC1-BE20	10	NORM	2/6/2009	9320	< 0.315 UJ	7.8	295 J	0.55	< 16.5 U	< 0.1 U	37200
GNC1-BE21	0	NORM	2/6/2009	10200	< 0.315 UJ	3.6 J	346 J	0.63	38.9 J	0.12 J	22800
GNC1-BE21	10	NORM	2/6/2009	10300	< 0.315 UJ	4.2 J	433 J	0.58	18.3 J	0.14 J	37300
GNC1-BE22	0	NORM	2/5/2009	10200	< 2.6 UJ	5.4	563 J	0.61	< 16.5 U	0.44	34400
GNC1-BE22	10	NORM	2/5/2009	10500	< 0.315 UJ	3.7 J	362 J	0.6	< 16.5 U	0.11 J	29500
GNC1-BF19	0	NORM	2/5/2009	7780	< 0.315 UJ	5.3	175 J	0.4 J	< 16.5 U	0.3	103000
GNC1-BF19	11	NORM	2/5/2009	13200	< 0.315 UJ	2.9 J	395 J	0.74	< 16.5 U	0.13 J	24200
GNC1-BF20	0	NORM	2/6/2009	11100	< 0.315 UJ	2.6 J	338 J	0.66	< 16.5 U	0.14 J	22200
GNC1-BF20	10	NORM	2/6/2009	10100	< 0.315 UJ	6.1	472 J	0.64	< 16.5 U	0.12 J	36400
GNC1-BF21	0	NORM	2/5/2009	12600	< 0.315 UJ	6.2	310 J	0.77	< 16.5 U	0.19 J	41600
GNC1-BF21	10	NORM	2/5/2009	8810	< 0.315 UJ	4.2 J	371 J	0.56	< 16.5 U	0.11 J	35000
GNC1-BF22	0	NORM	2/6/2009	8340	< 0.315 UJ	3.2 J	344 J	0.6	17.2 J	0.13 J	19700
GNC1-BF22	10	NORM	2/6/2009	7990	< 0.315 UJ	5.5	318 J	0.54	< 16.5 U	< 0.1 U	23900
GNC1-BG19	0	NORM	2/5/2009	10900	< 0.315 UJ	5.1 J	341 J	0.61	< 16.5 U	0.3	27600
GNC1-BG19	10	NORM	2/5/2009	11400	< 0.315 UJ	4.9 J	384 J	0.71	< 16.5 U	0.15 J	24500
GNC1-BG20	0	NORM	2/5/2009	11500	< 2.6 UJ	4.1 J	351 J	0.65	23 J	0.21 J	27700
GNC1-BG20	0	FD	2/5/2009	10000	< 0.315 UJ	4.5 J	266 J	0.61	20.7 J	0.18 J	32100
GNC1-BG20	10	NORM	2/5/2009	9260	< 0.315 UJ	5.7	268 J	0.57	< 16.5 U	0.14 J	29600
GNC1-BG21	0	NORM	2/5/2009	10600	< 0.315 UJ	3.7 J	290 J	0.61	18.6 J	0.16 J	30200
GNC1-BG21	10	NORM	2/5/2009	10900	< 0.315 UJ	4.7 J	362 J	0.63	< 16.5 U	0.15 J	31000
GNC1-BG22	0	NORM	2/5/2009	10400	< 0.315 UJ	5.3	408 J	0.62	< 16.5 U	0.14 J	23200
GNC1-BG22	10	NORM	2/5/2009	10400	< 0.315 UJ	4 J	382 J	0.65	< 16.5 U	0.14 J	20400
GNC1-JA04	0	NORM	8/13/2009	11000	< 2.5 UJ	7.7 J+	286 J	0.68	< 50.8 U	0.47 J+	31400 J
GNC1-JD06	0	NORM	2/13/2009	13200 J	< 2.6 UJ	9.6	661 J	0.59	< 16.5 U	0.34 J+	26700 J
GNC1-JD06	10	NORM	2/17/2009	11500 J	< 0.315 UJ	7.7	472 J	0.55	< 16.5 U	< 0.27 UJ	51700 J

TABLE B-4
SOIL METALS DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Metals							
				Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium
GNC1-JD07	0	NORM	1/30/2009	10000 J	< 0.315 UJ	3.7 J	307	0.66	< 16.5 U	0.13 J	34700
GNC1-JD07	10	NORM	1/30/2009	10600 J	< 0.315 UJ	6.7	329	0.59	< 16.5 U	0.11 J	28300
GNC1-JD08	0	NORM	1/30/2009	6210 J	< 0.315 UJ	3.8 J	142	0.45 J	< 16.5 U	0.13 J	54300
GNC1-JD08	10	NORM	1/30/2009	10900 J	< 0.315 UJ	5 J	209	0.64	< 16.5 U	< 0.1 U	29000
GNC1-JD09	0	NORM	1/30/2009	10600 J	< 0.315 UJ	4.1 J	315	0.66	< 16.5 U	0.13 J	30500
GNC1-JD09	0	FD	1/30/2009	12000 J	< 0.315 UJ	4.3 J	303	0.63	< 16.5 U	0.11 J	23800
GNC1-JD09	10	NORM	1/30/2009	11800 J	< 0.315 UJ	4.7 J	293	0.71	< 16.5 U	< 0.1 U	27100
GNC1-JD10	0	NORM	2/9/2009	11700 J	< 2.7 UJ	7.4	613 J-	1.1 J+	< 16.5 U	0.18 J	26000
GNC1-JD10	11	NORM	2/9/2009	11100 J	< 0.315 UJ	3.1 J	309 J-	1 J+	< 16.5 U	0.12 J	34300
GNC1-JD11	0	NORM	2/9/2009	10800 J	< 0.315 UJ	3.9 J	383 J-	0.77 J+	< 16.5 U	0.15 J	24300
GNC1-JD11	11	NORM	2/9/2009	14700 J	< 0.315 UJ	4.8 J	184 J-	1.1 J+	< 16.5 U	< 0.1 U	18200
GNC1-JS09	0	NORM	1/30/2009	10300 J	< 2.6 UJ	6.5	284	0.63	< 16.5 U	0.27	26900
GNC1-JS09	0	FD	1/30/2009	10200 J	< 0.315 UJ	4.3 J	280	0.6	< 16.5 U	0.23 J	29500
GNC1-JS09	10	NORM	1/30/2009	10800 J	< 0.315 UJ	6.7	314	0.62	< 16.5 U	< 0.1 U	32700
GNC1-JS10	0	NORM	1/30/2009	9560 J	< 2.7 UJ	7.2	374	0.59	< 16.5 U	0.33	40500
GNC1-JS10	10	NORM	1/30/2009	8910 J	< 0.315 UJ	8.8	383	0.56	< 16.5 U	< 0.1 U	32500
GNC1-JS11	0	NORM	1/29/2009	9770	< 0.315 UJ	4.7 J	365 J+	0.64	< 16.5 U	0.21 J	30100
GNC1-JS11	0	FD	1/29/2009	9720	< 0.315 UJ	4.8 J	387 J+	0.64	< 16.5 U	0.18 J	35000
GNC1-JS11	10	NORM	1/29/2009	11400	< 0.315 UJ	5.5	282 J+	0.73	< 16.5 U	0.11 J	34000
GNC2-BE20C	0	NORM	1/8/2010	11200 J	< 0.225 UJ	5.5 J+	273 J	0.7	< 52.2 U	0.29 J+	35900 J
GNC2-BE20C	0	FD	1/8/2010	11200 J	< 0.225 UJ	4.7 J+	280 J	0.64	< 51.9 U	< 0.26 UJ	31100 J
GNC2-JA04	0	NORM	8/2/2010	12200	< 0.83 UJ	< 5 U	388 J+	0.68	< 16.9 U	0.17 J	25300 J
GNC2-JA04	0	FD	8/2/2010	12200	< 0.83 UJ	< 5.1 U	455 J+	0.7	< 16.9 U	0.16 J	26700 J
GNC2-JD06	0	NORM	8/2/2010	12500	< 0.84 UJ	5.8	514 J+	0.71	< 17.1 U	0.092 J	31700 J
GNC2-JS09C	0	NORM	1/8/2010	13800 J	< 0.225 UJ	4.5 J+	368 J	0.76	< 51.3 U	< 0.26 UJ	24300 J
GNC2-JS10C	0	NORM	1/8/2010	11200 J	< 0.225 UJ	4.3 J+	365 J	0.61	< 53 U	< 0.27 UJ	19000 J
GNC2-JS10C	0	FD	1/8/2010	10800 J	< 0.225 UJ	3.6 J+	250 J	0.66	< 53 U	< 0.26 UJ	15400 J

All units in mg/kg.

-- = no sample data.

= Data not included in risk assessment. Sample location excavated and data replaced with post-excavation data.

TABLE B-4
SOIL METALS DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Metals							
				Chromium	Chromium (VI)	Cobalt	Copper	Iron	Lead	Lithium	Magnesium
GNC1-BD19	0	NORM	1/28/2009	7.3	< 0.11 UJ	8.1	15.9	14300	19.1	14.4	9360
GNC1-BD19	10	NORM	1/28/2009	9.4	< 0.11 UJ	7.7	13.5	13000	10.2	20.3	10100
GNC1-BD20	0	NORM	1/30/2009	16.7	< 0.1 U	8.7	20.8	18500	43.6	11.8	10800
GNC1-BD20	10	NORM	1/30/2009	11.2	0.14 J	8.7	16.4	16200	9.5	13.4	9190
GNC1-BD21	0	NORM	1/30/2009	17.3	0.19 J	8.8	20.3	17600	40.4	14.1	10900
GNC1-BD21	10	NORM	1/30/2009	13.3	0.19 J	8.5	19.1	17400	13.7	19.2	10800
GNC1-BE19	0	NORM	2/5/2009	19.4	< 0.1 U	8.9	18.3	17100	26.2	15.2	11800
GNC1-BE19	10	NORM	2/5/2009	16.1	< 0.11 U	10	18.5	19800	10.8	16	10700
GNC1-BE20	0	NORM	2/6/2009	18.6 J+	< 0.1 U	8 J	25.5 J+	14500	661	15.1	13700
GNC1-BE20	0	FD	2/6/2009	19.4 J+	< 0.1 U	17 J	29.3 J+	15200	860	16	13500
GNC1-BE20	10	NORM	2/6/2009	18.3 J+	0.3 J	8.5	18.2 J+	16100	12.7	19.7	10900
GNC1-BE21	0	NORM	2/6/2009	15.2 J+	< 0.11 U	9.2	18.1 J+	16700	13.5	16.2	11700
GNC1-BE21	10	NORM	2/6/2009	15.9 J+	0.2 J	9.3	18.3 J+	15800	18.7	16.2	10800
GNC1-BE22	0	NORM	2/5/2009	62.8	1.8	12.8	32.5	26900	272	14.5	10900
GNC1-BE22	10	NORM	2/5/2009	15.4	0.16 J	9.6	18	18800	9.3	16.4	9710
GNC1-BF19	0	NORM	2/5/2009	15.2	< 0.11 U	5.2	13.3	10200	9.8	13.8	28500
GNC1-BF19	11	NORM	2/5/2009	16.3	0.11 J	12.4	23	21400	12	14.3	13100
GNC1-BF20	0	NORM	2/6/2009	17 J+	< 0.1 U	9.9	18.2 J+	18300	16.4	14.3	11100
GNC1-BF20	10	NORM	2/6/2009	19.3 J+	0.16 J	9.3	18.5 J+	17200	12.5	18	11000
GNC1-BF21	0	NORM	2/5/2009	24.8	0.3 J	10.4	24.7	21800	16.9	20.9	12700
GNC1-BF21	10	NORM	2/5/2009	15.7	0.3 J	8.3	15.7	17700	9.5	14.8	8810
GNC1-BF22	0	NORM	2/6/2009	15.4 J+	< 0.1 U	8.8	16.4 J+	15000	15.8	14.2	8980
GNC1-BF22	10	NORM	2/6/2009	14.1 J+	0.19 J	7.5	15.9 J+	13500	14.1	13.9	7670
GNC1-BG19	0	NORM	2/5/2009	19.9	0.16 J	10.1	25.4	19800	21	12.5	10700
GNC1-BG19	10	NORM	2/5/2009	18.7	0.16 J	11.6	22	21700	11.5	17.2	11300
GNC1-BG20	0	NORM	2/5/2009	23.4	0.56	11.5	22.2	21200	22.2	17.2	12600
GNC1-BG20	0	FD	2/5/2009	20.7	0.34 J	9.7	21	18800	25	15.7	12400
GNC1-BG20	10	NORM	2/5/2009	8.8	< 0.1 U	8.3	18.5	15600	8.2	14.7	8660
GNC1-BG21	0	NORM	2/5/2009	22	< 0.1 U	9.3	20.1	19000	18.9	15	11800
GNC1-BG21	10	NORM	2/5/2009	17.1	0.11 J	10.5	20	19100	12	17.2	11500
GNC1-BG22	0	NORM	2/5/2009	17.1	0.34 J	9.6	27.1	19300	13.3	14.9	9160
GNC1-BG22	10	NORM	2/5/2009	23	0.34 J	10.5	22.8	21400	15.6	16.3	9780
GNC1-JA04	0	NORM	8/13/2009	16.9	< 0.1 U	9.2	30.3 J+	17700	154 J+	15.7	12900
GNC1-JD06	0	NORM	2/13/2009	22.8 J-	< 0.11 U	10.9	28.8	20800 J	121 J-	11.9	12400 J
GNC1-JD06	10	NORM	2/17/2009	12.9 J-	0.23 J	9.1	22.4	16500 J	15.7 J-	15.7	10700 J

TABLE B-4
SOIL METALS DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 4 of 8)

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Metals							
				Chromium	Chromium (VI)	Cobalt	Copper	Iron	Lead	Lithium	Magnesium
GNC1-JD07	0	NORM	1/30/2009	14	0.24 J	9.9	18.3	17700	17.5	16.1	12000
GNC1-JD07	10	NORM	1/30/2009	15.5	0.19 J	9.7	20.7	20500	25.3	14.7	9970
GNC1-JD08	0	NORM	1/30/2009	11.6	0.24 J	8.1	15.9	14600	7	12	9840
GNC1-JD08	10	NORM	1/30/2009	11.4	0.24 J	9.8	19.6	18200	9.3	12.7	11100
GNC1-JD09	0	NORM	1/30/2009	13.8	0.19 J	9.5	19	18800	18.3	12.5	12400
GNC1-JD09	0	FD	1/30/2009	14.5	0.14 J	10.9	21.1	19400	14.2	14.9	11800
GNC1-JD09	10	NORM	1/30/2009	16.1	< 0.11 U	10.9	23	21200	11.7	13.6	11400
GNC1-JD10	0	NORM	2/9/2009	31.2	0.14 J	10.8	22.3	20500 J	55.9	13.4 J+	11300 J
GNC1-JD10	11	NORM	2/9/2009	17.4	< 0.11 U	10.4	20.3	19800 J	12.1	13.3 J+	11500 J
GNC1-JD11	0	NORM	2/9/2009	18.6	< 0.11 U	10.4	21.6	20000 J	21.7	12.6 J+	10700 J
GNC1-JD11	11	NORM	2/9/2009	14.2	< 0.11 U	12.2	19.9	21300 J	13.1	16.7 J+	13100 J
GNC1-JS09	0	NORM	1/30/2009	21.7	< 0.1 U	10.8	28.8	41400 J	547 J	14.3	11600
GNC1-JS09	0	FD	1/30/2009	17	0.18 J	9.8	22	18400 J	28.6 J	13.3	11100
GNC1-JS09	10	NORM	1/30/2009	14.8	< 0.11 U	8.9	17	17000	11.7	15.4	10800
GNC1-JS10	0	NORM	1/30/2009	23.9	< 0.11 U	8.7	20.7	17500	67.6	14.6	12300
GNC1-JS10	10	NORM	1/30/2009	15.7	0.19 J	7.9	18	15100	11.1	16.4	9890
GNC1-JS11	0	NORM	1/29/2009	19.4	< 0.1 U	8.7	20.2	17600	32.7 J+	16.3	10700
GNC1-JS11	0	FD	1/29/2009	18.1	0.14 J	8.8	19.4	18500	27.7 J+	15.4	11400
GNC1-JS11	10	NORM	1/29/2009	16.7	0.19 J	9.3	21.7	19800	12 J+	18.8	11600
GNC2-BE20C	0	NORM	1/8/2010	15.2	0.15 J	9.7	28.2 J	19000 J	29.6 J+	15.3 J+	15600 J
GNC2-BE20C	0	FD	1/8/2010	14.3	< 0.1 U	10.6	22.6 J	17500 J	38.3 J+	15.9 J+	12700 J
GNC2-JA04	0	NORM	8/2/2010	20.9	< 0.1 U	11.2	19.3	25600	17.7	12.8	10500
GNC2-JA04	0	FD	8/2/2010	23.1	< 0.1 U	11.2	20.4	27300	18.2	13.6	11100
GNC2-JD06	0	NORM	8/2/2010	18.3	0.15 J	8.7	16.6	21900	13.3	19	12500
GNC2-JS09C	0	NORM	1/8/2010	14.2	< 0.1 U	11.3	22.6 J+	21200 J	17.6 J+	14.8 J+	13200 J
GNC2-JS10C	0	NORM	1/8/2010	13.3	0.15 J	10.9	19.9 J+	17300 J	20.5 J+	12.3 J+	11200 J
GNC2-JS10C	0	FD	1/8/2010	10.1	0.36 J	9.4	18.7 J+	17000 J	16.4 J+	13 J+	12000 J

All units in mg/kg.

-- = no sample data.

= Data not included in risk assessment. Sample location excavated and data replaced with post-excavation data.

TABLE B-4
SOIL METALS DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Metals							
				Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium
GNC1-BD19	0	NORM	1/28/2009	476	< 0.0367 U	< 0.47 U	13.3	1710 J+	< 0.4 U	0.11 J+	604
GNC1-BD19	10	NORM	1/28/2009	349	< 0.0355 U	0.62 J	14.2	1480 J+	< 0.4 U	< 0.11 UJ	1040
GNC1-BD20	0	NORM	1/30/2009	557 J	0.0912 J+	0.58 J	16.2	1820	< 0.4 U	0.11 J	284
GNC1-BD20	10	NORM	1/30/2009	458 J	< 0.035 UJ	0.64 J	15.2	1380	< 0.4 U	< 0.11 U	555
GNC1-BD21	0	NORM	1/30/2009	608 J	0.0575 J+	0.69 J	17.2	2240	< 0.4 U	0.13 J	433
GNC1-BD21	10	NORM	1/30/2009	408 J	< 0.035 UJ	0.76 J	15.3	2080	< 0.4 U	< 0.11 U	870
GNC1-BE19	0	NORM	2/5/2009	614	0.0742	0.93 J	16.5	2950	< 0.4 U	0.13 J+	2390
GNC1-BE19	10	NORM	2/5/2009	567	< 0.0354 U	1.2 J	15.7	2100	< 0.4 U	0.14 J+	1920
GNC1-BE20	0	NORM	2/6/2009	441	0.0915 J	0.94 J	15.4	2030 J+	< 0.4 U	0.18 J+	487
GNC1-BE20	0	FD	2/6/2009	484	< 0.0349 UJ	0.98 J	18.7	2070 J+	< 0.4 U	0.19 J+	437
GNC1-BE20	10	NORM	2/6/2009	418	0.0587 J-	1.1 J	15.5	2270 J+	< 0.4 U	< 0.11 U	788
GNC1-BE21	0	NORM	2/6/2009	451	0.0366 J-	1.5 J	16.7	2840 J+	< 0.4 U	0.12 J+	4420
GNC1-BE21	10	NORM	2/6/2009	513	< 0.0357 UJ	1.1 J	15.7	2550 J+	< 0.4 U	0.12 J+	1190
GNC1-BE22	0	NORM	2/5/2009	619	0.082	3.2	20.5	2060	< 0.4 U	0.16 J+	292
GNC1-BE22	10	NORM	2/5/2009	444	< 0.0351 U	0.61 J	16.3	1830	< 0.4 U	0.13 J+	599
GNC1-BF19	0	NORM	2/5/2009	295	< 0.0351 U	1.3 J	13	2300	< 0.4 U	0.11 J+	348
GNC1-BF19	11	NORM	2/5/2009	716	< 0.005 U	1.4 J	19.5	2470	< 0.4 U	0.13 J+	1260
GNC1-BF20	0	NORM	2/6/2009	543	< 0.0348 UJ	1.1 J	17.7	3040 J+	< 0.4 U	0.14 J+	421
GNC1-BF20	10	NORM	2/6/2009	455	< 0.005 UJ	1.4 J	16	2300 J+	< 0.4 U	0.12 J+	1290
GNC1-BF21	0	NORM	2/5/2009	508	< 0.0349 U	0.66 J	21.6	3440	< 0.4 U	0.13 J+	656
GNC1-BF21	10	NORM	2/5/2009	441	< 0.005 U	1 J	15.2	1820	< 0.4 U	< 0.11 U	801
GNC1-BF22	0	NORM	2/6/2009	568	< 0.0346 UJ	0.76 J	15.2	3710 J+	< 0.4 U	< 0.11 U	1180
GNC1-BF22	10	NORM	2/6/2009	534	< 0.005 UJ	0.77 J	14.4	1610 J+	< 0.4 U	< 0.11 U	649
GNC1-BG19	0	NORM	2/5/2009	550	0.047	0.74 J	19.4	2580	< 0.4 U	0.19 J+	651
GNC1-BG19	10	NORM	2/5/2009	778	< 0.0351 U	1.1 J	23.7	2210	< 0.4 U	0.15 J+	839
GNC1-BG20	0	NORM	2/5/2009	586	< 0.0345 U	0.99 J	19.9	2870	< 0.4 U	0.14 J+	1160 J
GNC1-BG20	0	FD	2/5/2009	554	0.0369	0.93 J	18.3	2520	< 0.4 U	0.12 J+	682 J
GNC1-BG20	10	NORM	2/5/2009	438	0.0565	0.67 J	13.1	2030	< 0.4 U	< 0.11 U	1080
GNC1-BG21	0	NORM	2/5/2009	511	< 0.0345 U	0.99 J	18.5	2990	< 0.4 U	0.13 J+	513
GNC1-BG21	10	NORM	2/5/2009	596	< 0.005 U	0.99 J	17	2230	< 0.4 U	0.12 J+	1210
GNC1-BG22	0	NORM	2/5/2009	489	< 0.005 U	1 J	16.4	2830	< 0.4 U	0.12 J+	1520
GNC1-BG22	10	NORM	2/5/2009	606	< 0.005 U	0.76 J	20.1	3080	< 0.4 U	0.12 J+	504
GNC1-JA04	0	NORM	8/13/2009	512 J	0.0495 J-	< 2.5 U	17.6	3200 J+	< 2.5 U	0.15 J	608
GNC1-JD06	0	NORM	2/13/2009	896 J	< 0.0353 U	1.1 J	18.4	2650 J	< 0.4 U	0.27 J+	271
GNC1-JD06	10	NORM	2/17/2009	491 J	0.0056 J	0.88 J	13.7	1570 J	< 0.4 U	< 0.11 U	796

TABLE B-4
SOIL METALS DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 6 of 8)

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Metals							
				Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium
GNC1-JD07	0	NORM	1/30/2009	493 J	< 0.0353 UJ	0.69 J	17.7	1780	< 0.4 U	0.11 J	500
GNC1-JD07	10	NORM	1/30/2009	544 J	< 0.0354 UJ	1.7 J	15.9	2340	< 0.4 U	0.12 J	1570
GNC1-JD08	0	NORM	1/30/2009	326 J	< 0.005 U	0.69 J	28.2	1620	< 0.4 U	0.13 J	1500
GNC1-JD08	10	NORM	1/30/2009	481 J	< 0.005 U	0.89 J	16.4	1770	< 0.4 U	< 0.11 U	834
GNC1-JD09	0	NORM	1/30/2009	587 J	< 0.005 U	0.79 J	15.1	2480	< 0.4 U	0.13 J	499 J
GNC1-JD09	0	FD	1/30/2009	578 J	0.0421 J+	0.9 J	17.8	2540	< 0.4 U	< 0.11 U	871 J
GNC1-JD09	10	NORM	1/30/2009	517 J	< 0.0356 UJ	1.3 J	16.7	2290	< 0.4 U	0.12 J	1210
GNC1-JD10	0	NORM	2/9/2009	808 J	< 0.0356 U	1.7 J	19	2740 J	< 0.4 U	0.28 J+	1480
GNC1-JD10	11	NORM	2/9/2009	530 J	< 0.0354 U	1.3 J	18.4	1880 J	< 0.4 U	0.13 J+	1040
GNC1-JD11	0	NORM	2/9/2009	692 J	< 0.0367 U	0.65 J	17.5	2520 J	< 0.4 U	0.14 J+	534
GNC1-JD11	11	NORM	2/9/2009	612 J	< 0.0373 U	1.1 J	19.8	2240 J	0.47 J	< 0.11 U	1330
GNC1-JS09	0	NORM	1/30/2009	661 J	0.061 J+	2.2 J	19.7	2370	< 0.4 U	0.23 J	378
GNC1-JS09	0	FD	1/30/2009	595 J	0.0412 J+	0.69 J	18.4	2310	< 0.4 U	0.18 J	358
GNC1-JS09	10	NORM	1/30/2009	477 J	0.0484 J+	0.93 J	15.9	2710	< 0.4 U	< 0.11 U	889
GNC1-JS10	0	NORM	1/30/2009	700 J	0.0406 J+	1 J	16.8	2250	< 0.4 U	0.15 J	342
GNC1-JS10	10	NORM	1/30/2009	397 J	< 0.005 U	1.1 J	14.2	1840	< 0.4 U	< 0.11 U	798
GNC1-JS11	0	NORM	1/29/2009	607	< 0.0345 U	0.89 J	17.4	2110	< 0.4 U	0.12 J+	247
GNC1-JS11	0	FD	1/29/2009	567	0.0366	0.77 J	19.5	2390	< 0.4 U	0.11 J+	277
GNC1-JS11	10	NORM	1/29/2009	475	< 0.005 U	1.1 J	17.3	1850	< 0.4 U	0.12 J+	1050
GNC2-BE20C	0	NORM	1/8/2010	540 J	0.0614 J	< 2.6 UJ	19.7	2800 J	< 2.6 UJ	0.21 J+	1080 J+
GNC2-BE20C	0	FD	1/8/2010	700 J	0.122 J	< 2.6 UJ	17.3	2580 J	< 2.6 UJ	0.18 J+	1100 J+
GNC2-JA04	0	NORM	8/2/2010	617 J+	< 0.0061 U	< 2.5 U	18.3	2970 J+	< 2.5 U	< 0.04 U	527
GNC2-JA04	0	FD	8/2/2010	619 J+	< 0.0061 U	< 2.5 U	20	3090 J+	< 2.5 U	< 0.04 U	535
GNC2-JD06	0	NORM	8/2/2010	457 J+	< 0.0061 U	< 2.6 U	16.6	2330 J+	< 2.6 U	< 0.041 U	784
GNC2-JS09C	0	NORM	1/8/2010	607 J	0.0479	< 2.6 UJ	19.4	2660 J	< 2.6 UJ	0.11 J+	1220 J+
GNC2-JS10C	0	NORM	1/8/2010	702 J	0.0366	< 2.7 UJ	17.7	1930 J	< 2.7 UJ	0.091 J+	412 J+
GNC2-JS10C	0	FD	1/8/2010	553 J	< 0.0353 U	< 2.6 UJ	16.3	1680 J	< 2.6 UJ	0.083 J+	321 J+

All units in mg/kg.

-- = no sample data.

= Data not included in risk assessment. Sample location excavated and data replaced with post-excavation data.

TABLE B-4
SOIL METALS DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Metals							
				Strontium	Thallium	Tin	Titanium	Tungsten	Uranium	Vanadium	Zinc
GNC1-BD19	0	NORM	1/28/2009	262	< 0.75 U	< 0.75 U	664	< 1.25 UJ	1.1	47.8	48
GNC1-BD19	10	NORM	1/28/2009	342	< 0.75 U	< 0.75 U	487	1.4 J-	1.6	44.8	33.6
GNC1-BD20	0	NORM	1/30/2009	202	< 0.75 U	1.2	765	< 1.25 UJ	0.82	53.3	155
GNC1-BD20	10	NORM	1/30/2009	280	< 0.75 U	< 0.75 U	591	< 1.25 UJ	1.1	42.8	40.6
GNC1-BD21	0	NORM	1/30/2009	317	< 0.75 U	1 J	855	< 1.25 UJ	0.78	52.1	67.2
GNC1-BD21	10	NORM	1/30/2009	401	< 0.75 U	< 0.75 U	717	< 1.25 UJ	1.9	49.2	41.5
GNC1-BE19	0	NORM	2/5/2009	599 J	< 0.75 U	< 1 U	925	< 1.25 U	0.84	58.5 J-	52.8
GNC1-BE19	10	NORM	2/5/2009	407 J	< 0.75 U	< 0.75 U	1030	< 1.25 U	1	62 J-	53.1
GNC1-BE20	0	NORM	2/6/2009	323 J	< 0.75 U	1.1	628	< 1.25 UJ	1.1	46.6 J+	91.8 J
GNC1-BE20	0	FD	2/6/2009	319 J	< 0.75 U	1.9	684	1.3 J-	1.2	46.3 J+	513 J
GNC1-BE20	10	NORM	2/6/2009	623 J	< 0.75 U	< 0.75 U	608	< 1.25 UJ	1.9	53.4 J+	45 J
GNC1-BE21	0	NORM	2/6/2009	319 J	< 0.75 U	< 0.75 U	598	< 1.25 UJ	0.98	46.1 J+	47.7 J
GNC1-BE21	10	NORM	2/6/2009	444 J	< 0.75 U	< 0.75 U	732	< 1.25 UJ	1.2	52.2 J+	46.3 J
GNC1-BE22	0	NORM	2/5/2009	247 J	< 0.75 U	10.4	1050	< 1.25 U	0.92	70.1 J-	150
GNC1-BE22	10	NORM	2/5/2009	397 J	< 0.75 U	< 0.75 U	909	2.9	1.1	61.2 J-	49
GNC1-BF19	0	NORM	2/5/2009	457 J	< 0.75 U	< 0.75 U	435	< 1.25 U	1.3	28.2 J-	52.6
GNC1-BF19	11	NORM	2/5/2009	516 J	< 0.75 U	< 0.75 U	1020	< 1.25 U	1.3	69.7 J-	56.4
GNC1-BF20	0	NORM	2/6/2009	289 J	< 0.75 U	< 0.75 U	859	< 1.25 UJ	0.7	57.5 J+	51.8 J
GNC1-BF20	10	NORM	2/6/2009	538 J	< 0.75 U	< 0.75 U	789	< 1.25 UJ	1.4	58.5 J+	43.8 J
GNC1-BF21	0	NORM	2/5/2009	226 J	< 0.75 U	< 1.1 U	875	< 1.25 U	0.94	67.1 J-	65.3
GNC1-BF21	10	NORM	2/5/2009	288 J	< 0.75 U	< 0.75 U	763	< 1.25 U	1.2	56.7 J-	43.8
GNC1-BF22	0	NORM	2/6/2009	189 J	< 0.75 U	< 0.75 U	601	< 1.25 UJ	0.59	48.2 J+	41.4 J
GNC1-BF22	10	NORM	2/6/2009	257 J	< 0.75 U	< 0.75 U	486	< 1.25 UJ	1.2	41.8 J+	37.2 J
GNC1-BG19	0	NORM	2/5/2009	401 J	< 0.75 U	< 1.1 U	1030	< 1.25 U	0.98	64.8 J-	81
GNC1-BG19	10	NORM	2/5/2009	305 J	< 0.75 U	< 0.75 U	1100	< 1.25 U	1.2	70.7 J-	53.4
GNC1-BG20	0	NORM	2/5/2009	296 J	< 0.75 U	1	998	< 1.25 U	0.85	70.7 J-	62.5
GNC1-BG20	0	FD	2/5/2009	244 J	< 0.75 U	< 1 U	807	< 1.25 U	0.81	59.3 J-	61.5
GNC1-BG20	10	NORM	2/5/2009	443 J	< 0.75 U	< 0.75 U	556	< 1.25 U	1.3	48.9 J-	39.6
GNC1-BG21	0	NORM	2/5/2009	308 J	< 0.75 U	< 1 U	973	< 1.25 U	0.75	59.9 J-	55.8
GNC1-BG21	10	NORM	2/5/2009	293 J	< 0.75 U	< 0.75 U	838	< 1.25 U	1	62.7 J-	52.8
GNC1-BG22	0	NORM	2/5/2009	306 J	< 0.75 U	< 0.75 U	886	< 1.25 U	0.99	65.5 J-	47.7
GNC1-BG22	10	NORM	2/5/2009	226 J	< 0.75 U	1.2	918	< 1.25 U	0.74	67.2 J-	52.6
GNC1-JA04	0	NORM	8/13/2009	403 J-	1.1	2.2	668 J+	< 2.5 UJ	0.92 J+	54.1 J+	82.2 J+
GNC1-JD06	0	NORM	2/13/2009	373 J	< 0.75 U	1.6	1200 J	2.2 J-	0.95 J	79.9 J-	84.7 J-
GNC1-JD06	10	NORM	2/17/2009	456 J	< 0.75 U	< 0.75 U	735 J	< 1.25 UJ	1.4 J	49.6 J-	45 J-

TABLE B-4
SOIL METALS DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 8 of 8)

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Metals							
				Strontium	Thallium	Tin	Titanium	Tungsten	Uranium	Vanadium	Zinc
GNC1-JD07	0	NORM	1/30/2009	303	< 0.75 U	< 0.75 U	698	< 1.25 UJ	1.2	50.4	48
GNC1-JD07	10	NORM	1/30/2009	308	< 0.75 U	< 0.75 U	800	< 1.25 UJ	1.5	54.2	47.5
GNC1-JD08	0	NORM	1/30/2009	193	< 0.75 U	< 0.75 U	791	< 1.25 UJ	0.98	38.1	48
GNC1-JD08	10	NORM	1/30/2009	309	< 0.75 U	< 0.75 U	658	< 1.25 UJ	1.2	50.3	44.3
GNC1-JD09	0	NORM	1/30/2009	273	< 0.75 U	< 0.75 U	921	< 1.25 UJ	1.2	54.3	49.3
GNC1-JD09	0	FD	1/30/2009	277	< 0.75 U	< 0.75 U	789	< 1.25 UJ	1	55.2	52.2
GNC1-JD09	10	NORM	1/30/2009	399	< 0.75 U	< 0.75 U	926	< 1.25 UJ	1.3	62.7	47
GNC1-JD10	0	NORM	2/9/2009	347 J	< 0.75 U	< 1.1 U	1350 J	3.2 J-	1.5 J+	82.7	82.2 J
GNC1-JD10	11	NORM	2/9/2009	411 J	< 0.75 U	< 0.75 U	1200 J	< 1.25 UJ	1.4 J+	60	63.5 J
GNC1-JD11	0	NORM	2/9/2009	290 J	< 0.75 U	< 0.75 U	1050 J	< 1.25 UJ	1.2 J+	68.6	58.5 J
GNC1-JD11	11	NORM	2/9/2009	324 J	< 0.75 U	< 0.75 U	1120 J	< 1.25 UJ	2.5 J+	59.6	67.9 J
GNC1-JS09	0	NORM	1/30/2009	262	< 0.75 U	314 J	811	< 1.25 UJ	0.97	53.2	67.8
GNC1-JS09	0	FD	1/30/2009	262	< 0.75 U	1 J	855	< 1.25 UJ	0.89	54.8	67.3
GNC1-JS09	10	NORM	1/30/2009	345	< 0.75 U	< 0.75 U	676	< 1.25 UJ	1.6	51.2	38.6
GNC1-JS10	0	NORM	1/30/2009	321	< 0.75 U	2	803	1.8 J-	1	56.9	66.1
GNC1-JS10	10	NORM	1/30/2009	358	< 0.75 U	< 0.75 U	546	< 1.25 UJ	1.4	47.5	36.9
GNC1-JS11	0	NORM	1/29/2009	249	< 0.75 U	4.2 J	755	< 1.25 UJ	0.87	54.2	59.2 J-
GNC1-JS11	0	FD	1/29/2009	245	< 0.75 U	2.9 J	691	< 1.25 UJ	0.98	51.4	51.9 J-
GNC1-JS11	10	NORM	1/29/2009	385	< 0.75 U	< 0.75 U	882	< 1.25 UJ	2	57.6	44 J-
GNC2-BE20C	0	NORM	1/8/2010	273 J	< 0.105 U	1.7 J+	815 J	< 0.185 U	1.2 J+	55.5 J+	84.5 J+
GNC2-BE20C	0	FD	1/8/2010	330 J	< 0.105 U	< 0.75 U	690 J	< 0.185 U	1 J+	54.7 J+	76.5 J+
GNC2-JA04	0	NORM	8/2/2010	285	< 0.29 U	< 1 U	971	< 0.41 UJ	0.77	63.8	51.3
GNC2-JA04	0	FD	8/2/2010	285	< 0.29 U	< 1 U	1000	< 0.41 UJ	0.8	67.3	52.9
GNC2-JD06	0	NORM	8/2/2010	417	< 1 U	< 1 U	895	< 2.6 UJ	1.4	55.9	44.5
GNC2-JS09C	0	NORM	1/8/2010	281 J	< 0.105 U	< 0.75 U	721 J	< 2.6 U	1 J+	60.6 J+	59.3 J+
GNC2-JS10C	0	NORM	1/8/2010	216 J	< 0.105 U	< 0.75 U	583 J	< 0.185 U	0.66 J+	51.6 J+	49.3 J+
GNC2-JS10C	0	FD	1/8/2010	210 J	< 0.105 U	< 0.75 U	559 J	< 2.6 U	0.83 J+	49.6 J+	55.2 J+

All units in mg/kg.

-- = no sample data.

= Data not included in risk assessment. Sample location excavated and data replaced with post-excavation data.

TABLE B-5
SOIL ORGANOCHLORINE PESTICIDES DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	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
GNC1-BD19	0	NORM	1/28/2009	< 0.00034 U	< 0.00022 U	< 0.000098 U	0.0094	0.014	< 0.0001 U	< 0.00031 U	< 0.00023 U
GNC1-BD19	10	NORM	1/28/2009	< 0.00033 U	< 0.00021 U	< 0.000095 U	< 0.0002 U	< 0.00022 U	< 0.0001 U	< 0.0003 U	< 0.00022 U
GNC1-BD20	0	NORM	1/30/2009	< 0.00031 U	0.0028	< 0.00009 U	0.0072	0.0024 J	< 0.000096 U	< 0.00028 U	< 0.00021 U
GNC1-BD20	10	NORM	1/30/2009	< 0.00032 U	< 0.00021 U	< 0.000093 U	< 0.0002 U	< 0.00021 U	< 0.0001 U	< 0.0003 U	< 0.00022 U
GNC1-BD21	0	NORM	1/30/2009	< 0.00032 U	0.0047	< 0.000094 U	0.011	0.0029 J	< 0.0001 U	< 0.0003 U	< 0.00022 U
GNC1-BD21	10	NORM	1/30/2009	< 0.00032 U	< 0.00021 U	< 0.000093 U	< 0.0002 U	< 0.00021 U	< 0.0001 U	< 0.0003 U	< 0.00022 U
GNC1-BE19	0	NORM	2/5/2009	< 0.00032 U	0.0038 J+	< 0.000092 U	0.0066 J+	0.0028 J+	< 0.000098 U	< 0.00029 U	< 0.00022 U
GNC1-BE19	10	NORM	2/5/2009	< 0.00032 U	< 0.00021 U	< 0.000094 U	< 0.0002 U	< 0.00021 U	< 0.0001 U	< 0.0003 U	< 0.00022 U
GNC1-BE20	0	NORM	2/6/2009	< 0.00032 UJ	< 0.00021 UJ	< 0.000093 UJ	0.012 J	0.0042 J	< 0.000099 UJ	< 0.0003 UJ	< 0.00022 UJ
GNC1-BE20	0	FD	2/6/2009	< 0.00032 U	0.0071 J	0.0044 J	0.027 J	0.016 J	< 0.0001 U	< 0.0003 U	0.0057 J
GNC1-BE20	10	NORM	2/6/2009	< 0.00033 U	< 0.00022 U	< 0.000097 U	< 0.00021 U	< 0.00022 U	< 0.0001 U	< 0.00031 U	< 0.00023 U
GNC1-BE21	0	NORM	2/6/2009	< 0.00032 U	< 0.00021 U	< 0.000094 U	0.0019 J+	< 0.00021 U	< 0.0001 U	< 0.0003 U	< 0.00022 U
GNC1-BE21	10	NORM	2/6/2009	< 0.00033 U	< 0.00021 U	< 0.000095 U	< 0.00021 U	< 0.00022 U	< 0.0001 U	< 0.0003 U	< 0.00022 U
GNC1-BE22	0	NORM	2/5/2009	< 0.00032 U	0.0097 J	< 0.000092 U	0.0078 J	< 0.00021 U	< 0.000099 U	< 0.00029 U	< 0.00022 U
GNC1-BE22	10	NORM	2/5/2009	< 0.00032 U	< 0.00021 U	< 0.000094 U	< 0.0002 U	< 0.00021 U	< 0.0001 U	< 0.0003 U	< 0.00022 U
GNC1-BF19	0	NORM	2/5/2009	< 0.00032 U	< 0.00021 U	< 0.000094 U	< 0.0002 U	< 0.00021 U	< 0.0001 U	< 0.0003 U	< 0.00022 U
GNC1-BF19	11	NORM	2/5/2009	< 0.00032 U	< 0.00021 U	< 0.000094 U	< 0.0002 U	< 0.00021 U	< 0.0001 U	< 0.0003 U	< 0.00022 U
GNC1-BF20	0	NORM	2/6/2009	< 0.00032 U	< 0.00021 U	< 0.000093 U	0.0018 J+	< 0.00021 U	< 0.000099 U	< 0.00029 U	< 0.00022 U
GNC1-BF20	10	NORM	2/6/2009	< 0.00034 U	< 0.00023 U	< 0.0001 U	< 0.00022 U	< 0.00023 U	< 0.00011 U	< 0.00032 U	< 0.00024 U
GNC1-BF21	0	NORM	2/5/2009	< 0.00032 U	< 0.00021 U	< 0.000093 U	0.0031 J+	0.0022 J+	< 0.000099 U	< 0.0003 U	< 0.00022 U
GNC1-BF21	10	NORM	2/5/2009	< 0.00032 U	< 0.00021 U	< 0.000094 U	< 0.0002 U	< 0.00021 U	< 0.0001 U	< 0.0003 U	< 0.00022 U
GNC1-BF22	0	NORM	2/6/2009	< 0.00032 U	< 0.00021 U	< 0.000092 U	0.004	0.0022	< 0.000099 U	< 0.00029 U	< 0.00022 U
GNC1-BF22	10	NORM	2/6/2009	< 0.00032 U	< 0.00021 U	< 0.000094 U	< 0.0002 U	0.0031	< 0.0001 U	< 0.0003 U	< 0.00022 U
GNC1-BG19	0	NORM	2/5/2009	< 0.00032 U	0.0025	< 0.000094 U	0.007 J+	0.0027 J+	< 0.0001 U	< 0.0003 U	< 0.00022 U
GNC1-BG19	10	NORM	2/5/2009	< 0.00032 U	< 0.00021 U	< 0.000094 U	< 0.0002 U	< 0.00021 U	< 0.0001 U	< 0.0003 U	< 0.00022 U
GNC1-BG20	0	NORM	2/5/2009	< 0.00032 U	0.002	< 0.000092 U	0.0044 J	0.0041 J+	< 0.000098 U	< 0.00029 U	< 0.00022 U
GNC1-BG20	0	FD	2/5/2009	< 0.00032 U	0.0034	< 0.000092 U	0.0073 J	0.0042 J	< 0.000098 U	< 0.00029 U	< 0.00022 U
GNC1-BG20	10	NORM	2/5/2009	< 0.00031 U	< 0.00021 U	< 0.000092 U	< 0.0002 U	< 0.00021 U	< 0.000098 U	< 0.00029 U	< 0.00022 U
GNC1-BG21	0	NORM	2/5/2009	< 0.00032 U	< 0.00021 U	< 0.000092 U	0.0022 J+	0.0018 J+	< 0.000098 U	< 0.00029 U	< 0.00022 U
GNC1-BG21	10	NORM	2/5/2009	< 0.00032 U	< 0.00021 U	< 0.000094 U	< 0.0002 U	< 0.00021 U	< 0.0001 U	< 0.0003 U	< 0.00022 U
GNC1-BG22	0	NORM	2/5/2009	< 0.00032 U	< 0.00021 U	< 0.000093 U	< 0.0002 U	< 0.00021 U	< 0.000099 U	< 0.00029 U	< 0.00022 U
GNC1-BG22	10	NORM	2/5/2009	< 0.00032 U	< 0.00021 U	< 0.000093 U	< 0.0002 U	< 0.00021 U	< 0.000099 U	< 0.00029 U	< 0.00022 U
GNC1-JD06	0	NORM	2/13/2009	< 0.00032 U	0.0049	< 0.000094 U	0.011 J+	0.0038 J-	< 0.0001 U	< 0.0003 U	< 0.00022 U
GNC1-JD06	10	NORM	2/17/2009	< 0.00032 U	< 0.00021 U	< 0.000094 U	< 0.0002 U	< 0.00021 UJ	< 0.0001 U	< 0.0003 U	< 0.00022 U
GNC1-JD07	0	NORM	1/30/2009	< 0.00032 U	< 0.00021 U	< 0.000094 U	0.0045	0.011	< 0.0001 U	< 0.0003 U	< 0.00022 U

TABLE B-5
SOIL ORGANOCHLORINE PESTICIDES DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	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
GNC1-JD07	10	NORM	1/30/2009	< 0.00032 U	< 0.00021 U	< 0.000095 U	< 0.0002 U	0.002	< 0.0001 U	< 0.0003 U	< 0.00022 U
GNC1-JD08	0	NORM	1/30/2009	< 0.0016 U	< 0.001 U	< 0.00046 U	< 0.00099 U	< 0.001 U	< 0.00049 U	< 0.0014 U	< 0.0011 U
GNC1-JD08	10	NORM	1/30/2009	< 0.00032 U	< 0.00021 U	< 0.000094 U	< 0.0002 U	< 0.00021 U	< 0.0001 U	< 0.0003 U	< 0.00022 U
GNC1-JD09	0	NORM	1/30/2009	< 0.00032 U	< 0.00021 U	< 0.000093 U	< 0.0002 U	< 0.00021 U	< 0.0001 U	< 0.0003 U	< 0.00022 U
GNC1-JD09	0	FD	1/30/2009	< 0.00033 U	< 0.00021 U	< 0.000096 U	< 0.00021 U	< 0.00022 U	< 0.0001 U	< 0.0003 U	< 0.00023 U
GNC1-JD09	10	NORM	1/30/2009	< 0.00033 U	< 0.00021 U	< 0.000095 U	< 0.00021 U	0.0034	< 0.0001 U	0.0022	< 0.00022 U
GNC1-JD10	0	NORM	2/9/2009	< 0.00033 U	0.002 J	< 0.000095 U	0.0031 J	< 0.00022 U	< 0.0001 U	< 0.0003 U	< 0.00022 U
GNC1-JD10	11	NORM	2/9/2009	< 0.00032 U	< 0.00021 U	< 0.000095 U	< 0.0002 U	< 0.00021 U	< 0.0001 U	< 0.0003 U	< 0.00022 U
GNC1-JD11	0	NORM	2/9/2009	< 0.00034 U	< 0.00022 U	< 0.000098 U	< 0.00021 U	< 0.00022 U	< 0.0001 U	< 0.00031 U	< 0.00023 U
GNC1-JD11	11	NORM	2/9/2009	< 0.00034 U	< 0.00022 U	< 0.0001 U	< 0.00021 U	< 0.00023 UJ	< 0.00011 U	< 0.00032 U	< 0.00023 U
GNC1-JS09	0	NORM	1/30/2009	< 0.00032 U	< 0.00021 U	< 0.000092 U	0.0063	0.0039 J	< 0.000098 U	< 0.00029 U	0.0022 J
GNC1-JS09	0	FD	1/30/2009	< 0.00031 U	0.0029	< 0.00009 U	0.0063	0.0026 J	< 0.000096 U	< 0.00028 U	< 0.00021 U
GNC1-JS09	10	NORM	1/30/2009	< 0.00032 U	< 0.00021 U	< 0.000095 U	< 0.0002 U	< 0.00021 U	< 0.0001 U	< 0.0003 U	< 0.00022 U
GNC1-JS10	0	NORM	1/30/2009	< 0.00032 U	0.015 J+	< 0.000094 U	0.031 J+	0.01 J+	< 0.0001 U	< 0.0003 U	< 0.00022 U
GNC1-JS10	10	NORM	1/30/2009	< 0.00032 U	< 0.00021 U	< 0.000093 U	< 0.0002 U	< 0.00021 U	< 0.0001 U	< 0.0003 U	< 0.00022 U
GNC1-JS11	0	NORM	1/29/2009	< 0.00032 U	< 0.00021 U	< 0.000092 U	0.0031	0.0022	< 0.000098 U	< 0.00029 U	< 0.00022 U
GNC1-JS11	0	FD	1/29/2009	< 0.00032 U	< 0.00021 U	< 0.000092 U	0.0037	< 0.00021 U	< 0.000098 U	< 0.00029 U	< 0.00022 U
GNC1-JS11	10	NORM	1/29/2009	< 0.00032 U	< 0.00021 U	< 0.000093 U	< 0.0002 U	< 0.00021 U	< 0.0001 U	< 0.0003 U	< 0.00022 U

All units in mg/kg.
-- = no sample data.

TABLE B-5
SOIL ORGANOCHLORINE PESTICIDES DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Organochlorine Pesticides							
				beta-BHC	Chlordane	delta-BHC	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulfate	Endrin
GNC1-BD19	0	NORM	1/28/2009	< 0.0002 U	< 0.0026 U	< 0.00018 U	< 0.0001 U	< 0.00012 U	< 0.0001 U	< 0.00029 U	< 0.000091 U
GNC1-BD19	10	NORM	1/28/2009	< 0.0002 U	< 0.0025 U	< 0.00018 U	< 0.000097 U	< 0.00011 U	< 0.000099 U	< 0.00028 U	< 0.000088 U
GNC1-BD20	0	NORM	1/30/2009	0.0037	< 0.0024 U	< 0.00017 U	< 0.000092 U	< 0.00011 U	< 0.000094 U	< 0.00026 U	< 0.000084 U
GNC1-BD20	10	NORM	1/30/2009	< 0.0002 U	< 0.0024 U	< 0.00018 U	< 0.000096 U	< 0.00011 U	< 0.000098 U	< 0.00028 U	< 0.000087 U
GNC1-BD21	0	NORM	1/30/2009	0.0095	< 0.0025 U	< 0.00018 U	< 0.000096 U	< 0.00011 U	< 0.000098 U	< 0.00028 U	< 0.000088 U
GNC1-BD21	10	NORM	1/30/2009	< 0.0002 U	< 0.0024 U	< 0.00018 U	< 0.000095 U	< 0.00011 U	< 0.000098 U	< 0.00027 U	< 0.000087 U
GNC1-BE19	0	NORM	2/5/2009	0.0043 J+	< 0.0024 U	< 0.00017 U	< 0.000094 U	< 0.00011 U	< 0.000096 U	< 0.00027 U	< 0.000086 U
GNC1-BE19	10	NORM	2/5/2009	< 0.0002 U	< 0.0025 U	< 0.00018 U	< 0.000097 U	< 0.00011 U	< 0.000099 U	< 0.00028 U	< 0.000088 U
GNC1-BE20	0	NORM	2/6/2009	0.0043 J	< 0.0024 UJ	< 0.00017 UJ	< 0.000095 UJ	< 0.00011 UJ	< 0.000097 UJ	< 0.00027 UJ	< 0.000087 UJ
GNC1-BE20	0	FD	2/6/2009	0.013 J	0.043 J	< 0.00018 U	< 0.000095 U	< 0.00011 U	< 0.000097 U	< 0.00027 U	< 0.000087 U
GNC1-BE20	10	NORM	2/6/2009	< 0.0002 U	< 0.0025 U	< 0.00018 U	< 0.000099 U	< 0.00011 U	< 0.0001 U	< 0.00029 U	< 0.000091 U
GNC1-BE21	0	NORM	2/6/2009	< 0.0002 U	< 0.0025 U	< 0.00018 U	< 0.000096 U	< 0.00011 U	< 0.000098 U	< 0.00028 U	< 0.000088 U
GNC1-BE21	10	NORM	2/6/2009	< 0.0002 U	< 0.0025 U	< 0.00018 U	< 0.000097 U	< 0.00011 U	< 0.0001 U	< 0.00028 U	< 0.000089 U
GNC1-BE22	0	NORM	2/5/2009	0.0047	< 0.0024 U	< 0.00017 U	< 0.000094 U	< 0.00011 U	< 0.000097 U	0.019 J	0.0021 J
GNC1-BE22	10	NORM	2/5/2009	< 0.0002 U	< 0.0025 U	< 0.00018 U	< 0.000096 U	< 0.00011 U	< 0.000098 U	< 0.00028 U	< 0.000087 U
GNC1-BF19	0	NORM	2/5/2009	< 0.0002 U	< 0.0025 U	< 0.00018 U	< 0.000096 U	< 0.00011 U	< 0.000098 U	< 0.00028 U	< 0.000087 U
GNC1-BF19	11	NORM	2/5/2009	< 0.0002 U	< 0.0025 U	< 0.00018 U	< 0.000096 U	< 0.00011 U	< 0.000098 U	< 0.00028 U	< 0.000088 U
GNC1-BF20	0	NORM	2/6/2009	0.0048 J+	< 0.0024 U	< 0.00017 U	< 0.000095 U	< 0.00011 U	< 0.000097 U	< 0.00027 U	< 0.000087 U
GNC1-BF20	10	NORM	2/6/2009	< 0.00021 U	< 0.0026 U	< 0.00019 U	< 0.0001 U	< 0.00012 U	< 0.00011 U	< 0.0003 U	< 0.000094 U
GNC1-BF21	0	NORM	2/5/2009	0.019 J+	< 0.0024 U	< 0.00017 U	< 0.000095 U	< 0.00011 U	< 0.000097 U	< 0.00027 U	< 0.000087 U
GNC1-BF21	10	NORM	2/5/2009	< 0.0002 U	< 0.0025 U	< 0.00018 U	< 0.000096 U	< 0.00011 U	< 0.000098 U	< 0.00028 U	< 0.000088 U
GNC1-BF22	0	NORM	2/6/2009	0.0054	< 0.0024 U	< 0.00017 U	< 0.000094 U	< 0.00011 U	< 0.000097 U	< 0.00027 U	< 0.000086 U
GNC1-BF22	10	NORM	2/6/2009	< 0.0002 U	< 0.0025 U	< 0.00018 U	< 0.000096 U	< 0.00011 U	< 0.000098 U	< 0.00028 U	< 0.000088 U
GNC1-BG19	0	NORM	2/5/2009	0.004 J+	< 0.0025 U	< 0.00018 U	< 0.000096 U	< 0.00011 U	< 0.000098 U	< 0.00028 U	< 0.000088 U
GNC1-BG19	10	NORM	2/5/2009	< 0.0002 U	< 0.0025 U	< 0.00018 U	< 0.000096 U	< 0.00011 U	< 0.000098 U	< 0.00028 U	< 0.000087 U
GNC1-BG20	0	NORM	2/5/2009	0.011	< 0.0024 U	< 0.00017 U	< 0.000094 U	< 0.00011 U	< 0.000096 U	< 0.00027 U	< 0.000086 U
GNC1-BG20	0	FD	2/5/2009	0.014	< 0.0024 U	< 0.00017 U	< 0.000094 U	< 0.00011 U	< 0.000096 U	< 0.00027 U	< 0.000086 U
GNC1-BG20	10	NORM	2/5/2009	< 0.00019 U	< 0.0024 U	< 0.00017 U	< 0.000094 U	< 0.00011 U	< 0.000096 U	< 0.00027 U	< 0.000086 U
GNC1-BG21	0	NORM	2/5/2009	< 0.00019 U	< 0.0024 U	< 0.00017 U	< 0.000094 U	< 0.00011 U	< 0.000096 U	< 0.00027 U	< 0.000086 U
GNC1-BG21	10	NORM	2/5/2009	< 0.0002 U	< 0.0025 U	< 0.00018 U	< 0.000096 U	< 0.00011 U	< 0.000098 U	< 0.00028 U	< 0.000087 U
GNC1-BG22	0	NORM	2/5/2009	< 0.00019 U	< 0.0024 U	< 0.00017 U	< 0.000095 U	< 0.00011 U	< 0.000097 U	< 0.00027 U	< 0.000087 U
GNC1-BG22	10	NORM	2/5/2009	< 0.00019 U	< 0.0024 U	< 0.00017 U	< 0.000095 U	< 0.00011 U	< 0.000097 U	< 0.00027 U	< 0.000087 U
GNC1-JD06	0	NORM	2/13/2009	0.0024	< 0.0025 U	< 0.00018 U	< 0.000096 U	< 0.00011 U	< 0.000098 U	< 0.00028 U	< 0.000088 U
GNC1-JD06	10	NORM	2/17/2009	< 0.0002 U	< 0.0025 U	< 0.00018 U	< 0.000096 U	< 0.00011 U	< 0.000098 U	< 0.00028 U	< 0.000088 U
GNC1-JD07	0	NORM	1/30/2009	< 0.0002 U	< 0.0025 U	< 0.00018 U	< 0.000096 U	< 0.00011 U	< 0.000098 U	< 0.00028 U	< 0.000088 U

TABLE B-5
SOIL ORGANOCHLORINE PESTICIDES DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Organochlorine Pesticides							
				beta-BHC	Chlordane	delta-BHC	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulfate	Endrin
GNC1-JD07	10	NORM	1/30/2009	< 0.0002 U	< 0.0025 U	< 0.00018 U	< 0.000097 U	< 0.00011 U	< 0.000099 U	< 0.00028 U	< 0.000088 U
GNC1-JD08	0	NORM	1/30/2009	< 0.00096 U	< 0.012 U	< 0.00086 U	< 0.00047 U	< 0.00054 U	< 0.00048 U	< 0.0013 U	< 0.00043 U
GNC1-JD08	10	NORM	1/30/2009	< 0.0002 U	< 0.0025 U	< 0.00018 U	< 0.000096 U	< 0.00011 U	< 0.000099 U	< 0.00028 U	< 0.000088 U
GNC1-JD09	0	NORM	1/30/2009	< 0.0002 U	< 0.0024 U	< 0.00018 U	< 0.000096 U	< 0.00011 U	< 0.000098 U	< 0.00028 U	< 0.000087 U
GNC1-JD09	0	FD	1/30/2009	< 0.0002 U	< 0.0025 U	< 0.00018 U	< 0.000098 U	< 0.00011 U	< 0.0001 U	< 0.00028 U	< 0.000089 U
GNC1-JD09	10	NORM	1/30/2009	< 0.0002 U	< 0.0025 U	< 0.00018 U	< 0.000097 U	< 0.00011 U	< 0.000099 U	< 0.00028 U	< 0.000089 U
GNC1-JD10	0	NORM	2/9/2009	0.0027 J+	< 0.0025 U	< 0.00018 U	< 0.000097 U	< 0.00011 U	< 0.000099 U	< 0.00028 U	< 0.000089 U
GNC1-JD10	11	NORM	2/9/2009	< 0.0002 U	< 0.0025 U	< 0.00018 U	< 0.000097 U	< 0.00011 U	< 0.000099 U	< 0.00028 U	< 0.000088 U
GNC1-JD11	0	NORM	2/9/2009	< 0.0002 U	< 0.0026 U	< 0.00018 U	< 0.0001 U	< 0.00012 U	< 0.0001 U	< 0.00029 U	< 0.000091 U
GNC1-JD11	11	NORM	2/9/2009	< 0.00021 U	< 0.0026 U	< 0.00019 U	< 0.0001 U	< 0.00012 U	< 0.0001 U	< 0.00029 U	< 0.000093 U
GNC1-JS09	0	NORM	1/30/2009	0.0022	0.02	< 0.00017 U	< 0.000094 U	< 0.00011 U	< 0.000096 U	< 0.00027 U	< 0.000086 U
GNC1-JS09	0	FD	1/30/2009	0.0027	< 0.0024 U	< 0.00017 U	< 0.000092 U	< 0.00011 U	< 0.000094 U	< 0.00026 U	< 0.000084 U
GNC1-JS09	10	NORM	1/30/2009	< 0.0002 U	< 0.0025 U	< 0.00018 U	< 0.000097 U	< 0.00011 U	< 0.000099 U	< 0.00028 U	< 0.000088 U
GNC1-JS10	0	NORM	1/30/2009	0.0099 J+	< 0.0025 U	< 0.00018 U	< 0.000096 U	< 0.00011 U	< 0.000098 U	< 0.00028 U	< 0.000088 U
GNC1-JS10	10	NORM	1/30/2009	< 0.00019 U	< 0.0024 U	< 0.00018 U	< 0.000095 U	< 0.00011 U	< 0.000097 U	< 0.00027 U	< 0.000087 U
GNC1-JS11	0	NORM	1/29/2009	0.0048 J+	< 0.0024 U	< 0.00017 U	< 0.000094 U	< 0.00011 U	< 0.000096 U	< 0.00027 U	< 0.000086 U
GNC1-JS11	0	FD	1/29/2009	0.0031 J+	< 0.0024 U	< 0.00017 U	< 0.000094 U	< 0.00011 U	< 0.000096 U	< 0.00027 U	< 0.000086 U
GNC1-JS11	10	NORM	1/29/2009	< 0.00019 U	< 0.0024 U	< 0.00018 U	< 0.000095 U	< 0.00011 U	< 0.000097 U	< 0.00027 U	< 0.000087 U

All units in mg/kg.
-- = no sample data.

TABLE B-5
SOIL ORGANOCHLORINE PESTICIDES DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Organochlorine Pesticides							
				Endrin aldehyde	Endrin ketone	gamma-BHC (Lindane)	gamma-Chlordane	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
GNC1-BD19	0	NORM	1/28/2009	< 0.0002 U	< 0.00018 U	< 0.00014 U	< 0.000091 U	< 0.00019 U	< 0.00014 U	< 0.00035 UJ	< 0.0064 U
GNC1-BD19	10	NORM	1/28/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000088 U	< 0.00018 U	< 0.00014 U	< 0.00034 UJ	< 0.0062 U
GNC1-BD20	0	NORM	1/30/2009	< 0.00018 U	< 0.00016 U	< 0.00012 U	< 0.000084 U	< 0.00017 U	< 0.00013 U	< 0.00032 U	< 0.0059 U
GNC1-BD20	10	NORM	1/30/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000087 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.0061 U
GNC1-BD21	0	NORM	1/30/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000088 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.0061 U
GNC1-BD21	10	NORM	1/30/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000087 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.0061 U
GNC1-BE19	0	NORM	2/5/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000086 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.006 U
GNC1-BE19	10	NORM	2/5/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000088 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.0062 U
GNC1-BE20	0	NORM	2/6/2009	< 0.00019 UJ	< 0.00017 UJ	< 0.00013 UJ	< 0.000087 UJ	< 0.00018 UJ	< 0.00014 UJ	< 0.00033 UJ	< 0.0061 UJ
GNC1-BE20	0	FD	2/6/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	0.007 J	< 0.00018 UJ	< 0.00014 U	0.0034 J	< 0.0061 U
GNC1-BE20	10	NORM	2/6/2009	< 0.0002 U	< 0.00018 U	< 0.00013 U	< 0.000091 U	< 0.00019 U	< 0.00014 U	< 0.00034 U	< 0.0063 U
GNC1-BE21	0	NORM	2/6/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000088 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.0061 U
GNC1-BE21	10	NORM	2/6/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000089 U	< 0.00018 U	< 0.00014 U	< 0.00034 U	< 0.0062 U
GNC1-BE22	0	NORM	2/5/2009	0.015 J	< 0.00017 U	< 0.00013 U	< 0.000086 U	< 0.00018 UJ	< 0.00014 U	< 0.00033 U	< 0.006 U
GNC1-BE22	10	NORM	2/5/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000087 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.0061 U
GNC1-BF19	0	NORM	2/5/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000087 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.0061 U
GNC1-BF19	11	NORM	2/5/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000088 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.0061 U
GNC1-BF20	0	NORM	2/6/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000087 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.0061 U
GNC1-BF20	10	NORM	2/6/2009	< 0.0002 U	< 0.00018 U	< 0.00014 U	< 0.000094 U	< 0.00019 U	< 0.00015 U	< 0.00036 U	< 0.0066 U
GNC1-BF21	0	NORM	2/5/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000087 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.0061 U
GNC1-BF21	10	NORM	2/5/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000088 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.0061 U
GNC1-BF22	0	NORM	2/6/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000086 U	< 0.00018 UJ	< 0.00014 U	0.0086	< 0.006 U
GNC1-BF22	10	NORM	2/6/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000088 U	< 0.00018 UJ	< 0.00014 U	0.015	< 0.0061 U
GNC1-BG19	0	NORM	2/5/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000088 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.0061 U
GNC1-BG19	10	NORM	2/5/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000087 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.0061 U
GNC1-BG20	0	NORM	2/5/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000086 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.006 U
GNC1-BG20	0	FD	2/5/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000086 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.006 U
GNC1-BG20	10	NORM	2/5/2009	< 0.00018 U	< 0.00017 U	< 0.00013 U	< 0.000086 U	< 0.00018 U	< 0.00014 U	< 0.00032 U	< 0.006 U
GNC1-BG21	0	NORM	2/5/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000086 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.006 U
GNC1-BG21	10	NORM	2/5/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000087 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.0061 U
GNC1-BG22	0	NORM	2/5/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000087 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.0061 U
GNC1-BG22	10	NORM	2/5/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000087 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.0061 U
GNC1-JD06	0	NORM	2/13/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000088 U	< 0.00018 U	< 0.00014 U	0.0044 J-	< 0.0061 U
GNC1-JD06	10	NORM	2/17/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000088 U	< 0.00018 U	< 0.00014 U	< 0.00033 UJ	< 0.0061 U
GNC1-JD07	0	NORM	1/30/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000088 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.0061 U

TABLE B-5
SOIL ORGANOCHLORINE PESTICIDES DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 6 of 6)

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Organochlorine Pesticides							
				Endrin aldehyde	Endrin ketone	gamma-BHC (Lindane)	gamma-Chlordane	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
GNC1-JD07	10	NORM	1/30/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000088 U	< 0.00018 U	< 0.00014 U	0.016	< 0.0062 U
GNC1-JD08	0	NORM	1/30/2009	< 0.00092 U	< 0.00084 U	< 0.00063 U	< 0.00043 U	< 0.00088 U	< 0.00067 U	< 0.0016 U	< 0.03 U
GNC1-JD08	10	NORM	1/30/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000088 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.0061 U
GNC1-JD09	0	NORM	1/30/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000087 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.0061 U
GNC1-JD09	0	FD	1/30/2009	< 0.00019 U	< 0.00018 U	< 0.00013 U	< 0.000089 U	< 0.00018 U	< 0.00014 U	< 0.00034 U	< 0.0062 U
GNC1-JD09	10	NORM	1/30/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000089 U	< 0.00018 U	< 0.00014 U	0.025	< 0.0062 U
GNC1-JD10	0	NORM	2/9/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000089 U	< 0.00018 UJ	< 0.00014 U	< 0.00034 U	< 0.0062 U
GNC1-JD10	11	NORM	2/9/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000088 U	< 0.00018 UJ	< 0.00014 U	< 0.00033 U	< 0.0062 U
GNC1-JD11	0	NORM	2/9/2009	< 0.0002 U	< 0.00018 U	< 0.00014 U	< 0.000091 U	< 0.00019 UJ	< 0.00014 U	< 0.00035 U	< 0.0064 U
GNC1-JD11	11	NORM	2/9/2009	< 0.0002 U	< 0.00018 U	< 0.00014 U	< 0.000093 U	< 0.00019 UJ	< 0.00015 U	< 0.00035 U	< 0.0065 U
GNC1-JS09	0	NORM	1/30/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	0.0028	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.006 U
GNC1-JS09	0	FD	1/30/2009	< 0.00018 U	< 0.00016 U	< 0.00012 U	0.0022	< 0.00017 U	< 0.00013 U	< 0.00032 U	< 0.0059 U
GNC1-JS09	10	NORM	1/30/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000088 U	< 0.00018 U	< 0.00014 U	< 0.00034 U	< 0.0062 U
GNC1-JS10	0	NORM	1/30/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000088 U	< 0.00018 U	< 0.00014 U	0.0023 J	< 0.0061 U
GNC1-JS10	10	NORM	1/30/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000087 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.0061 U
GNC1-JS11	0	NORM	1/29/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000086 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.006 U
GNC1-JS11	0	FD	1/29/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000086 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.006 U
GNC1-JS11	10	NORM	1/29/2009	< 0.00019 U	< 0.00017 U	< 0.00013 U	< 0.000087 U	< 0.00018 U	< 0.00014 U	< 0.00033 U	< 0.0061 U

All units in mg/kg.
-- = no sample data.

TABLE B-6
SOIL POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	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
GNC1-BD19	0	NORM	1/28/2009	< 0.00178 U	< 0.00178 U	< 0.00178 U	0.00333 J	< 0.00178 U	0.0022 J	< 0.00178 U	< 0.00178 U	< 0.00178 U	0.00287 J	< 0.00178 U	< 0.00178 U	< 0.00178 U
GNC1-BD19	10	NORM	1/28/2009	< 0.00182 U	< 0.00182 U	< 0.00182 U	< 0.00182 U	< 0.00182 U	< 0.00182 U	< 0.00182 U	< 0.00182 U	< 0.00182 U	< 0.00182 U	< 0.00182 U	< 0.00182 U	< 0.00182 U
GNC1-BD20	0	NORM	1/30/2009	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U
GNC1-BD20	10	NORM	1/30/2009	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U
GNC1-BD21	0	NORM	1/30/2009	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U
GNC1-BD21	10	NORM	1/30/2009	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U
GNC1-BE19	0	NORM	2/5/2009	< 0.00183 U	< 0.00183 U	< 0.00183 U	< 0.00183 U	0.00185 J	< 0.00183 U	< 0.00183 U	0.00489 J	0.00231 J	0.0587	< 0.00183 U	< 0.00183 U	0.00306 J
GNC1-BE19	10	NORM	2/5/2009	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U
GNC1-BE20	0	NORM	2/6/2009	< 0.00173 U	< 0.00173 U	0.00298 J	< 0.00173 U	0.0162 J	0.0411	< 0.00173 U	< 0.00173 U	0.0319 J	< 0.00173 U	< 0.00173 U	0.0239 J	0.0395
GNC1-BE20	0	FD	2/6/2009	< 0.00172 U	< 0.00172 U	0.00271 J	< 0.00172 U	0.0294 J	0.0767	< 0.00172 U	< 0.00172 U	0.0439 J	< 0.00172 U	< 0.00172 U	0.0158 J	0.0499
GNC1-BE20	10	NORM	2/6/2009	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U	0.00763	0.00963	< 0.00179 U	< 0.00179 U	0.0105	< 0.00179 U	< 0.00179 U	0.0123	0.0188
GNC1-BE21	0	NORM	2/6/2009	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U
GNC1-BE22	0	NORM	2/5/2009	< 0.00174 U	< 0.00174 U	0.00599 J	0.0576	0.0585	0.129	0.0295	< 0.00174 U	0.0904	0.0135	0.0311	0.0343	0.12
GNC1-BE22	10	NORM	2/5/2009	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U
GNC1-BF19	0	NORM	2/5/2009	< 0.00174 U	< 0.00174 U	< 0.00174 U	0.00398 J	0.00282 J	0.00793	0.00327 J	< 0.00174 U	0.00399 J	< 0.00174 U	0.00195 J	0.00402 J	0.00715
GNC1-BF19	11	NORM	2/5/2009	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U
GNC1-BF20	0	NORM	2/6/2009	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U
GNC1-BF20	10	NORM	2/6/2009	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U
GNC1-BF21	0	NORM	2/5/2009	< 0.00173 U	< 0.00173 U	0.0019 J	< 0.00173 U	0.00285 J	0.0043 J	< 0.00173 U	0.00251 J	0.00445 J	< 0.00173 U	< 0.00173 U	0.00324 J	0.00483 J
GNC1-BF21	10	NORM	2/5/2009	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U
GNC1-BF22	0	NORM	2/6/2009	< 0.00173 U	< 0.00173 U	< 0.00173 U	< 0.00173 U	< 0.00173 U	< 0.00173 U	< 0.00173 U	< 0.00173 U	< 0.00173 U	< 0.00173 U	< 0.00173 U	< 0.00173 U	< 0.00173 U
GNC1-BF22	10	NORM	2/6/2009	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U
GNC1-BG19	0	NORM	2/5/2009	0.00209 J	0.00206 J	0.00279 J	< 0.00176 U	0.00431 J	0.00714	< 0.00176 U	0.00359 J	0.00609 J	< 0.00176 U	< 0.00176 U	0.00404 J	0.00637 J
GNC1-BG19	10	NORM	2/5/2009	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U
GNC1-BG20	0	NORM	2/5/2009	< 0.00172 U	< 0.00172 U	0.00206 J	< 0.00172 U	0.00412 J	0.00856	< 0.00172 U	0.00296 J	0.00723	< 0.00172 U	< 0.00172 U	0.00398 J	0.00768
GNC1-BG20	0	FD	2/5/2009	< 0.00174 U	< 0.00174 U	< 0.00174 U	0.00429 J	0.00342 J	0.00931	< 0.00174 U	< 0.00174 U	0.00646 J	< 0.00174 U	< 0.00174 U	0.00272 J	0.0112
GNC1-BG20	10	NORM	2/5/2009	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	0.0022 J	0.00248 J
GNC1-BG21	0	NORM	2/5/2009	< 0.00174 U	< 0.00174 U	0.00213 J	< 0.00174 U	0.0026 J	0.0029 J	< 0.00174 U	0.00229 J	0.00271 J	< 0.00174 U	< 0.00174 U	0.00306 J	0.00384 J
GNC1-BG21	10	NORM	2/5/2009	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U
GNC1-BG22	0	NORM	2/5/2009	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U
GNC1-BG22	10	NORM	2/5/2009	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U	< 0.00175 U
GNC1-JA04	0	NORM	8/13/2009	< 0.00169 U	< 0.00169 U	< 0.00169 U	0.00406 J	0.00911	0.00802	< 0.00169 U	< 0.00169 U	0.00571 J	< 0.00169 U	0.00601 J	0.00263 J	0.00927
GNC1-JD06	0	NORM	2/13/2009	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	0.00231 J	0.02	0.00236 J	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	0.00322 J
GNC1-JD06	10	NORM	2/17/2009	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U	0.0174	0.00371 J	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U	0.00209 J
GNC1-JD07	0	NORM	1/30/2009	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	0.00443 J	0.0084	0.00351 J	< 0.00174 U	0.00557 J	0.00208 J	0.00272 J	0.00354 J	0.00783

TABLE B-6
SOIL POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 2 of 2)

Sample ID	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
GNC1-JD07	10	NORM	1/30/2009	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U
GNC1-JD08	0	NORM	1/30/2009	< 0.00169 U	< 0.00169 U	< 0.00169 U	< 0.00169 U	< 0.00169 U	0.00331 J	0.0103	< 0.00169 U	< 0.00169 U	< 0.00169 U	< 0.00169 U	0.00806	0.0156
GNC1-JD08	10	NORM	1/30/2009	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U
GNC1-JD09	0	NORM	1/30/2009	< 0.00174 U	< 0.00174 U	0.0382 J	0.188 J	0.112 J	0.246 J	0.0341 J	< 0.00174 U	0.188 J	< 0.00174 U	0.0378 J	0.2 J	0.412 J
GNC1-JD09	0	FD	1/30/2009	< 0.00174 U	< 0.00174 U	0.00963 J	0.089 J	0.058 J	0.136 J	0.0187 J	< 0.00174 U	0.111 J	< 0.00174 U	0.0217 J	0.0485 J	0.184 J
GNC1-JD09	10	NORM	1/30/2009	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U
GNC1-JD10	0	NORM	2/9/2009	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U	0.00199 J	0.00504 J	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U	< 0.00179 U	0.00279 J	0.00568 J
GNC1-JD10	11	NORM	2/9/2009	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U	< 0.00177 U
GNC1-JD11	0	NORM	2/9/2009	< 0.00175 U	< 0.00175 U	0.00338 J	0.0172	0.0101	0.0245	0.00442 J	< 0.00175 U	0.0242	< 0.00175 U	0.00423 J	0.019	0.0497
GNC1-JD11	11	NORM	2/9/2009	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U	< 0.00178 U
GNC1-JS09	0	NORM	1/30/2009	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U
GNC1-JS09	0	FD	1/30/2009	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U
GNC1-JS09	10	NORM	1/30/2009	< 0.00182 U	< 0.00182 U	< 0.00182 U	< 0.00182 U	< 0.00182 U	< 0.00182 U	< 0.00182 U	< 0.00182 U	< 0.00182 U	< 0.00182 U	< 0.00182 U	< 0.00182 U	< 0.00182 U
GNC1-JS10	0	NORM	1/30/2009	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U	< 0.00172 U
GNC1-JS10	10	NORM	1/30/2009	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U	< 0.00176 U
GNC1-JS11	0	NORM	1/29/2009	< 0.00173 U	< 0.00173 U	< 0.00173 U	< 0.00173 U	< 0.00173 U	0.00369 J	0.00224 J	< 0.00173 U	0.00258 J	< 0.00173 U	< 0.00173 U	< 0.00173 U	0.004 J
GNC1-JS11	0	FD	1/29/2009	< 0.00174 U	< 0.00174 U	< 0.00174 U	0.00225 J	0.00194 J	0.00394 J	< 0.00174 U	< 0.00174 U	0.00291 J	< 0.00174 U	< 0.00174 U	< 0.00174 U	0.00421 J
GNC1-JS11	10	NORM	1/29/2009	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U	< 0.00174 U
GNC2-JD09C	0	NORM	1/8/2010	< 0.00175 U	< 0.00175 U	< 0.00175 U	0.00642 J	0.00573 J	0.0108	< 0.00175 U	0.00658 J	0.0158	< 0.00175 U	< 0.00175 U	0.00765	0.0138

All units in mg/kg.

-- = no sample data.

= Data not included in risk assessment. Sample location excavated and data replaced with post-excavation data.

TABLE B-7
SOIL POLYCHLORINATED BIPHENYLS (PCBs) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Polychlorinated Biphenyls (PCBs)									
				Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCB 105	PCB 114	PCB 118
GNC1-BD19	0	NORM	1/28/2009	--	--	--	--	--	--	--	590	24	1200
GNC1-BD20	0	NORM	1/30/2009	--	--	--	--	--	--	--	120	17	260
GNC1-BD21	0	NORM	1/30/2009	--	--	--	--	--	--	--	68	5.9	120
GNC1-BE19	0	NORM	2/5/2009	--	--	--	--	--	--	--	66	7.9	130
GNC1-BE20	0	NORM	2/6/2009	--	--	--	--	--	--	--	180	17	310
GNC1-BE20	0	FD	2/6/2009	--	--	--	--	--	--	--	180	18	330
GNC1-BE21	0	NORM	2/6/2009	--	--	--	--	--	--	--	7.5	< 2.1 U	14
GNC1-BE22	0	NORM	2/5/2009	< 0.0051 U	< 0.0051 U	< 0.0051 U	< 0.0051 U	< 0.0051 U	< 0.0028 U	3.5	2200 J	130	12000 J
GNC1-BF19	0	NORM	2/5/2009	--	--	--	--	--	--	--	78	4.4	130
GNC1-BF20	0	NORM	2/6/2009	--	--	--	--	--	--	--	13	2.1	24
GNC1-BF21	0	NORM	2/5/2009	--	--	--	--	--	--	--	8.8	2.3	18
GNC1-BF22	0	NORM	2/6/2009	--	--	--	--	--	--	--	24	4.2	47
GNC1-BG19	0	NORM	2/5/2009	--	--	--	--	--	--	--	14	7.5	20
GNC1-BG20	0	NORM	2/5/2009	--	--	--	--	--	--	--	43	9.3	85
GNC1-BG20	0	FD	2/5/2009	--	--	--	--	--	--	--	63	9.7	110
GNC1-BG21	0	NORM	2/5/2009	--	--	--	--	--	--	--	7.3	< 2.1 U	17
GNC1-BG22	0	NORM	2/5/2009	--	--	--	--	--	--	--	10	2.8	21
GNC1-JA05	0	NORM	8/13/2009	--	--	--	--	--	--	--	2.7	< 2 U	6.1
GNC1-JA06	0	NORM	8/13/2009	--	--	--	--	--	--	--	37	3.6	72
GNC1-JA07	0	NORM	8/13/2009	--	--	--	--	--	--	--	25	3.3	57
GNC1-JD06	0	NORM	2/13/2009	--	--	--	--	--	--	--	710	43	1100
GNC1-JD07	0	NORM	1/30/2009	--	--	--	--	--	--	--	310	11	640
GNC1-JD08	0	NORM	1/30/2009	--	--	--	--	--	--	--	2.2	< 2.1 U	5.2
GNC1-JD09	0	NORM	1/30/2009	--	--	--	--	--	--	--	13	< 2.1 U	24
GNC1-JD09	0	FD	1/30/2009	--	--	--	--	--	--	--	18	< 2.1 U	28
GNC1-JD10	0	NORM	2/9/2009	--	--	--	--	--	--	--	530	23	1000
GNC1-JD11	0	NORM	2/9/2009	--	--	--	--	--	--	--	75	3.7	120
GNC1-JS09	0	NORM	1/30/2009	--	--	--	--	--	--	--	360	32	820 J
GNC1-JS09	0	FD	1/30/2009	--	--	--	--	--	--	--	220	23	470 J
GNC1-JS10	0	NORM	1/30/2009	--	--	--	--	--	--	--	460	65	960
GNC1-JS11	0	NORM	1/29/2009	--	--	--	--	--	--	--	39 J	8.3 J	78 J
GNC1-JS11	0	FD	1/29/2009	--	--	--	--	--	--	--	110 J	18 J	230 J
GNC2-BE20C	0	NORM	1/8/2010	--	--	--	--	--	--	--	48	4.5	82
GNC2-BE20C	0	FD	1/8/2010	--	--	--	--	--	--	--	43	5.4	83
GNC2-BE22C	0	NORM	1/6/2010	--	--	--	--	--	--	--	23	3.2	46

TABLE B-7
SOIL POLYCHLORINATED BIPHENYLS (PCBs) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Polychlorinated Biphenyls (PCBs)									
				Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCB 105	PCB 114	PCB 118
GNC2-JA04	0	NORM	8/2/2010	--	--	--	--	--	--	--	6.7	< 1.9 U	14
GNC2-JA04	0	FD	8/2/2010	--	--	--	--	--	--	--	5.2	< 2 U	10
GNC2-JD07C	0	NORM	1/6/2010	--	--	--	--	--	--	--	200	< 2 U	280
GNC2-JE01	0	NORM	4/26/2010	--	--	--	--	--	--	--	97	11	190
GNC2-JE02	0	NORM	4/26/2010	--	--	--	--	--	--	--	170	19	360
GNC2-JS09C	0	NORM	1/8/2010	--	--	--	--	--	--	--	< 2.1 U	< 2.1 U	4.7
GNC2-JS10C	0	NORM	1/8/2010	--	--	--	--	--	--	--	47	6.4 J	99
GNC2-JS10C	0	FD	1/8/2010	--	--	--	--	--	--	--	30	3.9 J	60

Aroclor units in mg/kg; PCB congener units in pg/g.

-- = no sample data.

= Data not included in risk assessment. Sample location excavated and data replaced with post-excavation data.

TABLE B-7
SOIL POLYCHLORINATED BIPHENYLS (PCBs) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 3 of 4)

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Polychlorinated Biphenyls (PCBs)									
				PCB 123	PCB 126	PCB 156	PCB 157	PCB 167	PCB 169	PCB 189	PCB 209	PCB 77	PCB 81
GNC1-BD19	0	NORM	1/28/2009	< 34 U	11	160	35	46	< 2.2 U	6.7	470	< 39 U	< 23 U
GNC1-BD20	0	NORM	1/30/2009	< 7 U	8.9	39	9.1	16	2.2	12	3000 J	< 34 U	< 10 U
GNC1-BD21	0	NORM	1/30/2009	< 4.7 U	4.8	23	4.9	11	< 2.1 U	8.9	2100	< 25 U	< 4.4 U
GNC1-BE19	0	NORM	2/5/2009	< 4.3 U	6.1	24	5.9	12	< 2.1 U	9.9	2800 J	< 19 U	< 5.9 U
GNC1-BE20	0	NORM	2/6/2009	< 13 U	11 J	76	19	35	3.3	27 J	4300 J	< 67 U	< 11 U
GNC1-BE20	0	FD	2/6/2009	< 12 U	8.3 J	64	15	24	< 2.1 U	13 J	1100 J	< 61 U	< 12 U
GNC1-BE21	0	NORM	2/6/2009	< 2.1 U	< 2.1 U	2.8	< 2.1 U	< 2.1 U	< 2.1 U	< 2.1 U	370	2.1	< 2.1 U
GNC1-BE22	0	NORM	2/5/2009	< 3700 U	620	13000 J	850	4600 J	24	5100 J	2400 J	< 810 U	< 300 U
GNC1-BF19	0	NORM	2/5/2009	< 5.6 U	< 2.1 U	24	5.3	13	< 2.1 U	4	990	< 8.9 U	< 4.9 U
GNC1-BF20	0	NORM	2/6/2009	< 2.1 U	< 2.1 U	5.6	< 2.1 U	< 2.1 U	< 2.1 U	3.6	1100	< 5.9 U	< 2.1 U
GNC1-BF21	0	NORM	2/5/2009	< 2.1 U	< 2.1 U	4	< 2.1 U	< 2.1 U	< 2.1 U	< 2.1 U	290	< 2.9 U	< 2.1 U
GNC1-BF22	0	NORM	2/6/2009	< 2.1 U	2.8	9	3.4	6.4	< 2.1 U	5.8	1300 J	7.4	3.4
GNC1-BG19	0	NORM	2/5/2009	6.8	7.5	10	6.9	8.8	6.2	8	630	< 9.7 U	7.4
GNC1-BG20	0	NORM	2/5/2009	< 2.6 U	4.8	18	3.5	8.6	< 2.1 U	6.5	1600	< 16 U	< 4.4 U
GNC1-BG20	0	FD	2/5/2009	< 2.6 U	5.9	21	5.3	12	< 2.1 U	4.8	1000	< 21 U	< 6.7 U
GNC1-BG21	0	NORM	2/5/2009	< 2.1 U	< 2.1 U	3	< 2.1 U	< 2.1 U	< 2.1 U	< 2.1 U	180	< 2.1 U	< 2.1 U
GNC1-BG22	0	NORM	2/5/2009	< 2.1 U	< 2.1 U	5.1	< 2.1 U	2.1	< 2.1 U	< 2.1 U	310	< 3.8 U	< 2.1 U
GNC1-JA05	0	NORM	8/13/2009	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	130	< 2 U	< 2 U
GNC1-JA06	0	NORM	8/13/2009	< 16 U	4.2	26	4.1	10	< 1.9 U	10	460	< 11 U	< 2.5 U
GNC1-JA07	0	NORM	8/13/2009	< 33 U	4.6	36	5	18	< 2 U	19	660	< 7.5 U	< 2.2 U
GNC1-JD06	0	NORM	2/13/2009	< 54 U	17	130	32	54	2.3 J	19	6200 J	< 150 U	< 34 U
GNC1-JD07	0	NORM	1/30/2009	< 22 U	< 2.1 U	110	24	32	< 2.1 U	4.8	470	< 16 U	< 9.2 U
GNC1-JD08	0	NORM	1/30/2009	< 2.1 U	< 2.1 U	< 2.1 U	< 2.1 U	< 2.1 U	< 2.1 U	< 2.1 U	46	< 2.1 U	< 2.1 U
GNC1-JD09	0	NORM	1/30/2009	< 2.1 U	< 2.1 U	6.6	< 2.1 U	2.4	< 2.1 U	< 2.1 U	490	< 2.5 U	< 2.1 U
GNC1-JD09	0	FD	1/30/2009	< 2.1 U	< 2.1 U	7	< 2.1 U	2.7	< 2.1 U	< 2.1 U	380	< 3.6 U	< 2.1 U
GNC1-JD10	0	NORM	2/9/2009	< 35 U	3.3	160	39	65	< 2.1 U	18	6300 J	< 51 U	< 32 U
GNC1-JD11	0	NORM	2/9/2009	< 5.2 U	2.5	24	5.5	9.9	< 2.2 U	2.8	800	< 10 U	< 4.5 U
GNC1-JS09	0	NORM	1/30/2009	< 19 U	13	99	20	32	< 2.1 U	11	1700	< 59 U	< 16 U
GNC1-JS09	0	FD	1/30/2009	< 14 U	14	95	20	33	< 2 U	13	1500	< 53 U	< 11 U
GNC1-JS10	0	NORM	1/30/2009	< 27 U	24	180	42	69	6.1	46	8900 J	< 100 U	< 40 U
GNC1-JS11	0	NORM	1/29/2009	< 3.4 U	2.8 J	14 J	4.1 J	6.4 J	< 2.1 U	5.5 J	940	< 11 U	< 4.7 U
GNC1-JS11	0	FD	1/29/2009	< 7 U	5.8 J	32 J	7.5 J	14 J	< 2.1 U	10 J	1500	< 27 U	< 11 U
GNC2-BE20C	0	NORM	1/8/2010	< 5.4 U	5.3	28	7.1	13	2.3	13	2900 J	< 13 U	< 3.3 U
GNC2-BE20C	0	FD	1/8/2010	< 4.9 U	5.4	26	6.1	14	2.8	13	3100 J	< 15 U	< 3.3 U
GNC2-BE22C	0	NORM	1/6/2010	< 18 U	2.6	20	2.4	7.7	< 2.1 U	8.5	230	< 4.6 U	< 2.6 U

TABLE B-7
SOIL POLYCHLORINATED BIPHENYLS (PCBs) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Polychlorinated Biphenyls (PCBs)									
				PCB 123	PCB 126	PCB 156	PCB 157	PCB 167	PCB 169	PCB 189	PCB 209	PCB 77	PCB 81
GNC2-JA04	0	NORM	8/2/2010	< 1.9 U	< 1.9 U	3.4	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U	130	< 2.5 U	< 1.9 U
GNC2-JA04	0	FD	8/2/2010	< 2 U	< 2 U	2.6	< 2 U	< 2 U	< 2 U	< 2 U	120	< 2.3 U	< 2 U
GNC2-JD07C	0	NORM	1/6/2010	< 12 U	< 2 U	76	20	28	< 2 U	4.2	380	< 12 U	< 8.7 U
GNC2-JE01	0	NORM	4/26/2010	< 5.8 U	7.5	33	8.1	13	< 2.3 U	13	3300 J	< 24 U	< 5.8 U
GNC2-JE02	0	NORM	4/26/2010	< 10 U	10	54	12	16	< 2.2 U	13	2300 J	< 52 U	< 9.3 U
GNC2-JS09C	0	NORM	1/8/2010	< 2.1 U	< 2.1 U	< 2.1 U	< 2.1 U	< 2.1 U	< 2.1 U	< 2.1 U	30	< 2.1 U	< 2.1 U
GNC2-JS10C	0	NORM	1/8/2010	< 2.6 U	4.4 J	17 J	4.4	9 J	< 2.1 U	7.7 J	2700 J	< 13 U	< 3.8 U
GNC2-JS10C	0	FD	1/8/2010	< 2.1 U	2.2 J	10 J	2.4	5.4 J	< 2.1 U	3.9 J	1300 J	< 8.5 U	< 2.2 U

Aroclor units in mg/kg; PCB congener units in pg/g.

-- = no sample data.

= Data not included in risk assessment. Sample location excavated and data replaced with post-excavation data.

TABLE B-8
SOIL RADIONUCLIDES DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 1 of 2)

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Radionuclides							
				Radium-226	Radium-228	Thorium-228	Thorium-230	Thorium-232	Uranium-233/234	Uranium-235/236	Uranium-238
GNC1-BD19	0	NORM	1/28/2009	2.51	1.88	1.46	2.11	1.86	0.933	0.123 U	0.799
GNC1-BD19	10	NORM	1/28/2009	1.13	0.817	1.5	1.75	0.65	1.22	0.116 U	1.41
GNC1-BD20	0	NORM	1/30/2009	0.792	2.27	2.15	1.07	0.943	0.784	0.0904 U	0.821
GNC1-BD20	10	NORM	1/30/2009	1.45	1.11	2.31	1.23	1.66	1.24	0.262 U	1.23
GNC1-BD21	0	NORM	1/30/2009	0.875	1.4	1.92	1.05	1.17	0.83	0.0462 U	0.85
GNC1-BD21	10	NORM	1/30/2009	2.2	1.31	1.48	1.65	1.52	1.23	0.107 U	1.51
GNC1-BE19	0	NORM	2/5/2009	0.643	0.508 U	1.22	1.24	1.09	1 U	0.0273 U	1 U
GNC1-BE19	10	NORM	2/5/2009	1.06	1.9	1.59	0.975	1.76	1 U	0.0506 U	1.22
GNC1-BE20	0	NORM	2/6/2009	1.12	0.55 U	1.15	1 U	0.977	0.935	0.0407 U	0.937
GNC1-BE20	0	FD	2/6/2009	1.01	1.41	0.421 U	0.537 U	0.509	0.556	0.0517 U	0.442
GNC1-BE20	10	NORM	2/6/2009	1.25	1.6	0.686	1.61	0.957	1.75	-0.0244 U	1.3
GNC1-BE21	0	NORM	2/6/2009	1.07	1.28	0.879	1.01	1.08	0.658	0.0533 U	0.599
GNC1-BE22	0	NORM	2/5/2009	1.57	1.31	0.968	0.881	1.48	1 U	0.0655 U	1.18
GNC1-BE22	10	NORM	2/5/2009	1.79	1.15	1.26	0.687	1.01	1 U	0.0705 U	1.1
GNC1-BF19	0	NORM	2/5/2009	1.01	0.737	0.728	0.757	0.608	1 U	0.1 U	1 U
GNC1-BF19	11	NORM	2/5/2009	1.93	0.875	1.48	1.04	1.42	1.37	0.0201 U	1.31
GNC1-BF20	0	NORM	2/6/2009	1.09	1.33	1.3	1 U	1.43	0.429	0.167	0.519
GNC1-BF20	10	NORM	2/6/2009	0.962	1.15	0.608	1.11	1.1	0.747	0.072 U	0.526
GNC1-BF21	0	NORM	2/5/2009	0.497	1.75	1.6	1.13	1.58	1 U	0.0386 U	1.03
GNC1-BF21	10	NORM	2/5/2009	1.21	1.74	1.39	0.95	1.26	1 U	0.0358 U	1 U
GNC1-BF22	0	NORM	2/6/2009	1.23	1.3	1.14	1 U	1.28	0.688	0.00304 U	0.476
GNC1-BF22	10	NORM	2/6/2009	0.695	1.45	1.05	1.18	0.924	0.491	0.0465 U	0.879
GNC1-BG19	0	NORM	2/5/2009	1.32	0.405 U	1.76	0.869	1.16	1 U	0.0381 U	1
GNC1-BG19	10	NORM	2/5/2009	0.621	0.799	1.72	0.917	1.68	1.06	0.0335 U	1 U
GNC1-BG20	0	NORM	2/5/2009	0.93	0.7 J	1.46	1.22	1.06	1.23	-0.0215 U	1 U
GNC1-BG20	0	FD	2/5/2009	0.757	2.28 J	1.27	0.931	1.35	1 U	0.229	1
GNC1-BG20	10	NORM	2/5/2009	1.52	1.03	0.97	0.952	0.953	1.1	0.0995 U	1.15
GNC1-BG21	0	NORM	2/5/2009	0.693	0.913	1.33	0.856	1.48	1 U	0.129	1 U
GNC1-BG21	10	NORM	2/5/2009	0.997	0.628	1.57	1.13	1.68	1 U	0.274	1 U
GNC1-BG22	0	NORM	2/5/2009	1.15	2.17	1.9	0.876	1.54	0.13 U	-0.0272 U	-0.0422 U
GNC1-BG22	10	NORM	2/5/2009	1.03	0.943	1.59	1.05	1.08	1.02	0.117 U	1 U
GNC1-JD06	0	NORM	2/13/2009	1.32	1.91	1.76	1.49	1.64	1.2	0.106 U	0.93
GNC1-JD06	10	NORM	2/17/2009	1.2	1.18	2	1.23	1.3	1.61	0.127 U	0.625
GNC1-JD07	0	NORM	1/30/2009	1.03	1.41	1.43	1.66	1.24	0.809	-0.0148 U	1.16
GNC1-JD07	10	NORM	1/30/2009	1.57	1.47	2.07	1.57	1.24	1.79	0.31	1.47

TABLE B-8
SOIL RADIONUCLIDES DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Radionuclides							
				Radium-226	Radium-228	Thorium-228	Thorium-230	Thorium-232	Uranium-233/234	Uranium-235/236	Uranium-238
GNC1-JD08	0	NORM	1/30/2009	1.31	1.06	1.68	1.04	1.48	0.971	0.0493 U	1.22
GNC1-JD08	10	NORM	1/30/2009	2.03	0.832 U	1.75	0.949	2.2	0.776	0.121 U	0.955
GNC1-JD09	0	NORM	1/30/2009	1.1	1.34	1.51	1.02	1.74	1.02	0.0281 U	1.07
GNC1-JD09	0	FD	1/30/2009	1.46	1.53	1.27	0.691	1.51	0.897	0.118 U	0.916
GNC1-JD09	10	NORM	1/30/2009	1.32	0.982	1.5	0.605	1.26	0.824	0.0296 U	0.774
GNC1-JD10	0	NORM	2/9/2009	0.902	1.14 J	1.17	0.837	1.3	1.45	0.098 U	0.789 U
GNC1-JD10	11	NORM	2/9/2009	1.04	1.38 J	1.31	1	1.06	0.968	0.0596 U	0.964 U
GNC1-JD11	0	NORM	2/9/2009	1.4	0.958 J	1.86	1.45	2.32	1.06	0.1 U	0.989 U
GNC1-JD11	11	NORM	2/9/2009	0.768	1.11 J	1.11	0.659	1.97	0.9	0.0492 U	0.935 U
GNC1-JS09	0	NORM	1/30/2009	1.31	2.02	1.43	0.631	1.59	0.476 U	-0.0987 U	0.608
GNC1-JS09	0	FD	1/30/2009	1.5	2.41	1.94	0.977	1.6	0.937	0.135 U	0.634
GNC1-JS09	10	NORM	1/30/2009	1.89	1.51	1.39	1.1	1.47	1.63	0.132 U	1.58
GNC1-JS10	0	NORM	1/30/2009	1.21	1.45	2.2	0.94	1.61	0.773	0.0934 U	0.376
GNC1-JS10	10	NORM	1/30/2009	1.93	0.765	1.13	1.79	1.13	1.54	0.046 U	1.18
GNC1-JS11	0	NORM	1/29/2009	1 U	1.3 J	1.47	1.15	1.37	0.992	1 U	1.2
GNC1-JS11	0	FD	1/29/2009	1.38	2.18 J	1.84	1.36	1.76	1.19	0.149 U	1.09
GNC1-JS11	10	NORM	1/29/2009	1.25	1.52 J	1.51	1.33	1.9	1.29	0.121 U	0.965

All units in pCi/g.
-- = no sample data.

TABLE B-9
SOIL ALDEHYDES AND SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 1 of 14)

				Aldehydes		Semi-Volatile Organic Compounds (SVOCs)							
Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Acetaldehyde	Formaldehyde	1,2,4,5-Tetrachloro-benzene	1,2-Diphenylhydrazine	1,4-Dioxane	2,2'-Dichlorobenzil	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol
GNC1-BD19	0	NORM	1/28/2009	< 0.32 U	0.222	< 0.0713 U	< 0.0713 U	< 0.0713 U	< 0.118 U	< 0.0713 U	< 0.0713 U	< 0.0713 U	< 0.0713 U
GNC1-BD19	10	NORM	1/28/2009	< 0.39 U	< 0.26 U	< 0.0726 U	< 0.0726 U	< 0.0726 U	< 0.12 U	< 0.0726 U	< 0.0726 U	< 0.0726 U	< 0.0726 U
GNC1-BD20	0	NORM	1/30/2009	< 0.313 U	0.496 J	< 0.0688 U	< 0.0688 U	< 0.0688 U	< 0.114 U	< 0.0688 U	< 0.0688 U	< 0.0688 U	< 0.0688 U
GNC1-BD20	10	NORM	1/30/2009	< 0.316 U	0.234 J	< 0.0716 U	< 0.0716 U	< 0.0716 U	< 0.118 U	< 0.0716 U	< 0.0716 U	< 0.0716 U	< 0.0716 U
GNC1-BD21	0	NORM	1/30/2009	< 0.314 U	0.285 J	< 0.068 U	< 0.068 U	< 0.068 U	< 0.112 U	< 0.068 U	< 0.068 U	< 0.068 U	< 0.068 U
GNC1-BD21	10	NORM	1/30/2009	< 0.316 U	< 0.211 U	< 0.071 U	< 0.071 U	< 0.071 U	< 0.117 U	< 0.071 U	< 0.071 U	< 0.071 U	< 0.071 U
GNC1-BE19	0	NORM	2/5/2009	< 0.503 U	0.843 J	< 0.0733 U	< 0.0733 U	< 0.0733 U	< 0.121 U	< 0.0733 U	< 0.0733 U	< 0.0733 U	< 0.0733 U
GNC1-BE19	10	NORM	2/5/2009	< 0.321 U	< 0.258 U	< 0.0708 U	< 0.0708 U	< 0.0708 U	< 0.117 U	< 0.0708 U	< 0.0708 U	< 0.0708 U	< 0.0708 U
GNC1-BE20	0	NORM	2/6/2009	< 0.312 U	0.582 J	< 0.0692 U	< 0.0692 U	< 0.0692 U	< 0.114 U	< 0.0692 U	< 0.0692 U	< 0.0692 U	< 0.0692 U
GNC1-BE20	0	FD	2/6/2009	< 0.311 U	0.541 J	< 0.0689 U	< 0.0689 U	< 0.0689 U	< 0.114 U	< 0.0689 U	< 0.0689 U	< 0.0689 U	< 0.0689 U
GNC1-BE20	10	NORM	2/6/2009	< 0.34 U	0.268 J	< 0.0718 UJ	< 0.0718 UJ	< 0.0718 UJ	< 0.118 UJ	< 0.0718 UJ	< 0.0718 UJ	< 0.0718 UJ	< 0.0718 UJ
GNC1-BE21	0	NORM	2/6/2009	< 0.315 U	0.211 J	< 0.07 U	< 0.07 U	< 0.07 U	< 0.116 U	< 0.07 U	< 0.07 U	< 0.07 U	< 0.07 U
GNC1-BE21	10	NORM	2/6/2009	< 0.316 U	0.593 J	--	--	--	--	--	--	--	--
GNC1-BE22	0	NORM	2/5/2009	< 0.391 U	< 0.362 U	< 0.0697 U	< 0.0697 U	< 0.0697 U	< 0.115 U	< 0.0697 U	< 0.0697 U	< 0.0697 U	< 0.0697 U
GNC1-BE22	10	NORM	2/5/2009	< 0.344 U	< 0.229 U	< 0.0699 U	< 0.0699 U	< 0.0699 U	< 0.115 U	< 0.0699 U	< 0.0699 U	< 0.0699 U	< 0.0699 U
GNC1-BF19	0	NORM	2/5/2009	< 0.318 U	< 0.385 U	< 0.0695 U	< 0.0695 U	< 0.0695 U	< 0.115 U	< 0.0695 U	< 0.0695 U	< 0.0695 U	< 0.0695 U
GNC1-BF19	11	NORM	2/5/2009	< 0.354 U	< 0.236 U	< 0.0708 U	< 0.0708 U	< 0.0708 U	< 0.117 U	< 0.0708 U	< 0.0708 U	< 0.0708 U	< 0.0708 U
GNC1-BF20	0	NORM	2/6/2009	< 0.311 U	0.263 J	< 0.0687 U	< 0.0687 U	< 0.0687 U	< 0.113 U	< 0.0687 U	< 0.0687 U	< 0.0687 U	< 0.0687 U
GNC1-BF20	10	NORM	2/6/2009	< 0.319 U	< 0.213 U	< 0.0704 U	< 0.0704 U	< 0.0704 U	< 0.116 U	< 0.0704 U	< 0.0704 U	< 0.0704 U	< 0.0704 U
GNC1-BF21	0	NORM	2/5/2009	< 0.311 U	0.525 J	< 0.0691 U	< 0.0691 U	< 0.0691 U	< 0.114 U	< 0.0691 U	< 0.0691 U	< 0.0691 U	< 0.0691 U
GNC1-BF21	10	NORM	2/5/2009	< 0.317 U	0.487 J	< 0.0703 U	< 0.0703 U	< 0.0703 U	< 0.116 U	< 0.0703 U	< 0.0703 U	< 0.0703 U	< 0.0703 U
GNC1-BF22	0	NORM	2/6/2009	< 0.312 U	0.284 J	< 0.0693 U	< 0.0693 U	< 0.0693 U	< 0.114 U	< 0.0693 U	< 0.0693 U	< 0.0693 U	< 0.0693 U
GNC1-BF22	10	NORM	2/6/2009	< 0.312 U	< 0.208 U	< 0.07 U	< 0.07 U	< 0.07 U	< 0.116 U	< 0.07 U	< 0.07 U	< 0.07 U	< 0.07 U
GNC1-BG19	0	NORM	2/5/2009	< 0.369 U	< 0.246 U	< 0.0705 U	< 0.0705 U	< 0.0705 U	< 0.116 U	< 0.0705 U	< 0.0705 U	< 0.0705 U	< 0.0705 U
GNC1-BG19	10	NORM	2/5/2009	< 0.317 U	< 0.323 U	< 0.0714 U	< 0.0714 U	< 0.0714 U	< 0.118 U	< 0.0714 U	< 0.0714 U	< 0.0714 U	< 0.0714 U
GNC1-BG20	0	NORM	2/5/2009	< 0.306 U	0.205 J	< 0.0688 U	< 0.0688 U	< 0.0688 U	< 0.113 U	< 0.0688 U	< 0.0688 U	< 0.0688 U	< 0.0688 U
GNC1-BG20	0	FD	2/5/2009	< 0.312 U	0.231 J	< 0.0695 U	< 0.0695 U	< 0.0695 U	< 0.115 U	< 0.0695 U	< 0.0695 U	< 0.0695 U	< 0.0695 U
GNC1-BG20	10	NORM	2/5/2009	< 0.337 U	< 0.225 U	< 0.0704 U	< 0.0704 U	< 0.0704 U	< 0.116 U	< 0.0704 U	< 0.0704 U	< 0.0704 U	< 0.0704 U
GNC1-BG21	0	NORM	2/5/2009	< 0.311 U	0.249 J	< 0.0698 U	< 0.0698 U	< 0.0698 U	< 0.115 U	< 0.0698 U	< 0.0698 U	< 0.0698 U	< 0.0698 U
GNC1-BG21	10	NORM	2/5/2009	< 0.312 U	< 0.208 U	< 0.0704 U	< 0.0704 U	< 0.0704 U	< 0.116 U	< 0.0704 U	< 0.0704 U	< 0.0704 U	< 0.0704 U
GNC1-BG22	0	NORM	2/5/2009	< 0.315 U	< 0.21 U	< 0.0695 U	< 0.0695 U	< 0.0695 U	< 0.115 U	< 0.0695 U	< 0.0695 U	< 0.0695 U	< 0.0695 U
GNC1-BG22	10	NORM	2/5/2009	< 0.313 U	< 0.209 U	< 0.0698 U	< 0.0698 U	< 0.0698 U	< 0.115 U	< 0.0698 U	< 0.0698 U	< 0.0698 U	< 0.0698 U
GNC1-JD06	0	NORM	2/13/2009	< 0.316 U	< 0.372 U	< 0.0711 U	< 0.0711 U	< 0.0711 U	< 0.117 U	< 0.0711 U	< 0.0711 U	< 0.0711 U	< 0.0711 U
GNC1-JD06	10	NORM	2/17/2009	< 0.315 U	< 0.254 U	< 0.0716 U	< 0.0716 U	< 0.0716 U	< 0.118 U	< 0.0716 U	< 0.0716 U	< 0.0716 U	< 0.0716 U
GNC1-JD07	0	NORM	1/30/2009	< 0.318 U	0.215 J	< 0.0695 U	< 0.0695 U	< 0.0695 U	< 0.115 U	< 0.0695 U	< 0.0695 U	< 0.0695 U	< 0.0695 U

TABLE B-9
SOIL ALDEHYDES AND SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

				Aldehydes		Semi-Volatile Organic Compounds (SVOCs)							
Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Acetaldehyde	Formaldehyde	1,2,4,5-Tetrachloro-benzene	1,2-Diphenylhydrazine	1,4-Dioxane	2,2'-Dichlorobenzil	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol
GNC1-JD07	10	NORM	1/30/2009	< 0.319 U	< 0.213 U	< 0.0715 U	< 0.0715 U	< 0.0715 U	< 0.118 U	< 0.0715 U	< 0.0715 U	< 0.0715 U	< 0.0715 U
GNC1-JD08	0	NORM	1/30/2009	< 0.307 U	0.214 J	< 0.0677 U	< 0.0677 U	< 0.0677 U	< 0.112 U	< 0.0677 U	< 0.0677 U	< 0.0677 U	< 0.0677 U
GNC1-JD08	10	NORM	1/30/2009	< 0.319 U	0.22 J	< 0.0706 U	< 0.0706 U	< 0.0706 UJ	< 0.116 U	< 0.0706 U	< 0.0706 U	< 0.0706 U	< 0.0706 U
GNC1-JD09	0	NORM	1/30/2009	< 0.312 U	< 0.208 U	< 0.0698 U	< 0.0698 U	< 0.0698 UJ	< 0.115 U	< 0.0698 U	< 0.0698 U	< 0.0698 U	< 0.0698 U
GNC1-JD09	0	FD	1/30/2009	< 0.312 U	0.238 J	< 0.0697 U	< 0.0697 U	< 0.0697 UJ	< 0.115 U	< 0.0697 U	< 0.0697 U	< 0.0697 U	< 0.0697 U
GNC1-JD09	10	NORM	1/30/2009	0.338 J	< 0.211 U	< 0.0713 U	< 0.0713 U	< 0.0713 UJ	< 0.118 U	< 0.0713 U	< 0.0713 U	< 0.0713 U	< 0.0713 U
GNC1-JD10	0	NORM	2/9/2009	< 0.317 U	< 0.211 U	< 0.0714 U	< 0.0714 U	< 0.0714 U	< 0.118 U	< 0.0714 U	< 0.0714 U	< 0.0714 U	< 0.0714 U
GNC1-JD10	11	NORM	2/9/2009	< 0.312 U	0.318 J	< 0.0708 U	< 0.0708 U	< 0.0708 U	< 0.117 U	< 0.0708 U	< 0.0708 U	< 0.0708 U	< 0.0708 U
GNC1-JD11	0	NORM	2/9/2009	< 0.32 U	< 0.213 U	< 0.0702 U	< 0.0702 U	< 0.0702 U	< 0.116 U	< 0.0702 U	< 0.0702 U	< 0.0702 U	< 0.0702 U
GNC1-JD11	11	NORM	2/9/2009	< 0.317 U	0.263 J	< 0.0711 U	< 0.0711 U	< 0.0711 U	< 0.117 U	< 0.0711 U	< 0.0711 U	< 0.0711 U	< 0.0711 U
GNC1-JS09	0	NORM	1/30/2009	< 0.311 U	0.371 J	< 0.069 U	< 0.069 U	< 0.069 U	< 0.114 U	< 0.069 U	< 0.069 U	< 0.069 U	< 0.069 U
GNC1-JS09	0	FD	1/30/2009	< 0.311 U	0.304 J	< 0.0696 U	< 0.0696 U	< 0.0696 U	< 0.115 U	< 0.0696 U	< 0.0696 U	< 0.0696 U	< 0.0696 U
GNC1-JS09	10	NORM	1/30/2009	< 0.326 U	0.405 J	< 0.073 U	< 0.073 U	< 0.073 U	< 0.12 U	< 0.073 U	< 0.073 U	< 0.073 U	< 0.073 U
GNC1-JS10	0	NORM	1/30/2009	< 0.322 U	0.887 J	< 0.0688 U	< 0.0688 U	< 0.0688 U	< 0.114 U	< 0.0688 U	< 0.0688 U	< 0.0688 U	< 0.0688 U
GNC1-JS10	10	NORM	1/30/2009	< 0.318 U	0.458 J	< 0.0705 U	< 0.0705 U	< 0.0705 U	< 0.116 U	< 0.0705 U	< 0.0705 U	< 0.0705 U	< 0.0705 U
GNC1-JS11	0	NORM	1/29/2009	< 0.315 U	< 0.21 U	< 0.0694 U	< 0.0694 U	< 0.0694 UJ	< 0.114 U	< 0.0694 U	< 0.0694 U	< 0.0694 U	< 0.0694 U
GNC1-JS11	0	FD	1/29/2009	< 0.312 U	0.293	< 0.0696 U	< 0.0696 U	< 0.0696 UJ	< 0.115 U	< 0.0696 U	< 0.0696 U	< 0.0696 U	< 0.0696 U
GNC1-JS11	10	NORM	1/29/2009	< 0.316 U	0.382	< 0.0696 U	< 0.0696 U	< 0.0696 UJ	< 0.115 U	< 0.0696 U	< 0.0696 U	< 0.0696 U	< 0.0696 U
GNC2-JD09C	0	NORM	1/8/2010	--	--	< 0.0701 U	< 0.0701 U	< 0.0701 U	< 0.116 U	< 0.0701 U	< 0.0701 U	< 0.0701 U	< 0.0701 U

All units in mg/kg.

-- = no sample data.

= Data not included in risk assessment. Sample location excavated and data replaced with post-excavation data.

TABLE B-9
SOIL ALDEHYDES AND SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

				Semi-Volatile Organic Compounds (SVOCs)									
Sample ID	**Depth (ft bgs)**	**Sample Type**	**Sample Date**	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methylnaphthalene	2-Nitroaniline	2-Nitrophenol	3,3-Dichlorobenzidine	3-Nitroaniline
GNC1-BD19	0	NORM	1/28/2009	< 0.136 U	< 0.0357 U	< 0.0357 U	< 0.0125 U	< 0.0713 U	< 0.00713 U	< 0.0713 U	< 0.0357 U	< 0.107 U	< 0.0713 UJ
GNC1-BD19	10	NORM	1/28/2009	< 0.138 U	< 0.0363 U	< 0.0363 U	< 0.0127 U	< 0.0726 U	< 0.00726 U	< 0.0726 U	< 0.0363 U	< 0.109 U	< 0.0726 UJ
GNC1-BD20	0	NORM	1/30/2009	< 0.131 U	< 0.0344 U	< 0.0344 U	< 0.012 U	< 0.0688 U	< 0.00688 U	< 0.0688 U	< 0.0344 U	< 0.103 U	< 0.0688 U
GNC1-BD20	10	NORM	1/30/2009	< 0.136 U	< 0.0358 U	< 0.0358 U	< 0.0125 U	< 0.0716 U	< 0.00716 U	< 0.0716 U	< 0.0358 U	< 0.107 U	< 0.0716 U
GNC1-BD21	0	NORM	1/30/2009	< 0.129 U	< 0.034 U	< 0.034 U	< 0.0119 U	< 0.068 U	< 0.0068 U	< 0.068 U	< 0.034 U	< 0.102 U	< 0.068 U
GNC1-BD21	10	NORM	1/30/2009	< 0.135 U	< 0.0355 U	< 0.0355 U	< 0.0124 U	< 0.071 U	< 0.0071 U	< 0.071 U	< 0.0355 U	< 0.107 U	< 0.071 U
GNC1-BE19	0	NORM	2/5/2009	< 0.139 U	< 0.0366 U	< 0.0366 U	< 0.0128 U	< 0.0733 U	< 0.00733 U	< 0.0733 U	< 0.0366 U	< 0.11 U	< 0.0733 U
GNC1-BE19	10	NORM	2/5/2009	< 0.134 U	< 0.0354 U	< 0.0354 U	< 0.0124 U	< 0.0708 U	< 0.00708 U	< 0.0708 U	< 0.0354 U	< 0.106 U	< 0.0708 U
GNC1-BE20	0	NORM	2/6/2009	< 0.132 U	< 0.0346 U	< 0.0346 U	< 0.0121 U	< 0.0692 U	< 0.00692 U	< 0.0692 U	< 0.0346 U	< 0.104 U	< 0.0692 U
GNC1-BE20	0	FD	2/6/2009	< 0.131 U	< 0.0345 U	< 0.0345 U	< 0.0121 U	< 0.0689 U	< 0.00689 U	< 0.0689 U	< 0.0345 U	< 0.103 U	< 0.0689 U
GNC1-BE20	10	NORM	2/6/2009	< 0.136 UJ	< 0.0359 UJ	< 0.0359 UJ	< 0.0126 UJ	< 0.0718 UJ	< 0.00718 UJ	< 0.0718 UJ	< 0.0359 UJ	< 0.108 UJ	< 0.0718 UJ
GNC1-BE21	0	NORM	2/6/2009	< 0.133 U	< 0.035 U	< 0.035 U	< 0.0123 U	< 0.07 U	< 0.007 U	< 0.07 U	< 0.035 U	< 0.105 U	< 0.07 U
GNC1-BE21	10	NORM	2/6/2009	--	--	--	--	--	--	--	--	--	--
GNC1-BE22	0	NORM	2/5/2009	< 0.132 U	< 0.0349 U	< 0.0349 U	< 0.0122 U	< 0.0697 U	< 0.00697 U	< 0.0697 U	< 0.0349 U	< 0.105 U	< 0.0697 UJ
GNC1-BE22	10	NORM	2/5/2009	< 0.133 U	< 0.035 U	< 0.035 U	< 0.0122 U	< 0.0699 U	< 0.00699 U	< 0.0699 U	< 0.035 U	< 0.105 U	< 0.0699 UJ
GNC1-BF19	0	NORM	2/5/2009	< 0.132 U	< 0.0348 U	< 0.0348 U	< 0.0122 U	< 0.0695 U	< 0.00695 U	< 0.0695 U	< 0.0348 U	< 0.104 U	< 0.0695 U
GNC1-BF19	11	NORM	2/5/2009	< 0.135 U	< 0.0354 U	< 0.0354 U	< 0.0124 U	< 0.0708 U	< 0.00708 U	< 0.0708 U	< 0.0354 U	< 0.106 U	< 0.0708 U
GNC1-BF20	0	NORM	2/6/2009	< 0.131 U	< 0.0344 U	< 0.0344 U	< 0.012 U	< 0.0687 U	< 0.00687 U	< 0.0687 U	< 0.0344 U	< 0.103 U	< 0.0687 U
GNC1-BF20	10	NORM	2/6/2009	< 0.134 U	< 0.0352 U	< 0.0352 U	< 0.0123 U	< 0.0704 U	< 0.00704 U	< 0.0704 U	< 0.0352 U	< 0.106 U	< 0.0704 U
GNC1-BF21	0	NORM	2/5/2009	< 0.131 U	< 0.0345 U	< 0.0345 U	< 0.0121 U	< 0.0691 U	< 0.00691 U	< 0.0691 U	< 0.0345 U	< 0.104 U	< 0.0691 UJ
GNC1-BF21	10	NORM	2/5/2009	< 0.134 U	< 0.0352 U	< 0.0352 U	< 0.0123 U	< 0.0703 U	< 0.00703 U	< 0.0703 U	< 0.0352 U	< 0.105 U	< 0.0703 UJ
GNC1-BF22	0	NORM	2/6/2009	< 0.132 U	< 0.0346 U	< 0.0346 U	< 0.0121 U	< 0.0693 U	< 0.00693 U	< 0.0693 U	< 0.0346 U	< 0.104 U	< 0.0693 U
GNC1-BF22	10	NORM	2/6/2009	< 0.133 U	< 0.035 U	< 0.035 U	< 0.0123 U	< 0.07 U	< 0.007 U	< 0.07 U	< 0.035 U	< 0.105 U	< 0.07 U
GNC1-BG19	0	NORM	2/5/2009	< 0.134 U	< 0.0352 U	< 0.0352 U	< 0.0123 U	< 0.0705 U	< 0.00705 U	< 0.0705 U	< 0.0352 U	< 0.106 U	< 0.0705 U
GNC1-BG19	10	NORM	2/5/2009	< 0.136 U	< 0.0357 U	< 0.0357 U	< 0.0125 U	< 0.0714 U	< 0.00714 U	< 0.0714 U	< 0.0357 U	< 0.107 U	< 0.0714 U
GNC1-BG20	0	NORM	2/5/2009	< 0.131 U	< 0.0344 U	< 0.0344 U	< 0.012 U	< 0.0688 U	< 0.00688 U	< 0.0688 U	< 0.0344 U	< 0.103 U	< 0.0688 UJ
GNC1-BG20	0	FD	2/5/2009	< 0.132 U	< 0.0347 U	< 0.0347 U	< 0.0122 U	< 0.0695 U	< 0.00695 U	< 0.0695 U	< 0.0347 U	< 0.104 U	< 0.0695 U
GNC1-BG20	10	NORM	2/5/2009	< 0.134 U	< 0.0352 U	< 0.0352 U	< 0.0123 U	< 0.0704 U	< 0.00704 U	< 0.0704 U	< 0.0352 U	< 0.106 U	< 0.0704 U
GNC1-BG21	0	NORM	2/5/2009	< 0.133 U	< 0.0349 U	< 0.0349 U	< 0.0122 U	< 0.0698 U	< 0.00698 U	< 0.0698 U	< 0.0349 U	< 0.105 U	< 0.0698 U
GNC1-BG21	10	NORM	2/5/2009	< 0.134 U	< 0.0352 U	< 0.0352 U	< 0.0123 U	< 0.0704 U	< 0.00704 U	< 0.0704 U	< 0.0352 U	< 0.106 U	< 0.0704 U
GNC1-BG22	0	NORM	2/5/2009	< 0.132 U	< 0.0348 U	< 0.0348 U	< 0.0122 U	< 0.0695 U	< 0.00695 U	< 0.0695 U	< 0.0348 U	< 0.104 U	< 0.0695 U
GNC1-BG22	10	NORM	2/5/2009	< 0.133 U	< 0.0349 U	< 0.0349 U	< 0.0122 U	< 0.0698 U	< 0.00698 U	< 0.0698 U	< 0.0349 U	< 0.105 U	< 0.0698 UJ
GNC1-JD06	0	NORM	2/13/2009	< 0.135 U	< 0.0355 U	< 0.0355 U	< 0.0124 U	< 0.0711 U	< 0.00711 U	< 0.0711 U	< 0.0355 U	< 0.107 U	< 0.0711 U
GNC1-JD06	10	NORM	2/17/2009	< 0.136 U	< 0.0358 U	< 0.0358 U	< 0.0125 U	< 0.0716 U	< 0.00716 U	< 0.0716 U	< 0.0358 U	< 0.107 U	< 0.0716 U
GNC1-JD07	0	NORM	1/30/2009	< 0.132 U	< 0.0347 U	< 0.0347 U	< 0.0122 U	< 0.0695 U	< 0.00695 U	< 0.0695 U	< 0.0347 U	< 0.104 U	< 0.0695 U

TABLE B-9
SOIL ALDEHYDES AND SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Semi-Volatile Organic Compounds (SVOCs)									
				2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methylnaphthalene	2-Nitroaniline	2-Nitrophenol	3,3-Dichlorobenzidine	3-Nitroaniline
GNC1-JD07	10	NORM	1/30/2009	< 0.136 U	< 0.0358 U	< 0.0358 U	< 0.0125 U	< 0.0715 U	< 0.00715 U	< 0.0715 U	< 0.0358 U	< 0.107 U	< 0.0715 U
GNC1-JD08	0	NORM	1/30/2009	< 0.129 U	< 0.0338 U	< 0.0338 U	< 0.0118 U	< 0.0677 U	< 0.00677 U	< 0.0677 U	< 0.0338 U	< 0.102 U	< 0.0677 U
GNC1-JD08	10	NORM	1/30/2009	< 0.134 U	< 0.0353 U	< 0.0353 U	< 0.0123 U	< 0.0706 U	< 0.00706 U	< 0.0706 U	< 0.0353 U	< 0.106 UJ	< 0.0706 UJ
GNC1-JD09	0	NORM	1/30/2009	< 0.133 U	< 0.0349 U	< 0.0349 U	< 0.0122 U	< 0.0698 U	< 0.00698 U	< 0.0698 U	< 0.0349 U	< 0.105 UJ	< 0.0698 UJ
GNC1-JD09	0	FD	1/30/2009	< 0.132 U	< 0.0349 U	< 0.0349 U	< 0.0122 U	< 0.0697 U	< 0.00697 U	< 0.0697 U	< 0.0349 U	< 0.105 UJ	< 0.0697 UJ
GNC1-JD09	10	NORM	1/30/2009	< 0.135 U	< 0.0356 U	< 0.0356 U	< 0.0125 U	< 0.0713 U	< 0.00713 U	< 0.0713 U	< 0.0356 U	< 0.107 UJ	< 0.0713 UJ
GNC1-JD10	0	NORM	2/9/2009	< 0.136 U	< 0.0357 U	< 0.0357 U	< 0.0125 U	< 0.0714 U	< 0.00714 U	< 0.0714 U	< 0.0357 U	< 0.107 U	< 0.0714 U
GNC1-JD10	11	NORM	2/9/2009	< 0.134 U	< 0.0354 U	< 0.0354 U	< 0.0124 U	< 0.0708 U	< 0.00708 U	< 0.0708 U	< 0.0354 U	< 0.106 U	< 0.0708 U
GNC1-JD11	0	NORM	2/9/2009	< 0.133 U	< 0.0351 U	< 0.0351 U	< 0.0123 U	< 0.0702 U	< 0.00702 U	< 0.0702 U	< 0.0351 U	< 0.105 U	< 0.0702 U
GNC1-JD11	11	NORM	2/9/2009	< 0.135 U	< 0.0355 U	< 0.0355 U	< 0.0124 U	< 0.0711 U	< 0.00711 U	< 0.0711 U	< 0.0355 U	< 0.107 U	< 0.0711 U
GNC1-JS09	0	NORM	1/30/2009	< 0.131 U	< 0.0345 U	< 0.0345 U	< 0.0121 U	< 0.069 U	< 0.0069 U	< 0.069 U	< 0.0345 U	< 0.103 U	< 0.069 U
GNC1-JS09	0	FD	1/30/2009	< 0.132 U	< 0.0348 U	< 0.0348 U	< 0.0122 U	< 0.0696 U	< 0.00696 U	< 0.0696 U	< 0.0348 U	< 0.104 U	< 0.0696 U
GNC1-JS09	10	NORM	1/30/2009	< 0.139 U	< 0.0365 U	< 0.0365 U	< 0.0128 U	< 0.073 U	< 0.0073 U	< 0.073 U	< 0.0365 U	< 0.109 U	< 0.073 U
GNC1-JS10	0	NORM	1/30/2009	< 0.131 U	< 0.0344 U	< 0.0344 U	< 0.012 U	< 0.0688 U	< 0.00688 U	< 0.0688 U	< 0.0344 U	< 0.103 U	< 0.0688 U
GNC1-JS10	10	NORM	1/30/2009	< 0.134 U	< 0.0352 U	< 0.0352 U	< 0.0123 U	< 0.0705 U	< 0.00705 U	< 0.0705 U	< 0.0352 U	< 0.106 U	< 0.0705 U
GNC1-JS11	0	NORM	1/29/2009	< 0.132 U	< 0.0347 U	< 0.0347 U	< 0.0121 U	< 0.0694 U	< 0.00694 U	< 0.0694 U	< 0.0347 U	< 0.104 UJ	< 0.0694 U
GNC1-JS11	0	FD	1/29/2009	< 0.132 U	< 0.0348 U	< 0.0348 U	< 0.0122 U	< 0.0696 U	< 0.00696 U	< 0.0696 U	< 0.0348 U	< 0.104 UJ	< 0.0696 U
GNC1-JS11	10	NORM	1/29/2009	< 0.132 U	< 0.0348 U	< 0.0348 U	< 0.0122 U	< 0.0696 U	< 0.00696 U	< 0.0696 U	< 0.0348 U	< 0.104 UJ	< 0.0696 U
GNC2-JD09C	0	NORM	1/8/2010	< 0.133 U	< 0.035 U	< 0.035 U	< 0.0123 U	< 0.0701 U	< 0.00701 U	< 0.0701 U	< 0.035 U	< 0.105 U	< 0.0701 U

All units in mg/kg.

-- = no sample data.

= Data not included in risk assessment. Sample location excavated and data replaced with post-excavation data.

TABLE B-9
SOIL ALDEHYDES AND SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Semi-Volatile Organic Compounds (SVOCs)									
				4-Bromophenyl phenyl ether	4-Chloro-3-methylphenol	4-Chlorophenyl phenyl ether	4-Chlorothioanisole	4-Nitroaniline	4-Nitrophenol	Acetophenone	Aniline	Benzenethiol	Benzoic acid
GNC1-BD19	0	NORM	1/28/2009	< 0.0357 U	< 0.0357 U	< 0.0357 U	< 0.118 U	< 0.0713 UJ	< 0.0713 U	< 0.0357 U	< 0.125 U	< 0.118 U	< 0.178 U
GNC1-BD19	10	NORM	1/28/2009	< 0.0363 U	< 0.0363 U	< 0.0363 U	< 0.12 U	< 0.0726 UJ	< 0.0726 U	< 0.0363 U	< 0.127 U	< 0.12 U	< 0.182 U
GNC1-BD20	0	NORM	1/30/2009	< 0.0344 U	< 0.0344 U	< 0.0344 U	< 0.114 U	< 0.0688 UJ	< 0.0688 U	< 0.0344 U	< 0.12 U	< 0.114 U	< 0.172 U
GNC1-BD20	10	NORM	1/30/2009	< 0.0358 U	< 0.0358 U	< 0.0358 U	< 0.118 U	< 0.0716 UJ	< 0.0716 U	< 0.0358 U	< 0.125 U	< 0.118 U	< 0.179 U
GNC1-BD21	0	NORM	1/30/2009	< 0.034 U	< 0.034 U	< 0.034 U	< 0.112 U	< 0.068 UJ	< 0.068 U	< 0.034 U	< 0.119 U	< 0.112 U	< 0.17 U
GNC1-BD21	10	NORM	1/30/2009	< 0.0355 U	< 0.0355 U	< 0.0355 U	< 0.117 U	< 0.071 UJ	< 0.071 U	< 0.0355 U	< 0.124 U	< 0.117 U	< 0.178 U
GNC1-BE19	0	NORM	2/5/2009	< 0.0366 U	< 0.0366 U	< 0.0366 U	< 0.121 U	< 0.0733 U	< 0.0733 U	< 0.0366 U	< 0.128 U	< 0.121 U	< 0.183 UJ
GNC1-BE19	10	NORM	2/5/2009	< 0.0354 U	< 0.0354 U	< 0.0354 U	< 0.117 U	< 0.0708 U	< 0.0708 U	< 0.0354 U	< 0.124 U	< 0.117 U	< 0.177 UJ
GNC1-BE20	0	NORM	2/6/2009	< 0.0346 U	< 0.0346 U	< 0.0346 U	< 0.114 U	< 0.0692 U	< 0.0692 U	< 0.0346 U	< 0.121 U	< 0.114 U	0.32 J
GNC1-BE20	0	FD	2/6/2009	< 0.0345 U	< 0.0345 U	< 0.0345 U	< 0.114 U	< 0.0689 U	< 0.0689 U	< 0.0345 U	< 0.121 U	< 0.114 U	< 0.172 U
GNC1-BE20	10	NORM	2/6/2009	< 0.0359 UJ	< 0.0359 UJ	< 0.0359 UJ	< 0.118 UJ	< 0.0718 UJ	< 0.0718 UJ	< 0.0359 UJ	< 0.126 UJ	< 0.118 UJ	< 0.179 UJ
GNC1-BE21	0	NORM	2/6/2009	< 0.035 U	< 0.035 U	< 0.035 U	< 0.116 U	< 0.07 U	< 0.07 U	< 0.035 U	< 0.123 U	< 0.116 U	< 0.175 U
GNC1-BE21	10	NORM	2/6/2009	--	--	--	--	--	--	--	--	--	--
GNC1-BE22	0	NORM	2/5/2009	< 0.0349 U	< 0.0349 U	< 0.0349 U	< 0.115 U	< 0.0697 UJ	< 0.0697 U	< 0.0349 U	< 0.122 U	< 0.115 U	< 0.174 U
GNC1-BE22	10	NORM	2/5/2009	< 0.035 U	< 0.035 U	< 0.035 U	< 0.115 U	< 0.0699 UJ	< 0.0699 U	< 0.035 U	< 0.122 U	< 0.115 U	< 0.175 U
GNC1-BF19	0	NORM	2/5/2009	< 0.0348 U	< 0.0348 U	< 0.0348 U	< 0.115 U	< 0.0695 U	< 0.0695 U	< 0.0348 U	< 0.122 U	< 0.115 U	< 0.174 UJ
GNC1-BF19	11	NORM	2/5/2009	< 0.0354 U	< 0.0354 U	< 0.0354 U	< 0.117 U	< 0.0708 U	< 0.0708 U	< 0.0354 U	< 0.124 U	< 0.117 U	< 0.177 UJ
GNC1-BF20	0	NORM	2/6/2009	< 0.0344 U	< 0.0344 U	< 0.0344 U	< 0.113 U	< 0.0687 U	< 0.0687 U	< 0.0344 U	< 0.12 U	< 0.113 U	< 0.172 U
GNC1-BF20	10	NORM	2/6/2009	< 0.0352 U	< 0.0352 U	< 0.0352 U	< 0.116 U	< 0.0704 U	< 0.0704 U	< 0.0352 U	< 0.123 U	< 0.116 U	< 0.176 U
GNC1-BF21	0	NORM	2/5/2009	< 0.0345 U	< 0.0345 U	< 0.0345 U	< 0.114 U	< 0.0691 UJ	< 0.0691 U	< 0.0345 U	< 0.121 U	< 0.114 U	< 0.173 U
GNC1-BF21	10	NORM	2/5/2009	< 0.0352 U	< 0.0352 U	< 0.0352 U	< 0.116 U	< 0.0703 UJ	< 0.0703 U	< 0.0352 U	< 0.123 U	< 0.116 U	< 0.176 U
GNC1-BF22	0	NORM	2/6/2009	< 0.0346 U	< 0.0346 U	< 0.0346 U	< 0.114 U	< 0.0693 U	< 0.0693 U	< 0.0346 U	< 0.121 U	< 0.114 U	< 0.173 U
GNC1-BF22	10	NORM	2/6/2009	< 0.035 U	< 0.035 U	< 0.035 U	< 0.116 U	< 0.07 U	< 0.07 U	< 0.035 U	< 0.123 U	< 0.116 U	< 0.175 U
GNC1-BG19	0	NORM	2/5/2009	< 0.0352 U	< 0.0352 U	< 0.0352 U	< 0.116 U	< 0.0705 U	< 0.0705 U	< 0.0352 U	< 0.123 U	< 0.116 U	< 0.176 UJ
GNC1-BG19	10	NORM	2/5/2009	< 0.0357 U	< 0.0357 U	< 0.0357 U	< 0.118 U	< 0.0714 U	< 0.0714 U	< 0.0357 U	< 0.125 U	< 0.118 U	< 0.178 UJ
GNC1-BG20	0	NORM	2/5/2009	< 0.0344 U	< 0.0344 U	< 0.0344 U	< 0.113 U	< 0.0688 UJ	< 0.0688 U	< 0.0344 U	< 0.12 U	< 0.113 U	< 0.172 U
GNC1-BG20	0	FD	2/5/2009	< 0.0347 U	< 0.0347 U	< 0.0347 U	< 0.115 U	< 0.0695 U	< 0.0695 U	< 0.0347 U	< 0.122 U	< 0.115 U	< 0.174 UJ
GNC1-BG20	10	NORM	2/5/2009	< 0.0352 U	< 0.0352 U	< 0.0352 U	< 0.116 U	< 0.0704 U	< 0.0704 U	< 0.0352 U	< 0.123 U	< 0.116 U	< 0.176 UJ
GNC1-BG21	0	NORM	2/5/2009	< 0.0349 U	< 0.0349 U	< 0.0349 U	< 0.115 U	< 0.0698 U	< 0.0698 U	< 0.0349 U	< 0.122 U	< 0.115 U	< 0.174 UJ
GNC1-BG21	10	NORM	2/5/2009	< 0.0352 U	< 0.0352 U	< 0.0352 U	< 0.116 U	< 0.0704 U	< 0.0704 U	< 0.0352 U	< 0.123 U	< 0.116 U	< 0.176 UJ
GNC1-BG22	0	NORM	2/5/2009	< 0.0348 U	< 0.0348 U	< 0.0348 U	< 0.115 U	< 0.0695 U	< 0.0695 U	< 0.0348 U	< 0.122 U	< 0.115 U	< 0.174 UJ
GNC1-BG22	10	NORM	2/5/2009	< 0.0349 U	< 0.0349 U	< 0.0349 U	< 0.115 U	< 0.0698 UJ	< 0.0698 U	< 0.0349 U	< 0.122 U	< 0.115 U	< 0.175 U
GNC1-JD06	0	NORM	2/13/2009	< 0.0355 U	< 0.0355 U	< 0.0355 U	< 0.117 U	< 0.0711 U	< 0.0711 U	< 0.0355 U	< 0.124 U	< 0.117 U	< 0.178 U
GNC1-JD06	10	NORM	2/17/2009	< 0.0358 U	< 0.0358 U	< 0.0358 U	< 0.118 U	< 0.0716 U	< 0.0716 U	< 0.0358 U	< 0.125 U	< 0.118 U	< 0.179 U
GNC1-JD07	0	NORM	1/30/2009	< 0.0347 U	< 0.0347 U	< 0.0347 U	< 0.115 U	< 0.0695 UJ	< 0.0695 U	< 0.0347 U	< 0.122 U	< 0.115 U	< 0.174 U

TABLE B-9
SOIL ALDEHYDES AND SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Semi-Volatile Organic Compounds (SVOCs)									
				4-Bromophenyl phenyl ether	4-Chloro-3-methylphenol	4-Chlorophenyl phenyl ether	4-Chlorothioanisole	4-Nitroaniline	4-Nitrophenol	Acetophenone	Aniline	Benzenethiol	Benzoic acid
GNC1-JD07	10	NORM	1/30/2009	< 0.0358 U	< 0.0358 U	< 0.0358 U	< 0.118 U	< 0.0715 UJ	< 0.0715 U	< 0.0358 U	< 0.125 U	< 0.118 U	< 0.179 U
GNC1-JD08	0	NORM	1/30/2009	< 0.0338 U	< 0.0338 U	< 0.0338 U	< 0.112 U	< 0.0677 UJ	< 0.0677 U	< 0.0338 U	< 0.118 U	< 0.112 U	< 0.169 U
GNC1-JD08	10	NORM	1/30/2009	< 0.0353 U	< 0.0353 U	< 0.0353 U	< 0.116 U	< 0.0706 UJ	< 0.0706 U	< 0.0353 UJ	< 0.123 U	< 0.116 U	< 0.176 U
GNC1-JD09	0	NORM	1/30/2009	< 0.0349 U	< 0.0349 U	< 0.0349 U	< 0.115 U	< 0.0698 UJ	< 0.0698 U	< 0.0349 UJ	< 0.122 U	< 0.115 U	< 0.174 U
GNC1-JD09	0	FD	1/30/2009	< 0.0349 U	< 0.0349 U	< 0.0349 U	< 0.115 U	< 0.0697 UJ	< 0.0697 U	< 0.0349 UJ	< 0.122 U	< 0.115 U	< 0.174 U
GNC1-JD09	10	NORM	1/30/2009	< 0.0356 U	< 0.0356 U	< 0.0356 U	< 0.118 U	< 0.0713 UJ	< 0.0713 U	< 0.0356 UJ	< 0.125 U	< 0.118 U	< 0.178 U
GNC1-JD10	0	NORM	2/9/2009	< 0.0357 U	< 0.0357 U	< 0.0357 U	< 0.118 U	< 0.0714 U	< 0.0714 U	< 0.0357 U	< 0.125 U	< 0.118 U	< 0.179 UJ
GNC1-JD10	11	NORM	2/9/2009	< 0.0354 U	< 0.0354 U	< 0.0354 U	< 0.117 U	< 0.0708 U	< 0.0708 U	< 0.0354 U	< 0.124 U	< 0.117 U	< 0.177 UJ
GNC1-JD11	0	NORM	2/9/2009	< 0.0351 U	< 0.0351 U	< 0.0351 U	< 0.116 U	< 0.0702 U	< 0.0702 U	< 0.0351 U	< 0.123 U	< 0.116 U	< 0.175 UJ
GNC1-JD11	11	NORM	2/9/2009	< 0.0355 U	< 0.0355 U	< 0.0355 U	< 0.117 U	< 0.0711 U	< 0.0711 U	< 0.0355 U	< 0.124 U	< 0.117 U	< 0.178 UJ
GNC1-JS09	0	NORM	1/30/2009	< 0.0345 U	< 0.0345 U	< 0.0345 U	< 0.114 U	< 0.069 UJ	< 0.069 U	< 0.0345 U	< 0.121 U	< 0.114 U	< 0.172 U
GNC1-JS09	0	FD	1/30/2009	< 0.0348 U	< 0.0348 U	< 0.0348 U	< 0.115 U	< 0.0696 UJ	< 0.0696 U	< 0.0348 U	< 0.122 U	< 0.115 U	< 0.174 U
GNC1-JS09	10	NORM	1/30/2009	< 0.0365 U	< 0.0365 U	< 0.0365 U	< 0.12 U	< 0.073 UJ	< 0.073 U	< 0.0365 U	< 0.128 U	< 0.12 U	< 0.182 U
GNC1-JS10	0	NORM	1/30/2009	< 0.0344 U	< 0.0344 U	< 0.0344 U	< 0.114 U	< 0.0688 UJ	< 0.0688 U	< 0.0344 U	< 0.12 U	< 0.114 U	< 0.172 U
GNC1-JS10	10	NORM	1/30/2009	< 0.0352 U	< 0.0352 U	< 0.0352 U	< 0.116 U	< 0.0705 UJ	< 0.0705 U	< 0.0352 U	< 0.123 U	< 0.116 U	< 0.176 U
GNC1-JS11	0	NORM	1/29/2009	< 0.0347 U	< 0.0347 U	< 0.0347 U	< 0.114 U	< 0.0694 U	< 0.0694 U	< 0.0347 UJ	< 0.121 U	< 0.114 U	< 0.173 U
GNC1-JS11	0	FD	1/29/2009	< 0.0348 U	< 0.0348 U	< 0.0348 U	< 0.115 U	< 0.0696 U	< 0.0696 U	< 0.0348 UJ	< 0.122 U	< 0.115 U	< 0.174 U
GNC1-JS11	10	NORM	1/29/2009	< 0.0348 U	< 0.0348 U	< 0.0348 U	< 0.115 U	< 0.0696 U	< 0.0696 U	< 0.0348 UJ	< 0.122 U	< 0.115 U	< 0.174 U
GNC2-JD09C	0	NORM	1/8/2010	< 0.035 U	< 0.035 U	< 0.035 U	< 0.116 U	< 0.0701 U	< 0.0701 U	< 0.035 U	< 0.123 U	< 0.116 U	< 0.175 U

All units in mg/kg.

-- = no sample data.

= Data not included in risk assessment. Sample location excavated and data replaced with post-excavation data.

TABLE B-9
SOIL ALDEHYDES AND SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

				Semi-Volatile Organic Compounds (SVOCs)									
Sample ID	**Depth (ft bgs)**	**Sample Type**	**Sample Date**	Benzyl alcohol	bis(2-Chloroethoxy) methane	bis(2-Chloroethyl) ether	bis(2-Chloroisopropyl) ether	bis(2-Ethylhexyl) phthalate	bis(p-Chlorophenyl) sulfone	bis(p-Chlorophenyl) disulfide	Butylbenzyl phthalate	Carbazole	Dibenzofuran
GNC1-BD19	0	NORM	1/28/2009	< 0.107 U	< 0.0713 U	< 0.0713 U	< 0.0713 U	< 0.11 U	< 0.118 U	< 0.118 UJ	< 0.0713 U	< 0.0107 UJ	< 0.0713 U
GNC1-BD19	10	NORM	1/28/2009	< 0.109 U	< 0.0726 U	< 0.0726 U	< 0.0726 U	< 0.0997 U	< 0.12 U	< 0.12 UJ	< 0.0726 U	< 0.0109 UJ	< 0.0726 U
GNC1-BD20	0	NORM	1/30/2009	< 0.103 U	< 0.0688 U	< 0.0688 U	< 0.0688 U	< 0.0688 U	< 0.114 U	< 0.114 U	< 0.0688 U	< 0.0103 U	< 0.0688 U
GNC1-BD20	10	NORM	1/30/2009	< 0.107 U	< 0.0716 U	< 0.0716 U	< 0.0716 U	< 0.0716 U	< 0.118 U	< 0.118 U	< 0.0716 U	< 0.0107 U	< 0.0716 U
GNC1-BD21	0	NORM	1/30/2009	< 0.102 U	< 0.068 U	< 0.068 U	< 0.068 U	< 0.068 U	< 0.112 U	< 0.112 U	< 0.068 U	< 0.0102 U	< 0.068 U
GNC1-BD21	10	NORM	1/30/2009	< 0.107 U	< 0.071 U	< 0.071 U	< 0.071 U	< 0.071 U	< 0.117 U	< 0.117 U	< 0.071 U	< 0.0107 U	< 0.071 U
GNC1-BE19	0	NORM	2/5/2009	< 0.11 U	< 0.0733 U	< 0.0733 U	< 0.0733 U	< 0.0733 U	< 0.121 UJ	< 0.121 U	< 0.0733 U	< 0.011 U	< 0.0733 U
GNC1-BE19	10	NORM	2/5/2009	< 0.106 U	< 0.0708 U	< 0.0708 U	< 0.0708 U	< 0.0708 U	< 0.117 UJ	< 0.117 U	< 0.0708 U	< 0.0106 U	< 0.0708 U
GNC1-BE20	0	NORM	2/6/2009	< 0.104 U	< 0.0692 U	< 0.0692 U	< 0.0692 U	1.04 J	< 0.114 U	< 0.114 U	126 J	< 0.0104 U	< 0.0692 U
GNC1-BE20	0	FD	2/6/2009	< 0.103 U	< 0.0689 U	< 0.0689 U	< 0.0689 U	< 0.0689 UJ	< 0.114 U	< 0.114 U	< 0.0689 UJ	< 0.0103 U	< 0.0689 U
GNC1-BE20	10	NORM	2/6/2009	< 0.108 UJ	< 0.0718 UJ	< 0.0718 UJ	< 0.0718 UJ	< 0.0718 UJ	< 0.118 UJ	< 0.118 UJ	< 0.0718 UJ	< 0.0108 UJ	< 0.0718 UJ
GNC1-BE21	0	NORM	2/6/2009	< 0.105 U	< 0.07 U	< 0.07 U	< 0.07 U	< 0.07 U	< 0.116 U	< 0.116 U	< 0.07 U	< 0.0105 U	< 0.07 U
GNC1-BE21	10	NORM	2/6/2009	--	--	--	--	--	--	--	--	--	--
GNC1-BE22	0	NORM	2/5/2009	< 0.105 U	< 0.0697 U	< 0.0697 U	< 0.0697 U	0.37	< 0.115 U	< 0.115 U	< 0.0697 U	< 0.0105 UJ	< 0.0697 U
GNC1-BE22	10	NORM	2/5/2009	< 0.105 U	< 0.0699 U	< 0.0699 U	< 0.0699 U	< 0.0699 U	< 0.115 U	< 0.115 U	< 0.0699 U	< 0.0105 UJ	< 0.0699 U
GNC1-BF19	0	NORM	2/5/2009	< 0.104 U	< 0.0695 U	< 0.0695 U	< 0.0695 U	< 0.0695 U	< 0.115 UJ	< 0.115 U	< 0.0695 U	< 0.0104 U	< 0.0695 U
GNC1-BF19	11	NORM	2/5/2009	< 0.106 U	< 0.0708 U	< 0.0708 U	< 0.0708 U	< 0.0708 U	< 0.117 UJ	< 0.117 U	< 0.0708 U	< 0.0106 U	< 0.0708 U
GNC1-BF20	0	NORM	2/6/2009	< 0.103 U	< 0.0687 U	< 0.0687 U	< 0.0687 U	< 0.0687 U	< 0.113 U	< 0.113 U	< 0.0687 U	< 0.0103 U	< 0.0687 U
GNC1-BF20	10	NORM	2/6/2009	< 0.106 U	< 0.0704 U	< 0.0704 U	< 0.0704 U	< 0.0704 U	< 0.116 U	< 0.116 U	< 0.0704 U	< 0.0106 U	< 0.0704 U
GNC1-BF21	0	NORM	2/5/2009	< 0.104 U	< 0.0691 U	< 0.0691 U	< 0.0691 U	< 0.0691 U	< 0.114 U	< 0.114 U	< 0.0691 U	< 0.0104 UJ	< 0.0691 U
GNC1-BF21	10	NORM	2/5/2009	< 0.105 U	< 0.0703 U	< 0.0703 U	< 0.0703 U	< 0.0703 U	< 0.116 U	< 0.116 U	< 0.0703 U	< 0.0105 UJ	< 0.0703 U
GNC1-BF22	0	NORM	2/6/2009	< 0.104 U	< 0.0693 U	< 0.0693 U	< 0.0693 U	< 0.0693 U	< 0.114 U	< 0.114 U	< 0.0693 U	< 0.0104 U	< 0.0693 U
GNC1-BF22	10	NORM	2/6/2009	< 0.105 U	< 0.07 U	< 0.07 U	< 0.07 U	< 0.07 U	< 0.116 U	< 0.116 U	< 0.07 U	< 0.0105 U	< 0.07 U
GNC1-BG19	0	NORM	2/5/2009	< 0.106 U	< 0.0705 U	< 0.0705 U	< 0.0705 U	< 0.0705 U	< 0.116 UJ	< 0.116 U	< 0.0705 U	< 0.0106 U	< 0.0705 U
GNC1-BG19	10	NORM	2/5/2009	< 0.107 U	< 0.0714 U	< 0.0714 U	< 0.0714 U	< 0.0714 U	< 0.118 UJ	< 0.118 U	< 0.0714 U	< 0.0107 U	< 0.0714 U
GNC1-BG20	0	NORM	2/5/2009	< 0.103 U	< 0.0688 U	< 0.0688 U	< 0.0688 U	0.077 J	< 0.113 U	< 0.113 U	< 0.0688 U	< 0.0103 UJ	< 0.0688 U
GNC1-BG20	0	FD	2/5/2009	< 0.104 U	< 0.0695 U	< 0.0695 U	< 0.0695 U	0.114 J	< 0.115 UJ	< 0.115 U	< 0.0695 U	< 0.0104 U	< 0.0695 U
GNC1-BG20	10	NORM	2/5/2009	< 0.106 U	< 0.0704 U	< 0.0704 U	< 0.0704 U	< 0.0704 U	< 0.116 UJ	< 0.116 U	< 0.0704 U	< 0.0106 U	< 0.0704 U
GNC1-BG21	0	NORM	2/5/2009	< 0.105 U	< 0.0698 U	< 0.0698 U	< 0.0698 U	< 0.0698 U	< 0.115 UJ	< 0.115 U	< 0.0698 U	< 0.0105 U	< 0.0698 U
GNC1-BG21	10	NORM	2/5/2009	< 0.106 U	< 0.0704 U	< 0.0704 U	< 0.0704 U	< 0.0704 U	< 0.116 UJ	< 0.116 U	< 0.0704 U	< 0.0106 U	< 0.0704 U
GNC1-BG22	0	NORM	2/5/2009	< 0.104 U	< 0.0695 U	< 0.0695 U	< 0.0695 U	< 0.0695 U	< 0.115 UJ	< 0.115 U	< 0.0695 U	< 0.0104 U	< 0.0695 U
GNC1-BG22	10	NORM	2/5/2009	< 0.105 U	< 0.0698 U	< 0.0698 U	< 0.0698 U	< 0.0698 U	< 0.115 U	< 0.115 U	< 0.0698 U	< 0.0105 UJ	< 0.0698 U
GNC1-JD06	0	NORM	2/13/2009	< 0.107 U	< 0.0711 U	< 0.0711 U	< 0.0711 U	0.0747 J	< 0.117 U	< 0.117 U	< 0.0711 U	< 0.0107 U	< 0.0711 U
GNC1-JD06	10	NORM	2/17/2009	< 0.107 U	< 0.0716 U	< 0.0716 U	< 0.0716 U	< 0.0716 U	< 0.118 U	< 0.118 U	< 0.0716 U	< 0.0107 U	< 0.0716 U
GNC1-JD07	0	NORM	1/30/2009	< 0.104 U	< 0.0695 U	< 0.0695 U	< 0.0695 U	< 0.0695 U	< 0.115 U	< 0.115 U	< 0.0695 U	< 0.0104 U	< 0.0695 U

TABLE B-9
SOIL ALDEHYDES AND SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Semi-Volatile Organic Compounds (SVOCs)									
				Benzyl alcohol	bis(2-Chloroethoxy) methane	bis(2-Chloroethyl) ether	bis(2-Chloroisopropyl) ether	bis(2-Ethylhexyl) phthalate	bis(p-Chlorophenyl) sulfone	bis(p-Chlorophenyl) disulfide	Butylbenzyl phthalate	Carbazole	Dibenzofuran
GNC1-JD07	10	NORM	1/30/2009	< 0.107 U	< 0.0715 U	< 0.0715 U	< 0.0715 U	< 0.0715 U	< 0.118 U	< 0.118 U	< 0.0715 U	< 0.0107 U	< 0.0715 U
GNC1-JD08	0	NORM	1/30/2009	< 0.102 U	< 0.0677 U	< 0.0677 U	< 0.0677 U	< 0.0677 U	< 0.112 U	< 0.112 U	< 0.0677 U	< 0.0102 U	< 0.0677 U
GNC1-JD08	10	NORM	1/30/2009	< 0.106 U	< 0.0706 U	< 0.0706 U	< 0.0706 U	< 0.0706 U	< 0.116 U	< 0.116 U	< 0.0706 U	< 0.0106 UJ	< 0.0706 U
GNC1-JD09	0	NORM	1/30/2009	< 0.105 U	< 0.0698 U	< 0.0698 U	< 0.0698 U	< 0.0698 U	< 0.115 U	< 0.115 U	< 0.0698 U	0.0545 J	< 0.0698 U
GNC1-JD09	0	FD	1/30/2009	< 0.105 U	< 0.0697 U	< 0.0697 U	< 0.0697 U	0.225	< 0.115 U	< 0.115 U	< 0.0697 U	0.0155 J	< 0.0697 U
GNC1-JD09	10	NORM	1/30/2009	< 0.107 U	< 0.0713 U	< 0.0713 U	< 0.0713 U	< 0.0713 U	< 0.118 U	< 0.118 U	< 0.0713 U	< 0.0107 UJ	< 0.0713 U
GNC1-JD10	0	NORM	2/9/2009	< 0.107 U	< 0.0714 U	< 0.0714 U	< 0.0714 U	< 0.0714 U	< 0.118 U	< 0.118 U	< 0.0714 U	< 0.0107 U	< 0.0714 U
GNC1-JD10	11	NORM	2/9/2009	< 0.106 U	< 0.0708 U	< 0.0708 U	< 0.0708 U	< 0.0708 U	< 0.117 U	< 0.117 U	< 0.0708 U	< 0.0106 U	< 0.0708 U
GNC1-JD11	0	NORM	2/9/2009	< 0.105 U	< 0.0702 U	< 0.0702 U	< 0.0702 U	< 0.0702 U	< 0.116 U	< 0.116 U	< 0.0702 U	< 0.0105 U	< 0.0702 U
GNC1-JD11	11	NORM	2/9/2009	< 0.107 U	< 0.0711 U	< 0.0711 U	< 0.0711 U	< 0.0711 U	< 0.117 U	< 0.117 U	< 0.0711 U	< 0.0107 U	< 0.0711 U
GNC1-JS09	0	NORM	1/30/2009	< 0.103 U	< 0.069 U	< 0.069 U	< 0.069 U	< 0.069 U	< 0.114 U	< 0.114 U	< 0.069 U	< 0.0103 U	< 0.069 U
GNC1-JS09	0	FD	1/30/2009	< 0.104 U	< 0.0696 U	< 0.0696 U	< 0.0696 U	< 0.0696 U	< 0.115 U	< 0.115 U	< 0.0696 U	< 0.0104 U	< 0.0696 U
GNC1-JS09	10	NORM	1/30/2009	< 0.109 U	< 0.073 U	< 0.073 U	< 0.073 U	< 0.073 U	< 0.12 U	< 0.12 U	< 0.073 U	< 0.0109 U	< 0.073 U
GNC1-JS10	0	NORM	1/30/2009	< 0.103 U	< 0.0688 U	< 0.0688 U	< 0.0688 U	< 0.0688 U	< 0.114 U	< 0.114 U	< 0.0688 U	< 0.0103 U	< 0.0688 U
GNC1-JS10	10	NORM	1/30/2009	< 0.106 U	< 0.0705 U	< 0.0705 U	< 0.0705 U	< 0.0705 U	< 0.116 U	< 0.116 U	< 0.0705 U	< 0.0106 U	< 0.0705 U
GNC1-JS11	0	NORM	1/29/2009	< 0.104 U	< 0.0694 U	< 0.0694 U	< 0.0694 U	< 0.0694 U	< 0.114 U	< 0.114 U	< 0.0694 U	< 0.0104 U	< 0.0694 U
GNC1-JS11	0	FD	1/29/2009	< 0.104 U	< 0.0696 U	< 0.0696 U	< 0.0696 U	< 0.0696 U	< 0.115 U	< 0.115 U	< 0.0696 U	< 0.0104 U	< 0.0696 U
GNC1-JS11	10	NORM	1/29/2009	< 0.104 U	< 0.0696 U	< 0.0696 U	< 0.0696 U	< 0.0696 U	< 0.115 U	< 0.115 U	< 0.0696 U	< 0.0104 U	< 0.0696 U
GNC2-JD09C	0	NORM	1/8/2010	< 0.105 U	< 0.0701 U	< 0.0701 U	< 0.0701 U	< 0.0701 U	< 0.116 U	< 0.116 U	< 0.0701 U	< 0.0105 U	< 0.0701 U

All units in mg/kg.

-- = no sample data.

= Data not included in risk assessment. Sample location excavated and data replaced with post-excavation data.

TABLE B-9
SOIL ALDEHYDES AND SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Semi-Volatile Organic Compounds (SVOCs)									
				Dichloromethyl ether	Diethyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Diphenyl disulfide	Diphenyl sulfide	Diphenyl sulfone	Diphenylamine	Fluoranthene
GNC1-BD19	0	NORM	1/28/2009	< 0.118 U	< 0.0713 U	< 0.0713 U	< 0.0357 U	< 0.0713 U	< 0.118 U	< 0.118 U	< 0.118 U	< 0.0713 U	< 0.0107 U
GNC1-BD19	10	NORM	1/28/2009	< 0.12 U	< 0.0726 U	< 0.0726 U	< 0.0363 U	< 0.0726 U	< 0.12 U	< 0.12 U	< 0.12 U	< 0.0726 U	< 0.0109 U
GNC1-BD20	0	NORM	1/30/2009	< 0.114 U	< 0.0688 U	< 0.0688 U	< 0.0344 U	< 0.0688 U	< 0.114 U	< 0.114 U	< 0.114 U	< 0.0688 U	< 0.0103 U
GNC1-BD20	10	NORM	1/30/2009	< 0.118 U	< 0.0716 U	< 0.0716 U	< 0.0358 U	< 0.0716 U	< 0.118 U	< 0.118 U	< 0.118 U	< 0.0716 U	< 0.0107 U
GNC1-BD21	0	NORM	1/30/2009	< 0.112 U	< 0.068 U	< 0.068 U	< 0.034 U	< 0.068 U	< 0.112 U	< 0.112 U	< 0.112 U	< 0.068 U	< 0.0102 U
GNC1-BD21	10	NORM	1/30/2009	< 0.117 U	< 0.071 U	< 0.071 U	< 0.0355 U	< 0.071 U	< 0.117 U	< 0.117 U	< 0.117 U	< 0.071 U	< 0.0107 U
GNC1-BE19	0	NORM	2/5/2009	< 0.121 U	< 0.0733 U	< 0.0733 U	< 0.0366 U	< 0.0733 U	< 0.121 U	< 0.121 U	< 0.121 UJ	< 0.0733 U	< 0.011 U
GNC1-BE19	10	NORM	2/5/2009	< 0.117 U	< 0.0708 U	< 0.0708 U	< 0.0354 U	< 0.0708 U	< 0.117 U	< 0.117 U	< 0.117 UJ	< 0.0708 U	< 0.0106 U
GNC1-BE20	0	NORM	2/6/2009	< 0.114 U	< 0.0692 U	< 0.0692 U	0.115 J	< 0.0692 U	< 0.114 U	< 0.114 U	< 0.114 U	< 0.0692 U	0.0426
GNC1-BE20	0	FD	2/6/2009	< 0.114 U	< 0.0689 U	< 0.0689 U	< 0.0345 U	< 0.0689 U	< 0.114 U	< 0.114 U	< 0.114 U	< 0.0689 U	0.0511
GNC1-BE20	10	NORM	2/6/2009	< 0.118 UJ	< 0.0718 UJ	< 0.0718 UJ	< 0.0359 UJ	< 0.0718 U	< 0.118 UJ	< 0.118 UJ	< 0.118 UJ	< 0.0718 UJ	0.0127 J
GNC1-BE21	0	NORM	2/6/2009	< 0.116 U	< 0.07 U	< 0.07 U	< 0.035 U	< 0.07 U	< 0.116 U	< 0.116 U	< 0.116 U	< 0.07 U	< 0.0105 U
GNC1-BE21	10	NORM	2/6/2009	--	--	--	--	--	--	--	--	--	--
GNC1-BE22	0	NORM	2/5/2009	< 0.115 U	< 0.0697 U	< 0.0697 U	< 0.0349 U	< 0.0697 U	< 0.115 U	< 0.115 U	< 0.115 U	< 0.0697 U	0.127
GNC1-BE22	10	NORM	2/5/2009	< 0.115 U	< 0.0699 U	< 0.0699 U	< 0.035 U	< 0.0699 U	< 0.115 U	< 0.115 U	< 0.115 U	< 0.0699 U	< 0.0105 U
GNC1-BF19	0	NORM	2/5/2009	< 0.115 U	< 0.0695 U	< 0.0695 U	< 0.0348 U	< 0.0695 U	< 0.115 U	< 0.115 U	< 0.115 UJ	< 0.0695 U	< 0.0104 U
GNC1-BF19	11	NORM	2/5/2009	< 0.117 U	< 0.0708 U	< 0.0708 U	< 0.0354 U	< 0.0708 U	< 0.117 U	< 0.117 U	< 0.117 UJ	< 0.0708 U	< 0.0106 U
GNC1-BF20	0	NORM	2/6/2009	< 0.113 U	< 0.0687 U	< 0.0687 U	< 0.0344 U	< 0.0687 U	< 0.113 U	< 0.113 U	< 0.113 U	< 0.0687 U	< 0.0103 U
GNC1-BF20	10	NORM	2/6/2009	< 0.116 U	< 0.0704 U	< 0.0704 U	< 0.0352 U	< 0.0704 U	< 0.116 U	< 0.116 U	< 0.116 U	< 0.0704 U	< 0.0106 U
GNC1-BF21	0	NORM	2/5/2009	< 0.114 U	< 0.0691 U	< 0.0691 U	< 0.0345 U	< 0.0691 U	< 0.114 U	< 0.114 U	< 0.114 U	< 0.0691 U	< 0.0104 U
GNC1-BF21	10	NORM	2/5/2009	< 0.116 U	< 0.0703 U	< 0.0703 U	< 0.0352 U	< 0.0703 U	< 0.116 U	< 0.116 U	< 0.116 U	< 0.0703 U	< 0.0105 U
GNC1-BF22	0	NORM	2/6/2009	< 0.114 U	< 0.0693 U	< 0.0693 U	< 0.0346 U	< 0.0693 U	< 0.114 U	< 0.114 U	< 0.114 U	< 0.0693 U	< 0.0104 U
GNC1-BF22	10	NORM	2/6/2009	< 0.116 U	< 0.07 U	< 0.07 U	< 0.035 U	< 0.07 U	< 0.116 U	< 0.116 U	< 0.116 U	< 0.07 U	< 0.0105 U
GNC1-BG19	0	NORM	2/5/2009	< 0.116 U	< 0.0705 U	< 0.0705 U	< 0.0352 U	< 0.0705 U	< 0.116 U	< 0.116 U	< 0.116 UJ	< 0.0705 U	< 0.0106 U
GNC1-BG19	10	NORM	2/5/2009	< 0.118 U	< 0.0714 U	< 0.0714 U	< 0.0357 U	< 0.0714 U	< 0.118 U	< 0.118 U	< 0.118 UJ	< 0.0714 U	< 0.0107 U
GNC1-BG20	0	NORM	2/5/2009	< 0.113 U	< 0.0688 U	< 0.0688 U	< 0.0344 U	< 0.0688 U	< 0.113 U	< 0.113 U	< 0.113 U	< 0.0688 U	< 0.0103 U
GNC1-BG20	0	FD	2/5/2009	< 0.115 U	< 0.0695 U	< 0.0695 U	< 0.0347 U	< 0.0695 U	< 0.115 U	< 0.115 U	< 0.115 UJ	< 0.0695 U	< 0.0104 U
GNC1-BG20	10	NORM	2/5/2009	< 0.116 U	< 0.0704 U	< 0.0704 U	< 0.0352 U	< 0.0704 U	< 0.116 U	< 0.116 U	< 0.116 UJ	< 0.0704 U	< 0.0106 U
GNC1-BG21	0	NORM	2/5/2009	< 0.115 U	< 0.0698 U	< 0.0698 U	< 0.0349 U	< 0.0698 U	< 0.115 U	< 0.115 U	< 0.115 UJ	< 0.0698 U	< 0.0105 U
GNC1-BG21	10	NORM	2/5/2009	< 0.116 U	< 0.0704 U	< 0.0704 U	< 0.0352 U	< 0.0704 U	< 0.116 U	< 0.116 U	< 0.116 UJ	< 0.0704 U	< 0.0106 U
GNC1-BG22	0	NORM	2/5/2009	< 0.115 U	< 0.0695 U	< 0.0695 U	< 0.0348 U	< 0.0695 U	< 0.115 U	< 0.115 U	< 0.115 UJ	< 0.0695 U	< 0.0104 U
GNC1-BG22	10	NORM	2/5/2009	< 0.115 U	< 0.0698 U	< 0.0698 U	< 0.0349 U	< 0.0698 U	< 0.115 U	< 0.115 U	< 0.115 U	< 0.0698 U	< 0.0105 U
GNC1-JD06	0	NORM	2/13/2009	< 0.117 U	< 0.0711 U	< 0.0711 U	< 0.0355 U	< 0.0711 U	< 0.117 U	< 0.117 U	< 0.117 U	< 0.0711 U	< 0.0107 U
GNC1-JD06	10	NORM	2/17/2009	< 0.118 U	< 0.0716 U	< 0.0716 U	< 0.0358 U	< 0.0716 U	< 0.118 U	< 0.118 U	< 0.118 U	< 0.0716 U	< 0.0107 U
GNC1-JD07	0	NORM	1/30/2009	< 0.115 U	< 0.0695 U	< 0.0695 U	< 0.0347 U	< 0.0695 U	< 0.115 U	< 0.115 U	< 0.115 U	< 0.0695 U	< 0.0104 U

TABLE B-9
SOIL ALDEHYDES AND SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Semi-Volatile Organic Compounds (SVOCs)									
				Dichloromethyl ether	Diethyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Diphenyl disulfide	Diphenyl sulfide	Diphenyl sulfone	Diphenylamine	Fluoranthene
GNC1-JD07	10	NORM	1/30/2009	< 0.118 U	< 0.0715 U	< 0.0715 U	< 0.0358 U	< 0.0715 U	< 0.118 U	< 0.118 U	< 0.118 U	< 0.0715 U	< 0.0107 U
GNC1-JD08	0	NORM	1/30/2009	< 0.112 U	< 0.0677 U	< 0.0677 U	< 0.0338 U	< 0.0677 U	< 0.112 U	< 0.112 U	< 0.112 U	< 0.0677 U	< 0.0102 U
GNC1-JD08	10	NORM	1/30/2009	< 0.116 U	< 0.0706 U	< 0.0706 U	< 0.0353 U	< 0.0706 U	< 0.116 U	< 0.116 U	< 0.116 U	< 0.0706 U	< 0.0106 U
GNC1-JD09	0	NORM	1/30/2009	< 0.115 U	< 0.0698 U	< 0.0698 U	< 0.0349 U	< 0.0698 U	< 0.115 U	< 0.115 U	< 0.115 U	< 0.0698 U	0.503 J
GNC1-JD09	0	FD	1/30/2009	< 0.115 U	< 0.0697 U	< 0.0697 U	0.0372 J	< 0.0697 U	< 0.115 U	< 0.115 U	< 0.115 U	< 0.0697 U	0.203 J
GNC1-JD09	10	NORM	1/30/2009	< 0.118 U	< 0.0713 U	< 0.0713 U	< 0.0356 U	< 0.0713 U	< 0.118 U	< 0.118 U	< 0.118 U	< 0.0713 U	< 0.0107 U
GNC1-JD10	0	NORM	2/9/2009	< 0.118 U	< 0.0714 U	< 0.0714 U	< 0.0357 U	< 0.0714 U	< 0.118 U	< 0.118 U	< 0.118 U	< 0.0714 U	< 0.0107 U
GNC1-JD10	11	NORM	2/9/2009	< 0.117 U	< 0.0708 U	< 0.0708 U	< 0.0354 U	< 0.0708 U	< 0.117 U	< 0.117 U	< 0.117 U	< 0.0708 U	< 0.0106 U
GNC1-JD11	0	NORM	2/9/2009	< 0.116 U	< 0.0702 U	< 0.0702 U	< 0.0351 U	< 0.0702 U	< 0.116 U	< 0.116 U	< 0.116 U	< 0.0702 U	0.0527
GNC1-JD11	11	NORM	2/9/2009	< 0.117 U	< 0.0711 U	< 0.0711 U	< 0.0355 U	< 0.0711 U	< 0.117 U	< 0.117 U	< 0.117 U	< 0.0711 U	< 0.0107 U
GNC1-JS09	0	NORM	1/30/2009	< 0.114 U	< 0.069 U	< 0.069 U	< 0.0345 U	< 0.069 U	< 0.114 U	< 0.114 U	< 0.114 U	< 0.069 U	< 0.0103 U
GNC1-JS09	0	FD	1/30/2009	< 0.115 U	< 0.0696 U	< 0.0696 U	< 0.0348 U	< 0.0696 U	< 0.115 U	< 0.115 U	< 0.115 U	< 0.0696 U	< 0.0104 U
GNC1-JS09	10	NORM	1/30/2009	< 0.12 U	< 0.073 U	< 0.073 U	< 0.0365 U	< 0.073 U	< 0.12 U	< 0.12 U	< 0.12 U	< 0.073 U	< 0.0109 U
GNC1-JS10	0	NORM	1/30/2009	< 0.114 U	< 0.0688 U	< 0.0688 U	< 0.0344 U	< 0.0688 U	< 0.114 U	< 0.114 U	< 0.114 U	< 0.0688 U	< 0.0103 U
GNC1-JS10	10	NORM	1/30/2009	< 0.116 U	< 0.0705 U	< 0.0705 U	< 0.0352 U	< 0.0705 U	< 0.116 U	< 0.116 U	< 0.116 U	< 0.0705 U	< 0.0106 U
GNC1-JS11	0	NORM	1/29/2009	< 0.114 U	< 0.0694 U	< 0.0694 U	< 0.0347 U	< 0.0694 U	< 0.114 U	< 0.114 U	< 0.114 U	< 0.0694 U	< 0.0104 U
GNC1-JS11	0	FD	1/29/2009	< 0.115 U	< 0.0696 U	< 0.0696 U	< 0.0348 U	< 0.0696 U	< 0.115 U	< 0.115 U	< 0.115 U	< 0.0696 U	< 0.0104 U
GNC1-JS11	10	NORM	1/29/2009	< 0.115 U	< 0.0696 U	< 0.0696 U	< 0.0348 U	< 0.0696 U	< 0.115 U	< 0.115 U	< 0.115 U	< 0.0696 U	< 0.0104 U
GNC2-JD09C	0	NORM	1/8/2010	< 0.116 U	< 0.0701 U	< 0.0701 U	< 0.035 U	< 0.0701 U	< 0.116 U	< 0.116 U	< 0.116 U	< 0.0701 U	0.0138 J

All units in mg/kg.

-- = no sample data.

= Data not included in risk assessment. Sample location excavated and data replaced with post-excavation data.

TABLE B-9
SOIL ALDEHYDES AND SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

				Semi-Volatile Organic Compounds (SVOCs)									
Sample ID	**Depth (ft bgs)**	**Sample Type**	**Sample Date**	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclo-pentadiene	Hexachloroethane	Hydroxymethyl phthalimide	Isophorone	m,p-Cresols	Naphthalene	Nitrobenzene
GNC1-BD19	0	NORM	1/28/2009	< 0.0107 U	< 0.0713 U	< 0.0713 U	< 0.0713 UJ	< 0.0713 U	< 0.118 U	< 0.0713 U	< 0.143 U	< 0.0107 U	< 0.0713 U
GNC1-BD19	10	NORM	1/28/2009	< 0.0109 U	< 0.0726 U	< 0.0726 U	< 0.0726 UJ	< 0.0726 U	< 0.12 U	< 0.0726 U	< 0.145 U	< 0.0109 U	< 0.0726 U
GNC1-BD20	0	NORM	1/30/2009	< 0.0103 U	< 0.0688 U	< 0.0688 U	< 0.0688 U	< 0.0688 U	< 0.114 U	< 0.0688 U	< 0.138 U	< 0.0103 U	< 0.0688 U
GNC1-BD20	10	NORM	1/30/2009	< 0.0107 U	< 0.0716 U	< 0.0716 U	< 0.0716 U	< 0.0716 U	< 0.118 U	< 0.0716 U	< 0.143 U	< 0.0107 U	< 0.0716 U
GNC1-BD21	0	NORM	1/30/2009	< 0.0102 U	< 0.068 U	< 0.068 U	< 0.068 U	< 0.068 U	< 0.112 U	< 0.068 U	< 0.136 U	< 0.0102 U	< 0.068 U
GNC1-BD21	10	NORM	1/30/2009	< 0.0107 U	< 0.071 U	< 0.071 U	< 0.071 U	< 0.071 U	< 0.117 U	< 0.071 U	< 0.142 U	< 0.0107 U	< 0.071 U
GNC1-BE19	0	NORM	2/5/2009	< 0.011 U	< 0.0733 U	< 0.0733 U	< 0.0733 U	< 0.0733 U	< 0.121 U	< 0.0733 U	< 0.147 U	< 0.011 U	< 0.0733 U
GNC1-BE19	10	NORM	2/5/2009	< 0.0106 U	< 0.0708 U	< 0.0708 U	< 0.0708 U	< 0.0708 U	< 0.117 U	< 0.0708 U	< 0.142 U	< 0.0106 U	< 0.0708 U
GNC1-BE20	0	NORM	2/6/2009	< 0.0104 U	< 0.0692 U	< 0.0692 U	< 0.0692 U	< 0.0692 U	< 0.114 U	< 0.0692 U	< 0.138 U	< 0.0104 U	< 0.0692 U
GNC1-BE20	0	FD	2/6/2009	< 0.0103 U	< 0.0689 U	< 0.0689 U	< 0.0689 U	< 0.0689 U	< 0.114 U	< 0.0689 U	< 0.138 U	< 0.0103 U	< 0.0689 U
GNC1-BE20	10	NORM	2/6/2009	< 0.0108 UJ	< 0.0718 UJ	< 0.0718 UJ	< 0.0718 UJ	< 0.0718 UJ	< 0.118 UJ	< 0.0718 UJ	< 0.144 UJ	< 0.0108 UJ	< 0.0718 UJ
GNC1-BE21	0	NORM	2/6/2009	< 0.0105 U	< 0.07 U	< 0.07 U	< 0.07 U	< 0.07 U	< 0.116 U	< 0.07 U	< 0.14 U	< 0.0105 U	< 0.07 U
GNC1-BE21	10	NORM	2/6/2009	--	--	--	--	--	--	--	--	--	--
GNC1-BE22	0	NORM	2/5/2009	< 0.0105 U	< 0.0697 U	< 0.0697 U	< 0.0697 U	< 0.0697 U	< 0.115 U	< 0.0697 U	< 0.139 U	< 0.0105 U	< 0.0697 U
GNC1-BE22	10	NORM	2/5/2009	< 0.0105 U	< 0.0699 U	< 0.0699 U	< 0.0699 U	< 0.0699 U	< 0.115 U	< 0.0699 U	< 0.14 U	< 0.0105 U	< 0.0699 U
GNC1-BF19	0	NORM	2/5/2009	< 0.0104 U	< 0.0695 U	< 0.0695 U	< 0.0695 U	< 0.0695 U	< 0.115 U	< 0.0695 U	< 0.139 U	< 0.0104 U	< 0.0695 U
GNC1-BF19	11	NORM	2/5/2009	< 0.0106 U	< 0.0708 U	< 0.0708 U	< 0.0708 U	< 0.0708 U	< 0.117 U	< 0.0708 U	< 0.142 U	< 0.0106 U	< 0.0708 U
GNC1-BF20	0	NORM	2/6/2009	< 0.0103 U	< 0.0687 U	< 0.0687 U	< 0.0687 U	< 0.0687 U	< 0.113 U	< 0.0687 U	< 0.137 U	< 0.0103 U	< 0.0687 U
GNC1-BF20	10	NORM	2/6/2009	< 0.0106 U	< 0.0704 U	< 0.0704 U	< 0.0704 U	< 0.0704 U	< 0.116 U	< 0.0704 U	< 0.141 U	< 0.0106 U	< 0.0704 U
GNC1-BF21	0	NORM	2/5/2009	< 0.0104 U	< 0.0691 U	< 0.0691 U	< 0.0691 U	< 0.0691 U	< 0.114 U	< 0.0691 U	< 0.138 U	< 0.0104 U	< 0.0691 U
GNC1-BF21	10	NORM	2/5/2009	< 0.0105 U	< 0.0703 U	< 0.0703 U	< 0.0703 U	< 0.0703 U	< 0.116 U	< 0.0703 U	< 0.141 U	< 0.0105 U	< 0.0703 U
GNC1-BF22	0	NORM	2/6/2009	< 0.0104 U	< 0.0693 U	< 0.0693 U	< 0.0693 U	< 0.0693 U	< 0.114 U	< 0.0693 U	< 0.139 U	< 0.0104 U	< 0.0693 U
GNC1-BF22	10	NORM	2/6/2009	< 0.0105 U	< 0.07 U	< 0.07 U	< 0.07 U	< 0.07 U	< 0.116 U	< 0.07 U	< 0.14 U	< 0.0105 U	< 0.07 U
GNC1-BG19	0	NORM	2/5/2009	< 0.0106 U	< 0.0705 U	< 0.0705 U	< 0.0705 U	< 0.0705 U	< 0.116 U	< 0.0705 U	< 0.141 U	< 0.0106 U	< 0.0705 U
GNC1-BG19	10	NORM	2/5/2009	< 0.0107 U	< 0.0714 U	< 0.0714 U	< 0.0714 U	< 0.0714 U	< 0.118 U	< 0.0714 U	< 0.143 U	< 0.0107 U	< 0.0714 U
GNC1-BG20	0	NORM	2/5/2009	< 0.0103 U	< 0.0688 U	< 0.0688 U	< 0.0688 U	< 0.0688 U	< 0.113 U	< 0.0688 U	< 0.138 U	< 0.0103 U	< 0.0688 U
GNC1-BG20	0	FD	2/5/2009	< 0.0104 U	< 0.0695 U	< 0.0695 U	< 0.0695 U	< 0.0695 U	< 0.115 U	< 0.0695 U	< 0.139 U	< 0.0104 U	< 0.0695 U
GNC1-BG20	10	NORM	2/5/2009	< 0.0106 U	< 0.0704 U	< 0.0704 U	< 0.0704 U	< 0.0704 U	< 0.116 U	< 0.0704 U	< 0.141 U	< 0.0106 U	< 0.0704 U
GNC1-BG21	0	NORM	2/5/2009	< 0.0105 U	< 0.0698 U	< 0.0698 U	< 0.0698 U	< 0.0698 U	< 0.115 U	< 0.0698 U	< 0.14 U	< 0.0105 U	< 0.0698 U
GNC1-BG21	10	NORM	2/5/2009	< 0.0106 U	< 0.0704 U	< 0.0704 U	< 0.0704 U	< 0.0704 U	< 0.116 U	< 0.0704 U	< 0.141 U	< 0.0106 U	< 0.0704 U
GNC1-BG22	0	NORM	2/5/2009	< 0.0104 U	< 0.0695 U	< 0.0695 U	< 0.0695 U	< 0.0695 U	< 0.115 U	< 0.0695 U	< 0.139 U	< 0.0104 U	< 0.0695 U
GNC1-BG22	10	NORM	2/5/2009	< 0.0105 U	< 0.0698 U	< 0.0698 U	< 0.0698 U	< 0.0698 U	< 0.115 U	< 0.0698 U	< 0.14 U	< 0.0105 U	< 0.0698 U
GNC1-JD06	0	NORM	2/13/2009	< 0.0107 U	< 0.0711 U	< 0.0711 U	< 0.0711 U	< 0.0711 U	< 0.117 U	< 0.0711 U	< 0.142 U	< 0.0107 U	< 0.0711 U
GNC1-JD06	10	NORM	2/17/2009	< 0.0107 U	< 0.0716 U	< 0.0716 U	< 0.0716 U	< 0.0716 U	< 0.118 U	< 0.0716 U	< 0.143 U	< 0.0107 U	< 0.0716 U
GNC1-JD07	0	NORM	1/30/2009	< 0.0104 U	< 0.0695 U	< 0.0695 U	< 0.0695 U	< 0.0695 U	< 0.115 U	< 0.0695 U	< 0.139 U	< 0.0104 U	< 0.0695 U

TABLE B-9
SOIL ALDEHYDES AND SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Semi-Volatile Organic Compounds (SVOCs)									
				Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclo-pentadiene	Hexachloroethane	Hydroxymethyl phthalimide	Isophorone	m,p-Cresols	Naphthalene	Nitrobenzene
GNC1-JD07	10	NORM	1/30/2009	< 0.0107 U	< 0.0715 U	< 0.0715 U	< 0.0715 U	< 0.0715 U	< 0.118 U	< 0.0715 U	< 0.143 U	< 0.0107 U	< 0.0715 U
GNC1-JD08	0	NORM	1/30/2009	< 0.0102 U	< 0.0677 U	< 0.0677 U	< 0.0677 U	< 0.0677 U	< 0.112 U	< 0.0677 U	< 0.135 U	< 0.0102 U	< 0.0677 U
GNC1-JD08	10	NORM	1/30/2009	< 0.0106 U	< 0.0706 U	< 0.0706 U	< 0.0706 U	< 0.0706 U	< 0.116 U	< 0.0706 U	< 0.141 U	< 0.0106 U	< 0.0706 U
GNC1-JD09	0	NORM	1/30/2009	< 0.0105 U	< 0.0698 U	< 0.0698 U	< 0.0698 U	< 0.0698 U	< 0.115 U	< 0.0698 U	< 0.14 U	< 0.0105 U	< 0.0698 U
GNC1-JD09	0	FD	1/30/2009	< 0.0105 U	< 0.0697 U	< 0.0697 U	< 0.0697 U	< 0.0697 U	< 0.115 U	< 0.0697 U	< 0.139 U	< 0.0105 U	< 0.0697 U
GNC1-JD09	10	NORM	1/30/2009	< 0.0107 U	< 0.0713 U	< 0.0713 U	< 0.0713 U	< 0.0713 U	< 0.118 U	< 0.0713 U	< 0.143 U	< 0.0107 U	< 0.0713 U
GNC1-JD10	0	NORM	2/9/2009	< 0.0107 U	< 0.0714 U	< 0.0714 U	< 0.0714 U	< 0.0714 U	< 0.118 U	< 0.0714 U	< 0.143 U	< 0.0107 U	< 0.0714 U
GNC1-JD10	11	NORM	2/9/2009	< 0.0106 U	< 0.0708 U	< 0.0708 U	< 0.0708 U	< 0.0708 U	< 0.117 U	< 0.0708 U	< 0.142 U	< 0.0106 U	< 0.0708 U
GNC1-JD11	0	NORM	2/9/2009	< 0.0105 U	< 0.0702 U	< 0.0702 U	< 0.0702 U	< 0.0702 U	< 0.116 U	< 0.0702 U	< 0.14 U	< 0.0105 U	< 0.0702 U
GNC1-JD11	11	NORM	2/9/2009	< 0.0107 U	< 0.0711 U	< 0.0711 U	< 0.0711 U	< 0.0711 U	< 0.117 U	< 0.0711 U	< 0.142 U	< 0.0107 U	< 0.0711 U
GNC1-JS09	0	NORM	1/30/2009	< 0.0103 U	< 0.069 U	< 0.069 U	< 0.069 U	< 0.069 U	< 0.114 U	< 0.069 U	< 0.138 U	< 0.0103 U	< 0.069 U
GNC1-JS09	0	FD	1/30/2009	< 0.0104 U	< 0.0696 U	< 0.0696 U	< 0.0696 U	< 0.0696 U	< 0.115 U	< 0.0696 U	< 0.139 U	< 0.0104 U	< 0.0696 U
GNC1-JS09	10	NORM	1/30/2009	< 0.0109 U	< 0.073 U	< 0.073 U	< 0.073 U	< 0.073 U	< 0.12 U	< 0.073 U	< 0.146 U	< 0.0109 U	< 0.073 U
GNC1-JS10	0	NORM	1/30/2009	< 0.0103 U	< 0.0688 U	< 0.0688 U	< 0.0688 U	< 0.0688 U	< 0.114 U	< 0.0688 U	< 0.138 U	< 0.0103 U	< 0.0688 U
GNC1-JS10	10	NORM	1/30/2009	< 0.0106 U	< 0.0705 U	< 0.0705 U	< 0.0705 U	< 0.0705 U	< 0.116 U	< 0.0705 U	< 0.141 U	< 0.0106 U	< 0.0705 U
GNC1-JS11	0	NORM	1/29/2009	< 0.0104 U	< 0.0694 U	< 0.0694 U	< 0.0694 U	< 0.0694 U	< 0.114 U	< 0.0694 U	< 0.139 U	< 0.0104 U	< 0.0694 U
GNC1-JS11	0	FD	1/29/2009	< 0.0104 U	< 0.0696 U	< 0.0696 U	< 0.0696 U	< 0.0696 U	< 0.115 U	< 0.0696 U	< 0.139 U	< 0.0104 U	< 0.0696 U
GNC1-JS11	10	NORM	1/29/2009	< 0.0104 U	< 0.0696 U	< 0.0696 U	< 0.0696 U	< 0.0696 U	< 0.115 U	< 0.0696 U	< 0.139 U	< 0.0104 U	< 0.0696 U
GNC2-JD09C	0	NORM	1/8/2010	< 0.0105 U	< 0.0701 U	< 0.0701 U	< 0.0701 UJ	< 0.0701 U	< 0.116 U	< 0.0701 U	< 0.14 U	< 0.0105 U	< 0.0701 U

All units in mg/kg.

-- = no sample data.

= Data not included in risk assessment. Sample location excavated and data replaced with post-excavation data.

TABLE B-9
SOIL ALDEHYDES AND SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Semi-Volatile Organic Compounds (SVOCs)									
				N-nitrosodi-n-propyl-amine	o-Cresol	Octachlorostyrene	p-Chloroaniline	p-Chlorobenzenethiol	Pentachlorobenzene	Pentachlorophenol	Phenol	Phthalic acid	Pyridine
GNC1-BD19	0	NORM	1/28/2009	< 0.0713 U	< 0.0713 U	< 0.118 U	< 0.0713 U	< 0.118 U	< 0.0713 U	< 0.0713 U	< 0.0713 U	< 0.118 U	< 0.0713 U
GNC1-BD19	10	NORM	1/28/2009	< 0.0726 U	< 0.0726 U	< 0.12 U	< 0.0726 U	< 0.12 U	< 0.0726 U	< 0.0726 U	< 0.0726 U	< 0.12 U	< 0.0726 U
GNC1-BD20	0	NORM	1/30/2009	< 0.0688 U	< 0.0688 U	< 0.114 U	< 0.0688 U	< 0.114 U	< 0.0688 U	< 0.0688 U	< 0.0688 U	< 0.114 U	< 0.0688 U
GNC1-BD20	10	NORM	1/30/2009	< 0.0716 U	< 0.0716 U	< 0.118 U	< 0.0716 U	< 0.118 U	< 0.0716 U	< 0.0716 U	< 0.0716 U	< 0.118 U	< 0.0716 U
GNC1-BD21	0	NORM	1/30/2009	< 0.068 U	< 0.068 U	< 0.112 U	< 0.068 U	< 0.112 U	< 0.068 U	< 0.068 U	< 0.068 U	< 0.112 U	< 0.068 U
GNC1-BD21	10	NORM	1/30/2009	< 0.071 U	< 0.071 U	< 0.117 U	< 0.071 U	< 0.117 U	< 0.071 U	< 0.071 U	< 0.071 U	< 0.117 U	< 0.071 U
GNC1-BE19	0	NORM	2/5/2009	< 0.0733 U	< 0.0733 U	< 0.121 U	< 0.0733 U	< 0.121 U	< 0.0733 U	< 0.0733 U	< 0.0733 U	< 0.121 U	< 0.0733 U
GNC1-BE19	10	NORM	2/5/2009	< 0.0708 U	< 0.0708 U	< 0.117 U	< 0.0708 U	< 0.117 U	< 0.0708 U	< 0.0708 U	< 0.0708 U	< 0.117 U	< 0.0708 U
GNC1-BE20	0	NORM	2/6/2009	< 0.0692 U	< 0.0692 U	< 0.114 U	< 0.0692 U	< 0.114 U	< 0.0692 U	< 0.0692 U	< 0.0692 U	0.387	< 0.0692 U
GNC1-BE20	0	FD	2/6/2009	< 0.0689 U	< 0.0689 U	< 0.114 U	< 0.0689 U	< 0.114 U	< 0.0689 U	< 0.0689 U	< 0.0689 U	< 0.114 U	< 0.0689 U
GNC1-BE20	10	NORM	2/6/2009	< 0.0718 UJ	< 0.0718 UJ	< 0.118 UJ	< 0.0718 UJ	< 0.118 UJ	< 0.0718 UJ	< 0.0718 UJ	< 0.0718 UJ	< 0.118 UJ	< 0.0718 UJ
GNC1-BE21	0	NORM	2/6/2009	< 0.07 U	< 0.07 U	< 0.116 U	< 0.07 U	< 0.116 U	< 0.07 U	< 0.07 U	< 0.07 U	< 0.116 U	< 0.07 U
GNC1-BE21	10	NORM	2/6/2009	--	--	--	--	--	--	--	--	--	--
GNC1-BE22	0	NORM	2/5/2009	< 0.0697 U	< 0.0697 U	< 0.115 U	< 0.0697 U	< 0.115 U	< 0.0697 U	< 0.0697 U	< 0.0697 U	< 0.115 UJ	< 0.0697 U
GNC1-BE22	10	NORM	2/5/2009	< 0.0699 U	< 0.0699 U	< 0.115 U	< 0.0699 U	< 0.115 U	< 0.0699 U	< 0.0699 U	< 0.0699 U	< 0.115 UJ	< 0.0699 U
GNC1-BF19	0	NORM	2/5/2009	< 0.0695 U	< 0.0695 U	< 0.115 U	< 0.0695 U	< 0.115 U	< 0.0695 U	< 0.0695 U	< 0.0695 U	< 0.115 U	< 0.0695 U
GNC1-BF19	11	NORM	2/5/2009	< 0.0708 U	< 0.0708 U	< 0.117 U	< 0.0708 U	< 0.117 U	< 0.0708 U	< 0.0708 U	< 0.0708 U	< 0.117 U	< 0.0708 U
GNC1-BF20	0	NORM	2/6/2009	< 0.0687 U	< 0.0687 U	< 0.113 U	< 0.0687 U	< 0.113 U	< 0.0687 U	< 0.0687 U	< 0.0687 U	< 0.113 U	< 0.0687 U
GNC1-BF20	10	NORM	2/6/2009	< 0.0704 U	< 0.0704 U	< 0.116 U	< 0.0704 U	< 0.116 U	< 0.0704 U	< 0.0704 U	< 0.0704 U	< 0.116 U	< 0.0704 U
GNC1-BF21	0	NORM	2/5/2009	< 0.0691 U	< 0.0691 U	< 0.114 U	< 0.0691 U	< 0.114 U	< 0.0691 U	< 0.0691 U	< 0.0691 U	< 0.114 UJ	< 0.0691 U
GNC1-BF21	10	NORM	2/5/2009	< 0.0703 U	< 0.0703 U	< 0.116 U	< 0.0703 U	< 0.116 U	< 0.0703 U	< 0.0703 U	< 0.0703 U	< 0.116 UJ	< 0.0703 U
GNC1-BF22	0	NORM	2/6/2009	< 0.0693 U	< 0.0693 U	< 0.114 U	< 0.0693 U	< 0.114 U	< 0.0693 U	< 0.0693 U	< 0.0693 U	< 0.114 U	< 0.0693 U
GNC1-BF22	10	NORM	2/6/2009	< 0.07 U	< 0.07 U	< 0.116 U	< 0.07 U	< 0.116 U	< 0.07 U	< 0.07 U	< 0.07 U	< 0.116 U	< 0.07 U
GNC1-BG19	0	NORM	2/5/2009	< 0.0705 U	< 0.0705 U	< 0.116 U	< 0.0705 U	< 0.116 U	< 0.0705 U	< 0.0705 U	< 0.0705 U	< 0.116 U	< 0.0705 U
GNC1-BG19	10	NORM	2/5/2009	< 0.0714 U	< 0.0714 U	< 0.118 U	< 0.0714 U	< 0.118 U	< 0.0714 U	< 0.0714 U	< 0.0714 U	< 0.118 U	< 0.0714 U
GNC1-BG20	0	NORM	2/5/2009	< 0.0688 U	< 0.0688 U	< 0.113 U	< 0.0688 U	< 0.113 U	< 0.0688 U	< 0.0688 U	< 0.0688 U	< 0.113 UJ	< 0.0688 U
GNC1-BG20	0	FD	2/5/2009	< 0.0695 U	< 0.0695 U	< 0.115 U	< 0.0695 U	< 0.115 U	< 0.0695 U	< 0.0695 U	< 0.0695 U	< 0.115 U	< 0.0695 U
GNC1-BG20	10	NORM	2/5/2009	< 0.0704 U	< 0.0704 U	< 0.116 U	< 0.0704 U	< 0.116 U	< 0.0704 U	< 0.0704 U	< 0.0704 U	< 0.116 U	< 0.0704 U
GNC1-BG21	0	NORM	2/5/2009	< 0.0698 U	< 0.0698 U	< 0.115 U	< 0.0698 U	< 0.115 U	< 0.0698 U	< 0.0698 U	< 0.0698 U	< 0.115 U	< 0.0698 U
GNC1-BG21	10	NORM	2/5/2009	< 0.0704 U	< 0.0704 U	< 0.116 U	< 0.0704 U	< 0.116 U	< 0.0704 U	< 0.0704 U	< 0.0704 U	< 0.116 U	< 0.0704 U
GNC1-BG22	0	NORM	2/5/2009	< 0.0695 U	< 0.0695 U	< 0.115 U	< 0.0695 U	< 0.115 U	< 0.0695 U	< 0.0695 U	< 0.0695 U	< 0.115 U	< 0.0695 U
GNC1-BG22	10	NORM	2/5/2009	< 0.0698 U	< 0.0698 U	< 0.115 U	< 0.0698 U	< 0.115 U	< 0.0698 U	< 0.0698 U	< 0.0698 U	< 0.115 UJ	< 0.0698 U
GNC1-JD06	0	NORM	2/13/2009	< 0.0711 U	< 0.0711 U	< 0.117 U	< 0.0711 U	< 0.117 U	< 0.0711 U	< 0.0711 U	< 0.0711 U	< 0.117 UJ	< 0.0711 U
GNC1-JD06	10	NORM	2/17/2009	< 0.0716 U	< 0.0716 U	< 0.118 U	< 0.0716 U	< 0.118 U	< 0.0716 U	< 0.0716 U	< 0.0716 U	< 0.118 U	< 0.0716 U
GNC1-JD07	0	NORM	1/30/2009	< 0.0695 U	< 0.0695 U	< 0.115 U	< 0.0695 U	< 0.115 U	< 0.0695 U	< 0.0695 U	< 0.0695 U	< 0.115 U	< 0.0695 U

TABLE B-9
SOIL ALDEHYDES AND SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Semi-Volatile Organic Compounds (SVOCs)									
				N-nitrosodi-n-propyl-amine	o-Cresol	Octachlorostyrene	p-Chloroaniline	p-Chlorobenzenethiol	Pentachlorobenzene	Pentachlorophenol	Phenol	Phthalic acid	Pyridine
GNC1-JD07	10	NORM	1/30/2009	< 0.0715 U	< 0.0715 U	< 0.118 U	< 0.0715 U	< 0.118 U	< 0.0715 U	< 0.0715 U	< 0.0715 U	< 0.118 U	< 0.0715 U
GNC1-JD08	0	NORM	1/30/2009	< 0.0677 U	< 0.0677 U	< 0.112 U	< 0.0677 U	< 0.112 U	< 0.0677 U	< 0.0677 U	< 0.0677 U	< 0.112 U	< 0.0677 U
GNC1-JD08	10	NORM	1/30/2009	< 0.0706 U	< 0.0706 U	< 0.116 U	< 0.0706 U	< 0.116 U	< 0.0706 U	< 0.0706 U	< 0.0706 U	< 0.116 U	< 0.0706 U
GNC1-JD09	0	NORM	1/30/2009	< 0.0698 U	< 0.0698 U	< 0.115 U	< 0.0698 U	< 0.115 U	< 0.0698 U	< 0.0698 U	< 0.0698 U	< 0.115 U	< 0.0698 U
GNC1-JD09	0	FD	1/30/2009	< 0.0697 U	< 0.0697 U	< 0.115 U	< 0.0697 U	< 0.115 U	< 0.0697 U	< 0.0697 U	< 0.0697 U	< 0.115 U	< 0.0697 U
GNC1-JD09	10	NORM	1/30/2009	< 0.0713 U	< 0.0713 U	< 0.118 U	< 0.0713 U	< 0.118 U	< 0.0713 U	< 0.0713 U	< 0.0713 U	< 0.118 U	< 0.0713 U
GNC1-JD10	0	NORM	2/9/2009	< 0.0714 U	< 0.0714 U	< 0.118 U	< 0.0714 U	< 0.118 U	< 0.0714 U	< 0.0714 U	< 0.0714 U	< 0.118 UJ	< 0.0714 U
GNC1-JD10	11	NORM	2/9/2009	< 0.0708 U	< 0.0708 U	< 0.117 U	< 0.0708 U	< 0.117 U	< 0.0708 U	< 0.0708 U	< 0.0708 U	< 0.117 UJ	< 0.0708 U
GNC1-JD11	0	NORM	2/9/2009	< 0.0702 U	< 0.0702 U	< 0.116 U	< 0.0702 U	< 0.116 U	< 0.0702 U	< 0.0702 U	< 0.0702 U	< 0.116 UJ	< 0.0702 U
GNC1-JD11	11	NORM	2/9/2009	< 0.0711 U	< 0.0711 U	< 0.117 U	< 0.0711 U	< 0.117 U	< 0.0711 U	< 0.0711 U	< 0.0711 U	< 0.117 UJ	< 0.0711 U
GNC1-JS09	0	NORM	1/30/2009	< 0.069 U	< 0.069 U	< 0.114 U	< 0.069 U	< 0.114 U	< 0.069 U	< 0.069 U	< 0.069 U	< 0.114 U	< 0.069 U
GNC1-JS09	0	FD	1/30/2009	< 0.0696 U	< 0.0696 U	< 0.115 U	< 0.0696 U	< 0.115 U	< 0.0696 U	< 0.0696 U	< 0.0696 U	< 0.115 U	< 0.0696 U
GNC1-JS09	10	NORM	1/30/2009	< 0.073 U	< 0.073 U	< 0.12 U	< 0.073 U	< 0.12 U	< 0.073 U	< 0.073 U	< 0.073 U	< 0.12 U	< 0.073 U
GNC1-JS10	0	NORM	1/30/2009	< 0.0688 U	< 0.0688 U	< 0.114 U	< 0.0688 U	< 0.114 U	< 0.0688 U	< 0.0688 U	< 0.0688 U	< 0.114 U	< 0.0688 U
GNC1-JS10	10	NORM	1/30/2009	< 0.0705 U	< 0.0705 U	< 0.116 U	< 0.0705 U	< 0.116 U	< 0.0705 U	< 0.0705 U	< 0.0705 U	< 0.116 U	< 0.0705 U
GNC1-JS11	0	NORM	1/29/2009	< 0.0694 U	< 0.0694 U	< 0.114 UJ	< 0.0694 U	< 0.114 U	< 0.0694 U	< 0.0694 U	< 0.0694 U	< 0.114 U	< 0.0694 U
GNC1-JS11	0	FD	1/29/2009	< 0.0696 U	< 0.0696 U	< 0.115 UJ	< 0.0696 U	< 0.115 U	< 0.0696 U	< 0.0696 U	< 0.0696 U	< 0.115 U	< 0.0696 U
GNC1-JS11	10	NORM	1/29/2009	< 0.0696 U	< 0.0696 U	< 0.115 UJ	< 0.0696 U	< 0.115 U	< 0.0696 U	< 0.0696 U	< 0.0696 U	< 0.115 U	< 0.0696 U
GNC2-JD09C	0	NORM	1/8/2010	< 0.0701 U	< 0.0701 U	< 0.116 U	< 0.0701 U	< 0.116 U	< 0.0701 U	< 0.0701 U	< 0.0701 U	< 0.116 UJ	< 0.0701 U

All units in mg/kg.

-- = no sample data.

= Data not included in risk assessment. Sample location excavated and data replaced with post-excavation data.

TABLE B-10
SOIL VOLATILE ORGANIC COMPOUNDS (VOCS) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	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-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dichlorobenzene
GNC1-BD19	0	NORM	1/28/2009	< 0.0002 U	< 0.00012 U	< 0.000086 U	< 0.000074 U	< 0.000077 U	< 0.00013 U	< 0.000096 U	< 0.00043 U	< 0.00028 U	< 0.00036 U	< 0.0003 U	< 0.00013 U
GNC1-BD19	10	NORM	1/28/2009	< 0.00019 U	< 0.00011 U	< 0.000083 U	< 0.000071 U	< 0.000075 U	< 0.00013 U	< 0.000093 U	< 0.00041 U	< 0.00027 U	< 0.00035 U	< 0.00023 U	< 0.00013 U
GNC1-BD20	0	NORM	1/30/2009	< 0.00018 U	< 0.00011 U	< 0.000079 U	< 0.000068 U	< 0.000071 U	< 0.00012 U	< 0.000088 U	< 0.00039 U	< 0.00025 U	< 0.00033 U	< 0.00055 U	< 0.00012 U
GNC1-BD20	10	NORM	1/30/2009	< 0.00019 U	< 0.00011 U	< 0.000082 U	< 0.00007 U	< 0.000074 U	< 0.00013 U	< 0.000091 U	< 0.00041 U	< 0.00026 U	< 0.00035 U	< 0.00048 U	< 0.00013 U
GNC1-BD21	0	NORM	1/30/2009	< 0.00019 U	< 0.00011 U	< 0.000082 U	< 0.000071 U	< 0.000074 U	< 0.00013 U	< 0.000092 U	< 0.00041 U	< 0.00026 U	< 0.00035 U	< 0.00057 U	< 0.00013 U
GNC1-BD21	10	NORM	1/30/2009	< 0.00019 U	< 0.00011 U	< 0.000082 U	< 0.00007 U	< 0.000073 U	< 0.00013 U	< 0.000091 U	< 0.00041 U	< 0.00026 U	< 0.00035 U	< 0.0006 U	< 0.00013 U
GNC1-BE19	0	NORM	2/5/2009	< 0.00018 U	< 0.00011 U	< 0.000081 U	< 0.000069 U	< 0.000073 U	< 0.00012 U	< 0.00009 U	< 0.0004 UJ	< 0.00026 UJ	< 0.00034 UJ	0.0011 J	< 0.00013 UJ
GNC1-BE19	10	NORM	2/5/2009	< 0.00019 U	< 0.00011 U	< 0.000083 U	< 0.000071 U	< 0.000074 U	< 0.00013 U	< 0.000092 U	< 0.00041 U	< 0.00027 U	< 0.00035 U	< 0.00064 U	< 0.00013 U
GNC1-BE20	0	NORM	2/6/2009	< 0.00019 U	< 0.00011 U	< 0.000082 U	< 0.00007 U	< 0.000073 U	< 0.00013 U	< 0.000091 U	< 0.00041 UJ	< 0.00026 UJ	< 0.00035 UJ	0.0008 J	< 0.00013 UJ
GNC1-BE20	0	FD	2/6/2009	< 0.00019 U	< 0.00011 U	< 0.000082 U	< 0.00007 U	< 0.000073 U	< 0.00013 U	< 0.000091 U	< 0.00041 UJ	< 0.00026 UJ	< 0.00035 UJ	0.0017 J	< 0.00013 UJ
GNC1-BE20	10	NORM	2/6/2009	< 0.00019 U	< 0.00011 U	< 0.000085 U	< 0.000073 U	< 0.000077 U	< 0.00013 U	< 0.000095 U	< 0.00042 U	< 0.00027 U	< 0.00036 U	0.00072 J	< 0.00013 U
GNC1-BE21	0	NORM	2/6/2009	< 0.00019 U	< 0.00011 U	< 0.000082 U	< 0.000071 U	< 0.000074 U	< 0.00013 U	< 0.000092 U	< 0.00041 U	< 0.00026 U	< 0.00035 U	0.00069 J	< 0.00013 U
GNC1-BE21	10	NORM	2/6/2009	< 0.00019 U	< 0.00011 U	< 0.000084 U	< 0.000072 U	< 0.000075 U	< 0.00013 U	< 0.000093 U	< 0.00042 U	< 0.00027 U	< 0.00035 U	0.0007 J	< 0.00013 U
GNC1-BE22	0	NORM	2/5/2009	< 0.00018 U	< 0.00011 U	< 0.000081 U	< 0.00007 U	< 0.000073 U	< 0.00012 U	< 0.00009 U	< 0.0004 UJ	< 0.00026 UJ	< 0.00034 UJ	< 0.00059 UJ	< 0.00013 UJ
GNC1-BE22	10	NORM	2/5/2009	< 0.00019 U	< 0.00011 U	< 0.000082 U	< 0.000071 U	< 0.000074 U	< 0.00013 U	< 0.000092 U	< 0.00041 U	< 0.00026 U	< 0.00035 U	0.00069 J	< 0.00013 U
GNC1-BF19	0	NORM	2/5/2009	< 0.00019 U	< 0.00011 U	< 0.000082 U	< 0.000071 U	< 0.000074 U	< 0.00013 U	< 0.000092 U	< 0.00041 U	< 0.00026 U	< 0.00035 U	< 0.00065 U	< 0.00013 U
GNC1-BF19	11	NORM	2/5/2009	< 0.00019 U	< 0.00011 U	< 0.000082 U	< 0.000071 U	< 0.000074 U	< 0.00013 U	< 0.000092 U	< 0.00041 U	< 0.00026 U	< 0.00035 U	< 0.00054 U	< 0.00013 U
GNC1-BF20	0	NORM	2/6/2009	< 0.00019 U	< 0.00011 U	< 0.000082 U	< 0.00007 U	< 0.000073 U	< 0.00013 U	< 0.000091 U	< 0.00041 U	< 0.00026 U	< 0.00034 U	0.0007 J	< 0.00013 U
GNC1-BF20	10	NORM	2/6/2009	< 0.0002 U	< 0.00012 U	< 0.000088 U	< 0.000076 U	< 0.000079 U	< 0.00014 U	< 0.000098 U	< 0.00044 U	< 0.00028 U	< 0.00037 U	0.00072 J	< 0.00014 U
GNC1-BF21	0	NORM	2/5/2009	< 0.00019 U	< 0.00011 U	< 0.000082 U	< 0.00007 U	< 0.000073 U	< 0.00013 U	< 0.000091 U	< 0.00041 U	< 0.00026 U	< 0.00035 U	< 0.00067 U	< 0.00013 U
GNC1-BF21	10	NORM	2/5/2009	< 0.00019 U	< 0.00011 U	< 0.000082 U	< 0.000071 U	< 0.000074 U	< 0.00013 U	< 0.000092 U	< 0.00041 U	< 0.00026 U	< 0.00035 U	0.00069 J	< 0.00013 U
GNC1-BF22	0	NORM	2/6/2009	< 0.00018 U	< 0.00011 U	< 0.000081 U	< 0.00007 U	< 0.000073 U	< 0.00012 U	< 0.00009 U	< 0.0004 UJ	< 0.00026 UJ	< 0.00034 UJ	0.001 J	< 0.00013 UJ
GNC1-BF22	10	NORM	2/6/2009	< 0.00019 U	< 0.00011 U	< 0.000082 U	< 0.000071 U	< 0.000074 U	< 0.00013 U	< 0.000092 U	< 0.00041 U	< 0.00026 U	< 0.00035 U	< 0.00057 U	< 0.00013 U
GNC1-BG19	0	NORM	2/5/2009	< 0.00019 U	< 0.00011 U	< 0.000082 U	< 0.000071 U	< 0.000074 U	< 0.00013 U	< 0.000092 U	< 0.00041 UJ	< 0.00026 UJ	< 0.00035 UJ	0.001 J	< 0.00013 UJ
GNC1-BG19	10	NORM	2/5/2009	< 0.00019 U	< 0.00011 U	< 0.000082 U	< 0.00007 U	< 0.000074 U	< 0.00013 U	< 0.000091 U	< 0.00041 U	< 0.00026 U	< 0.00035 U	< 0.00056 U	< 0.00013 U
GNC1-BG20	0	NORM	2/5/2009	< 0.00018 U	< 0.00011 U	< 0.000081 U	< 0.000069 U	< 0.000072 U	< 0.00012 U	< 0.00009 U	< 0.0004 UJ	< 0.00026 UJ	< 0.00034 UJ	0.001 J	< 0.00013 UJ
GNC1-BG20	0	FD	2/5/2009	< 0.00018 U	< 0.00011 U	< 0.000081 U	< 0.000069 U	< 0.000072 U	< 0.00012 U	< 0.00009 U	< 0.0004 UJ	< 0.00026 UJ	< 0.00034 UJ	0.0012 J	< 0.00013 UJ
GNC1-BG20	10	NORM	2/5/2009	< 0.00018 U	< 0.00011 U	< 0.00008 U	< 0.000069 U	< 0.000072 U	< 0.00012 U	< 0.00009 U	< 0.0004 U	< 0.00026 U	< 0.00034 U	0.00076 J	< 0.00012 U
GNC1-BG21	0	NORM	2/5/2009	< 0.00018 U	< 0.00011 U	< 0.000081 U	< 0.000069 U	< 0.000072 U	< 0.00012 U	< 0.00009 U	< 0.0004 U	< 0.00026 U	< 0.00034 U	0.00077 J	< 0.00013 U
GNC1-BG21	10	NORM	2/5/2009	< 0.00019 U	< 0.00011 U	< 0.000082 U	< 0.000071 U	< 0.000074 U	< 0.00013 U	< 0.000092 U	< 0.00041 U	< 0.00026 U	< 0.00035 U	< 0.00036 U	< 0.00013 U
GNC1-BG22	0	NORM	2/5/2009	< 0.00019 U	< 0.00011 U	< 0.000081 U	< 0.00007 U	< 0.000073 U	< 0.00013 U	< 0.000091 U	< 0.0004 U	< 0.00026 U	< 0.00034 U	< 0.00061 U	< 0.00013 U
GNC1-BG22	10	NORM	2/5/2009	< 0.00019 U	< 0.00011 U	< 0.000082 U	< 0.00007 U	< 0.000073 U	< 0.00013 U	< 0.000091 U	< 0.00041 U	< 0.00026 U	< 0.00035 U	< 0.00035 U	< 0.00013 U
GNC1-JD06	0	NORM	2/13/2009	< 0.00019 U	< 0.00011 U	< 0.000083 U	< 0.000071 U	< 0.000074 U	< 0.00013 U	< 0.000092 U	< 0.00041 U	< 0.00026 U	< 0.00035 U	< 0.00045 U	0.00021 J
GNC1-JD06	10	NORM	2/17/2009	< 0.00019 U	< 0.00011 U	< 0.000083 U	< 0.000071 U	< 0.000074 U	< 0.00013 U	< 0.000092 U	< 0.00041 U	< 0.00026 U	< 0.00035 U	< 0.00069 U	< 0.00015 U
GNC1-JD07	0	NORM	1/30/2009	< 0.00019 U	< 0.00011 U	< 0.000083 U	< 0.000071 U	< 0.000074 U	< 0.00013 U	< 0.000092 U	< 0.00041 U	< 0.00026 U	< 0.00035 U	< 0.00053 U	< 0.00013 U

TABLE B-10
SOIL VOLATILE ORGANIC COMPOUNDS (VOCS) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	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-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dichlorobenzene
GNC1-JD07	10	NORM	1/30/2009	< 0.00019 U	< 0.00011 U	< 0.000083 U	< 0.000071 U	< 0.000074 U	< 0.00013 U	< 0.000092 U	< 0.00041 U	< 0.00027 U	< 0.00035 U	< 0.00055 U	< 0.00013 U
GNC1-JD08	0	NORM	1/30/2009	< 0.00018 U	< 0.00011 U	< 0.00008 U	< 0.000069 U	< 0.000072 U	< 0.00012 U	< 0.000089 U	< 0.0004 U	< 0.00026 U	< 0.00034 U	< 0.00059 U	< 0.00012 U
GNC1-JD08	10	NORM	1/30/2009	< 0.00019 U	< 0.00011 U	< 0.000083 U	< 0.000071 U	< 0.000074 U	< 0.00013 U	< 0.000092 U	< 0.00041 U	< 0.00027 U	< 0.00035 U	< 0.00058 U	< 0.00013 U
GNC1-JD09	0	NORM	1/30/2009	< 0.00019 U	< 0.00011 U	< 0.000082 U	< 0.00007 U	< 0.000074 U	< 0.00013 U	< 0.000091 U	< 0.00041 U	< 0.00026 U	< 0.00035 U	< 0.00058 U	< 0.00013 U
GNC1-JD09	0	FD	1/30/2009	< 0.00019 U	< 0.00011 U	< 0.000084 U	< 0.000072 U	< 0.000075 U	< 0.00013 U	< 0.000093 U	< 0.00042 U	< 0.00027 U	< 0.00035 U	< 0.00052 U	< 0.00013 U
GNC1-JD09	10	NORM	1/30/2009	< 0.00019 U	< 0.00011 U	< 0.000083 U	< 0.000072 U	< 0.000075 U	< 0.00013 U	< 0.000093 U	< 0.00041 U	< 0.00027 U	< 0.00035 U	< 0.00056 U	< 0.00013 U
GNC1-JD10	0	NORM	2/9/2009	< 0.00019 U	< 0.00011 U	< 0.000083 U	< 0.000072 U	< 0.000075 U	< 0.00013 U	< 0.000093 U	< 0.00041 U	< 0.00027 U	< 0.00035 U	< 0.00043 U	< 0.00013 U
GNC1-JD10	11	NORM	2/9/2009	< 0.00019 U	< 0.00011 U	< 0.000083 U	< 0.000071 U	< 0.000074 U	< 0.00013 U	< 0.000092 U	< 0.00041 U	< 0.00027 U	< 0.00035 U	< 0.00042 U	< 0.00013 U
GNC1-JD11	0	NORM	2/9/2009	< 0.0002 U	< 0.00012 U	< 0.000086 U	< 0.000074 U	< 0.000077 U	< 0.00013 U	< 0.000096 U	< 0.00043 U	< 0.00027 U	< 0.00036 U	< 0.00039 U	< 0.00013 U
GNC1-JD11	11	NORM	2/9/2009	< 0.0002 U	< 0.00012 U	< 0.000087 U	< 0.000075 U	< 0.000078 U	< 0.00013 U	< 0.000097 U	< 0.00043 U	< 0.00028 U	< 0.00037 U	< 0.00049 U	< 0.00014 U
GNC1-JS09	0	NORM	1/30/2009	< 0.00018 U	< 0.00011 U	< 0.000081 U	< 0.000069 U	< 0.000073 U	< 0.00012 U	< 0.00009 U	< 0.0004 U	< 0.00026 U	< 0.00034 U	< 0.00064 U	< 0.00013 U
GNC1-JS09	0	FD	1/30/2009	< 0.00018 U	< 0.00011 U	< 0.000079 U	< 0.000068 U	< 0.000071 U	< 0.00012 U	< 0.000088 U	< 0.00039 U	< 0.00025 U	< 0.00033 U	< 0.00044 U	< 0.00012 U
GNC1-JS09	10	NORM	1/30/2009	< 0.00019 U	< 0.00011 U	< 0.000083 U	< 0.000071 U	< 0.000074 U	< 0.00013 U	< 0.000093 U	< 0.00041 U	< 0.00027 U	< 0.00035 U	< 0.00049 U	< 0.00013 U
GNC1-JS10	0	NORM	1/30/2009	< 0.00019 U	< 0.00011 U	< 0.000083 U	< 0.000071 U	< 0.000074 U	< 0.00013 U	< 0.000092 U	< 0.00041 U	< 0.00026 U	< 0.00035 U	< 0.00073 U	< 0.00013 U
GNC1-JS10	10	NORM	1/30/2009	< 0.00019 U	< 0.00011 U	< 0.000082 U	< 0.00007 U	< 0.000073 U	< 0.00013 U	< 0.000091 U	< 0.00041 U	< 0.00026 U	< 0.00035 U	0.00088 J	< 0.00013 U
GNC1-JS11	0	NORM	1/29/2009	< 0.00018 U	< 0.00011 U	< 0.000081 U	< 0.000069 U	< 0.000072 U	< 0.00012 U	< 0.00009 U	< 0.0004 UJ	< 0.00026 UJ	< 0.00034 UJ	< 0.00037 UJ	< 0.00013 UJ
GNC1-JS11	0	FD	1/29/2009	< 0.00018 UJ	< 0.00011 U	< 0.000081 U	< 0.000069 U	< 0.000072 U	< 0.00012 U	< 0.00009 U	< 0.0004 UJ	< 0.00026 UJ	< 0.00034 UJ	< 0.00014 UJ	< 0.00013 UJ
GNC1-JS11	10	NORM	1/29/2009	< 0.00019 U	< 0.00011 U	< 0.000082 U	< 0.00007 U	< 0.000073 U	< 0.00013 U	< 0.000091 U	< 0.00041 U	< 0.00026 U	< 0.00035 U	< 0.00025 U	< 0.00013 U

All units in mg/kg.
-- = no sample data.

TABLE B-10
SOIL VOLATILE ORGANIC COMPOUNDS (VOCS) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Volatile Organic Compounds (VOCs)											
				1,2-Dichloroethane	1,2-Dichloroethene	1,2-Dichloropropane	1,3,5-Trichlorobenzene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2,3-Trimethylbutane	2,2-Dichloropropane	2,2-Dimethylpentane	2,3-Dimethylpentane
GNC1-BD19	0	NORM	1/28/2009	< 0.000073 U	< 0.00012 U	< 0.00012 U	< 0.00041 U	< 0.00011 U	< 0.00014 U	< 0.000056 U	< 0.00015 U	< 0.00023 U	< 0.00026 U	< 0.0003 U	< 0.00025 U
GNC1-BD19	10	NORM	1/28/2009	< 0.00007 U	< 0.00012 U	< 0.00012 U	< 0.00039 U	< 0.0001 U	< 0.00014 U	< 0.000054 U	< 0.00014 U	< 0.00022 U	< 0.00025 U	< 0.00029 U	< 0.00024 U
GNC1-BD20	0	NORM	1/30/2009	< 0.000067 U	< 0.00011 U	< 0.00011 U	< 0.00037 U	< 0.000098 U	< 0.00013 U	< 0.000051 U	< 0.00014 U	< 0.00021 U	< 0.00023 U	< 0.00028 U	< 0.00023 U
GNC1-BD20	10	NORM	1/30/2009	< 0.000069 U	< 0.00011 U	< 0.00012 U	< 0.00039 U	< 0.0001 U	< 0.00014 U	< 0.000054 U	< 0.00014 U	< 0.00022 U	< 0.00024 U	< 0.00029 U	< 0.00024 U
GNC1-BD21	0	NORM	1/30/2009	< 0.00007 U	< 0.00011 U	< 0.00012 U	< 0.00039 U	< 0.0001 U	< 0.00014 U	< 0.000054 U	< 0.00014 U	< 0.00022 U	< 0.00024 U	< 0.00029 U	< 0.00024 U
GNC1-BD21	10	NORM	1/30/2009	< 0.000069 U	< 0.00011 U	< 0.00012 U	< 0.00039 U	< 0.0001 U	< 0.00014 U	< 0.000053 U	< 0.00014 U	< 0.00022 U	< 0.00024 U	< 0.00029 U	< 0.00023 U
GNC1-BE19	0	NORM	2/5/2009	< 0.000068 U	< 0.00011 U	< 0.00011 U	< 0.00038 UJ	< 0.0001 UJ	< 0.00014 UJ	< 0.000053 U	< 0.00014 UJ	< 0.00022 U	< 0.00024 U	< 0.00028 U	< 0.00023 U
GNC1-BE19	10	NORM	2/5/2009	< 0.00007 U	< 0.00011 U	< 0.00012 U	< 0.00039 U	< 0.0001 U	< 0.00014 U	< 0.000054 U	< 0.00014 U	< 0.00022 U	< 0.00025 U	< 0.00029 U	< 0.00024 U
GNC1-BE20	0	NORM	2/6/2009	< 0.000069 U	< 0.00011 U	< 0.00012 U	< 0.00039 UJ	< 0.0001 UJ	< 0.00014 UJ	< 0.000053 U	< 0.00014 UJ	< 0.00022 U	< 0.00024 U	< 0.00029 U	< 0.00023 U
GNC1-BE20	0	FD	2/6/2009	< 0.000069 U	< 0.00011 U	< 0.00012 U	< 0.00039 UJ	< 0.0001 UJ	< 0.00014 UJ	< 0.000053 U	< 0.00014 UJ	< 0.00022 U	< 0.00024 U	< 0.00029 U	< 0.00023 U
GNC1-BE20	10	NORM	2/6/2009	< 0.000072 U	< 0.00012 U	< 0.00012 U	< 0.0004 U	< 0.00011 U	< 0.00014 U	< 0.000056 U	< 0.00015 U	< 0.00023 U	< 0.00025 U	< 0.0003 U	< 0.00024 U
GNC1-BE21	0	NORM	2/6/2009	< 0.00007 U	< 0.00011 U	< 0.00012 U	< 0.00039 U	< 0.0001 U	< 0.00014 U	< 0.000054 U	< 0.00014 U	< 0.00022 U	< 0.00024 U	< 0.00029 U	< 0.00024 U
GNC1-BE21	10	NORM	2/6/2009	< 0.000071 U	< 0.00012 U	< 0.00012 U	< 0.0004 U	< 0.0001 U	< 0.00014 U	< 0.000055 U	< 0.00015 U	< 0.00022 U	< 0.00025 U	< 0.00029 U	< 0.00024 U
GNC1-BE22	0	NORM	2/5/2009	< 0.000069 U	< 0.00011 U	< 0.00011 U	< 0.00038 UJ	< 0.0001 UJ	< 0.00014 UJ	< 0.000053 U	< 0.00014 UJ	< 0.00022 U	< 0.00024 U	< 0.00029 U	< 0.00023 U
GNC1-BE22	10	NORM	2/5/2009	< 0.000069 U	< 0.00011 U	< 0.00012 U	< 0.00039 U	< 0.0001 U	< 0.00014 U	< 0.000054 U	< 0.00014 U	< 0.00022 U	< 0.00024 U	< 0.00029 U	< 0.00024 U
GNC1-BF19	0	NORM	2/5/2009	< 0.00007 U	< 0.00011 U	< 0.00012 U	< 0.00039 U	< 0.0001 U	< 0.00014 U	< 0.000054 U	< 0.00014 U	< 0.00022 U	< 0.00024 U	< 0.00029 U	< 0.00024 U
GNC1-BF19	11	NORM	2/5/2009	< 0.00007 U	< 0.00011 U	< 0.00012 U	< 0.00039 U	< 0.0001 U	< 0.00014 U	< 0.000054 U	< 0.00014 U	< 0.00022 U	< 0.00024 U	< 0.00029 U	< 0.00024 U
GNC1-BF20	0	NORM	2/6/2009	< 0.000069 U	< 0.00011 U	< 0.00011 U	< 0.00039 U	< 0.0001 U	< 0.00014 U	< 0.000053 U	< 0.00014 U	< 0.00022 U	< 0.00024 U	< 0.00029 U	< 0.00023 U
GNC1-BF20	10	NORM	2/6/2009	< 0.000075 U	< 0.00012 U	< 0.00012 U	< 0.00042 U	< 0.00011 U	< 0.00015 U	< 0.000058 U	< 0.00015 U	< 0.00024 U	< 0.00026 U	< 0.00031 U	< 0.00025 U
GNC1-BF21	0	NORM	2/5/2009	< 0.000069 U	< 0.00011 U	< 0.00012 U	< 0.00039 U	< 0.0001 U	< 0.00014 U	< 0.000053 U	< 0.00014 U	< 0.00022 U	< 0.00024 U	< 0.00029 U	< 0.00023 U
GNC1-BF21	10	NORM	2/5/2009	< 0.00007 U	< 0.00011 U	< 0.00012 U	< 0.00039 U	< 0.0001 U	< 0.00014 U	< 0.000054 U	< 0.00014 U	< 0.00022 U	< 0.00025 U	< 0.00029 U	< 0.00024 U
GNC1-BF22	0	NORM	2/6/2009	< 0.000069 U	< 0.00011 U	< 0.00011 U	< 0.00038 UJ	< 0.0001 UJ	< 0.00014 UJ	< 0.000053 U	< 0.00014 UJ	< 0.00022 U	< 0.00024 U	< 0.00029 U	< 0.00023 U
GNC1-BF22	10	NORM	2/6/2009	< 0.00007 U	< 0.00011 U	< 0.00012 U	< 0.00039 U	< 0.0001 U	< 0.00014 U	< 0.000054 U	< 0.00014 U	< 0.00022 U	< 0.00025 U	< 0.00029 U	< 0.00024 U
GNC1-BG19	0	NORM	2/5/2009	< 0.00007 U	< 0.00011 U	< 0.00012 U	< 0.00039 UJ	< 0.0001 UJ	< 0.00014 UJ	< 0.000054 U	< 0.00014 UJ	< 0.00022 U	< 0.00024 U	< 0.00029 U	< 0.00024 U
GNC1-BG19	10	NORM	2/5/2009	< 0.000069 U	< 0.00011 U	< 0.00012 U	< 0.00039 U	< 0.0001 U	< 0.00014 U	< 0.000054 U	< 0.00014 U	< 0.00022 U	< 0.00024 U	< 0.00029 U	< 0.00024 U
GNC1-BG20	0	NORM	2/5/2009	< 0.000068 U	< 0.00011 U	< 0.00011 U	< 0.00038 UJ	< 0.0001 UJ	< 0.00014 UJ	< 0.000053 U	< 0.00014 UJ	< 0.00022 U	< 0.00024 U	< 0.00028 U	< 0.00023 U
GNC1-BG20	0	FD	2/5/2009	< 0.000068 U	< 0.00011 U	< 0.00011 U	< 0.00038 UJ	< 0.0001 UJ	< 0.00014 UJ	< 0.000053 U	< 0.00014 UJ	< 0.00022 U	< 0.00024 U	< 0.00028 U	< 0.00023 U
GNC1-BG20	10	NORM	2/5/2009	< 0.000068 U	< 0.00011 U	< 0.00011 U	< 0.00038 U	< 0.0001 U	< 0.00014 U	< 0.000053 U	< 0.00014 U	< 0.00022 U	< 0.00024 U	< 0.00028 U	< 0.00023 U
GNC1-BG21	0	NORM	2/5/2009	< 0.000068 U	< 0.00011 U	< 0.00011 U	< 0.00038 U	< 0.0001 U	< 0.00014 U	< 0.000053 U	< 0.00014 U	< 0.00022 U	< 0.00024 U	< 0.00028 U	< 0.00023 U
GNC1-BG21	10	NORM	2/5/2009	< 0.00007 U	< 0.00011 U	< 0.00012 U	< 0.00039 U	< 0.0001 U	< 0.00014 U	< 0.000054 U	< 0.00014 U	< 0.00022 U	< 0.00024 U	< 0.00029 U	< 0.00024 U
GNC1-BG22	0	NORM	2/5/2009	< 0.000069 U	< 0.00011 U	< 0.00011 U	< 0.00039 U	< 0.0001 U	< 0.00014 U	< 0.000053 U	< 0.00014 U	< 0.00022 U	< 0.00024 U	< 0.00029 U	< 0.00023 U
GNC1-BG22	10	NORM	2/5/2009	< 0.000069 U	< 0.00011 U	< 0.00012 U	< 0.00039 U	< 0.0001 U	< 0.00014 U	< 0.000053 U	< 0.00014 U	< 0.00022 U	< 0.00024 U	< 0.00029 U	< 0.00023 U
GNC1-JD06	0	NORM	2/13/2009	< 0.00007 U	< 0.00011 U	< 0.00012 U	< 0.00039 U	< 0.0001 U	0.00022 J	< 0.000054 U	0.00024 J	< 0.00022 U	< 0.00025 U	< 0.00029 U	< 0.00024 U
GNC1-JD06	10	NORM	2/17/2009	< 0.00007 U	< 0.00011 U	< 0.00012 U	< 0.00039 U	< 0.00014 U	< 0.00014 U	< 0.000054 U	< 0.00014 U	< 0.00022 U	< 0.00025 U	< 0.00029 U	< 0.00024 U
GNC1-JD07	0	NORM	1/30/2009	< 0.00007 U	< 0.00011 U	< 0.00012 U	< 0.00039 U	< 0.0001 U	< 0.00014 U	< 0.000054 U	< 0.00014 U	< 0.00022 U	< 0.00025 U	< 0.00029 U	< 0.00024 U

TABLE B-10
SOIL VOLATILE ORGANIC COMPOUNDS (VOCS) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Volatile Organic Compounds (VOCs)											
				1,2-Dichloroethane	1,2-Dichloroethene	1,2-Dichloropropane	1,3,5-Trichlorobenzene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2,3-Trimethylbutane	2,2-Dichloropropane	2,2-Dimethylpentane	2,3-Dimethylpentane
GNC1-JD07	10	NORM	1/30/2009	< 0.00007 U	< 0.00011 U	< 0.00012 U	< 0.00039 U	< 0.0001 U	< 0.00014 U	< 0.000054 U	< 0.00014 U	< 0.00022 U	< 0.00025 U	< 0.00029 U	< 0.00024 U
GNC1-JD08	0	NORM	1/30/2009	< 0.000068 U	< 0.00011 U	< 0.00011 U	< 0.00038 U	< 0.0001 U	< 0.00013 U	< 0.000052 U	< 0.00014 U	< 0.00022 U	< 0.00024 U	< 0.00028 U	< 0.00023 U
GNC1-JD08	10	NORM	1/30/2009	< 0.00007 U	< 0.00011 U	< 0.00012 U	< 0.00039 U	< 0.0001 U	< 0.00014 U	< 0.000054 U	< 0.00014 U	< 0.00022 U	< 0.00025 U	< 0.00029 U	< 0.00024 U
GNC1-JD09	0	NORM	1/30/2009	< 0.000069 U	< 0.00011 U	< 0.00012 U	< 0.00039 U	< 0.0001 U	< 0.00014 U	< 0.000054 U	< 0.00014 U	< 0.00022 U	< 0.00024 U	< 0.00029 U	< 0.00024 U
GNC1-JD09	0	FD	1/30/2009	< 0.000071 U	< 0.00012 U	< 0.00012 U	< 0.0004 U	< 0.0001 U	< 0.00014 U	< 0.000055 U	< 0.00015 U	< 0.00023 U	< 0.00025 U	< 0.0003 U	< 0.00024 U
GNC1-JD09	10	NORM	1/30/2009	< 0.00007 U	< 0.00012 U	< 0.00012 U	< 0.0004 U	< 0.0001 U	< 0.00014 U	< 0.000054 U	< 0.00015 U	< 0.00022 U	< 0.00025 U	< 0.00029 U	< 0.00024 U
GNC1-JD10	0	NORM	2/9/2009	< 0.000071 U	< 0.00012 U	< 0.00012 U	< 0.0004 U	< 0.0001 U	< 0.00014 U	< 0.000054 U	< 0.00015 U	< 0.00022 U	< 0.00025 U	< 0.00029 U	< 0.00024 U
GNC1-JD10	11	NORM	2/9/2009	< 0.00007 U	< 0.00011 U	< 0.00012 U	< 0.00039 U	< 0.0001 U	< 0.00014 U	< 0.000054 U	< 0.00014 U	< 0.00022 U	< 0.00025 U	< 0.00029 U	< 0.00024 U
GNC1-JD11	0	NORM	2/9/2009	< 0.000073 U	< 0.00012 U	< 0.00012 U	< 0.00041 U	< 0.00011 U	< 0.00014 U	< 0.000056 U	< 0.00015 U	< 0.00023 U	< 0.00026 U	< 0.0003 U	< 0.00025 U
GNC1-JD11	11	NORM	2/9/2009	< 0.000074 U	< 0.00012 U	< 0.00012 U	< 0.00041 U	< 0.00011 U	< 0.00015 U	< 0.000057 U	< 0.00015 U	< 0.00023 U	< 0.00026 U	< 0.00031 U	< 0.00025 U
GNC1-JS09	0	NORM	1/30/2009	< 0.000068 U	< 0.00011 U	< 0.00011 U	< 0.00038 U	< 0.0001 U	< 0.00014 U	< 0.000053 U	< 0.00014 U	< 0.00022 U	< 0.00024 U	< 0.00029 U	< 0.00023 U
GNC1-JS09	0	FD	1/30/2009	< 0.000067 U	< 0.00011 U	< 0.00011 U	< 0.00037 U	< 0.000098 U	< 0.00013 U	< 0.000051 U	< 0.00014 U	< 0.00021 U	< 0.00023 U	< 0.00028 U	< 0.00023 U
GNC1-JS09	10	NORM	1/30/2009	< 0.00007 U	< 0.00011 U	< 0.00012 U	< 0.00039 U	< 0.0001 U	< 0.00014 U	< 0.000054 U	< 0.00014 U	< 0.00022 U	< 0.00025 U	< 0.00029 U	< 0.00024 U
GNC1-JS10	0	NORM	1/30/2009	< 0.00007 U	< 0.00011 U	< 0.00012 U	< 0.00039 U	< 0.0001 U	< 0.00014 U	< 0.000054 U	< 0.00014 U	< 0.00022 U	< 0.00025 U	< 0.00029 U	< 0.00024 U
GNC1-JS10	10	NORM	1/30/2009	< 0.000069 U	< 0.00011 U	< 0.00012 U	< 0.00039 U	0.00012 J	< 0.00014 U	< 0.000053 U	< 0.00014 U	< 0.00022 U	< 0.00024 U	< 0.00029 U	< 0.00023 U
GNC1-JS11	0	NORM	1/29/2009	< 0.000068 U	< 0.00011 U	< 0.00011 U	< 0.00038 UJ	< 0.0001 UJ	< 0.00014 UJ	< 0.000053 U	< 0.00014 UJ	< 0.00022 U	< 0.00024 U	< 0.00028 U	< 0.00023 U
GNC1-JS11	0	FD	1/29/2009	< 0.000068 U	< 0.00011 U	< 0.00011 U	< 0.00038 UJ	< 0.0001 UJ	< 0.00014 UJ	< 0.000053 U	< 0.00014 UJ	< 0.00022 U	< 0.00024 U	< 0.00028 U	< 0.00023 U
GNC1-JS11	10	NORM	1/29/2009	< 0.000069 U	< 0.00011 U	< 0.00012 U	< 0.00039 U	< 0.0001 U	< 0.00014 U	< 0.000053 U	< 0.00014 U	< 0.00022 U	< 0.00024 U	< 0.00029 U	< 0.00023 U

All units in mg/kg.
-- = no sample data.

TABLE B-10
SOIL VOLATILE ORGANIC COMPOUNDS (VOCS) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Volatile Organic Compounds (VOCs)											
				2,4-Dimethylpentane	2-Chlorotoluene	2-Hexanone	2-Methylhexane	2-Nitropropane	3,3-Dimethylpentane	3-Ethylpentane	3-Methylhexane	4-Chlorotoluene	4-Methyl-2-pentanone (MIBK)	Acetone	Acetonitrile
GNC1-BD19	0	NORM	1/28/2009	< 0.00021 U	< 0.00027 U	< 0.00026 U	< 0.00022 U	< 0.00066 U	< 0.00022 U	< 0.00023 U	< 0.00015 U	< 0.00019 U	< 0.00032 U	< 0.0087 U	< 0.006 UJ
GNC1-BD19	10	NORM	1/28/2009	< 0.00021 U	< 0.00026 U	< 0.00025 U	< 0.00022 U	< 0.00064 U	< 0.00022 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.00031 U	< 0.012 U	< 0.0058 UJ
GNC1-BD20	0	NORM	1/30/2009	< 0.00019 U	< 0.00025 U	< 0.00024 U	< 0.0002 U	< 0.00061 U	< 0.0002 U	< 0.00021 U	< 0.00014 U	< 0.00017 U	< 0.00029 U	< 0.0051 U	< 0.0055 UJ
GNC1-BD20	10	NORM	1/30/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00021 U	< 0.00063 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.0003 U	< 0.0039 U	< 0.0057 UJ
GNC1-BD21	0	NORM	1/30/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00021 U	< 0.00064 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.0003 U	< 0.0018 U	< 0.0057 UJ
GNC1-BD21	10	NORM	1/30/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00021 U	< 0.00063 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.0003 U	< 0.0045 U	< 0.0057 UJ
GNC1-BE19	0	NORM	2/5/2009	< 0.0002 U	< 0.00026 UJ	< 0.00025 U	< 0.00021 U	< 0.00062 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 UJ	< 0.0003 U	< 0.02 U	< 0.0056 UJ
GNC1-BE19	10	NORM	2/5/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00022 U	< 0.00064 U	< 0.00022 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.00031 U	< 0.019 U	< 0.0057 UJ
GNC1-BE20	0	NORM	2/6/2009	< 0.0002 U	< 0.00026 UJ	< 0.00025 U	< 0.00021 U	< 0.00063 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 UJ	< 0.0003 U	< 0.018 U	< 0.0057 UJ
GNC1-BE20	0	FD	2/6/2009	< 0.0002 U	< 0.00026 UJ	< 0.00025 U	< 0.00021 U	< 0.00063 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 UJ	< 0.0003 U	< 0.011 UJ	< 0.0057 UJ
GNC1-BE20	10	NORM	2/6/2009	< 0.00021 U	< 0.00027 U	< 0.00026 U	< 0.00022 U	< 0.00066 U	< 0.00022 U	< 0.00023 U	< 0.00015 U	< 0.00019 U	< 0.00031 U	< 0.012 U	< 0.0059 UJ
GNC1-BE21	0	NORM	2/6/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00021 U	< 0.00064 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.0003 U	< 0.012 U	< 0.0057 UJ
GNC1-BE21	10	NORM	2/6/2009	< 0.00021 U	< 0.00026 U	< 0.00025 U	< 0.00022 U	< 0.00064 U	< 0.00022 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.00031 U	< 0.013 U	< 0.0058 UJ
GNC1-BE22	0	NORM	2/5/2009	< 0.0002 U	< 0.00026 UJ	< 0.00025 U	< 0.00021 U	< 0.00062 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 UJ	< 0.0003 U	< 0.018 U	< 0.0056 UJ
GNC1-BE22	10	NORM	2/5/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00021 U	< 0.00063 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.0003 U	< 0.02 U	< 0.0057 UJ
GNC1-BF19	0	NORM	2/5/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00021 U	< 0.00063 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.0003 U	< 0.019 U	< 0.0057 UJ
GNC1-BF19	11	NORM	2/5/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00021 U	< 0.00064 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.0003 U	< 0.02 U	< 0.0057 UJ
GNC1-BF20	0	NORM	2/6/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00021 U	< 0.00063 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.0003 U	< 0.011 U	< 0.0057 UJ
GNC1-BF20	10	NORM	2/6/2009	< 0.00022 U	< 0.00028 U	< 0.00027 U	< 0.00023 U	< 0.00068 U	< 0.00023 U	< 0.00024 U	< 0.00016 U	< 0.00019 U	< 0.00033 U	< 0.013 U	< 0.0061 UJ
GNC1-BF21	0	NORM	2/5/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00021 U	< 0.00063 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.0003 U	< 0.018 U	< 0.0057 UJ
GNC1-BF21	10	NORM	2/5/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00021 U	< 0.00064 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.0003 U	< 0.02 U	< 0.0057 UJ
GNC1-BF22	0	NORM	2/6/2009	< 0.0002 U	< 0.00026 UJ	< 0.00025 U	< 0.00021 U	< 0.00063 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 UJ	< 0.0003 U	< 0.011 U	< 0.0056 UJ
GNC1-BF22	10	NORM	2/6/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00021 U	< 0.00064 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.0003 U	< 0.012 U	< 0.0057 UJ
GNC1-BG19	0	NORM	2/5/2009	< 0.0002 U	< 0.00026 UJ	< 0.00025 U	< 0.00021 U	< 0.00064 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 UJ	< 0.0003 U	< 0.019 UJ	< 0.0057 UJ
GNC1-BG19	10	NORM	2/5/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00021 U	< 0.00063 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.0003 U	< 0.019 U	< 0.0057 UJ
GNC1-BG20	0	NORM	2/5/2009	< 0.0002 U	< 0.00026 UJ	< 0.00025 U	< 0.00021 U	< 0.00062 U	< 0.00021 U	< 0.00022 U	< 0.00014 U	< 0.00018 UJ	< 0.0003 U	< 0.0095 U	< 0.0056 UJ
GNC1-BG20	0	FD	2/5/2009	< 0.0002 U	< 0.00026 UJ	< 0.00025 U	< 0.00021 U	< 0.00062 U	< 0.00021 U	< 0.00022 U	< 0.00014 U	< 0.00018 UJ	< 0.0003 U	< 0.01 U	< 0.0056 UJ
GNC1-BG20	10	NORM	2/5/2009	< 0.0002 U	< 0.00025 U	< 0.00024 U	< 0.00021 U	< 0.00062 U	< 0.00021 U	< 0.00022 U	< 0.00014 U	< 0.00018 U	< 0.0003 U	< 0.016 U	< 0.0056 UJ
GNC1-BG21	0	NORM	2/5/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00021 U	< 0.00062 U	< 0.00021 U	< 0.00022 U	< 0.00014 U	< 0.00018 U	< 0.0003 U	< 0.01 U	< 0.0056 UJ
GNC1-BG21	10	NORM	2/5/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00021 U	< 0.00063 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.0003 U	< 0.021 U	< 0.0057 UJ
GNC1-BG22	0	NORM	2/5/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00021 U	< 0.00063 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.0003 U	< 0.019 U	< 0.0056 UJ
GNC1-BG22	10	NORM	2/5/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00021 U	< 0.00063 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.0003 U	< 0.021 U	< 0.0057 UJ
GNC1-JD06	0	NORM	2/13/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00021 U	< 0.00064 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.0003 U	< 0.0018 U	< 0.0057 UJ
GNC1-JD06	10	NORM	2/17/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00021 U	< 0.00064 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.0003 U	0.013 J	< 0.0057 UJ
GNC1-JD07	0	NORM	1/30/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00021 U	< 0.00064 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.00031 U	< 0.011 U	< 0.0057 UJ

TABLE B-10
SOIL VOLATILE ORGANIC COMPOUNDS (VOCS) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Volatile Organic Compounds (VOCs)											
				2,4-Dimethylpentane	2-Chlorotoluene	2-Hexanone	2-Methylhexane	2-Nitropropane	3,3-Dimethylpentane	3-Ethylpentane	3-Methylhexane	4-Chlorotoluene	4-Methyl-2-pentanone (MIBK)	Acetone	Acetonitrile
GNC1-JD07	10	NORM	1/30/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00022 U	< 0.00064 U	< 0.00022 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.00031 U	< 0.0053 U	< 0.0057 UJ
GNC1-JD08	0	NORM	1/30/2009	< 0.0002 U	< 0.00025 U	< 0.00024 U	< 0.00021 U	< 0.00062 U	< 0.00021 U	< 0.00022 U	< 0.00014 U	< 0.00018 U	< 0.0003 U	< 0.0057 U	< 0.0056 UJ
GNC1-JD08	10	NORM	1/30/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00022 U	< 0.00064 U	< 0.00022 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.00031 U	< 0.0062 U	< 0.0057 UJ
GNC1-JD09	0	NORM	1/30/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00021 U	< 0.00063 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.0003 U	< 0.0077 U	< 0.0057 UJ
GNC1-JD09	0	FD	1/30/2009	< 0.00021 U	< 0.00027 U	< 0.00025 U	< 0.00022 U	< 0.00065 U	< 0.00022 U	< 0.00023 U	< 0.00015 U	< 0.00018 U	< 0.00031 U	< 0.0082 U	< 0.0058 UJ
GNC1-JD09	10	NORM	1/30/2009	< 0.00021 U	< 0.00026 U	< 0.00025 U	< 0.00022 U	< 0.00064 U	< 0.00022 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.00031 U	< 0.0072 U	< 0.0058 UJ
GNC1-JD10	0	NORM	2/9/2009	< 0.00021 U	< 0.00026 U	< 0.00025 U	< 0.00022 U	< 0.00064 U	< 0.00022 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.00031 U	< 0.0018 U	< 0.0058 UJ
GNC1-JD10	11	NORM	2/9/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00022 U	< 0.00064 U	< 0.00022 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.00031 U	< 0.0018 U	< 0.0057 UJ
GNC1-JD11	0	NORM	2/9/2009	< 0.00021 U	< 0.00027 U	< 0.00026 U	< 0.00022 U	< 0.00066 U	< 0.00022 U	< 0.00023 U	< 0.00015 U	< 0.00019 U	< 0.00032 U	< 0.0019 U	< 0.006 UJ
GNC1-JD11	11	NORM	2/9/2009	< 0.00022 U	< 0.00028 U	< 0.00027 U	< 0.00023 U	< 0.00067 U	< 0.00023 U	< 0.00023 U	< 0.00016 U	< 0.00019 U	< 0.00032 U	< 0.01 UJ	< 0.0061 UJ
GNC1-JS09	0	NORM	1/30/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00021 U	< 0.00062 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.0003 U	0.017 J	< 0.0056 UJ
GNC1-JS09	0	FD	1/30/2009	< 0.00019 U	< 0.00025 U	< 0.00024 U	< 0.0002 U	< 0.00061 U	< 0.0002 U	< 0.00021 U	< 0.00014 U	< 0.00017 U	< 0.00029 U	< 0.0042 U	< 0.0055 UJ
GNC1-JS09	10	NORM	1/30/2009	< 0.00021 U	< 0.00026 U	< 0.00025 U	< 0.00022 U	< 0.00064 U	< 0.00022 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.00031 U	< 0.0046 U	< 0.0058 UJ
GNC1-JS10	0	NORM	1/30/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00021 U	< 0.00064 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.00031 U	< 0.0018 U	< 0.0057 UJ
GNC1-JS10	10	NORM	1/30/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00021 U	< 0.00063 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.0003 U	< 0.0053 U	< 0.0057 UJ
GNC1-JS11	0	NORM	1/29/2009	< 0.0002 U	< 0.00026 UJ	< 0.00025 U	< 0.00021 U	< 0.00062 U	< 0.00021 U	< 0.00022 U	< 0.00014 U	< 0.00018 UJ	< 0.0003 U	< 0.0018 U	< 0.0056 UJ
GNC1-JS11	0	FD	1/29/2009	< 0.0002 U	< 0.00026 UJ	< 0.00025 UJ	< 0.00021 U	< 0.00062 UJ	< 0.00021 U	< 0.00022 U	< 0.00014 U	< 0.00018 UJ	< 0.0003 UJ	< 0.0018 U	< 0.0056 UJ
GNC1-JS11	10	NORM	1/29/2009	< 0.0002 U	< 0.00026 U	< 0.00025 U	< 0.00021 U	< 0.00063 U	< 0.00021 U	< 0.00022 U	< 0.00015 U	< 0.00018 U	< 0.0003 U	< 0.012 U	< 0.0057 UJ

All units in mg/kg.
-- = no sample data.

TABLE B-10
SOIL VOLATILE ORGANIC COMPOUNDS (VOCS) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Volatile Organic Compounds (VOCs)											
				Benzene	Bromobenzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorobromomethane	Chloroethane	Chloroform	Chloromethane
GNC1-BD19	0	NORM	1/28/2009	< 0.000096 U	< 0.00013 U	< 0.00023 U	< 0.000065 U	< 0.00014 U	< 0.00013 U	< 0.00023 U	< 0.00012 U	< 0.00025 U	< 0.00051 U	< 0.00011 U	< 0.0003 U
GNC1-BD19	10	NORM	1/28/2009	< 0.000093 U	< 0.00013 U	< 0.00023 U	< 0.000063 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00012 U	< 0.00024 U	< 0.00049 U	< 0.00011 U	< 0.00029 U
GNC1-BD20	0	NORM	1/30/2009	< 0.000088 U	< 0.00012 U	< 0.00022 U	< 0.00006 U	< 0.00013 U	< 0.00012 U	< 0.00021 U	< 0.00011 U	< 0.00023 U	< 0.00047 U	< 0.0001 U	< 0.00027 U
GNC1-BD20	10	NORM	1/30/2009	< 0.000091 U	< 0.00013 U	< 0.00022 U	< 0.000062 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00011 U	< 0.00024 U	< 0.00048 U	< 0.00011 U	< 0.00028 U
GNC1-BD21	0	NORM	1/30/2009	< 0.000092 U	< 0.00013 U	< 0.00022 U	< 0.000062 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00011 U	< 0.00024 U	< 0.00049 U	< 0.00011 U	< 0.00028 U
GNC1-BD21	10	NORM	1/30/2009	< 0.000091 U	< 0.00013 U	< 0.00022 U	< 0.000062 U	< 0.00014 U	< 0.00013 U	< 0.00021 U	< 0.00011 U	< 0.00024 U	< 0.00048 U	< 0.0001 U	< 0.00028 U
GNC1-BE19	0	NORM	2/5/2009	< 0.00009 U	< 0.00013 UJ	< 0.00022 U	< 0.000061 U	< 0.00013 U	< 0.00013 U	< 0.00021 U	< 0.00011 U	< 0.00023 U	< 0.00048 U	< 0.0001 U	< 0.00028 U
GNC1-BE19	10	NORM	2/5/2009	< 0.000092 U	< 0.00013 U	< 0.00023 U	< 0.000063 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00011 U	< 0.00024 U	< 0.00049 U	< 0.00011 U	< 0.00028 U
GNC1-BE20	0	NORM	2/6/2009	< 0.000091 U	< 0.00013 UJ	< 0.00022 U	< 0.000062 U	< 0.00014 U	< 0.00013 U	< 0.00021 U	< 0.00011 U	< 0.00024 U	< 0.00048 U	< 0.0001 U	< 0.00028 U
GNC1-BE20	0	FD	2/6/2009	< 0.000091 U	< 0.00013 UJ	< 0.00022 U	< 0.000062 U	< 0.00014 U	< 0.00013 U	< 0.00021 U	< 0.00011 U	< 0.00024 U	< 0.00048 U	< 0.0001 U	< 0.00028 U
GNC1-BE20	10	NORM	2/6/2009	< 0.000095 U	< 0.00013 U	< 0.00023 U	< 0.000064 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00012 U	< 0.00025 U	< 0.0005 U	< 0.00011 U	< 0.00029 U
GNC1-BE21	0	NORM	2/6/2009	< 0.000092 U	< 0.00013 U	< 0.00022 U	< 0.000062 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00011 U	< 0.00024 U	< 0.00049 U	< 0.00011 U	< 0.00028 U
GNC1-BE21	10	NORM	2/6/2009	< 0.000093 U	< 0.00013 U	< 0.00023 U	< 0.000063 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00012 U	< 0.00024 U	< 0.00049 U	< 0.00011 U	< 0.00029 U
GNC1-BE22	0	NORM	2/5/2009	< 0.00009 U	< 0.00013 UJ	< 0.00022 U	< 0.000061 U	< 0.00013 U	< 0.00013 U	< 0.00021 U	< 0.00011 U	< 0.00023 U	< 0.00048 U	< 0.0001 U	< 0.00028 U
GNC1-BE22	10	NORM	2/5/2009	< 0.000092 U	< 0.00013 U	< 0.00022 U	< 0.000062 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00011 U	< 0.00024 U	< 0.00049 U	< 0.00011 U	< 0.00028 U
GNC1-BF19	0	NORM	2/5/2009	< 0.000092 U	< 0.00013 U	< 0.00022 U	< 0.000062 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00011 U	< 0.00024 U	< 0.00049 U	< 0.00011 U	< 0.00028 U
GNC1-BF19	11	NORM	2/5/2009	< 0.000092 U	< 0.00013 U	< 0.00022 U	< 0.000062 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00011 U	< 0.00024 U	< 0.00049 U	< 0.00011 U	< 0.00028 U
GNC1-BF20	0	NORM	2/6/2009	< 0.000091 U	< 0.00013 U	< 0.00022 U	< 0.000062 U	< 0.00014 U	< 0.00013 U	< 0.00021 U	< 0.00011 U	< 0.00024 U	< 0.00048 U	< 0.0001 U	< 0.00028 U
GNC1-BF20	10	NORM	2/6/2009	< 0.000098 U	< 0.00014 U	< 0.00024 U	< 0.000067 U	< 0.00015 U	< 0.00014 U	< 0.00023 U	< 0.00012 U	< 0.00025 U	< 0.00052 U	< 0.00011 U	< 0.0003 U
GNC1-BF21	0	NORM	2/5/2009	< 0.000091 U	< 0.00013 U	< 0.00022 U	< 0.000062 U	< 0.00014 U	< 0.00013 U	< 0.00021 U	< 0.00011 U	< 0.00024 U	< 0.00048 U	< 0.0001 U	< 0.00028 U
GNC1-BF21	10	NORM	2/5/2009	< 0.000092 U	< 0.00013 U	< 0.00023 U	< 0.000062 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00011 U	< 0.00024 U	< 0.00049 U	< 0.00011 U	< 0.00028 U
GNC1-BF22	0	NORM	2/6/2009	< 0.00009 U	< 0.00013 UJ	< 0.00022 U	< 0.000061 U	< 0.00013 U	< 0.00013 U	< 0.00021 U	< 0.00011 U	< 0.00023 U	< 0.00048 U	< 0.0001 U	< 0.00028 U
GNC1-BF22	10	NORM	2/6/2009	< 0.000092 U	< 0.00013 U	< 0.00023 U	< 0.000062 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00011 U	< 0.00024 U	< 0.00049 U	< 0.00011 U	< 0.00028 U
GNC1-BG19	0	NORM	2/5/2009	< 0.000092 U	< 0.00013 UJ	< 0.00022 U	< 0.000062 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00011 U	< 0.00024 U	< 0.00049 U	< 0.00011 U	< 0.00028 U
GNC1-BG19	10	NORM	2/5/2009	< 0.000091 U	< 0.00013 U	< 0.00022 U	< 0.000062 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00011 U	< 0.00024 U	< 0.00048 U	< 0.00011 U	< 0.00028 U
GNC1-BG20	0	NORM	2/5/2009	< 0.00009 U	< 0.00013 UJ	< 0.00022 U	< 0.000061 U	< 0.00013 U	< 0.00013 U	< 0.00021 U	< 0.00011 U	< 0.00023 U	< 0.00048 U	< 0.0001 U	< 0.00028 U
GNC1-BG20	0	FD	2/5/2009	< 0.00009 U	< 0.00013 UJ	< 0.00022 U	< 0.000061 U	< 0.00013 U	< 0.00013 U	< 0.00021 U	< 0.00011 U	< 0.00023 U	< 0.00048 U	< 0.0001 U	< 0.00028 U
GNC1-BG20	10	NORM	2/5/2009	< 0.00009 U	< 0.00012 U	< 0.00022 U	< 0.000061 U	< 0.00013 U	< 0.00012 U	< 0.00021 U	< 0.00011 U	< 0.00023 U	< 0.00048 U	< 0.0001 U	< 0.00028 U
GNC1-BG21	0	NORM	2/5/2009	< 0.00009 U	< 0.00013 U	< 0.00022 U	< 0.000061 U	< 0.00013 U	< 0.00013 U	< 0.00021 U	< 0.00011 U	< 0.00023 U	< 0.00048 U	< 0.0001 U	< 0.00028 U
GNC1-BG21	10	NORM	2/5/2009	< 0.000092 U	< 0.00013 U	< 0.00022 U	< 0.000062 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00011 U	< 0.00024 U	< 0.00049 U	< 0.00011 U	< 0.00028 U
GNC1-BG22	0	NORM	2/5/2009	< 0.000091 U	< 0.00013 U	< 0.00022 U	< 0.000062 U	< 0.00014 U	< 0.00013 U	< 0.00021 U	< 0.00011 U	< 0.00023 U	< 0.00048 U	< 0.0001 U	< 0.00028 U
GNC1-BG22	10	NORM	2/5/2009	< 0.000091 U	< 0.00013 U	< 0.00022 U	< 0.000062 U	< 0.00014 U	< 0.00013 U	< 0.00021 U	< 0.00011 U	< 0.00024 U	< 0.00048 U	< 0.0001 U	< 0.00028 U
GNC1-JD06	0	NORM	2/13/2009	< 0.000092 U	< 0.00013 U	< 0.00023 U	< 0.000062 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00011 U	< 0.00024 U	< 0.00049 U	< 0.00011 U	< 0.00028 U
GNC1-JD06	10	NORM	2/17/2009	< 0.000092 U	< 0.00013 U	< 0.00023 U	< 0.000062 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00011 U	< 0.00024 U	< 0.00049 U	< 0.00011 U	< 0.00028 U
GNC1-JD07	0	NORM	1/30/2009	< 0.000092 U	< 0.00013 U	< 0.00023 U	< 0.000062 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00011 U	< 0.00024 U	< 0.00049 U	< 0.00011 U	< 0.00028 U

TABLE B-10
SOIL VOLATILE ORGANIC COMPOUNDS (VOCS) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Volatile Organic Compounds (VOCs)											
				Benzene	Bromobenzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorobromomethane	Chloroethane	Chloroform	Chloromethane
GNC1-JD07	10	NORM	1/30/2009	< 0.000092 U	< 0.00013 U	< 0.00023 U	< 0.000063 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00011 U	< 0.00024 U	< 0.00049 U	< 0.00011 U	< 0.00028 U
GNC1-JD08	0	NORM	1/30/2009	< 0.000089 U	< 0.00012 U	< 0.00022 U	< 0.000061 U	< 0.00013 U	< 0.00012 U	< 0.00021 U	< 0.00011 U	< 0.00023 U	< 0.00047 U	< 0.0001 U	< 0.00028 U
GNC1-JD08	10	NORM	1/30/2009	< 0.000092 U	< 0.00013 U	< 0.00023 U	< 0.000063 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00011 U	< 0.00024 U	< 0.00049 U	< 0.00011 U	< 0.00028 U
GNC1-JD09	0	NORM	1/30/2009	< 0.000091 U	< 0.00013 U	< 0.00022 U	< 0.000062 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00011 U	< 0.00024 U	< 0.00048 U	< 0.00011 U	< 0.00028 U
GNC1-JD09	0	FD	1/30/2009	< 0.000093 U	< 0.00013 U	< 0.00023 U	< 0.000063 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00012 U	< 0.00024 U	< 0.0005 U	< 0.00011 U	< 0.00029 U
GNC1-JD09	10	NORM	1/30/2009	< 0.000093 U	< 0.00013 U	< 0.00023 U	< 0.000063 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00012 U	< 0.00024 U	< 0.00049 U	< 0.00011 U	< 0.00029 U
GNC1-JD10	0	NORM	2/9/2009	< 0.000093 U	< 0.00013 U	< 0.00023 U	< 0.000063 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00012 U	< 0.00024 U	< 0.00049 U	< 0.00011 U	< 0.00029 U
GNC1-JD10	11	NORM	2/9/2009	< 0.000092 U	< 0.00013 U	< 0.00023 U	< 0.000063 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00011 U	< 0.00024 U	< 0.00049 U	< 0.00011 U	< 0.00028 U
GNC1-JD11	0	NORM	2/9/2009	< 0.000096 U	< 0.00013 U	< 0.00023 U	< 0.000065 U	< 0.00014 U	< 0.00013 U	< 0.00023 U	< 0.00012 U	< 0.00025 U	< 0.00051 U	< 0.00011 U	< 0.00029 U
GNC1-JD11	11	NORM	2/9/2009	< 0.000097 U	< 0.00014 U	< 0.00024 U	< 0.000066 U	< 0.00015 U	< 0.00014 U	< 0.00023 U	< 0.00012 U	< 0.00025 U	< 0.00052 U	< 0.00011 U	< 0.0003 U
GNC1-JS09	0	NORM	1/30/2009	< 0.00009 U	< 0.00013 U	< 0.00022 U	< 0.000061 U	< 0.00013 U	< 0.00013 U	< 0.00021 U	< 0.00011 U	< 0.00023 U	< 0.00048 U	< 0.0001 U	< 0.00028 U
GNC1-JS09	0	FD	1/30/2009	< 0.000088 U	< 0.00012 U	< 0.00021 U	< 0.00006 U	< 0.00013 U	< 0.00012 U	< 0.00021 U	< 0.00011 U	< 0.00023 U	< 0.00047 U	< 0.0001 U	< 0.00027 U
GNC1-JS09	10	NORM	1/30/2009	< 0.000093 U	< 0.00013 U	< 0.00023 U	< 0.000063 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00011 U	< 0.00024 U	< 0.00049 U	< 0.00011 U	< 0.00029 U
GNC1-JS10	0	NORM	1/30/2009	< 0.000092 U	< 0.00013 U	< 0.00023 U	< 0.000062 U	< 0.00014 U	< 0.00013 U	< 0.00022 U	< 0.00011 U	< 0.00024 U	< 0.00049 U	< 0.00011 U	< 0.00028 U
GNC1-JS10	10	NORM	1/30/2009	< 0.000091 U	< 0.00013 U	< 0.00022 U	< 0.000062 U	< 0.00014 U	< 0.00013 U	< 0.00021 U	< 0.00011 U	< 0.00024 U	< 0.00048 U	< 0.0001 U	< 0.00028 U
GNC1-JS11	0	NORM	1/29/2009	< 0.00009 U	< 0.00013 UJ	< 0.00022 U	< 0.000061 U	< 0.00013 U	< 0.00013 U	< 0.00021 U	< 0.00011 U	< 0.00023 U	< 0.00048 U	< 0.0001 U	< 0.00028 U
GNC1-JS11	0	FD	1/29/2009	< 0.00009 U	< 0.00013 UJ	< 0.00022 U	< 0.000061 UJ	< 0.00013 U	< 0.00013 U	< 0.00021 U	< 0.00011 UJ	< 0.00023 U	< 0.00048 U	< 0.0001 U	< 0.00028 U
GNC1-JS11	10	NORM	1/29/2009	< 0.000091 U	< 0.00013 U	< 0.00022 U	< 0.000062 U	< 0.00014 U	< 0.00013 U	< 0.00021 U	< 0.00011 U	< 0.00024 U	< 0.00048 U	< 0.0001 U	< 0.00028 U

All units in mg/kg.
-- = no sample data.

TABLE B-10
SOIL VOLATILE ORGANIC COMPOUNDS (VOCS) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

				Volatile Organic Compounds (VOCs)											
Sample ID	Depth (ft bgs)	Sample Type	Sample Date	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Cymene (Isopropyltoluene)	Dibromochloromethane	Dibromochloropropane	Dibromomethane	Dichloromethane (Methylene chloride)	Dimethyldisulfide	Ethanol	Ethylbenzene	Freon-11 (Trichlorofluoromethane)	Freon-113 (1,1,2-Trifluoro-1,2,2-trichloroethane)
GNC1-BD19	0	NORM	1/28/2009	< 0.000059 U	< 0.00011 U	< 0.00014 U	< 0.00013 U	< 0.00023 U	< 0.00018 U	0.0099	< 0.00019 U	< 0.052 UJ	< 0.000064 U	< 0.00024 U	< 0.00016 U
GNC1-BD19	10	NORM	1/28/2009	< 0.000058 U	< 0.00011 U	< 0.00013 U	< 0.00013 U	< 0.00022 U	< 0.00018 U	0.0083	< 0.00019 U	< 0.05 UJ	< 0.000062 U	< 0.00023 U	< 0.00015 U
GNC1-BD20	0	NORM	1/30/2009	< 0.000055 U	< 0.0001 U	< 0.00013 U	< 0.00012 U	< 0.00021 U	< 0.00017 U	0.0032 J	< 0.00018 U	< 0.048 UJ	< 0.000059 U	< 0.00022 U	< 0.00015 U
GNC1-BD20	10	NORM	1/30/2009	< 0.000057 U	< 0.00011 U	< 0.00013 U	< 0.00012 U	< 0.00022 U	< 0.00017 U	0.0039 J	< 0.00018 U	< 0.05 UJ	< 0.000061 U	< 0.00023 U	< 0.00015 U
GNC1-BD21	0	NORM	1/30/2009	< 0.000057 U	< 0.00011 U	< 0.00013 U	< 0.00012 U	< 0.00022 U	< 0.00018 U	0.0051 J	< 0.00019 U	< 0.05 UJ	< 0.000061 U	< 0.00023 U	< 0.00015 U
GNC1-BD21	10	NORM	1/30/2009	< 0.000057 U	< 0.0001 U	< 0.00013 U	< 0.00012 U	< 0.00022 U	< 0.00017 U	0.015	< 0.00018 U	< 0.05 UJ	< 0.000061 U	< 0.00023 U	< 0.00015 U
GNC1-BE19	0	NORM	2/5/2009	< 0.000056 U	< 0.0001 U	< 0.00013 UJ	< 0.00012 U	< 0.00022 UJ	< 0.00017 U	0.019	< 0.00018 U	< 0.049 UJ	< 0.00006 U	< 0.00023 U	< 0.00015 U
GNC1-BE19	10	NORM	2/5/2009	< 0.000057 U	< 0.00011 U	< 0.00013 U	< 0.00013 U	< 0.00022 U	< 0.00018 U	< 0.0026 U	< 0.00019 U	< 0.05 UJ	< 0.000062 U	< 0.00023 U	< 0.00015 U
GNC1-BE20	0	NORM	2/6/2009	< 0.000057 U	< 0.0001 U	< 0.00013 UJ	< 0.00012 U	< 0.00022 UJ	< 0.00017 U	0.011 J	< 0.00018 U	< 0.05 UJ	< 0.000061 U	< 0.00023 U	< 0.00015 U
GNC1-BE20	0	FD	2/6/2009	< 0.000057 U	< 0.0001 U	< 0.00013 UJ	< 0.00012 U	< 0.00022 UJ	< 0.00017 U	0.0014 J	< 0.00018 U	< 0.05 UJ	< 0.000061 U	< 0.00023 U	< 0.00015 U
GNC1-BE20	10	NORM	2/6/2009	< 0.000059 U	< 0.00011 U	< 0.00014 U	< 0.00013 U	< 0.00023 U	< 0.00018 U	< 0.00075 U	< 0.00019 U	< 0.052 UJ	< 0.000063 U	< 0.00024 U	< 0.00016 U
GNC1-BE21	0	NORM	2/6/2009	< 0.000057 U	< 0.00011 U	< 0.00013 U	< 0.00012 U	< 0.00022 U	< 0.00018 U	< 0.00073 U	< 0.00019 U	< 0.05 UJ	< 0.000061 U	< 0.00023 U	< 0.00015 U
GNC1-BE21	10	NORM	2/6/2009	< 0.000058 U	< 0.00011 U	< 0.00013 U	< 0.00013 U	< 0.00023 U	< 0.00018 U	< 0.00074 U	< 0.00019 U	< 0.051 UJ	< 0.000062 U	< 0.00023 U	< 0.00016 U
GNC1-BE22	0	NORM	2/5/2009	< 0.000056 U	< 0.0001 U	< 0.00013 UJ	< 0.00012 U	< 0.00022 UJ	< 0.00017 U	< 0.006 U	< 0.00018 U	< 0.049 UJ	< 0.00006 U	< 0.00023 U	< 0.00015 U
GNC1-BE22	10	NORM	2/5/2009	< 0.000057 U	< 0.00011 U	< 0.00013 U	< 0.00012 U	< 0.00022 U	< 0.00017 U	< 0.0041 U	< 0.00019 U	< 0.05 UJ	< 0.000061 U	< 0.00023 U	< 0.00015 U
GNC1-BF19	0	NORM	2/5/2009	< 0.000057 U	< 0.00011 U	< 0.00013 U	< 0.00012 U	< 0.00022 U	< 0.00017 U	< 0.0045 U	< 0.00019 U	< 0.05 UJ	< 0.000061 U	< 0.00023 U	< 0.00015 U
GNC1-BF19	11	NORM	2/5/2009	< 0.000057 U	< 0.00011 U	< 0.00013 U	< 0.00012 U	< 0.00022 U	< 0.00018 U	< 0.0039 U	< 0.00019 U	< 0.05 UJ	< 0.000061 U	< 0.00023 U	< 0.00015 U
GNC1-BF20	0	NORM	2/6/2009	< 0.000056 U	< 0.0001 U	< 0.00013 U	< 0.00012 U	< 0.00022 U	< 0.00017 U	< 0.00072 U	< 0.00018 U	< 0.049 UJ	< 0.000061 U	< 0.00023 U	< 0.00015 U
GNC1-BF20	10	NORM	2/6/2009	< 0.000061 U	< 0.00011 U	< 0.00014 U	< 0.00013 U	< 0.00024 U	< 0.00019 U	< 0.00078 U	< 0.0002 U	< 0.053 UJ	< 0.000066 U	< 0.00025 U	< 0.00016 U
GNC1-BF21	0	NORM	2/5/2009	< 0.000056 U	< 0.0001 U	< 0.00013 U	< 0.00012 U	< 0.00022 U	< 0.00017 U	< 0.0042 U	< 0.00018 U	< 0.049 UJ	< 0.000061 U	< 0.00023 U	< 0.00015 U
GNC1-BF21	10	NORM	2/5/2009	< 0.000057 U	< 0.00011 U	< 0.00013 U	< 0.00012 U	< 0.00022 U	< 0.00018 U	< 0.0038 U	< 0.00019 U	< 0.05 UJ	< 0.000061 U	< 0.00023 U	< 0.00015 U
GNC1-BF22	0	NORM	2/6/2009	< 0.000056 U	< 0.0001 U	< 0.00013 UJ	< 0.00012 U	< 0.00022 UJ	< 0.00017 U	< 0.00071 U	< 0.00018 U	< 0.049 UJ	< 0.00006 U	< 0.00023 U	< 0.00015 U
GNC1-BF22	10	NORM	2/6/2009	< 0.000057 U	< 0.00011 U	< 0.00013 U	< 0.00012 U	< 0.00022 U	< 0.00018 U	< 0.00073 U	< 0.00019 U	< 0.05 UJ	< 0.000061 U	< 0.00023 U	< 0.00015 U
GNC1-BG19	0	NORM	2/5/2009	< 0.000057 U	< 0.00011 U	< 0.00013 UJ	< 0.00012 U	< 0.00022 UJ	< 0.00018 U	< 0.0077 UJ	< 0.00019 U	< 0.05 UJ	< 0.000061 U	< 0.00023 U	< 0.00015 U
GNC1-BG19	10	NORM	2/5/2009	< 0.000057 U	< 0.00011 U	< 0.00013 U	< 0.00012 U	< 0.00022 U	< 0.00017 U	< 0.0035 U	< 0.00019 U	< 0.05 UJ	< 0.000061 U	< 0.00023 U	< 0.00015 U
GNC1-BG20	0	NORM	2/5/2009	< 0.000056 U	< 0.0001 U	< 0.00013 UJ	< 0.00012 U	< 0.00022 UJ	< 0.00017 U	< 0.0018 U	< 0.00018 U	< 0.049 UJ	< 0.00006 U	< 0.00023 U	< 0.00015 U
GNC1-BG20	0	FD	2/5/2009	< 0.000056 U	< 0.0001 U	< 0.00013 UJ	< 0.00012 U	< 0.00022 UJ	< 0.00017 U	< 0.0022 U	< 0.00018 U	< 0.049 UJ	0.000077 J	< 0.00023 U	< 0.00015 U
GNC1-BG20	10	NORM	2/5/2009	< 0.000056 U	< 0.0001 U	< 0.00013 U	< 0.00012 U	< 0.00022 U	< 0.00017 U	< 0.00071 U	< 0.00018 U	< 0.049 UJ	< 0.00006 U	< 0.00022 U	< 0.00015 U
GNC1-BG21	0	NORM	2/5/2009	< 0.000056 U	< 0.0001 U	< 0.00013 U	< 0.00012 U	< 0.00022 U	< 0.00017 U	< 0.00071 U	< 0.00018 U	< 0.049 UJ	< 0.00006 U	< 0.00023 U	< 0.00015 U
GNC1-BG21	10	NORM	2/5/2009	< 0.000057 U	< 0.00011 U	< 0.00013 U	< 0.00012 U	< 0.00022 U	< 0.00017 U	0.017	< 0.00019 U	< 0.05 UJ	< 0.000061 U	< 0.00023 U	< 0.00015 U
GNC1-BG22	0	NORM	2/5/2009	< 0.000056 U	< 0.0001 U	< 0.00013 U	< 0.00012 U	< 0.00022 U	< 0.00017 U	0.018	< 0.00018 U	< 0.049 UJ	< 0.000061 U	< 0.00023 U	< 0.00015 U
GNC1-BG22	10	NORM	2/5/2009	< 0.000056 U	< 0.0001 U	< 0.00013 U	< 0.00012 U	< 0.00022 U	< 0.00017 U	0.018	< 0.00018 U	< 0.049 UJ	< 0.000061 U	< 0.00023 U	< 0.00015 U
GNC1-JD06	0	NORM	2/13/2009	< 0.000057 U	< 0.00011 U	< 0.00013 U	< 0.00012 U	< 0.00022 U	< 0.00018 U	0.012	< 0.00019 U	< 0.05 UJ	0.0002 J	< 0.00023 U	< 0.00015 U
GNC1-JD06	10	NORM	2/17/2009	< 0.000057 U	< 0.00011 U	< 0.00013 U	< 0.00012 U	< 0.00022 U	< 0.00018 U	< 0.00073 U	< 0.00019 U	< 0.05 UJ	< 0.00015 U	< 0.00023 U	< 0.00015 U
GNC1-JD07	0	NORM	1/30/2009	< 0.000057 U	< 0.00011 U	< 0.00013 U	< 0.00012 U	< 0.00022 U	< 0.00018 U	0.0031 J	< 0.00019 U	< 0.05 UJ	< 0.000061 U	< 0.00023 U	< 0.00015 U

TABLE B-10
SOIL VOLATILE ORGANIC COMPOUNDS (VOCS) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Volatile Organic Compounds (VOCs)											
				cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Cymene (Isopropyltoluene)	Dibromochloromethane	Dibromochloropropane	Dibromomethane	Dichloromethane (Methylene chloride)	Dimethyldisulfide	Ethanol	Ethylbenzene	Freon-11 (Trichlorofluoromethane)	Freon-113 (1,1,2-Trifluoro-1,2,2-trichloroethane)
GNC1-JD07	10	NORM	1/30/2009	< 0.000057 U	< 0.00011 U	< 0.00013 U	< 0.00013 U	< 0.00022 U	< 0.00018 U	0.0028 J	< 0.00019 U	< 0.05 UJ	< 0.000062 U	< 0.00023 U	< 0.00015 U
GNC1-JD08	0	NORM	1/30/2009	< 0.000055 U	< 0.0001 U	< 0.00013 U	< 0.00012 U	< 0.00022 U	< 0.00017 U	0.016	< 0.00018 U	< 0.049 UJ	< 0.00006 U	< 0.00022 U	< 0.00015 U
GNC1-JD08	10	NORM	1/30/2009	< 0.000057 U	< 0.00011 U	< 0.00013 U	< 0.00013 U	< 0.00022 U	< 0.00018 U	0.015	< 0.00019 U	< 0.05 UJ	0.000062 J	< 0.00023 U	< 0.00015 U
GNC1-JD09	0	NORM	1/30/2009	< 0.000057 U	< 0.00011 U	< 0.00013 U	< 0.00012 U	< 0.00022 U	< 0.00017 U	0.017	< 0.00018 U	< 0.05 UJ	< 0.000061 U	< 0.00023 U	< 0.00015 U
GNC1-JD09	0	FD	1/30/2009	< 0.000058 U	< 0.00011 U	< 0.00013 U	< 0.00013 U	< 0.00023 U	< 0.00018 U	0.016	< 0.00019 U	< 0.051 UJ	< 0.000062 U	< 0.00023 U	< 0.00016 U
GNC1-JD09	10	NORM	1/30/2009	< 0.000058 U	< 0.00011 U	< 0.00013 U	< 0.00013 U	< 0.00023 U	< 0.00018 U	0.014	< 0.00019 U	< 0.051 UJ	< 0.000062 U	< 0.00023 U	< 0.00015 U
GNC1-JD10	0	NORM	2/9/2009	< 0.000058 U	< 0.00011 U	< 0.00013 U	< 0.00013 U	< 0.00023 U	< 0.00018 U	< 0.0026 U	< 0.00019 U	< 0.051 UJ	< 0.000062 U	< 0.00023 U	< 0.00015 U
GNC1-JD10	11	NORM	2/9/2009	< 0.000057 U	< 0.00011 U	< 0.00013 U	< 0.00013 U	< 0.00022 U	< 0.00018 U	< 0.0036 U	< 0.00019 U	< 0.05 UJ	< 0.000062 U	< 0.00023 U	< 0.00015 U
GNC1-JD11	0	NORM	2/9/2009	< 0.000059 U	< 0.00011 U	< 0.00014 U	< 0.00013 U	< 0.00023 U	< 0.00018 U	< 0.0038 U	< 0.00019 U	< 0.052 UJ	< 0.000064 U	< 0.00024 U	< 0.00016 U
GNC1-JD11	11	NORM	2/9/2009	< 0.00006 U	< 0.00011 U	< 0.00014 U	< 0.00013 U	< 0.00024 U	< 0.00019 U	< 0.0053 U	< 0.0002 U	< 0.053 UJ	< 0.000065 U	< 0.00024 U	< 0.00016 U
GNC1-JS09	0	NORM	1/30/2009	< 0.000056 U	< 0.0001 U	< 0.00013 U	< 0.00012 U	< 0.00022 U	< 0.00017 U	0.028 J	< 0.00018 U	< 0.049 UJ	< 0.00006 U	< 0.00023 U	< 0.00015 U
GNC1-JS09	0	FD	1/30/2009	< 0.000055 U	< 0.0001 U	< 0.00013 U	< 0.00012 U	< 0.00021 U	< 0.00017 U	0.0027 J	< 0.00018 U	< 0.048 UJ	< 0.000059 U	< 0.00022 U	< 0.00015 U
GNC1-JS09	10	NORM	1/30/2009	< 0.000057 U	< 0.00011 U	< 0.00013 U	< 0.00013 U	< 0.00022 U	< 0.00018 U	0.0033 J	< 0.00019 U	< 0.05 UJ	< 0.000062 U	< 0.00023 U	< 0.00015 U
GNC1-JS10	0	NORM	1/30/2009	< 0.000057 U	< 0.00011 U	< 0.00013 U	< 0.00012 U	< 0.00022 U	< 0.00018 U	0.0041 J	< 0.00019 U	< 0.05 UJ	< 0.000061 U	< 0.00023 U	< 0.00015 U
GNC1-JS10	10	NORM	1/30/2009	< 0.000057 U	< 0.0001 U	< 0.00013 U	< 0.00012 U	< 0.00022 U	< 0.00017 U	0.0046 J	< 0.00018 U	< 0.05 UJ	0.000062 J	< 0.00023 U	< 0.00015 U
GNC1-JS11	0	NORM	1/29/2009	< 0.000056 U	< 0.0001 U	< 0.00013 UJ	< 0.00012 U	< 0.00022 UJ	< 0.00017 U	< 0.0016 U	< 0.00018 U	< 0.049 UJ	< 0.00006 U	< 0.00023 U	< 0.00015 U
GNC1-JS11	0	FD	1/29/2009	< 0.000056 U	< 0.0001 U	< 0.00013 UJ	< 0.00012 UJ	< 0.00022 UJ	< 0.00017 U	< 0.003 U	< 0.00018 UJ	< 0.049 UJ	< 0.00006 UJ	< 0.00023 U	< 0.00015 U
GNC1-JS11	10	NORM	1/29/2009	< 0.000057 U	< 0.0001 U	< 0.00013 U	< 0.00012 U	< 0.00022 U	< 0.00017 U	< 0.0025 U	< 0.00018 U	< 0.05 UJ	< 0.000061 U	< 0.00023 U	< 0.00015 U

All units in mg/kg.
-- = no sample data.

TABLE B-10
SOIL VOLATILE ORGANIC COMPOUNDS (VOCS) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

				Volatile Organic Compounds (VOCs)												
Sample ID	**Depth (ft bgs)**	**Sample Type**	**Sample Date**	Freon-12 (Dichloro-difluoromethane)	Heptane	Isopropylbenzene	m,p-Xylene	Methyl ethyl ketone (2-Butanone)	Methyl iodide	MTBE (Methyl tert-butyl ether)	n-Butylbenzene	Nonanal	n-Propylbenzene	o-Xylene	sec-Butylbenzene
GNC1-BD19	0	NORM	1/28/2009	< 0.00032 U	< 0.00018 U	< 0.00011 U	< 0.00018 U	< 0.00096 U	< 0.00014 UJ	< 0.000098 U	< 0.0002 U	< 0.00052 U	< 0.00012 U	< 0.000084 U	< 0.00012 U
GNC1-BD19	10	NORM	1/28/2009	< 0.00031 U	< 0.00017 U	< 0.00011 U	< 0.00018 U	< 0.00092 U	< 0.00013 UJ	< 0.000095 U	< 0.00019 U	< 0.0005 U	< 0.00012 U	< 0.000081 U	< 0.00011 U
GNC1-BD20	0	NORM	1/30/2009	< 0.00029 UJ	< 0.00016 U	< 0.0001 U	< 0.00017 U	< 0.00088 U	< 0.00013 U	< 0.00009 U	< 0.00018 U	< 0.00047 U	< 0.00011 U	< 0.000077 U	< 0.00011 U
GNC1-BD20	10	NORM	1/30/2009	< 0.0003 UJ	< 0.00017 U	< 0.00011 U	< 0.00017 U	< 0.00091 U	< 0.00013 U	< 0.000093 U	< 0.00019 U	< 0.00049 U	< 0.00011 U	< 0.00008 U	< 0.00011 U
GNC1-BD21	0	NORM	1/30/2009	< 0.00031 UJ	< 0.00017 U	< 0.00011 U	< 0.00018 U	< 0.00092 U	< 0.00013 U	< 0.000094 U	< 0.00019 U	< 0.00049 U	< 0.00012 U	< 0.00008 U	< 0.00011 U
GNC1-BD21	10	NORM	1/30/2009	< 0.0003 UJ	< 0.00017 U	< 0.00011 U	< 0.00017 U	< 0.00091 U	< 0.00013 U	< 0.000093 U	< 0.00019 U	< 0.00049 U	< 0.00011 U	< 0.00008 U	< 0.00011 U
GNC1-BE19	0	NORM	2/5/2009	< 0.0003 U	< 0.00017 U	< 0.00011 U	< 0.00017 U	< 0.0009 U	< 0.00013 U	< 0.000092 U	< 0.00019 UJ	< 0.00048 UJ	< 0.00011 UJ	< 0.000079 U	< 0.00011 UJ
GNC1-BE19	10	NORM	2/5/2009	< 0.00031 U	< 0.00017 U	< 0.00011 U	< 0.00018 U	< 0.00092 U	< 0.00013 U	< 0.000094 U	< 0.00019 U	< 0.0005 U	< 0.00012 U	< 0.000081 U	< 0.00011 U
GNC1-BE20	0	NORM	2/6/2009	< 0.0003 U	< 0.00017 U	< 0.00011 U	< 0.00017 U	< 0.00091 U	< 0.00013 U	< 0.000093 U	< 0.00019 UJ	< 0.00049 UJ	< 0.00011 UJ	< 0.00008 U	< 0.00011 UJ
GNC1-BE20	0	FD	2/6/2009	< 0.0003 U	< 0.00017 U	< 0.00011 U	< 0.00017 U	< 0.00091 U	< 0.00013 U	< 0.000093 U	< 0.00019 UJ	< 0.00049 UJ	< 0.00011 UJ	< 0.00008 U	< 0.00011 UJ
GNC1-BE20	10	NORM	2/6/2009	< 0.00032 U	< 0.00018 U	< 0.00011 U	< 0.00018 U	< 0.00095 U	< 0.00014 U	< 0.000097 U	< 0.0002 U	0.0008 J	< 0.00012 U	< 0.000083 U	< 0.00012 U
GNC1-BE21	0	NORM	2/6/2009	< 0.0003 U	< 0.00017 U	< 0.00011 U	< 0.00018 U	< 0.00091 U	< 0.00013 U	< 0.000094 U	< 0.00019 U	< 0.00049 U	< 0.00012 U	< 0.00008 U	< 0.00011 U
GNC1-BE21	10	NORM	2/6/2009	< 0.00031 U	< 0.00017 U	< 0.00011 U	< 0.00018 U	< 0.00093 U	< 0.00013 U	< 0.000095 U	< 0.00019 U	0.00098 J	< 0.00012 U	< 0.000081 U	< 0.00011 U
GNC1-BE22	0	NORM	2/5/2009	< 0.0003 U	< 0.00017 U	< 0.00011 U	< 0.00017 U	< 0.0009 U	< 0.00013 U	< 0.000092 U	< 0.00019 UJ	< 0.00049 UJ	< 0.00011 UJ	< 0.000079 U	< 0.00011 UJ
GNC1-BE22	10	NORM	2/5/2009	< 0.0003 U	< 0.00017 U	< 0.00011 U	< 0.00017 U	< 0.00091 U	< 0.00013 U	< 0.000094 U	< 0.00019 U	< 0.00049 U	< 0.00011 U	< 0.00008 U	< 0.00011 U
GNC1-BF19	0	NORM	2/5/2009	< 0.0003 U	< 0.00017 U	< 0.00011 U	< 0.00017 U	< 0.00091 U	< 0.00013 U	< 0.000094 U	< 0.00019 U	< 0.00049 U	< 0.00011 U	< 0.00008 U	< 0.00011 U
GNC1-BF19	11	NORM	2/5/2009	< 0.00031 U	< 0.00017 U	< 0.00011 U	< 0.00018 U	< 0.00092 U	< 0.00013 U	< 0.000094 U	< 0.00019 U	< 0.00049 U	< 0.00012 U	< 0.00008 U	< 0.00011 U
GNC1-BF20	0	NORM	2/6/2009	< 0.0003 U	< 0.00017 U	< 0.00011 U	< 0.00017 U	< 0.00091 U	< 0.00013 U	< 0.000093 U	< 0.00019 U	< 0.00049 U	< 0.00011 U	< 0.000079 U	< 0.00011 U
GNC1-BF20	10	NORM	2/6/2009	< 0.00033 U	< 0.00018 U	< 0.00012 U	< 0.00019 U	< 0.00098 U	< 0.00014 U	< 0.0001 U	< 0.0002 U	< 0.00053 U	< 0.00012 U	< 0.000086 U	< 0.00012 U
GNC1-BF21	0	NORM	2/5/2009	< 0.0003 U	< 0.00017 U	< 0.00011 U	< 0.00017 U	< 0.00091 U	< 0.00013 U	< 0.000093 U	< 0.00019 U	< 0.00049 U	< 0.00011 U	< 0.00008 U	< 0.00011 U
GNC1-BF21	10	NORM	2/5/2009	< 0.00031 U	< 0.00017 U	< 0.00011 U	< 0.00018 U	< 0.00092 U	< 0.00013 U	< 0.000094 U	< 0.00019 U	< 0.00049 U	< 0.00012 U	< 0.00008 U	< 0.00011 U
GNC1-BF22	0	NORM	2/6/2009	< 0.0003 U	< 0.00017 U	< 0.00011 U	< 0.00017 U	< 0.0009 U	< 0.00013 U	< 0.000092 U	< 0.00019 UJ	< 0.00049 UJ	< 0.00011 UJ	< 0.000079 U	< 0.00011 UJ
GNC1-BF22	10	NORM	2/6/2009	< 0.00031 U	< 0.00017 U	< 0.00011 U	< 0.00018 U	< 0.00092 U	< 0.00013 U	< 0.000094 U	< 0.00019 U	< 0.00049 U	< 0.00012 U	< 0.00008 U	< 0.00011 U
GNC1-BG19	0	NORM	2/5/2009	< 0.00031 U	< 0.00017 U	< 0.00011 U	< 0.00018 U	< 0.00092 U	< 0.00013 U	< 0.000094 U	< 0.00019 UJ	< 0.00049 UJ	< 0.00012 UJ	< 0.00008 U	< 0.00011 UJ
GNC1-BG19	10	NORM	2/5/2009	< 0.0003 U	< 0.00017 U	< 0.00011 U	< 0.00017 U	< 0.00091 U	< 0.00013 U	< 0.000094 U	< 0.00019 U	< 0.00049 U	< 0.00011 U	< 0.00008 U	< 0.00011 U
GNC1-BG20	0	NORM	2/5/2009	< 0.0003 U	< 0.00017 U	< 0.00011 U	< 0.00017 U	< 0.0009 U	< 0.00013 U	< 0.000092 U	< 0.00019 UJ	< 0.00048 UJ	< 0.00011 UJ	< 0.000079 U	< 0.00011 UJ
GNC1-BG20	0	FD	2/5/2009	< 0.0003 U	< 0.00017 U	< 0.00011 U	< 0.00017 U	< 0.0009 U	< 0.00013 U	< 0.000092 U	< 0.00019 UJ	< 0.00048 UJ	< 0.00011 UJ	< 0.000079 U	< 0.00011 UJ
GNC1-BG20	10	NORM	2/5/2009	< 0.0003 U	< 0.00017 U	< 0.00011 U	< 0.00017 U	< 0.00089 U	< 0.00013 U	< 0.000092 U	< 0.00019 U	< 0.00048 U	< 0.00011 U	< 0.000078 U	< 0.00011 U
GNC1-BG21	0	NORM	2/5/2009	< 0.0003 U	< 0.00017 U	< 0.00011 U	< 0.00017 U	< 0.0009 U	< 0.00013 U	< 0.000092 U	< 0.00019 U	< 0.00048 U	< 0.00011 U	< 0.000079 U	< 0.00011 U
GNC1-BG21	10	NORM	2/5/2009	< 0.0003 U	< 0.00017 U	< 0.00011 U	< 0.00017 U	< 0.00091 U	< 0.00013 U	< 0.000094 U	< 0.00019 U	< 0.00049 U	< 0.00011 U	< 0.00008 U	< 0.00011 U
GNC1-BG22	0	NORM	2/5/2009	< 0.0003 U	< 0.00017 U	< 0.00011 U	< 0.00017 U	< 0.0009 U	< 0.00013 U	< 0.000093 U	< 0.00019 U	< 0.00049 U	< 0.00011 U	< 0.000079 U	< 0.00011 U
GNC1-BG22	10	NORM	2/5/2009	< 0.0003 U	< 0.00017 U	< 0.00011 U	< 0.00017 U	< 0.00091 U	< 0.00013 U	< 0.000093 U	< 0.00019 U	< 0.00049 U	< 0.00011 U	< 0.000079 U	< 0.00011 U
GNC1-JD06	0	NORM	2/13/2009	< 0.00031 U	< 0.00017 U	< 0.00011 U	< 0.00018 U	< 0.00092 U	< 0.00013 U	< 0.000094 U	< 0.00019 U	< 0.0005 U	0.00017 J	< 0.00008 U	< 0.00011 U
GNC1-JD06	10	NORM	2/17/2009	< 0.00031 U	< 0.00017 U	< 0.00011 U	< 0.00018 U	< 0.00092 U	< 0.00013 U	< 0.000094 U	< 0.00019 U	< 0.0005 U	< 0.00012 U	< 0.00008 U	< 0.00011 U
GNC1-JD07	0	NORM	1/30/2009	< 0.00031 UJ	< 0.00017 U	< 0.00011 U	< 0.00018 U	< 0.00092 U	< 0.00013 U	< 0.000094 U	< 0.00019 U	< 0.0005 U	< 0.00012 U	< 0.00008 U	< 0.00011 U

TABLE B-10
SOIL VOLATILE ORGANIC COMPOUNDS (VOCS) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Volatile Organic Compounds (VOCs)											
				Freon-12 (Dichloro-difluoromethane)	Heptane	Isopropylbenzene	m,p-Xylene	Methyl ethyl ketone (2-Butanone)	Methyl iodide	MTBE (Methyl tert-butyl ether)	n-Butylbenzene	Nonanal	n-Propylbenzene	o-Xylene	sec-Butylbenzene
GNC1-JD07	10	NORM	1/30/2009	< 0.00031 UJ	< 0.00017 U	< 0.00011 U	< 0.00018 U	< 0.00092 U	< 0.00013 U	< 0.000095 U	< 0.00019 U	< 0.0005 U	< 0.00012 U	< 0.000081 U	< 0.00011 U
GNC1-JD08	0	NORM	1/30/2009	< 0.0003 UJ	< 0.00017 U	< 0.00011 U	< 0.00017 U	< 0.00089 U	< 0.00013 U	< 0.000091 U	< 0.00018 U	< 0.00048 U	< 0.00011 U	< 0.000078 U	< 0.00011 U
GNC1-JD08	10	NORM	1/30/2009	< 0.00031 UJ	< 0.00017 U	< 0.00011 U	< 0.00018 U	< 0.00092 U	< 0.00013 U	< 0.000094 U	< 0.00019 U	< 0.0005 U	< 0.00012 U	< 0.000081 U	< 0.00011 U
GNC1-JD09	0	NORM	1/30/2009	< 0.0003 UJ	< 0.00017 U	< 0.00011 U	< 0.00017 U	< 0.00091 U	< 0.00013 U	< 0.000093 U	< 0.00019 U	< 0.00049 U	< 0.00011 U	< 0.00008 U	< 0.00011 U
GNC1-JD09	0	FD	1/30/2009	< 0.00031 UJ	< 0.00018 U	< 0.00011 U	< 0.00018 U	< 0.00093 U	< 0.00013 U	< 0.000096 U	< 0.00019 U	< 0.0005 U	< 0.00012 U	< 0.000082 U	< 0.00011 U
GNC1-JD09	10	NORM	1/30/2009	< 0.00031 UJ	< 0.00017 U	< 0.00011 U	< 0.00018 U	< 0.00093 U	< 0.00013 U	< 0.000095 U	< 0.00019 U	< 0.0005 U	< 0.00012 U	< 0.000081 U	< 0.00011 U
GNC1-JD10	0	NORM	2/9/2009	< 0.00031 U	< 0.00017 U	< 0.00011 U	< 0.00018 U	< 0.00093 UJ	< 0.00013 U	< 0.000095 U	< 0.00019 U	< 0.0005 U	< 0.00012 U	< 0.000081 U	< 0.00011 U
GNC1-JD10	11	NORM	2/9/2009	< 0.00031 U	< 0.00017 U	< 0.00011 U	< 0.00018 U	< 0.00092 UJ	< 0.00013 U	< 0.000095 U	< 0.00019 U	< 0.0005 U	< 0.00012 U	< 0.000081 U	< 0.00011 U
GNC1-JD11	0	NORM	2/9/2009	< 0.00032 U	< 0.00018 U	< 0.00011 U	< 0.00018 U	< 0.00095 UJ	< 0.00014 U	< 0.000098 U	< 0.0002 U	< 0.00051 U	< 0.00012 U	< 0.000084 U	< 0.00012 U
GNC1-JD11	11	NORM	2/9/2009	< 0.00032 U	< 0.00018 U	< 0.00012 U	< 0.00019 U	< 0.00097 UJ	< 0.00014 U	< 0.0001 U	< 0.0002 U	< 0.00052 U	< 0.00012 U	< 0.000085 U	< 0.00012 U
GNC1-JS09	0	NORM	1/30/2009	< 0.0003 UJ	< 0.00017 U	< 0.00011 U	< 0.00017 U	< 0.0009 U	< 0.00013 U	< 0.000092 U	< 0.00019 U	< 0.00049 U	< 0.00011 U	< 0.000079 U	< 0.00011 U
GNC1-JS09	0	FD	1/30/2009	< 0.00029 UJ	< 0.00016 U	< 0.0001 U	< 0.00017 U	< 0.00088 U	< 0.00013 U	< 0.00009 U	< 0.00018 U	< 0.00047 U	< 0.00011 U	< 0.000077 U	< 0.00011 U
GNC1-JS09	10	NORM	1/30/2009	< 0.00031 UJ	< 0.00017 U	< 0.00011 U	< 0.00018 U	< 0.00092 U	< 0.00013 U	< 0.000095 U	< 0.00019 U	< 0.0005 U	< 0.00012 U	< 0.000081 U	< 0.00011 U
GNC1-JS10	0	NORM	1/30/2009	< 0.00031 UJ	< 0.00017 U	< 0.00011 U	< 0.00018 U	< 0.00092 U	< 0.00013 U	< 0.000094 U	< 0.00019 U	< 0.0005 U	< 0.00012 U	< 0.00008 U	< 0.00011 U
GNC1-JS10	10	NORM	1/30/2009	< 0.0003 UJ	< 0.00017 U	< 0.00011 U	< 0.00017 U	< 0.00091 U	< 0.00013 U	< 0.000093 U	< 0.00019 U	< 0.00049 U	< 0.00011 U	< 0.00008 U	< 0.00011 U
GNC1-JS11	0	NORM	1/29/2009	< 0.0003 U	< 0.00017 U	< 0.00011 U	< 0.00017 U	< 0.0009 U	< 0.00013 UJ	< 0.000092 U	< 0.00019 UJ	< 0.00048 UJ	< 0.00011 UJ	< 0.000079 U	< 0.00011 UJ
GNC1-JS11	0	FD	1/29/2009	< 0.0003 U	< 0.00017 U	< 0.00011 UJ	< 0.00017 UJ	< 0.0009 U	< 0.00013 UJ	< 0.000092 U	< 0.00019 UJ	< 0.00048 UJ	< 0.00011 UJ	< 0.000079 U	< 0.00011 UJ
GNC1-JS11	10	NORM	1/29/2009	< 0.0003 U	< 0.00017 U	< 0.00011 U	< 0.00017 U	< 0.00091 U	< 0.00013 UJ	< 0.000093 U	< 0.00019 U	< 0.00049 U	< 0.00011 U	< 0.00008 U	< 0.00011 U

All units in mg/kg.
-- = no sample data.

TABLE B-10
SOIL VOLATILE ORGANIC COMPOUNDS (VOCs) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Volatile Organic Compounds (VOCs)									
				Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloro-propene	Trichloroethene	Vinyl acetate	Vinyl chloride	Xylenes (total)
GNC1-BD19	0	NORM	1/28/2009	< 0.00019 U	< 0.00011 U	< 0.000096 U	< 0.00035 U	< 0.000099 U	< 0.00011 U	< 0.00011 U	< 0.00026 U	< 0.00012 U	< 0.00025 U
GNC1-BD19	10	NORM	1/28/2009	< 0.00018 U	< 0.00011 U	< 0.000093 U	< 0.00034 U	< 0.000096 U	< 0.00011 U	< 0.00011 U	< 0.00026 U	< 0.00012 U	< 0.00025 U
GNC1-BD20	0	NORM	1/30/2009	< 0.00021 U	< 0.0001 U	< 0.000088 U	< 0.00033 U	< 0.000091 U	< 0.0001 U	< 0.00011 U	< 0.00024 U	< 0.00011 U	< 0.00023 U
GNC1-BD20	10	NORM	1/30/2009	< 0.00019 U	< 0.00011 U	< 0.000091 U	< 0.00034 U	< 0.000095 U	< 0.00011 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-BD21	0	NORM	1/30/2009	< 0.0002 U	< 0.00011 U	< 0.000092 U	< 0.00034 U	< 0.000095 U	< 0.00011 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-BD21	10	NORM	1/30/2009	< 0.0002 U	< 0.0001 U	< 0.000091 U	< 0.00034 U	< 0.000094 U	< 0.0001 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-BE19	0	NORM	2/5/2009	< 0.00018 U	< 0.0001 UJ	< 0.00009 U	< 0.00033 U	< 0.000093 U	< 0.0001 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-BE19	10	NORM	2/5/2009	< 0.00018 U	< 0.00011 U	< 0.000092 U	< 0.00034 U	< 0.000096 U	< 0.00011 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00025 U
GNC1-BE20	0	NORM	2/6/2009	< 0.00018 U	< 0.0001 UJ	< 0.000091 U	< 0.00034 U	< 0.000094 U	< 0.0001 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-BE20	0	FD	2/6/2009	< 0.00018 U	< 0.0001 UJ	< 0.000091 U	0.00036 J+	< 0.000094 U	< 0.0001 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-BE20	10	NORM	2/6/2009	< 0.00019 U	< 0.00011 U	< 0.000095 U	< 0.00035 U	< 0.000098 U	< 0.00011 U	< 0.00011 U	< 0.00026 U	< 0.00012 U	< 0.00025 U
GNC1-BE21	0	NORM	2/6/2009	< 0.00018 U	< 0.00011 U	< 0.000092 U	< 0.00034 U	< 0.000095 U	< 0.00011 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-BE21	10	NORM	2/6/2009	< 0.00019 U	< 0.00011 U	< 0.000093 U	< 0.00034 U	< 0.000096 U	< 0.00011 U	< 0.00011 U	< 0.00026 U	< 0.00012 U	< 0.00025 U
GNC1-BE22	0	NORM	2/5/2009	< 0.00018 U	< 0.0001 UJ	< 0.00009 U	< 0.00033 U	< 0.000093 U	< 0.0001 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-BE22	10	NORM	2/5/2009	< 0.00018 U	< 0.00011 U	< 0.000092 U	< 0.00034 U	< 0.000095 U	< 0.00011 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-BF19	0	NORM	2/5/2009	< 0.00018 U	< 0.00011 U	< 0.000092 U	< 0.00034 U	< 0.000095 U	< 0.00011 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-BF19	11	NORM	2/5/2009	< 0.00018 U	< 0.00011 U	< 0.000092 U	< 0.00034 U	< 0.000095 U	< 0.00011 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-BF20	0	NORM	2/6/2009	< 0.00018 U	< 0.0001 U	< 0.000091 U	< 0.00034 U	< 0.000094 U	< 0.0001 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-BF20	10	NORM	2/6/2009	< 0.0002 U	< 0.00011 U	< 0.000098 U	< 0.00036 U	< 0.0001 U	< 0.00011 U	< 0.00012 U	< 0.00027 U	< 0.00013 U	< 0.00026 U
GNC1-BF21	0	NORM	2/5/2009	< 0.00018 U	< 0.0001 U	< 0.000091 U	< 0.00034 U	< 0.000094 U	< 0.0001 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-BF21	10	NORM	2/5/2009	< 0.00018 U	< 0.00011 U	< 0.000092 U	< 0.00034 U	< 0.000095 U	< 0.00011 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-BF22	0	NORM	2/6/2009	< 0.00018 U	< 0.0001 UJ	< 0.00009 U	< 0.00033 U	< 0.000093 U	< 0.0001 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-BF22	10	NORM	2/6/2009	< 0.00018 U	< 0.00011 U	< 0.000092 U	< 0.00034 U	< 0.000095 U	< 0.00011 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-BG19	0	NORM	2/5/2009	< 0.00018 U	< 0.00011 UJ	< 0.000092 U	< 0.00034 U	< 0.000095 U	< 0.00011 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-BG19	10	NORM	2/5/2009	< 0.00018 U	< 0.00011 U	< 0.000091 U	< 0.00034 U	< 0.000095 U	< 0.00011 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-BG20	0	NORM	2/5/2009	< 0.0002 U	< 0.0001 UJ	< 0.00009 U	< 0.00033 U	< 0.000093 U	< 0.0001 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-BG20	0	FD	2/5/2009	< 0.00021 U	< 0.0001 UJ	< 0.00009 U	< 0.00033 U	< 0.000093 U	< 0.0001 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-BG20	10	NORM	2/5/2009	< 0.00018 U	< 0.0001 U	< 0.00009 U	< 0.00033 U	< 0.000093 U	< 0.0001 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-BG21	0	NORM	2/5/2009	< 0.00018 U	< 0.0001 U	< 0.00009 U	< 0.00033 U	< 0.000093 U	< 0.0001 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-BG21	10	NORM	2/5/2009	< 0.00018 U	< 0.00011 U	< 0.000092 U	< 0.00034 U	< 0.000095 U	< 0.00011 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-BG22	0	NORM	2/5/2009	< 0.00018 U	< 0.0001 U	< 0.000091 U	< 0.00034 U	< 0.000094 U	< 0.0001 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-BG22	10	NORM	2/5/2009	< 0.00018 U	< 0.0001 U	< 0.000091 U	< 0.00034 U	< 0.000094 U	< 0.0001 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-JD06	0	NORM	2/13/2009	< 0.00027 U	< 0.00011 U	< 0.000092 U	< 0.00034 U	< 0.000095 U	< 0.00011 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-JD06	10	NORM	2/17/2009	< 0.00022 U	< 0.00011 U	< 0.000092 U	< 0.00034 U	< 0.000095 U	< 0.00011 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-JD07	0	NORM	1/30/2009	< 0.00027 U	< 0.00011 U	< 0.000092 U	< 0.00034 U	< 0.000095 U	< 0.00011 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U

TABLE B-10
SOIL VOLATILE ORGANIC COMPOUNDS (VOCS) DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Depth (ft bgs)	Sample Type	Sample Date	Volatile Organic Compounds (VOCs)									
				Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloro-propene	Trichloroethene	Vinyl acetate	Vinyl chloride	Xylenes (total)
GNC1-JD07	10	NORM	1/30/2009	< 0.00022 U	< 0.00011 U	< 0.000092 U	< 0.00034 U	< 0.000096 U	< 0.00011 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00025 U
GNC1-JD08	0	NORM	1/30/2009	< 0.00019 U	< 0.0001 U	< 0.000089 U	< 0.00033 U	< 0.000092 U	< 0.0001 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-JD08	10	NORM	1/30/2009	< 0.00019 U	< 0.00011 U	< 0.000092 U	< 0.00034 U	< 0.000095 U	< 0.00011 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-JD09	0	NORM	1/30/2009	< 0.00021 U	< 0.00011 U	< 0.000091 U	< 0.00034 U	< 0.000095 U	< 0.00011 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-JD09	0	FD	1/30/2009	< 0.00019 U	< 0.00011 U	< 0.000093 U	< 0.00035 U	< 0.000097 U	< 0.00011 U	< 0.00011 U	< 0.00026 U	< 0.00012 U	< 0.00025 U
GNC1-JD09	10	NORM	1/30/2009	< 0.00018 U	< 0.00011 U	< 0.000093 U	< 0.00034 U	< 0.000096 U	< 0.00011 U	< 0.00011 U	< 0.00026 U	< 0.00012 U	< 0.00025 U
GNC1-JD10	0	NORM	2/9/2009	< 0.00018 U	< 0.00011 U	< 0.000093 U	< 0.00034 U	< 0.000096 U	< 0.00011 U	< 0.00011 U	< 0.00026 U	< 0.00012 U	< 0.00025 U
GNC1-JD10	11	NORM	2/9/2009	< 0.00018 U	< 0.00011 U	< 0.000092 U	< 0.00034 U	< 0.000096 U	< 0.00011 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00025 U
GNC1-JD11	0	NORM	2/9/2009	< 0.00019 U	< 0.00011 U	< 0.000096 U	< 0.00035 U	< 0.000099 U	< 0.00011 U	< 0.00011 U	< 0.00026 U	< 0.00012 U	< 0.00025 U
GNC1-JD11	11	NORM	2/9/2009	< 0.00019 U	< 0.00011 U	< 0.000097 U	< 0.00036 U	< 0.0001 U	< 0.00011 U	< 0.00012 U	< 0.00027 U	< 0.00013 U	< 0.00026 U
GNC1-JS09	0	NORM	1/30/2009	< 0.00019 U	< 0.0001 U	< 0.00009 U	< 0.00033 U	< 0.000093 U	< 0.0001 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-JS09	0	FD	1/30/2009	< 0.00026 U	< 0.0001 U	< 0.000088 U	< 0.00033 U	< 0.000091 U	< 0.0001 U	< 0.0001 U	< 0.00024 U	< 0.00011 U	< 0.00023 U
GNC1-JS09	10	NORM	1/30/2009	< 0.00021 U	< 0.00011 U	< 0.000093 U	< 0.00034 U	< 0.000096 U	< 0.00011 U	< 0.00011 U	< 0.00026 U	< 0.00012 U	< 0.00025 U
GNC1-JS10	0	NORM	1/30/2009	< 0.00025 U	< 0.00011 U	< 0.000092 U	< 0.00034 U	< 0.000095 U	< 0.00011 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-JS10	10	NORM	1/30/2009	< 0.00025 U	< 0.0001 U	< 0.000091 U	< 0.00034 U	< 0.000094 U	< 0.0001 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-JS11	0	NORM	1/29/2009	< 0.00018 U	< 0.0001 UJ	< 0.00009 U	< 0.00033 U	< 0.000093 U	< 0.0001 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U
GNC1-JS11	0	FD	1/29/2009	< 0.00018 UJ	< 0.0001 UJ	< 0.00009 UJ	< 0.00033 UJ	< 0.000093 U	< 0.0001 UJ	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 UJ
GNC1-JS11	10	NORM	1/29/2009	< 0.00018 U	< 0.0001 U	< 0.000091 U	< 0.00034 U	< 0.000094 U	< 0.0001 U	< 0.00011 U	< 0.00025 U	< 0.00012 U	< 0.00024 U

All units in mg/kg.
-- = no sample data.

TABLE B-11
SURFACE FLUX DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Sample Type	Sample Date	Analytical Method	Surface Flux											
				1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromoethane	1,2-Dichlorobenzene
GNC1-BE20	NORM	2/11/2009	TO-15	< 0.0158 U	< 0.0142 U	< 0.0181 UJ	< 0.0142 U	< 0.0104 U	< 0.0104 U	< 0.00962 U	< 0.0135 U	< 0.0392 UJ	< 0.0258 U	< 0.0204 U	< 0.0308 UJ
GNC1-BE20	NORM	2/11/2009	TO-15 SIM	--	--	< 0.00181 UJ	< 0.00142 U	--	--	--	< 0.00123 UJ	--	--	< 0.00204 U	< 0.00154 UJ
GNC1-BE21	NORM	2/11/2009	TO-15	< 0.0154 U	< 0.0138 U	< 0.0177 UJ	< 0.0138 U	< 0.0104 U	< 0.01 U	< 0.00962 U	< 0.0131 U	< 0.0385 UJ	0.0254 J	< 0.02 U	< 0.0304 UJ
GNC1-BE21	NORM	2/11/2009	TO-15 SIM	--	--	< 0.00177 UJ	< 0.00138 U	--	--	--	< 0.00123 UJ	--	--	0.00885 J	< 0.00273 UJ
GNC1-BE22	NORM	2/11/2009	TO-15	< 0.0158 U	< 0.0142 U	< 0.0181 UJ	< 0.0142 U	< 0.0104 U	< 0.0104 U	< 0.00962 U	< 0.0135 U	< 0.0392 UJ	< 0.0258 U	< 0.0204 U	< 0.0308 UJ
GNC1-BE22	NORM	2/11/2009	TO-15 SIM	--	--	< 0.00181 UJ	< 0.00142 UJ	--	--	--	< 0.00123 UJ	--	--	< 0.00408 UJ	0.00165 J
GNC1-BF19	NORM	2/11/2009	TO-15	< 0.0158 U	< 0.0142 U	< 0.0181 UJ	< 0.0142 U	< 0.0104 U	< 0.0104 U	< 0.00962 U	< 0.0135 UJ	< 0.0392 UJ	< 0.0258 U	< 0.0204 UJ	< 0.0308 UJ
GNC1-BF19	NORM	2/11/2009	TO-15 SIM	--	--	< 0.00181 UJ	< 0.00142 UJ	--	--	--	< 0.00123 UJ	--	--	< 0.00204 UJ	0.00319 J
GNC1-BF20	NORM	2/11/2009	TO-15	< 0.0162 U	< 0.0146 U	< 0.0185 UJ	< 0.0146 U	< 0.0108 U	< 0.0108 U	< 0.01 U	< 0.0138 U	< 0.0408 UJ	< 0.0265 U	< 0.0212 U	< 0.0319 UJ
GNC1-BF20	NORM	2/11/2009	TO-15 SIM	--	--	< 0.00185 UJ	< 0.00146 UJ	--	--	--	< 0.00127 UJ	--	--	< 0.00212 UJ	< 0.00162 UJ
GNC1-BF21	NORM	2/11/2009	TO-15	< 0.0158 U	< 0.0142 U	< 0.0181 UJ	< 0.0142 U	< 0.0104 U	< 0.0104 U	< 0.01 U	< 0.0135 U	< 0.0396 UJ	< 0.0258 U	< 0.0208 U	< 0.0312 UJ
GNC1-BF21	NORM	2/11/2009	TO-15 SIM	--	--	< 0.00181 UJ	< 0.00142 UJ	--	--	--	< 0.00123 UJ	--	--	< 0.00208 UJ	< 0.00154 UJ
GNC1-BF22	NORM	2/11/2009	TO-15	< 0.0162 U	< 0.0146 U	< 0.0185 UJ	< 0.0146 U	< 0.0108 U	< 0.0104 U	< 0.01 U	< 0.0138 U	< 0.0404 UJ	< 0.0265 U	< 0.0212 U	< 0.0319 UJ
GNC1-BF22	NORM	2/11/2009	TO-15 SIM	--	--	< 0.00185 UJ	< 0.00146 U	--	--	--	< 0.00127 UJ	--	--	< 0.00212 U	< 0.00158 UJ
GNC1-BG19	NORM	2/11/2009	TO-15	< 0.0154 UJ	< 0.0142 UJ	< 0.0177 UJ	< 0.0142 UJ	< 0.0104 UJ	< 0.01 UJ	< 0.00962 UJ	< 0.0131 UJ	< 0.0388 UJ	< 0.0254 UJ	< 0.0204 UJ	< 0.0304 UJ
GNC1-BG19	NORM	2/11/2009	TO-15 SIM	--	--	< 0.00177 UJ	< 0.00142 U	--	--	--	< 0.00123 UJ	--	--	< 0.00204 U	< 0.00154 UJ
GNC1-BG20	NORM	2/11/2009	TO-15	< 0.0158 UJ	< 0.0146 UJ	< 0.0181 UJ	< 0.0146 UJ	< 0.0108 UJ	< 0.0104 UJ	< 0.01 UJ	< 0.0135 UJ	< 0.0396 UJ	< 0.0262 UJ	< 0.0208 UJ	< 0.0312 UJ
GNC1-BG20	NORM	2/11/2009	TO-15 SIM	--	--	< 0.00181 UJ	< 0.00146 U	--	--	--	< 0.00127 UJ	--	--	< 0.00208 U	< 0.00158 UJ
GNC1-BG21	NORM	2/11/2009	TO-15	< 0.015 UJ	< 0.0138 UJ	< 0.0173 UJ	< 0.0138 UJ	< 0.01 UJ	< 0.01 UJ	< 0.00962 UJ	< 0.0127 UJ	< 0.0381 UJ	< 0.025 UJ	< 0.02 UJ	< 0.03 UJ
GNC1-BG21	NORM	2/11/2009	TO-15 SIM	--	--	< 0.00173 UJ	< 0.00138 U	--	--	--	< 0.00119 UJ	--	--	< 0.002 U	< 0.0015 UJ
GNC1-BG22	NORM	2/11/2009	TO-15	< 0.0154 UJ	< 0.0138 UJ	< 0.0177 UJ	< 0.0138 UJ	< 0.0104 UJ	< 0.01 UJ	< 0.00962 UJ	< 0.0131 UJ	< 0.0385 UJ	< 0.0254 UJ	< 0.02 UJ	< 0.0304 UJ
GNC1-BG22	NORM	2/11/2009	TO-15 SIM	--	--	< 0.00177 UJ	< 0.00138 U	--	--	--	< 0.00123 UJ	--	--	< 0.002 U	< 0.0015 UJ
GNC1-JD09	NORM	2/11/2009	TO-15	< 0.0154 U	< 0.0138 U	< 0.0177 UJ	< 0.0138 U	< 0.0104 U	< 0.01 U	< 0.00962 U	< 0.0131 U	< 0.0385 UJ	< 0.0254 U	< 0.02 U	< 0.0304 UJ
GNC1-JD09	NORM	2/11/2009	TO-15 SIM	--	--	< 0.00177 UJ	< 0.00138 UJ	--	--	--	< 0.00123 UJ	--	--	< 0.002 UJ	< 0.0015 UJ
GNC1-JS09	NORM	2/12/2009	TO-15	< 0.0231 U	< 0.0212 U	< 0.0265 UJ	< 0.0212 U	< 0.0154 U	< 0.0154 U	< 0.0146 U	< 0.0196 U	< 0.0581 UJ	< 0.0381 U	< 0.0304 U	< 0.0458 U
GNC1-JS09	NORM	2/12/2009	TO-15 SIM	--	--	< 0.00185 UJ	< 0.00146 UJ	--	--	--	< 0.00127 UJ	--	--	< 0.00212 UJ	< 0.00162 UJ
GNC1-JS10	NORM	2/12/2009	TO-15	< 0.0154 U	< 0.0142 U	< 0.0177 UJ	< 0.0142 U	< 0.0104 U	< 0.01 U	< 0.00962 U	< 0.0131 U	< 0.0388 UJ	0.0562 J-	< 0.0204 U	< 0.0304 UJ
GNC1-JS10	NORM	2/12/2009	TO-15 SIM	--	--	< 0.00177 UJ	< 0.00142 UJ	--	--	--	< 0.00123 UJ	--	--	< 0.00204 UJ	< 0.00154 UJ
GNC1-JS11	NORM	2/12/2009	TO-15	< 0.0158 U	< 0.0142 U	< 0.0181 UJ	< 0.0142 U	< 0.0104 U	< 0.0104 U	< 0.00962 U	< 0.0135 U	< 0.0392 UJ	0.0527 J-	< 0.0204 U	< 0.0308 UJ
GNC1-JS11	NORM	2/12/2009	TO-15 SIM	--	--	< 0.00181 UJ	< 0.00142 U	--	--	--	< 0.00123 UJ	--	--	< 0.00204 U	< 0.00154 UJ
GNC1-JS11R	FD	2/12/2009	TO-15	< 0.0154 U	< 0.0142 U	< 0.0177 UJ	< 0.0142 U	< 0.0104 U	< 0.01 U	< 0.00962 U	< 0.0131 U	< 0.0388 UJ	0.0742 J-	< 0.0204 U	< 0.0304 UJ
GNC1-JS11R	FD	2/12/2009	TO-15 SIM	--	--	< 0.00465 UJ	< 0.00442 U	--	--	--	< 0.00123 UJ	--	--	< 0.00969 U	< 0.00231 UJ

All units in $\mu g/m^2,min^{-1}$.
-- = no sample data.

TABLE B-11
SURFACE FLUX DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Sample Type	Sample Date	Analytical Method	Surface Flux											
				1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	1,4-Dioxane	2,2-Dichloropropane	2-Hexanone	2-Methyl-1-propanol	4-Methyl-2-pentanone (MIBK)	Acetone
GNC1-BE20	NORM	2/11/2009	TO-15	< 0.0108 U	< 0.0123 U	< 0.0265 U	< 0.0315 U	< 0.01 U	< 0.0315 U	0.0177 J	< 0.0108 U	0.01 J	< 0.0192 UJ	< 0.00962 U	0.247 J
GNC1-BE20	NORM	2/11/2009	TO-15 SIM	< 0.00108 U	< 0.00123 U	--	< 0.00158 UJ	--	< 0.00158 UJ	--	--	--	--	--	--
GNC1-BE21	NORM	2/11/2009	TO-15	< 0.0104 U	< 0.0119 U	< 0.0262 U	< 0.0308 U	< 0.00962 U	< 0.0308 U	< 0.00808 U	< 0.0108 U	< 0.00923 U	< 0.0188 UJ	< 0.00962 U	0.206 J
GNC1-BE21	NORM	2/11/2009	TO-15 SIM	< 0.00108 U	< 0.00123 U	--	< 0.00331 UJ	--	< 0.00315 UJ	--	--	--	--	--	--
GNC1-BE22	NORM	2/11/2009	TO-15	< 0.0108 U	< 0.0123 U	< 0.0265 U	< 0.0315 U	< 0.01 U	< 0.0315 U	< 0.00808 U	< 0.0108 U	< 0.00923 U	< 0.0192 UJ	< 0.00962 U	0.0273 J
GNC1-BE22	NORM	2/11/2009	TO-15 SIM	0.00196 J	0.00135 J	--	0.00208 J	--	0.00235 J	--	--	--	--	--	--
GNC1-BF19	NORM	2/11/2009	TO-15	< 0.0108 U	< 0.0123 U	< 0.0265 U	< 0.0315 U	< 0.01 U	< 0.0315 U	< 0.00808 U	< 0.0108 UJ	0.0288 J	< 0.0192 UJ	0.0131 J	0.123 J
GNC1-BF19	NORM	2/11/2009	TO-15 SIM	< 0.00108 UJ	< 0.00123 UJ	--	< 0.00158 UJ	--	< 0.00158 UJ	--	--	--	--	--	--
GNC1-BF20	NORM	2/11/2009	TO-15	< 0.0112 U	< 0.0127 U	< 0.0277 U	< 0.0327 U	< 0.0104 U	< 0.0327 U	< 0.00846 U	< 0.0112 U	< 0.00962 U	< 0.02 UJ	< 0.01 U	< 0.00577 UJ
GNC1-BF20	NORM	2/11/2009	TO-15 SIM	< 0.00112 UJ	< 0.00127 UJ	--	< 0.00162 UJ	--	< 0.00162 UJ	--	--	--	--	--	--
GNC1-BF21	NORM	2/11/2009	TO-15	< 0.0108 U	< 0.0123 U	< 0.0269 U	< 0.0315 U	< 0.01 U	< 0.0315 U	< 0.00808 U	< 0.0108 U	< 0.00923 U	< 0.0192 UJ	< 0.00962 U	0.111 J
GNC1-BF21	NORM	2/11/2009	TO-15 SIM	< 0.00108 UJ	< 0.00123 UJ	--	< 0.00158 UJ	--	< 0.00158 UJ	--	--	--	--	--	--
GNC1-BF22	NORM	2/11/2009	TO-15	< 0.0112 U	< 0.0127 U	< 0.0277 U	< 0.0323 U	< 0.01 U	< 0.0323 U	< 0.00846 U	< 0.0112 U	0.0131 J	< 0.0196 UJ	< 0.01 U	0.181 J
GNC1-BF22	NORM	2/11/2009	TO-15 SIM	< 0.00112 U	< 0.00127 U	--	< 0.00162 UJ	--	< 0.00162 UJ	--	--	--	--	--	--
GNC1-BG19	NORM	2/11/2009	TO-15	< 0.0108 UJ	< 0.0119 UJ	< 0.0265 UJ	< 0.0312 UJ	< 0.00962 UJ	< 0.0312 UJ	< 0.00808 UJ	< 0.0108 UJ	< 0.00923 UJ	< 0.0188 UJ	< 0.00962 UJ	0.0477 J
GNC1-BG19	NORM	2/11/2009	TO-15 SIM	< 0.00108 U	< 0.00123 U	--	< 0.00158 UJ	--	< 0.00158 UJ	--	--	--	--	--	--
GNC1-BG20	NORM	2/11/2009	TO-15	< 0.0108 UJ	< 0.0123 UJ	< 0.0269 UJ	< 0.0319 UJ	< 0.01 UJ	< 0.0319 UJ	< 0.00808 UJ	< 0.0108 UJ	< 0.00923 UJ	< 0.0192 UJ	< 0.00962 UJ	< 0.0469 UJ
GNC1-BG20	NORM	2/11/2009	TO-15 SIM	< 0.00108 U	< 0.00127 U	--	< 0.00158 UJ	--	< 0.00158 UJ	--	--	--	--	--	--
GNC1-BG21	NORM	2/11/2009	TO-15	< 0.0104 UJ	< 0.0119 UJ	< 0.0258 UJ	< 0.0304 UJ	< 0.00962 UJ	< 0.0304 UJ	< 0.00769 UJ	< 0.0104 UJ	< 0.00885 UJ	< 0.0185 UJ	< 0.00923 UJ	< 0.0265 UJ
GNC1-BG21	NORM	2/11/2009	TO-15 SIM	< 0.00104 U	< 0.00119 U	--	< 0.00154 UJ	--	< 0.00154 UJ	--	--	--	--	--	--
GNC1-BG22	NORM	2/11/2009	TO-15	< 0.0104 UJ	< 0.0119 UJ	< 0.0262 UJ	< 0.0308 UJ	< 0.00962 UJ	< 0.0308 UJ	< 0.00808 UJ	< 0.0108 UJ	< 0.00923 UJ	< 0.0188 UJ	< 0.00962 UJ	0.0627 J
GNC1-BG22	NORM	2/11/2009	TO-15 SIM	< 0.00108 U	< 0.00123 U	--	< 0.00154 UJ	--	< 0.00154 UJ	--	--	--	--	--	--
GNC1-JD09	NORM	2/11/2009	TO-15	< 0.0104 U	< 0.0119 U	< 0.0262 U	< 0.0308 U	< 0.00962 U	< 0.0308 U	< 0.00808 U	< 0.0108 U	< 0.00923 U	< 0.0188 UJ	< 0.00962 U	< 0.00538 UJ
GNC1-JD09	NORM	2/11/2009	TO-15 SIM	< 0.00108 UJ	< 0.00123 UJ	--	< 0.00154 UJ	--	< 0.00154 UJ	--	--	--	--	--	--
GNC1-JS09	NORM	2/12/2009	TO-15	< 0.0158 U	< 0.0181 U	< 0.0396 U	< 0.0465 U	< 0.0146 U	< 0.0465 U	< 0.0119 U	< 0.0162 U	< 0.0138 U	< 0.0285 UJ	< 0.0142 U	< 0.00808 UJ
GNC1-JS09	NORM	2/12/2009	TO-15 SIM	< 0.00112 UJ	< 0.00127 UJ	--	< 0.00162 UJ	--	< 0.00162 UJ	--	--	--	--	--	--
GNC1-JS10	NORM	2/12/2009	TO-15	< 0.0108 U	< 0.0119 U	< 0.0265 U	< 0.0312 UJ	< 0.00962 U	< 0.0312 UJ	< 0.00808 U	< 0.0108 U	< 0.00923 U	0.0488 J-	< 0.00962 U	< 0.00538 UJ
GNC1-JS10	NORM	2/12/2009	TO-15 SIM	< 0.00108 UJ	< 0.00123 UJ	--	< 0.00158 UJ	--	< 0.00158 UJ	--	--	--	--	--	--
GNC1-JS11	NORM	2/12/2009	TO-15	< 0.0108 U	< 0.0123 U	< 0.0265 U	< 0.0315 UJ	< 0.01 U	< 0.0315 UJ	< 0.00808 U	< 0.0108 U	< 0.00923 U	< 0.0192 UJ	< 0.00962 U	< 0.0858 UJ
GNC1-JS11	NORM	2/12/2009	TO-15 SIM	< 0.00108 U	< 0.00123 U	--	< 0.00158 UJ	--	< 0.00158 UJ	--	--	--	--	--	--
GNC1-JS11R	FD	2/12/2009	TO-15	< 0.0108 U	< 0.0119 U	< 0.0265 U	< 0.0312 UJ	< 0.00962 U	< 0.0312 UJ	< 0.00808 U	< 0.0108 U	< 0.00923 U	< 0.0188 UJ	< 0.00962 U	< 0.00538 UJ
GNC1-JS11R	FD	2/12/2009	TO-15 SIM	< 0.00108 U	< 0.00123 U	--	< 0.00281 UJ	--	< 0.00319 UJ	--	--	--	--	--	--

All units in $\mu g/m^2,min^{-1}$.
-- = no sample data.

TABLE B-11
SURFACE FLUX DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 3 of 6)

Sample ID	Sample Type	Sample Date	Analytical Method	Surface Flux											
				Acetonitrile	Benzene	Benzyl chloride	Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorobromomethane	Chloroethane	Chloroform
GNC1-BE20	NORM	2/11/2009	TO-15	0.0577	< 0.055 U	< 0.0238 UJ	< 0.0138 U	< 0.0246 U	< 0.0104 U	0.0385 J	< 0.0165 U	< 0.0119 U	< 0.0115 U	0.112 J+	< 0.0127 U
GNC1-BE20	NORM	2/11/2009	TO-15 SIM	--	0.00581	< 0.001 UJ	< 0.00115 U	--	--	--	0.0055 J	--	--	--	0.0207
GNC1-BE21	NORM	2/11/2009	TO-15	< 0.0104 U	< 0.0677 UJ	< 0.0235 U	< 0.0135 U	< 0.0242 U	< 0.01 U	< 0.00692 UJ	< 0.0162 U	< 0.0119 U	< 0.0115 U	< 0.00692 U	< 0.0127 U
GNC1-BE21	NORM	2/11/2009	TO-15 SIM	--	0.00912	< 0.001 UJ	< 0.00115 U	--	--	--	0.00881	--	--	--	0.0155
GNC1-BE22	NORM	2/11/2009	TO-15	< 0.0104 U	< 0.0154 UJ	< 0.0238 U	< 0.0138 U	< 0.0246 U	< 0.0104 U	< 0.00692 UJ	< 0.0165 U	< 0.0119 U	< 0.0115 U	< 0.00692 U	< 0.0127 U
GNC1-BE22	NORM	2/11/2009	TO-15 SIM	--	0.00331 J	< 0.001 UJ	< 0.00115 UJ	--	--	--	0.00323 J	--	--	--	0.00773 J
GNC1-BF19	NORM	2/11/2009	TO-15	0.015 J	< 0.0412 U	< 0.0238 UJ	< 0.0138 U	< 0.0246 UJ	< 0.0104 UJ	0.0269 J	< 0.0165 U	< 0.0119 U	< 0.0115 U	< 0.00692 UJ	0.0177 J
GNC1-BF19	NORM	2/11/2009	TO-15 SIM	--	0.00612 J	< 0.001 UJ	< 0.00115 UJ	--	--	--	0.00838 J	--	--	--	0.029 J
GNC1-BF20	NORM	2/11/2009	TO-15	< 0.0108 U	< 0.0569 U	< 0.0246 UJ	< 0.0142 U	< 0.0254 U	< 0.0108 U	< 0.00731 UJ	< 0.0169 U	< 0.0123 U	< 0.0119 U	< 0.00731 U	< 0.0131 U
GNC1-BF20	NORM	2/11/2009	TO-15 SIM	--	0.00431 J	< 0.00104 UJ	< 0.00123 UJ	--	--	--	0.00542 J	--	--	--	0.0275 J
GNC1-BF21	NORM	2/11/2009	TO-15	< 0.0108 U	< 0.0369 U	< 0.0242 UJ	< 0.0138 U	< 0.025 U	< 0.0104 U	< 0.00731 UJ	< 0.0165 U	< 0.0123 U	< 0.0119 U	< 0.00692 U	< 0.0127 U
GNC1-BF21	NORM	2/11/2009	TO-15 SIM	--	0.0162 J	< 0.001 UJ	< 0.00119 UJ	--	--	--	0.00554 J	--	--	--	0.00519 J
GNC1-BF22	NORM	2/11/2009	TO-15	0.0419 J	< 0.0769 U	< 0.0246 UJ	< 0.0142 U	< 0.0254 U	< 0.0108 U	0.0319 J	< 0.0169 U	< 0.0123 U	< 0.0119 U	0.132 J+	< 0.0131 U
GNC1-BF22	NORM	2/11/2009	TO-15 SIM	--	0.0117	< 0.00104 UJ	< 0.00119 U	--	--	--	0.00962	--	--	--	0.0283
GNC1-BG19	NORM	2/11/2009	TO-15	< 0.0104 UJ	< 0.00923 UJ	< 0.0238 UJ	< 0.0135 UJ	< 0.0246 UJ	< 0.0104 UJ	< 0.00692 UJ	< 0.0162 UJ	< 0.0119 UJ	< 0.0115 UJ	< 0.00692 UJ	< 0.0127 UJ
GNC1-BG19	NORM	2/11/2009	TO-15 SIM	--	0.0115	< 0.001 UJ	< 0.00115 U	--	--	--	0.00892	--	--	--	0.0215
GNC1-BG20	NORM	2/11/2009	TO-15	< 0.0108 UJ	< 0.01 UJ	< 0.0242 UJ	< 0.0138 UJ	< 0.025 UJ	< 0.0104 UJ	< 0.00731 UJ	< 0.0165 UJ	< 0.0123 UJ	< 0.0119 UJ	< 0.00731 UJ	< 0.0131 UJ
GNC1-BG20	NORM	2/11/2009	TO-15 SIM	--	0.0105	< 0.00104 UJ	< 0.00119 U	--	--	--	0.0167	--	--	--	0.0204
GNC1-BG21	NORM	2/11/2009	TO-15	< 0.01 UJ	< 0.00962 UJ	< 0.0231 UJ	< 0.0135 UJ	< 0.0238 UJ	< 0.01 UJ	0.00846 J	< 0.0158 UJ	< 0.0115 UJ	< 0.0112 UJ	< 0.00692 UJ	< 0.0123 UJ
GNC1-BG21	NORM	2/11/2009	TO-15 SIM	--	0.00954	< 0.000962 UJ	< 0.00112 U	--	--	--	0.00908	--	--	--	0.0287
GNC1-BG22	NORM	2/11/2009	TO-15	< 0.0104 UJ	< 0.00846 UJ	< 0.0235 UJ	< 0.0135 UJ	< 0.0242 UJ	< 0.01 UJ	0.0131 J	< 0.0162 UJ	< 0.0119 UJ	< 0.0115 UJ	< 0.00692 UJ	< 0.0127 UJ
GNC1-BG22	NORM	2/11/2009	TO-15 SIM	--	< 0.000846 U	< 0.001 UJ	< 0.00115 U	--	--	--	0.00604 J	--	--	--	0.017
GNC1-JD09	NORM	2/11/2009	TO-15	< 0.0104 U	< 0.03 UJ	< 0.0235 U	< 0.0135 U	< 0.0242 U	< 0.01 U	< 0.00692 UJ	< 0.0162 U	< 0.0119 U	< 0.0115 U	< 0.00692 U	< 0.0127 U
GNC1-JD09	NORM	2/11/2009	TO-15 SIM	--	0.00365 J	< 0.001 UJ	< 0.00115 UJ	--	--	--	0.00827 J	--	--	--	0.00412 J
GNC1-JS09	NORM	2/12/2009	TO-15	< 0.0158 U	< 0.0381 U	< 0.0354 UJ	< 0.0204 U	< 0.0365 U	< 0.0154 U	0.0123 J	< 0.0242 U	< 0.0177 U	< 0.0173 U	< 0.0104 U	0.02 J
GNC1-JS09	NORM	2/12/2009	TO-15 SIM	--	0.00477 J	< 0.00104 UJ	< 0.00123 UJ	--	--	--	0.0108 J	--	--	--	0.0333 J
GNC1-JS10	NORM	2/12/2009	TO-15	< 0.0104 U	< 0.00846 U	< 0.0238 UJ	< 0.0135 U	< 0.0246 U	< 0.0104 U	< 0.00692 UJ	< 0.0162 U	< 0.0119 U	< 0.0115 U	< 0.00692 U	< 0.0127 U
GNC1-JS10	NORM	2/12/2009	TO-15 SIM	--	0.00412 J	< 0.001 UJ	< 0.00115 UJ	--	--	--	0.00269 J	--	--	--	0.00985 J
GNC1-JS11	NORM	2/12/2009	TO-15	< 0.015 U	< 0.13 UJ	< 0.0238 UJ	< 0.0138 U	< 0.0246 U	< 0.0104 U	0.0281 J	< 0.0165 U	< 0.0119 U	< 0.0115 U	0.0338 J	< 0.0127 U
GNC1-JS11	NORM	2/12/2009	TO-15 SIM	--	0.00412 J	< 0.001 UJ	< 0.00115 U	--	--	--	0.00527 J	--	--	--	0.00781
GNC1-JS11R	FD	2/12/2009	TO-15	< 0.0104 U	< 0.0923 UJ	< 0.0238 UJ	< 0.0135 U	< 0.0246 U	< 0.0104 U	< 0.00692 UJ	0.0188 J	< 0.0119 U	< 0.0115 U	< 0.00692 U	< 0.0127 U
GNC1-JS11R	FD	2/12/2009	TO-15 SIM	--	0.0065	< 0.001 UJ	< 0.00115 U	--	--	--	0.00419 J	--	--	--	0.00885

All units in $\mu g/m^2,min^{-1}$.
-- = no sample data.

TABLE B-11
SURFACE FLUX DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Sample ID	Sample Type	Sample Date	Analytical Method	Surface Flux												
				Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Cymene (Isopropyltoluene)	Dibromochloromethane	Dibromochloropropane	Dibromomethane	Dichloromethane (Methylene chloride)	Ethanol	Ethylbenzene	Freon-11 (Trichlorofluoromethane)	Freon-113 (1,1,2-Trifluoro-1,2,2-trichloroethane)
GNC1-BE20	NORM	2/11/2009	TO-15	< 0.00538 U	< 0.0104 U	< 0.0123 U	< 0.0258 UJ	< 0.0192 U	< 0.119 UJ	< 0.0162 U	0.0162 J	0.17 J	< 0.0115 U	0.0265 J	< 0.02 U
GNC1-BE20	NORM	2/11/2009	TO-15 SIM	--	--	--	--	< 0.00162 U	< 0.00531 UJ	--	< 0.000923 U	--	--	--	--
GNC1-BE21	NORM	2/11/2009	TO-15	< 0.00538 U	< 0.0104 U	< 0.0123 U	< 0.025 U	< 0.0192 U	< 0.117 UJ	< 0.0158 U	0.239	< 0.0115 UJ	0.0196 J	< 0.0146 U	< 0.0196 U
GNC1-BE21	NORM	2/11/2009	TO-15 SIM	--	--	--	--	< 0.00158 U	< 0.00523 UJ	--	< 0.000923 U	--	--	--	--
GNC1-BE22	NORM	2/11/2009	TO-15	< 0.00538 U	< 0.0104 U	< 0.0123 U	< 0.0258 U	< 0.0192 U	< 0.119 UJ	< 0.0162 U	< 0.00923 U	< 0.0119 UJ	< 0.0115 U	< 0.015 U	< 0.02 U
GNC1-BE22	NORM	2/11/2009	TO-15 SIM	--	--	--	--	< 0.00162 UJ	< 0.00531 UJ	--	< 0.000923 UJ	--	--	--	--
GNC1-BF19	NORM	2/11/2009	TO-15	< 0.00538 U	< 0.0104 U	< 0.0123 UJ	< 0.0258 UJ	< 0.0192 U	< 0.119 UJ	< 0.0162 U	< 0.00923 U	0.0304 J	< 0.0115 U	< 0.015 U	< 0.02 U
GNC1-BF19	NORM	2/11/2009	TO-15 SIM	--	--	--	--	< 0.00162 UJ	< 0.00531 UJ	--	< 0.000923 UJ	--	--	--	--
GNC1-BF20	NORM	2/11/2009	TO-15	< 0.00577 U	< 0.0108 U	< 0.0127 U	< 0.0265 UJ	< 0.02 U	< 0.123 UJ	< 0.0165 U	< 0.00962 U	< 0.0123 UJ	< 0.0119 U	< 0.0154 U	< 0.0208 U
GNC1-BF20	NORM	2/11/2009	TO-15 SIM	--	--	--	--	< 0.00169 UJ	< 0.0055 UJ	--	< 0.000962 UJ	--	--	--	--
GNC1-BF21	NORM	2/11/2009	TO-15	< 0.00538 U	< 0.0104 U	< 0.0123 U	< 0.0258 UJ	< 0.0196 U	< 0.12 UJ	< 0.0162 U	< 0.00923 U	< 0.0119 UJ	< 0.0115 U	< 0.015 U	< 0.02 U
GNC1-BF21	NORM	2/11/2009	TO-15 SIM	--	--	--	--	< 0.00162 UJ	< 0.00535 UJ	--	< 0.000923 UJ	--	--	--	--
GNC1-BF22	NORM	2/11/2009	TO-15	< 0.00538 U	< 0.0108 U	< 0.0127 U	< 0.0265 UJ	< 0.02 U	< 0.123 UJ	< 0.0165 U	< 0.00962 U	0.0646 J	< 0.0119 U	0.0304 J	< 0.0208 U
GNC1-BF22	NORM	2/11/2009	TO-15 SIM	--	--	--	--	< 0.00165 U	< 0.00546 UJ	--	< 0.000962 U	--	--	--	--
GNC1-BG19	NORM	2/11/2009	TO-15	< 0.00538 UJ	< 0.0104 UJ	< 0.0123 UJ	< 0.0254 UJ	< 0.0192 UJ	< 0.118 UJ	< 0.0158 UJ	< 0.00923 UJ	< 0.0115 UJ	< 0.0115 UJ	< 0.015 UJ	< 0.02 UJ
GNC1-BG19	NORM	2/11/2009	TO-15 SIM	--	--	--	--	< 0.00162 U	< 0.00527 UJ	--	< 0.000923 U	--	--	--	--
GNC1-BG20	NORM	2/11/2009	TO-15	< 0.00538 UJ	< 0.0108 UJ	< 0.0127 UJ	< 0.0262 UJ	< 0.0196 UJ	< 0.121 UJ	< 0.0162 UJ	< 0.00923 UJ	< 0.0119 UJ	< 0.0119 UJ	< 0.0154 UJ	< 0.0204 UJ
GNC1-BG20	NORM	2/11/2009	TO-15 SIM	--	--	--	--	< 0.00165 U	< 0.00538 UJ	--	< 0.000923 U	--	--	--	--
GNC1-BG21	NORM	2/11/2009	TO-15	< 0.00538 UJ	< 0.01 UJ	< 0.0119 UJ	< 0.0246 UJ	< 0.0188 UJ	< 0.115 UJ	< 0.0154 UJ	< 0.00885 UJ	< 0.0115 UJ	< 0.0112 UJ	< 0.0146 UJ	< 0.0192 UJ
GNC1-BG21	NORM	2/11/2009	TO-15 SIM	--	--	--	--	< 0.00158 U	< 0.00512 UJ	--	< 0.000885 U	--	--	--	--
GNC1-BG22	NORM	2/11/2009	TO-15	< 0.00538 UJ	< 0.0104 UJ	< 0.0123 UJ	< 0.025 UJ	< 0.0192 UJ	< 0.117 UJ	< 0.0158 UJ	< 0.00923 UJ	< 0.0115 UJ	< 0.0115 UJ	< 0.0146 UJ	< 0.0196 UJ
GNC1-BG22	NORM	2/11/2009	TO-15 SIM	--	--	--	--	< 0.00158 U	< 0.00523 UJ	--	< 0.000923 U	--	--	--	--
GNC1-JD09	NORM	2/11/2009	TO-15	< 0.00538 U	< 0.0104 U	< 0.0123 U	< 0.025 U	< 0.0192 U	< 0.117 UJ	< 0.0158 U	< 0.00923 U	< 0.0115 UJ	< 0.0115 U	< 0.0146 U	< 0.0196 U
GNC1-JD09	NORM	2/11/2009	TO-15 SIM	--	--	--	--	< 0.00158 UJ	< 0.00523 UJ	--	< 0.000923 UJ	--	--	--	--
GNC1-JS09	NORM	2/12/2009	TO-15	< 0.00808 U	< 0.0154 U	< 0.0185 U	< 0.0381 U	< 0.0288 U	< 0.176 UJ	< 0.0238 U	< 0.0138 U	< 0.0173 UJ	< 0.0173 U	< 0.0223 U	< 0.0296 U
GNC1-JS09	NORM	2/12/2009	TO-15 SIM	--	--	--	--	< 0.00169 UJ	< 0.0055 UJ	--	< 0.000962 UJ	--	--	--	--
GNC1-JS10	NORM	2/12/2009	TO-15	< 0.00538 U	< 0.0104 U	< 0.0123 U	< 0.0254 U	< 0.0192 U	< 0.118 UJ	< 0.0158 U	< 0.00923 U	< 0.0115 UJ	0.0154 J	< 0.015 U	< 0.02 U
GNC1-JS10	NORM	2/12/2009	TO-15 SIM	--	--	--	--	< 0.00162 UJ	< 0.00527 UJ	--	< 0.000923 UJ	--	--	--	--
GNC1-JS11	NORM	2/12/2009	TO-15	0.0169 J	< 0.0104 U	< 0.0123 U	< 0.0258 U	< 0.0192 U	< 0.119 UJ	< 0.0162 U	< 0.00923 U	< 0.0119 UJ	0.0177 J	0.0196 J	< 0.02 U
GNC1-JS11	NORM	2/12/2009	TO-15 SIM	--	--	--	--	< 0.00162 U	< 0.00531 UJ	--	< 0.000923 U	--	--	--	--
GNC1-JS11R	FD	2/12/2009	TO-15	< 0.00538 U	< 0.0104 U	< 0.0123 U	< 0.0254 U	< 0.0192 U	< 0.118 UJ	< 0.0158 U	< 0.00923 U	< 0.0115 UJ	0.0269 J	< 0.015 U	< 0.02 U
GNC1-JS11R	FD	2/12/2009	TO-15 SIM	--	--	--	--	< 0.00162 U	< 0.00527 UJ	--	0.00408 J	--	--	--	--

All units in $\mu g/m^2,min^{-1}$.
-- = no sample data.

TABLE B-11
SURFACE FLUX DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 5 of 6)

Sample ID	Sample Type	Sample Date	Analytical Method	Surface Flux											
				Freon-12 (Dichloro-difluoromethane)	Heptane	Hexachlorobutadiene	Isopropylbenzene	m & p-Xylenes	Methyl ethyl ketone (2-Butanone)	Methyl iodide	MTBE (Methyl tert-butyl ether)	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene
GNC1-BE20	NORM	2/11/2009	TO-15	0.04 J	< 0.00885 U	< 0.0562 UJ	< 0.0119 U	0.0246 J	0.085	< 0.0304 U	< 0.00731 U	--	< 0.0258 UJ	< 0.0108 U	< 0.0115 U
GNC1-BE20	NORM	2/11/2009	TO-15 SIM	--	--	< 0.00285 UJ	--	--	--	--	--	< 0.00288 UJ	--	--	--
GNC1-BE21	NORM	2/11/2009	TO-15	< 0.0131 U	< 0.00885 U	< 0.0554 UJ	< 0.0119 U	0.0708 J	< 0.00654 U	< 0.03 U	< 0.00692 U	--	< 0.0254 U	< 0.0104 U	0.0281 J
GNC1-BE21	NORM	2/11/2009	TO-15 SIM	--	--	< 0.00281 UJ	--	--	--	--	--	< 0.00285 UJ	--	--	--
GNC1-BE22	NORM	2/11/2009	TO-15	< 0.0135 U	< 0.00885 U	< 0.0562 UJ	< 0.0119 U	< 0.0231 U	< 0.00654 U	< 0.0304 U	< 0.00731 U	--	< 0.0258 U	< 0.0108 U	< 0.0115 U
GNC1-BE22	NORM	2/11/2009	TO-15 SIM	--	--	< 0.00285 UJ	--	--	--	--	--	< 0.00288 UJ	--	--	--
GNC1-BF19	NORM	2/11/2009	TO-15	< 0.0135 U	< 0.00885 U	< 0.0562 UJ	< 0.0119 U	< 0.0231 U	0.101 J-	< 0.0304 UJ	< 0.00731 U	--	< 0.0258 UJ	< 0.0108 U	0.0146 J
GNC1-BF19	NORM	2/11/2009	TO-15 SIM	--	--	< 0.00285 UJ	--	--	--	--	--	< 0.00288 UJ	--	--	--
GNC1-BF20	NORM	2/11/2009	TO-15	< 0.0138 U	< 0.00923 U	< 0.0585 UJ	< 0.0123 U	0.0277 J	< 0.00692 U	< 0.0315 U	< 0.00731 U	--	< 0.0269 UJ	< 0.0112 U	< 0.0119 U
GNC1-BF20	NORM	2/11/2009	TO-15 SIM	--	--	< 0.00296 UJ	--	--	--	--	--	< 0.003 UJ	--	--	--
GNC1-BF21	NORM	2/11/2009	TO-15	< 0.0135 U	< 0.00885 U	< 0.0565 UJ	< 0.0119 U	< 0.0231 U	< 0.00654 U	< 0.0308 U	< 0.00731 U	--	< 0.0262 UJ	< 0.0108 U	< 0.0115 U
GNC1-BF21	NORM	2/11/2009	TO-15 SIM	--	--	< 0.00285 UJ	--	--	--	--	--	< 0.00288 UJ	--	--	--
GNC1-BF22	NORM	2/11/2009	TO-15	0.0608 J	< 0.00923 U	< 0.0581 UJ	0.0515 J	0.0246 J	0.02 J	< 0.0315 U	< 0.00731 U	--	< 0.0265 UJ	< 0.0108 U	< 0.0115 U
GNC1-BF22	NORM	2/11/2009	TO-15 SIM	--	--	< 0.00292 UJ	--	--	--	--	--	< 0.00296 UJ	--	--	--
GNC1-BG19	NORM	2/11/2009	TO-15	< 0.0131 UJ	< 0.00885 UJ	< 0.0558 UJ	< 0.0119 UJ	< 0.0227 UJ	0.00923 J	< 0.0304 UJ	< 0.00731 UJ	--	< 0.0258 UJ	< 0.0104 UJ	< 0.0112 UJ
GNC1-BG19	NORM	2/11/2009	TO-15 SIM	--	--	< 0.00281 UJ	--	--	--	--	--	< 0.00285 UJ	--	--	--
GNC1-BG20	NORM	2/11/2009	TO-15	< 0.0135 UJ	< 0.00885 UJ	< 0.0573 UJ	< 0.0123 UJ	< 0.0235 UJ	0.0112 J	< 0.0312 UJ	< 0.00731 UJ	--	< 0.0262 UJ	< 0.0108 UJ	< 0.0115 UJ
GNC1-BG20	NORM	2/11/2009	TO-15 SIM	--	--	< 0.00288 UJ	--	--	--	--	--	< 0.00292 UJ	--	--	--
GNC1-BG21	NORM	2/11/2009	TO-15	< 0.0131 UJ	< 0.00846 UJ	< 0.0546 UJ	< 0.0115 UJ	< 0.0223 UJ	0.0196 J	< 0.0296 UJ	< 0.00692 UJ	--	< 0.025 UJ	< 0.0104 UJ	< 0.0112 UJ
GNC1-BG21	NORM	2/11/2009	TO-15 SIM	--	--	< 0.00277 UJ	--	--	--	--	--	< 0.00277 UJ	--	--	--
GNC1-BG22	NORM	2/11/2009	TO-15	< 0.0131 UJ	< 0.00885 UJ	< 0.0554 UJ	< 0.0119 UJ	< 0.0227 UJ	0.0158 J	< 0.03 UJ	< 0.00692 UJ	--	< 0.0254 UJ	< 0.0104 UJ	< 0.0112 UJ
GNC1-BG22	NORM	2/11/2009	TO-15 SIM	--	--	< 0.00281 UJ	--	--	--	--	--	< 0.00285 UJ	--	--	--
GNC1-JD09	NORM	2/11/2009	TO-15	< 0.0131 U	< 0.00885 U	< 0.0554 UJ	< 0.0119 U	< 0.0227 U	< 0.00654 U	< 0.03 U	< 0.00692 U	--	< 0.0254 U	< 0.0104 U	< 0.0112 U
GNC1-JD09	NORM	2/11/2009	TO-15 SIM	--	--	< 0.00281 UJ	--	--	--	--	--	< 0.00285 UJ	--	--	--
GNC1-JS09	NORM	2/12/2009	TO-15	< 0.0196 U	< 0.0131 U	< 0.0835 U	< 0.0177 U	< 0.0338 U	< 0.00962 U	< 0.0454 U	< 0.0108 U	--	< 0.0385 U	< 0.0158 U	< 0.0169 U
GNC1-JS09	NORM	2/12/2009	TO-15 SIM	--	--	< 0.00296 UJ	--	--	--	--	--	< 0.003 UJ	--	--	--
GNC1-JS10	NORM	2/12/2009	TO-15	< 0.0131 U	< 0.00885 U	< 0.0558 UJ	< 0.0131 U	< 0.0427 U	< 0.00654 U	< 0.0304 U	< 0.00731 U	--	< 0.0258 UJ	0.0131 J	< 0.0223 U
GNC1-JS10	NORM	2/12/2009	TO-15 SIM	--	--	< 0.00281 UJ	--	--	--	--	--	< 0.00285 UJ	--	--	--
GNC1-JS11	NORM	2/12/2009	TO-15	0.0473 J	0.0119 J	< 0.0562 UJ	0.0473 J	0.0654 J	< 0.0196 U	< 0.0304 U	< 0.00731 U	--	< 0.0258 UJ	0.0115 J	< 0.0288 U
GNC1-JS11	NORM	2/12/2009	TO-15 SIM	--	--	< 0.00285 UJ	--	--	--	--	--	< 0.00288 UJ	--	--	--
GNC1-JS11R	FD	2/12/2009	TO-15	< 0.0131 U	0.0162 J	< 0.0558 UJ	0.0608	0.0896 J	< 0.00654 U	< 0.0304 U	< 0.00731 U	--	< 0.0258 UJ	0.0158 J	0.0427 J
GNC1-JS11R	FD	2/12/2009	TO-15 SIM	--	--	< 0.00281 UJ	--	--	--	--	--	< 0.00285 UJ	--	--	--

All units in $\mu g/m^2,min^{-1}$.
-- = no sample data.

TABLE B-11
SURFACE FLUX DATA
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
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Sample ID	Sample Type	Sample Date	Analytical Method	Surface Flux										
				sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	Total Xylenes	trans-1,2-Dichloroethene	trans-1,3-Dichloro-propene	Trichloroethene	Vinyl acetate	Vinyl chloride
GNC1-BE20	NORM	2/11/2009	TO-15	< 0.0258 U	< 0.0112 U	< 0.0254 UJ	< 0.0177 U	0.0412 J	0.0304	< 0.00885 U	< 0.0119 U	< 0.0142 U	< 0.00769 U	< 0.00692 U
GNC1-BE20	NORM	2/11/2009	TO-15 SIM	--	--	--	0.013	--	--	--	--	< 0.00142 UJ	--	< 0.000692 U
GNC1-BE21	NORM	2/11/2009	TO-15	< 0.025 U	< 0.0112 U	< 0.025 U	< 0.0173 U	0.121	0.0989	< 0.00885 U	< 0.0119 U	< 0.0538 UJ	< 0.00769 U	< 0.00654 U
GNC1-BE21	NORM	2/11/2009	TO-15 SIM	--	--	--	0.00765 J	--	--	--	--	< 0.00242 U	--	< 0.000654 U
GNC1-BE22	NORM	2/11/2009	TO-15	< 0.0258 U	< 0.0112 U	< 0.0254 U	< 0.0177 U	< 0.01 U	< 0.0173 U	< 0.00885 U	< 0.0119 U	< 0.0142 U	< 0.00769 U	< 0.00692 U
GNC1-BE22	NORM	2/11/2009	TO-15 SIM	--	--	--	0.00254 J	--	--	--	--	< 0.00269 UJ	--	< 0.000692 UJ
GNC1-BF19	NORM	2/11/2009	TO-15	< 0.0258 U	< 0.0112 U	< 0.0254 UJ	< 0.0177 U	< 0.0154 U	0.0262	< 0.00885 U	< 0.0119 UJ	< 0.0142 U	< 0.00769 UJ	< 0.00692 UJ
GNC1-BF19	NORM	2/11/2009	TO-15 SIM	--	--	--	0.00623 J	--	--	--	--	< 0.00142 UJ	--	< 0.000692 UJ
GNC1-BF20	NORM	2/11/2009	TO-15	< 0.0265 U	< 0.0115 U	< 0.0262 UJ	< 0.0185 U	0.05 J	0.0337	< 0.00923 U	< 0.0127 U	< 0.0146 U	< 0.00808 U	< 0.00692 U
GNC1-BF20	NORM	2/11/2009	TO-15 SIM	--	--	--	0.00881 J	--	--	--	--	< 0.00185 UJ	--	< 0.000692 UJ
GNC1-BF21	NORM	2/11/2009	TO-15	< 0.0258 U	< 0.0112 U	< 0.0254 UJ	< 0.0177 U	< 0.01 U	< 0.0173 U	< 0.00885 U	< 0.0123 U	< 0.0142 U	< 0.00769 U	< 0.00692 U
GNC1-BF21	NORM	2/11/2009	TO-15 SIM	--	--	--	< 0.00177 UJ	--	--	--	--	< 0.00146 UJ	--	< 0.000692 UJ
GNC1-BF22	NORM	2/11/2009	TO-15	< 0.0265 U	< 0.0115 U	< 0.0262 UJ	< 0.0181 U	0.0312 J	0.0304	< 0.00923 U	< 0.0123 U	< 0.0146 U	< 0.00808 U	< 0.00692 U
GNC1-BF22	NORM	2/11/2009	TO-15 SIM	--	--	--	0.00446 J	--	--	--	--	< 0.00146 U	--	< 0.000692 U
GNC1-BG19	NORM	2/11/2009	TO-15	< 0.0254 UJ	< 0.0112 UJ	< 0.025 UJ	< 0.0177 UJ	< 0.01 UJ	< 0.0167 U	< 0.00885 UJ	< 0.0119 UJ	< 0.0142 UJ	< 0.00769 UJ	< 0.00692 UJ
GNC1-BG19	NORM	2/11/2009	TO-15 SIM	--	--	--	0.0045 J	--	--	--	--	< 0.00142 U	--	< 0.000692 U
GNC1-BG20	NORM	2/11/2009	TO-15	< 0.0262 UJ	< 0.0115 UJ	< 0.0258 UJ	< 0.0181 UJ	< 0.01 UJ	< 0.0175 U	< 0.00885 UJ	< 0.0123 UJ	< 0.0142 UJ	< 0.00769 UJ	< 0.00692 UJ
GNC1-BG20	NORM	2/11/2009	TO-15 SIM	--	--	--	0.018	--	--	--	--	< 0.00146 UJ	--	< 0.000692 U
GNC1-BG21	NORM	2/11/2009	TO-15	< 0.0246 UJ	< 0.0108 UJ	< 0.0246 UJ	< 0.0173 UJ	< 0.01 UJ	< 0.0168 U	< 0.00846 UJ	< 0.0115 UJ	0.114 J	< 0.00769 UJ	< 0.00654 UJ
GNC1-BG21	NORM	2/11/2009	TO-15 SIM	--	--	--	0.00615 J	--	--	--	--	< 0.00138 U	--	< 0.000654 U
GNC1-BG22	NORM	2/11/2009	TO-15	< 0.025 UJ	< 0.0112 UJ	< 0.025 UJ	< 0.0173 UJ	< 0.00962 UJ	< 0.0169 U	< 0.00885 UJ	< 0.0119 UJ	< 0.0627 UJ	< 0.00769 UJ	< 0.00654 UJ
GNC1-BG22	NORM	2/11/2009	TO-15 SIM	--	--	--	0.00388 J	--	--	--	--	< 0.00142 UJ	--	< 0.000654 U
GNC1-JD09	NORM	2/11/2009	TO-15	< 0.025 U	< 0.0112 U	< 0.025 U	< 0.0173 U	< 0.00962 U	< 0.0169 U	< 0.00885 U	< 0.0119 U	< 0.0138 U	< 0.00769 U	< 0.00654 U
GNC1-JD09	NORM	2/11/2009	TO-15 SIM	--	--	--	0.00365 J	--	--	--	--	< 0.00154 UJ	--	< 0.000654 UJ
GNC1-JS09	NORM	2/12/2009	TO-15	< 0.0381 U	< 0.0165 U	< 0.0377 U	< 0.0262 U	< 0.0146 U	< 0.0254 U	< 0.0131 U	< 0.0181 U	< 0.0212 U	< 0.0115 U	< 0.01 U
GNC1-JS09	NORM	2/12/2009	TO-15 SIM	--	--	--	0.0145 J	--	--	--	--	< 0.00312 UJ	--	< 0.000692 UJ
GNC1-JS10	NORM	2/12/2009	TO-15	< 0.0254 U	< 0.0112 U	< 0.025 UJ	0.02 J	< 0.02 U	< 0.0325 U	< 0.00885 U	< 0.0119 U	< 0.0142 U	< 0.00769 U	< 0.00692 U
GNC1-JS10	NORM	2/12/2009	TO-15 SIM	--	--	--	0.015 J	--	--	--	--	0.00281 J	--	< 0.000692 UJ
GNC1-JS11	NORM	2/12/2009	TO-15	< 0.0258 U	< 0.0112 U	< 0.0254 UJ	< 0.0177 U	0.0585	0.0798	< 0.00885 U	< 0.0119 U	< 0.0142 U	< 0.00769 U	< 0.00692 U
GNC1-JS11	NORM	2/12/2009	TO-15 SIM	--	--	--	0.00281 J	--	--	--	--	< 0.00142 UJ	--	< 0.000692 U
GNC1-JS11R	FD	2/12/2009	TO-15	0.0265 J	< 0.0112 U	< 0.025 UJ	< 0.0177 U	0.0742	0.132	< 0.00885 U	< 0.0119 U	< 0.0142 U	< 0.00769 U	< 0.00692 U
GNC1-JS11R	FD	2/12/2009	TO-15 SIM	--	--	--	< 0.00562 U	--	--	--	--	< 0.00346 UJ	--	< 0.000692 U

All units in $\mu g/m^2,min^{-1}$.
-- = no sample data.

TABLE B-12
SPLP DATA SUMMARY
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 1 of 4)

Parameter of Interest	Compound List	Units	Total Count	GNC1-BE21 Result	Residential Water BCL[c]	Count of Detects > BCL	MCL	Count of Detects > MCL
Aldehydes	Acetaldehyde	mg/L	1	< 0.0082 U	0.066	--	--	--
	Formaldehyde	mg/L	1	< 0.021 U	0.0015	--	--	--
General Chemistry	Ammonia (as N)	mg/L	1	0.0896	0.73	0	--	--
	Bromide	mg/L	1	< 0.026 U	--	--	--	--
	Chlorate	mg/L	1	0.22 J	--	--	--	--
	Chloride	mg/L	1	22.2	--	--	--	--
	Fluoride	mg/L	1	0.23	2.2	0	4	0
	Nitrate	mg/L	--	--	10	--	10	--
	Nitrite	mg/L	1	< 0.003 U	1	--	1	--
	Orthophosphate as P	mg/L	1	0.5 U	--	--	--	--
	Perchlorate	mg/L	1	0.148	0.026	1	0.018/0.0245(1)	1
	Total Kjeldahl Nitrogen (TKN)	mg/L	1	0.5 U	--	--	--	--
Metals	Aluminum	mg/L	1	< 0.00991 U	37	--	--	--
	Antimony	mg/L	1	0.005 U	0.015	0	0.006	0
	Arsenic	mg/L	1	0.0034 J	0.000045	1	0.01	0
	Barium	mg/L	1	0.0561	7.3	0	2	0
	Beryllium	mg/L	1	< 0.000128 U	0.073	--	0.004	--
	Boron	mg/L	1	0.0656	7.3	0	--	--
	Cadmium	mg/L	1	< 0.000042 U	0.018	--	0.005	--
	Calcium	mg/L	1	190	--	--	--	--
	Chromium	mg/L	1	< 0.003 U	--	--	0.1	--
	Chromium (VI)	mg/L	1	< 0.002 UJ	0.11	--	0.1	--
	Cobalt	mg/L	1	0.00036 J	0.011	0	--	--
	Copper	mg/L	1	0.0022	1.4	0	1.3	0
	Iron	mg/L	1	0.264	26	0	--	--
	Lead	mg/L	1	< 0.000492 U	0.015	--	0.015	--
	Lithium	mg/L	1	0.0138	0.073	0	--	--
	Magnesium	mg/L	1	12.5	210	0	--	--
	Manganese	mg/L	1	0.0057	0.51	0	--	--
	Mercury	mg/L	1	0.0002 U	0.0058	0	0.002	0
	Molybdenum	mg/L	1	0.0088	0.18	0	--	--
	Nickel	mg/L	1	0.0049 J	0.73	0	--	--
	Potassium	mg/L	1	5.25	--	--	--	--
	Selenium	mg/L	1	0.005 U	0.18	0	0.05	0
	Silver	mg/L	1	< 0.0002028 U	0.18	--	--	--
	Sodium	mg/L	1	21.9	--	--	--	--
	Strontium	mg/L	1	6.01	22	0	--	--
	Thallium	mg/L	1	< 0.00006 U	0.0026	--	0.002	--
	Tin	mg/L	1	< 0.00068 U	22	--	--	--
	Titanium	mg/L	1	< 0.00151 U	150	--	--	--
	Tungsten	mg/L	1	0.0273	0.27	0	--	--
	Uranium	mg/L	1	0.00042 J	0.11	0	0.03	0
	Vanadium	mg/L	1	0.0043 J	0.18	0	--	--
	Zinc	mg/L	1	< 0.0009 U	11	--	--	--

TABLE B-12
SPLP DATA SUMMARY
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA
(Page 2 of 4)

Parameter of Interest	Compound List	Units	Total Count	GNC1-BE21 Result	Residential Water BCL[c]	Count of Detects > BCL	MCL	Count of Detects > MCL
OCPs	2,4-DDD	mg/L	1	< 0.000011 U	--	--	--	--
	2,4-DDE	mg/L	1	< 0.000009 U	--	--	--	--
	4,4-DDD	mg/L	1	< 0.0000038 U	0.00028	--	--	--
	4,4-DDE	mg/L	1	< 0.0000027 U	0.0002	--	--	--
	4,4-DDT	mg/L	1	< 0.0000056 U	0.0002	--	--	--
	Aldrin	mg/L	1	< 0.000004 U	0.000004	--	--	--
	alpha-BHC	mg/L	1	< 0.0000025 U	0.000011	--	--	--
	alpha-Chlordane	mg/L	1	< 0.000003 U	--	--	--	--
	beta-BHC	mg/L	1	< 0.000013 U	0.000037	--	--	--
	Chlordane	mg/L	1	< 0.00018 U	0.00019	--	0.002	--
	delta-BHC	mg/L	1	< 0.000006 U	--	--	--	--
	Dieldrin	mg/L	1	< 0.0000023 U	0.0000042	--	--	--
	Endosulfan I	mg/L	1	< 0.0000025 U	--	--	--	--
	Endosulfan II	mg/L	1	< 0.00001 U	--	--	--	--
	Endosulfan sulfate	mg/L	1	< 0.000017 U	--	--	--	--
	Endrin	mg/L	1	< 0.0000028 U	0.011	--	0.002	--
	Endrin aldehyde	mg/L	1	< 0.0000032 U	--	--	--	--
	Endrin ketone	mg/L	1	< 0.000016 U	--	--	--	--
	gamma-BHC (Lindane)	mg/L	1	< 0.0000025 U	0.000052	--	0.0002	--
	gamma-Chlordane	mg/L	1	< 0.0000027 U	--	--	--	--
	Heptachlor	mg/L	1	< 0.0000025 U	0.000015	--	0.0004	--
	Heptachlor epoxide	mg/L	1	< 0.0000032 U	0.0000074	--	0.0002	--
	Methoxychlor	mg/L	1	< 0.000005 U	0.18	--	0.04	--
	Toxaphene	mg/L	1	< 0.00033 U	0.000061	--	0.003	--
PAHs	Acenaphthene	mg/L	1	< 0.00025 U	2.2	--	--	--
	Acenaphthylene	mg/L	1	< 0.00025 U	1.1	--	--	--
	Anthracene	mg/L	1	< 0.00025 U	11	--	--	--
	Benzo(a)anthracene	mg/L	1	< 0.00025 U	0.000092	--	--	--
	Benzo(a)pyrene	mg/L	1	< 0.00025 U	0.0000092	--	0.0002	--
	Benzo(b)fluoranthene	mg/L	1	< 0.00025 U	0.000092	--	--	--
	Benzo(g,h,i)perylene	mg/L	1	< 0.00025 U	1.1	--	--	--
	Benzo(k)fluoranthene	mg/L	1	< 0.00025 U	0.00092	--	--	--
	Chrysene	mg/L	1	< 0.00025 U	0.0092	--	--	--
	Dibenzo(a,h)anthracene	mg/L	1	< 0.00025 U	0.0000092	--	--	--
	Indeno(1,2,3-cd)pyrene	mg/L	1	< 0.00025 U	0.000092	--	--	--
	Phenanthrene	mg/L	1	< 0.00025 U	1.1	--	--	--
	Pyrene	mg/L	1	< 0.00025 U	1.1	--	--	--
Radionuclides	Radium-226	pCi/L	1	0.692	5	0	--	--
	Radium-228	pCi/L	1	0.0538 U	5	0	--	--
	Thorium-228	pCi/L	1	-0.212 U	0.11	0	--	--
	Thorium-230	pCi/L	1	-0.06 U	0.042	0	--	--
	Thorium-232	pCi/L	1	-0.019 U	0.14	0	--	--
	Uranium-233/234	pCi/L	1	0.246 U	--	--	--	--
	Uranium-235/236	pCi/L	1	0.164 U	--	--	--	--
	Uranium-238	pCi/L	1	0.12 U	--	--	--	--

TABLE B-12
SPLP DATA SUMMARY
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter of Interest	Compound List	Units	Total Count	GNC1-BE21 Result	Residential Water BCL[c]	Count of Detects > BCL	MCL	Count of Detects > MCL
SVOCs	1,2,4,5-Tetrachlorobenzene	mg/L	1	< 0.01 U	0.011	--	--	--
	1,2-Diphenylhydrazine	mg/L	1	< 0.01 U	0.000084	--	--	--
	1,4-Dioxane	mg/L	1	< 0.005 U	0.0061	--	--	--
	2,2'-Dichlorobenzil	mg/L	1	< 0.0165 U	0.011	--	--	--
	2,4,5-Trichlorophenol	mg/L	1	< 0.005 U	3.7	--	--	--
	2,4,6-Trichlorophenol	mg/L	1	< 0.01 U	0.0061	--	--	--
	2,4-Dichlorophenol	mg/L	1	< 0.01 U	0.11	--	--	--
	2,4-Dimethylphenol	mg/L	1	< 0.01 U	0.73	--	--	--
	2,4-Dinitrophenol	mg/L	1	< 0.05 U	0.073	--	--	--
	2,4-Dinitrotoluene	mg/L	1	< 0.01 U	0.00022	--	--	--
	2,6-Dinitrotoluene	mg/L	1	< 0.01 U	0.037	--	--	--
	2-Chloronaphthalene	mg/L	1	< 0.00175 U	2.9	--	--	--
	2-Chlorophenol	mg/L	1	< 0.01 U	0.18	--	--	--
	2-Methylnaphthalene	mg/L	1	< 0.0015 U	--	--	--	--
	2-Nitroaniline	mg/L	1	< 0.01 U	0.11	--	--	--
	2-Nitrophenol	mg/L	1	< 0.01 U	--	--	--	--
	3,3-Dichlorobenzidine	mg/L	1	< 0.005 U	0.00015	--	--	--
	3-Nitroaniline	mg/L	1	< 0.01 U	--	--	--	--
	4-Bromophenyl phenyl ether	mg/L	1	< 0.01 U	--	--	--	--
	4-Chloro-3-methylphenol	mg/L	1	< 0.01 U	--	--	--	--
	4-Chlorophenyl phenyl ether	mg/L	1	< 0.01 U	--	--	--	--
	4-Chlorothioanisole	mg/L	1	< 0.0165 U	--	--	--	--
	4-Nitroaniline	mg/L	1	< 0.015 U	--	--	--	--
	4-Nitrophenol	mg/L	1	< 0.01 U	0.29	--	--	--
	Acetophenone	mg/L	1	< 0.01 U	3.7	--	--	--
	Aniline	mg/L	1	< 0.0125 U	0.012	--	--	--
	Benzenethiol	mg/L	1	< 0.033 U	--	--	--	--
	Benzoic acid	mg/L	1	< 0.03 U	150	--	--	--
	Benzyl alcohol	mg/L	1	< 0.01 U	18	--	--	--
	bis(2-Chloroethoxy)methane	mg/L	1	< 0.015 U	--	--	--	--
	bis(2-Chloroethyl) ether	mg/L	1	< 0.01 U	0.000054	--	--	--
	bis(2-Chloroisopropyl) ether	mg/L	1	< 0.01 U	0.0009	--	--	--
	bis(2-Ethylhexyl) phthalate	mg/L	1	< 0.01 U	0.0048	--	0.006	--
	bis(p-Chlorophenyl) sulfone	mg/L	1	< 0.0165 U	--	--	--	--
	bis(p-Chlorophenyl)disulfide	mg/L	1	< 0.0165 U	--	--	--	--
	Butylbenzyl phthalate	mg/L	1	< 0.01 U	7.3	--	--	--
	Carbazole	mg/L	1	< 0.001 U	0.0034	--	--	--
	Dibenzofuran	mg/L	1	< 0.01 U	0.073	--	--	--
	Diethyl phthalate	mg/L	1	< 0.01 U	29	--	--	--
	Dimethyl phthalate	mg/L	1	< 0.01 U	370	--	--	--
	Di-n-butyl phthalate	mg/L	1	< 0.01 U	3.7	--	--	--
	Di-n-octyl phthalate	mg/L	1	< 0.015 U	--	--	--	--
	Diphenyl disulfide	mg/L	1	< 0.0165 U	--	--	--	--
	Diphenyl sulfide	mg/L	1	< 0.0165 U	--	--	--	--
	Diphenyl sulfone	mg/L	1	< 0.0165 U	0.11	--	--	--

TABLE B-12
SPLP DATA SUMMARY
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter of Interest	Compound List	Units	Total Count	GNC1-BE21 Result	Residential Water BCL[c]	Count of Detects > BCL	MCL	Count of Detects > MCL
SVOCs	Diphenylamine	mg/L	1	< 0.015 U	0.91	--	--	--
	Fluoranthene	mg/L	1	< 0.001 U	1.5	--	--	--
	Fluorene	mg/L	1	< 0.001 U	1.5	--	--	--
	Hexachlorobenzene	mg/L	1	< 0.01 U	0.000042	--	0.001	--
	Hexachlorobutadiene	mg/L	1	< 0.01 U	0.00086	--	--	--
	Hexachlorocyclopentadiene	mg/L	1	< 0.01 U	0.22	--	0.05	--
	Hexachloroethane	mg/L	1	< 0.01 U	0.0048	--	--	--
	Hydroxymethyl phthalimide	mg/L	1	< 0.0165 U	--	--	--	--
	Isophorone	mg/L	1	< 0.01 U	0.071	--	--	--
	m,p-Cresols	mg/L	1	< 0.015 U	0.18	--	--	--
	Naphthalene	mg/L	1	< 0.0015 U	0.0043	--	--	--
	Nitrobenzene	mg/L	1	< 0.015 U	0.0037	--	--	--
	N-nitrosodi-n-propylamine	mg/L	1	< 0.01 U	0.0000096	--	--	--
	o-Cresol	mg/L	1	< 0.01 U	1.8	--	--	--
	Octachlorostyrene	mg/L	1	< 0.0165 U	--	--	--	--
	p-Chloroaniline	mg/L	1	< 0.01 U	0.15	--	--	--
	p-Chlorobenzenethiol	mg/L	1	< 0.0165 U	--	--	--	--
	Pentachlorobenzene	mg/L	1	< 0.01 U	0.029	--	--	--
	Pentachlorophenol	mg/L	1	< 0.01 U	0.00056	--	0.001	--
	Phenol	mg/L	1	< 0.005 U	11	--	--	--
	Pyridine	mg/L	1	< 0.005 U	0.037	--	--	--

BCL = Basic Comparison Levels (BCLs) from NDEP 2010a. Values used are residential water BCLs.

MCL = USEPA Maximum Contaminant Level.

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

APPENDIX C

GES FIELD REPORTS
(on the report CD in Appendix B)

APPENDIX D

SURFACE FLUX CHAMBER TESTING INVESTIGATOR'S REPORT
(on the report CD in Appendix B)

APPENDIX E

DATA USABILITY TABLES
(on the report CD in Appendix B)

LIST OF TABLES (APPENDIX E)

Table E-1 Data Usability Evaluation for Semi-Volatile Organic Compounds

Table E-2 Data Usability Evaluation for Dioxins/Furans

Table E-3 Data Usability Evaluation for Aldehydes

Table E-4 Data Usability Evaluation for Radionuclides

Table E-5 Data Usability Evaluation for Polychlorinated Biphenyls

Table E-6 Data Usability Evaluation for Organochlorine Pesticides

Table E-7 Data Usability Evaluation for General Chemistry Parameters

Table E-8 Data Usability Evaluation for Volatile Organic Compounds in Soil

Table E-9 Data Usability Evaluation for Metals

Table E-10 Data Usability Evaluation for Volatile Organic Compounds in Flux

Table E-11 Data Usability Evaluation for Low MS and LCS Recoveries

Table E-12 Data Usability Evaluation for Field Duplicate RPD Exceedences

Table E-13 Data Usability Evaluation for Surrogate Recoveries

Table E-14 Data Censored Due to Lab or Field Blank Contamination

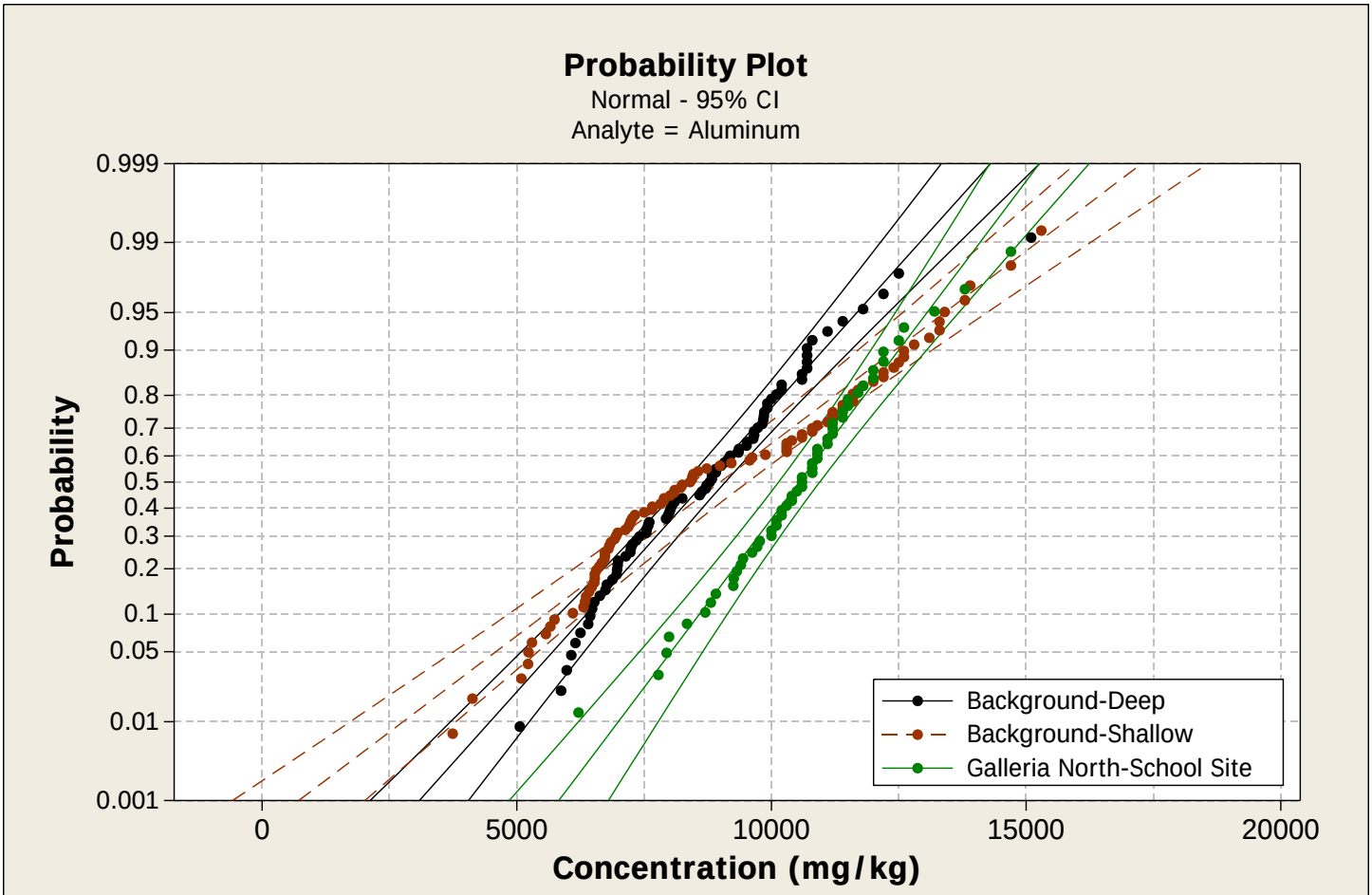
APPENDIX F

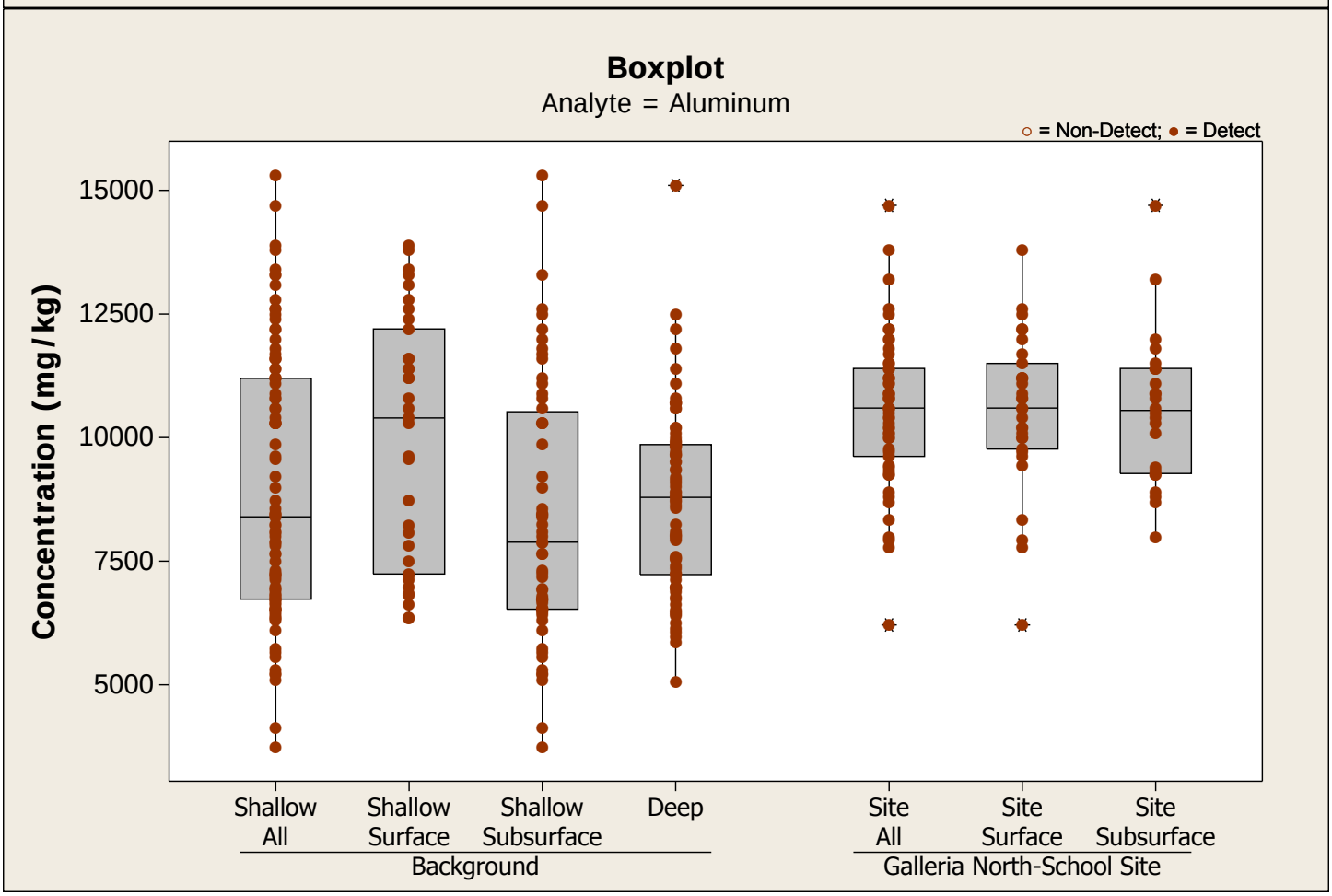
DATA VALIDATION SUMMARY REPORTS

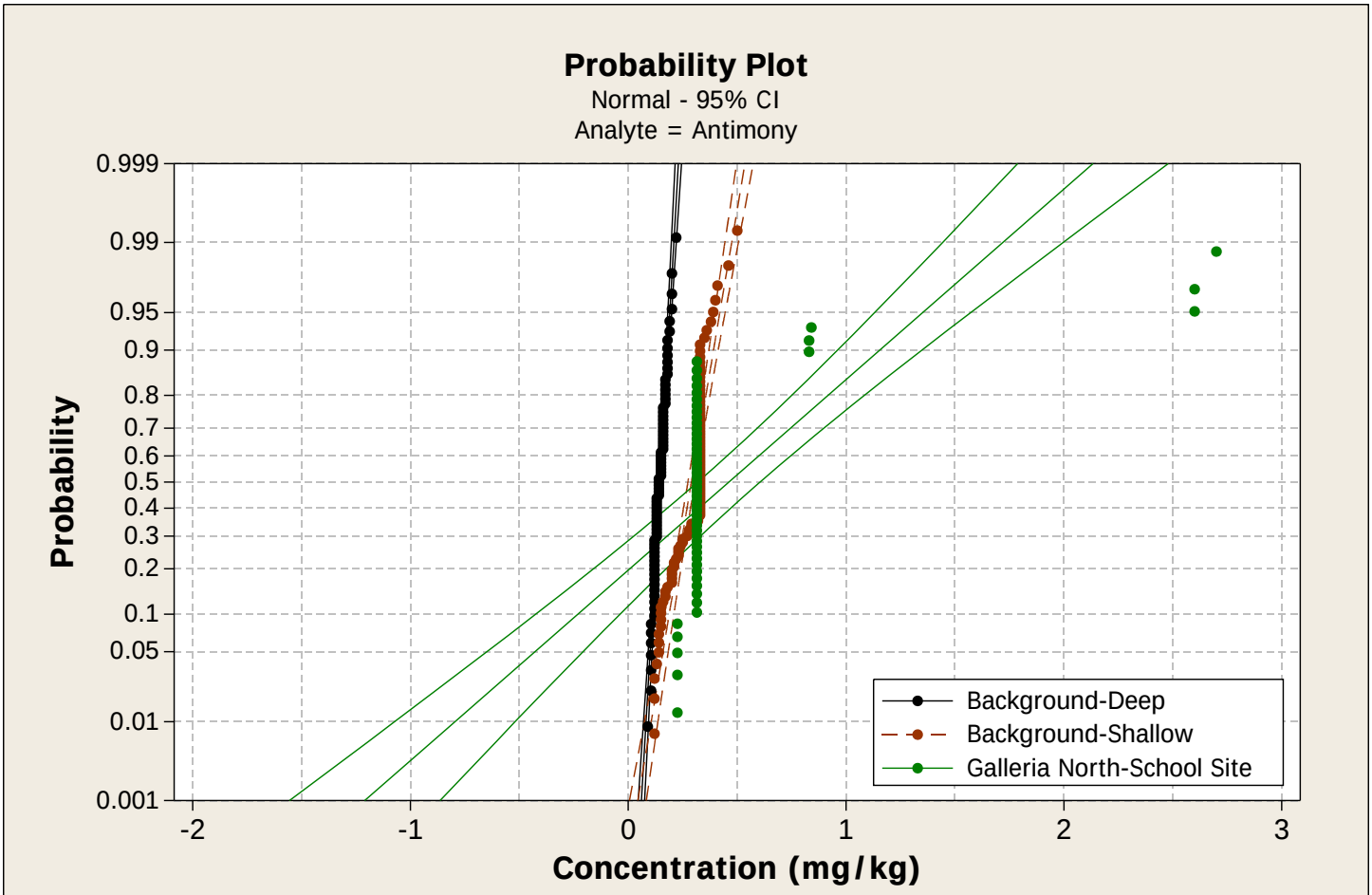
APPENDIX G

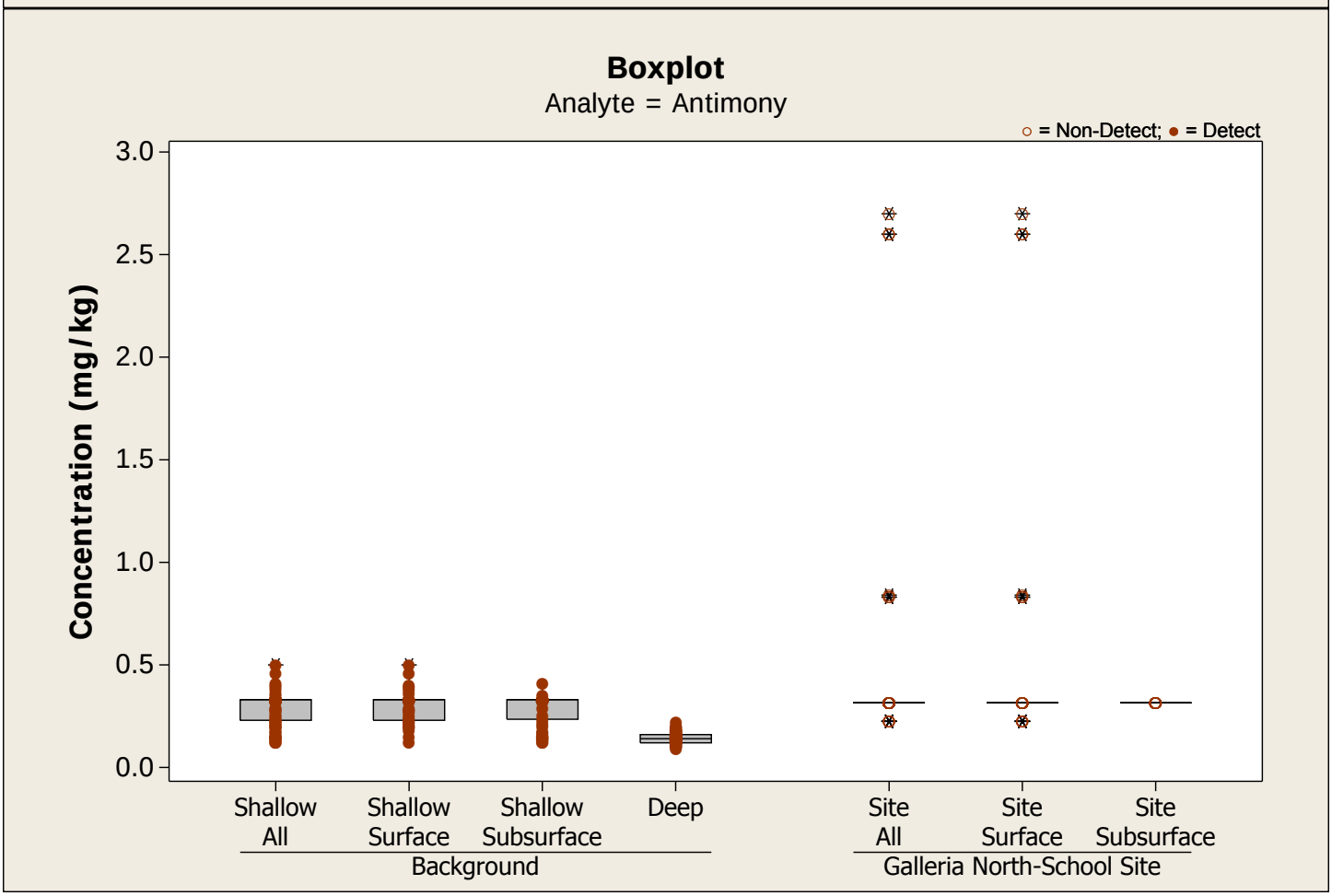
CUMULATIVE PROBABILITY PLOTS AND BOXPLOTS FOR METALS AND RADIONUCLIDES AND SCATTERPLOTS FOR METALS

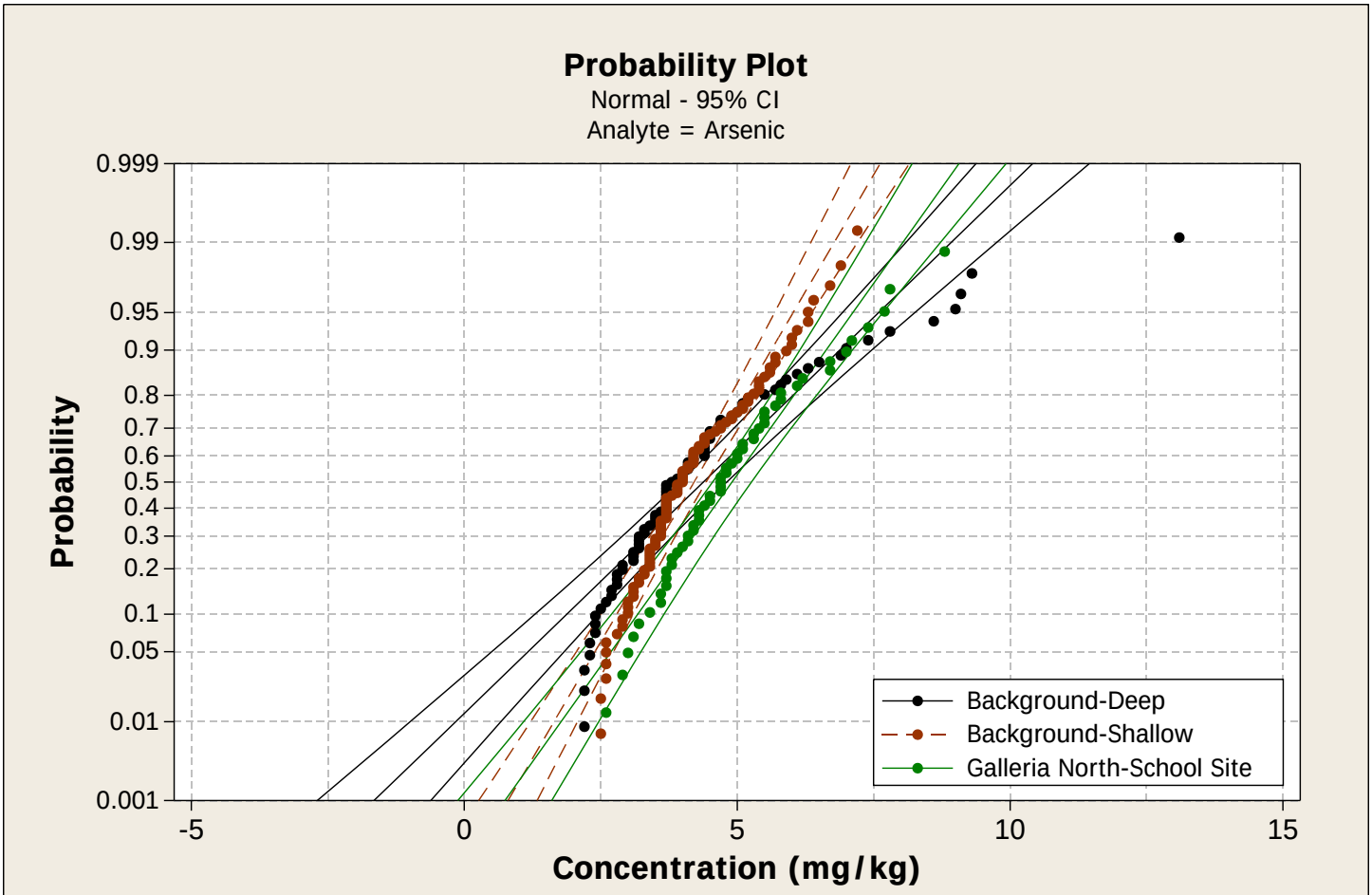
CUMULATIVE PROBABILITY PLOTS AND BOXPLOTS FOR METALS AND RADIONUCLIDES

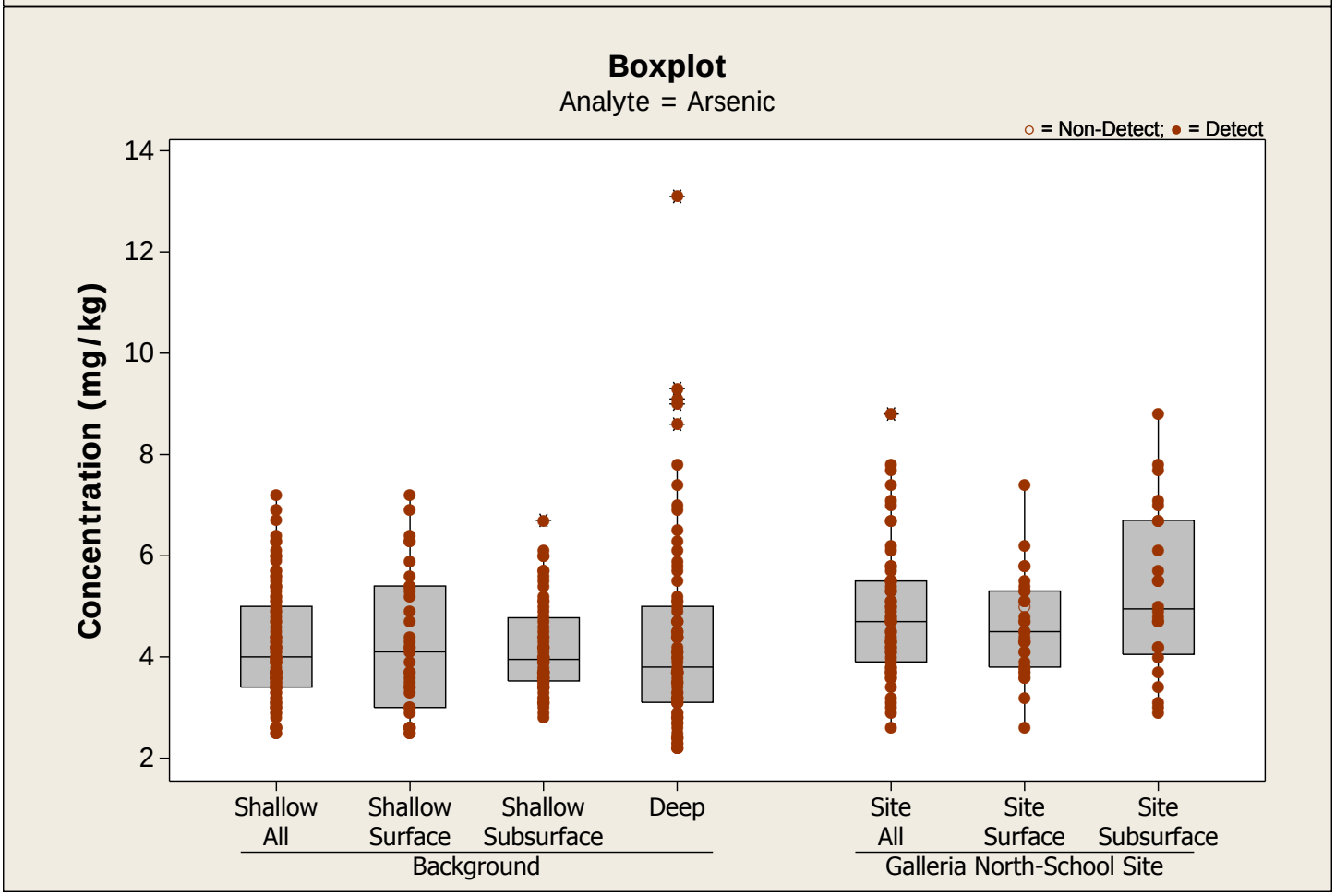

Probability Plot
Normal - 95% CI
Analyte = Aluminum
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
0
5000
10000
15000
20000
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

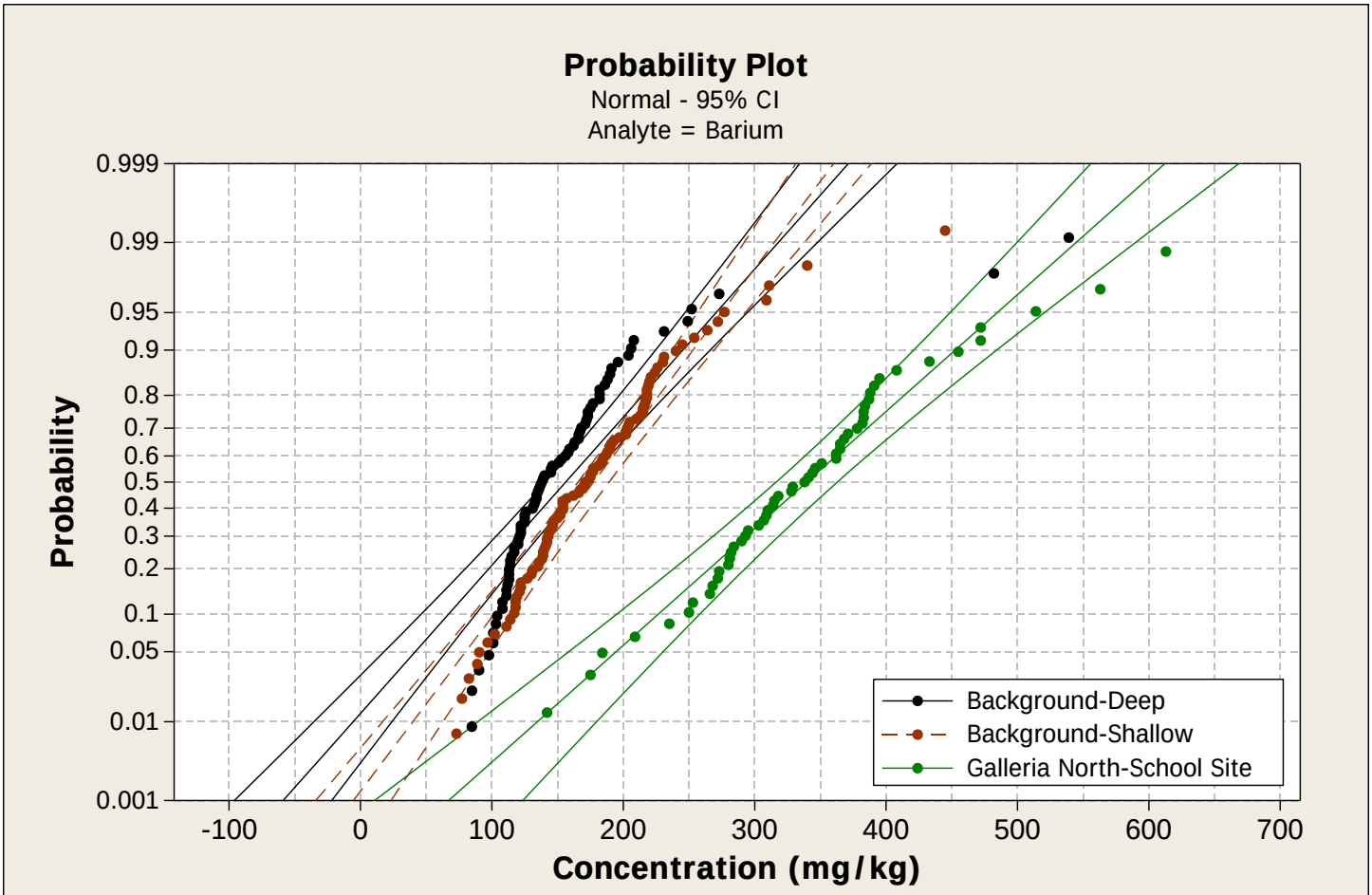

Boxplot
Analyte = Aluminum
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
15000
12500
10000
7500
5000
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

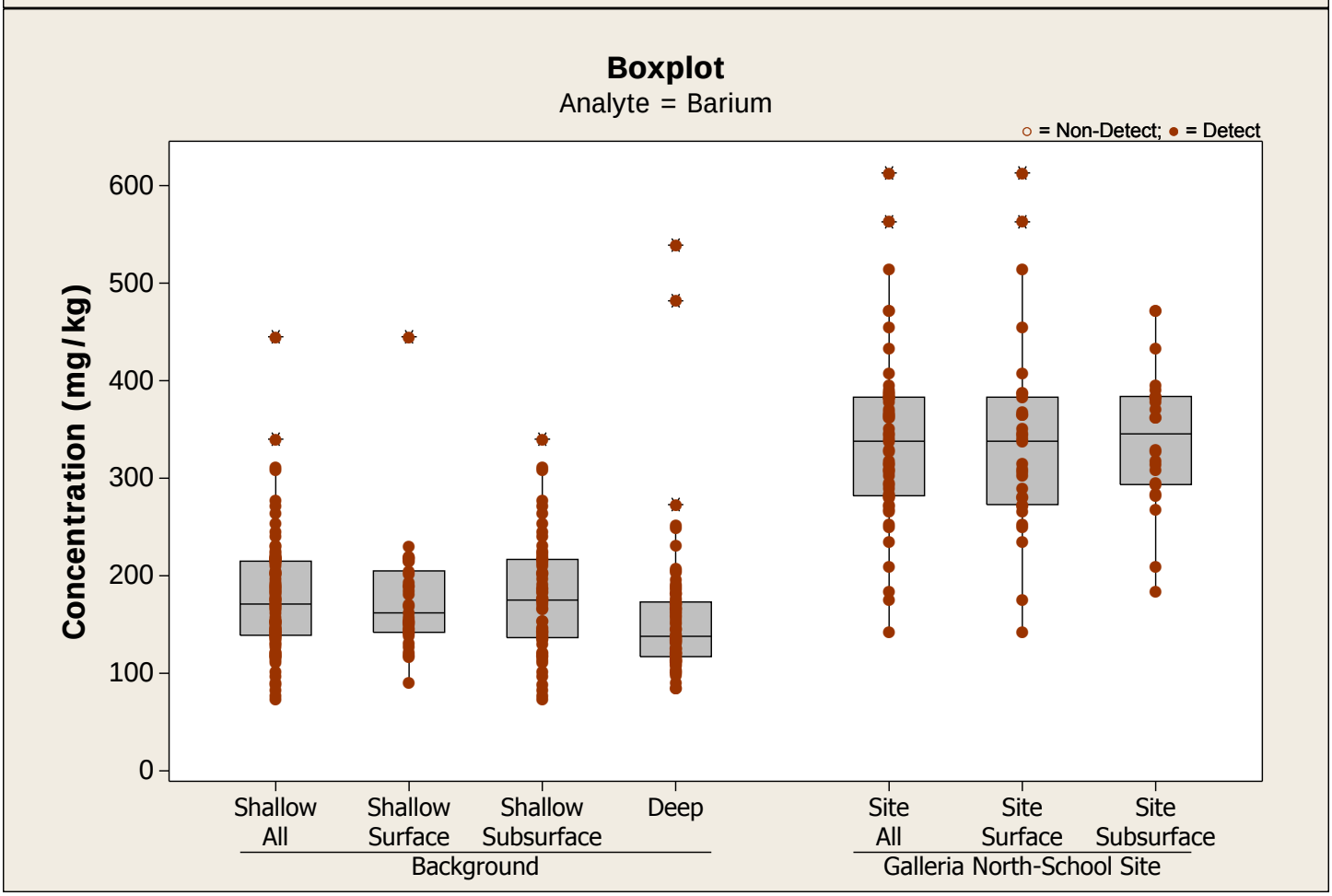

Probability Plot
Normal - 95% CI
Analyte = Antimony
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
-2
-1
0
1
2
3
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

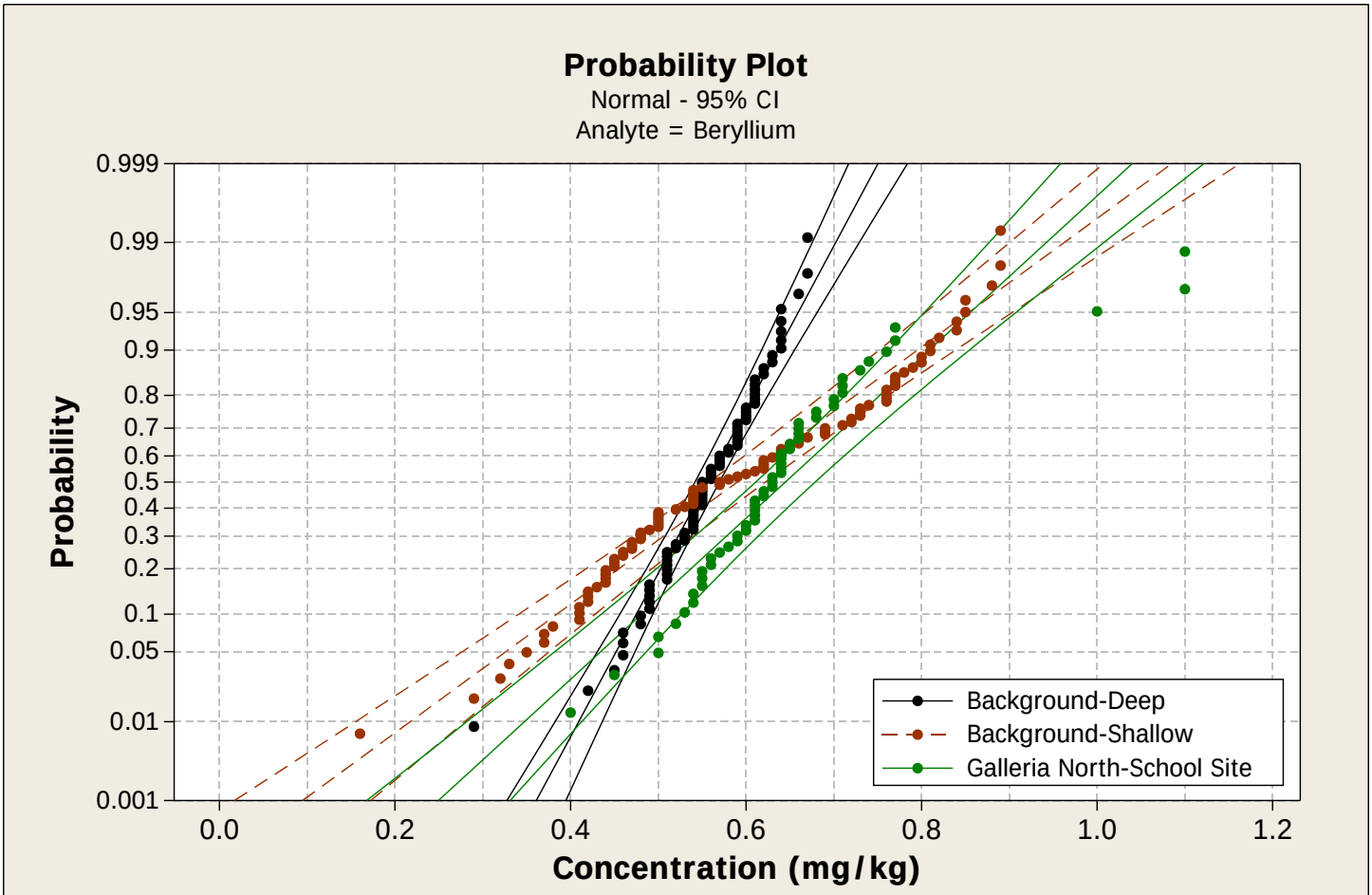

Boxplot
Analyte = Antimony
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

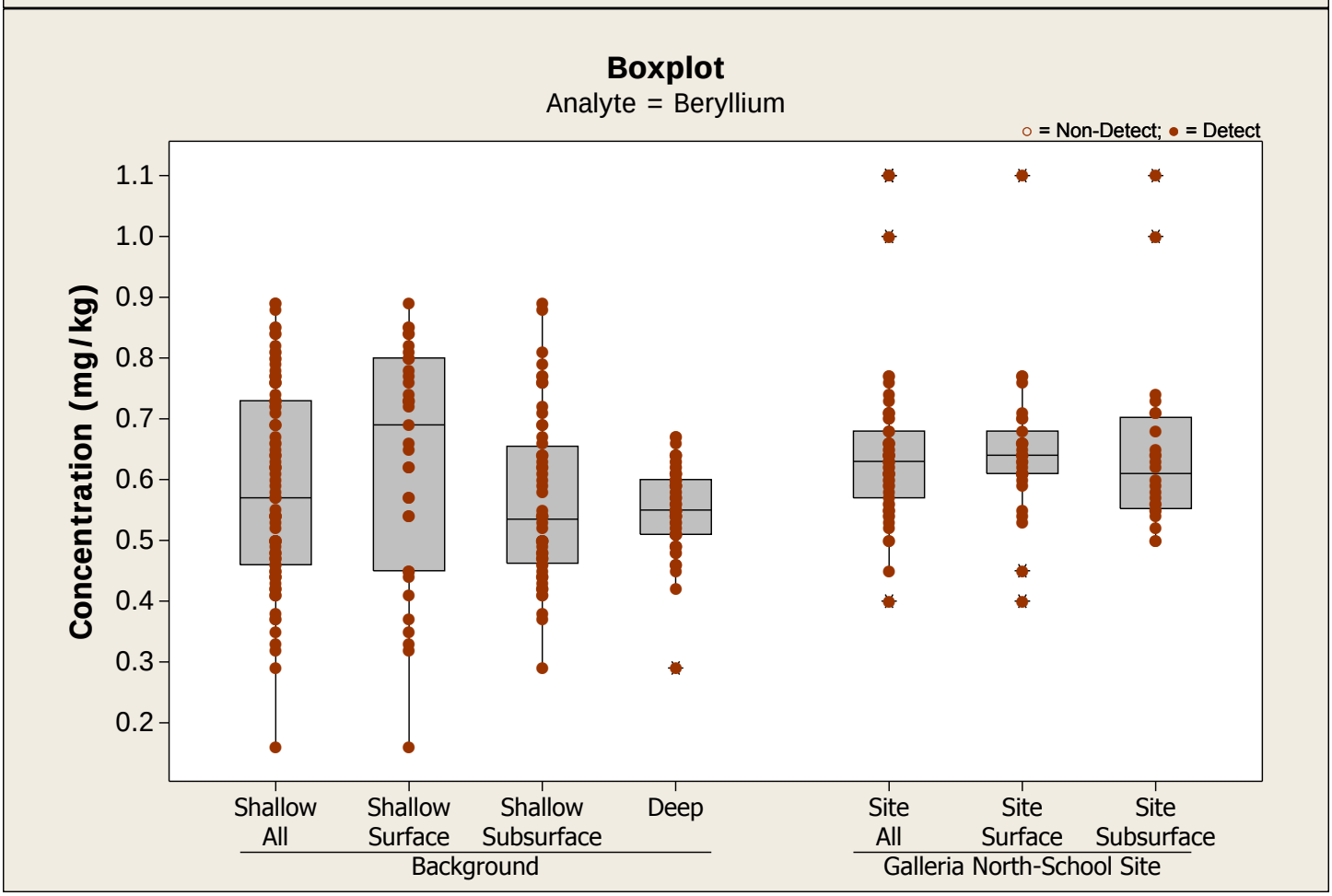

Probability Plot
Normal - 95% CI
Analyte = Arsenic
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
-5
0
5
10
15
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

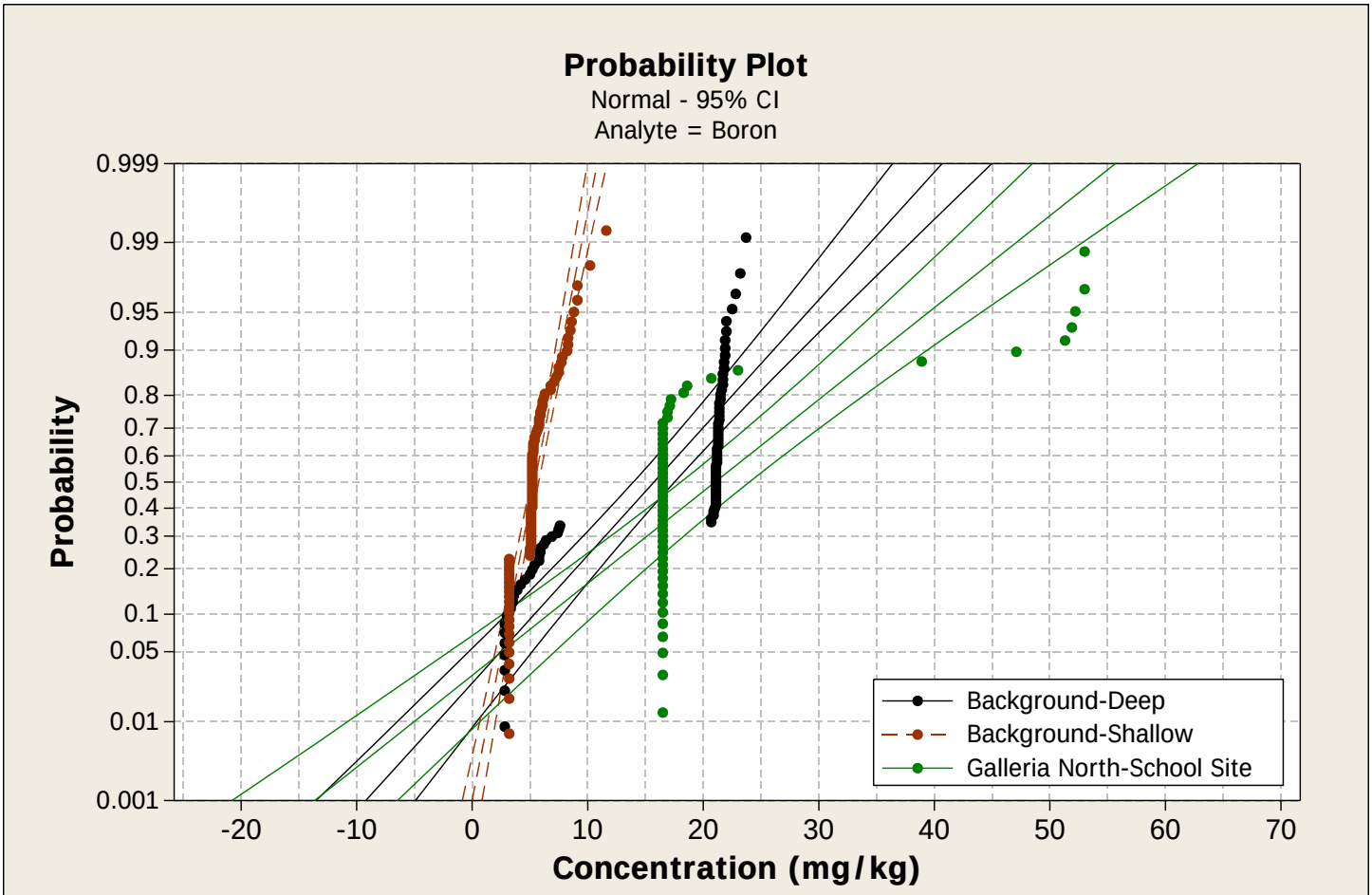

Boxplot
Analyte = Arsenic
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
14
12
10
8
6
4
2
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

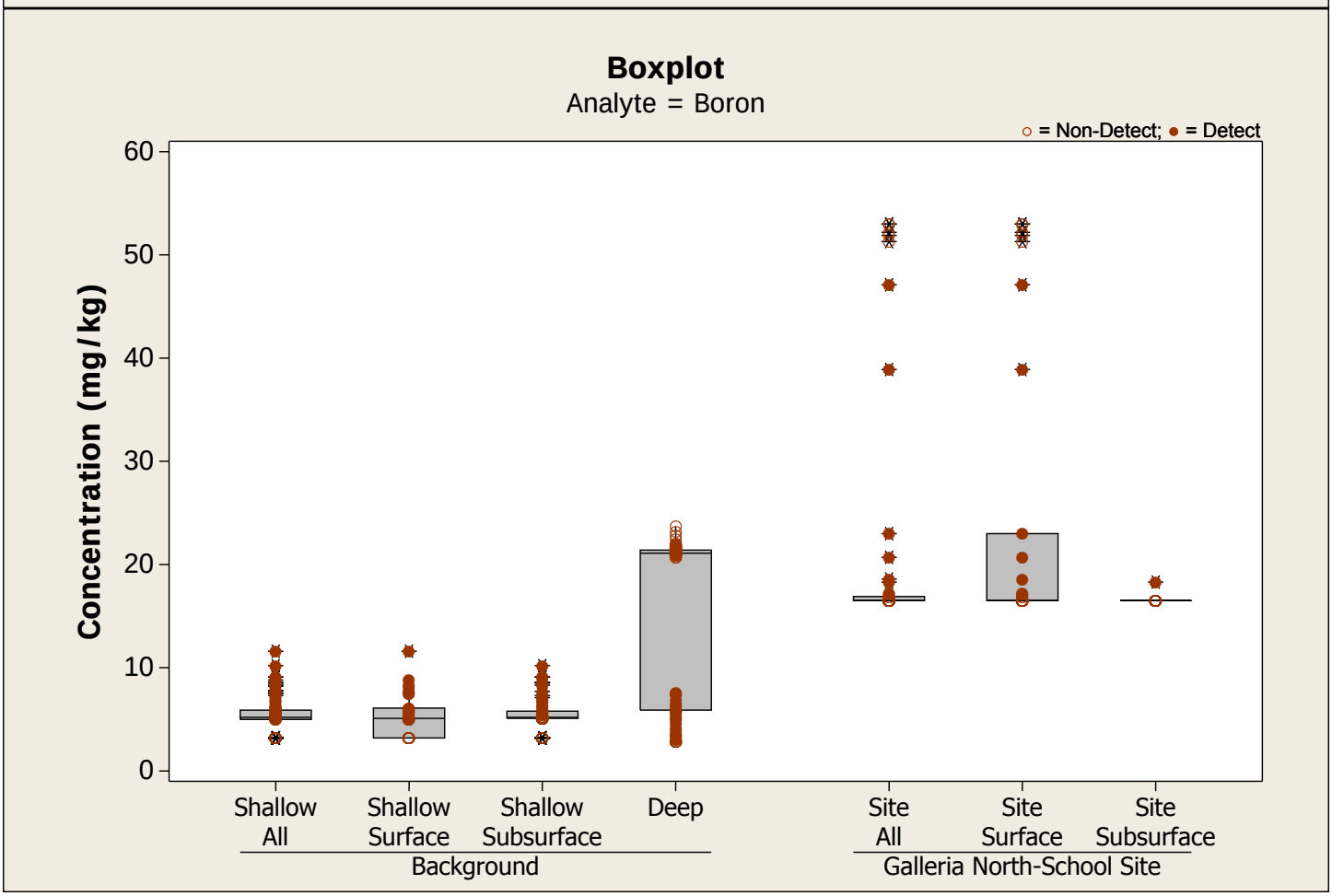

Probability Plot
Normal - 95% CI
Analyte = Barium
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
-100
0
100
200
300
400
500
600
700
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

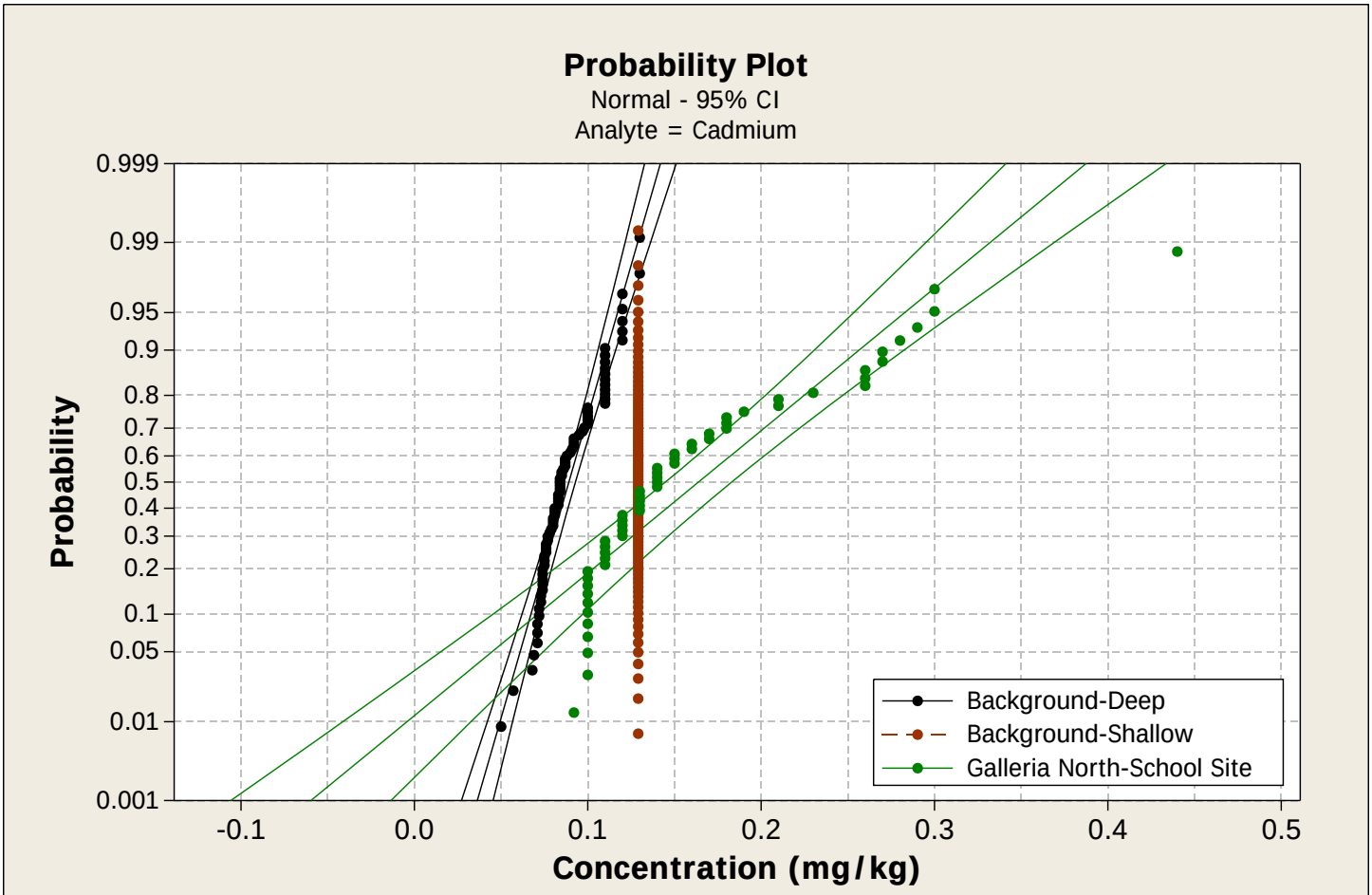

Boxplot
Analyte = Barium
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
600
500
400
300
200
100
0
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

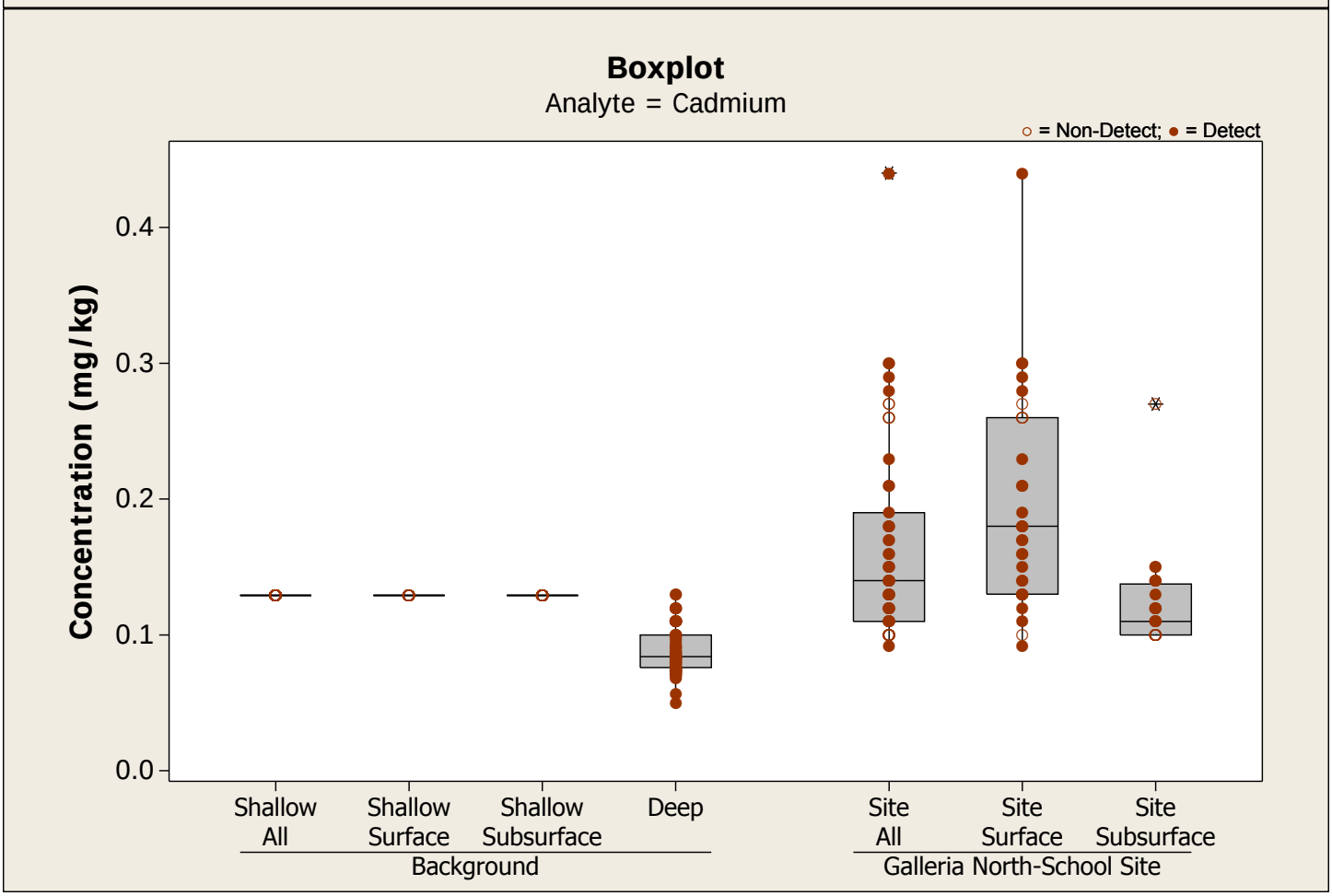

Probability Plot
Normal - 95% CI
Analyte = Beryllium
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
0.0
0.2
0.4
0.6
0.8
1.0
1.2
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

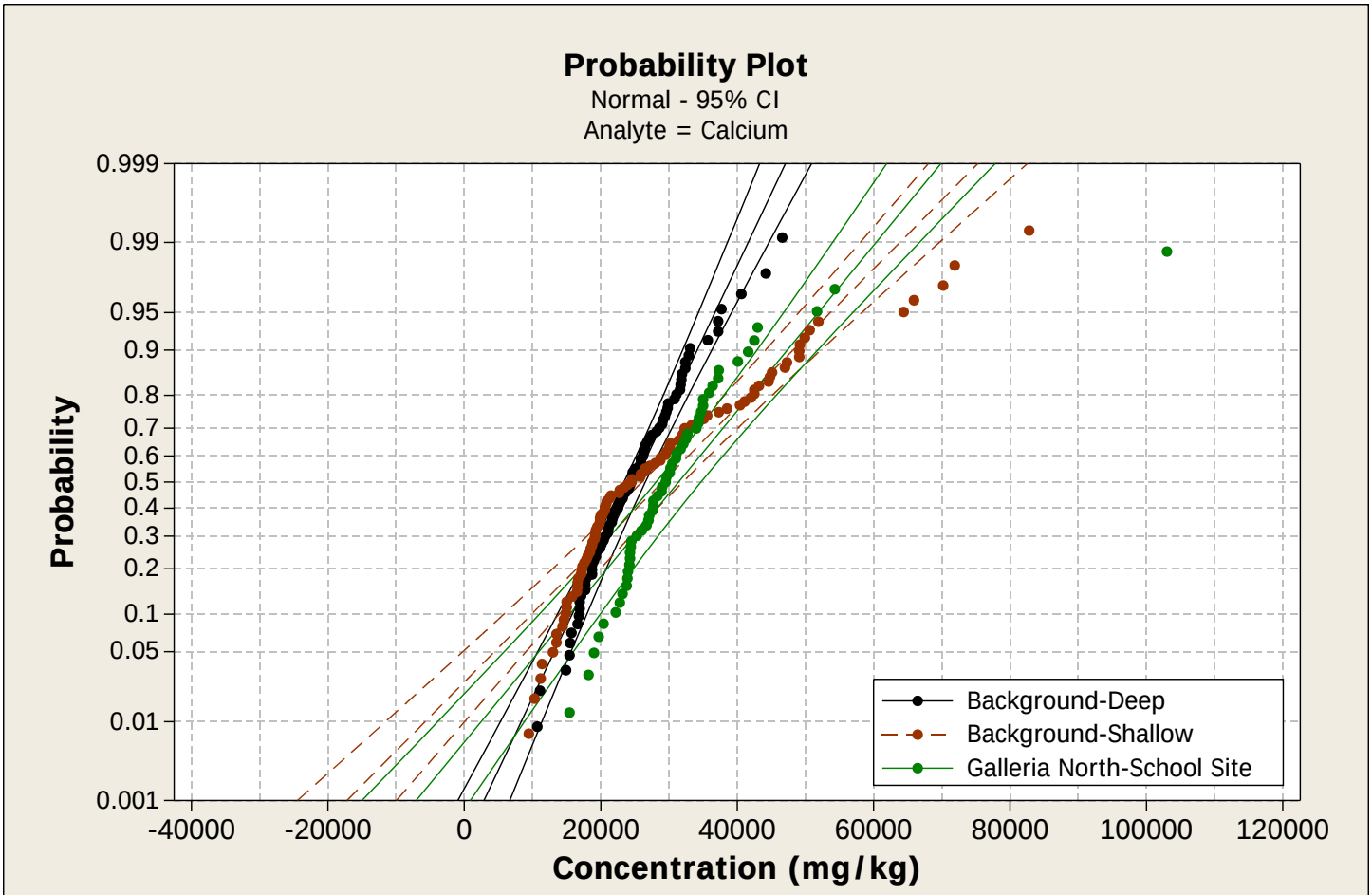

Boxplot
Analyte = Beryllium
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

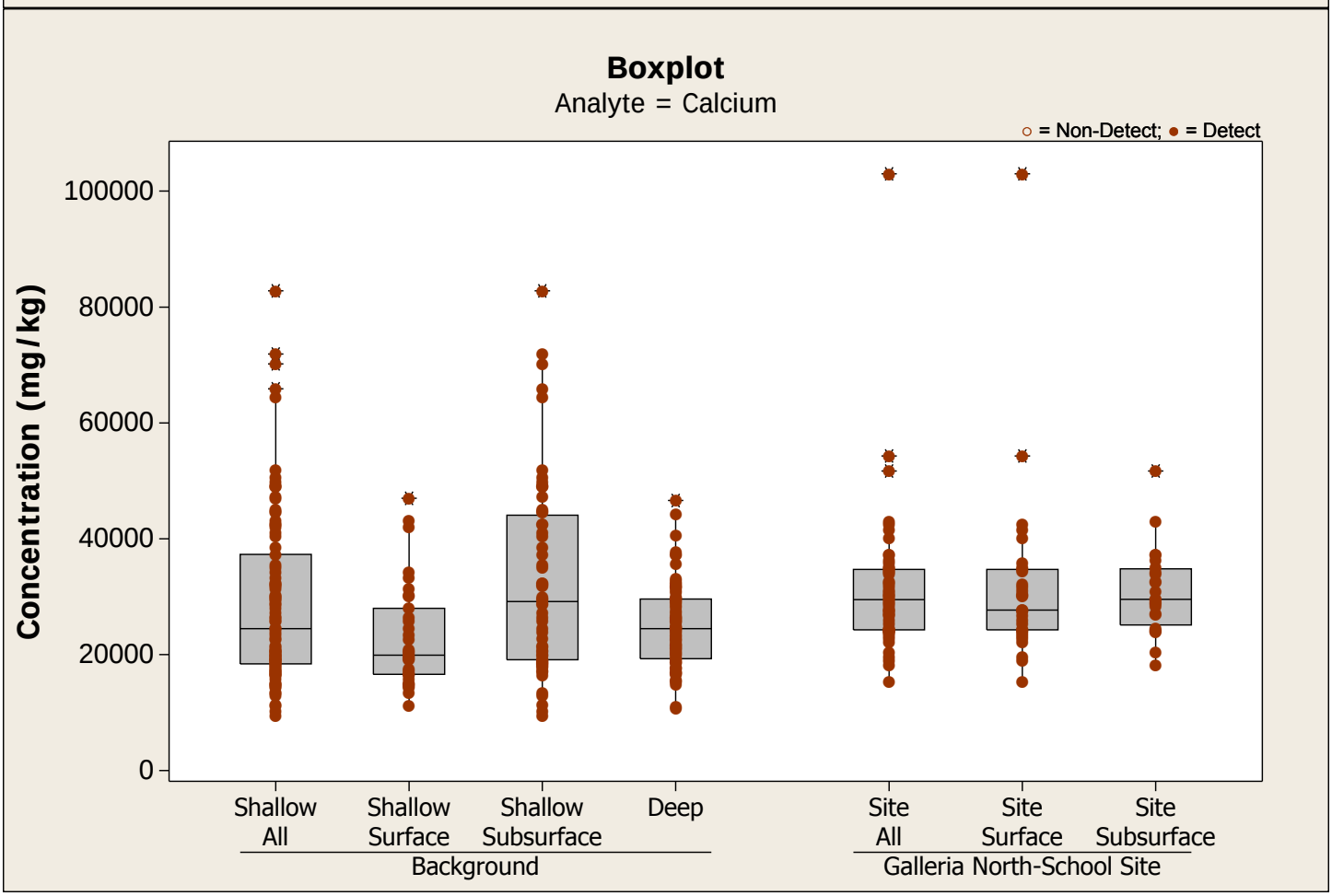

Probability Plot
Normal - 95% CI
Analyte = Boron
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
-20
-10
0
10
20
30
40
50
60
70
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

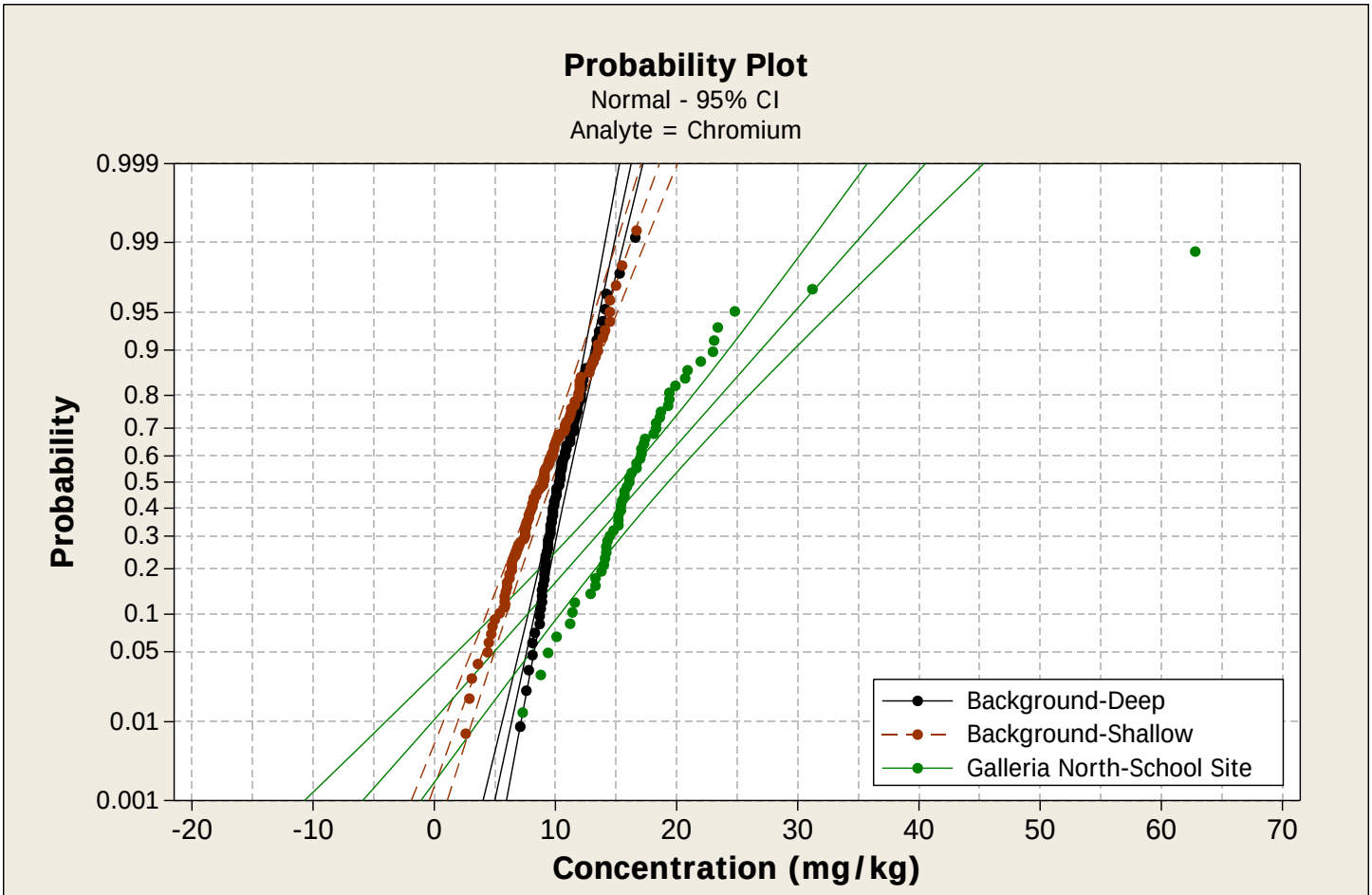

Boxplot
Analyte = Boron
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
60
50
40
30
20
10
0
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

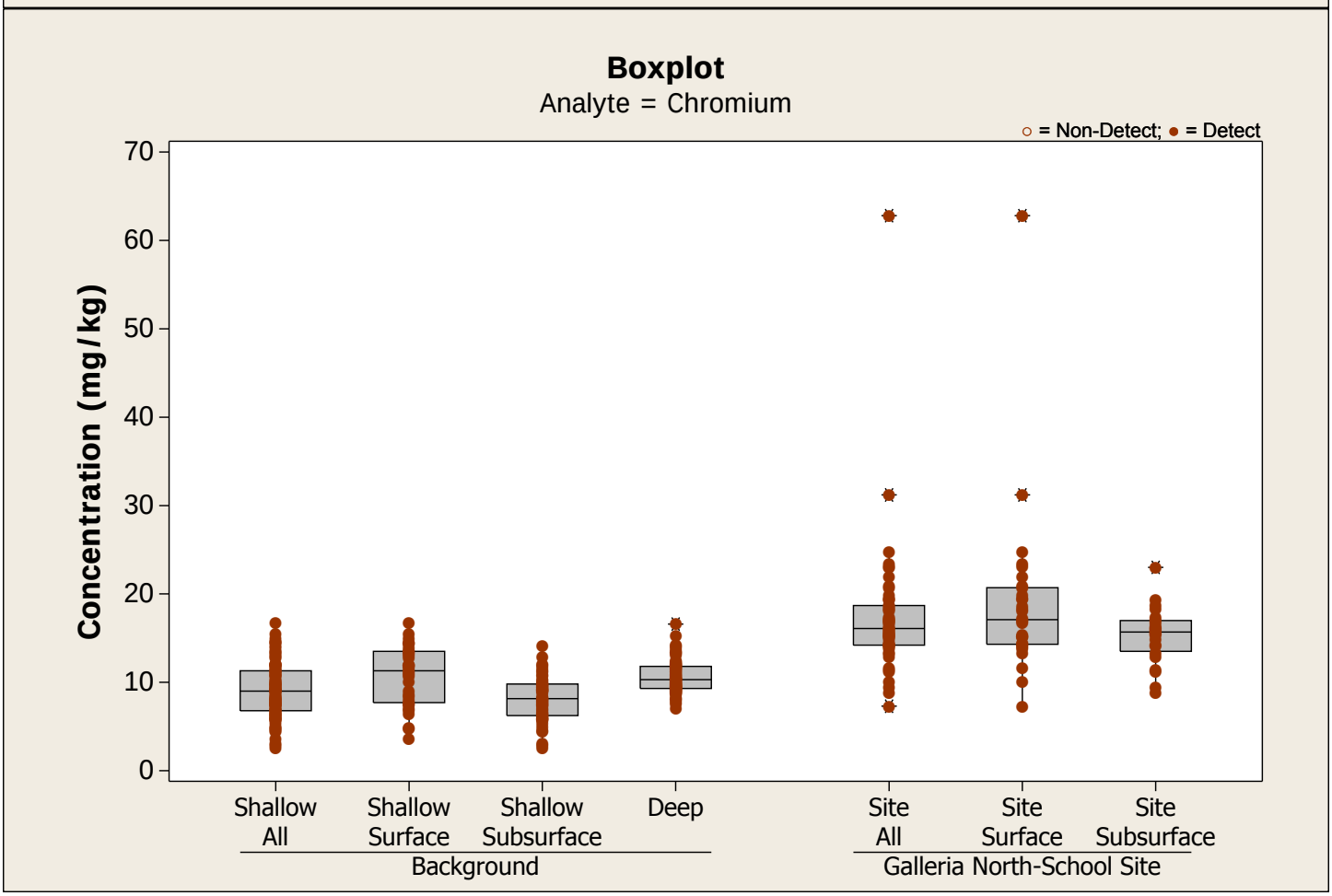

Probability Plot
Normal - 95% CI
Analyte = Cadmium
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
-0.1
0.0
0.1
0.2
0.3
0.4
0.5
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

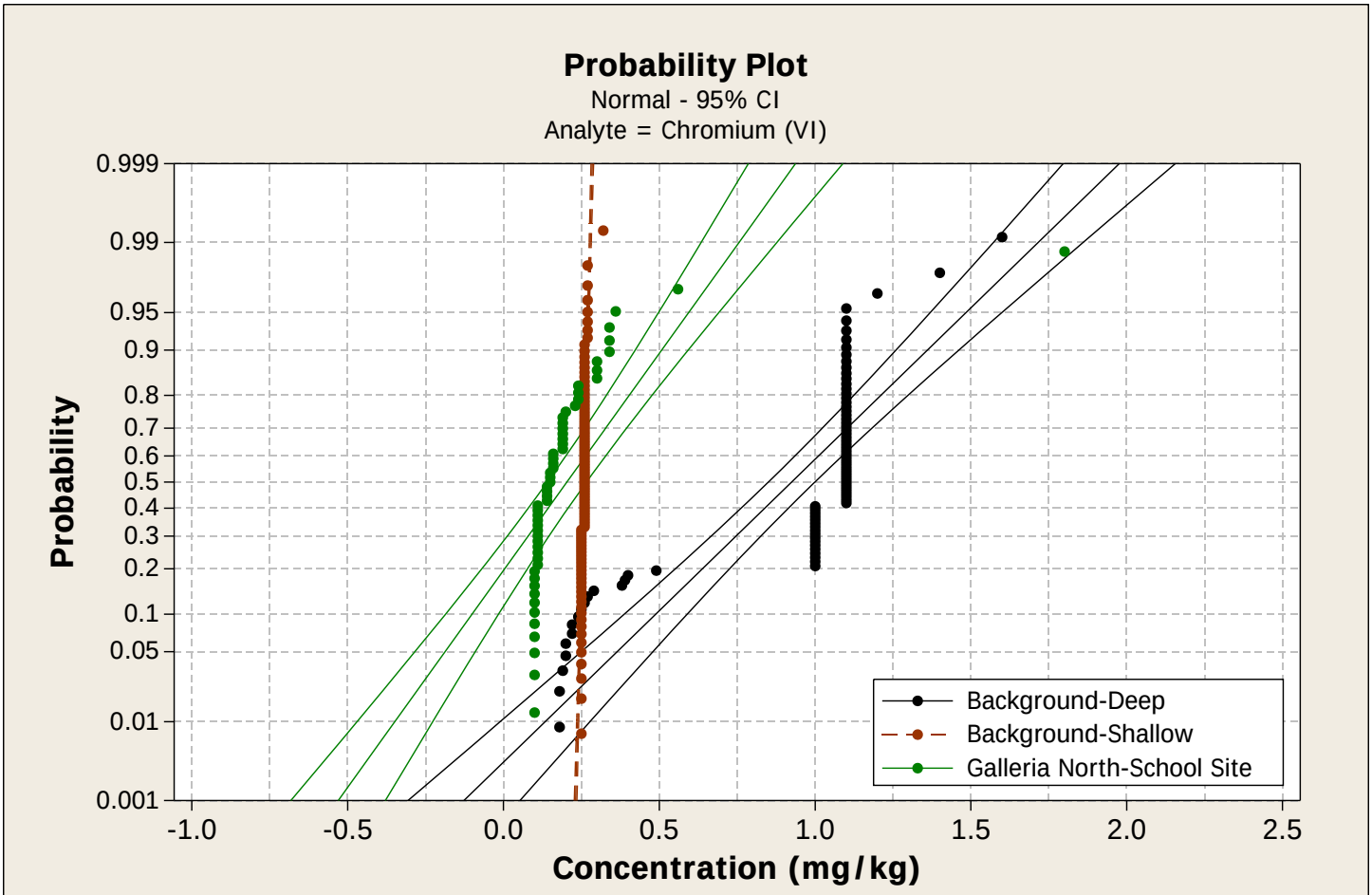

Boxplot
Analyte = Cadmium
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
0.4
0.3
0.2
0.1
0.0
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

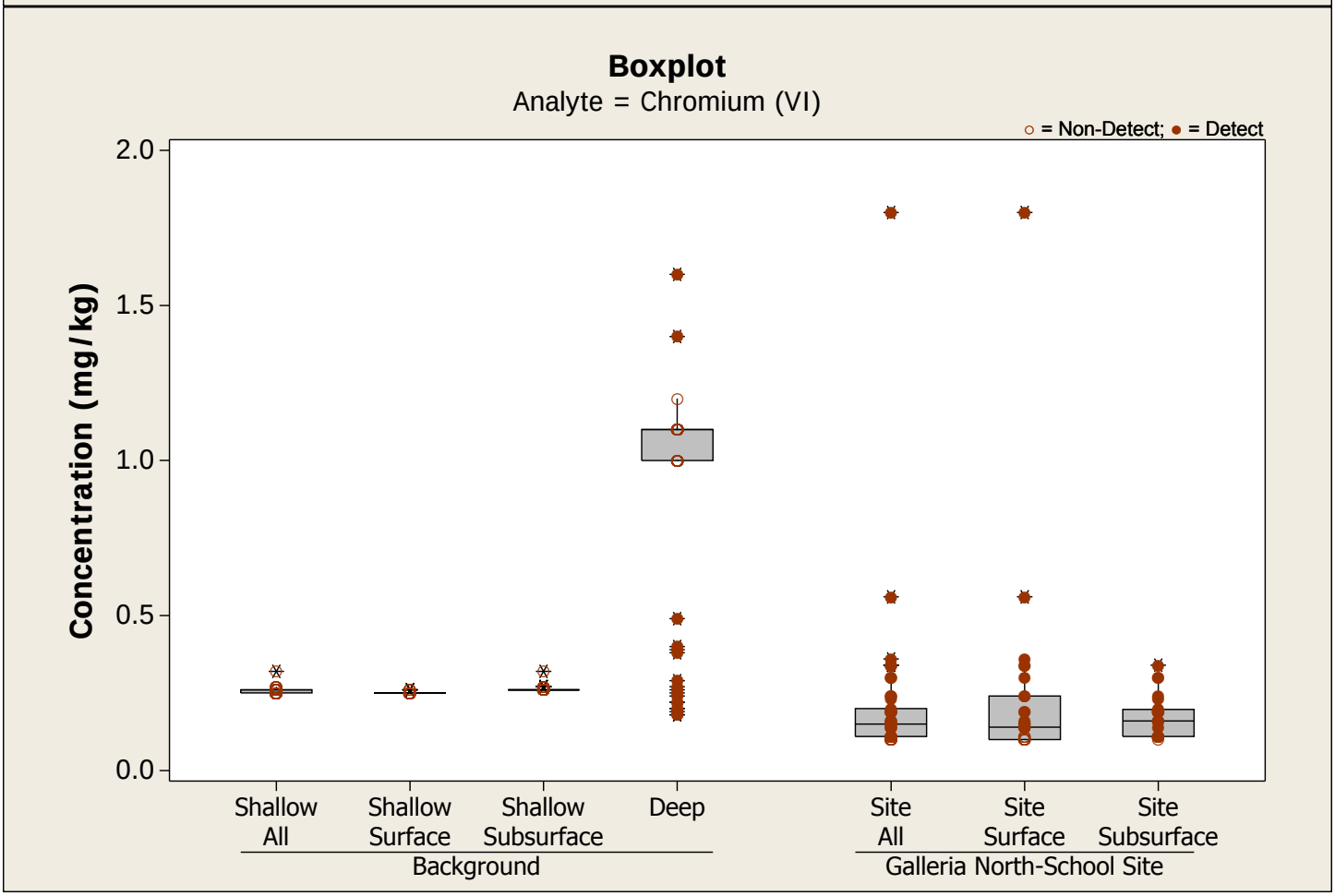

Probability Plot
Normal - 95% CI
Analyte = Calcium
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
-40000
-20000
0
20000
40000
60000
80000
100000
120000
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

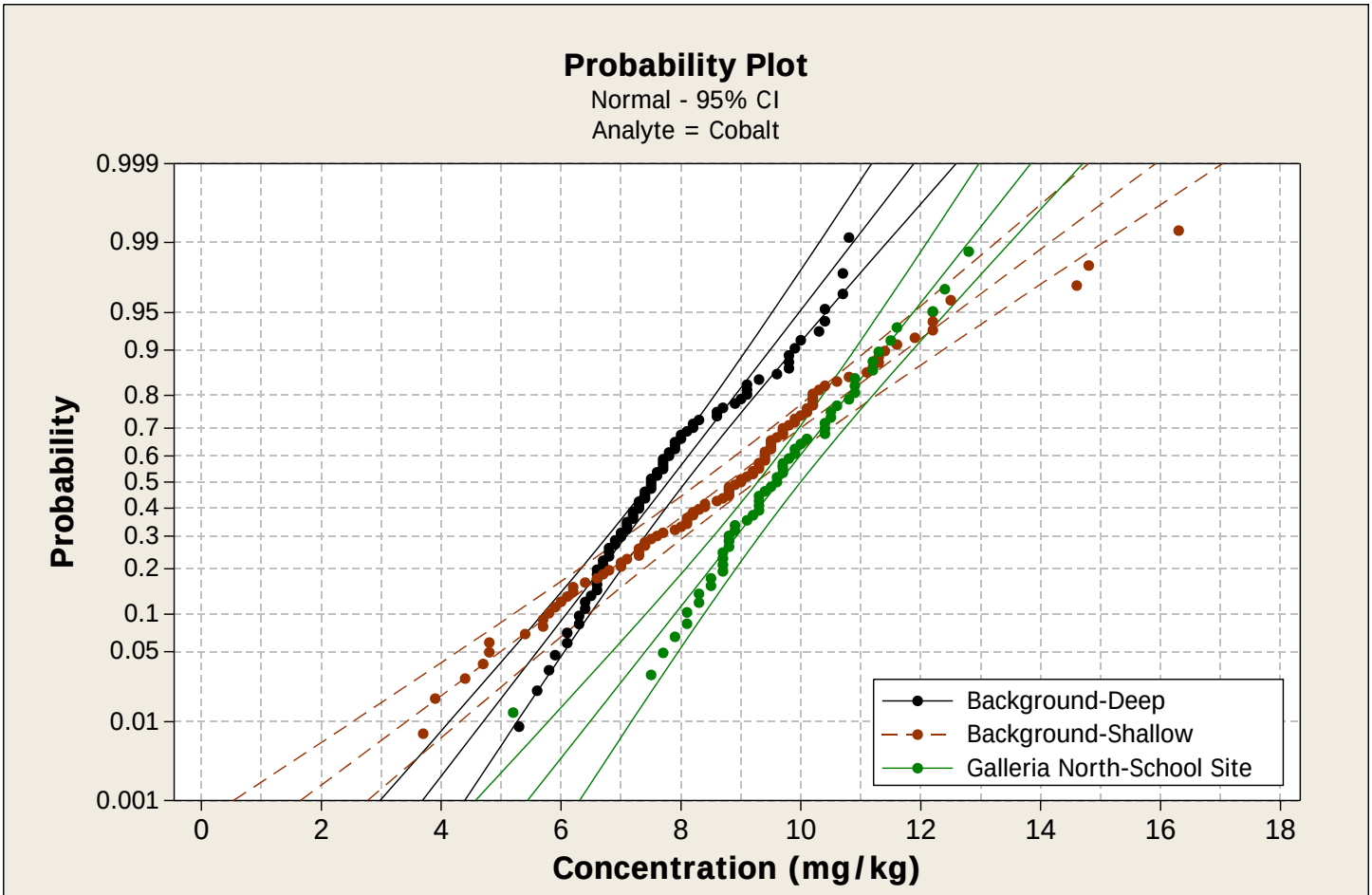

Boxplot
Analyte = Calcium
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
100000
80000
60000
40000
20000
0
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

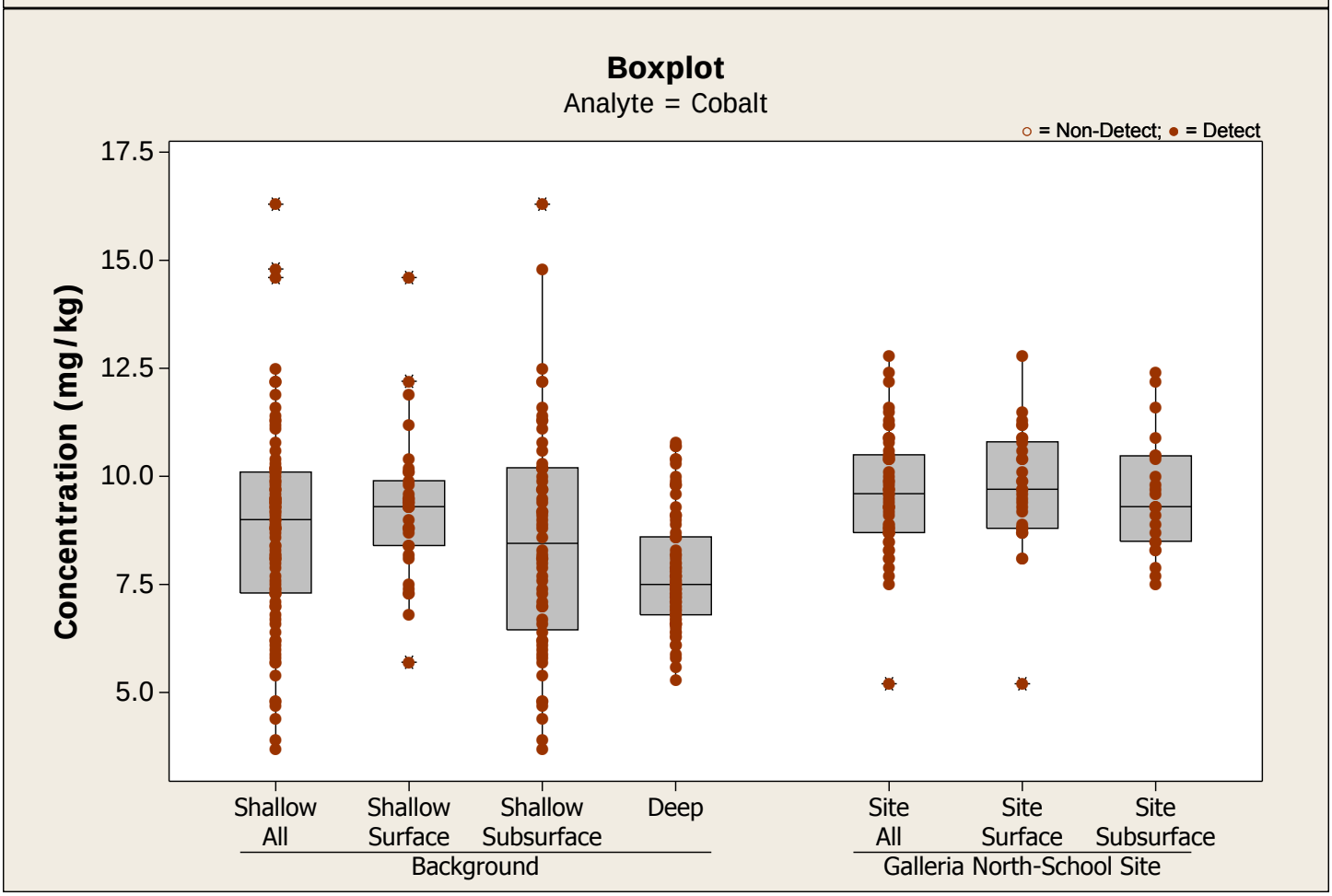

Probability Plot
Normal - 95% CI
Analyte = Chromium
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
-20
-10
0
10
20
30
40
50
60
70
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

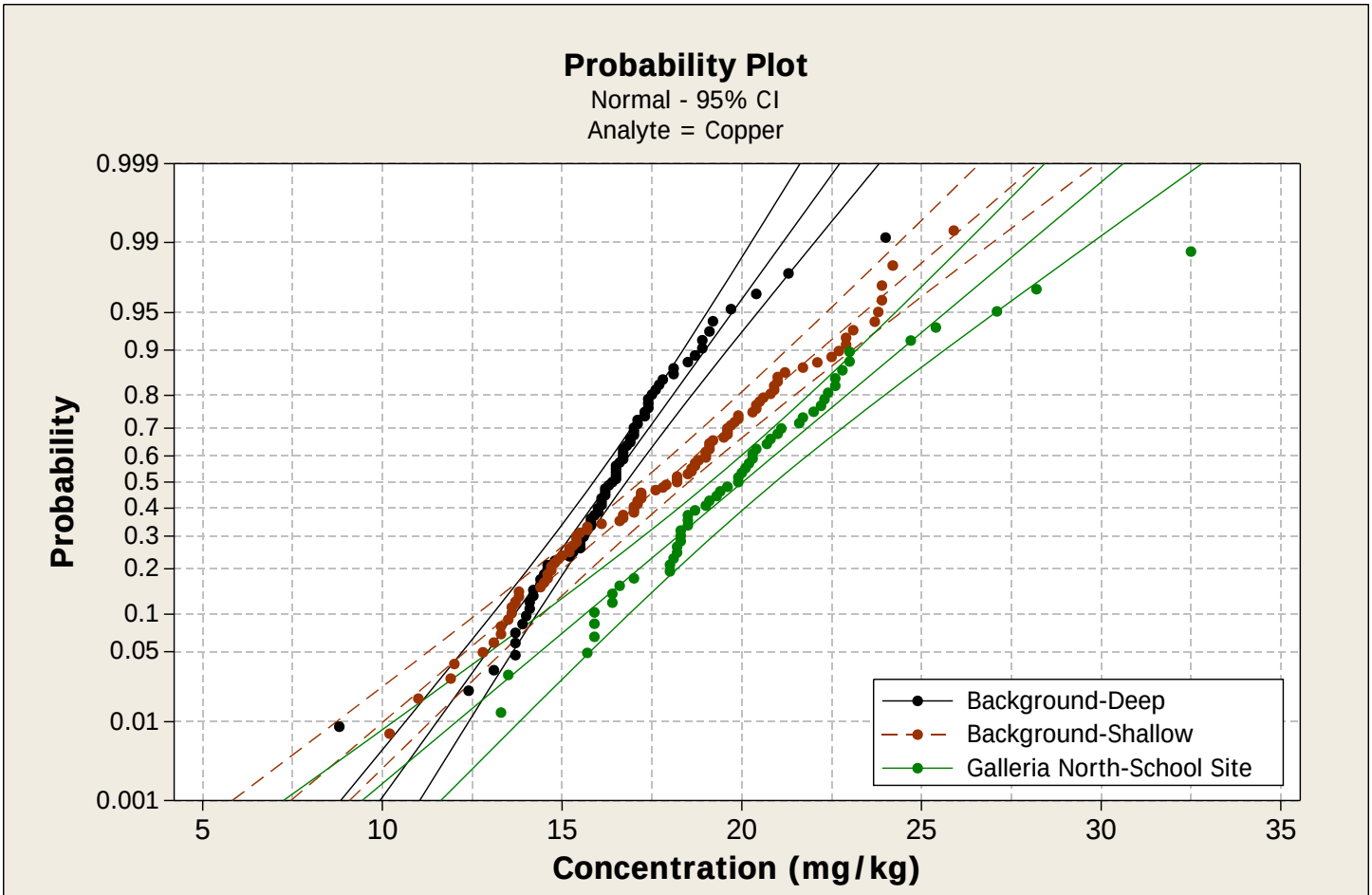

Boxplot
Analyte = Chromium
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
70
60
50
40
30
20
10
0
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

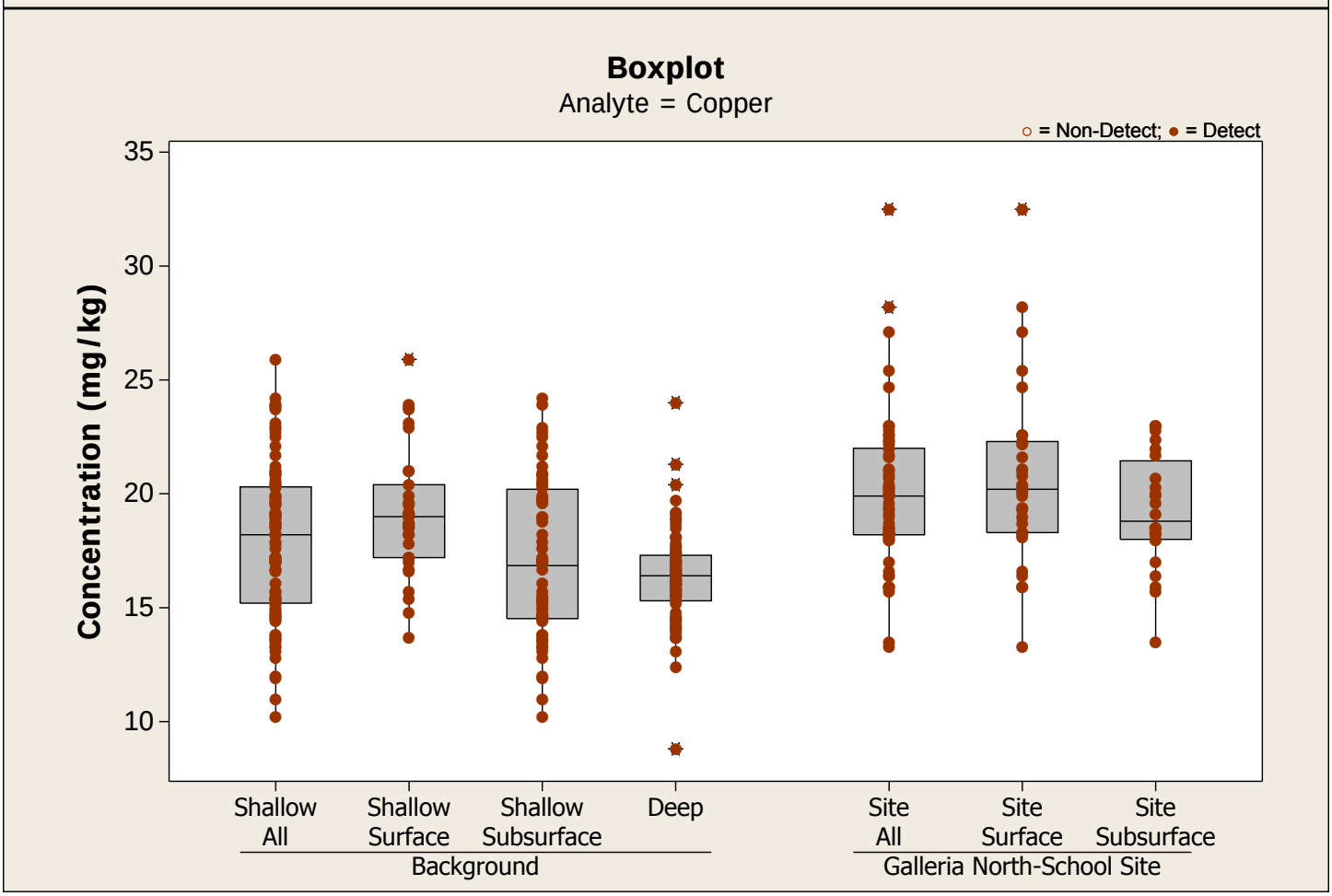

Probability Plot
Normal - 95% CI
Analyte = Chromium (VI)
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

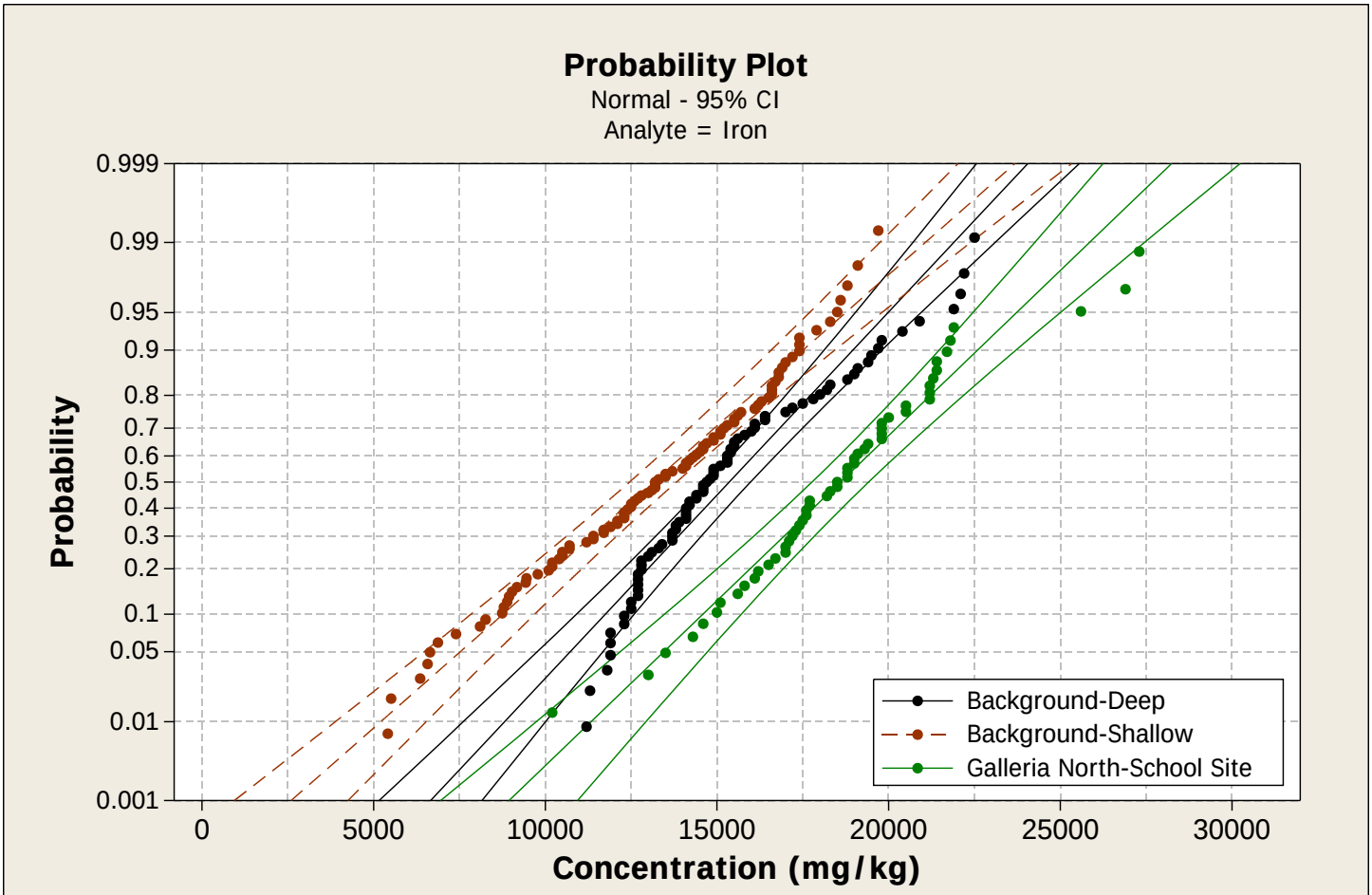

Boxplot
Analyte = Chromium (VI)
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
2.0
1.5
1.0
0.5
0.0
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

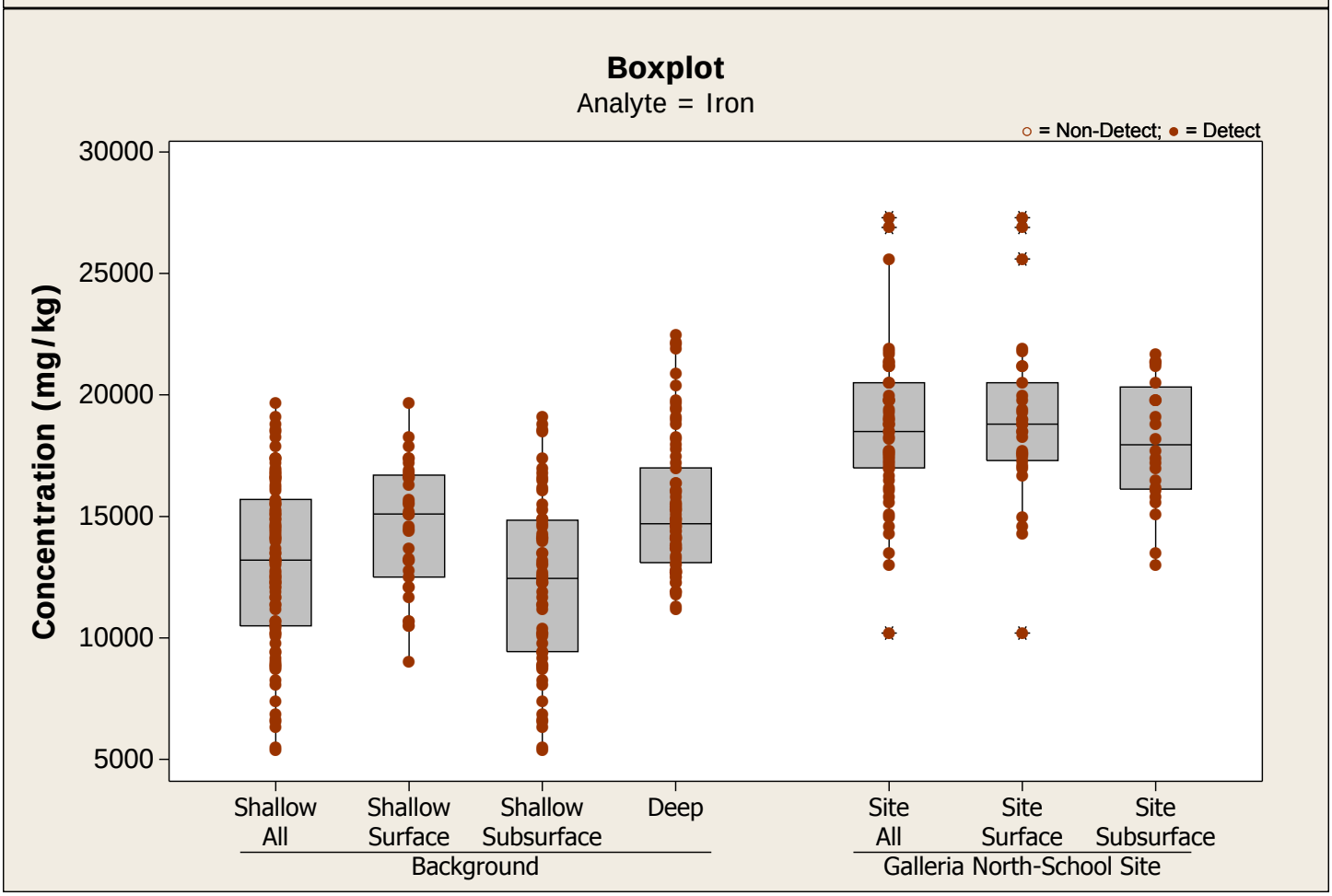

Probability Plot
Normal - 95% CI
Analyte = Cobalt
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
0
2
4
6
8
10
12
14
16
18
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

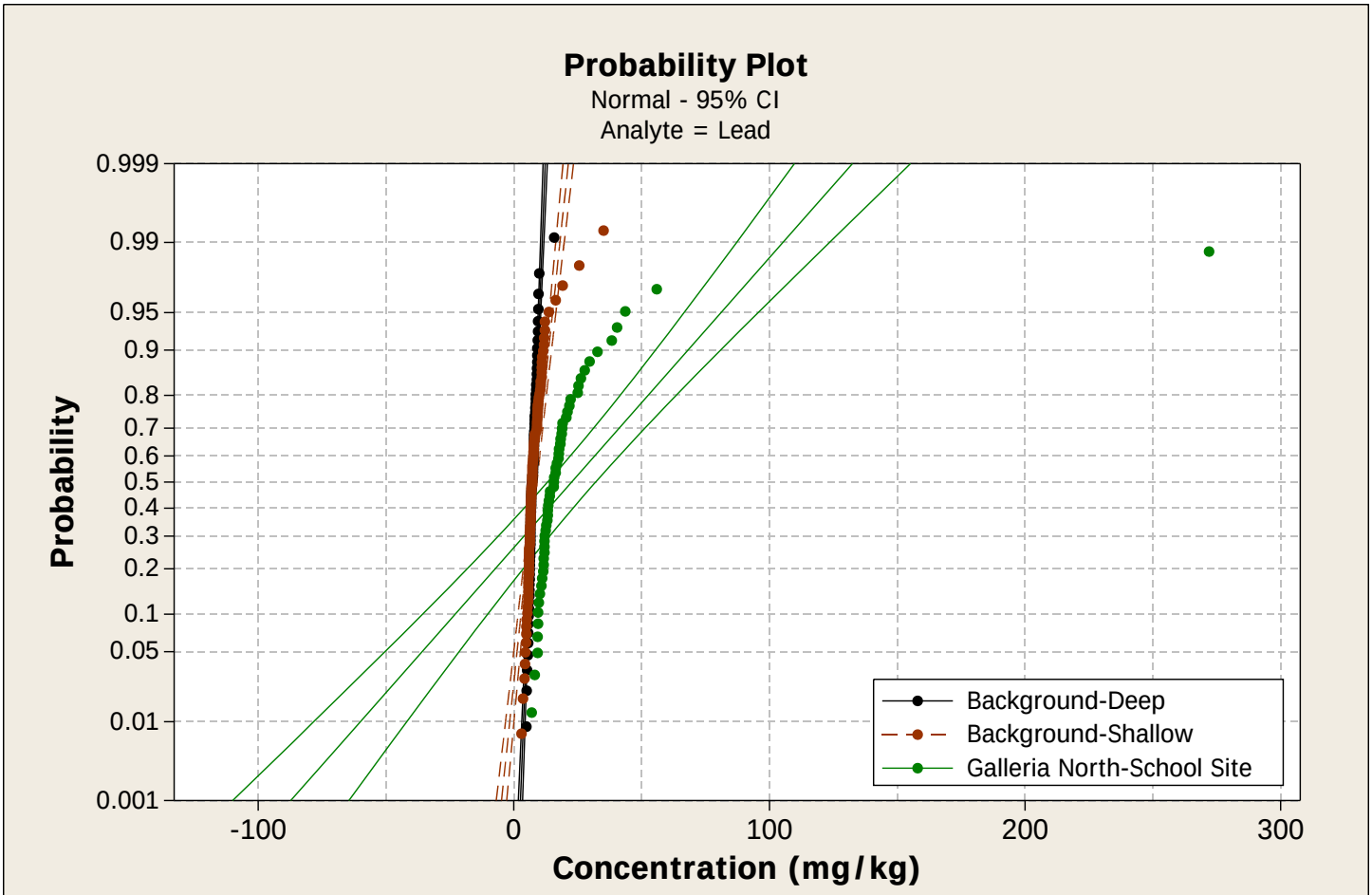

Boxplot
Analyte = Cobalt
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
17.5
15.0
12.5
10.0
7.5
5.0
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

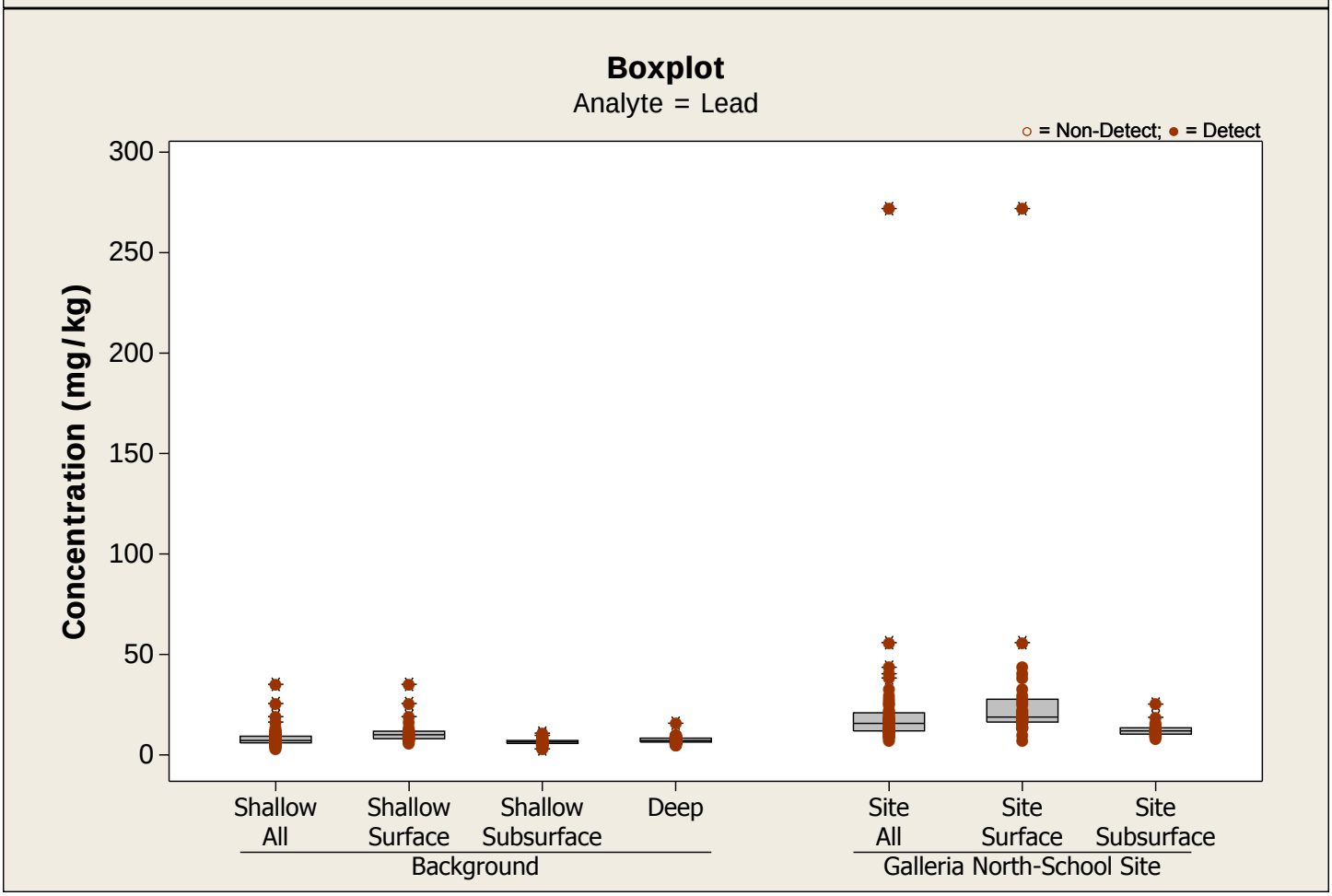

Probability Plot
Normal - 95% CI
Analyte = Copper
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
5
10
15
20
25
30
35
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

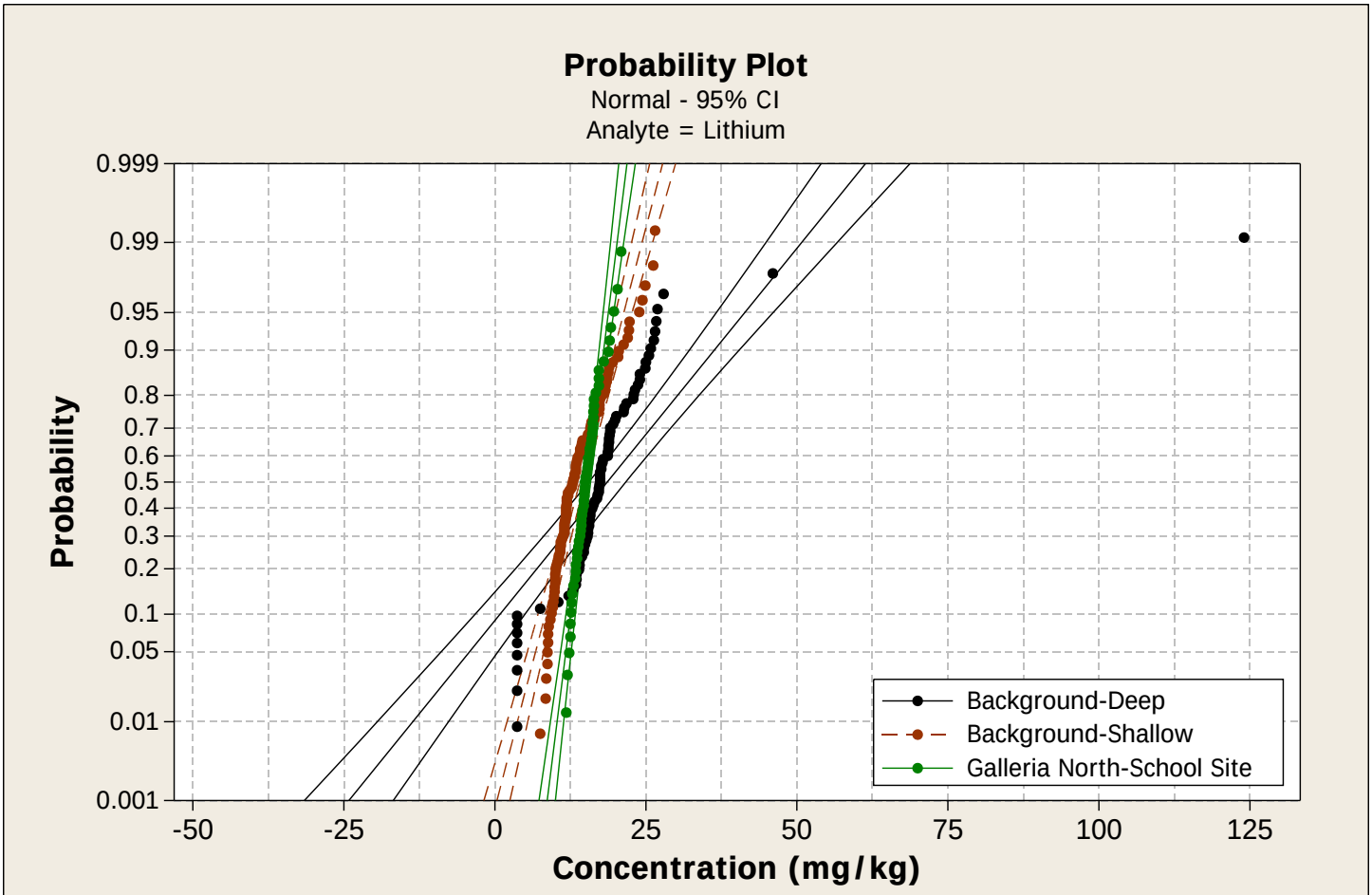

Boxplot
Analyte = Copper
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
35
30
25
20
15
10
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

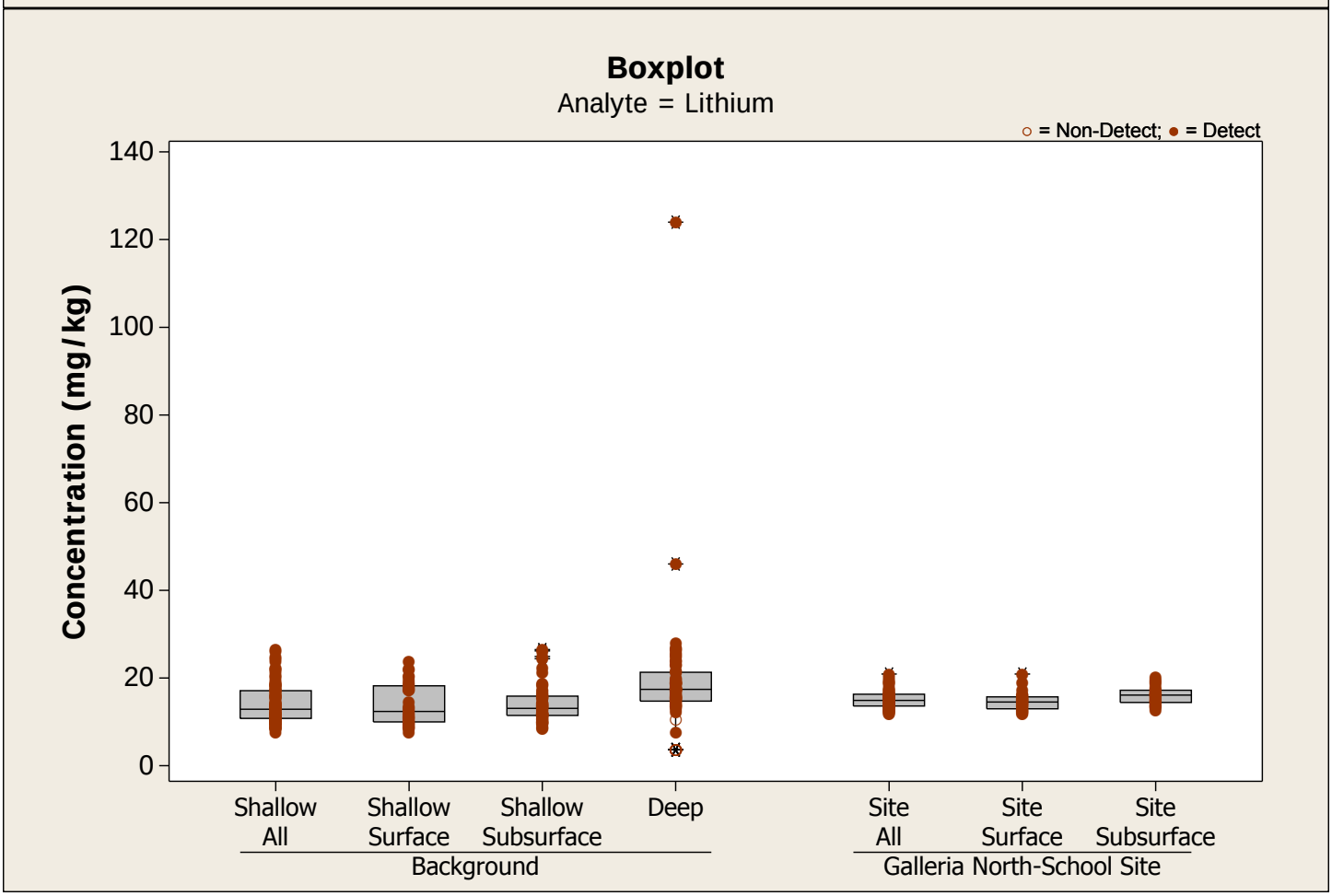

Probability Plot
Normal - 95% CI
Analyte = Iron
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
0
5000
10000
15000
20000
25000
30000
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

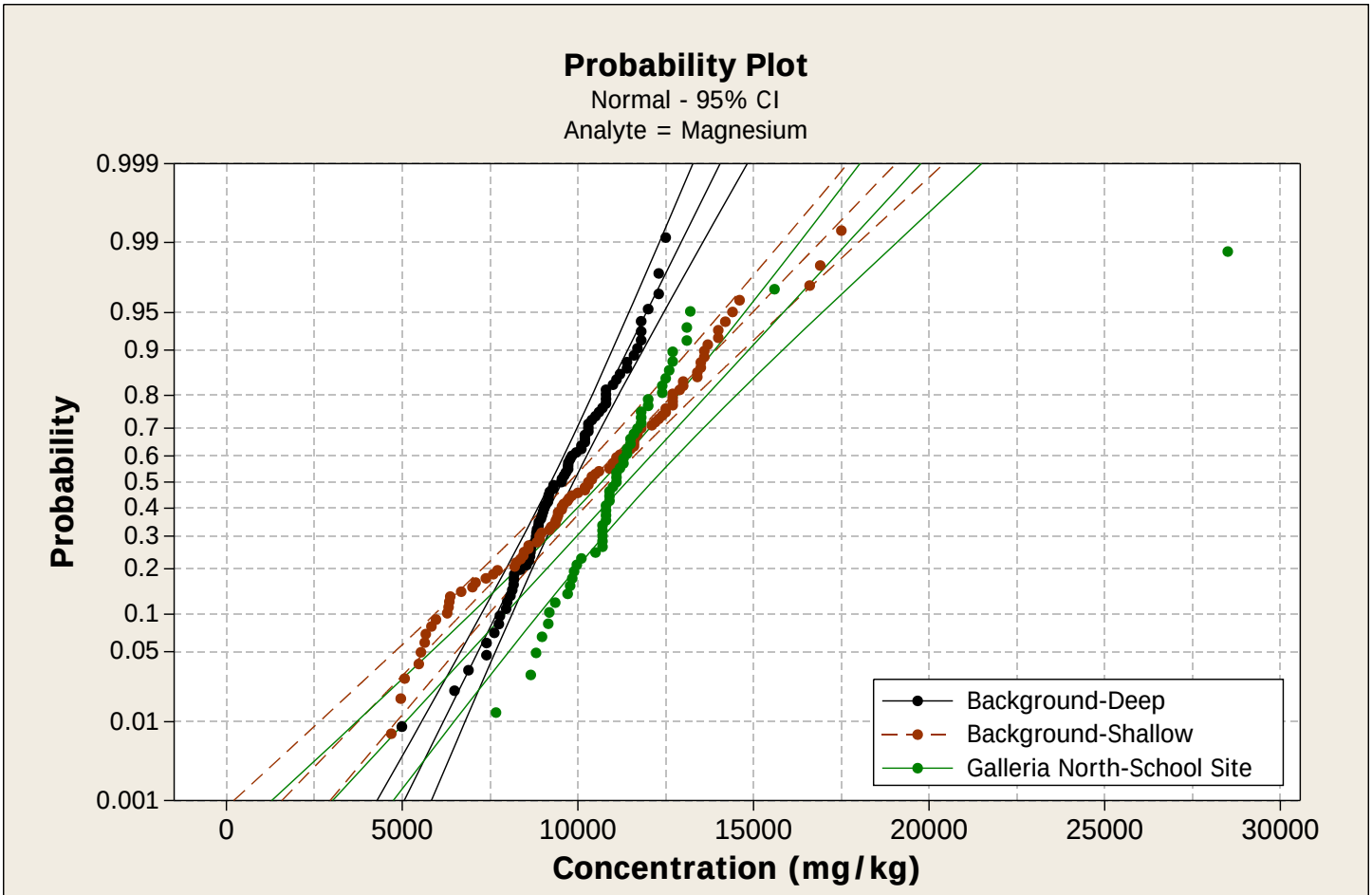

Boxplot
Analyte = Iron
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
30000
25000
20000
15000
10000
5000
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

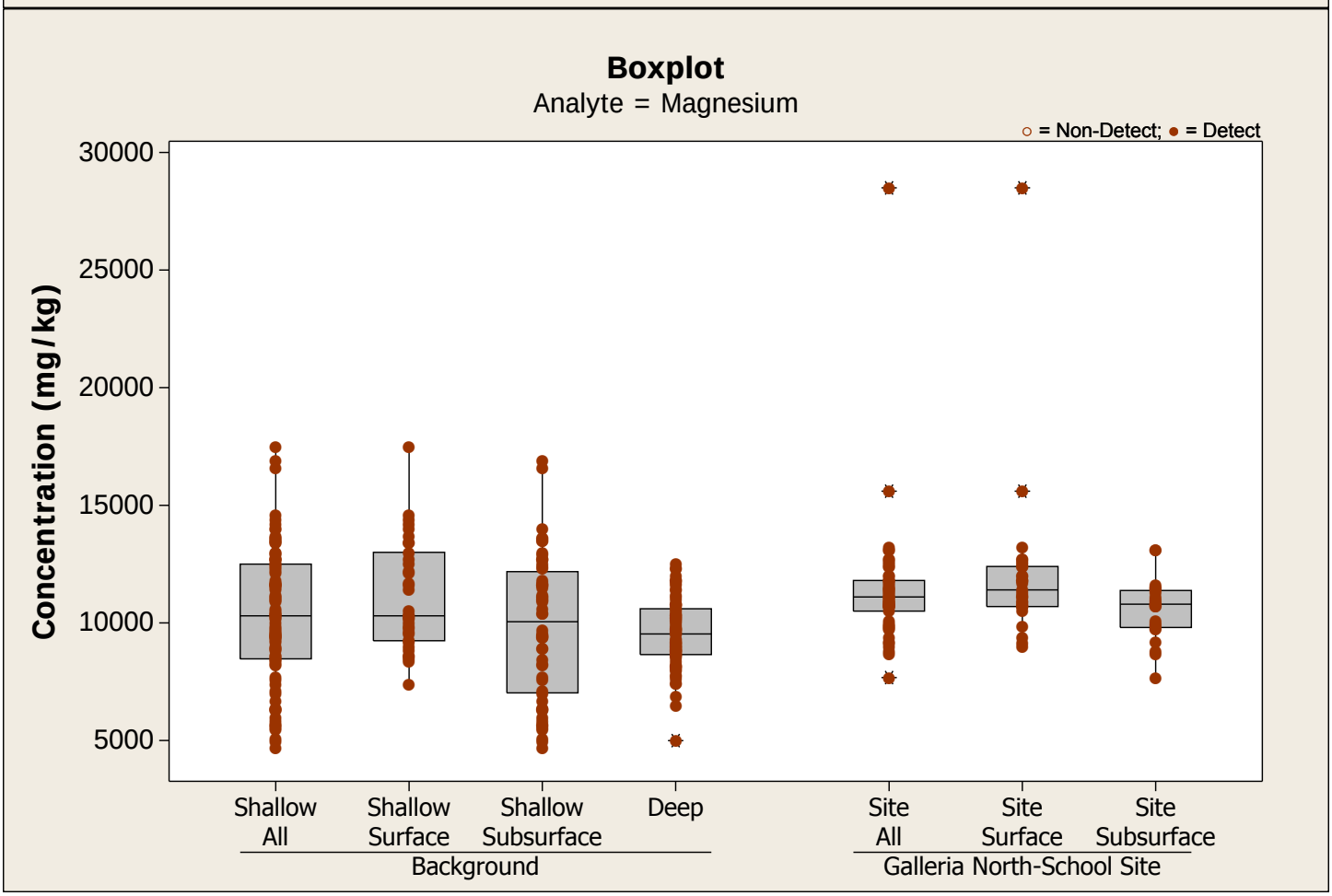

Probability Plot
Normal - 95% CI
Analyte = Lead
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
-100
0
100
200
300
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

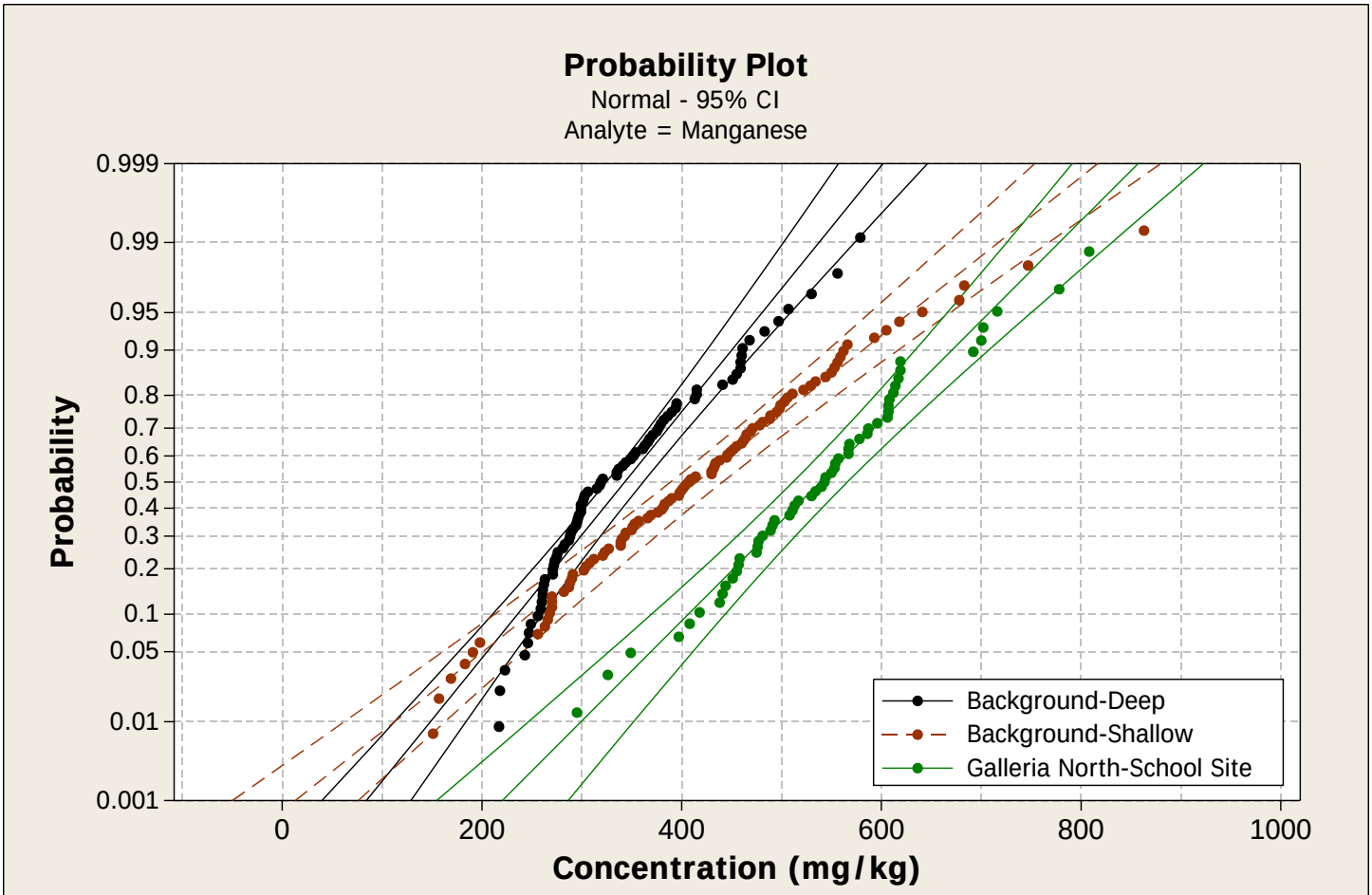

Boxplot
Analyte = Lead
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
300
250
200
150
100
50
0
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

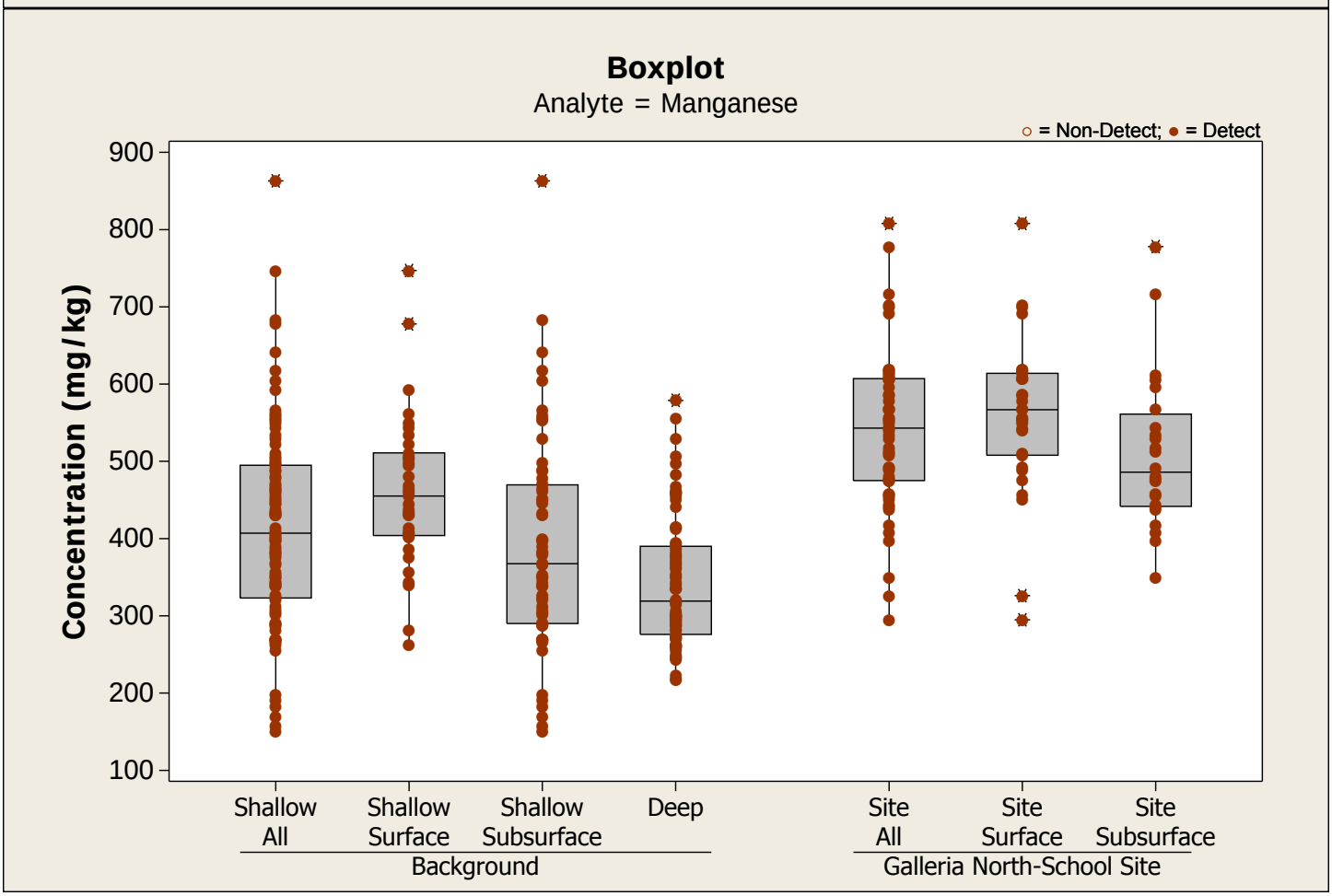

Probability Plot
Normal - 95% CI
Analyte = Lithium
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
-50
-25
0
25
50
75
100
125
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

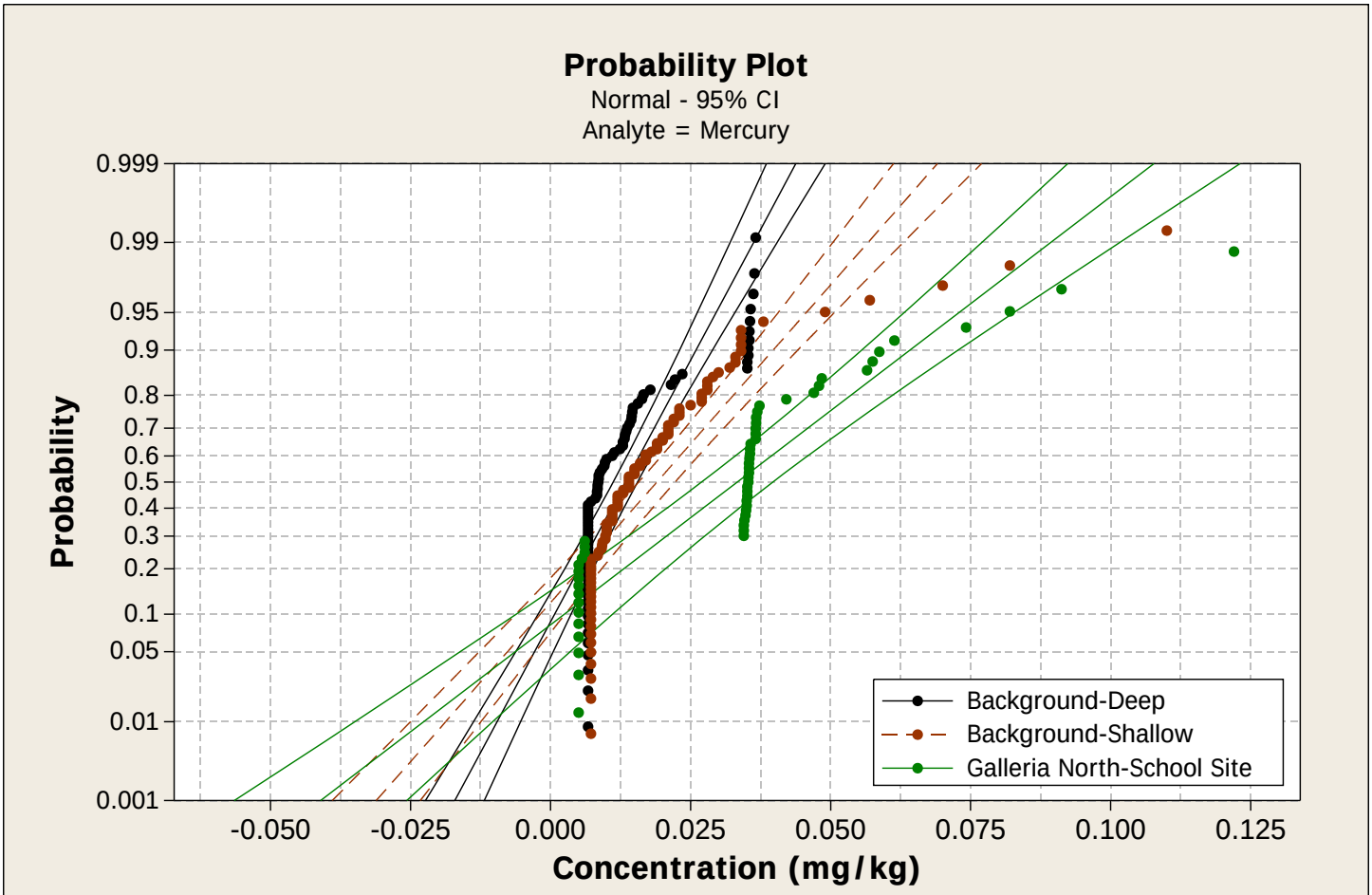

Boxplot
Analyte = Lithium
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
140
120
100
80
60
40
20
0
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Site All
Site Surface
Site Subsurface
Background
Galleria North-School Site

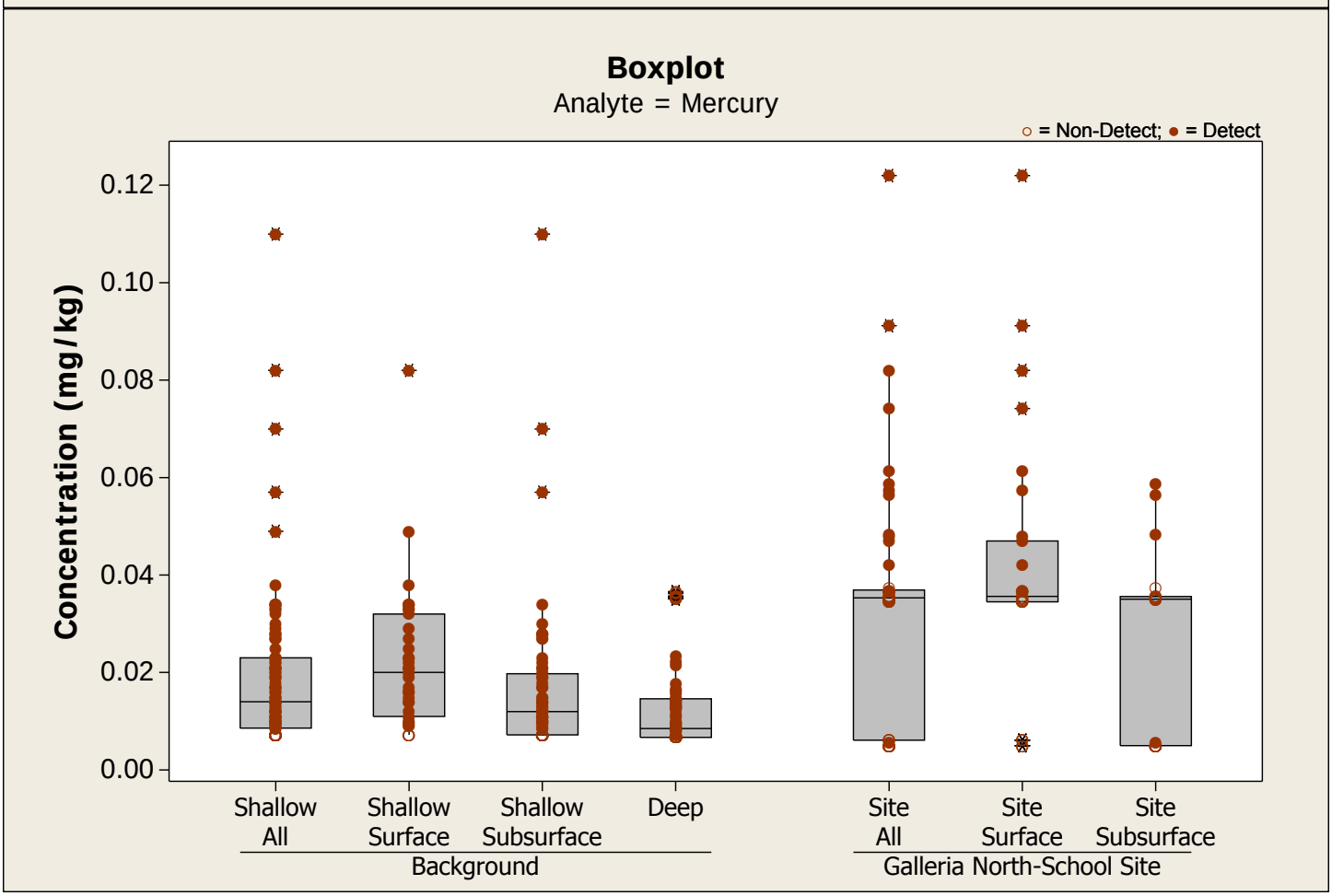

Probability Plot
Normal - 95% CI
Analyte = Magnesium
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
0
5000
10000
15000
20000
25000
30000
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

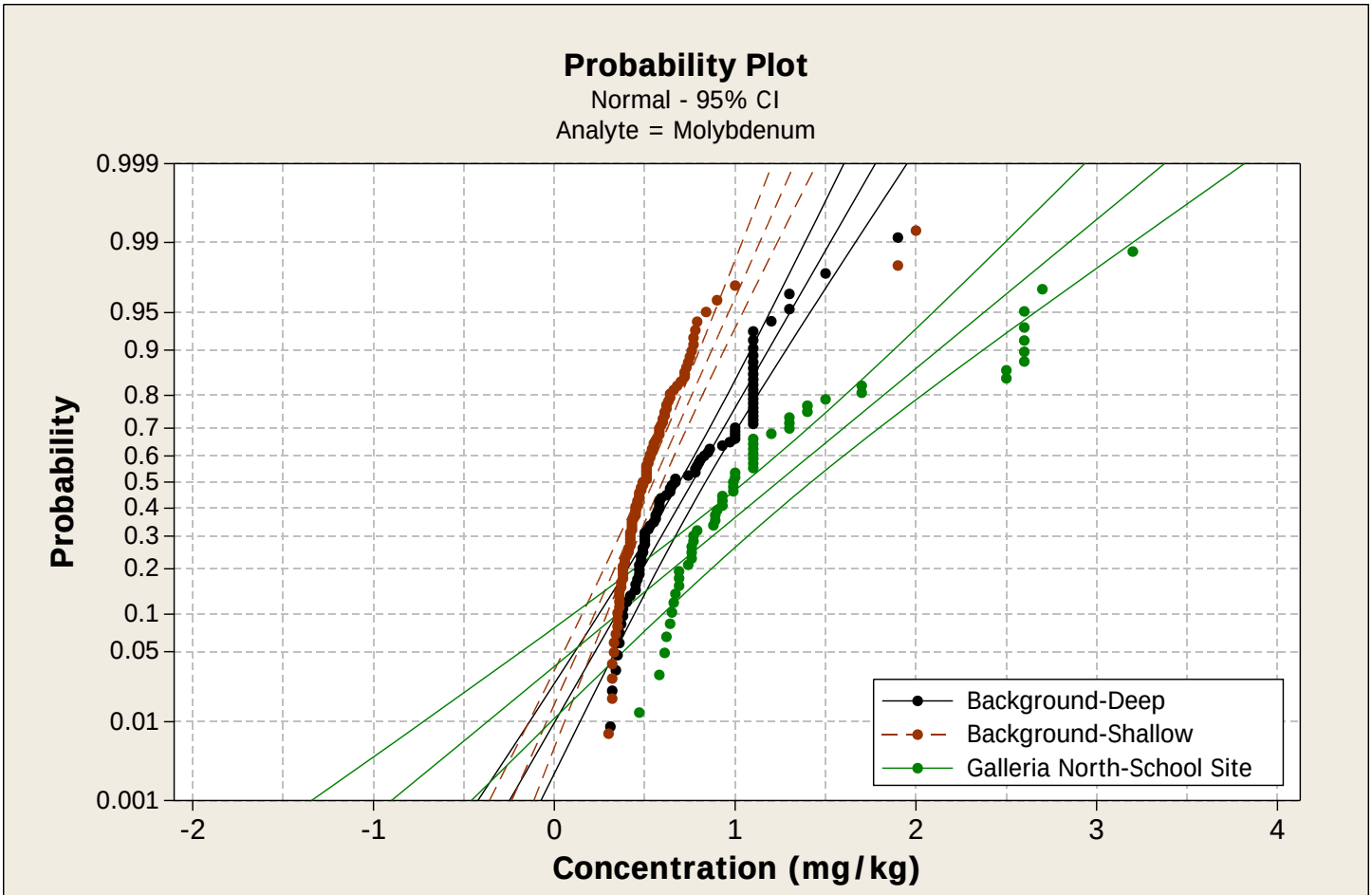

Boxplot
Analyte = Magnesium
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
30000
25000
20000
15000
10000
5000
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

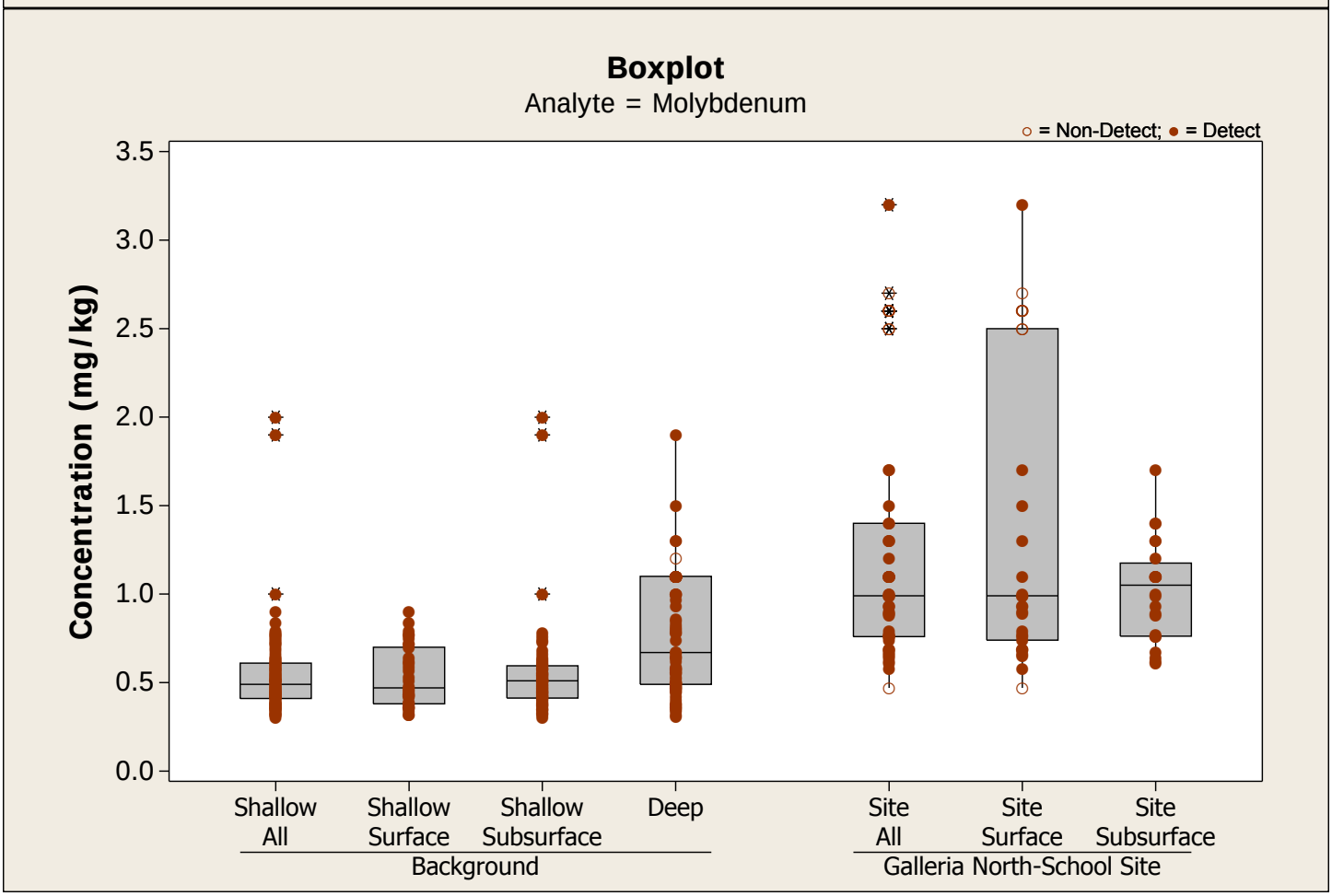

Probability Plot
Normal - 95% CI
Analyte = Manganese
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
0
200
400
600
800
1000
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

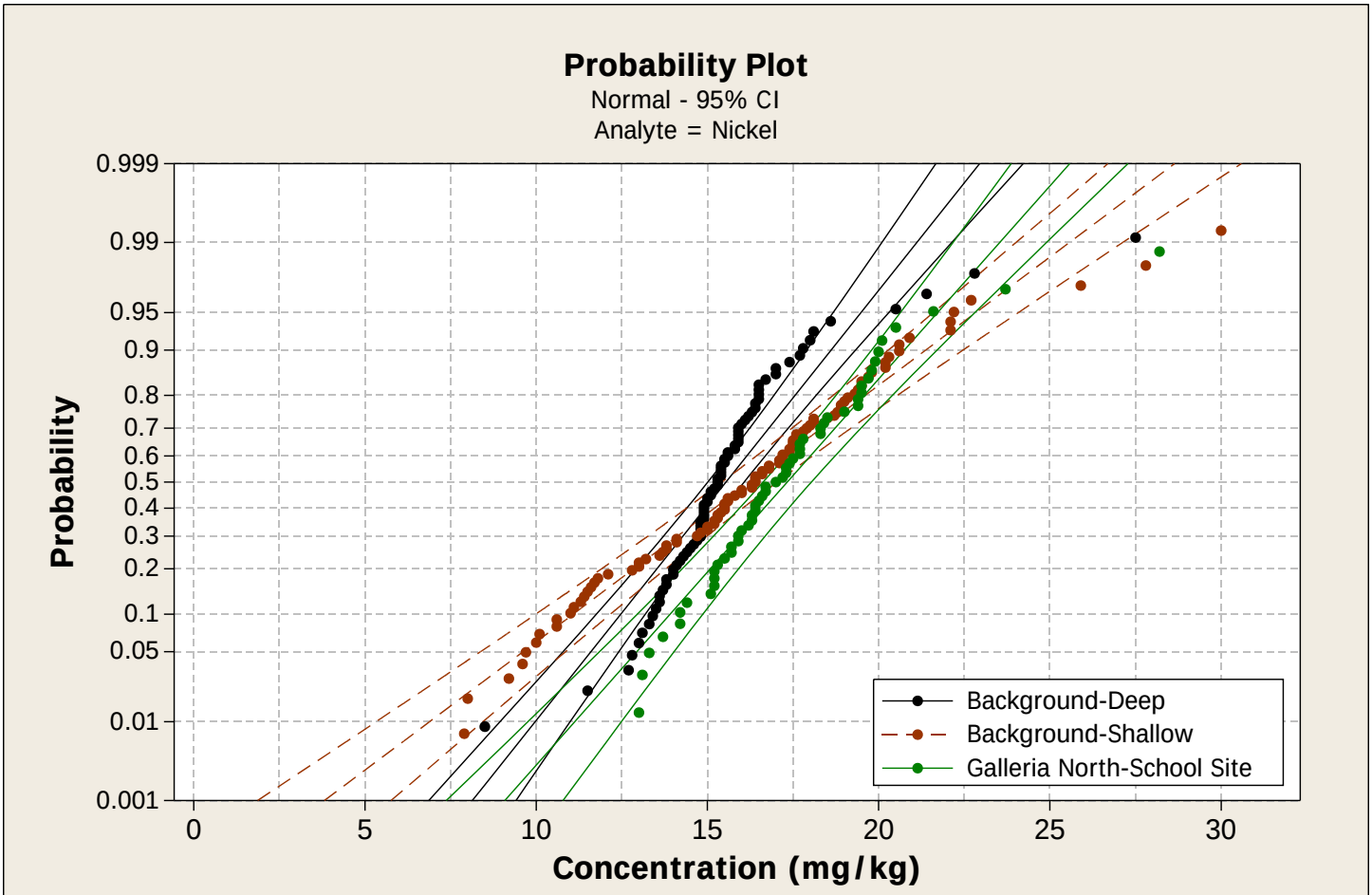

Boxplot
Analyte = Manganese
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
900
800
700
600
500
400
300
200
100
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

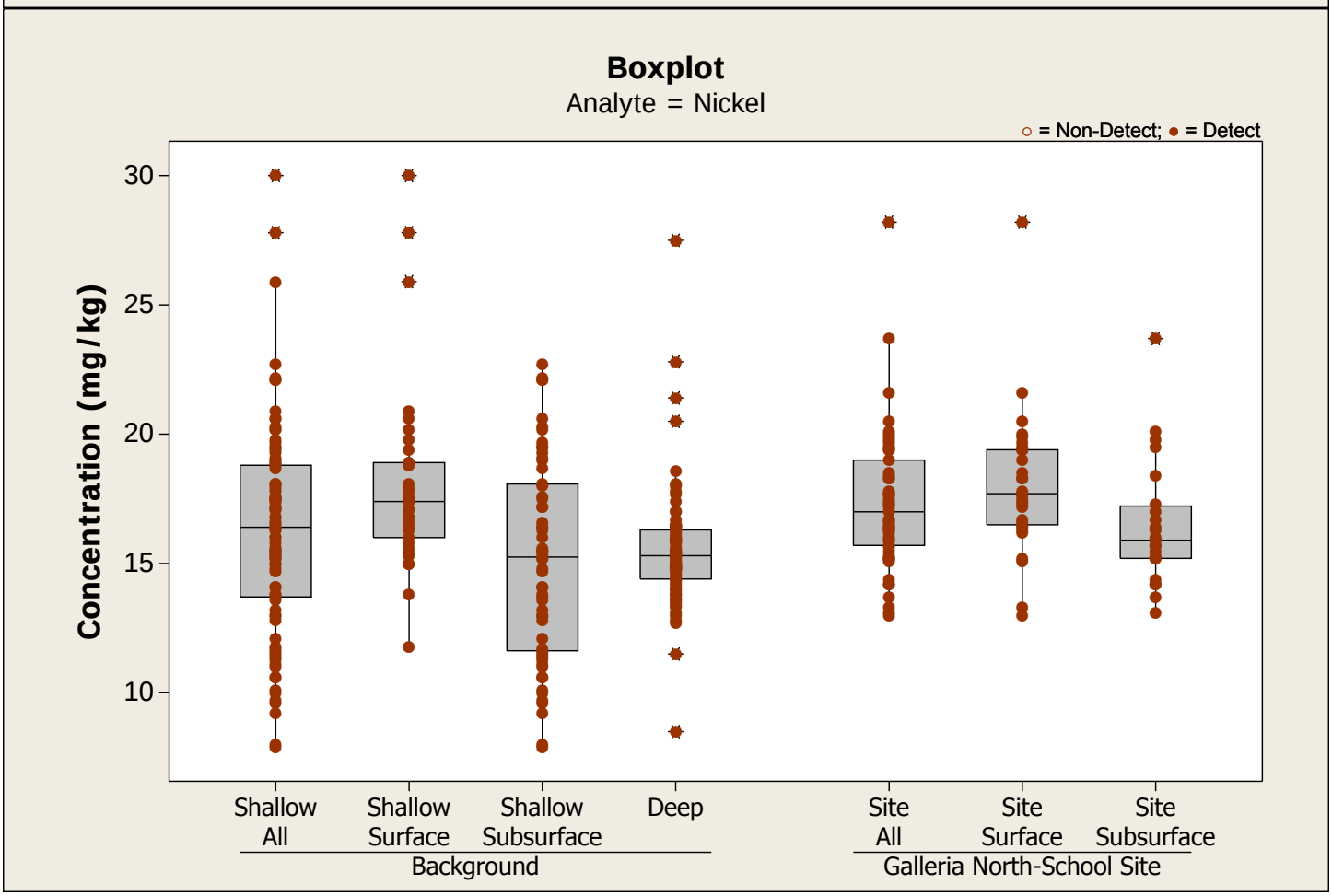

Probability Plot
Normal - 95% CI
Analyte = Mercury
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
-0.050
-0.025
0.000
0.025
0.050
0.075
0.100
0.125
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

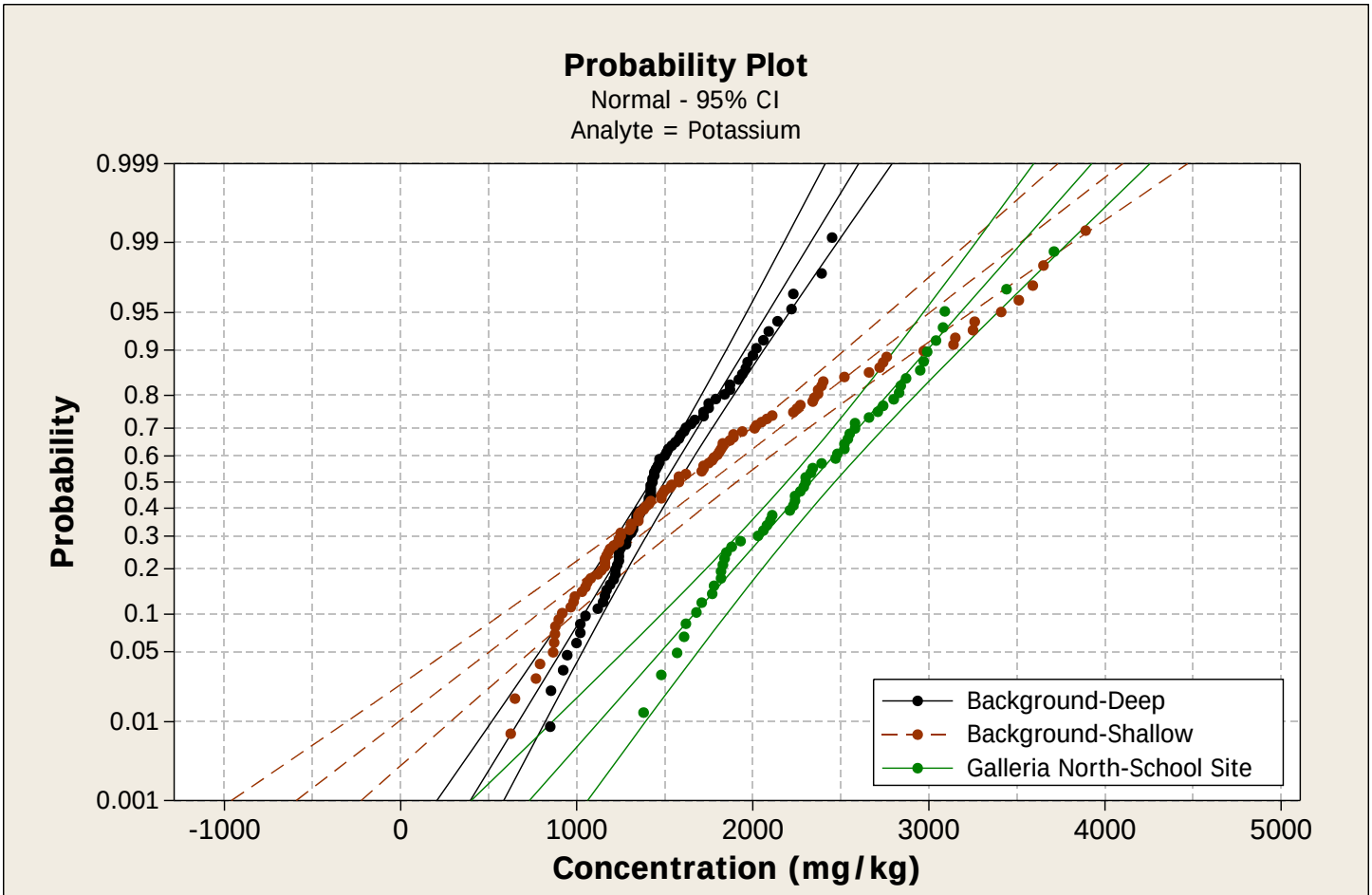

Boxplot
Analyte = Mercury
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
0.12
0.10
0.08
0.06
0.04
0.02
0.00
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

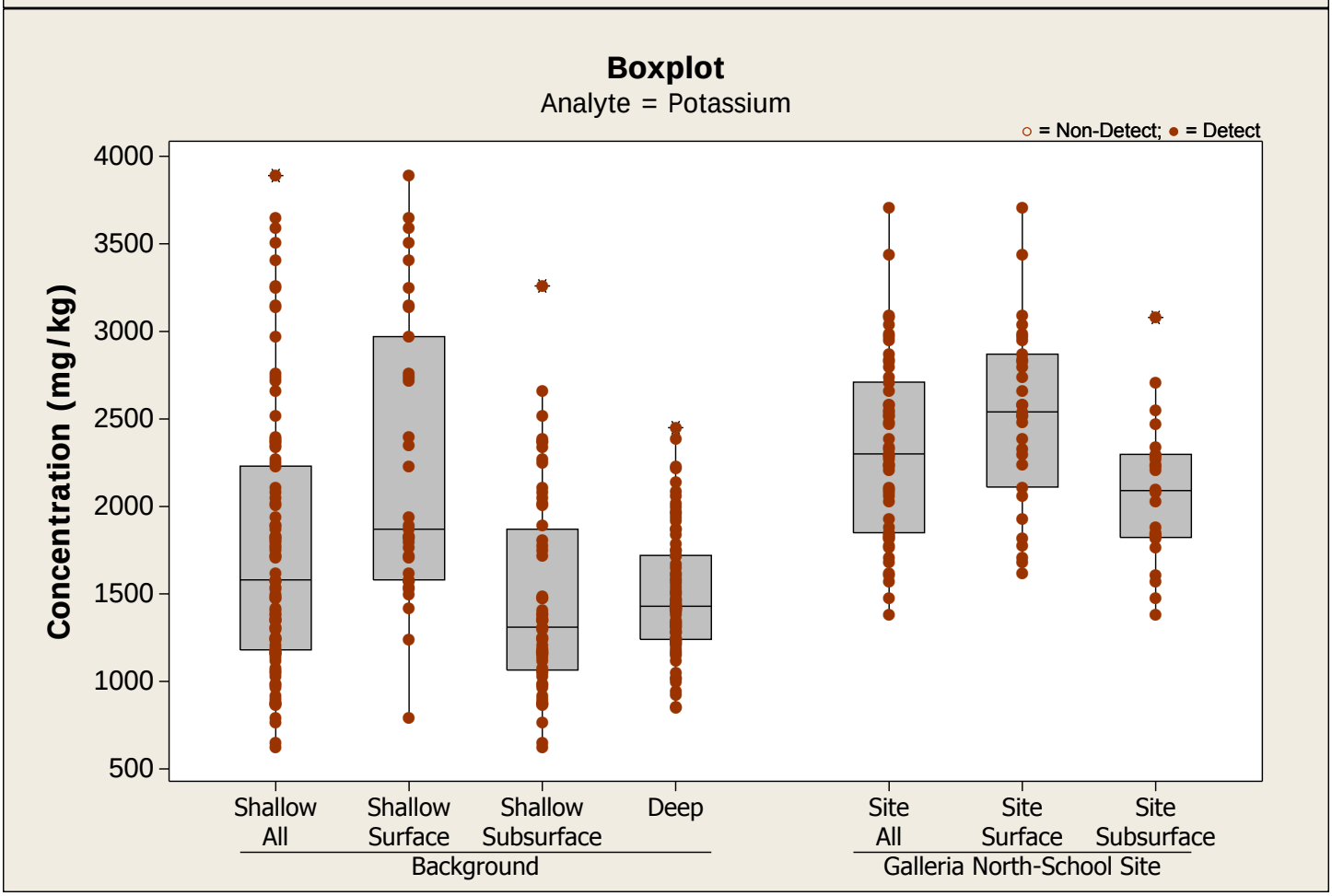

Probability Plot
Normal - 95% CI
Analyte = Molybdenum
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
-2
-1
0
1
2
3
4
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

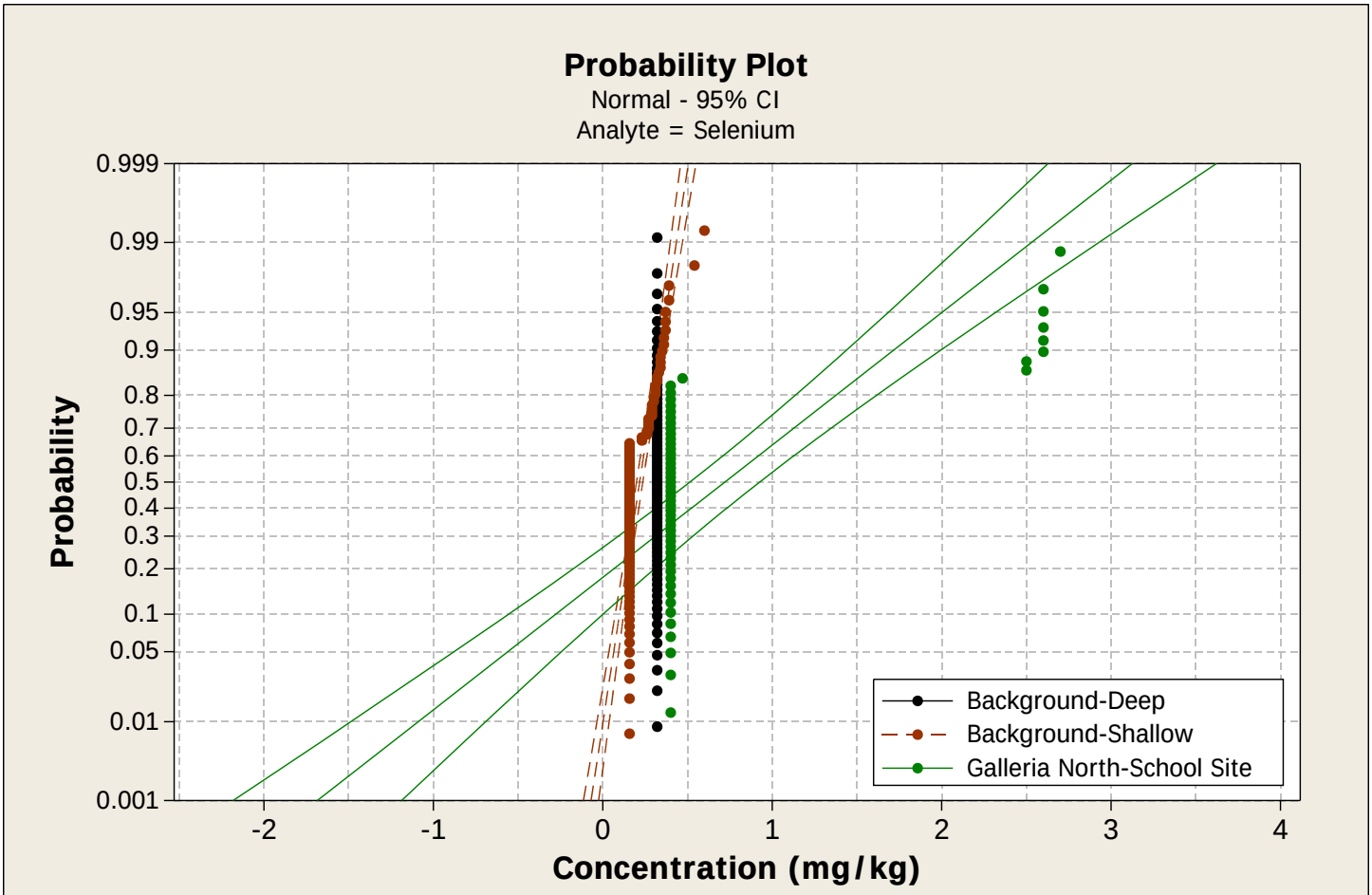

Boxplot
Analyte = Molybdenum
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

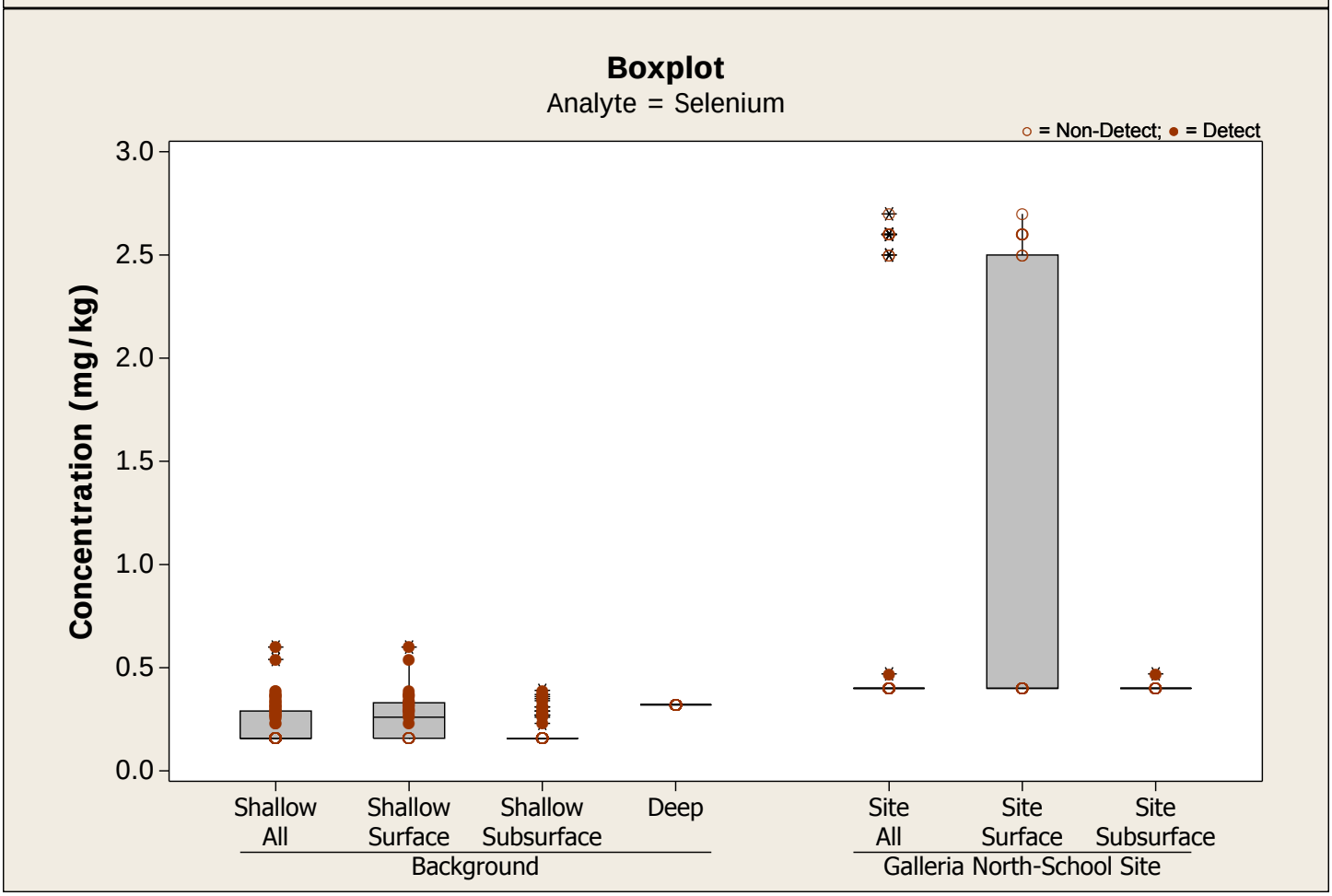

Probability Plot
Normal - 95% CI
Analyte = Nickel
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
0
5
10
15
20
25
30
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

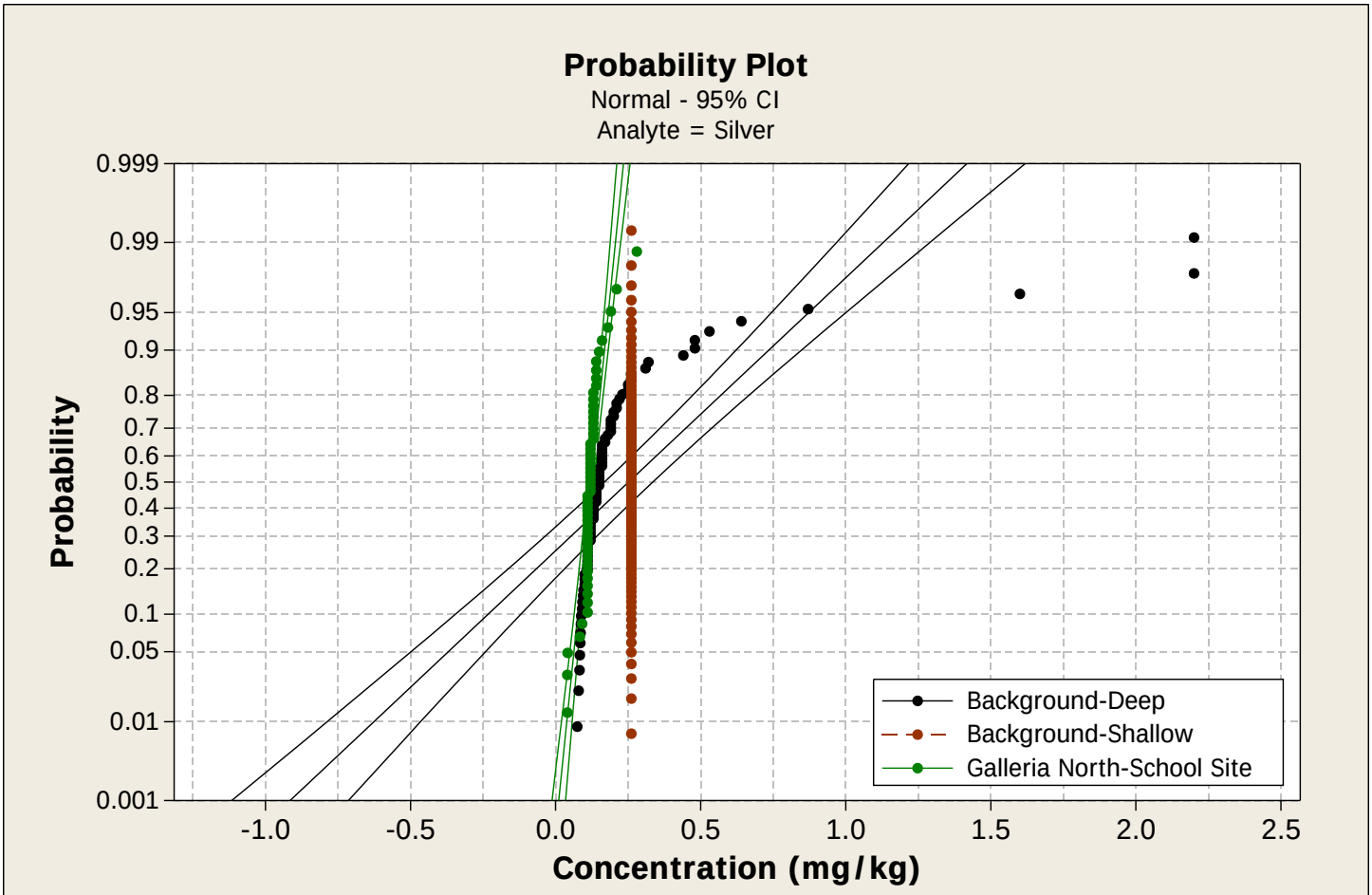

Boxplot
Analyte = Nickel
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
30
25
20
15
10
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

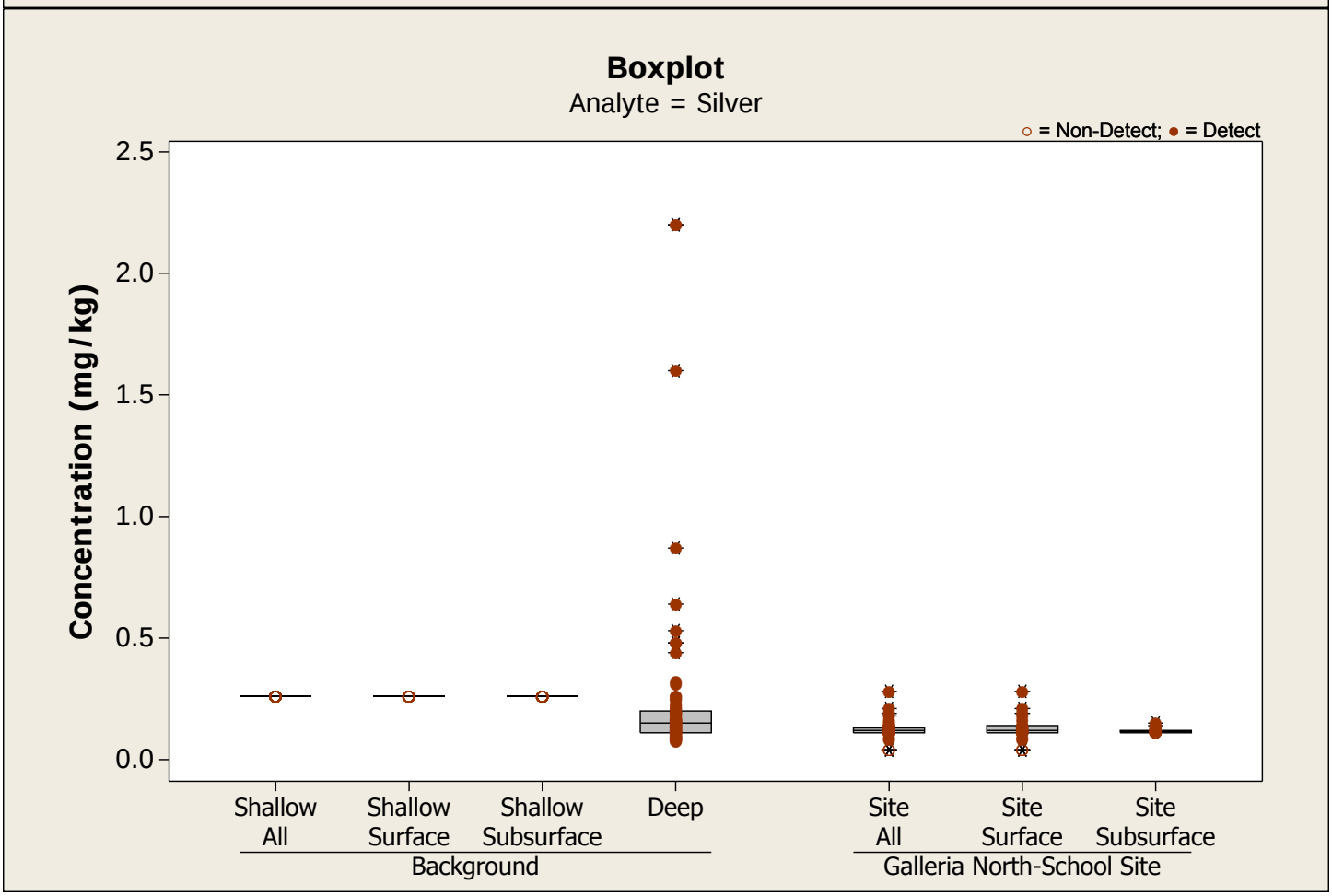

Probability Plot
Normal - 95% CI
Analyte = Potassium
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
-1000
0
1000
2000
3000
4000
5000
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

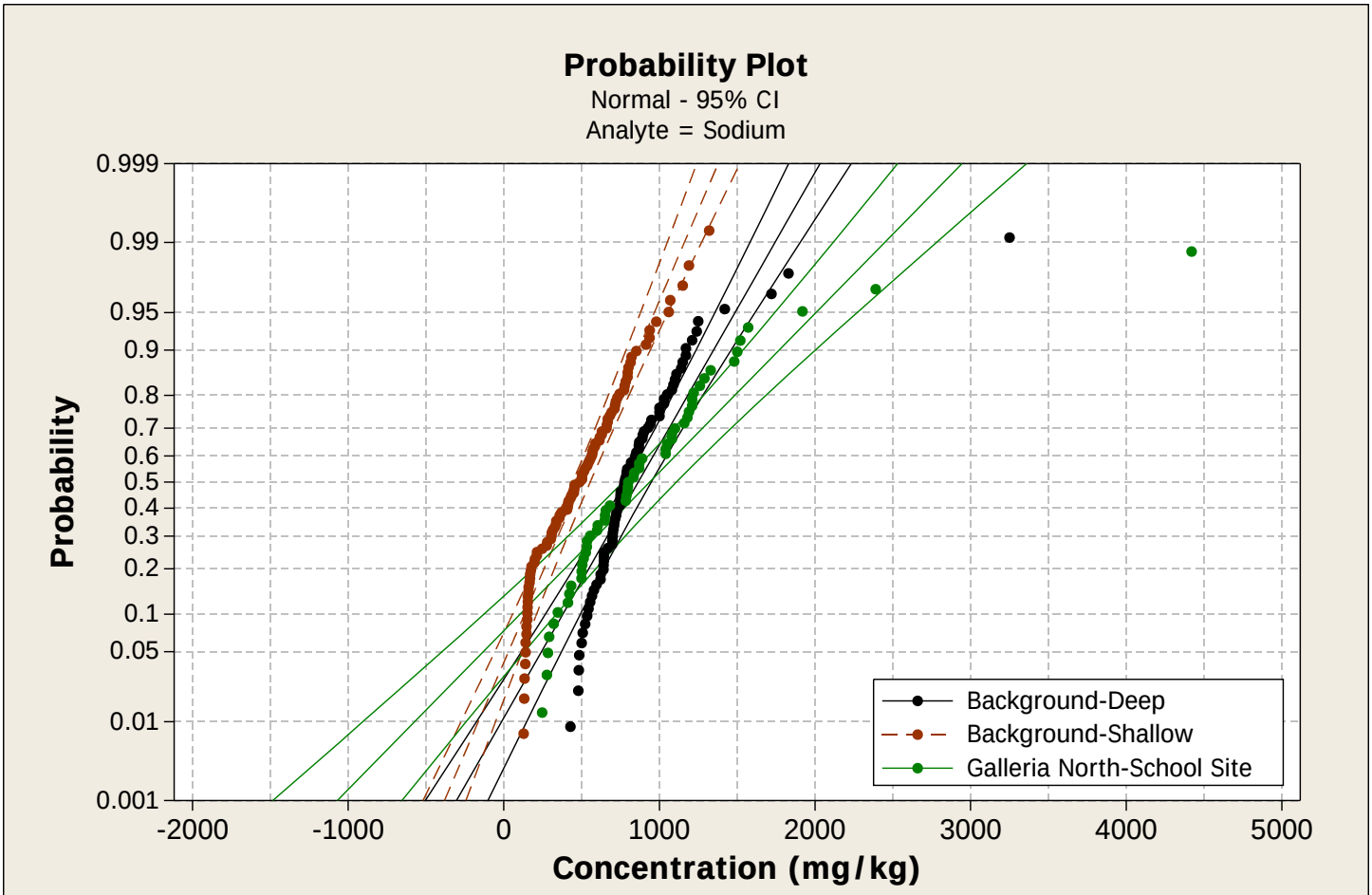

Boxplot
Analyte = Potassium
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
4000
3500
3000
2500
2000
1500
1000
500
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

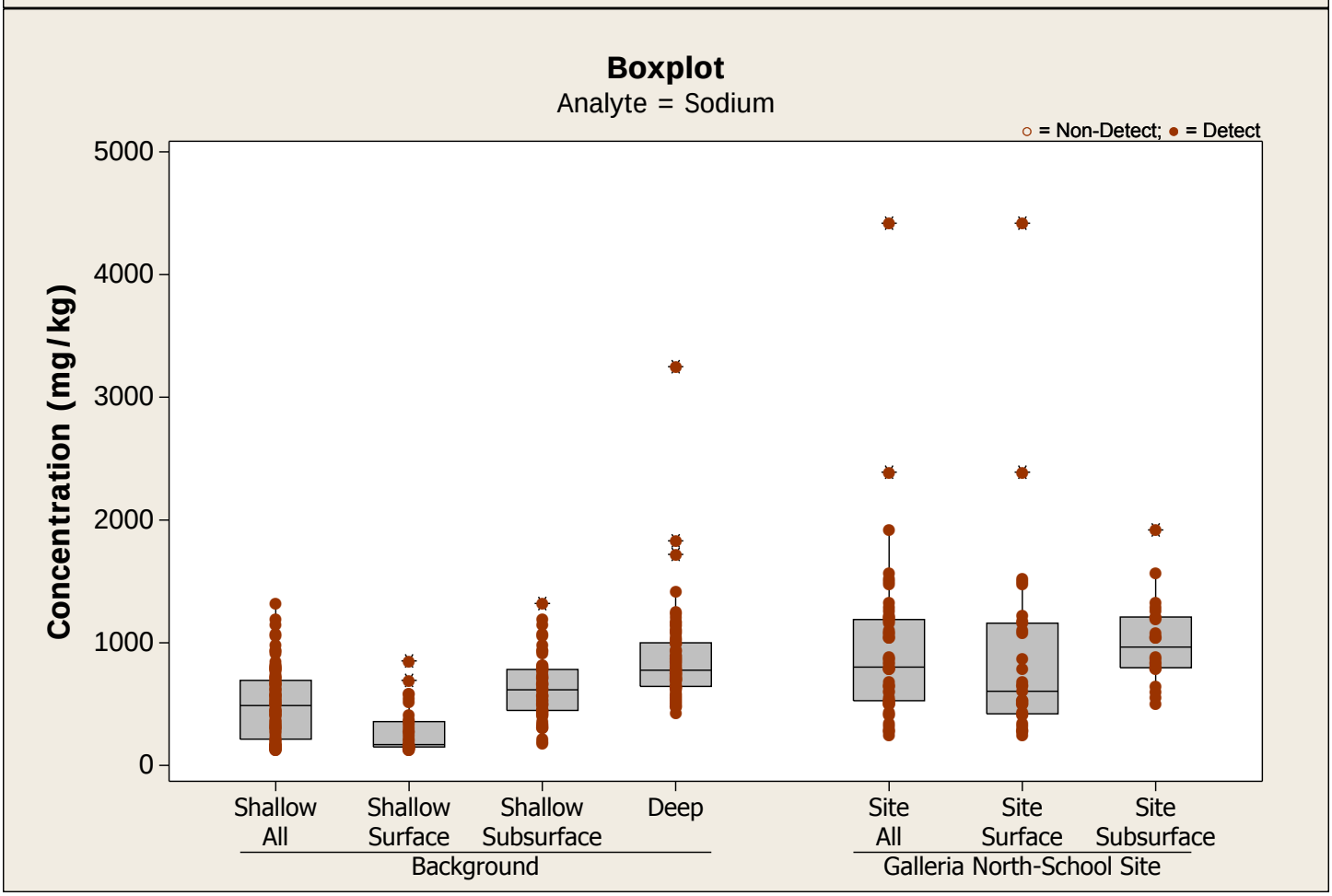

Probability Plot
Normal - 95% CI
Analyte = Selenium
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
-2
-1
0
1
2
3
4
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

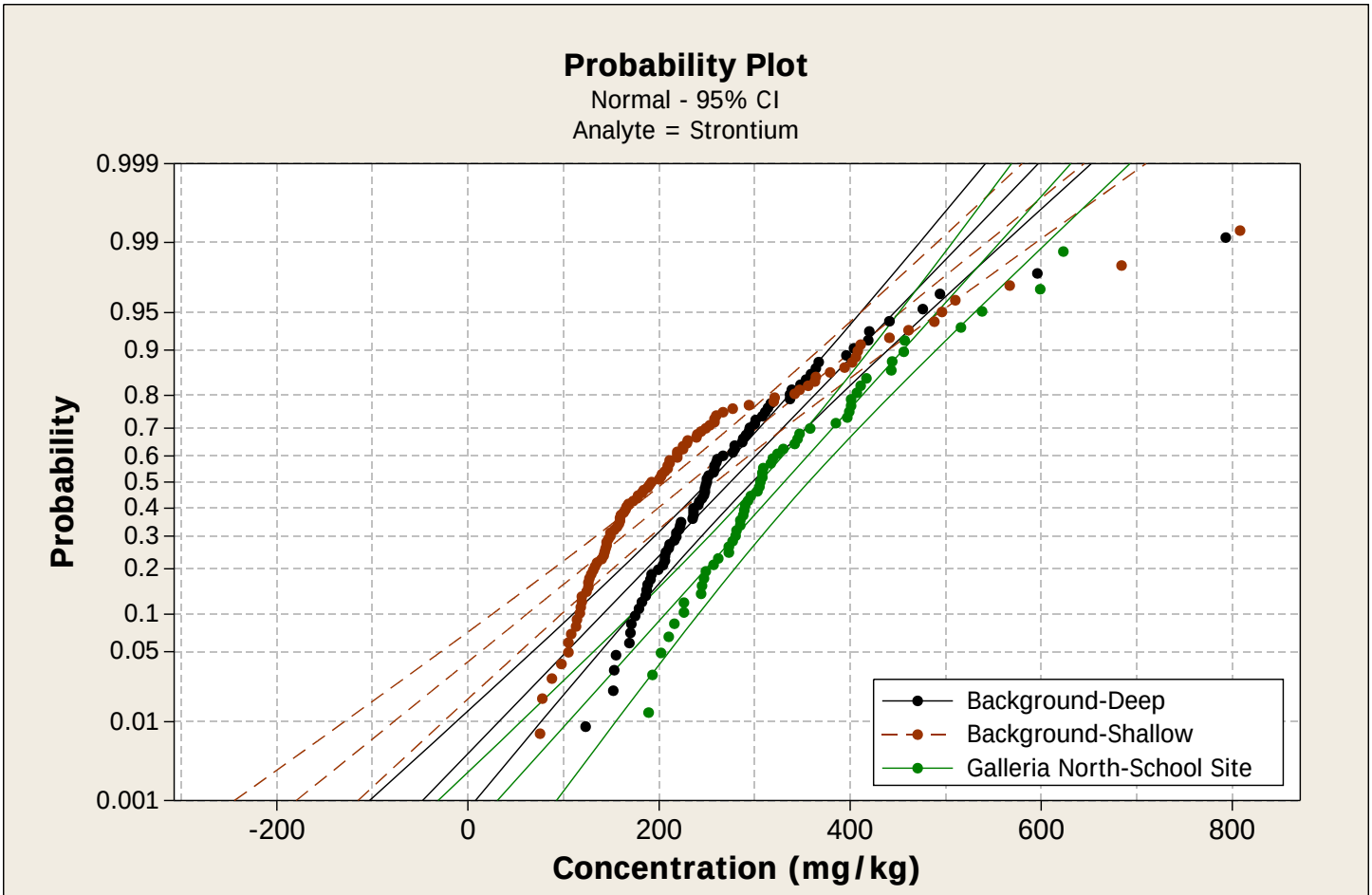

Boxplot
Analyte = Selenium
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

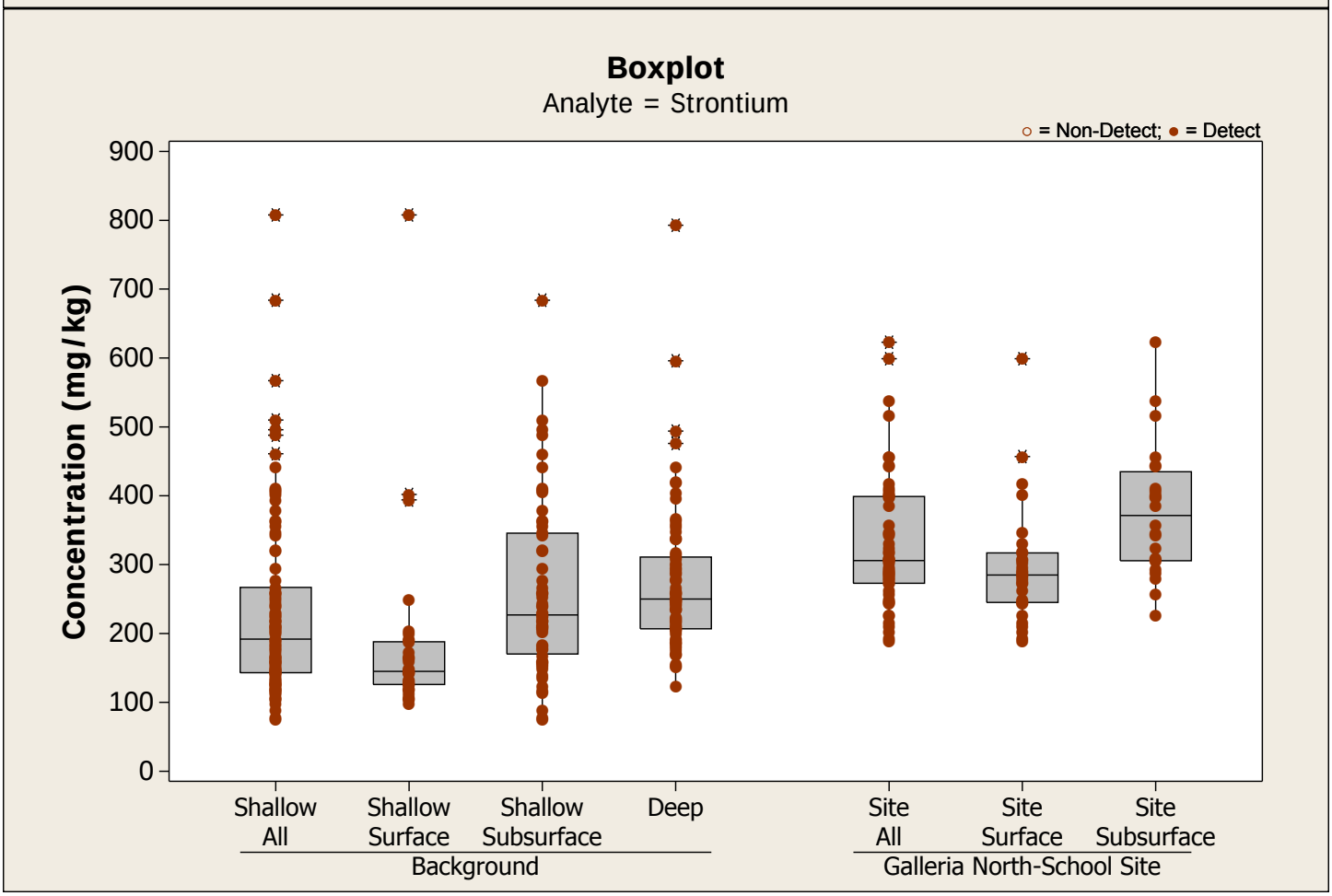

Probability Plot
Normal - 95% CI
Analyte = Silver
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

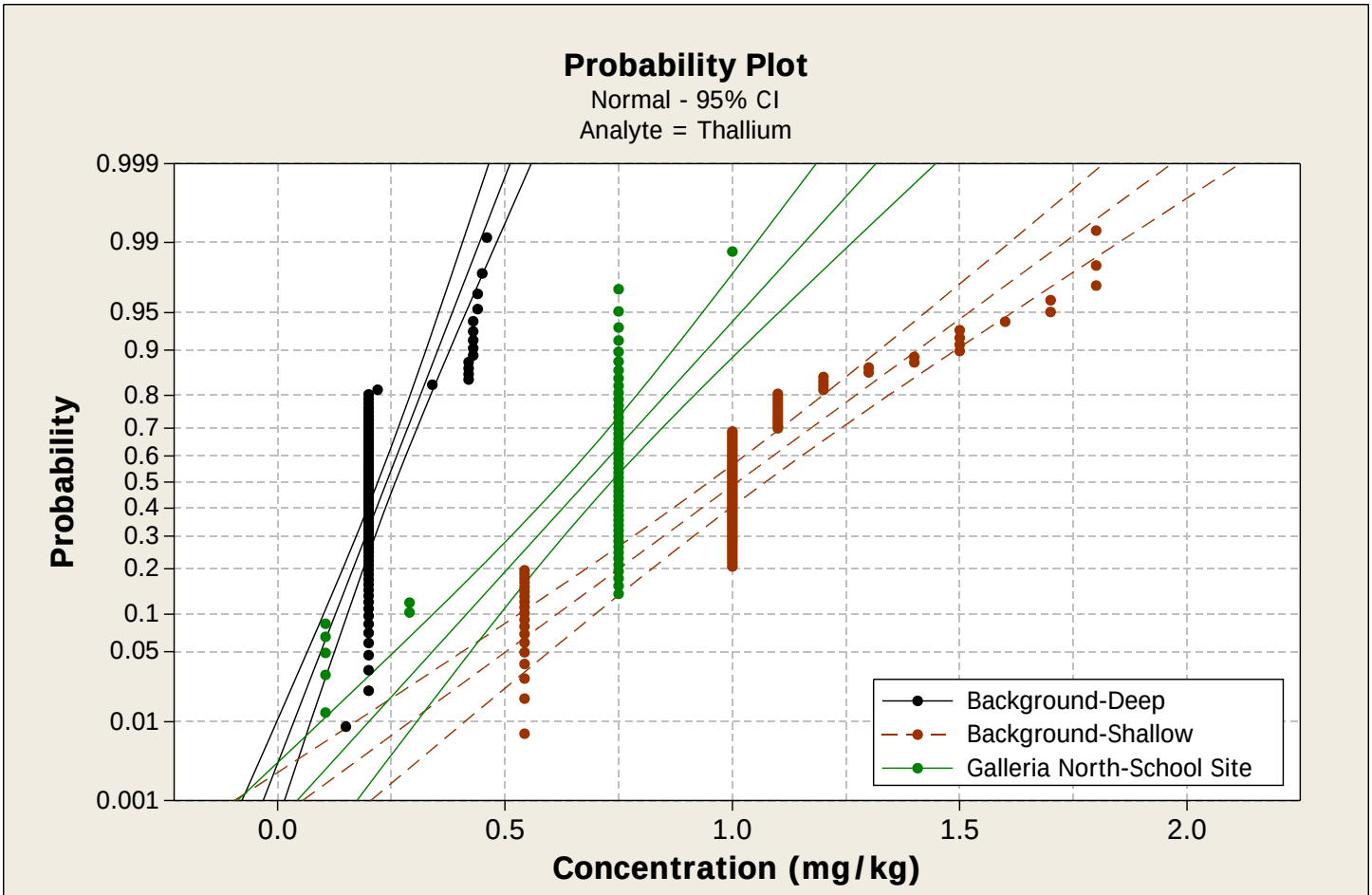

Boxplot
Analyte = Silver
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
2.5
2.0
1.5
1.0
0.5
0.0
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

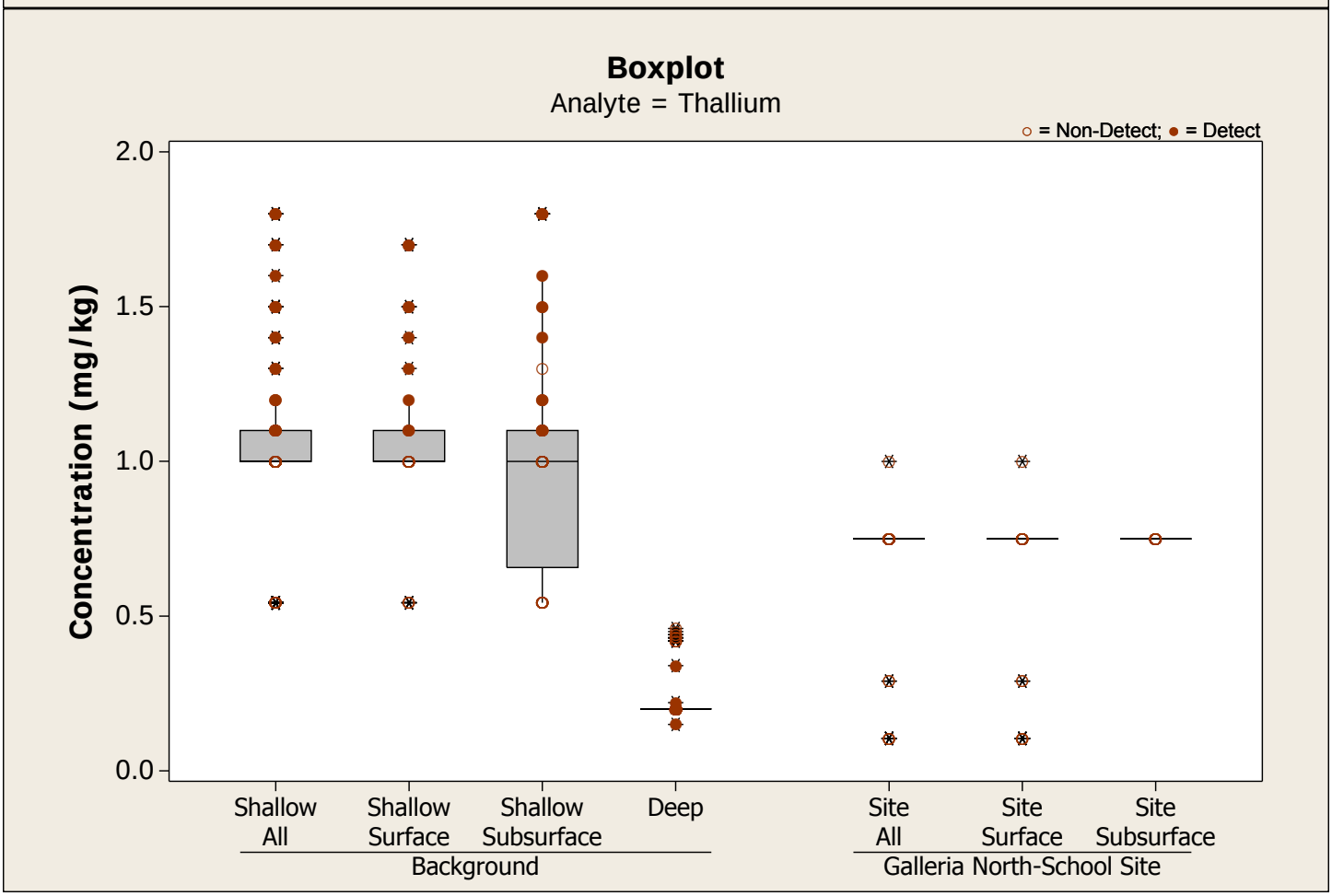

Probability Plot
Normal - 95% CI
Analyte = Sodium
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
-2000
-1000
0
1000
2000
3000
4000
5000
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

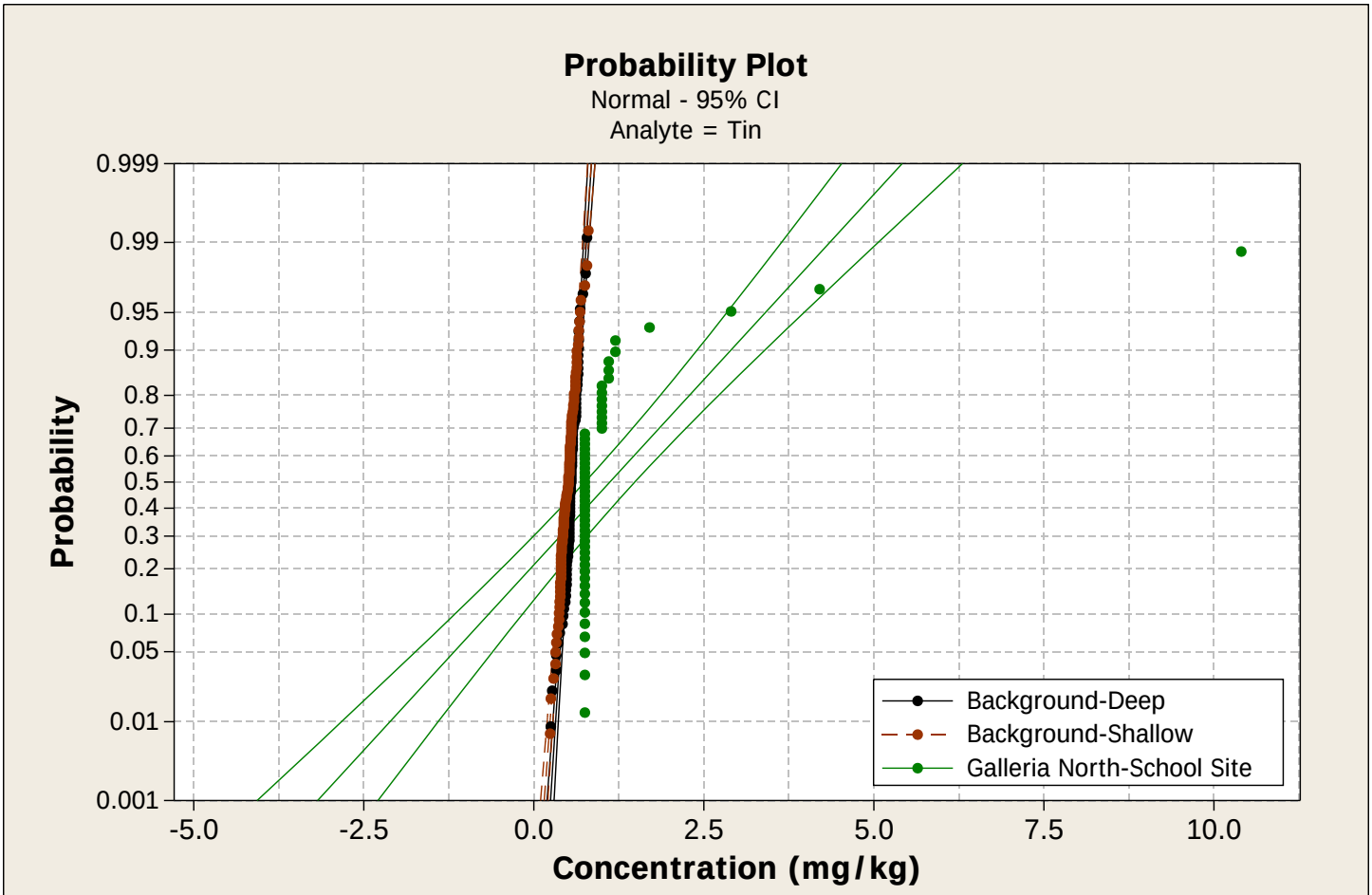

Boxplot
Analyte = Sodium
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
5000
4000
3000
2000
1000
0
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

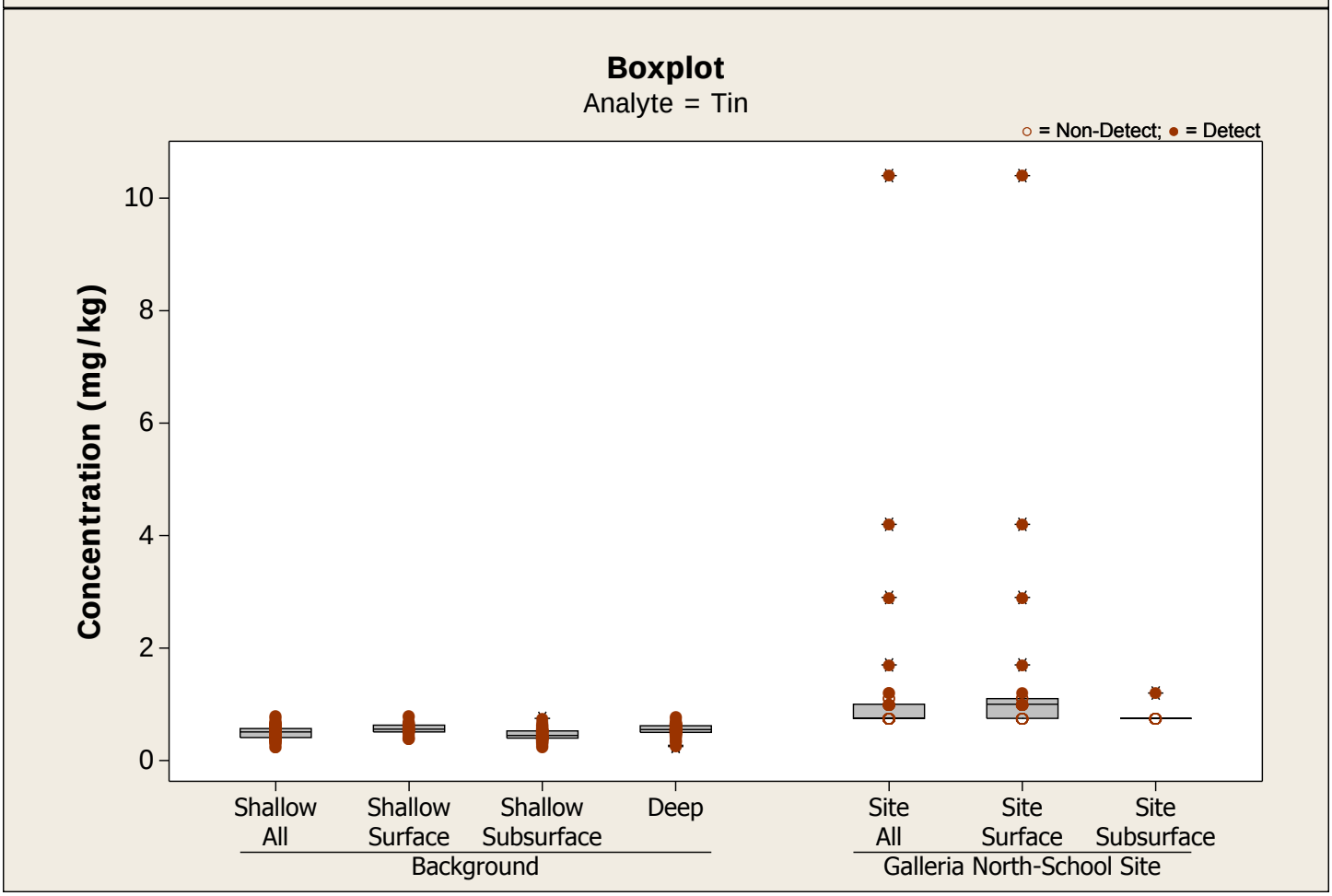

Probability Plot
Normal - 95% CI
Analyte = Strontium
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
-200
0
200
400
600
800
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

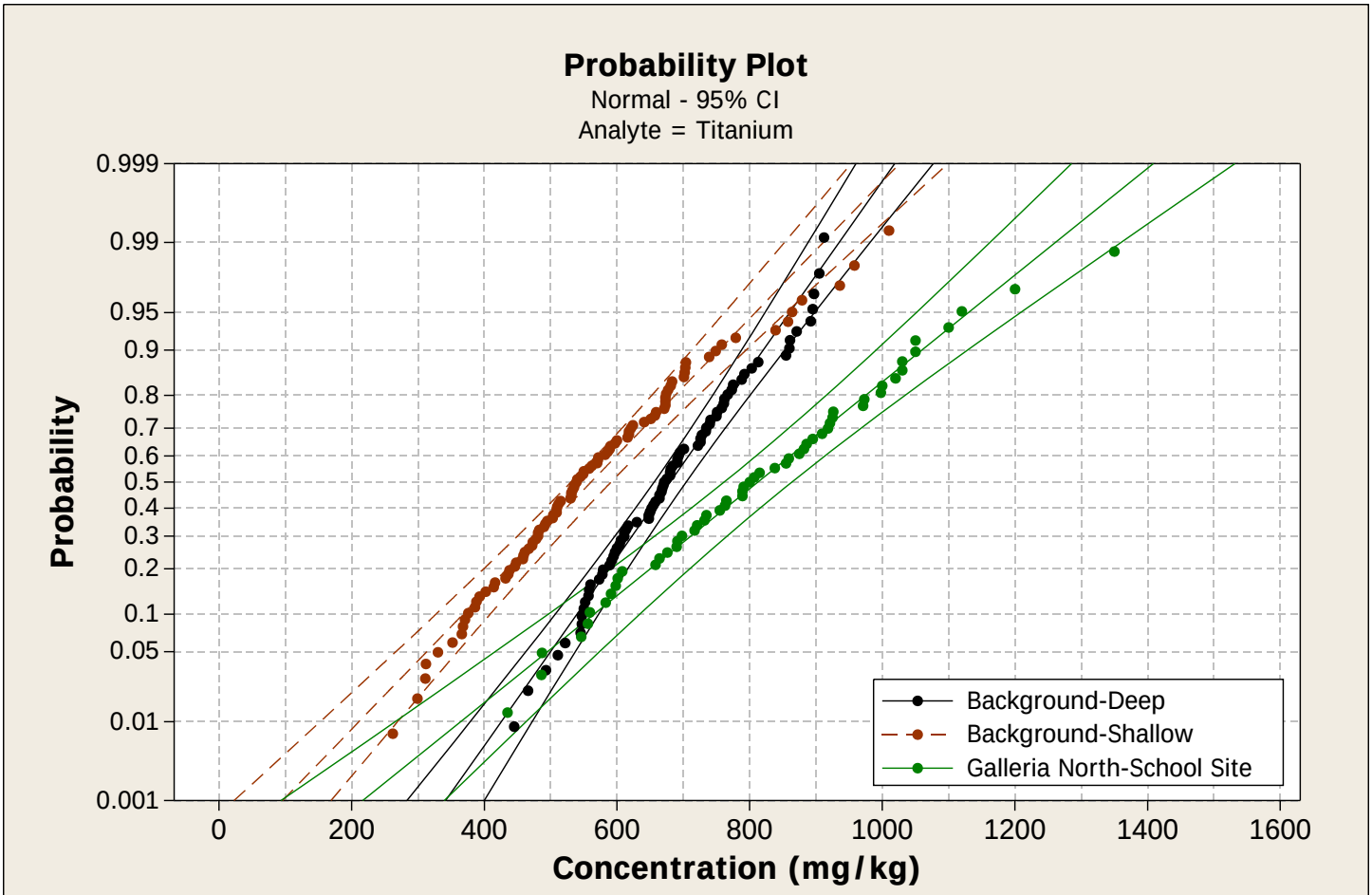

Boxplot
Analyte = Strontium
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
900
800
700
600
500
400
300
200
100
0
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

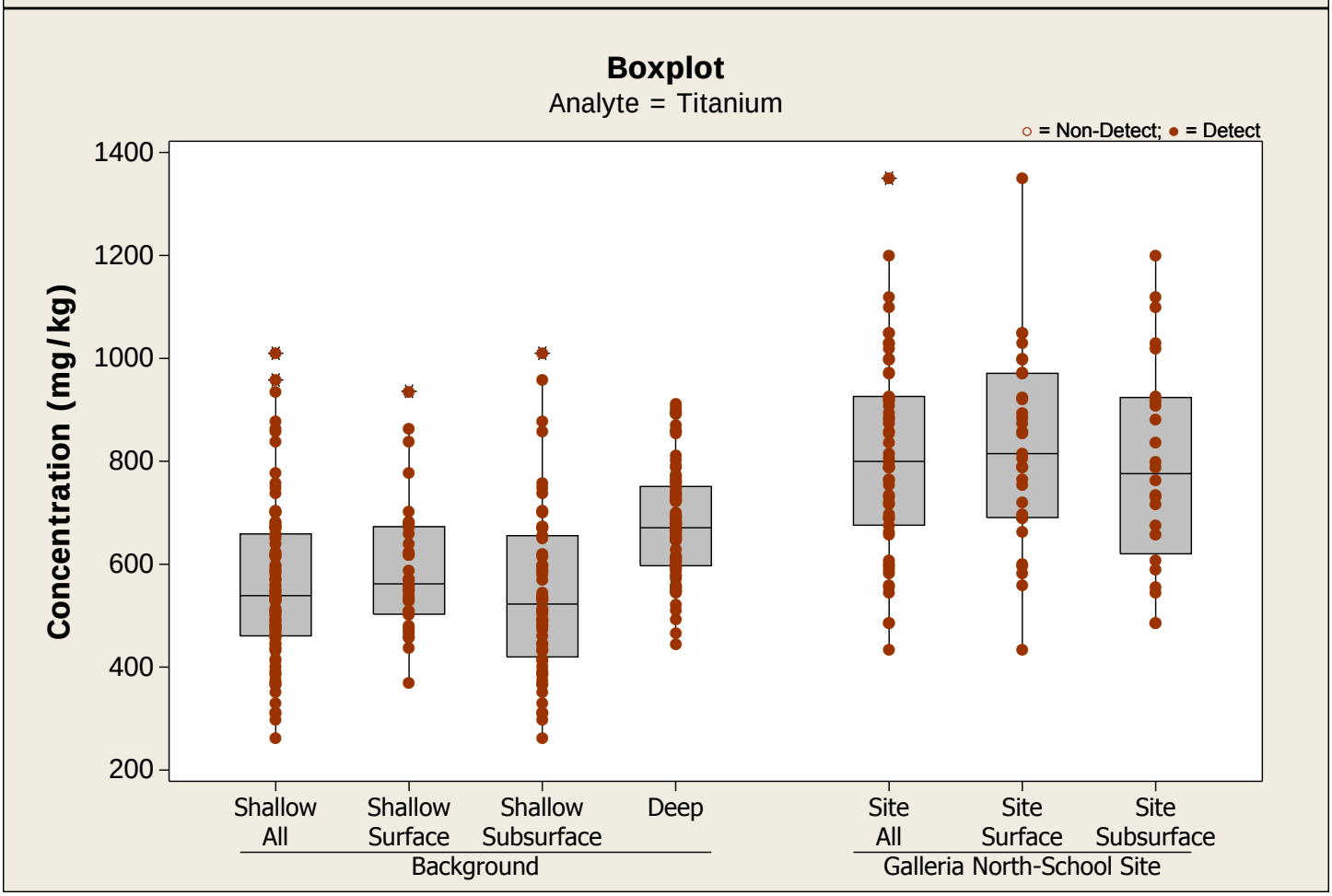

Probability Plot
Normal - 95% CI
Analyte = Thallium
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
0.0
0.5
1.0
1.5
2.0
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

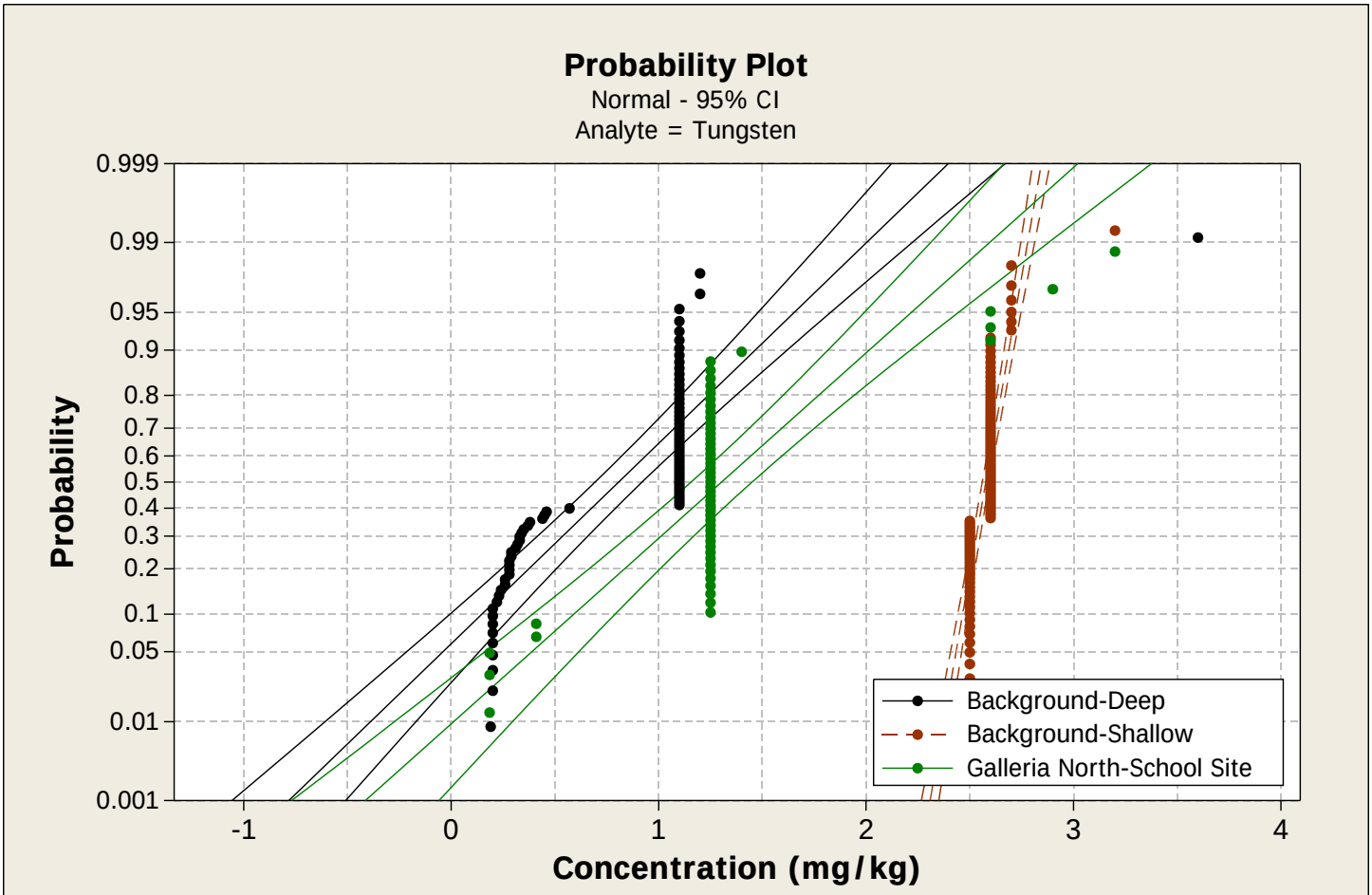

Boxplot
Analyte = Thallium
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
2.0
1.5
1.0
0.5
0.0
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

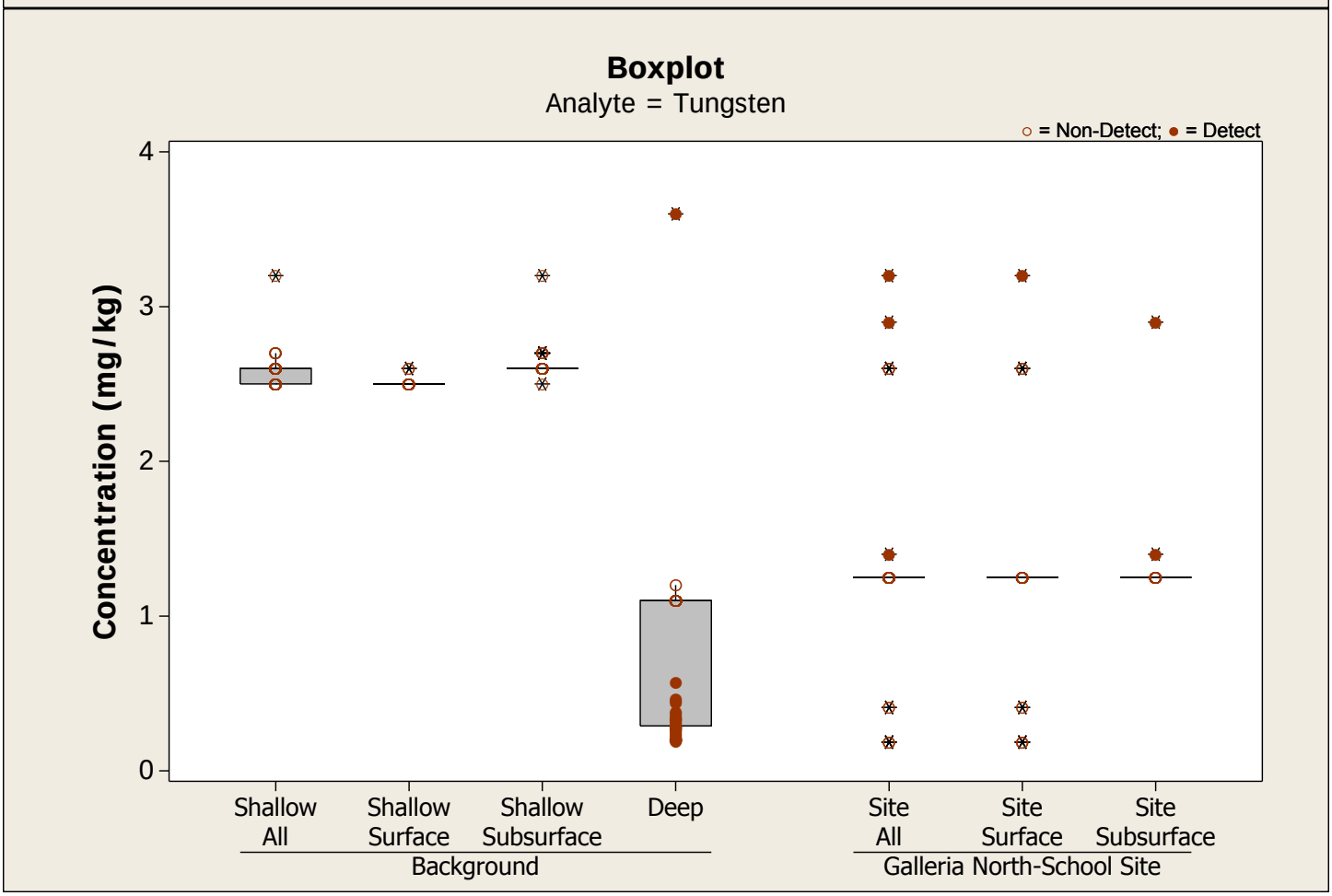

Probability Plot
Normal - 95% CI
Analyte = Tin
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
-5.0
-2.5
0.0
2.5
5.0
7.5
10.0
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

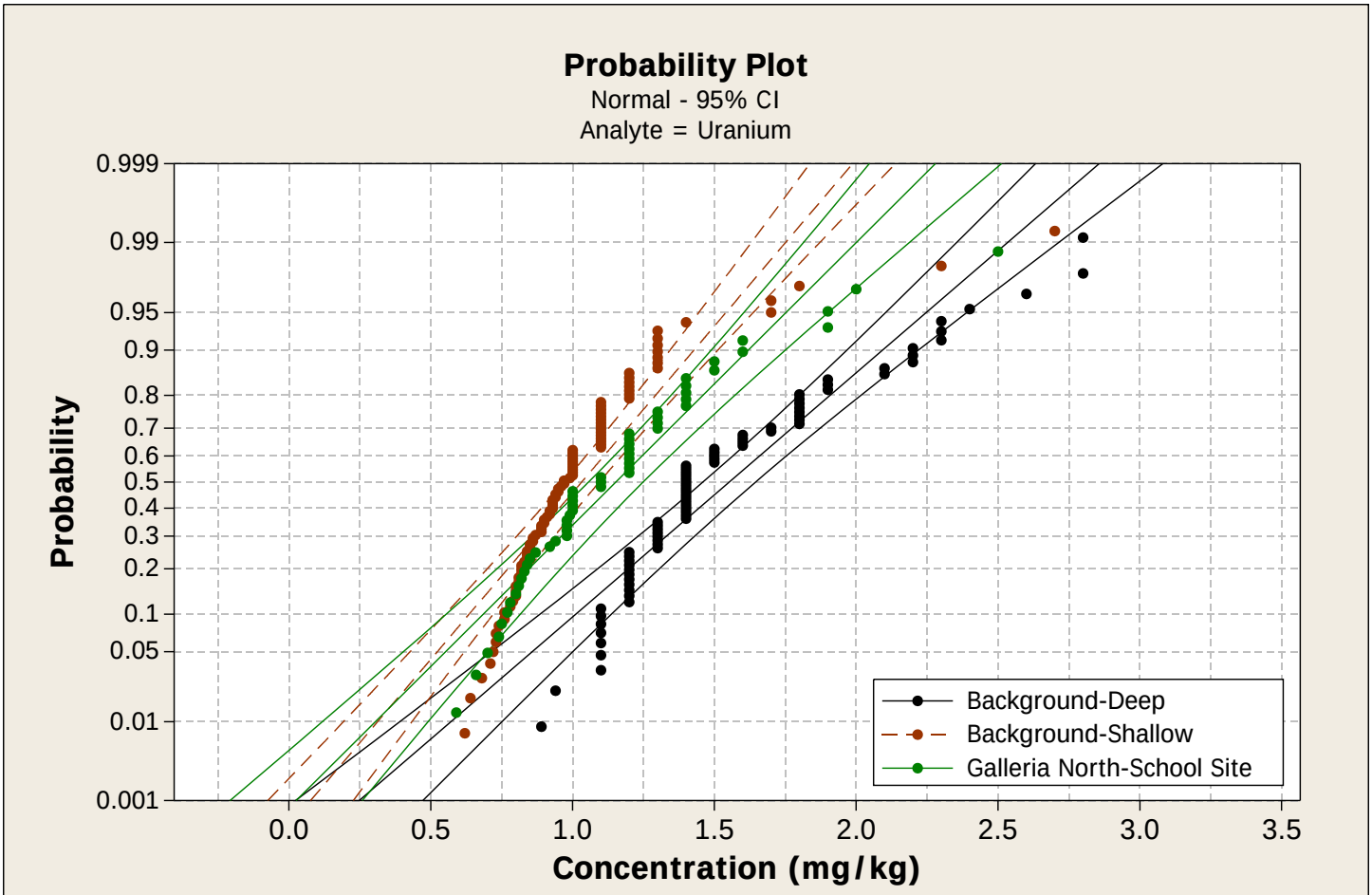

Boxplot
Analyte = Tin
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
10
8
6
4
2
0
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

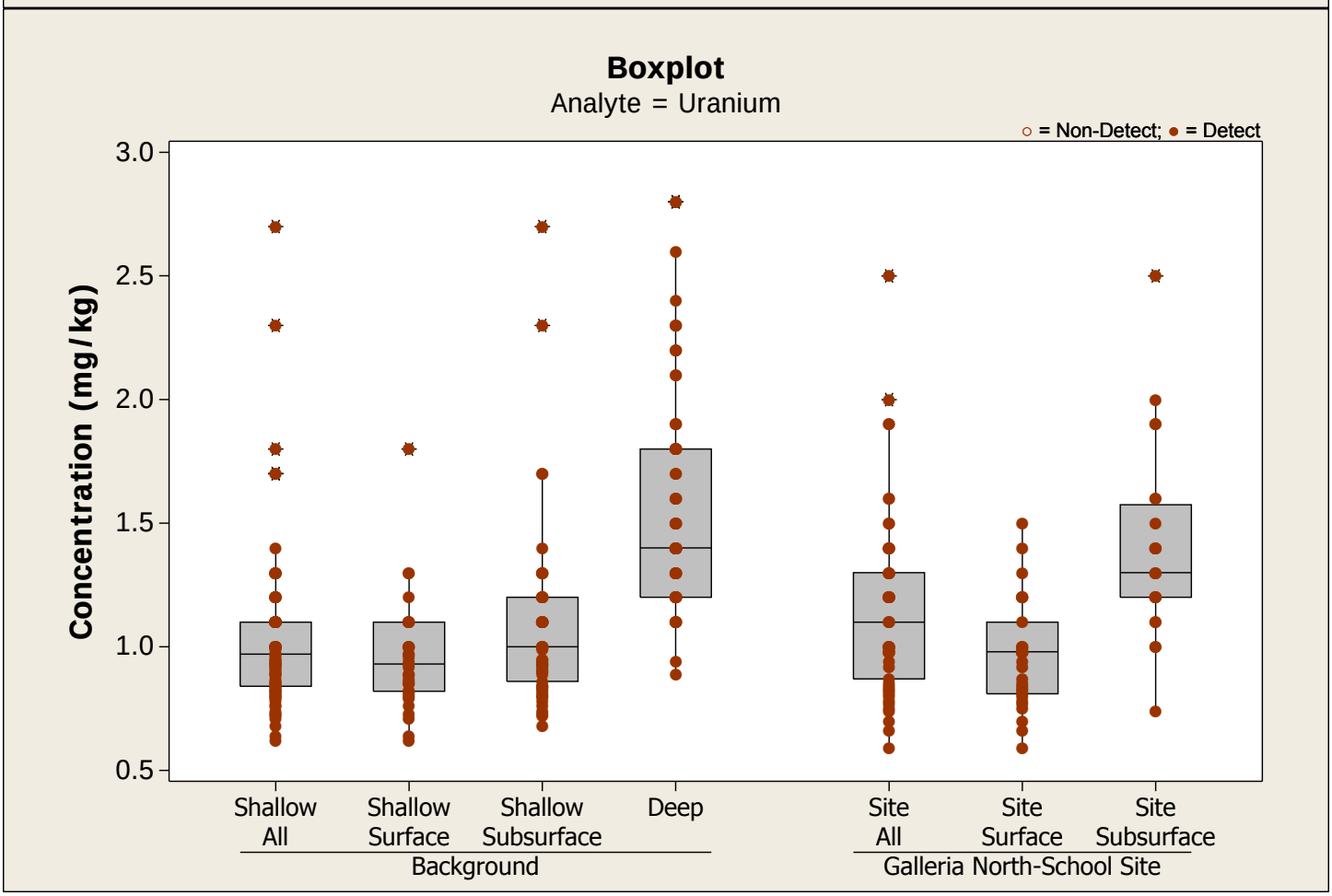

Probability Plot
Normal - 95% CI
Analyte = Titanium
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
0
200
400
600
800
1000
1200
1400
1600
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

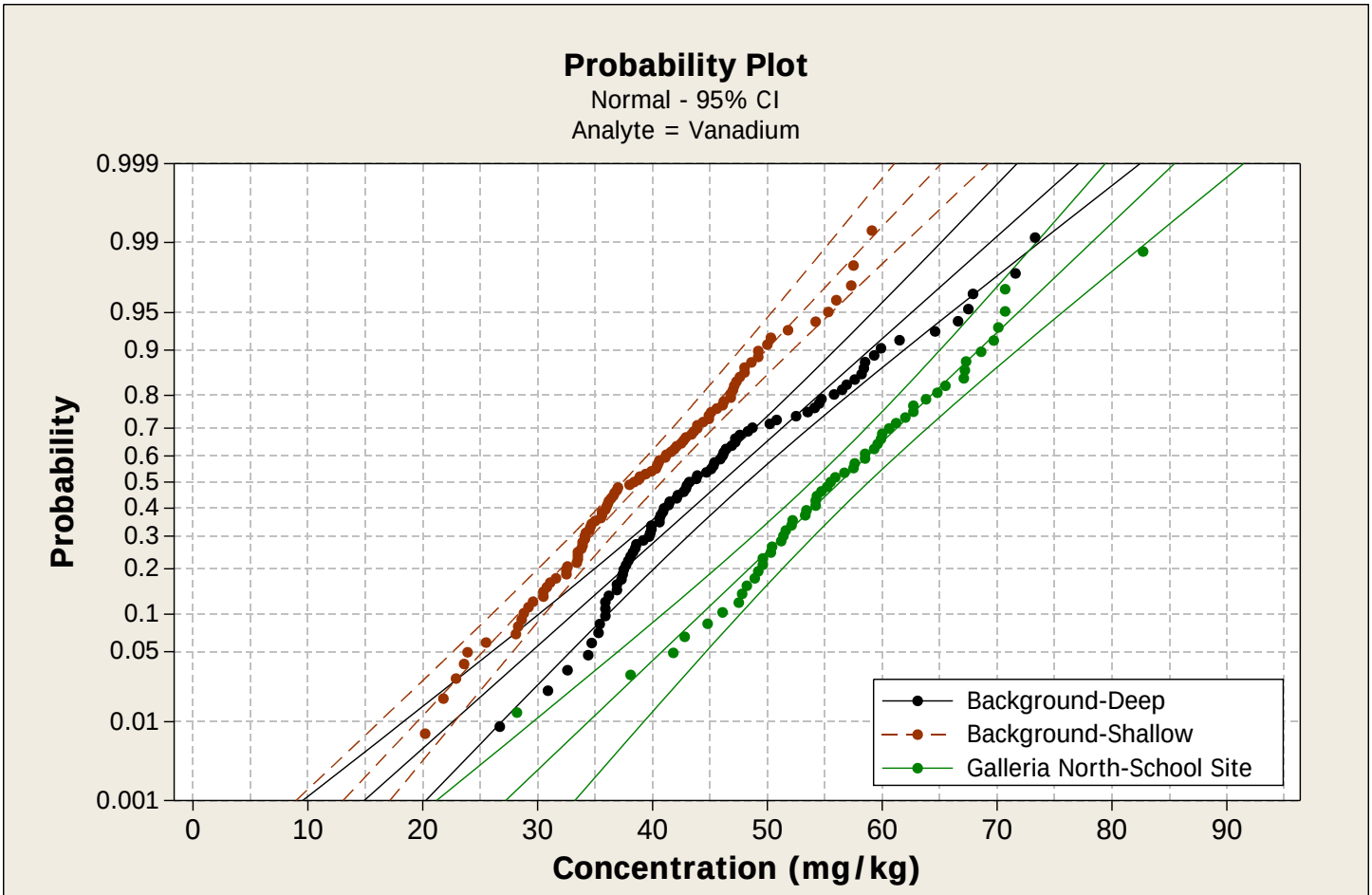

Boxplot
Analyte = Titanium
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
1400
1200
1000
800
600
400
200
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

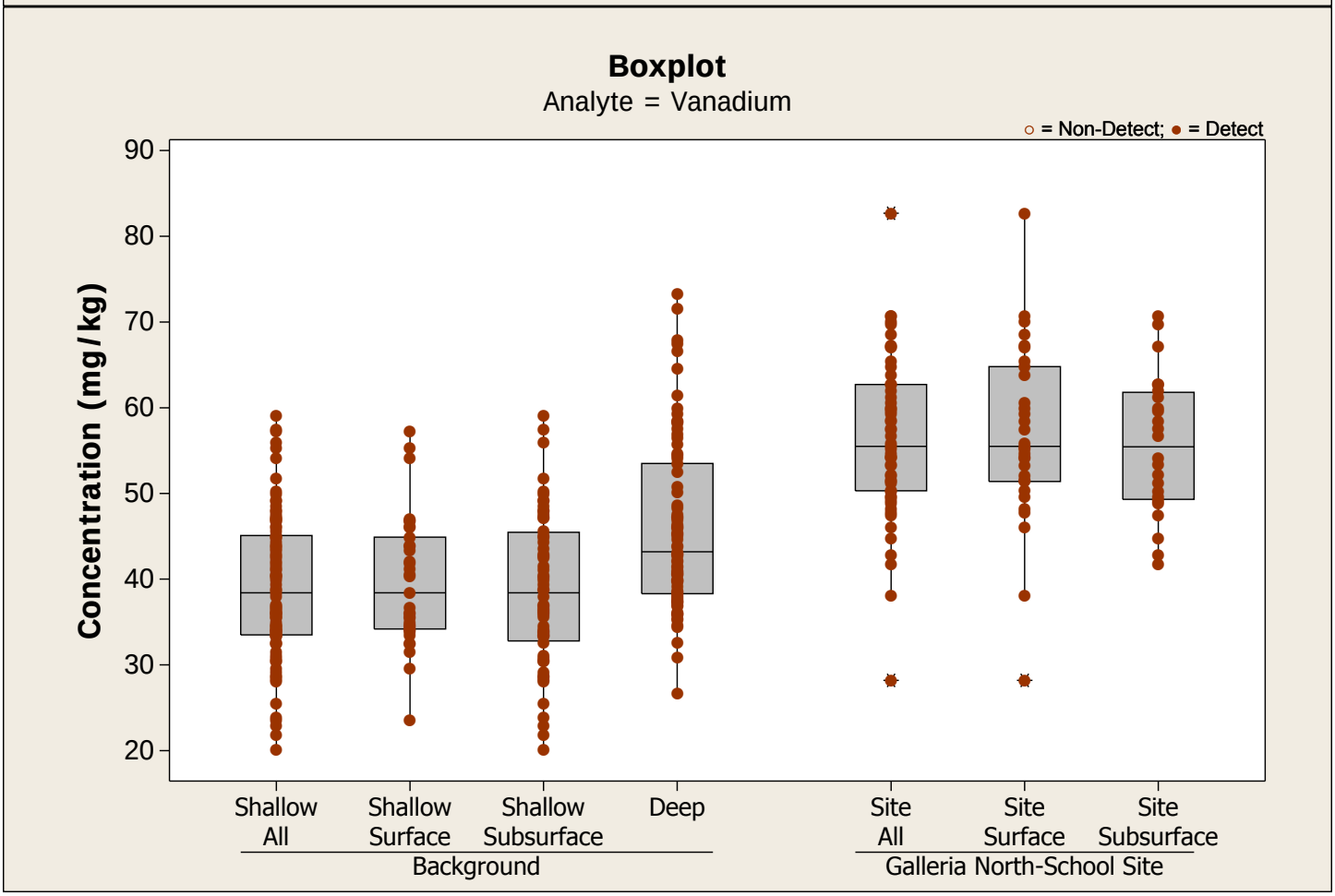

Probability Plot
Normal - 95% CI
Analyte = Tungsten
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
-1
0
1
2
3
4
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

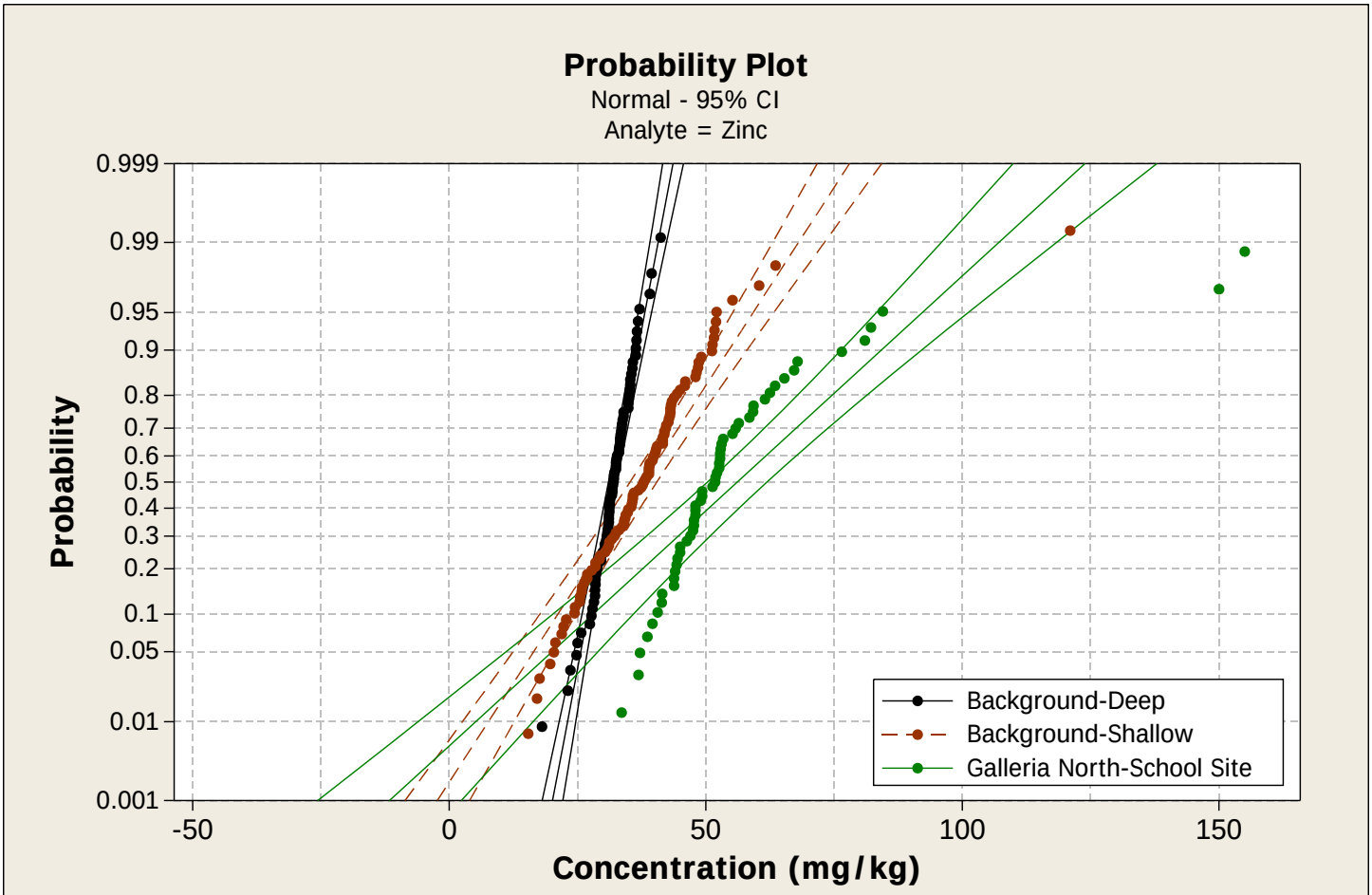

Boxplot
Analyte = Tungsten
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
4
3
2
1
0
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

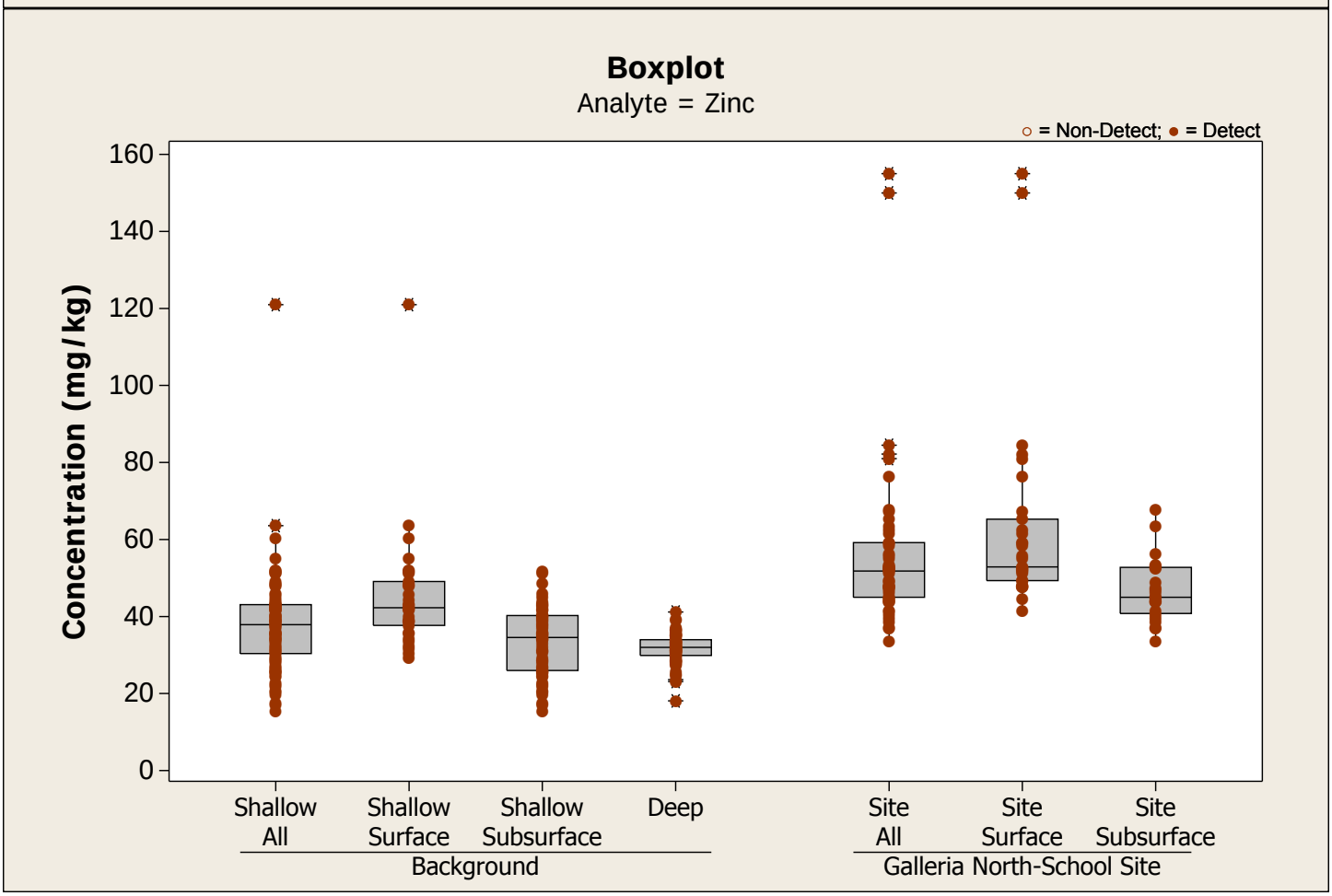

Probability Plot
Normal - 95% CI
Analyte = Uranium
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

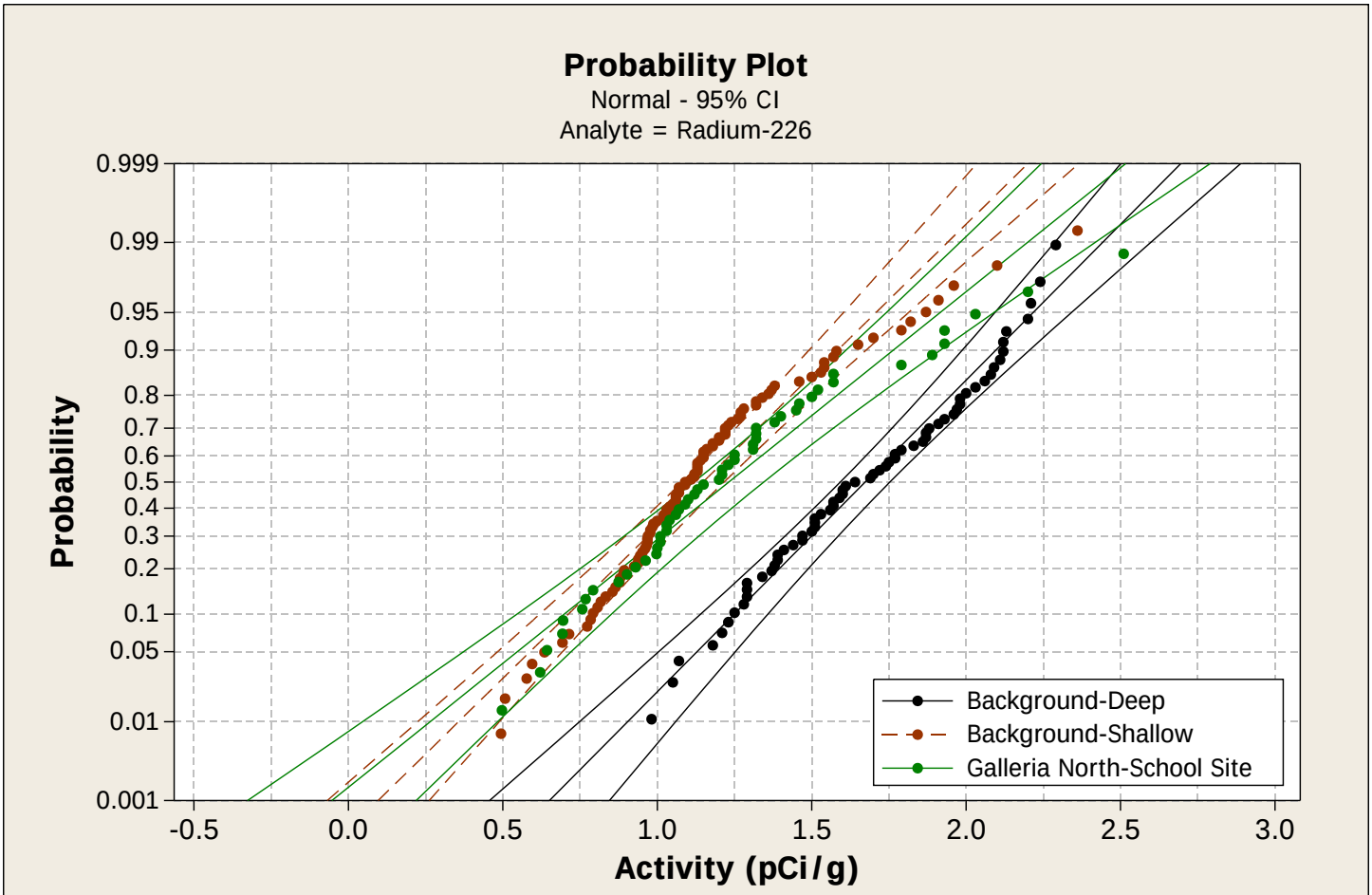

Boxplot
Analyte = Uranium
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
3.0
2.5
2.0
1.5
1.0
0.5
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

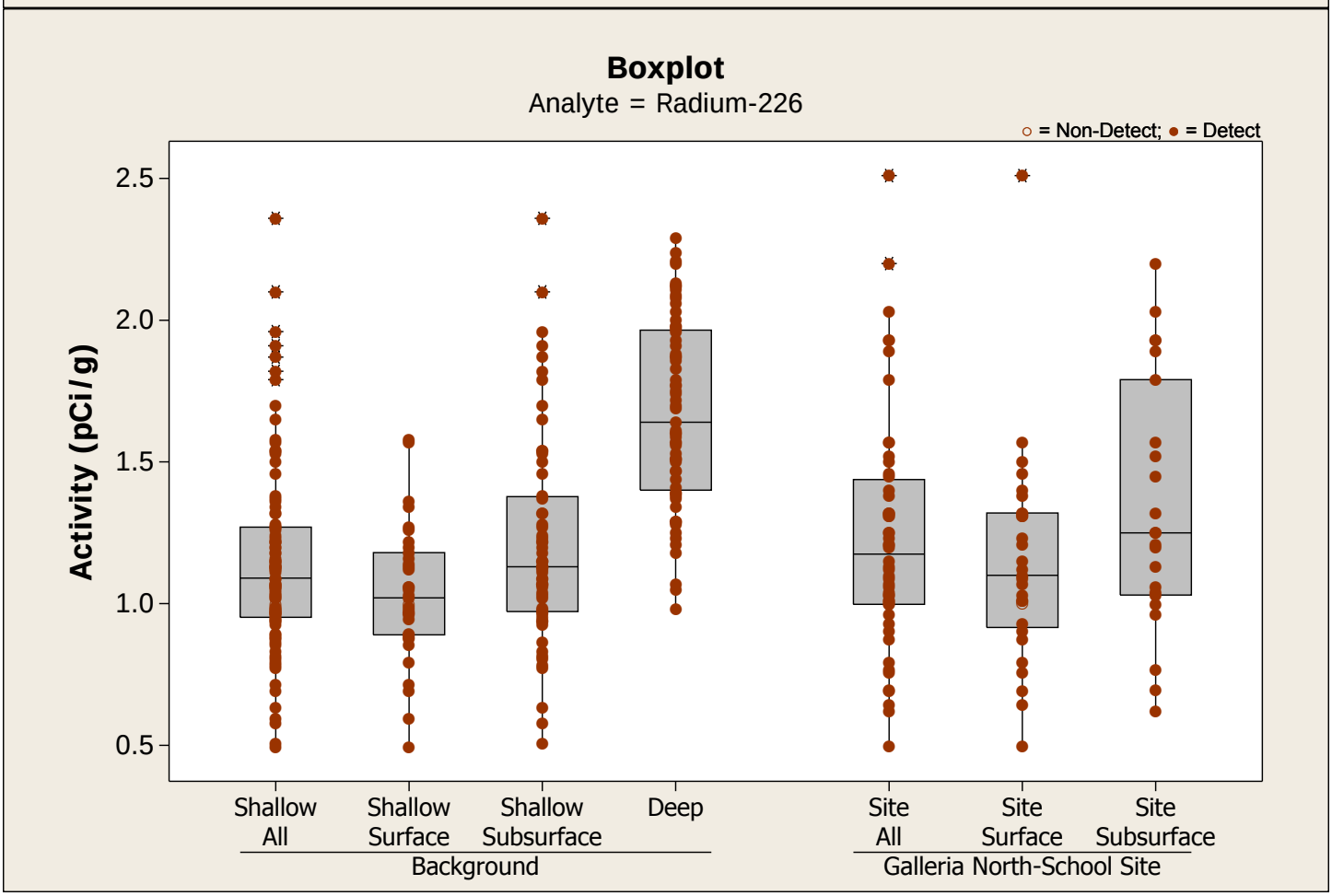

Probability Plot
Normal - 95% CI
Analyte = Vanadium
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
0
10
20
30
40
50
60
70
80
90
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

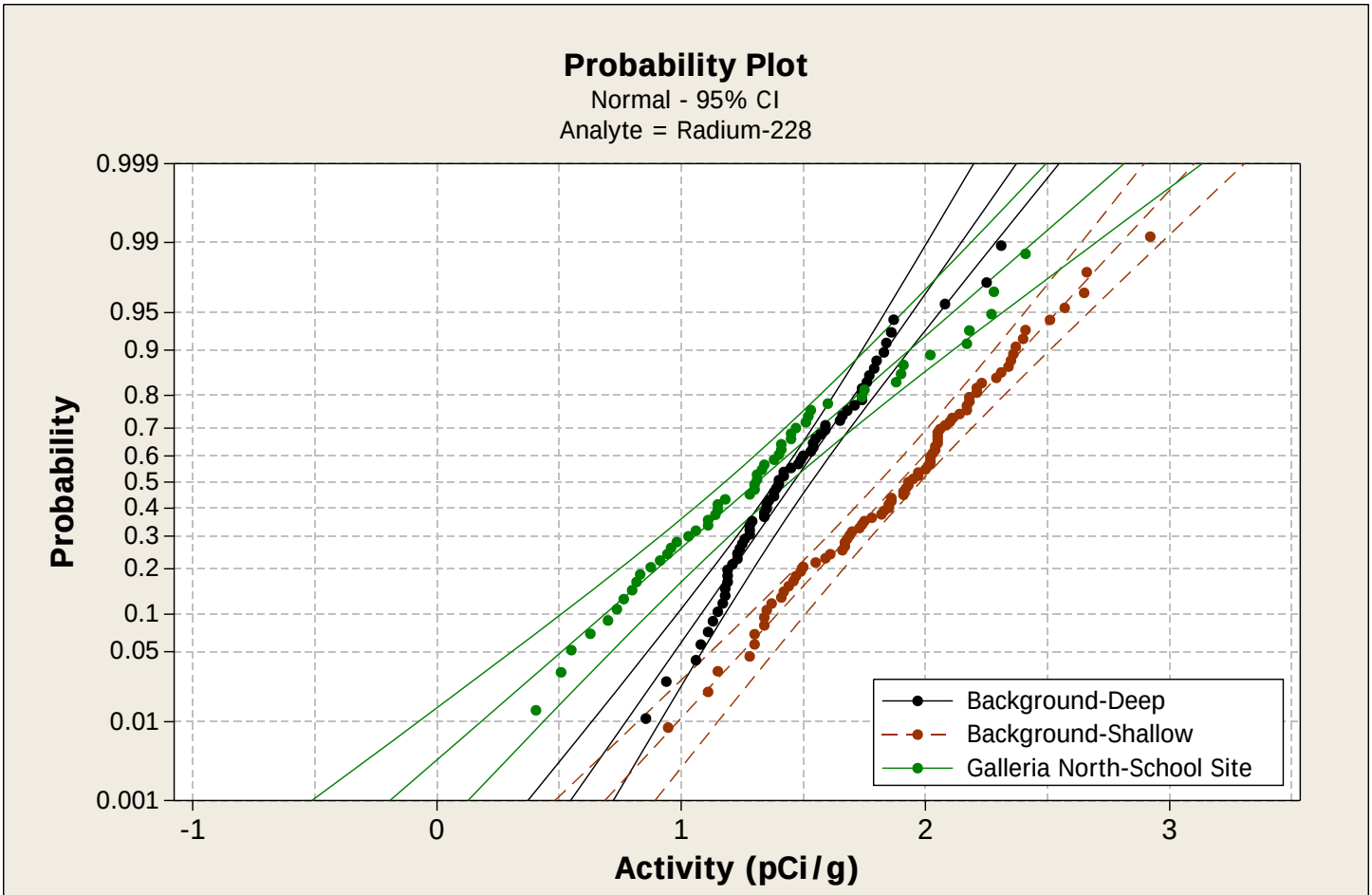

Boxplot
Analyte = Vanadium
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
90
80
70
60
50
40
30
20
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

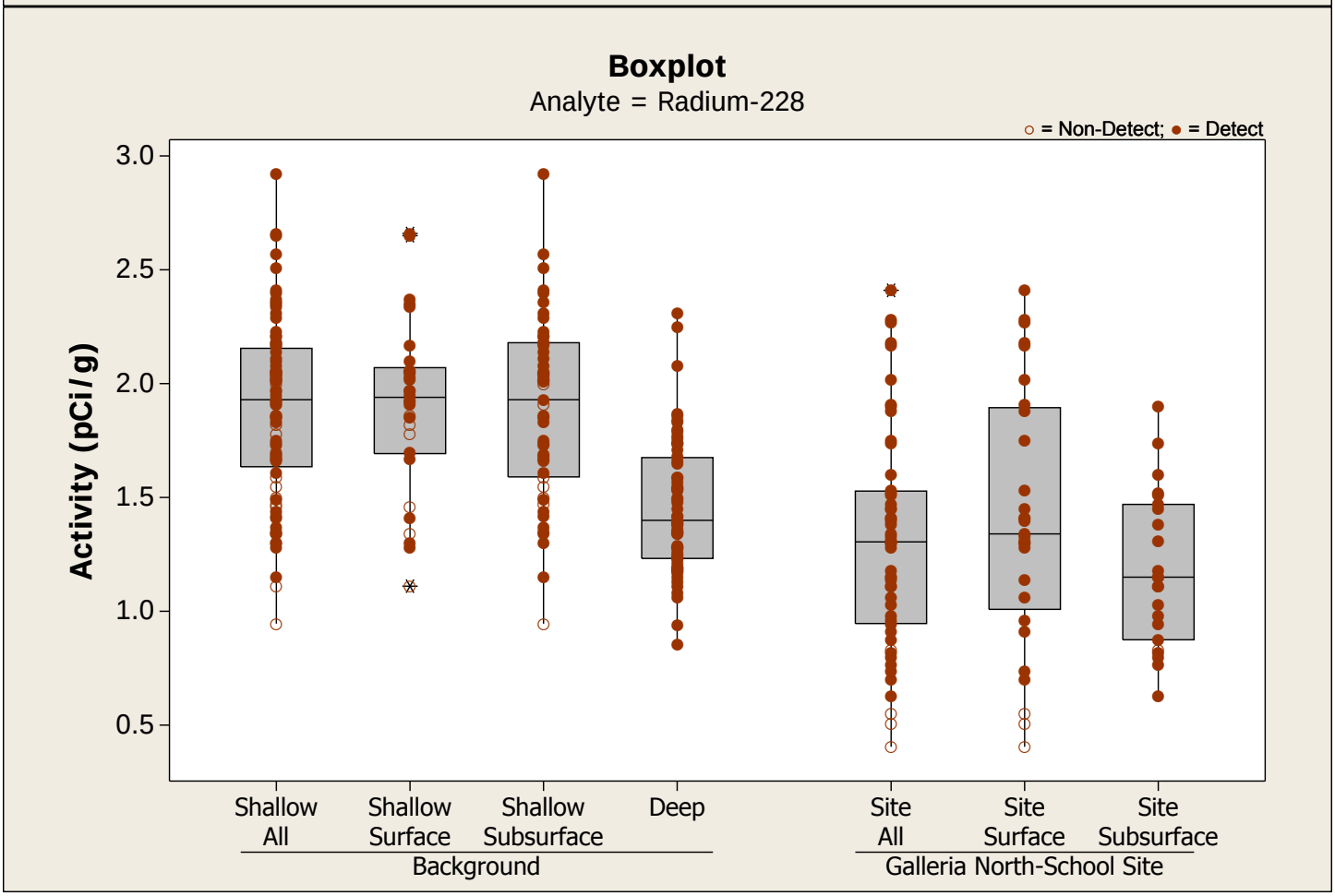

Probability Plot
Normal - 95% CI
Analyte = Zinc
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
-50
0
50
100
150
Concentration (mg/kg)
Background-Deep
Background-Shallow
Galleria North-School Site

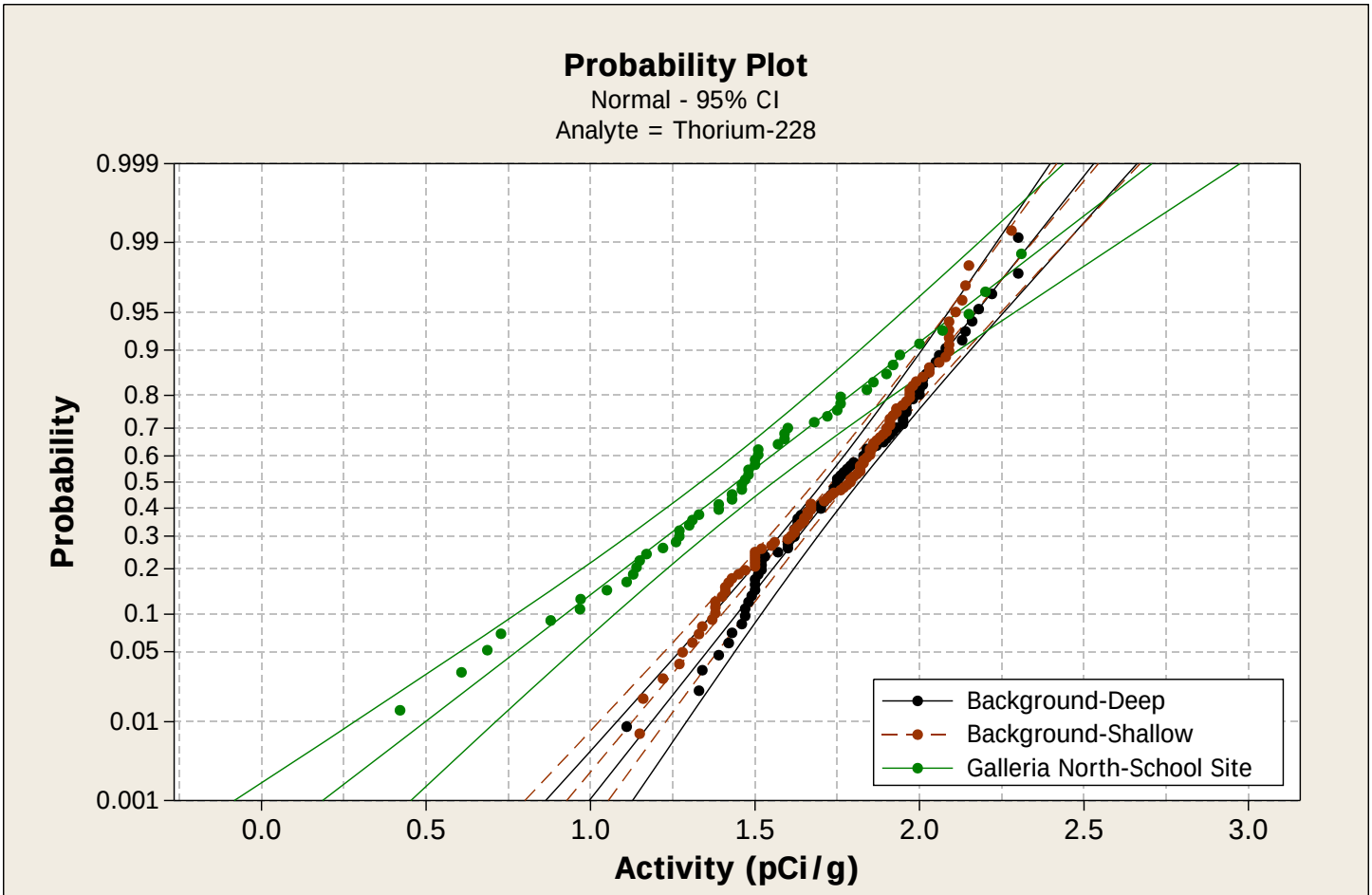

Boxplot
Analyte = Zinc
○ = Non-Detect; ● = Detect
Concentration (mg/kg)
160
140
120
100
80
60
40
20
0
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

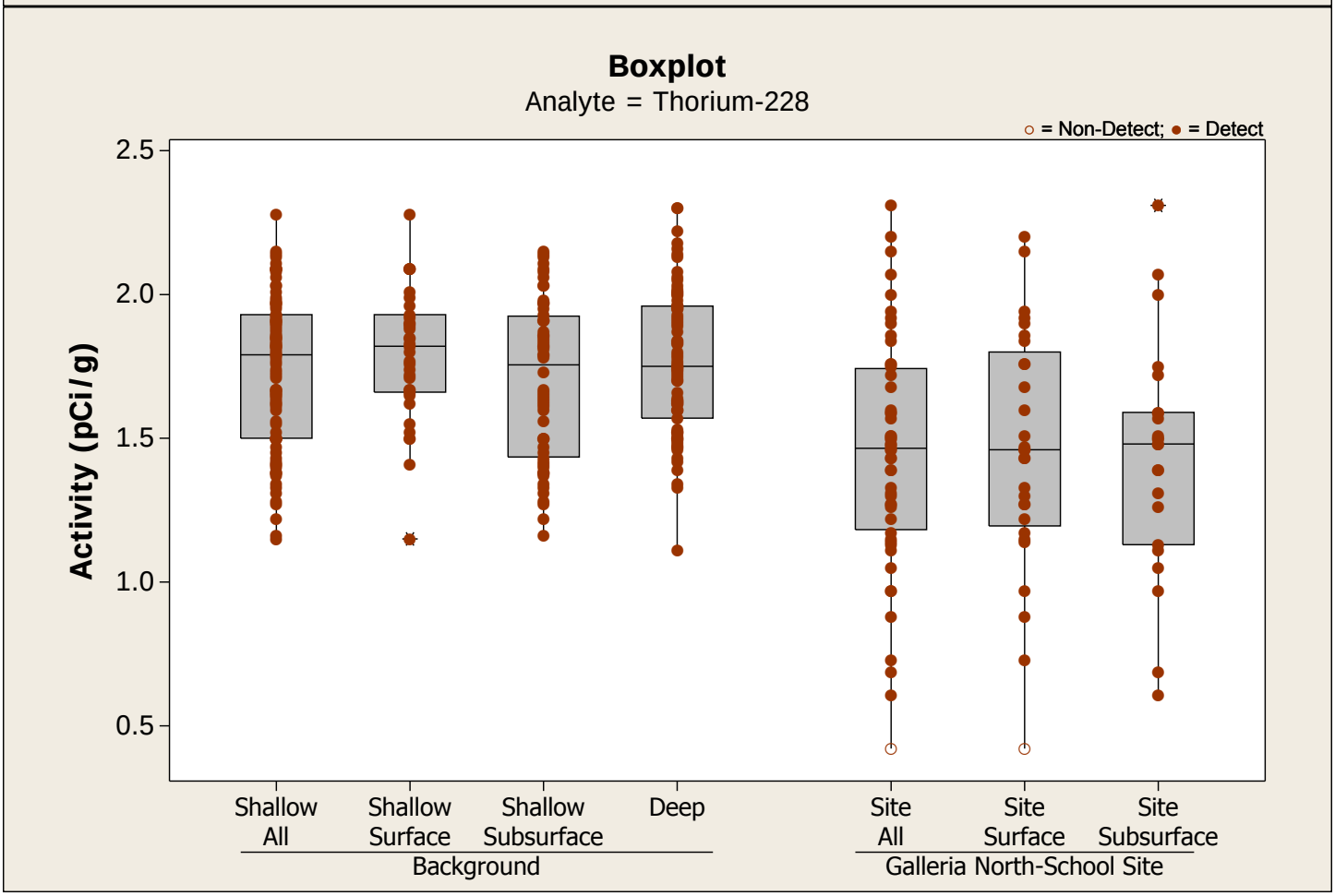

Probability Plot
Normal - 95% CI
Analyte = Radium-226
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Activity (pCi/g)
Background-Deep
Background-Shallow
Galleria North-School Site

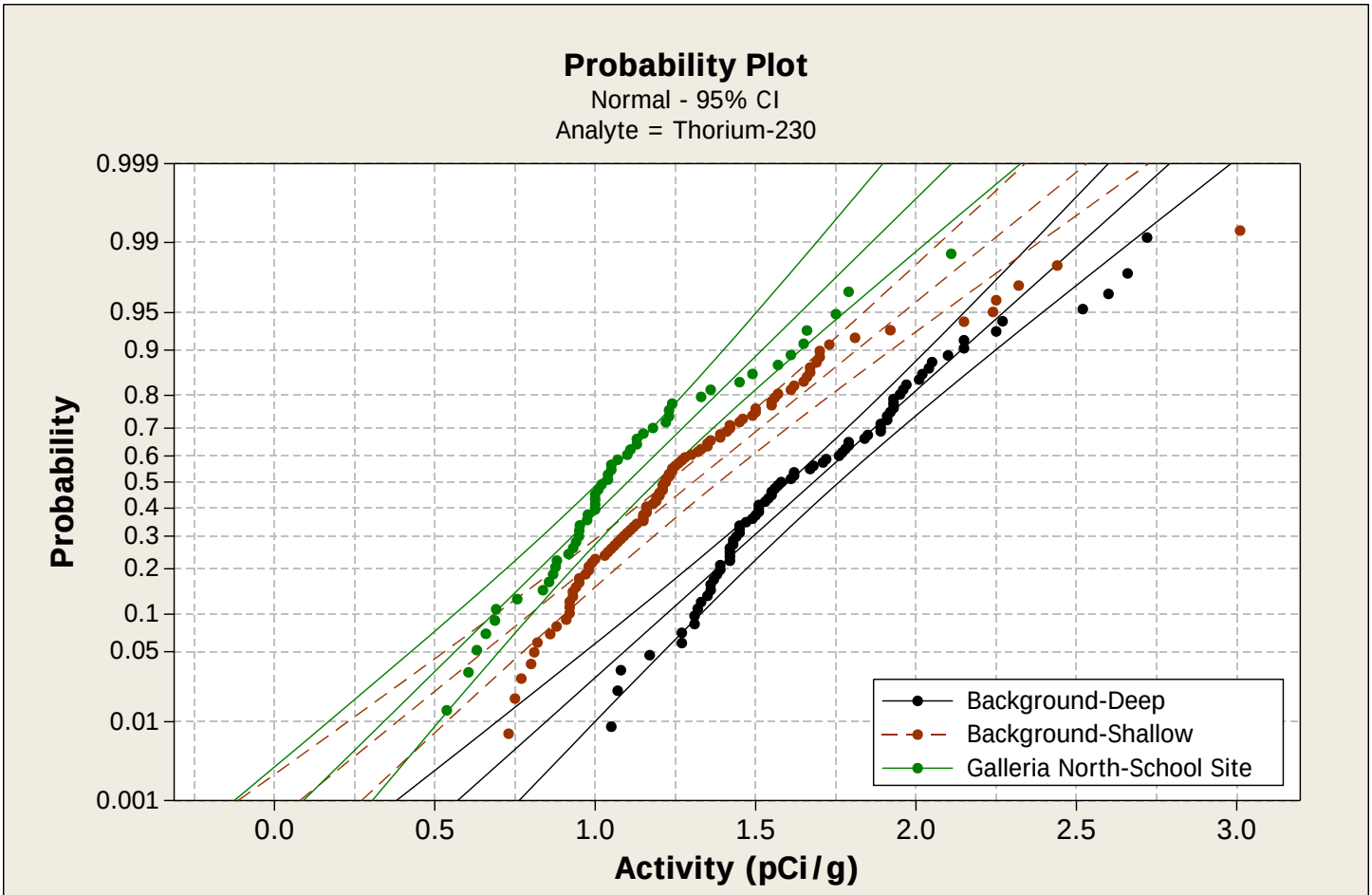

Boxplot
Analyte = Radium-226
○ = Non-Detect; ● = Detect
Activity (pCi/g)
2.5
2.0
1.5
1.0
0.5
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

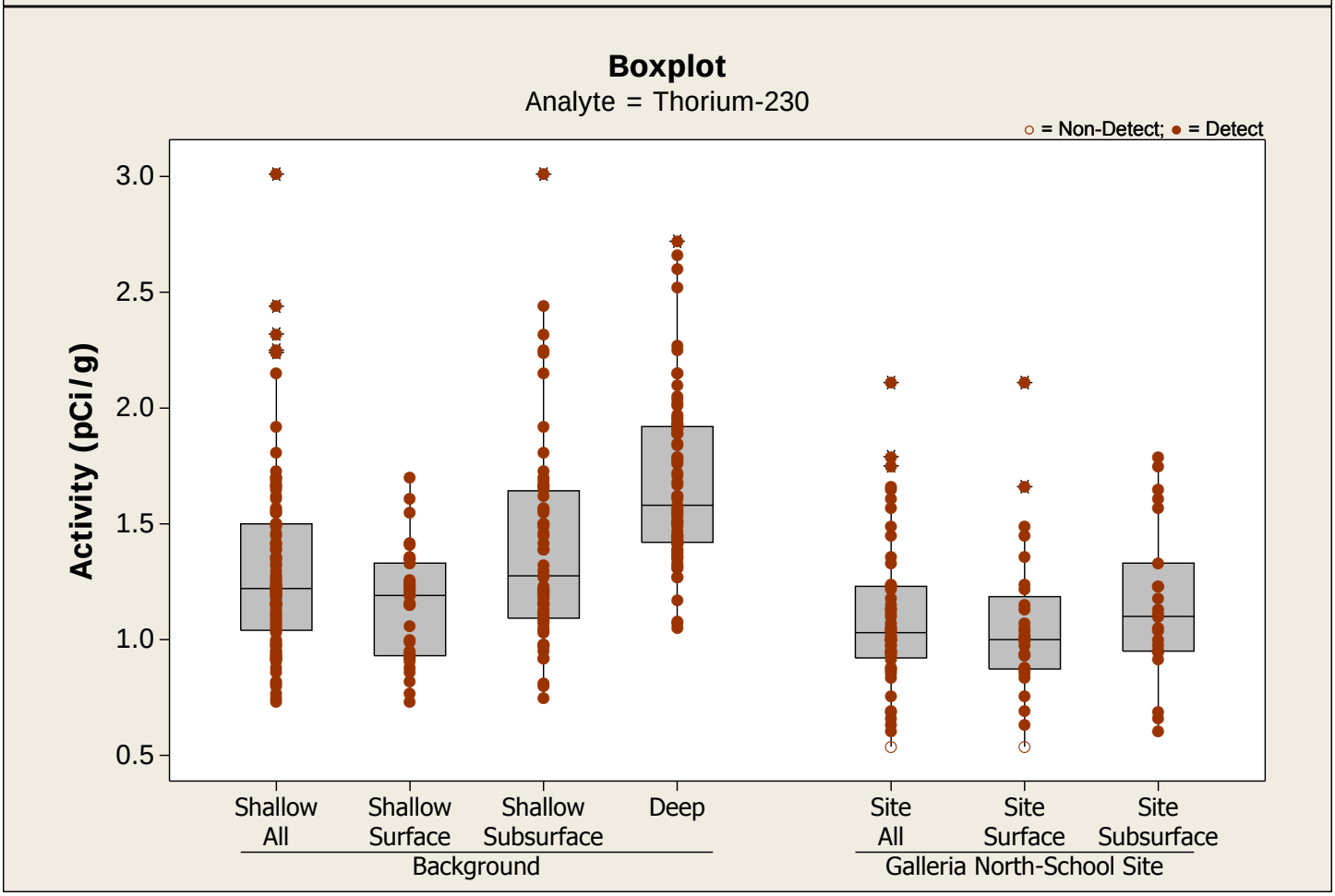

Probability Plot
Normal - 95% CI
Analyte = Radium-228
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
-1
0
1
2
3
Activity (pCi/g)
Background-Deep
Background-Shallow
Galleria North-School Site

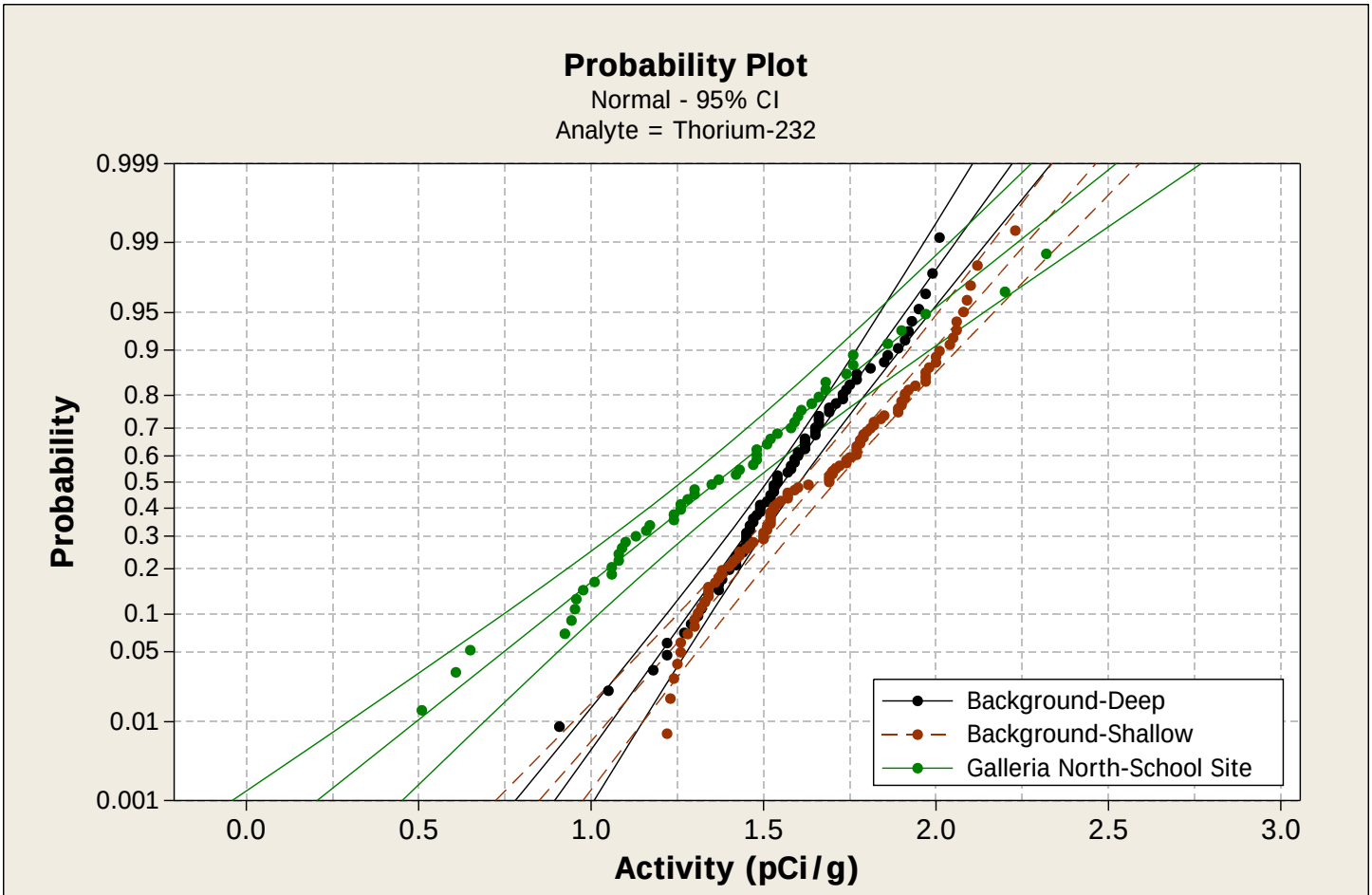

Boxplot
Analyte = Radium-228
○ = Non-Detect; ● = Detect
Activity (pCi/g)
3.0
2.5
2.0
1.5
1.0
0.5
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

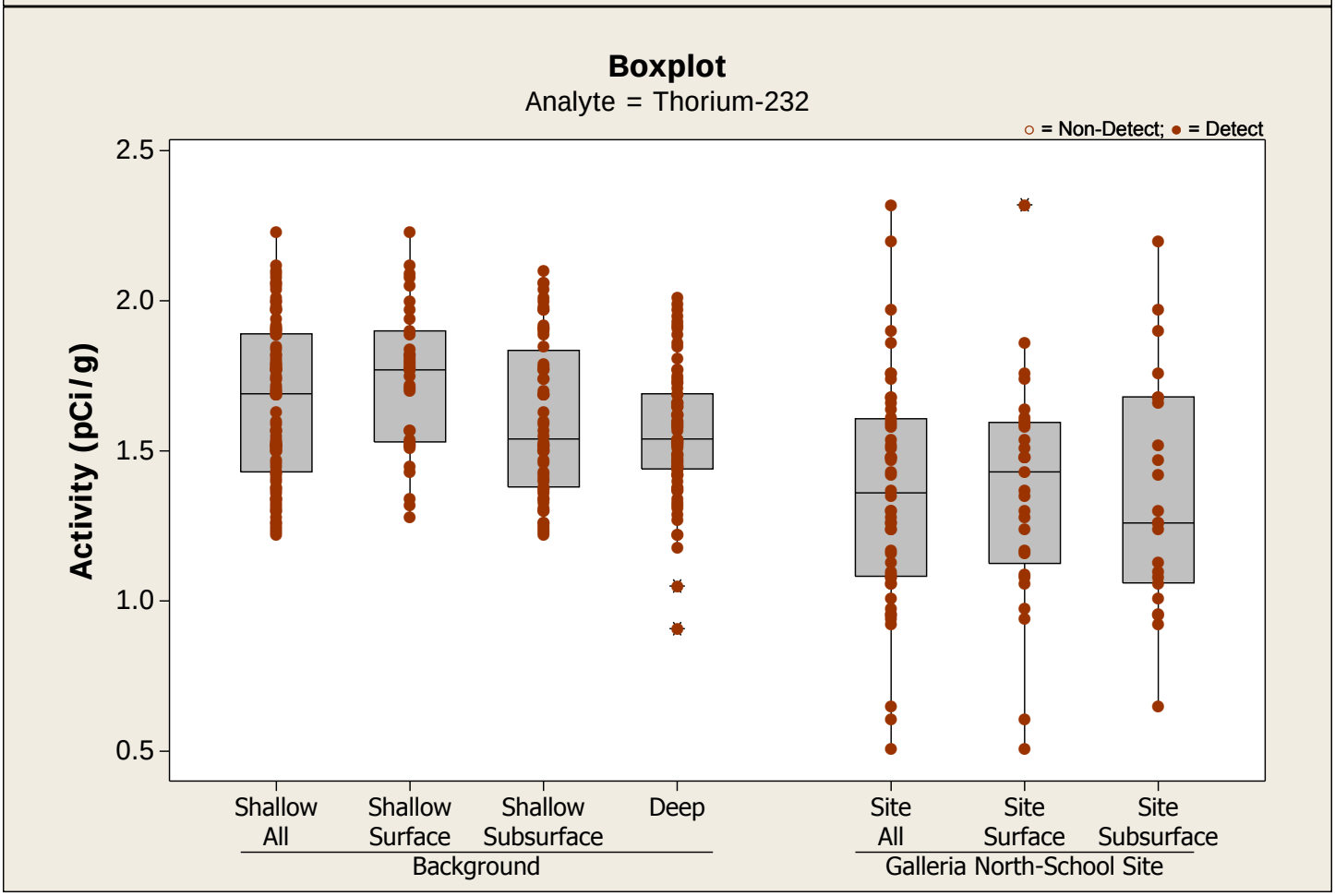

Probability Plot
Normal - 95% CI
Analyte = Thorium-228
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Activity (pCi/g)
Background-Deep
Background-Shallow
Galleria North-School Site

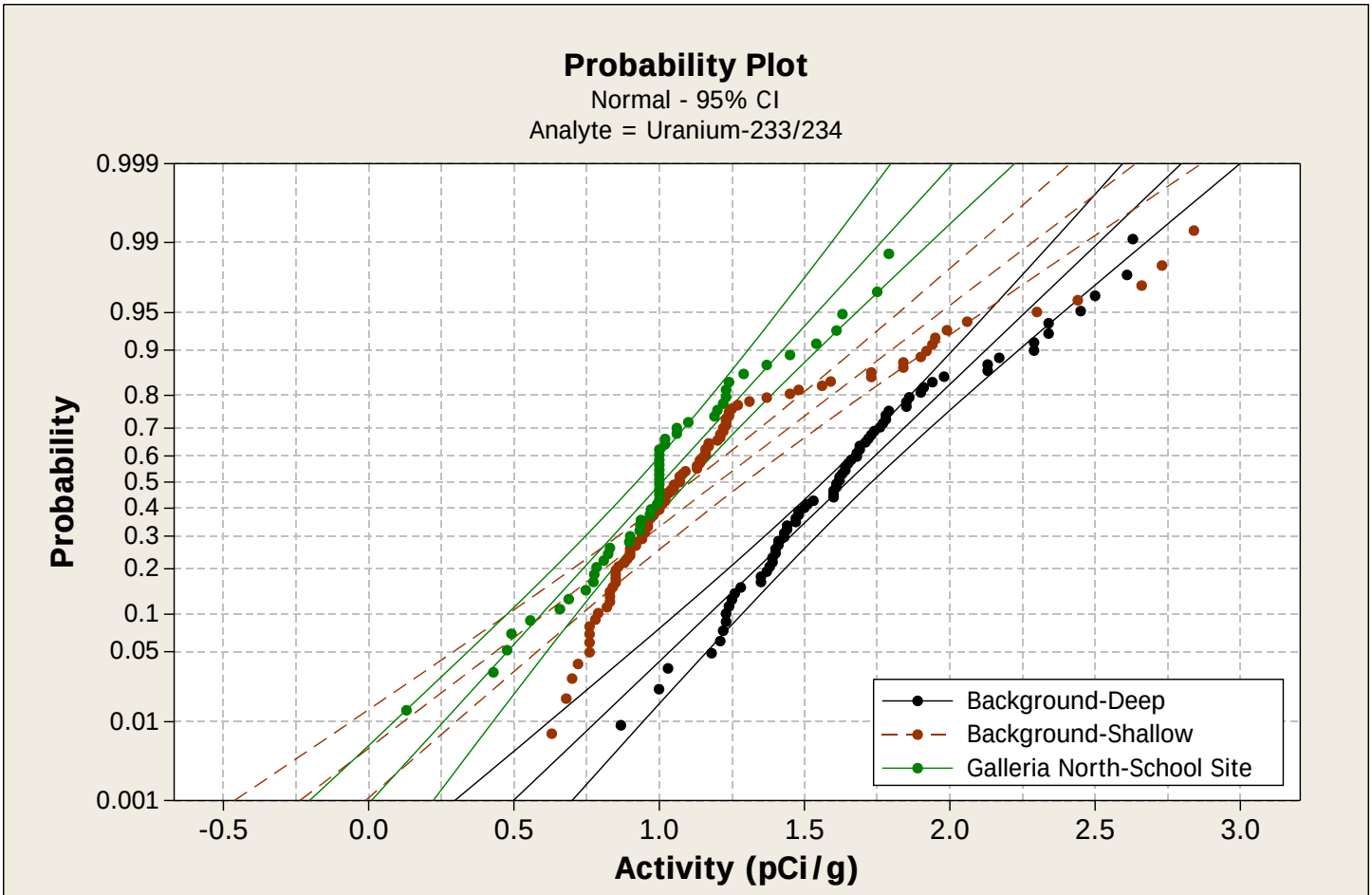

Boxplot
Analyte = Thorium-228
○ = Non-Detect; ● = Detect
Activity (pCi/g)
2.5
2.0
1.5
1.0
0.5
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

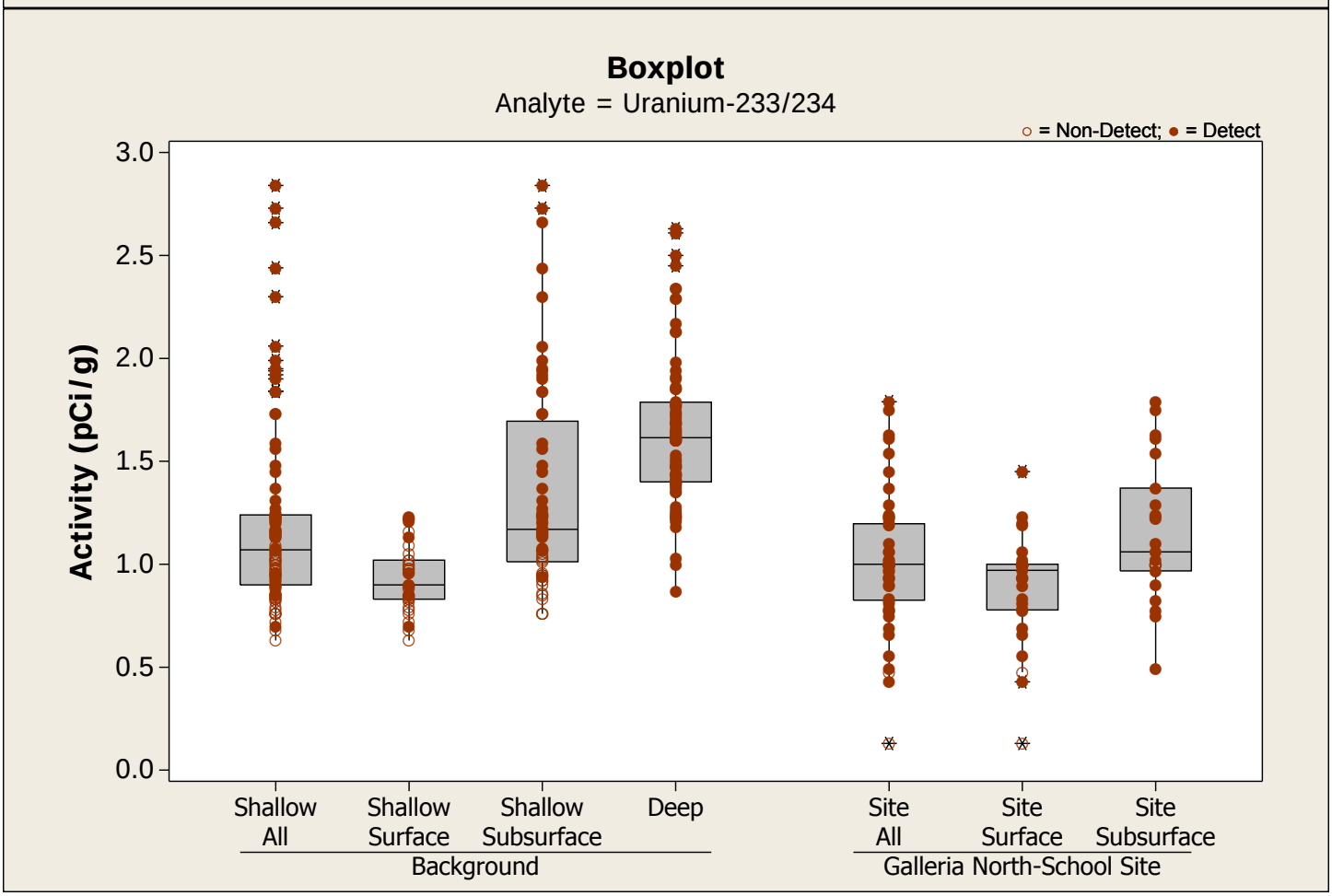

Probability Plot
Normal - 95% CI
Analyte = Thorium-230
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Activity (pCi/g)
Background-Deep
Background-Shallow
Galleria North-School Site

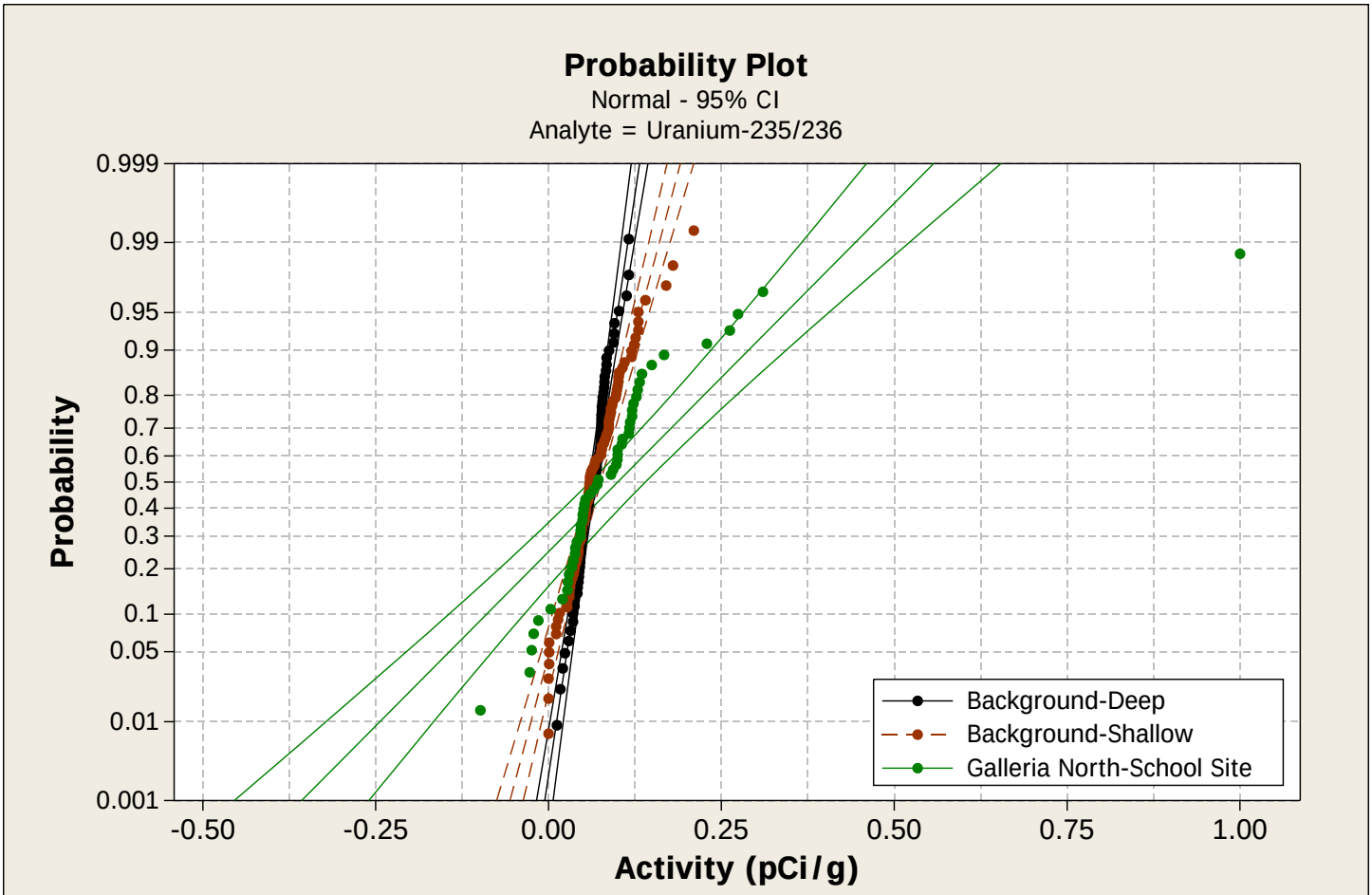

Boxplot
Analyte = Thorium-230
○ = Non-Detect; ● = Detect
Activity (pCi/g)
3.0
2.5
2.0
1.5
1.0
0.5
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

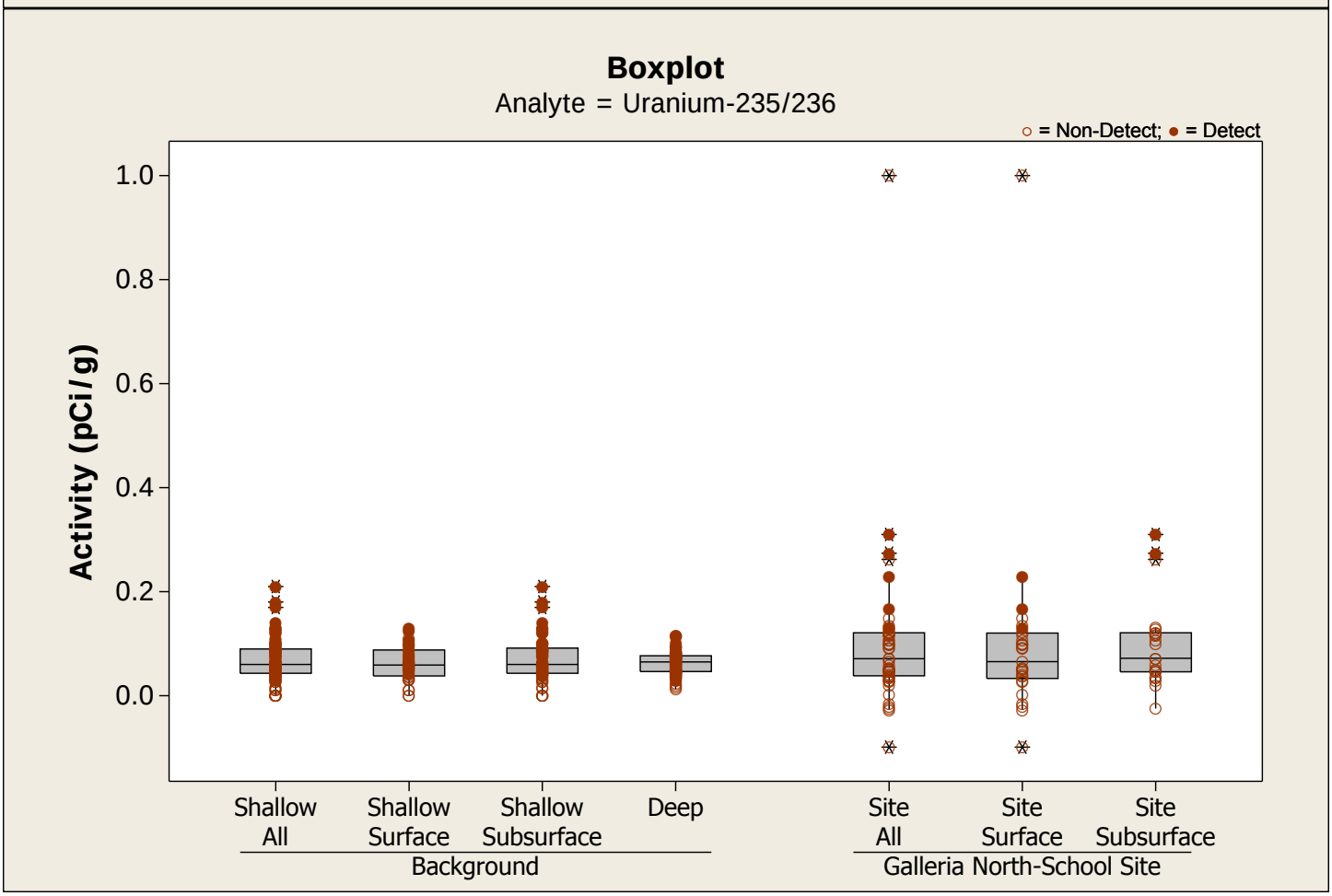

Probability Plot
Normal - 95% CI
Analyte = Thorium-232
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Activity (pCi/g)
Background-Deep
Background-Shallow
Galleria North-School Site

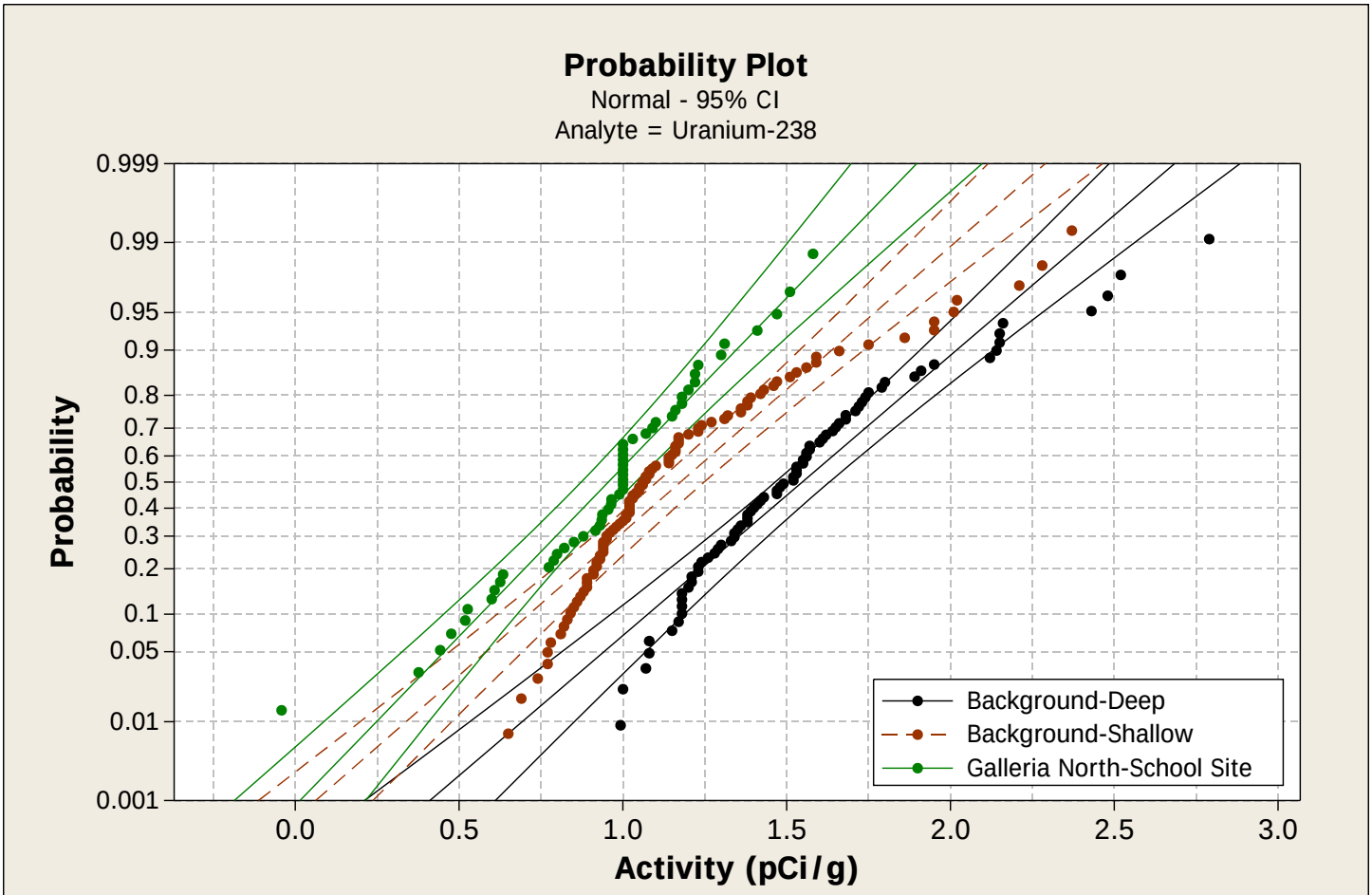

Boxplot
Analyte = Thorium-232
○ = Non-Detect; ● = Detect
Activity (pCi/g)
2.5
2.0
1.5
1.0
0.5
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

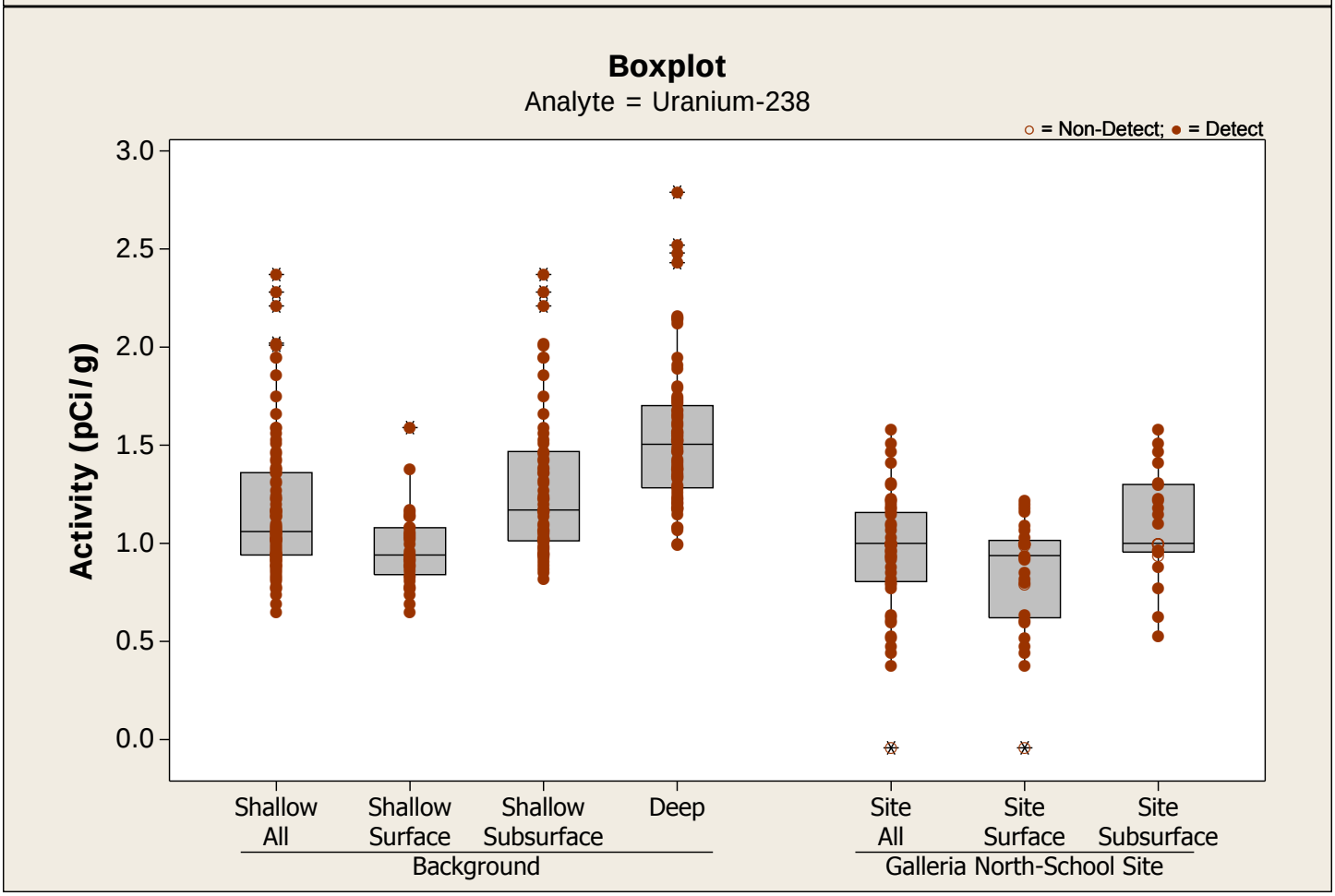

Probability Plot
Normal - 95% CI
Analyte = Uranium-233/234
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Activity (pCi/g)
Background-Deep
Background-Shallow
Galleria North-School Site


Boxplot
Analyte = Uranium-233/234
○ = Non-Detect; ● = Detect
Activity (pCi/g)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site


Probability Plot
Normal - 95% CI
Analyte = Uranium-235/236
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
-0.50
-0.25
0.00
0.25
0.50
0.75
1.00
Activity (pCi/g)
Background-Deep
Background-Shallow
Galleria North-School Site


Boxplot
Analyte = Uranium-235/236
○ = Non-Detect; ● = Detect
Activity (pCi/g)
1.0
0.8
0.6
0.4
0.2
0.0
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

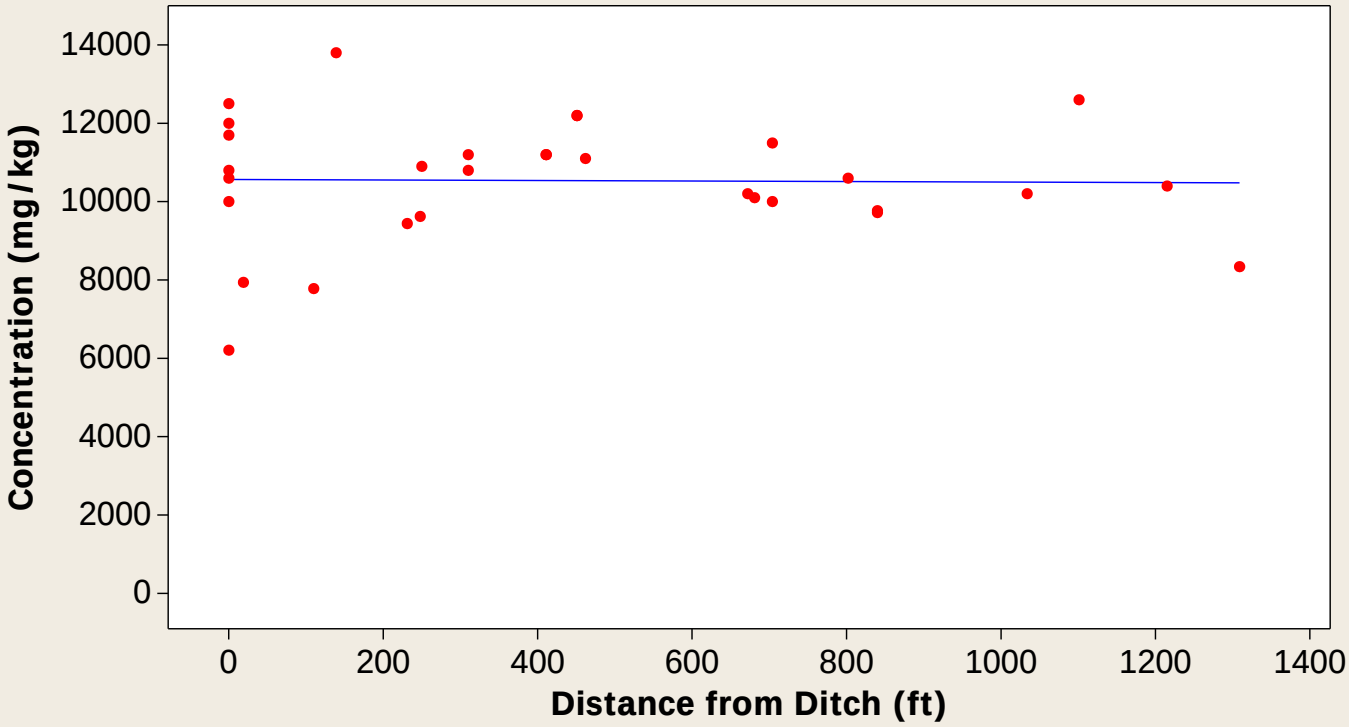

Probability Plot
Normal - 95% CI
Analyte = Uranium-238
Probability
0.999
0.99
0.95
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.05
0.01
0.001
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Activity (pCi/g)
Background-Deep
Background-Shallow
Galleria North-School Site


Boxplot
Analyte = Uranium-238
○ = Non-Detect; ● = Detect
Activity (pCi/g)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Shallow All
Shallow Surface
Shallow Subsurface
Deep
Background
Site All
Site Surface
Site Subsurface
Galleria North-School Site

SCATTERPLOTS FOR METALS

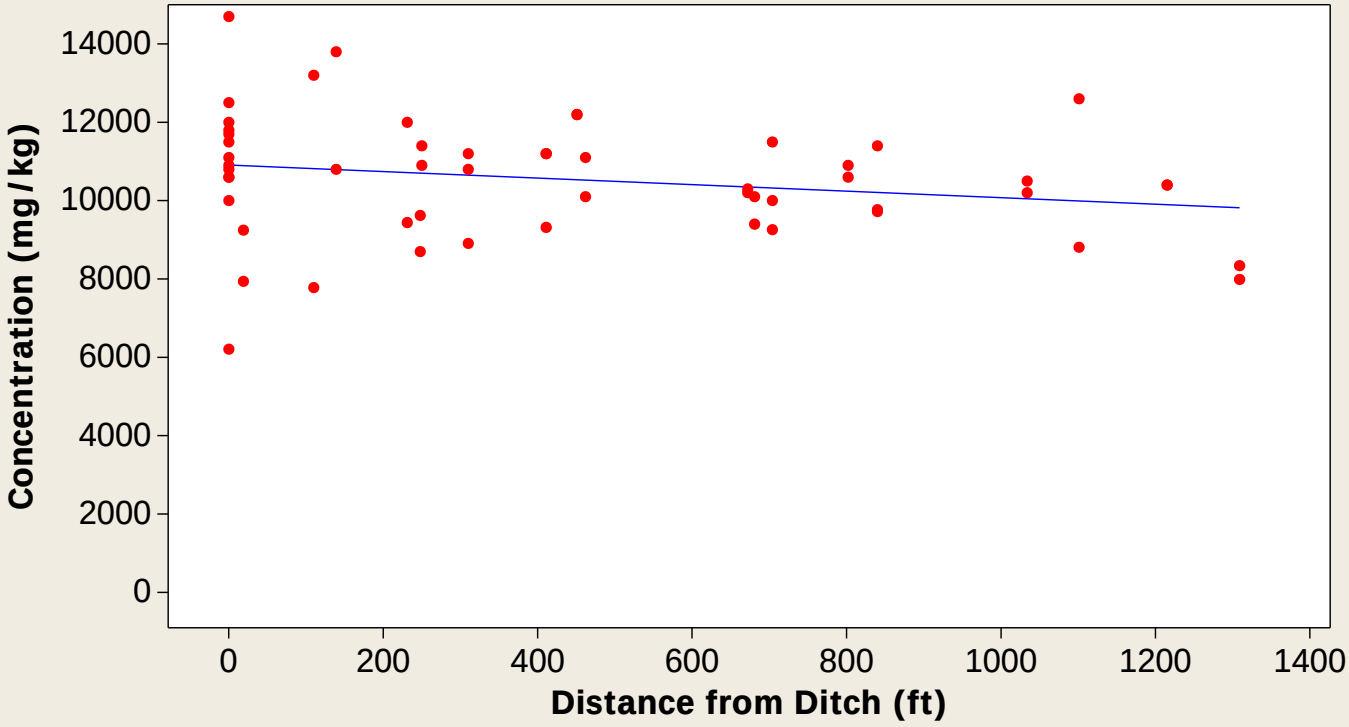
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only

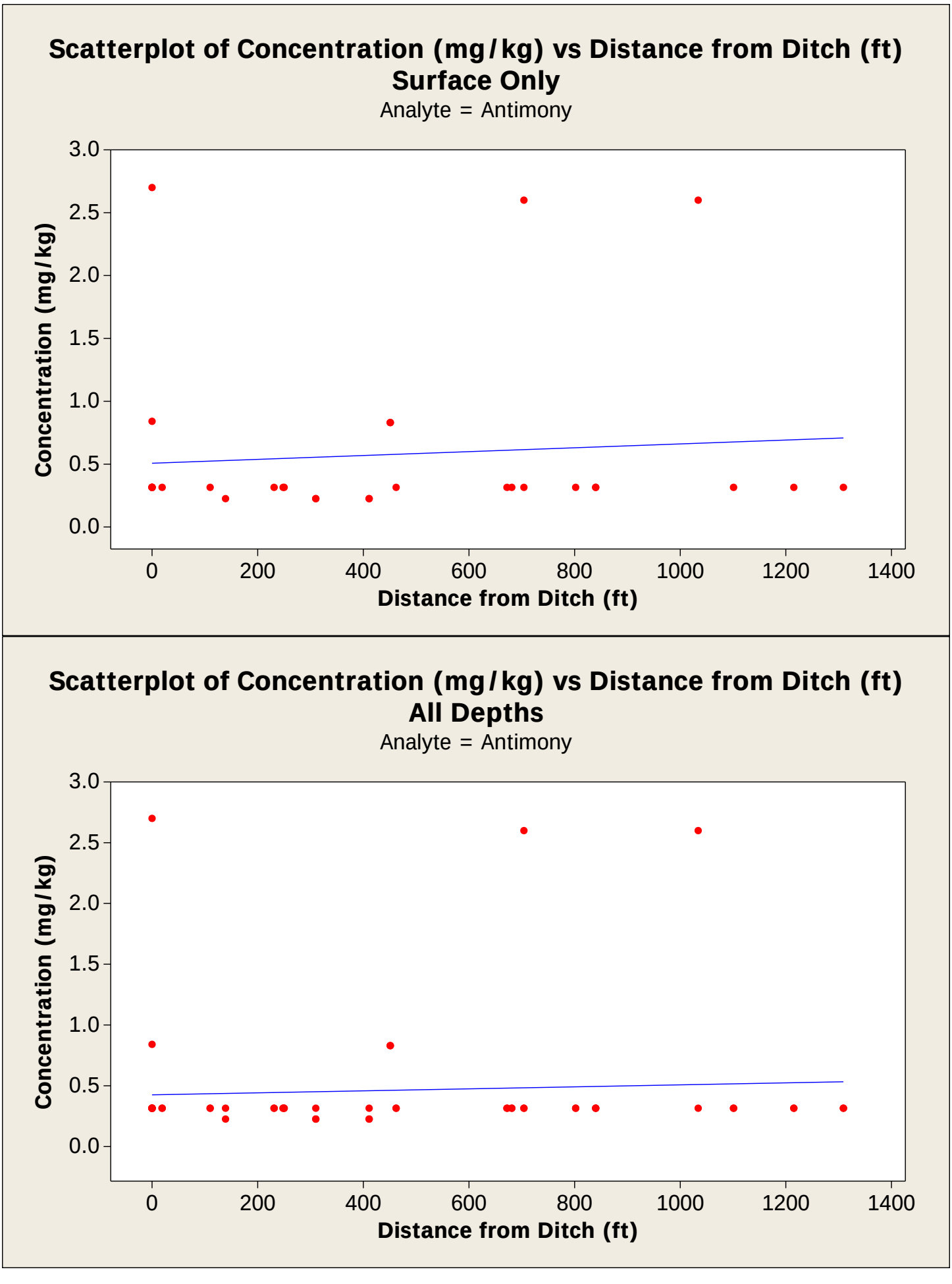
Analyte = Aluminum

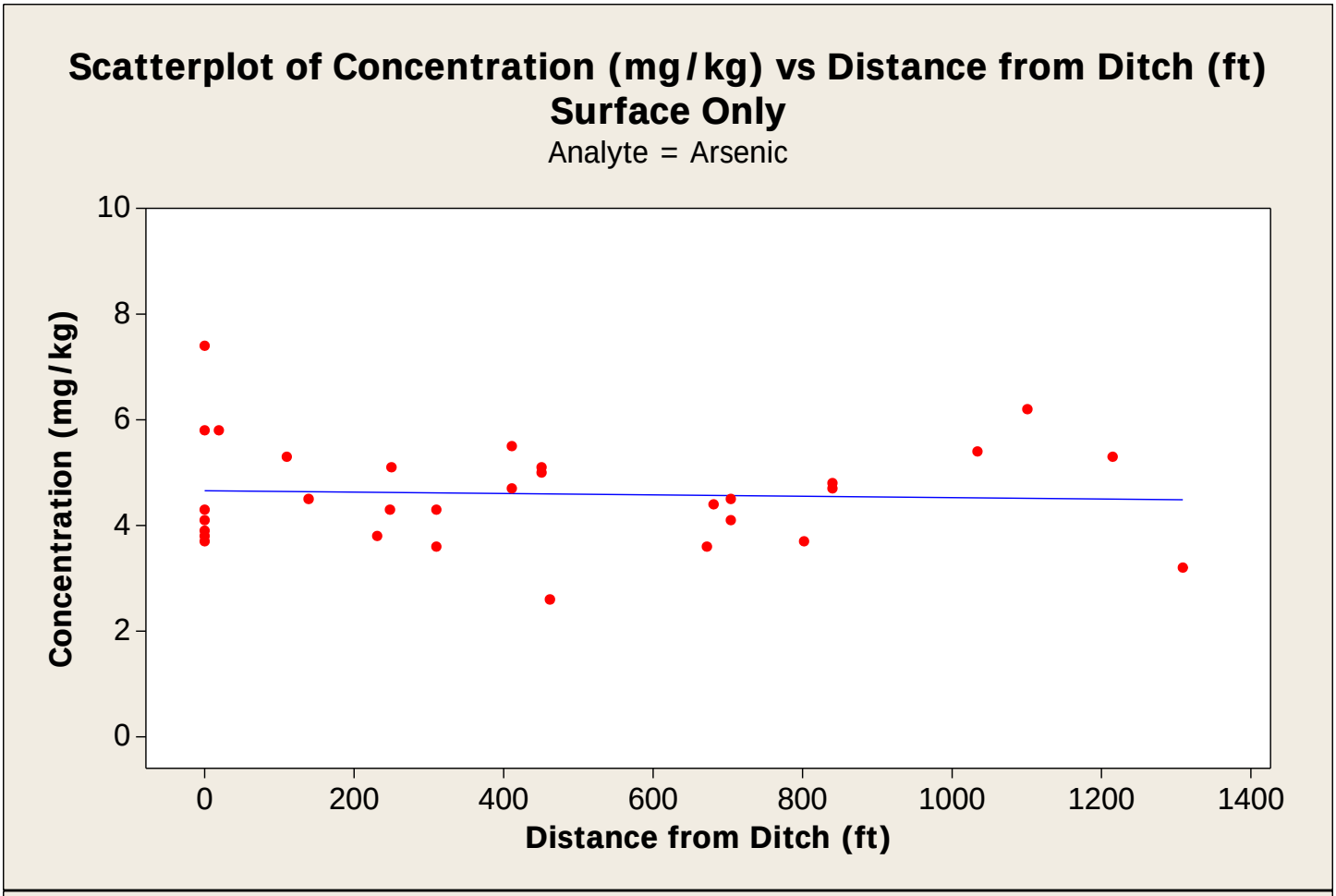


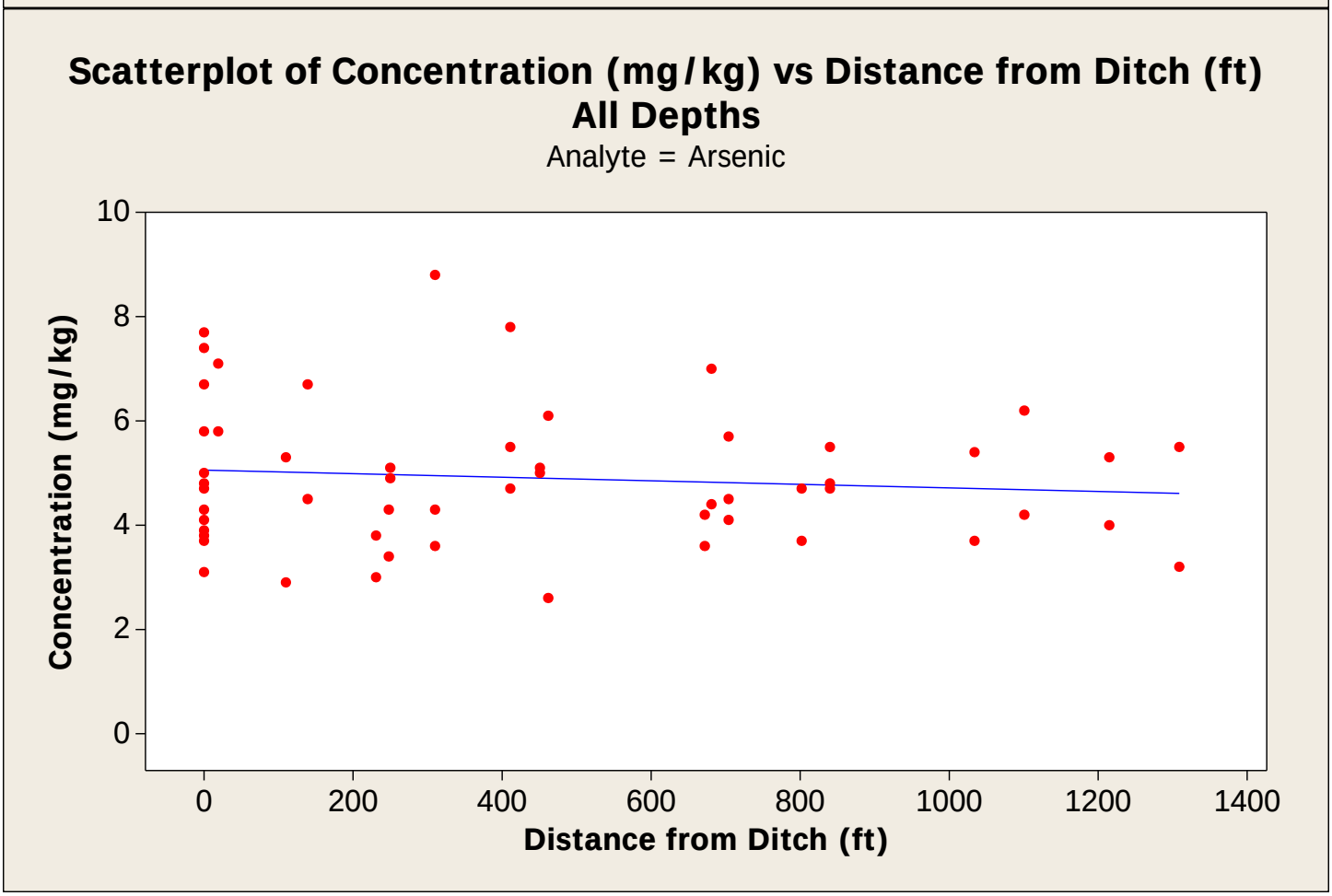
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths

Analyte = Aluminum



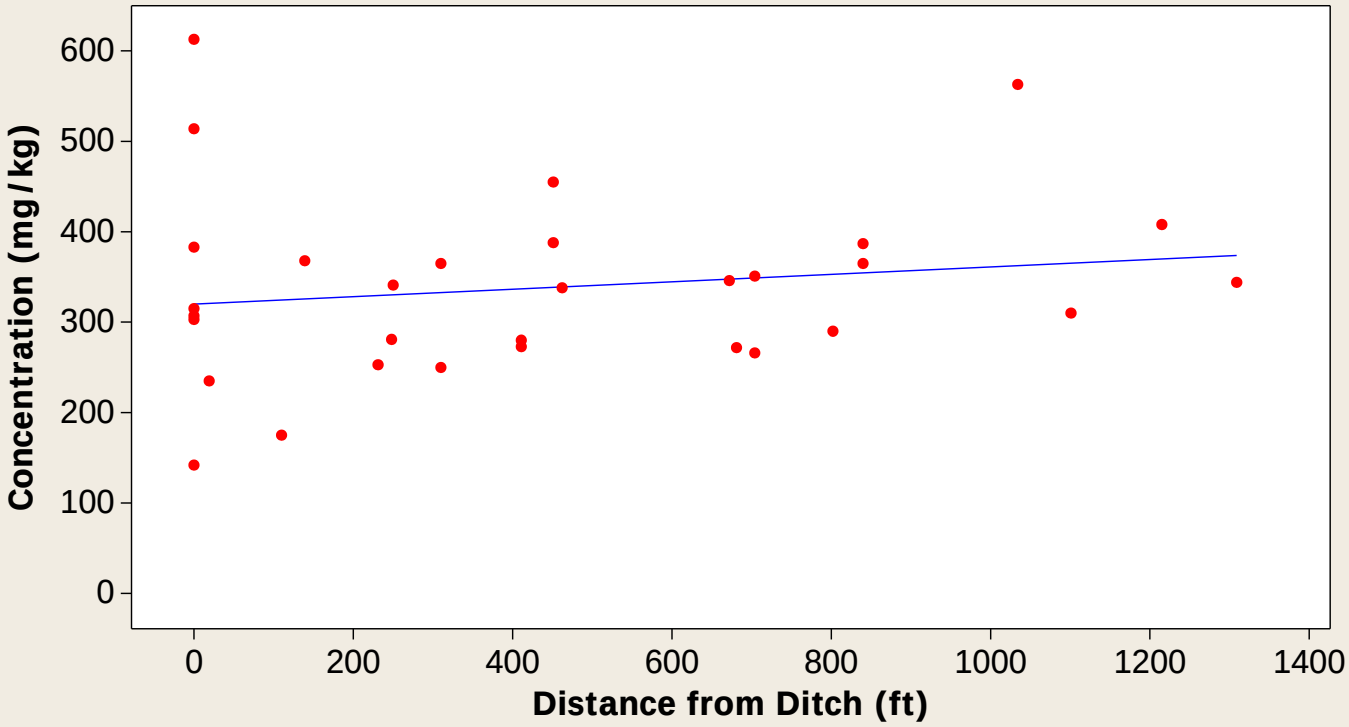

Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only
Analyte = Antimony
Concentration (mg/kg)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths
Analyte = Antimony
Concentration (mg/kg)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)


Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only
Analyte = Arsenic
Concentration (mg/kg)
0
2
4
6
8
10
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)


Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths
Analyte = Arsenic
Concentration (mg/kg)
0
2
4
6
8
10
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)

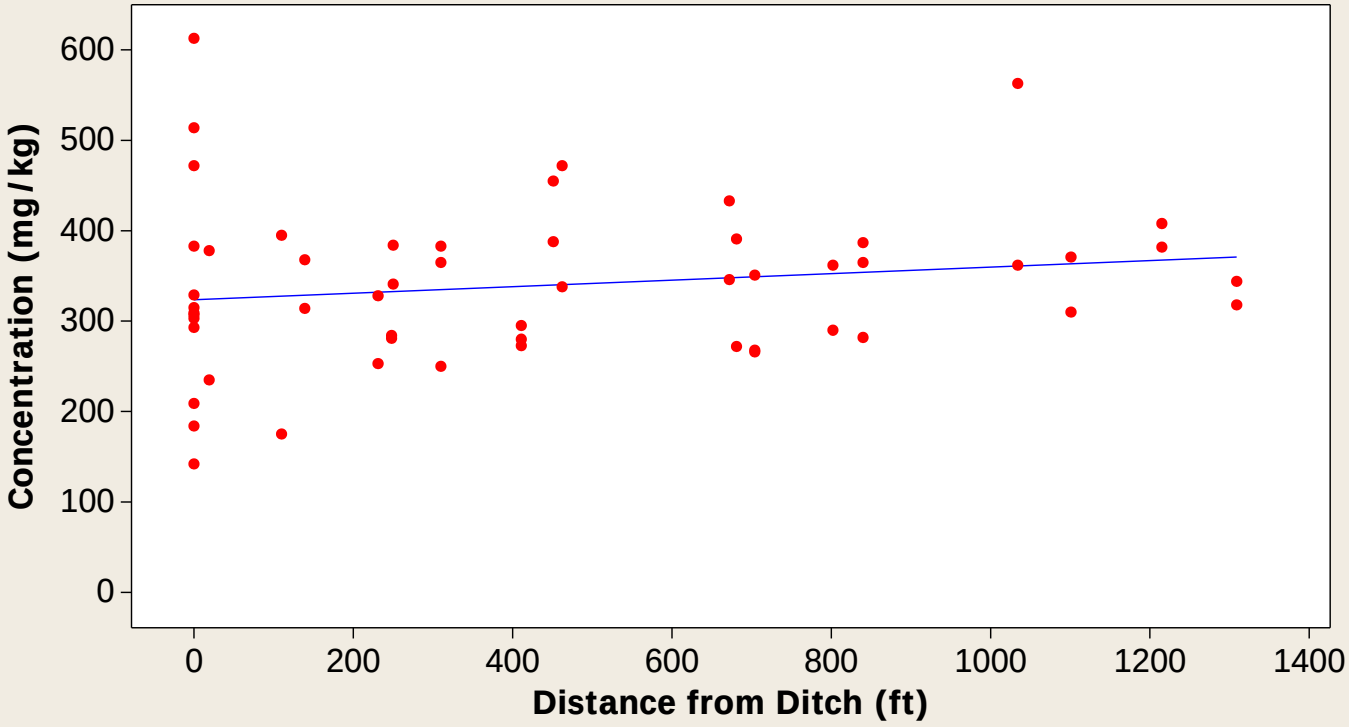
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only

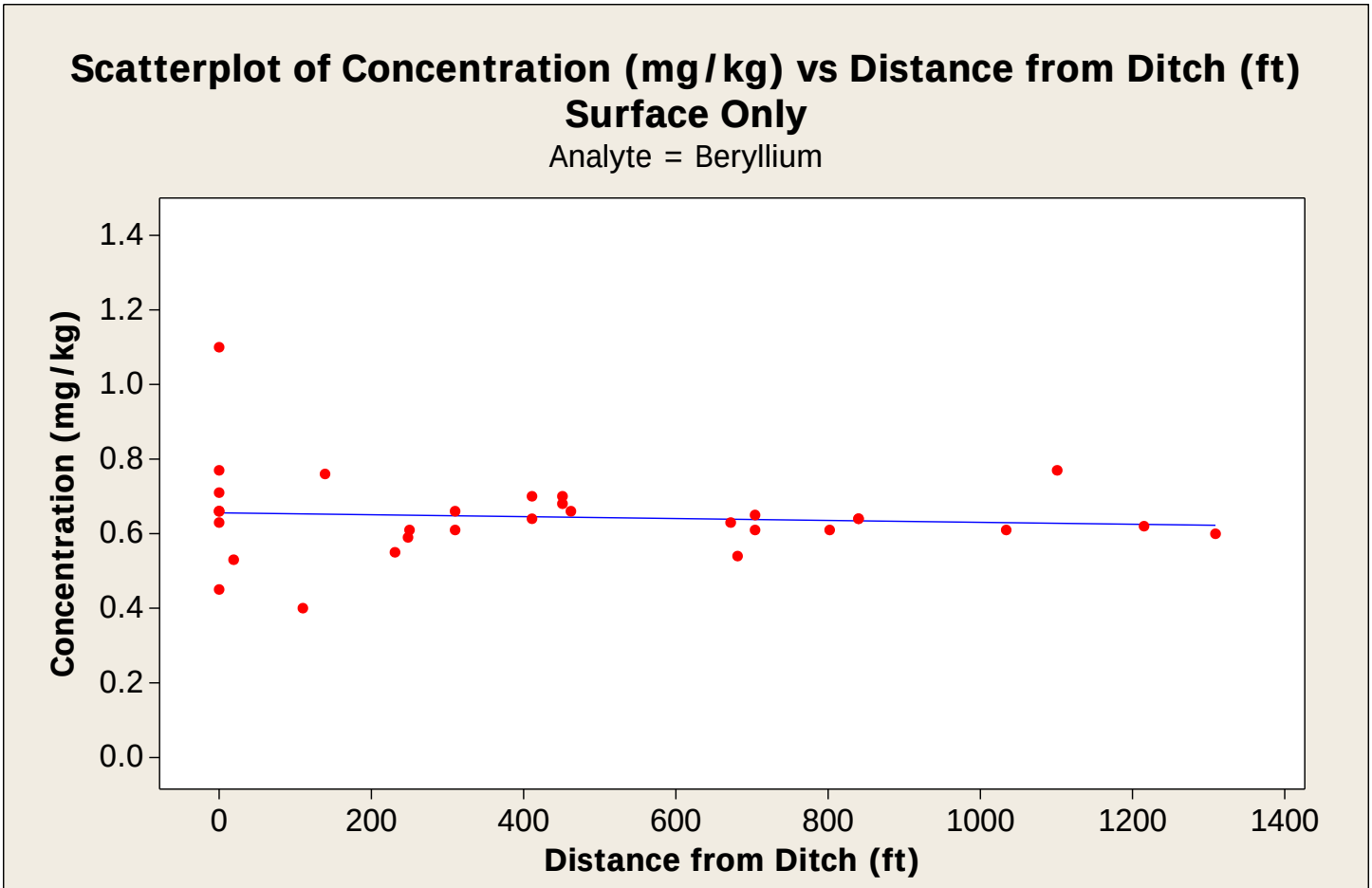
Analyte = Barium

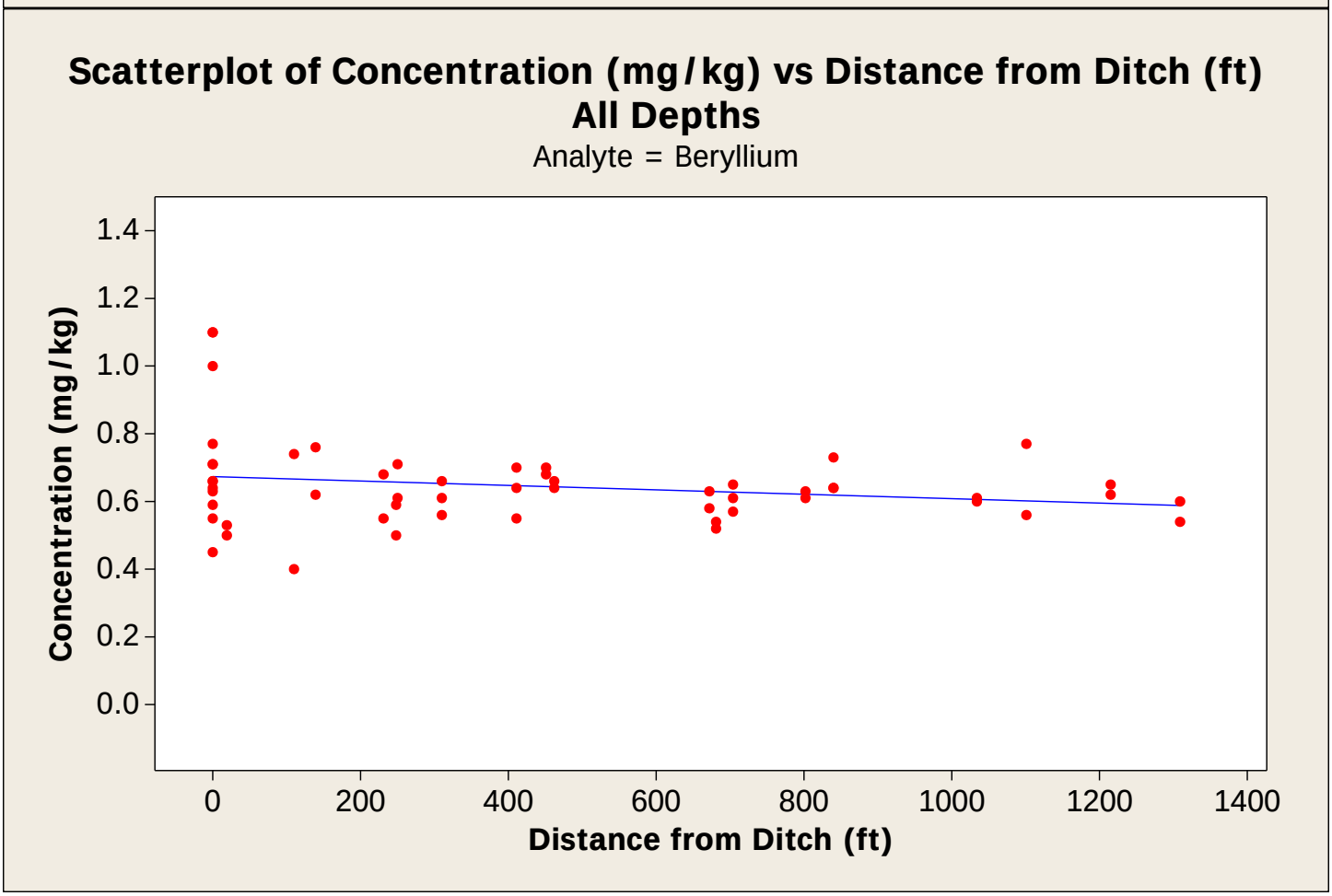


Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths

Analyte = Barium

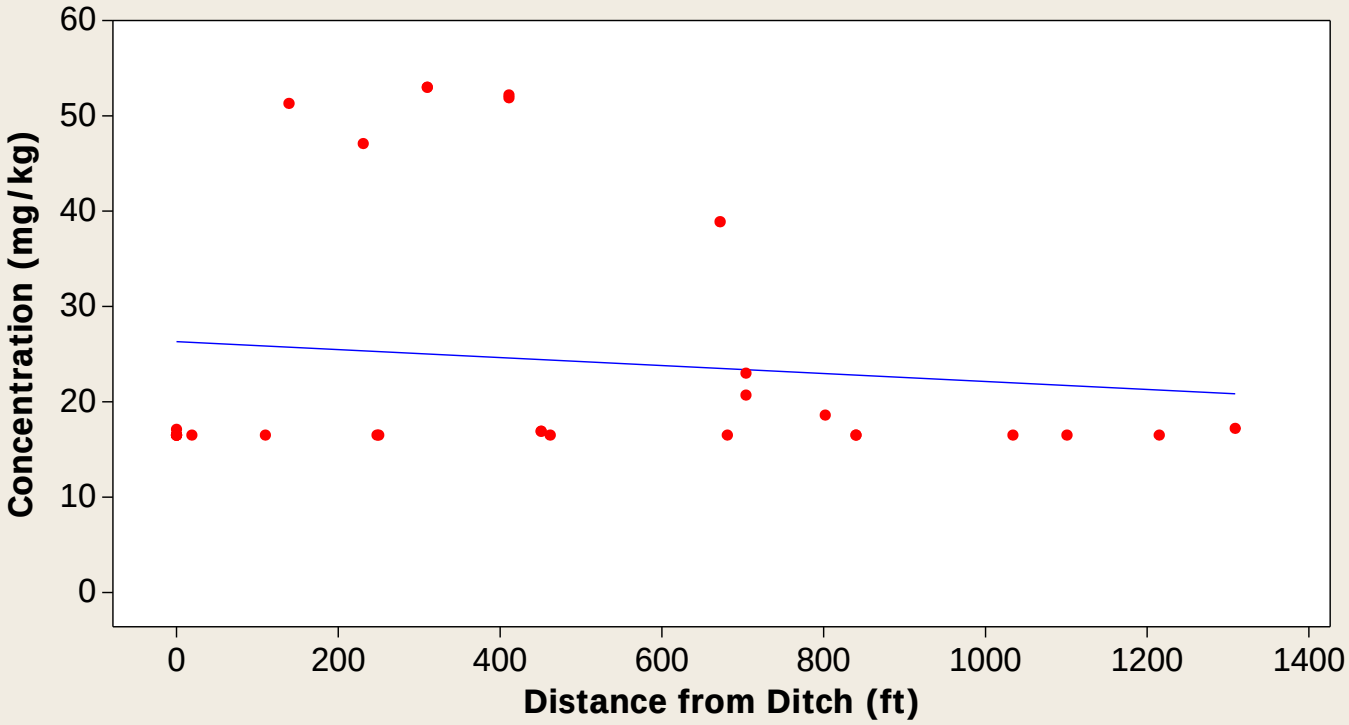



Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only
Analyte = Beryllium
Concentration (mg/kg)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)


Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths
Analyte = Beryllium
Concentration (mg/kg)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)

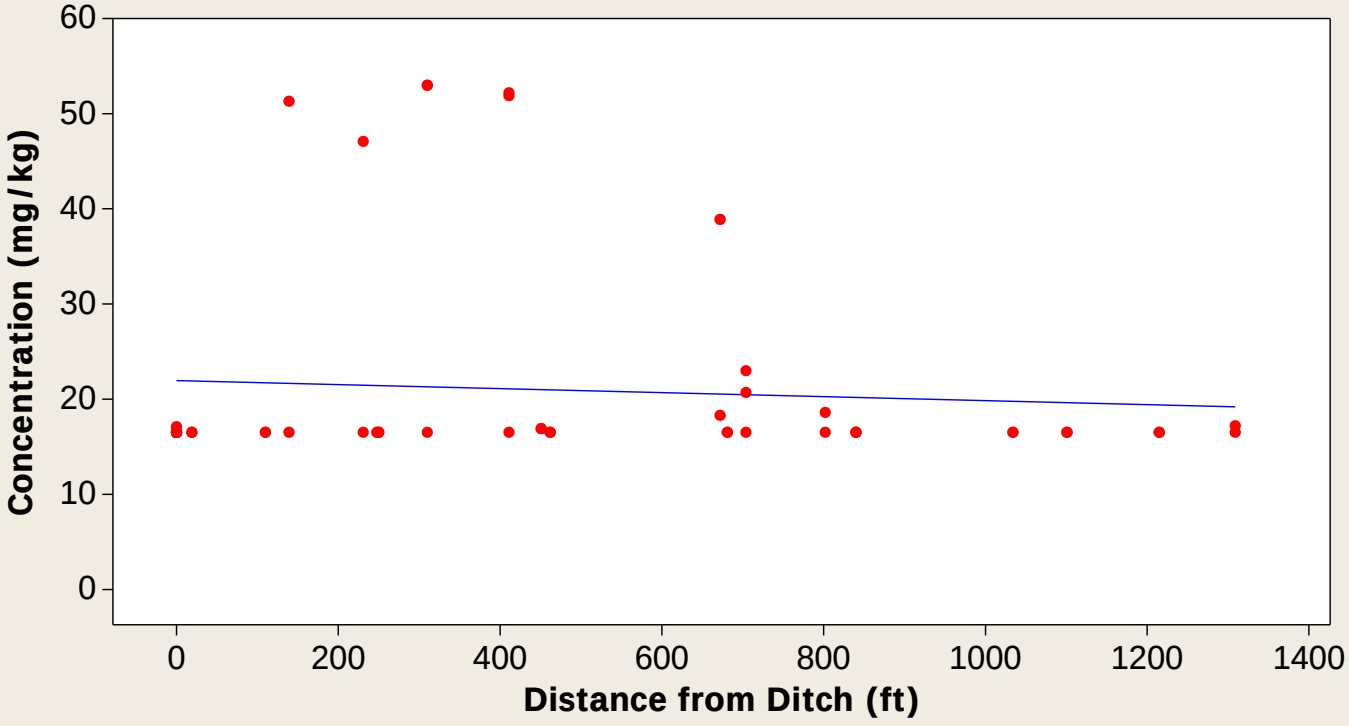
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only

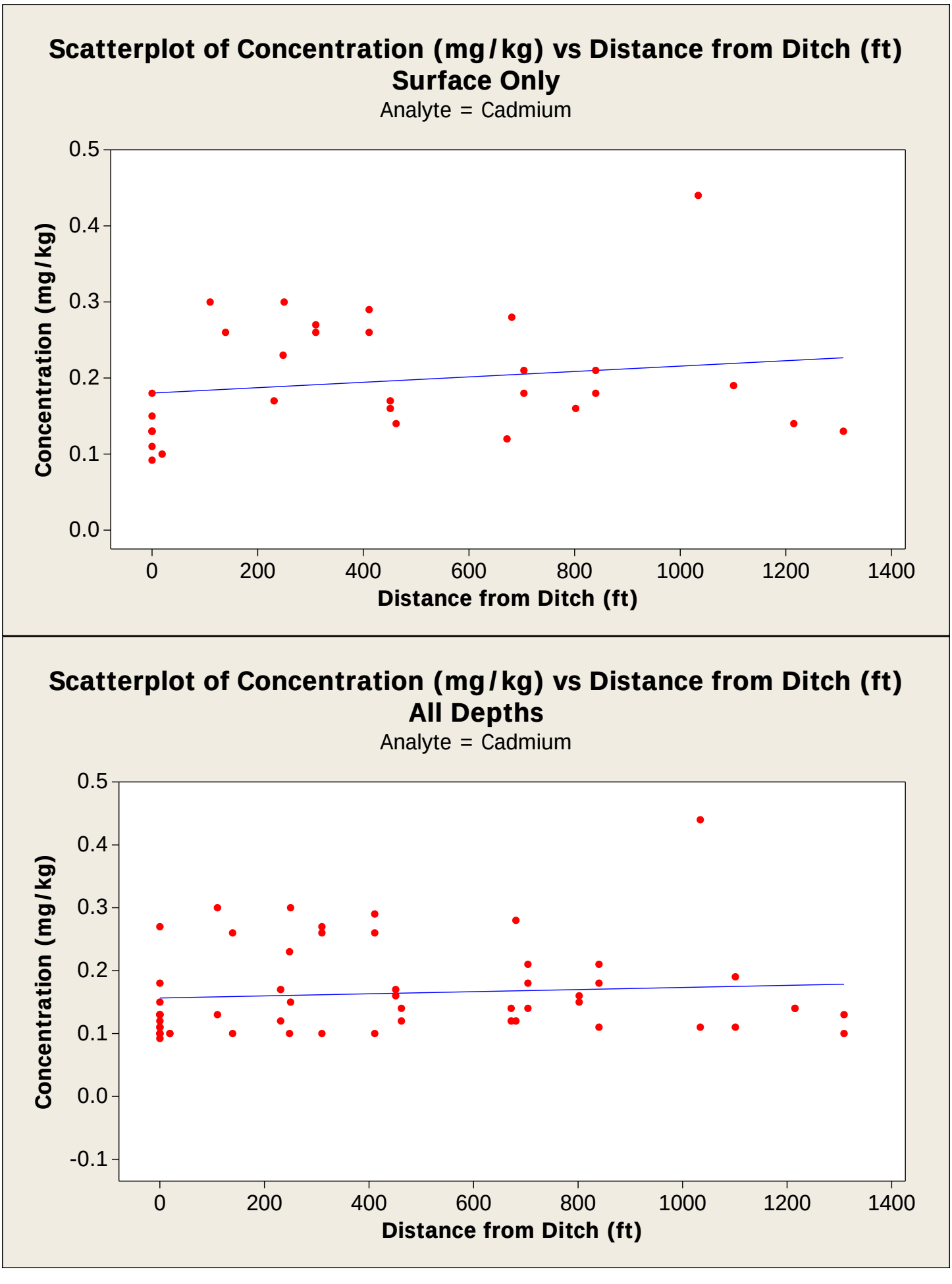
Analyte = Boron



Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths

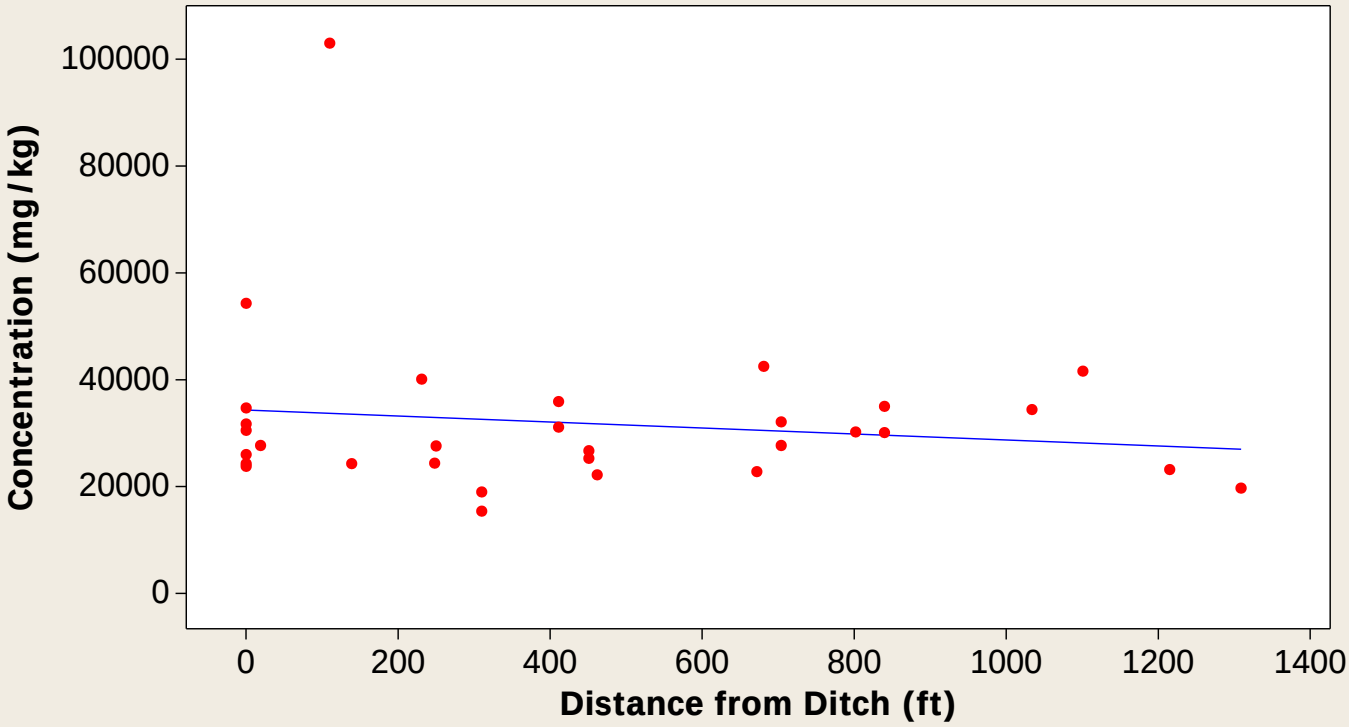
Analyte = Boron




Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only
Analyte = Cadmium
Concentration (mg/kg)
0.5
0.4
0.3
0.2
0.1
0.0
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths
Analyte = Cadmium
Concentration (mg/kg)
0.5
0.4
0.3
0.2
0.1
0.0
-0.1
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)

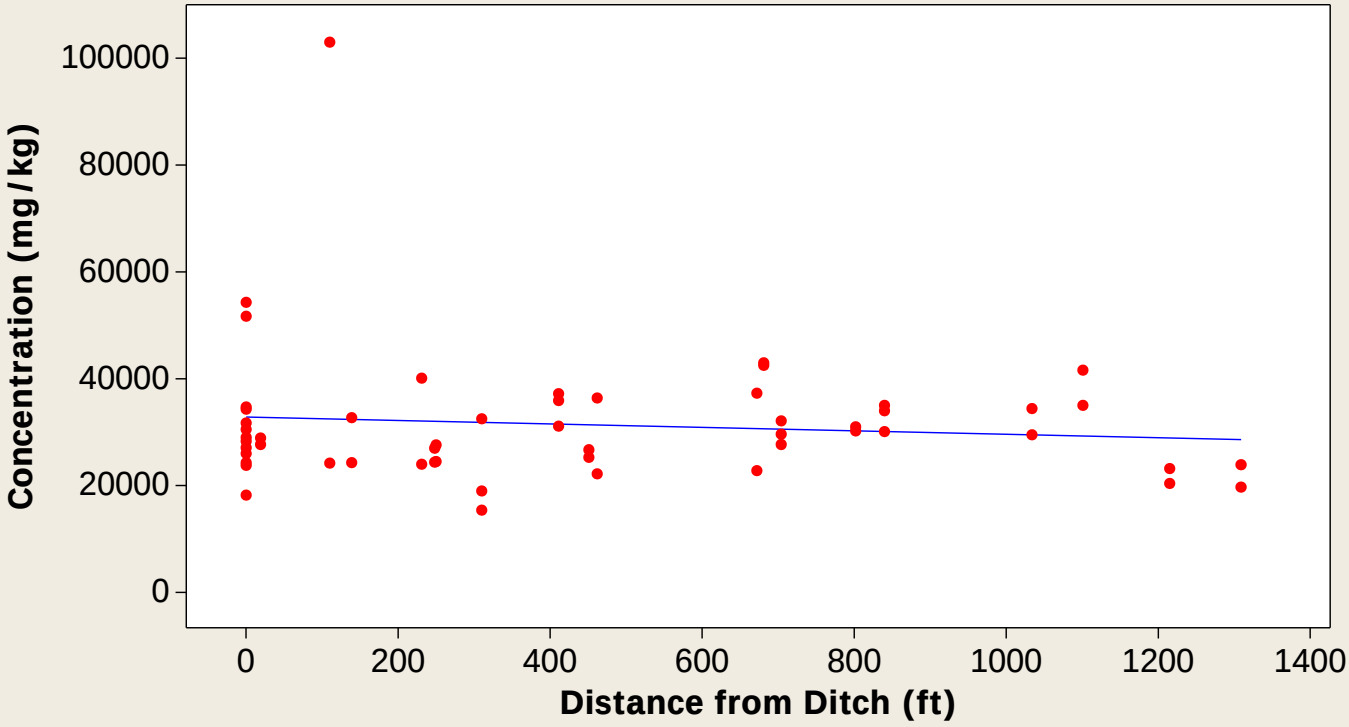
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only

Analyte = Calcium



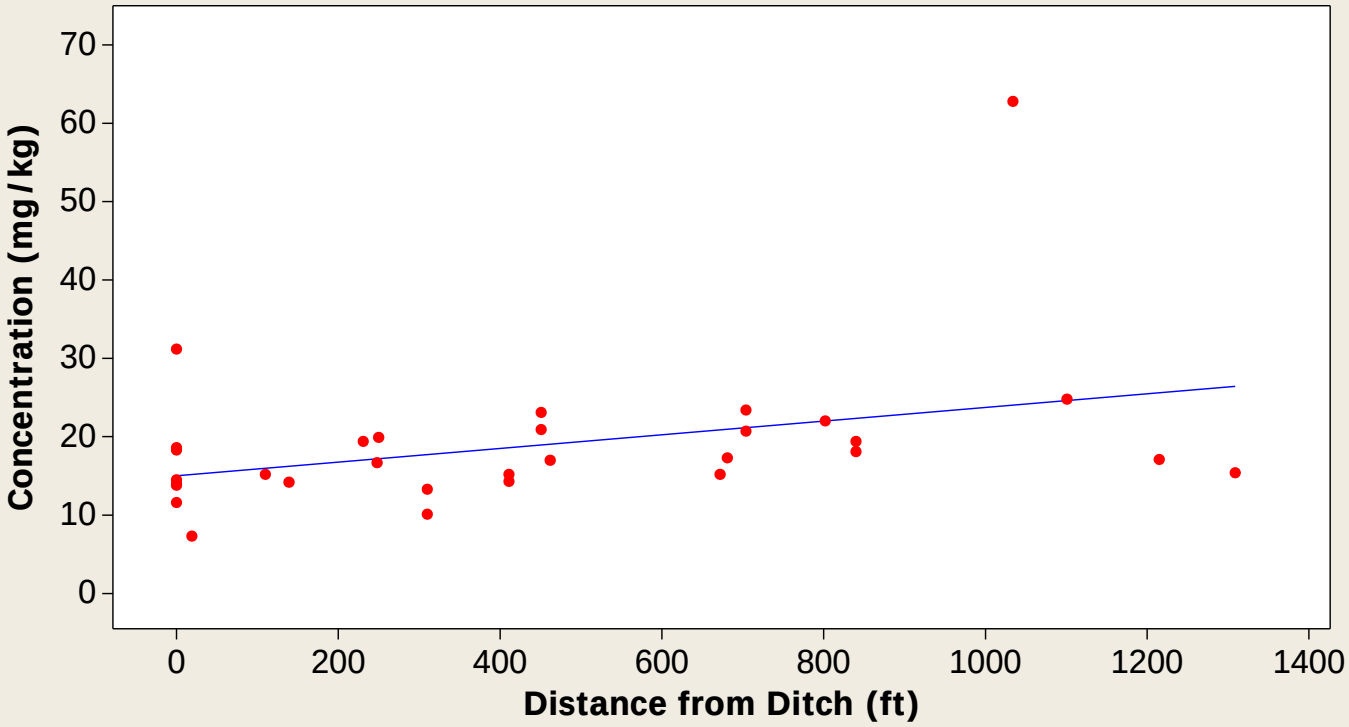
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths

Analyte = Calcium



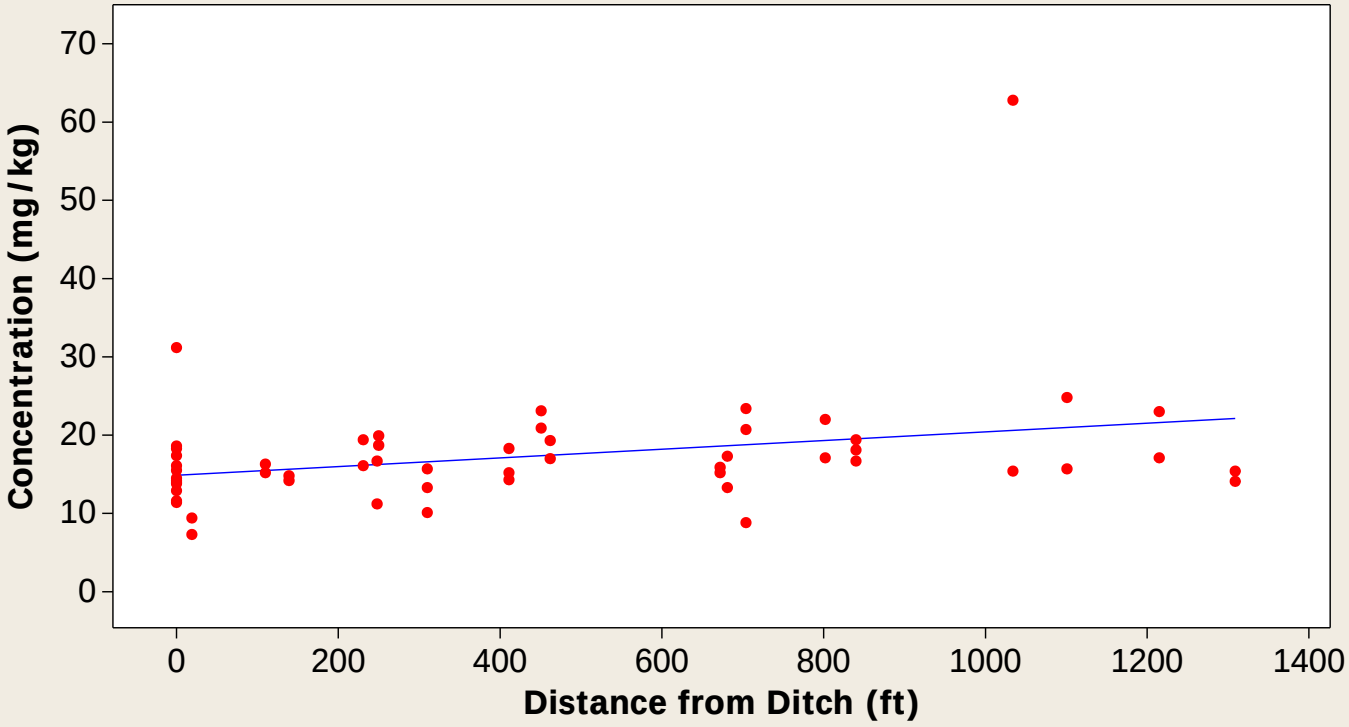
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only

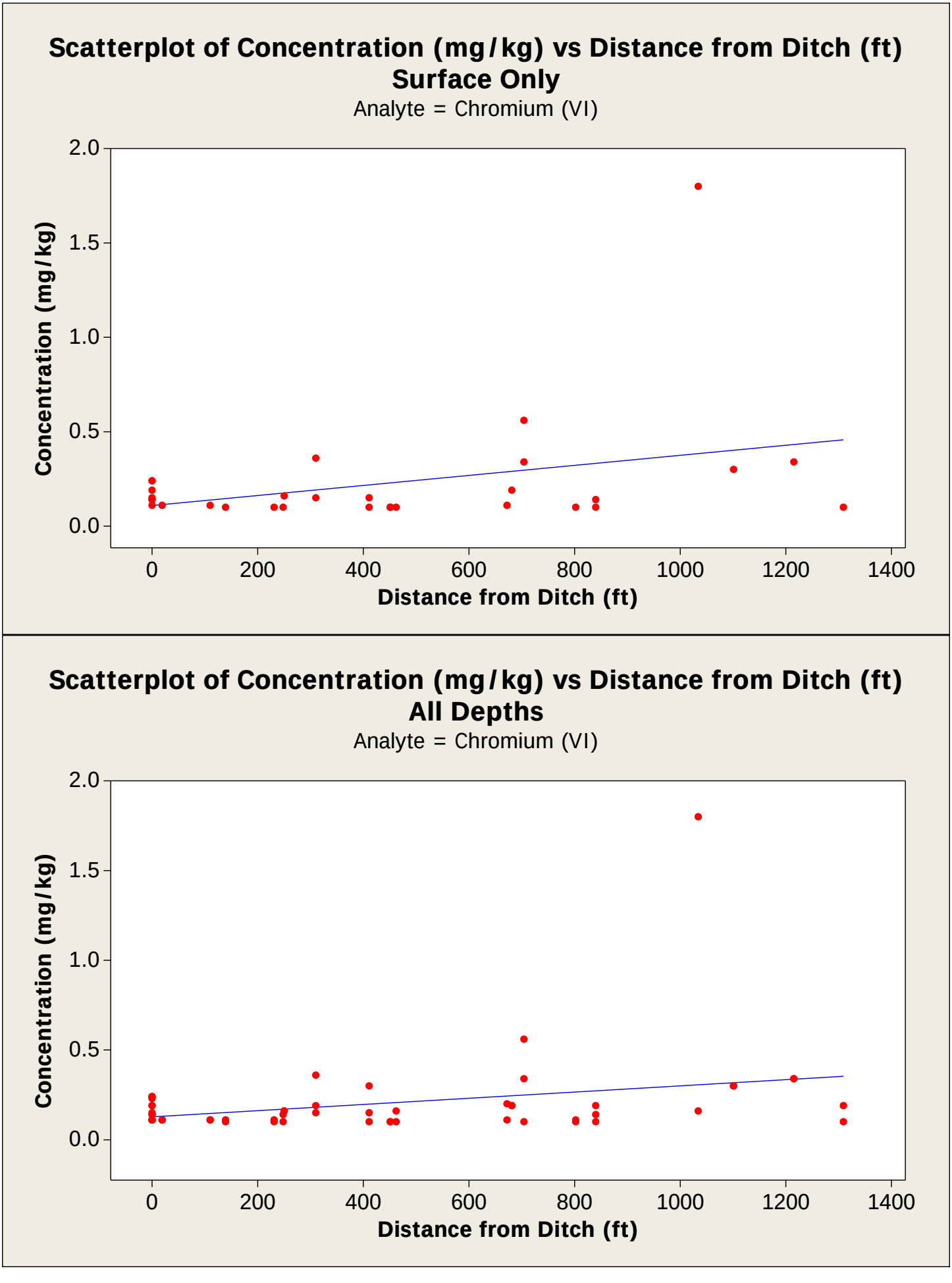
Analyte = Chromium

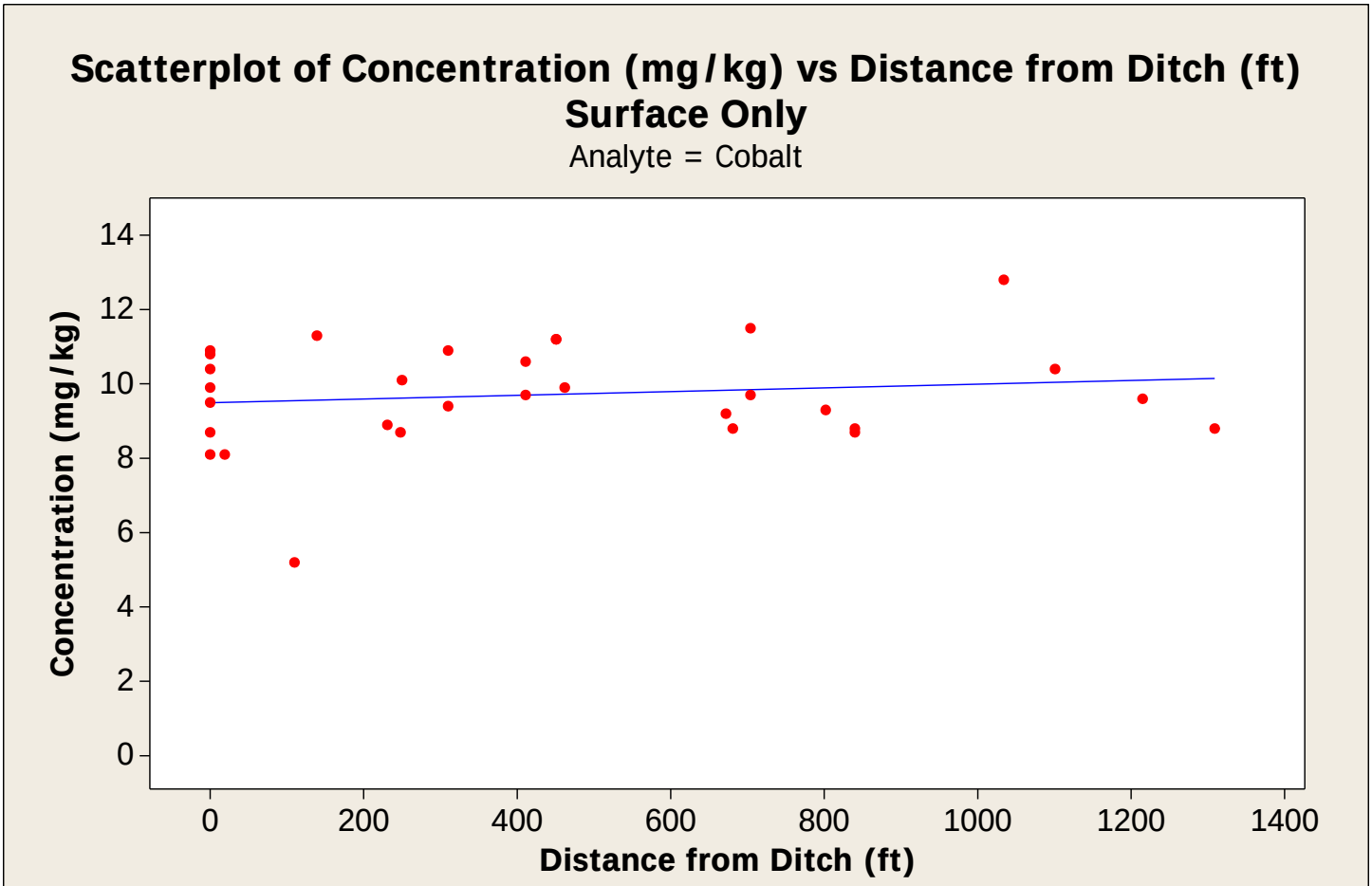


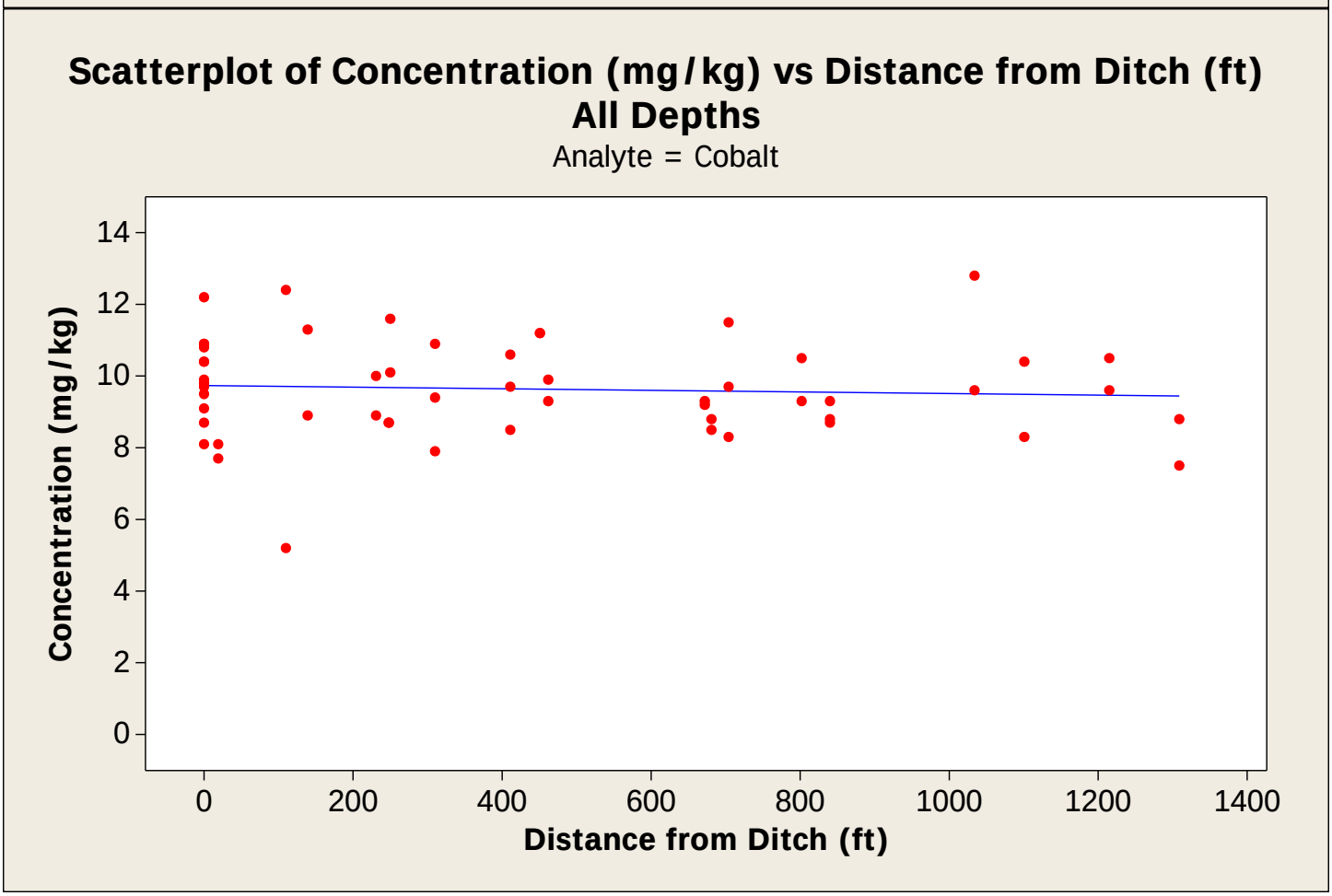
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths

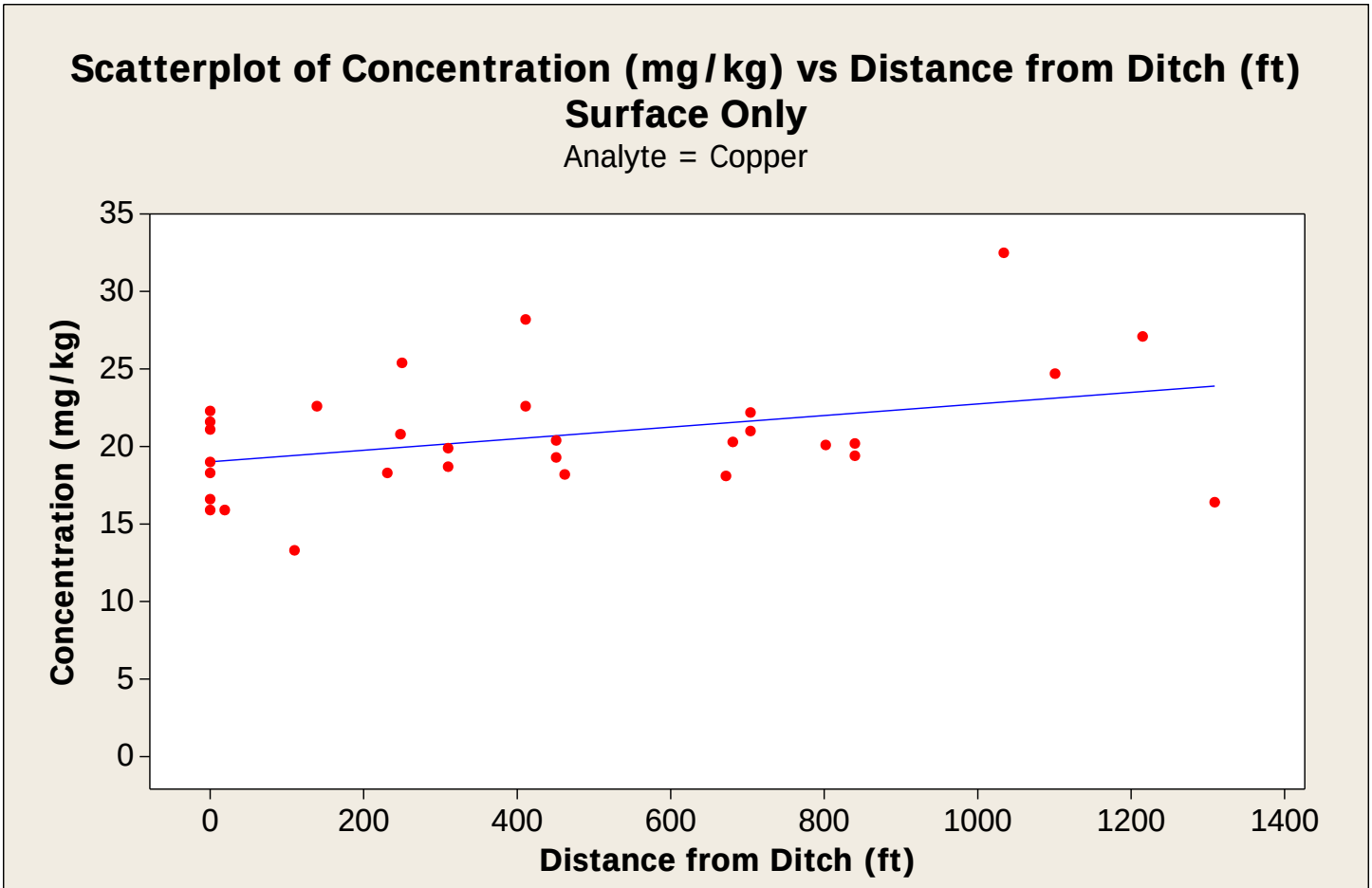
Analyte = Chromium

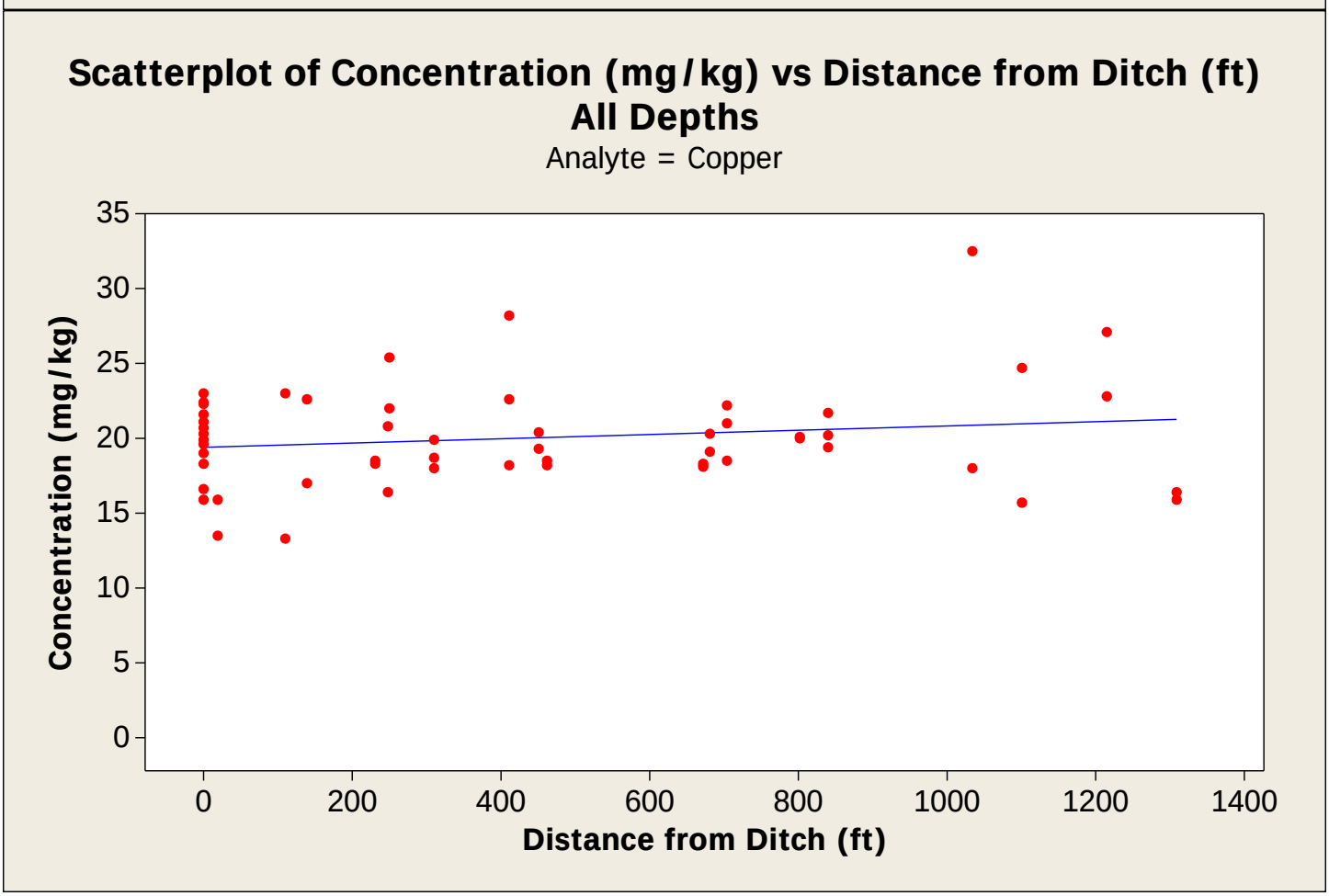


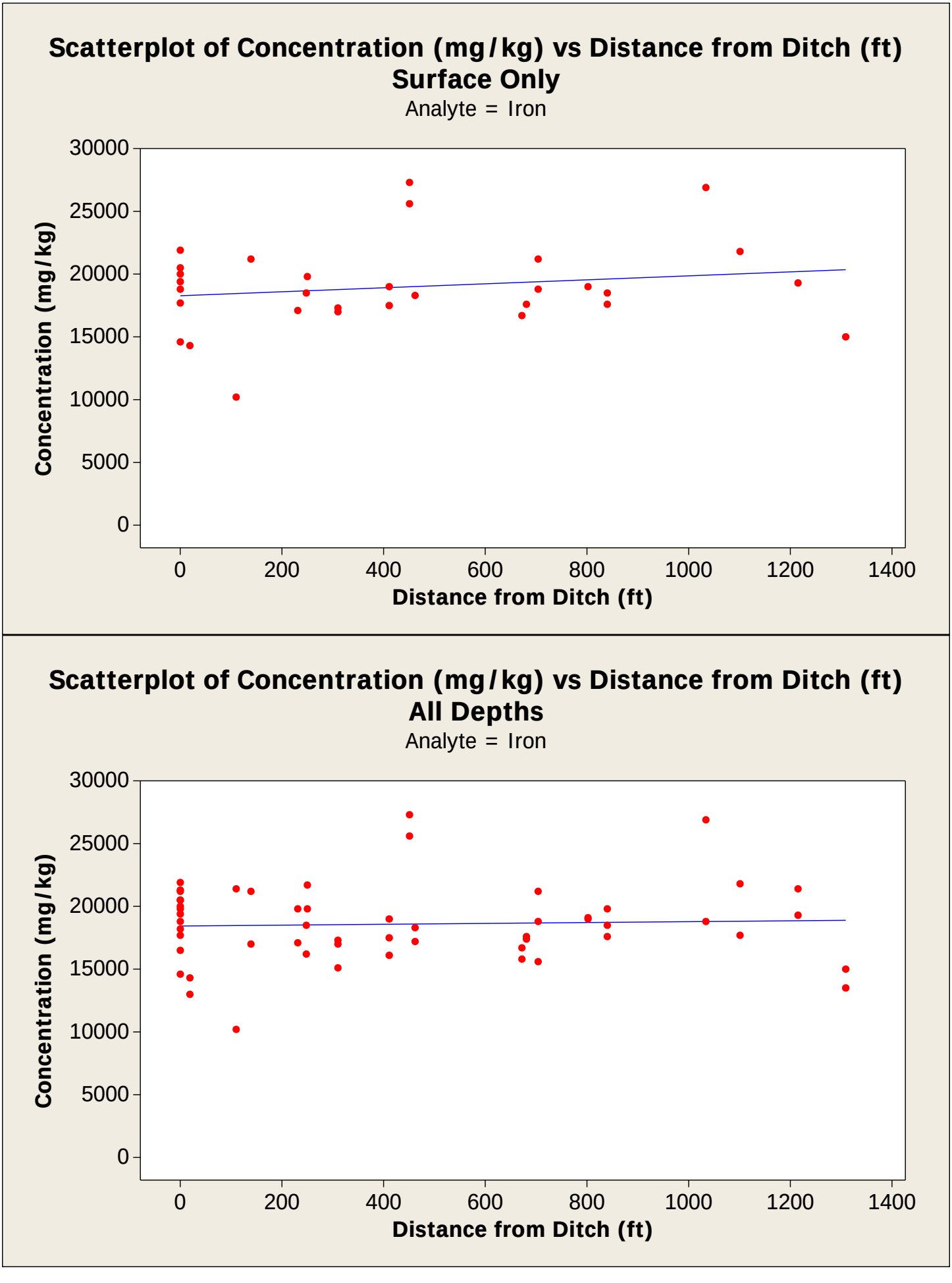

Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only
Analyte = Chromium (VI)
Concentration (mg/kg)
2.0
1.5
1.0
0.5
0.0
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths
Analyte = Chromium (VI)
Concentration (mg/kg)
2.0
1.5
1.0
0.5
0.0
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)

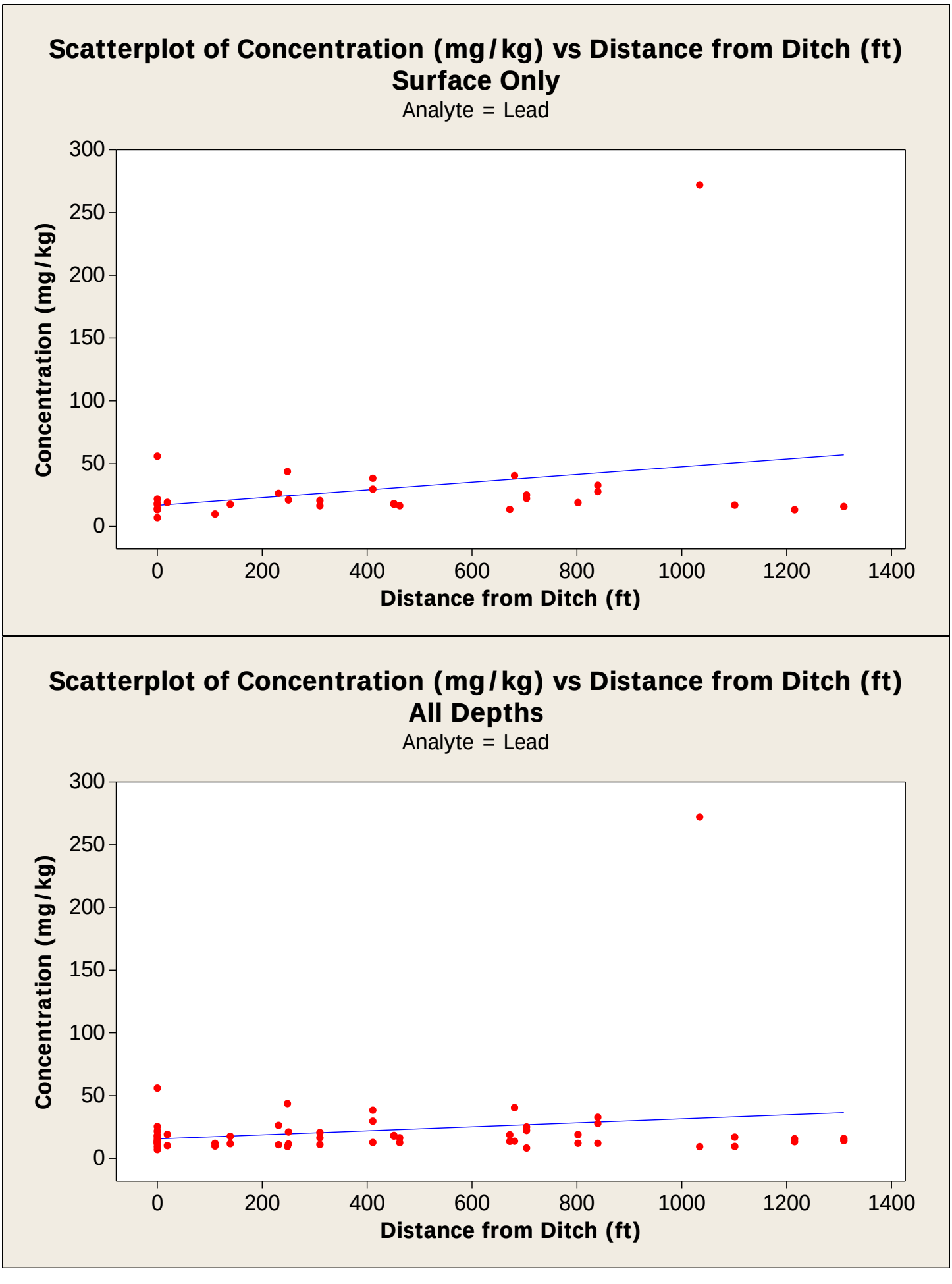

Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only
Analyte = Cobalt
Concentration (mg/kg)
0
2
4
6
8
10
12
14
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)

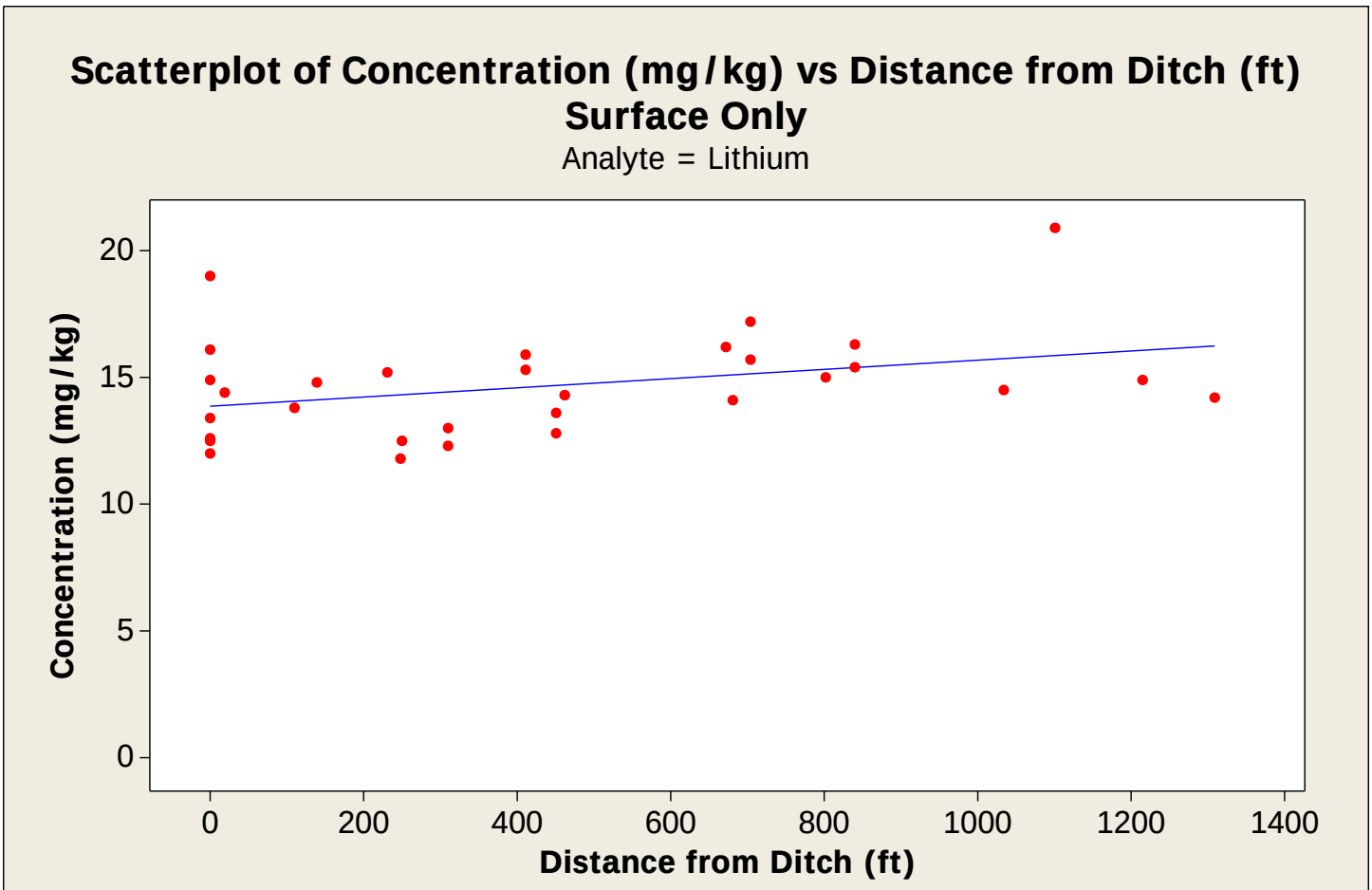

Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths
Analyte = Cobalt
Concentration (mg/kg)
0
2
4
6
8
10
12
14
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)

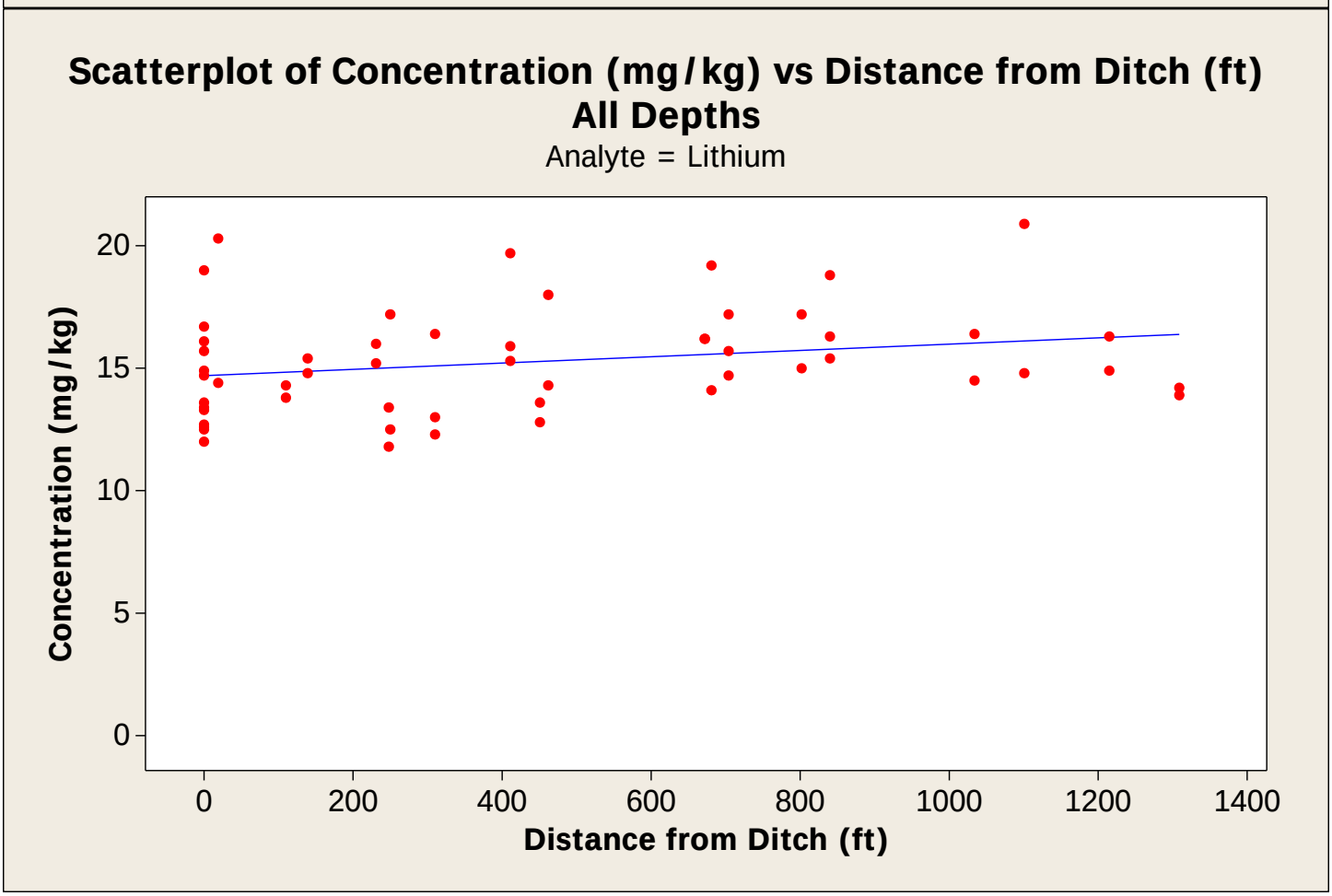

Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only
Analyte = Copper
Concentration (mg/kg)
0
5
10
15
20
25
30
35
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)

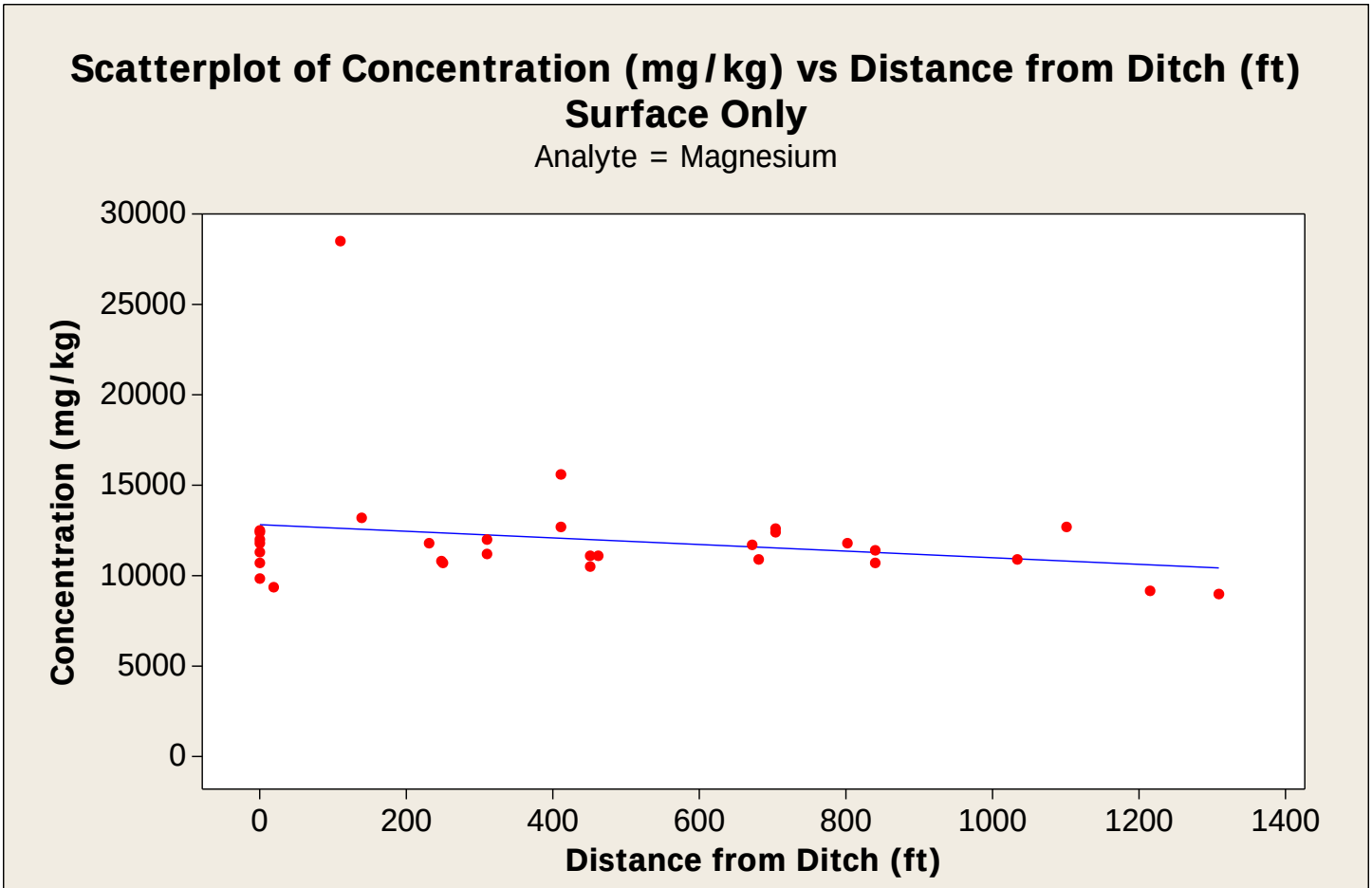

Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths
Analyte = Copper
Concentration (mg/kg)
0
5
10
15
20
25
30
35
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)

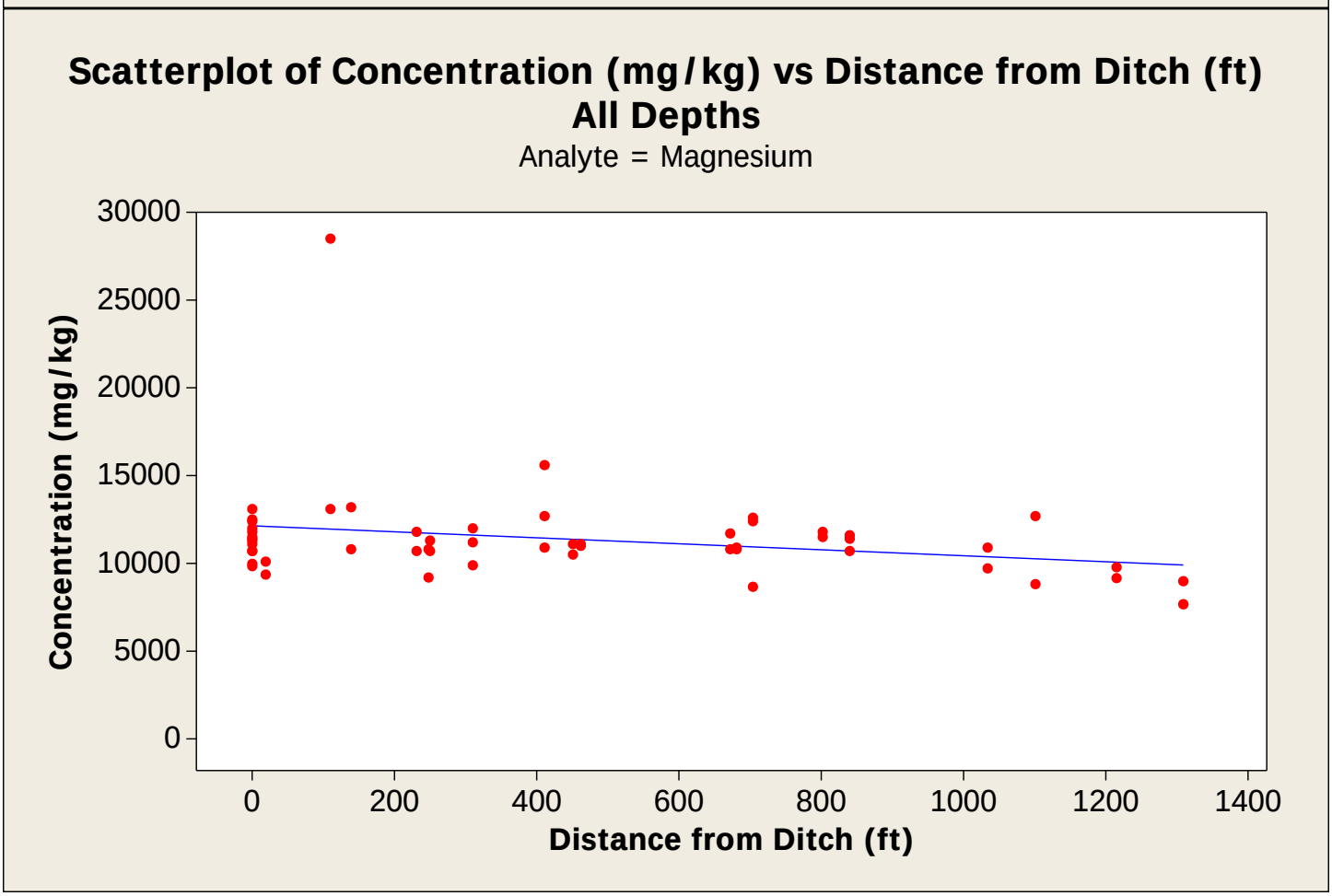

Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only
Analyte = Iron
Concentration (mg/kg)
30000
25000
20000
15000
10000
5000
0
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths
Analyte = Iron
Concentration (mg/kg)
30000
25000
20000
15000
10000
5000
0
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)

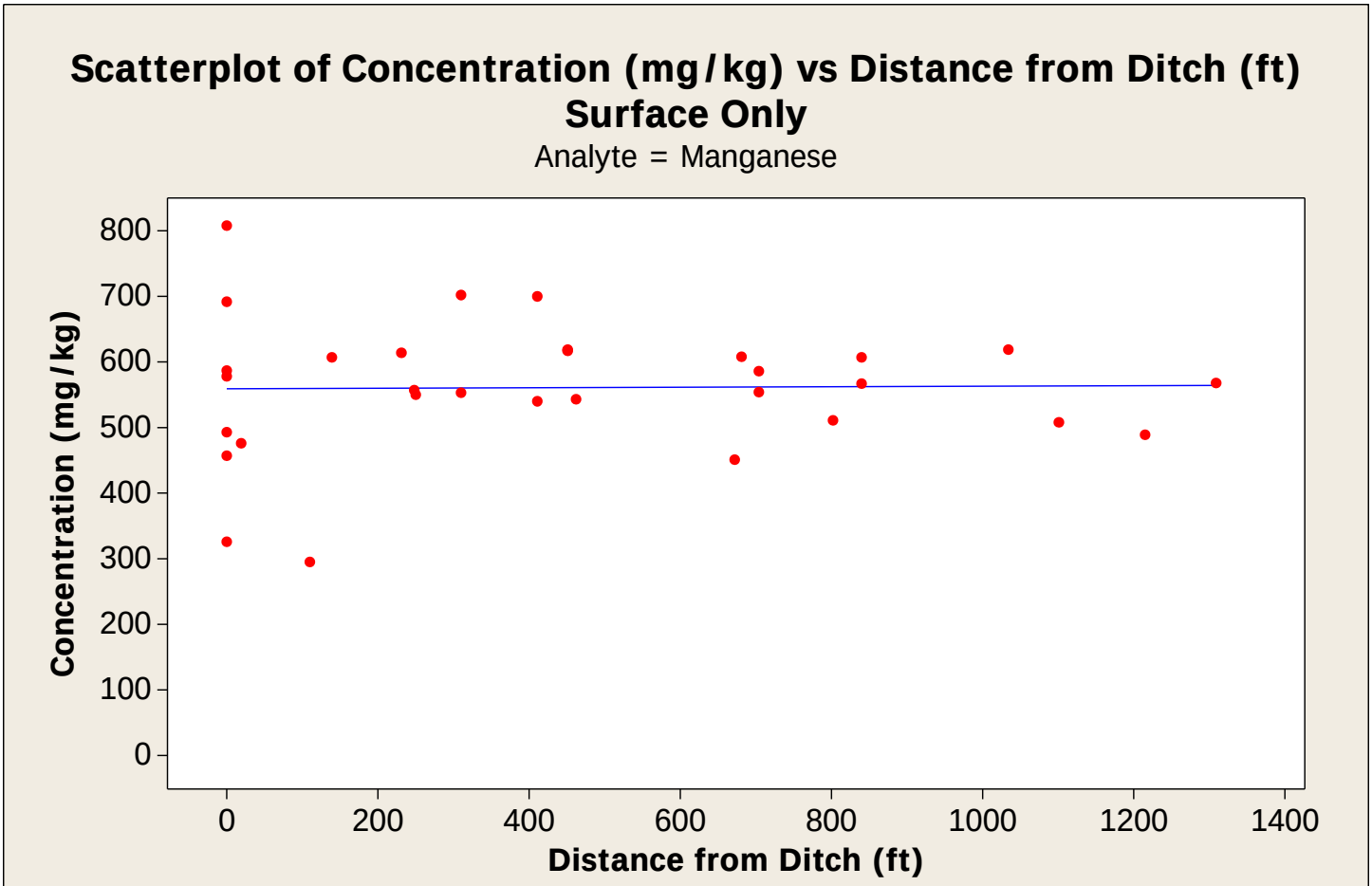

Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only
Analyte = Lead
Concentration (mg/kg)
300
250
200
150
100
50
0
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths
Analyte = Lead
Concentration (mg/kg)
300
250
200
150
100
50
0
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)

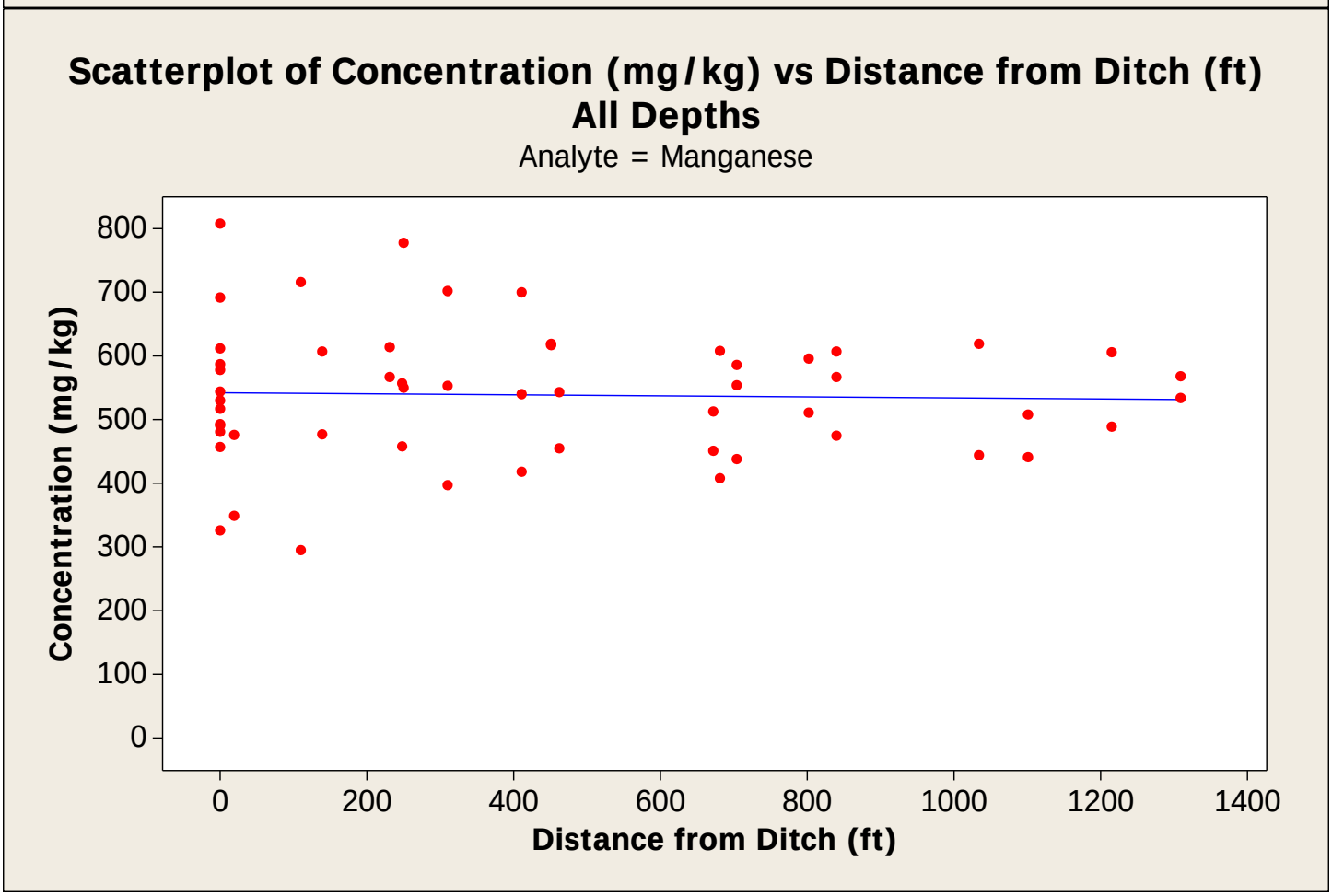

Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only
Analyte = Lithium
Concentration (mg/kg)
0
5
10
15
20
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)


Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths
Analyte = Lithium
Concentration (mg/kg)
0
5
10
15
20
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)


Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only
Analyte = Magnesium
Concentration (mg/kg)
30000
25000
20000
15000
10000
5000
0
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)

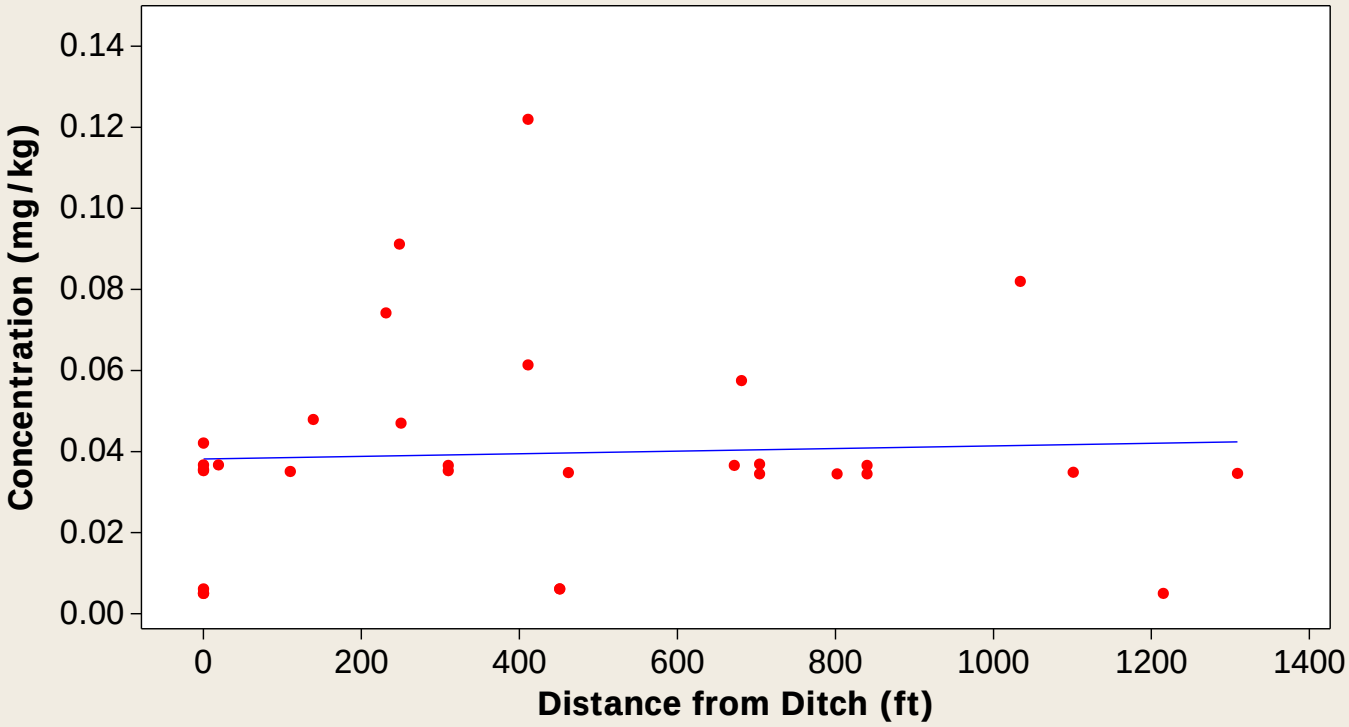

Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths
Analyte = Magnesium
Concentration (mg/kg)
30000
25000
20000
15000
10000
5000
0
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)


Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only
Analyte = Manganese
Concentration (mg/kg)
0
100
200
300
400
500
600
700
800
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)


Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths
Analyte = Manganese
Concentration (mg/kg)
0
100
200
300
400
500
600
700
800
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)

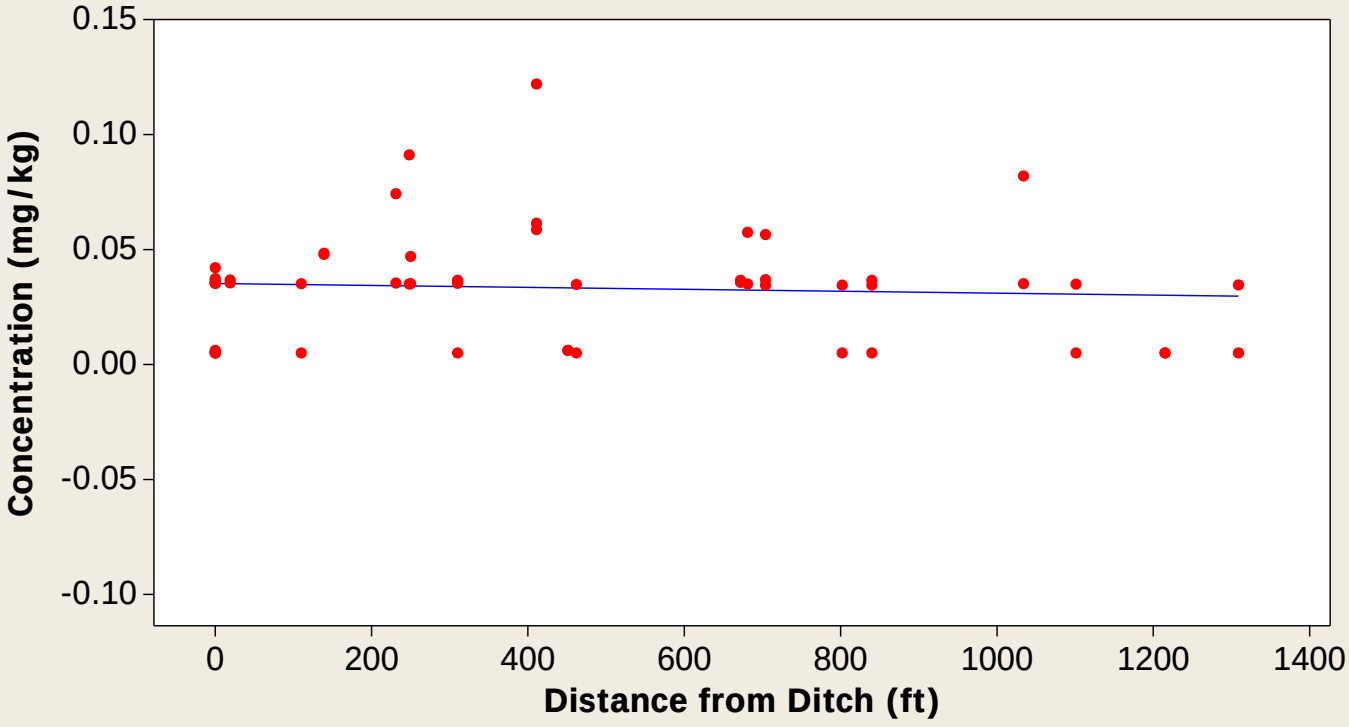
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only

Analyte = Mercury



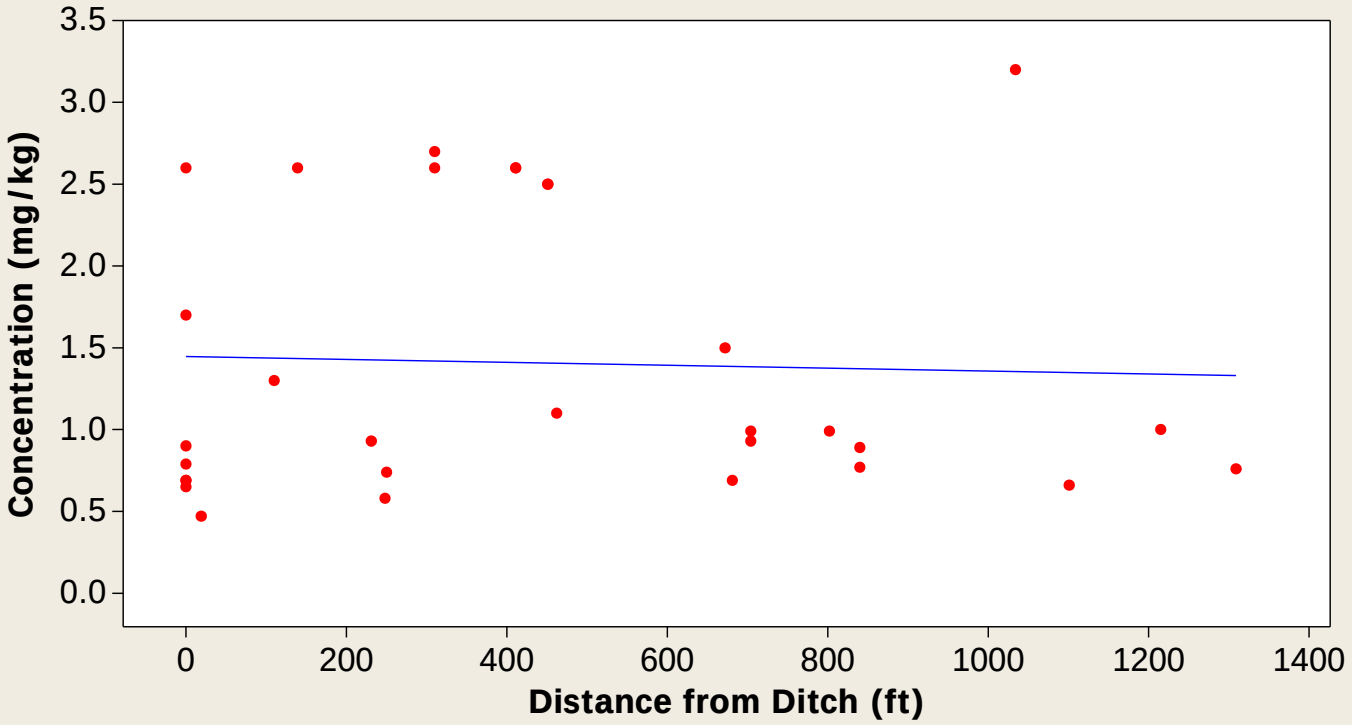
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths

Analyte = Mercury



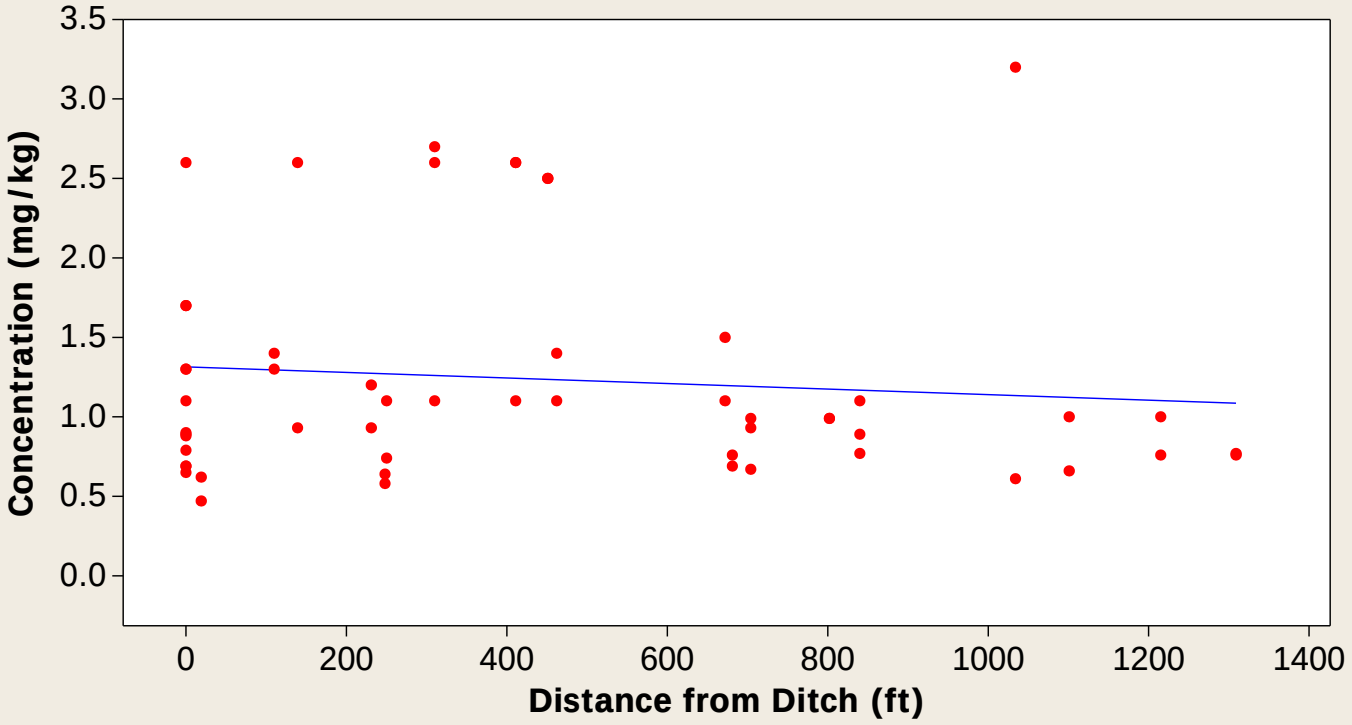
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only

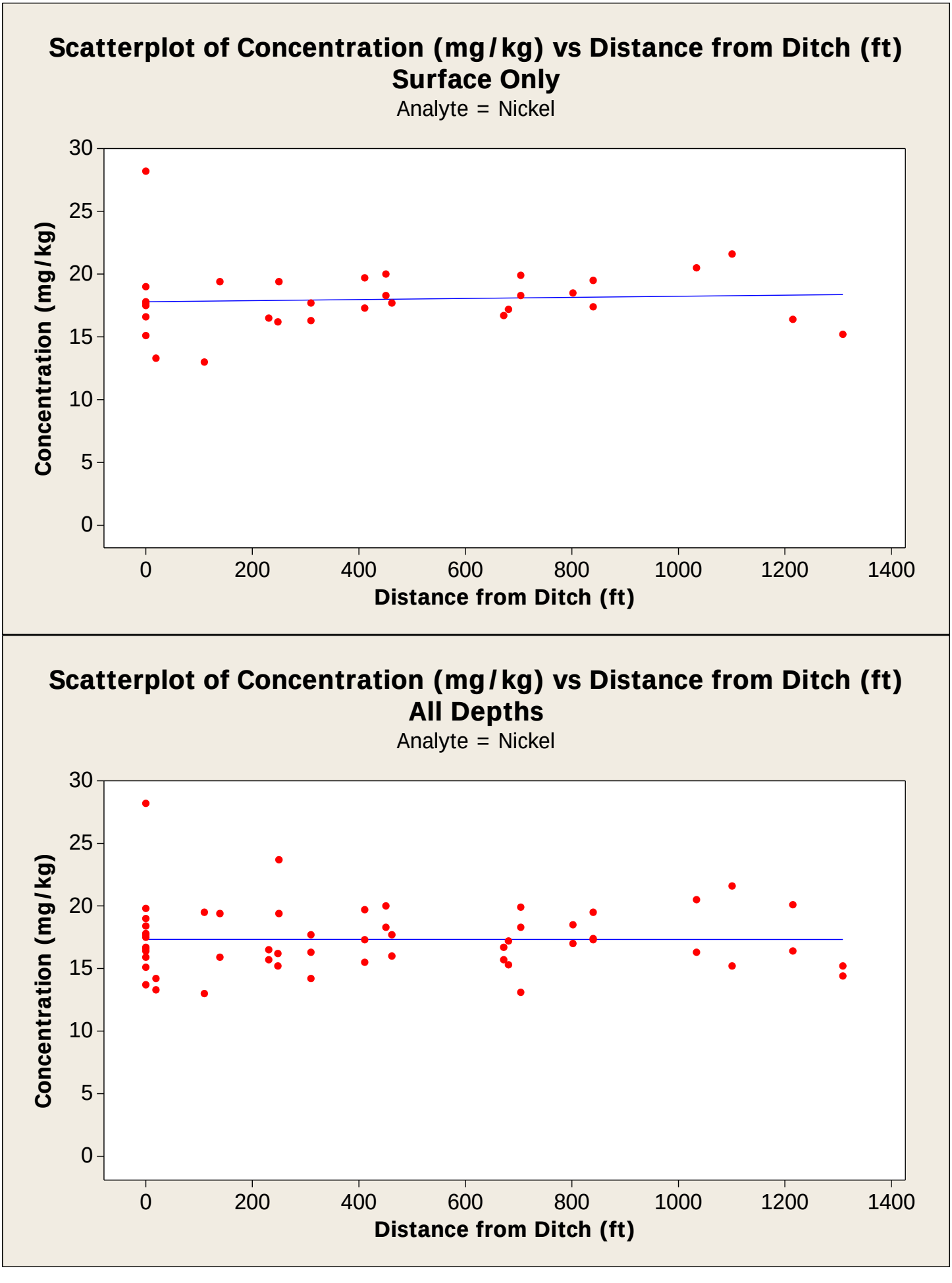
Analyte = Molybdenum



Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths

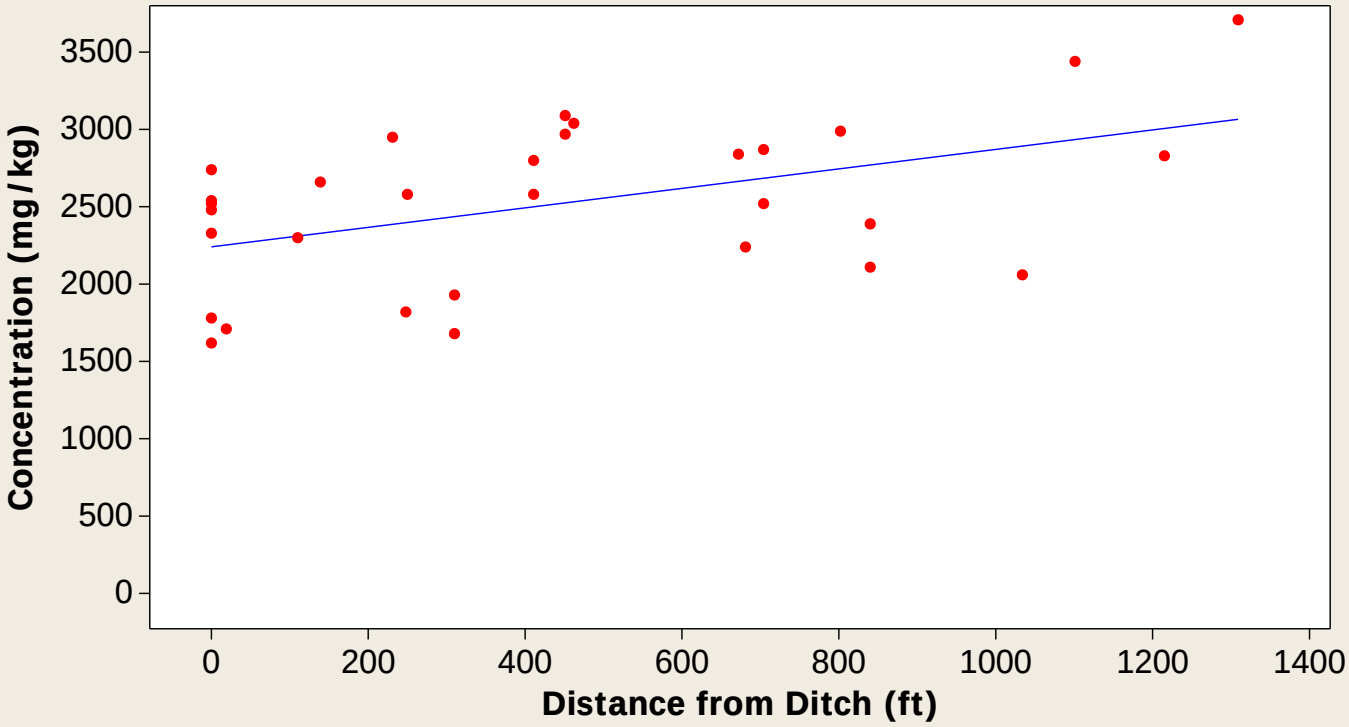
Analyte = Molybdenum




Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only
Analyte = Nickel
Concentration (mg/kg)
0
5
10
15
20
25
30
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths
Analyte = Nickel
Concentration (mg/kg)
0
5
10
15
20
25
30
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)

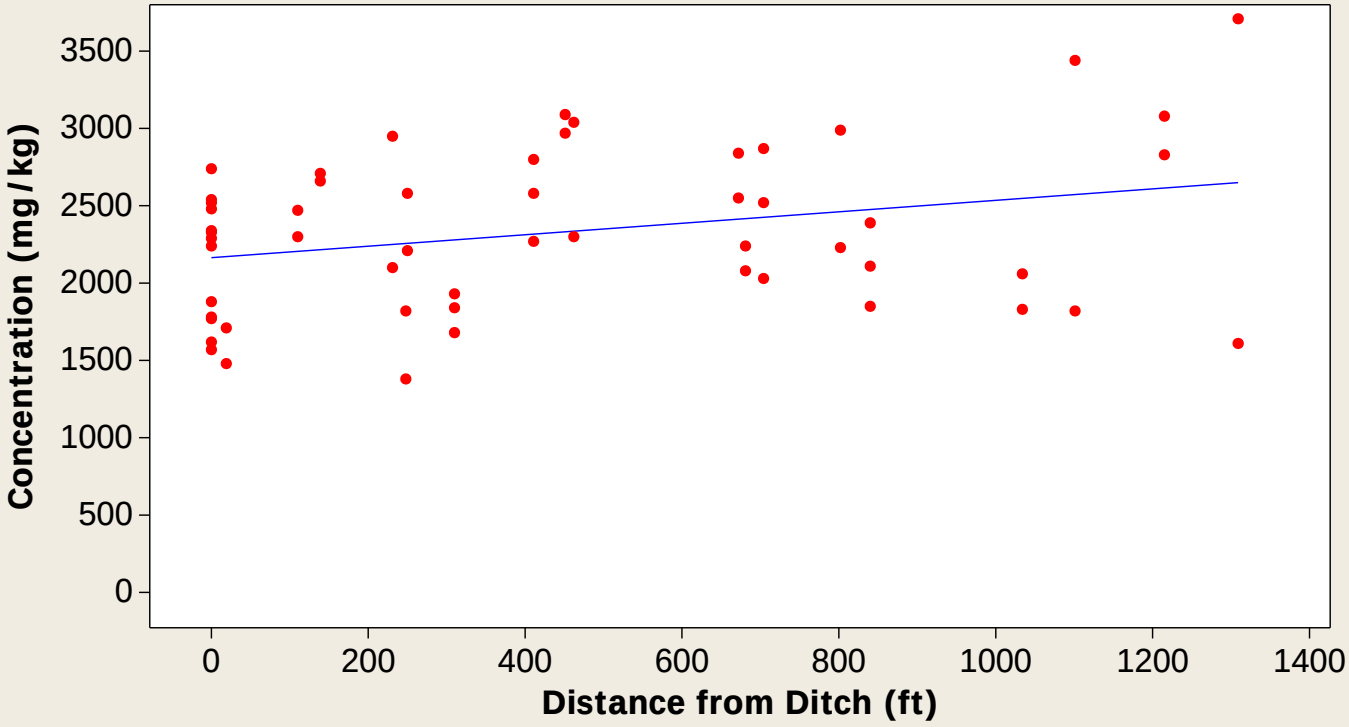
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only

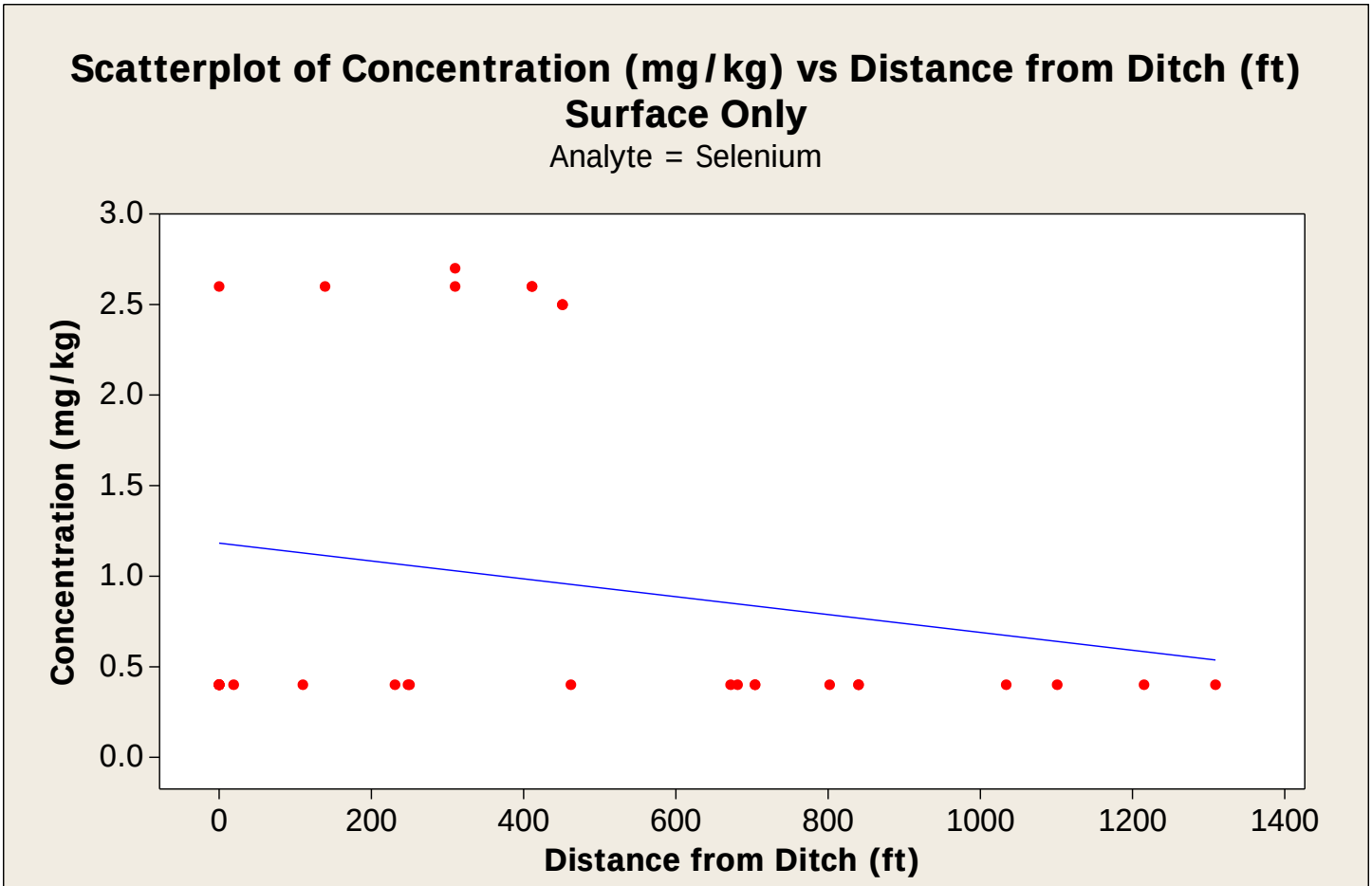
Analyte = Potassium

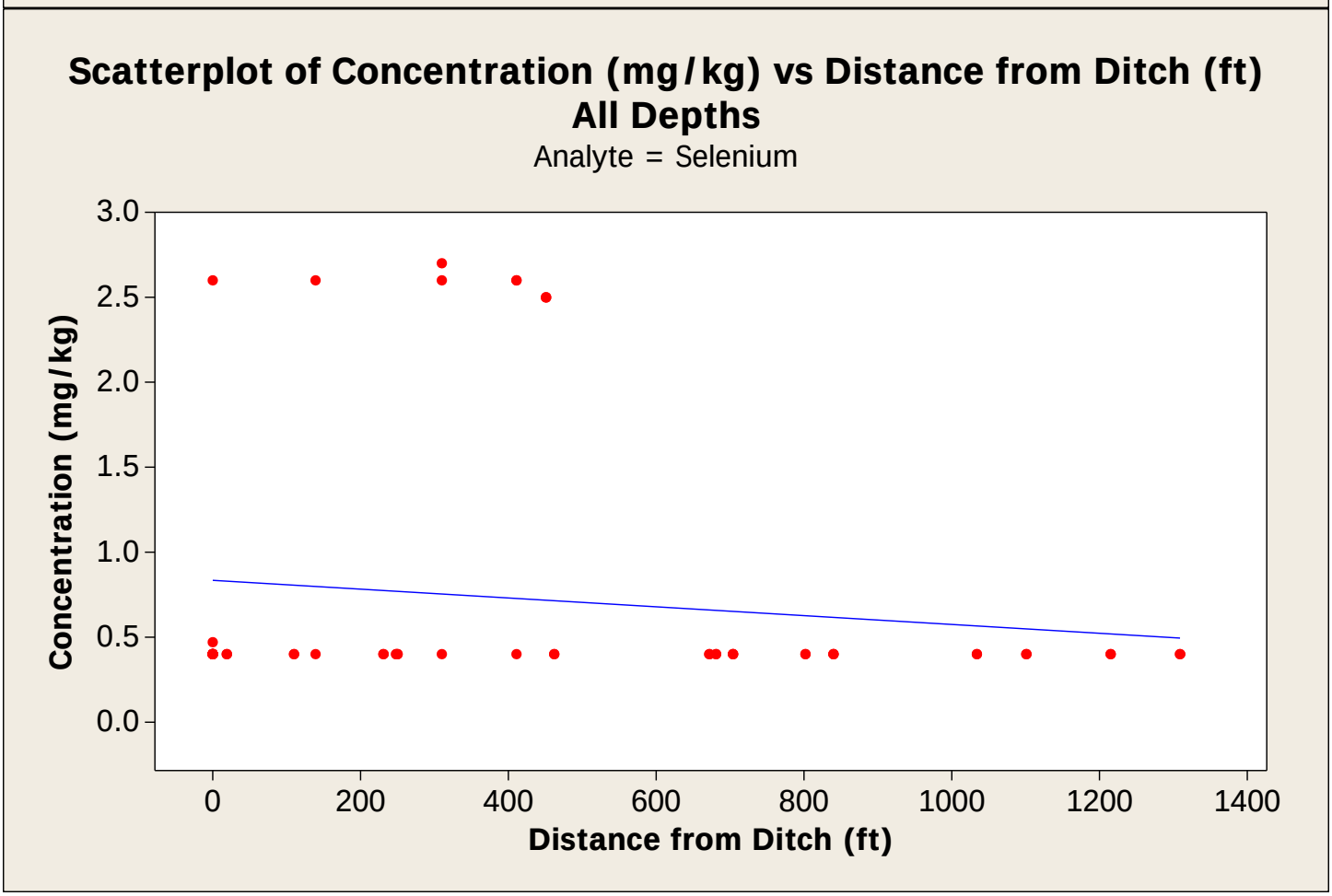


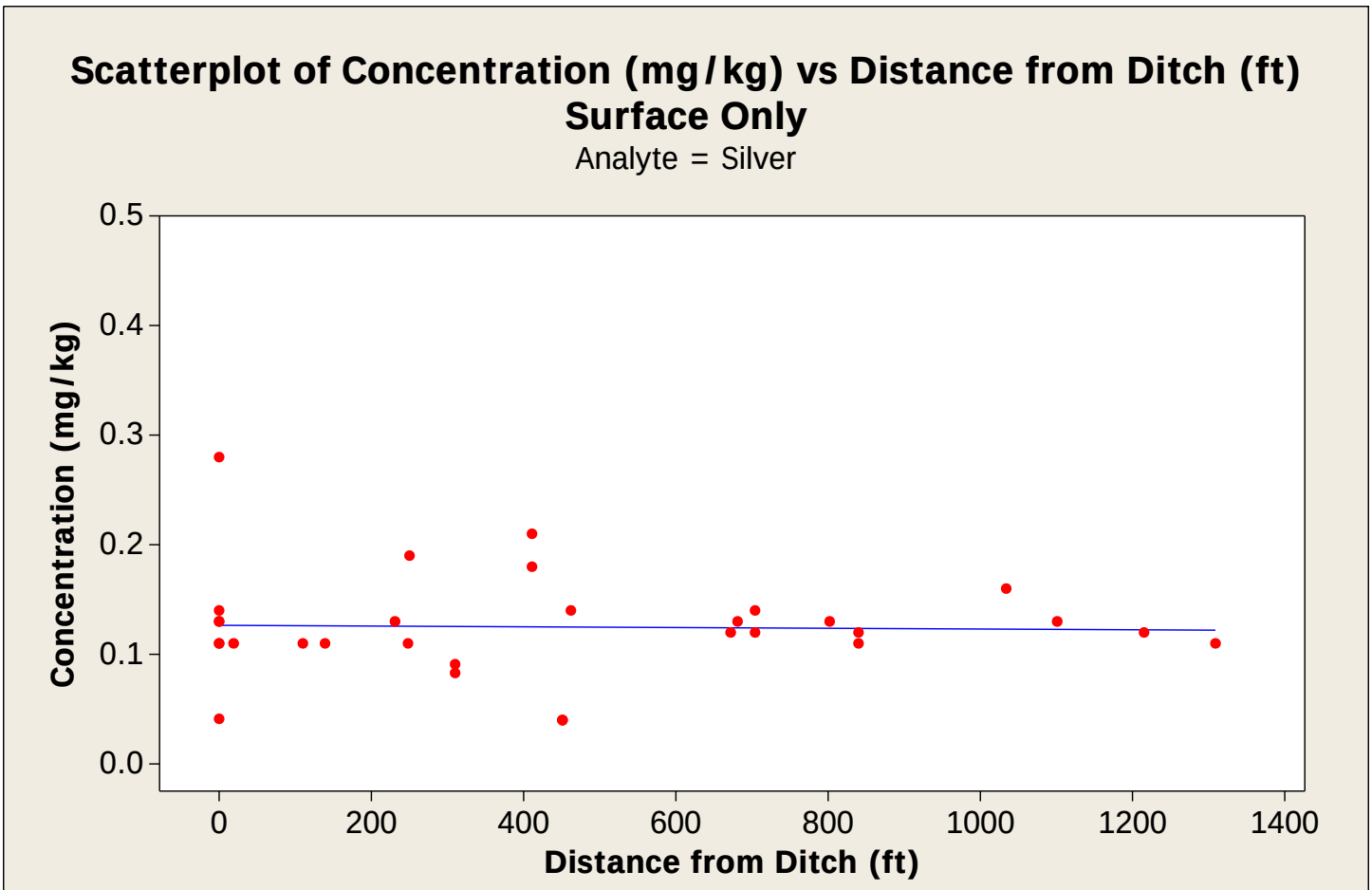
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths

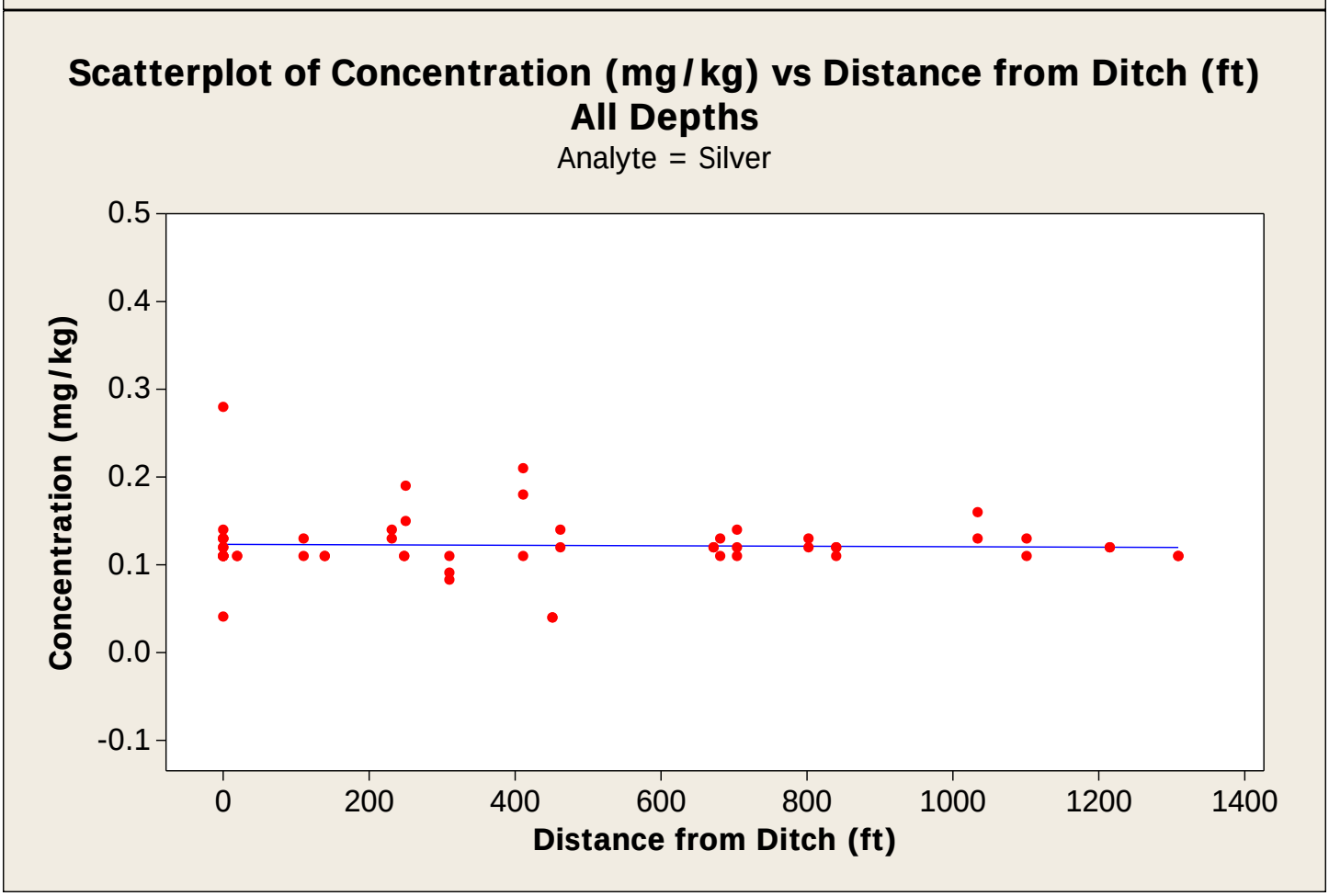
Analyte = Potassium

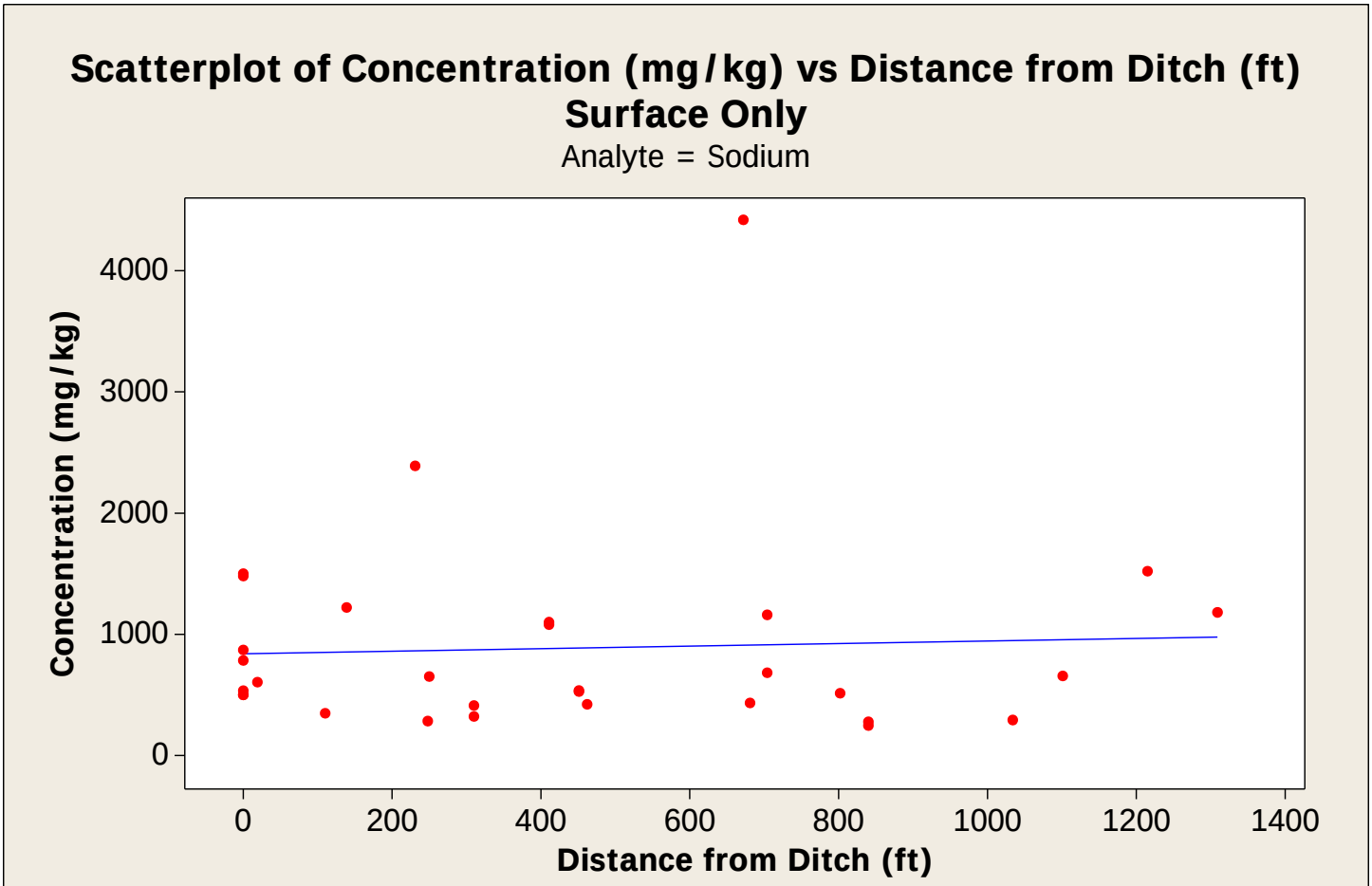


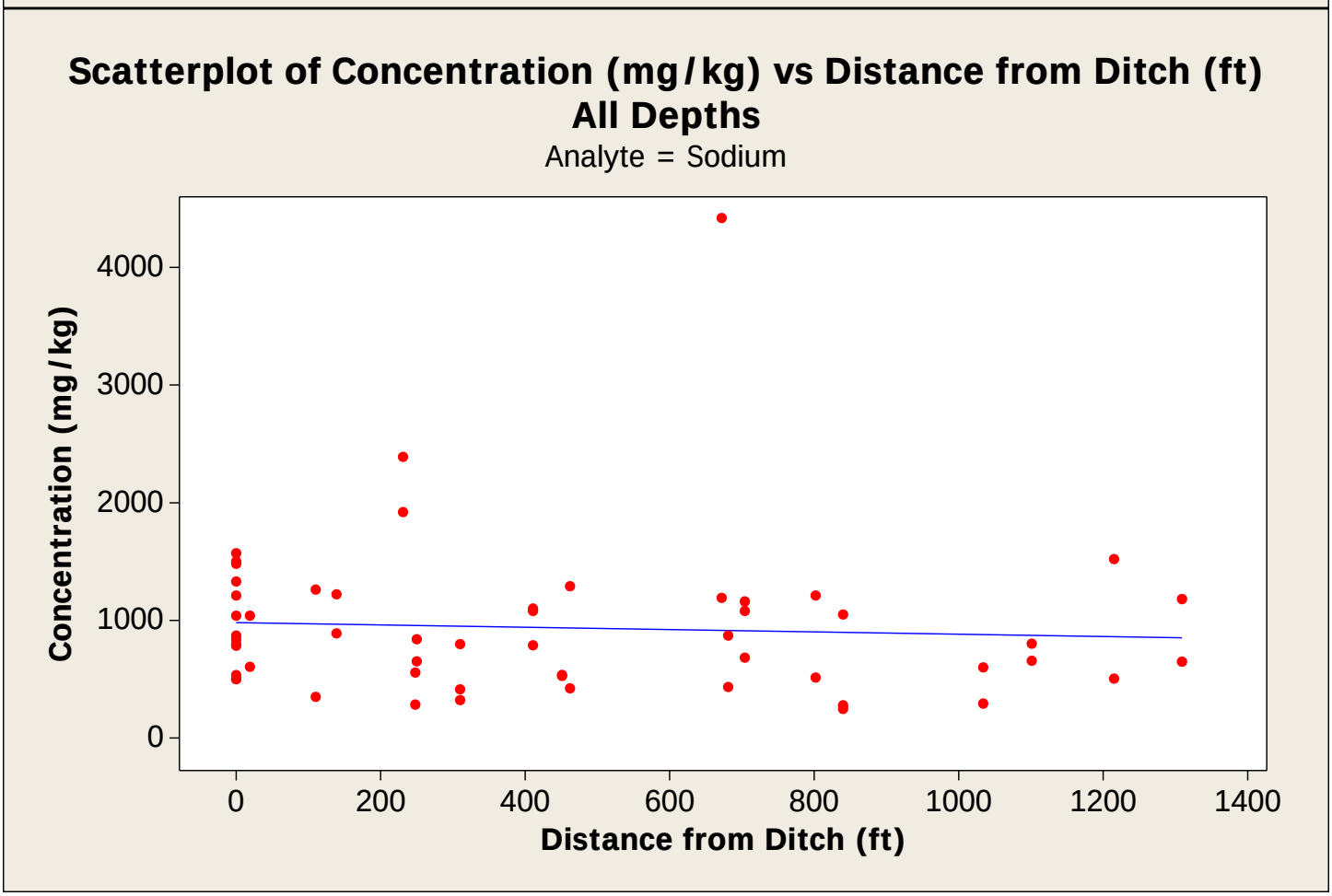

Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only
Analyte = Selenium
Concentration (mg/kg)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)

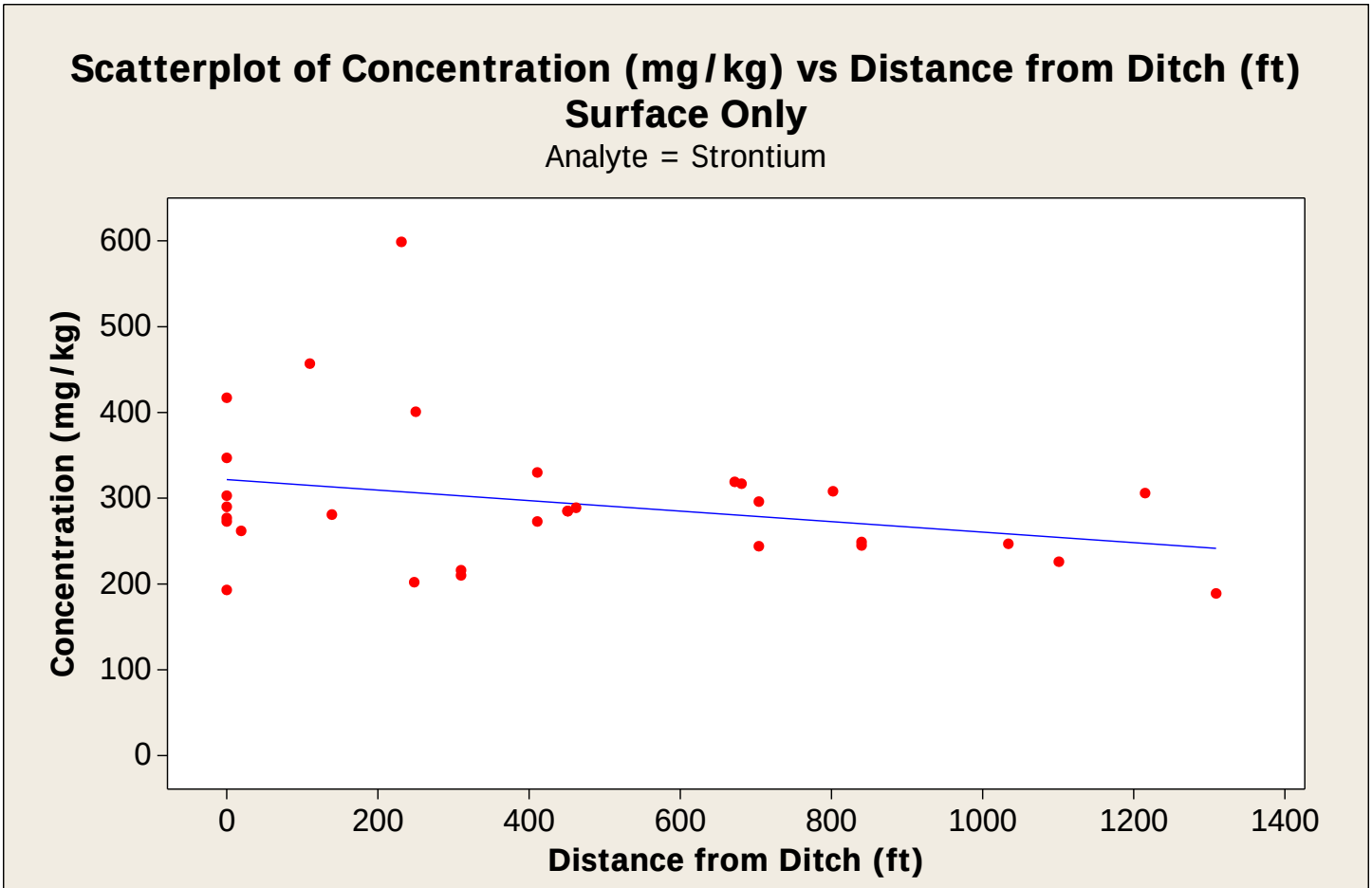

Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths
Analyte = Selenium
Concentration (mg/kg)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)

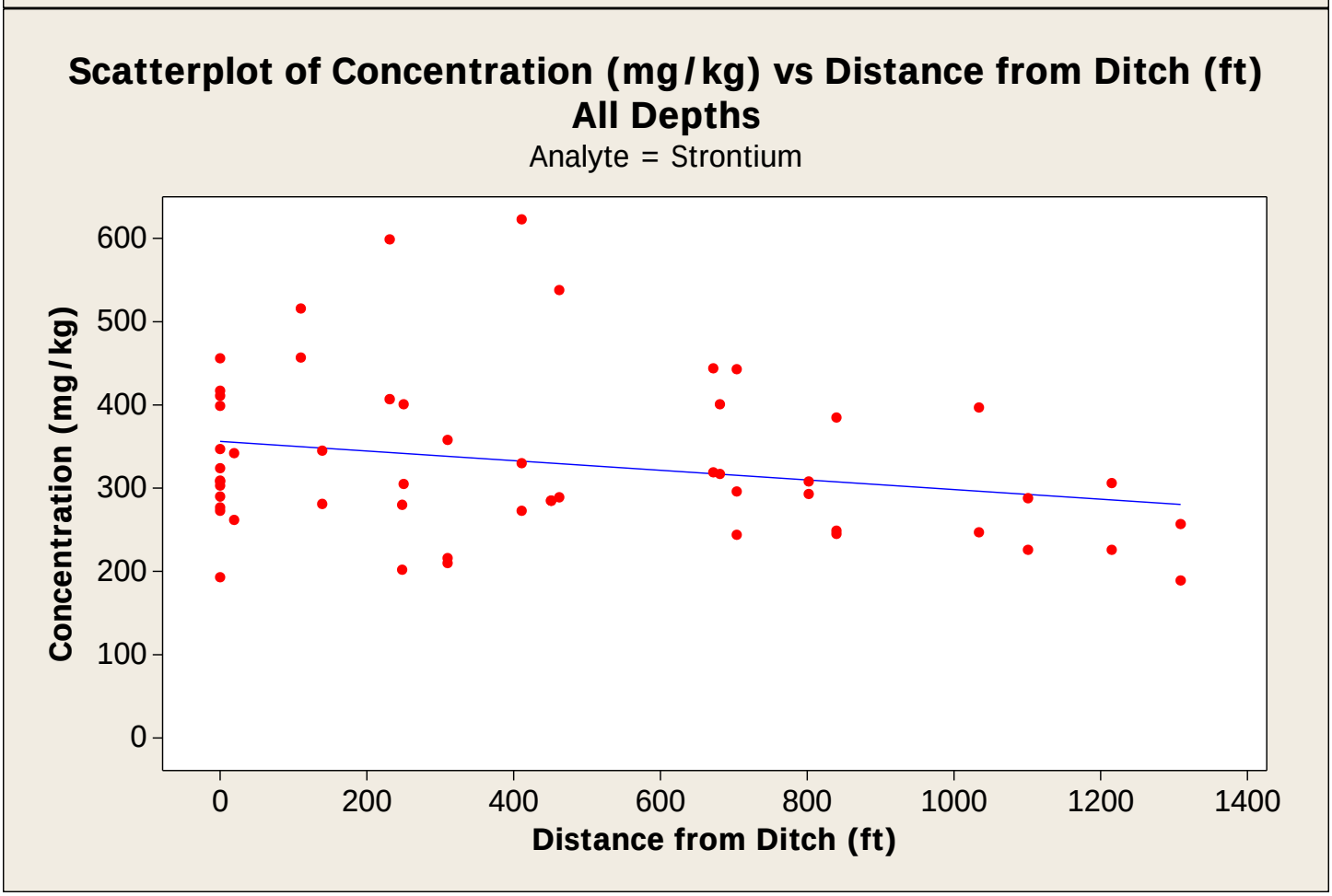

Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only
Analyte = Silver
Concentration (mg/kg)
0.5
0.4
0.3
0.2
0.1
0.0
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)

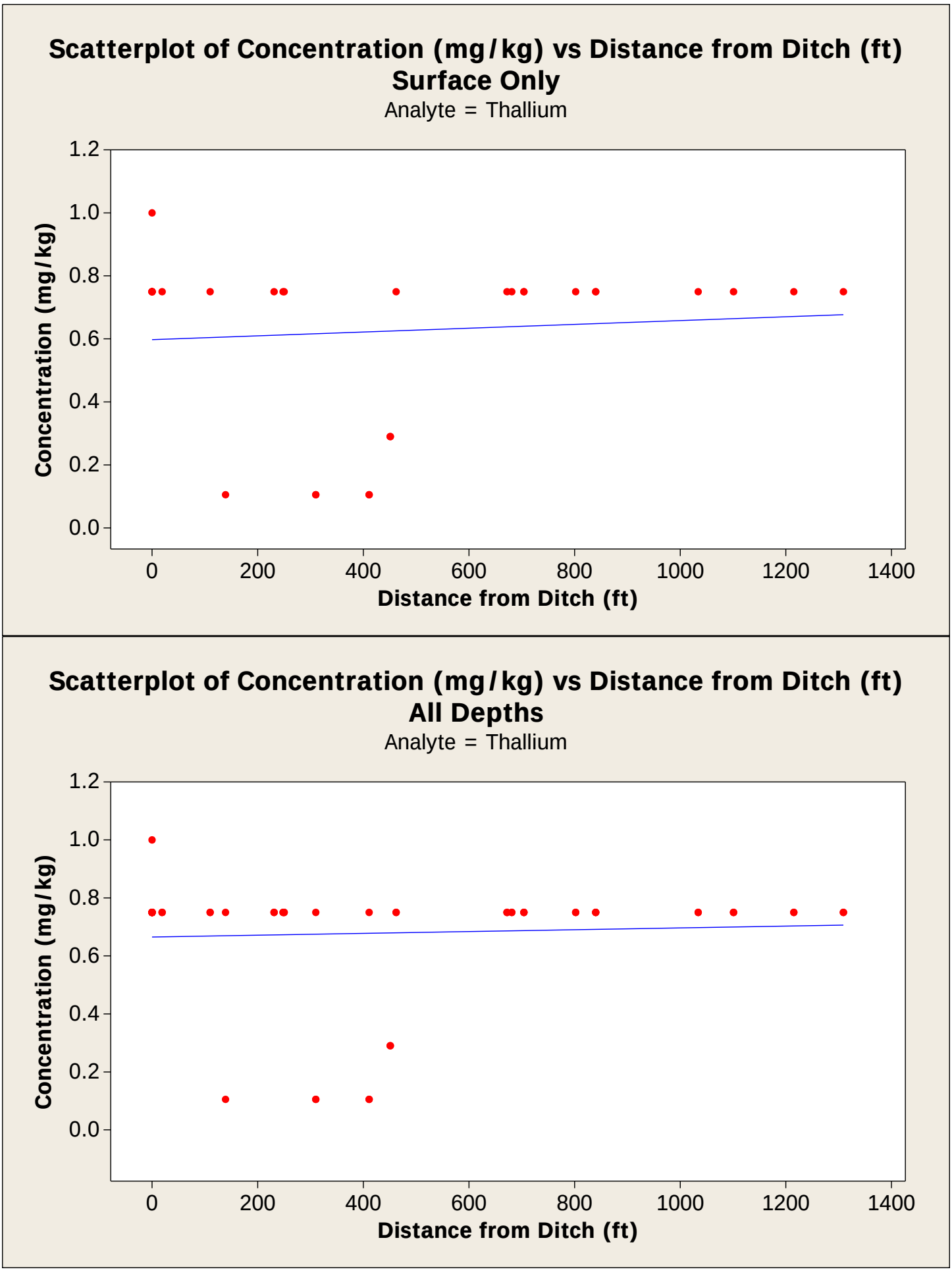

Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths
Analyte = Silver
Concentration (mg/kg)
0.5
0.4
0.3
0.2
0.1
0.0
-0.1
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)

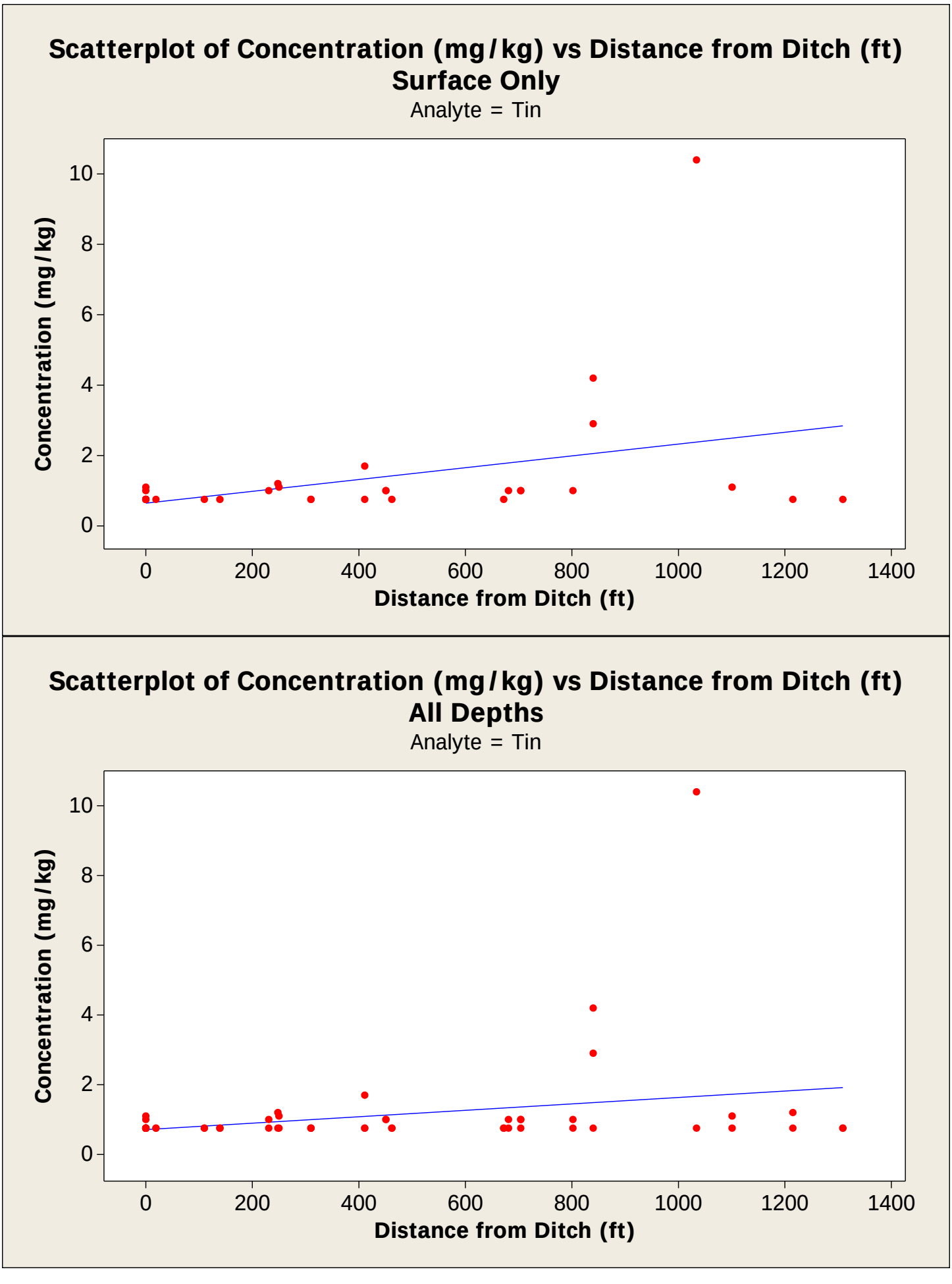

Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only
Analyte = Sodium
Concentration (mg/kg)
0
1000
2000
3000
4000
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)

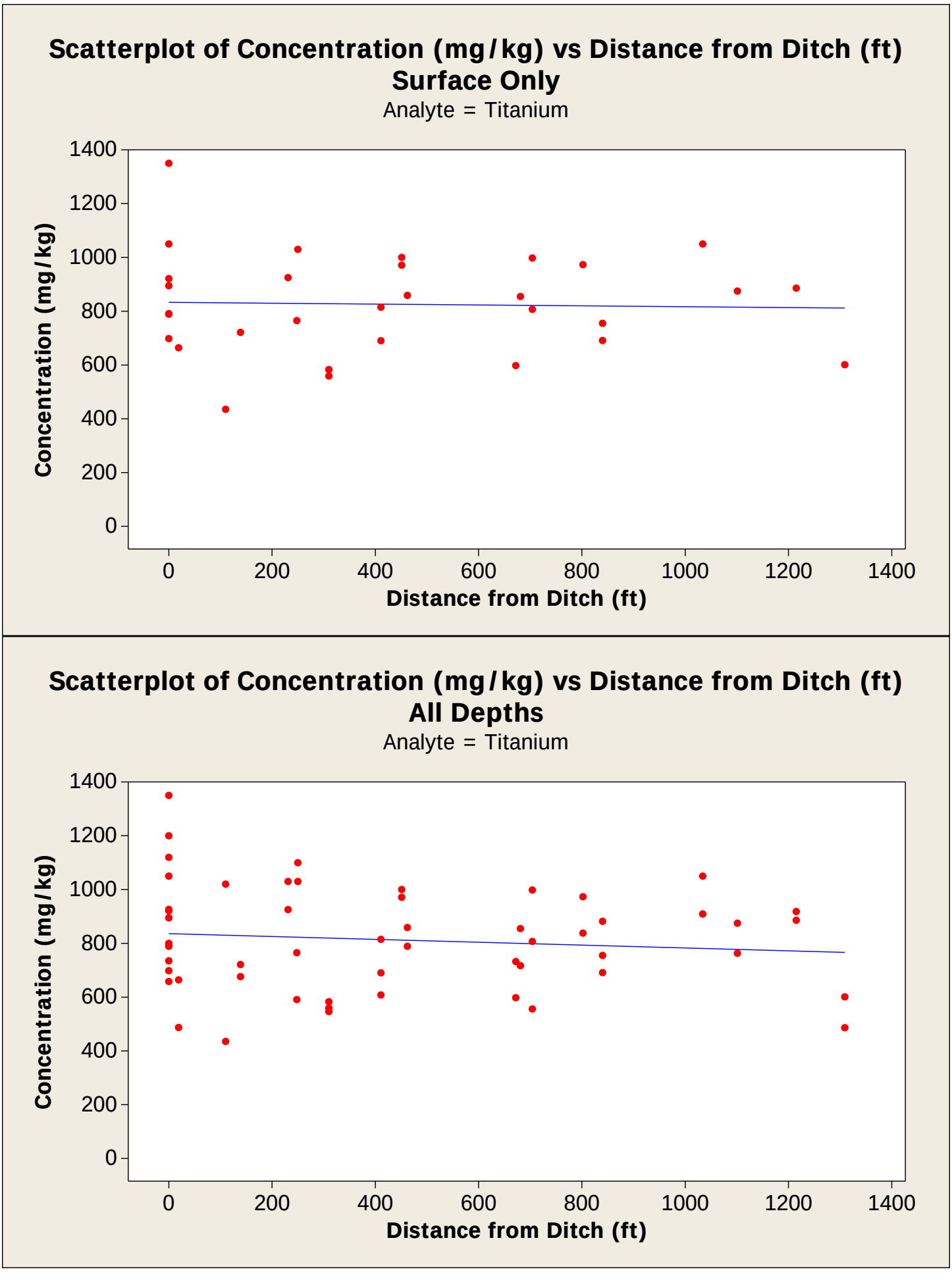

Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths
Analyte = Sodium
Concentration (mg/kg)
0
1000
2000
3000
4000
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)


Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only
Analyte = Strontium
Concentration (mg/kg)
0
100
200
300
400
500
600
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)


Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths
Analyte = Strontium
Concentration (mg/kg)
0
100
200
300
400
500
600
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)

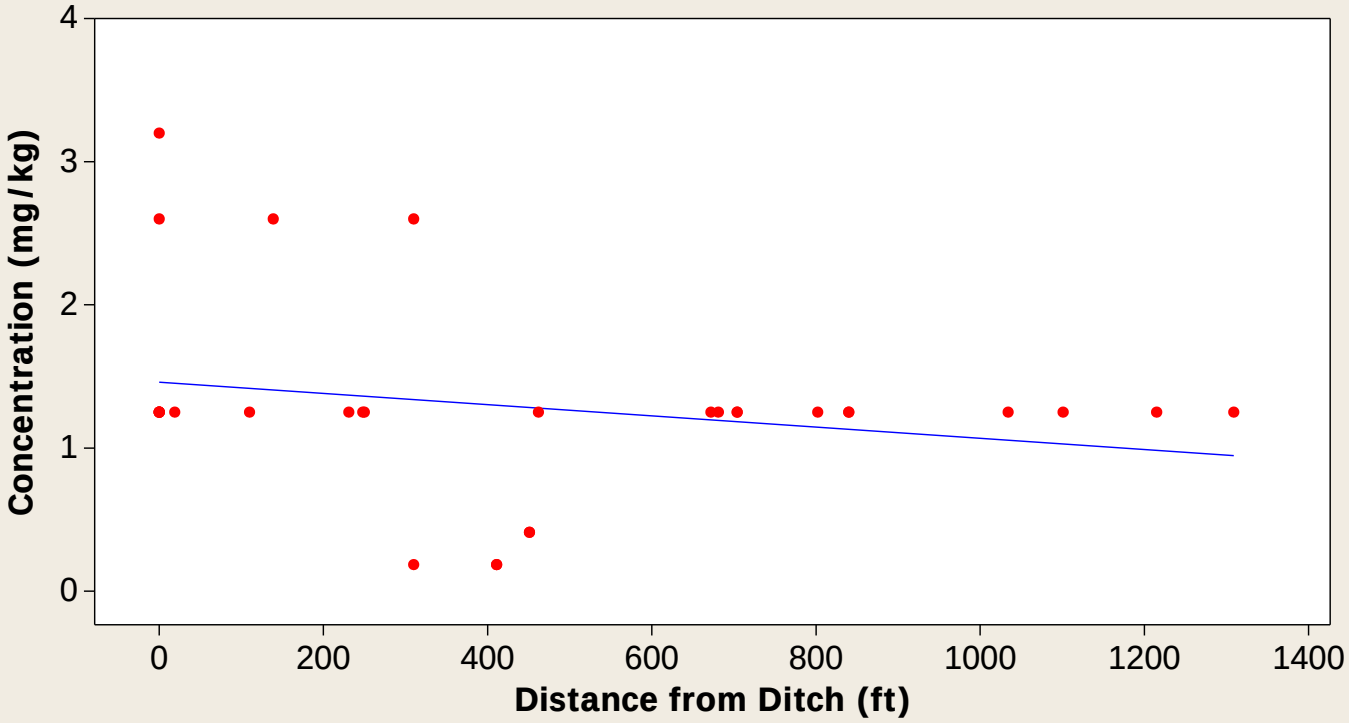

Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only
Analyte = Thallium
Concentration (mg/kg)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths
Analyte = Thallium
Concentration (mg/kg)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)


Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only
Analyte = Tin
Concentration (mg/kg)
0
2
4
6
8
10
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths
Analyte = Tin
Concentration (mg/kg)
0
2
4
6
8
10
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)


Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only
Analyte = Titanium
Concentration (mg/kg)
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)
0
200
400
600
800
1000
1200
1400
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths
Analyte = Titanium
Concentration (mg/kg)
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)
0
200
400
600
800
1000
1200
1400

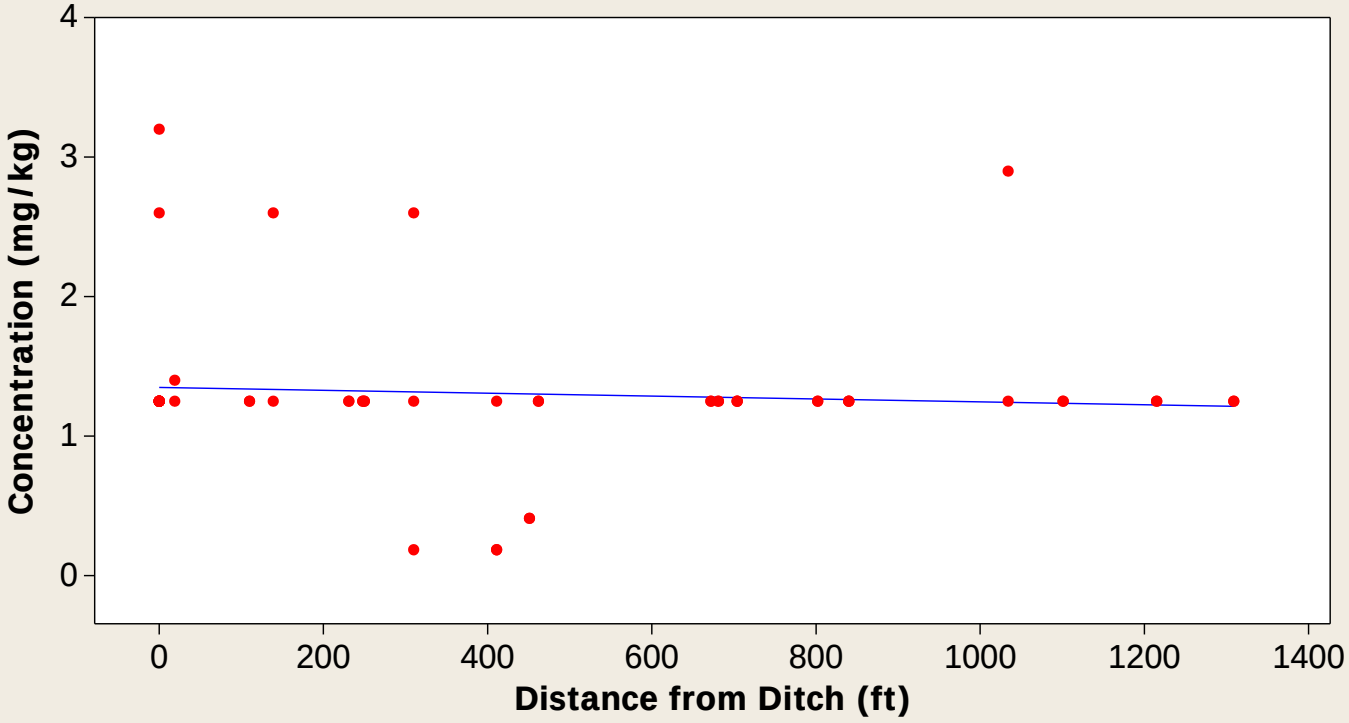
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only

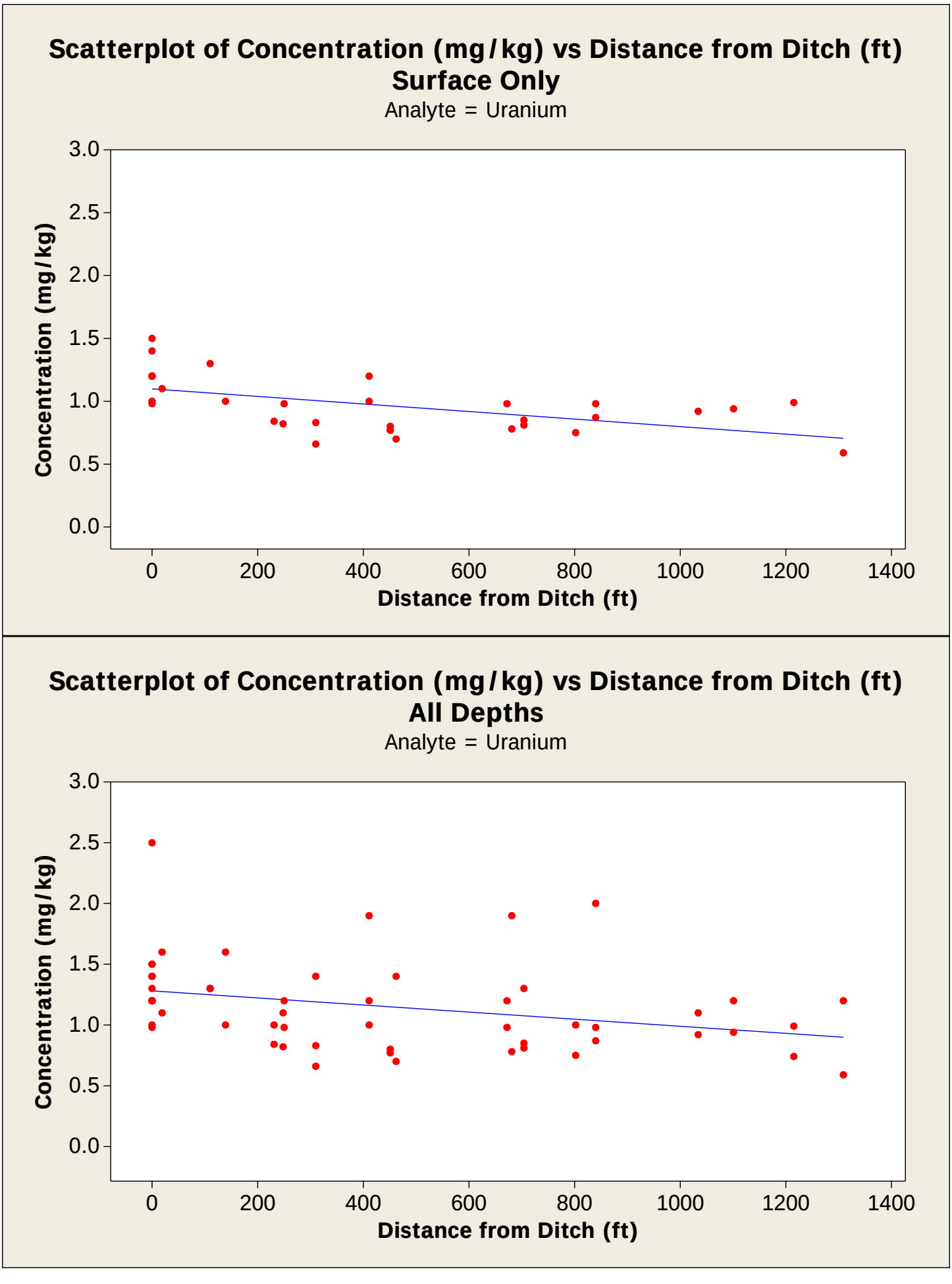
Analyte = Tungsten

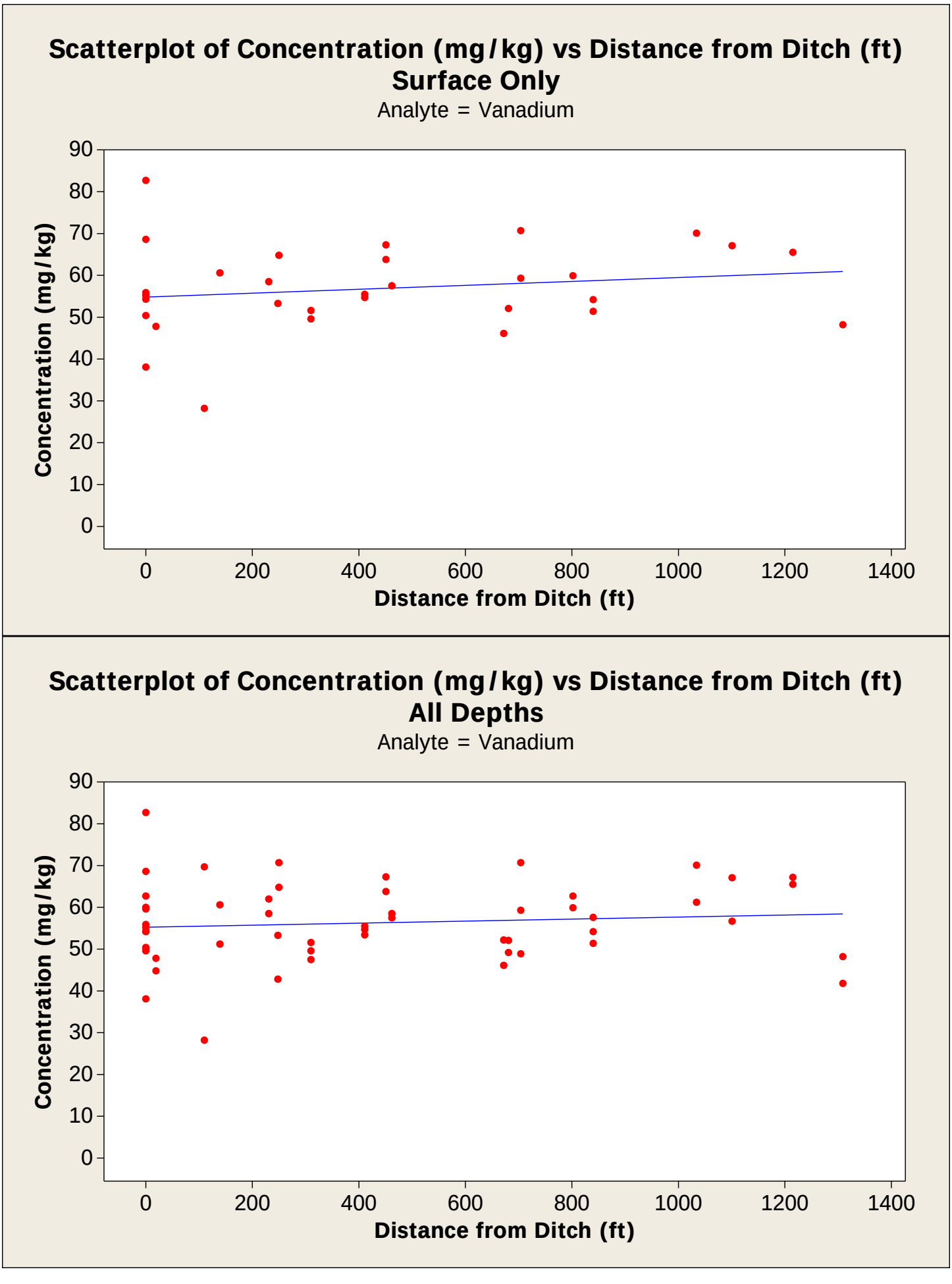


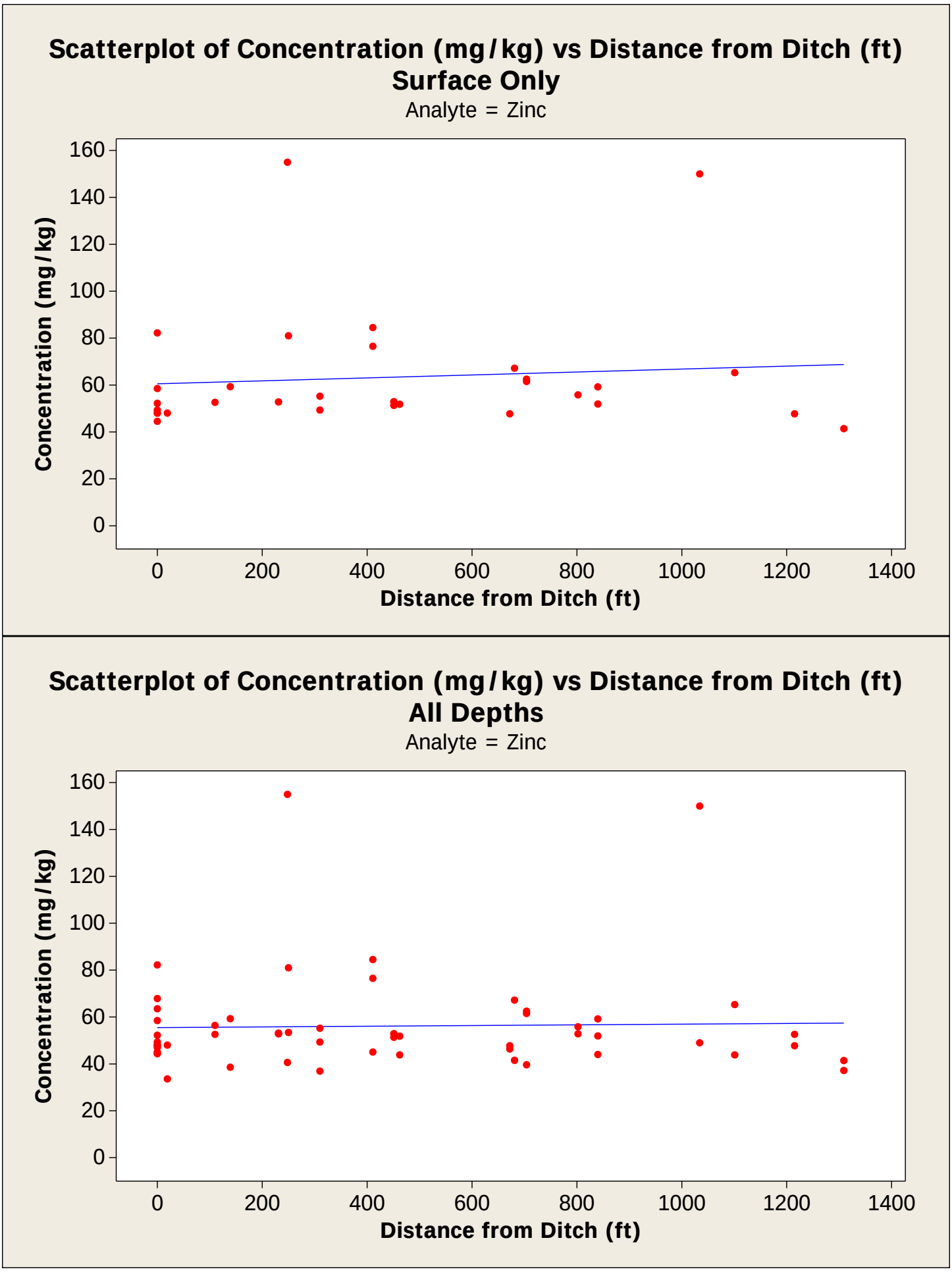
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths

Analyte = Tungsten




Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only
Analyte = Uranium
Concentration (mg/kg)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths
Analyte = Uranium
Concentration (mg/kg)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)


Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only
Analyte = Vanadium
Concentration (mg/kg)
Distance from Ditch (ft)
0
10
20
30
40
50
60
70
80
90
0
200
400
600
800
1000
1200
1400
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths
Analyte = Vanadium
Concentration (mg/kg)
Distance from Ditch (ft)


Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
Surface Only
Analyte = Zinc
Concentration (mg/kg)
0
20
40
60
80
100
120
140
160
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)
Scatterplot of Concentration (mg/kg) vs Distance from Ditch (ft)
All Depths
Analyte = Zinc
Concentration (mg/kg)
0
20
40
60
80
100
120
140
160
0
200
400
600
800
1000
1200
1400
Distance from Ditch (ft)

APPENDIX H

HUMAN HEALTH RISK ASSESSMENT CALCULATION SPREADSHEETS
(on the report CD in Appendix B)

APPENDIX I

METALS DISTRIBUTION PLOTS, AND METALS AND CHEMICALS OF POTENTIAL CONCERN INTENSITY PLOTS

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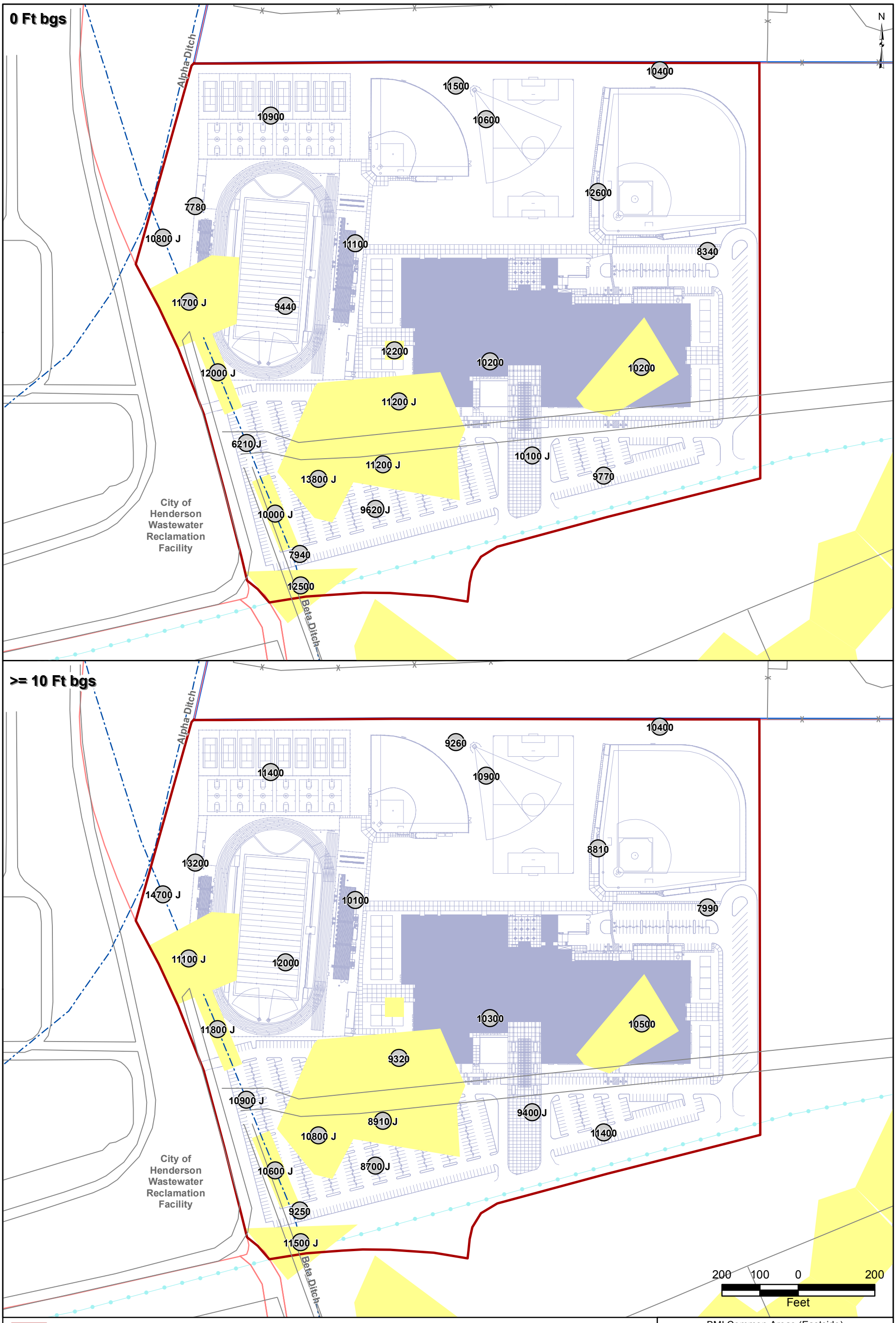

0 Ft bgs
Alpha Ditch
Beta Ditch
City of Henderson Wastewater Reclamation Facility
N
10400
11500
10900
10600
12600
7780
10800 J
11100
8340
11700 J
9440
12200
10200
10200
12000 J
11200 J
6210 J
10100 J
11200 J
13800 J
9770
10000 J
9620 J
7940
12500
>= 10 Ft bgs
Alpha Ditch
Beta Ditch
City of Henderson Wastewater Reclamation Facility
10400
9260
11400
10900
8810
13200
14700 J
10100
7990
11100 J
12000
11800 J
10300
10500
9320
10900 J
9400 J
8910 J
10800 J
11400
10600 J
8700 J
9250
11500 J
200 100 0 200
Feet
Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas
Non-Detect
< Max. Shallow Background
>= Max. Shallow Background and < Residential BCL
>= Residential BCL
Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.
BMI Common Areas (Eastside)
Clark County, Nevada
FIGURE I-1A
ALUMINUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA
Basic Remediation COMPANY
Prepared by MKJ (ERM)
ERM
Date 11/10/10
JOB No. 0064276
FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

10400
11500
10900
10600
12600
7780
10800 J
11100
8340
11700 J
9440
12200
10200
10200
12000 J
11200 J
6210 J
11200 J
10100 J
13800 J
9770
10000 J
9620 J
7940
12500

>= 10 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

10400
9260
11400
10900
8810
13200
14700 J
10100
7990
11100 J
12000
10300
10500
11800 J
9320
10900 J
9400 J
8910 J
11400
10800 J
10600 J
8700 J
9250
11500 J

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< -2.5 Std. Dev.
-2.5 - -1.5 Std. Dev.
-1.5 - -0.50 Std. Dev.
-0.50 - 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
1.5 - 2.5 Std. Dev.
> 2.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

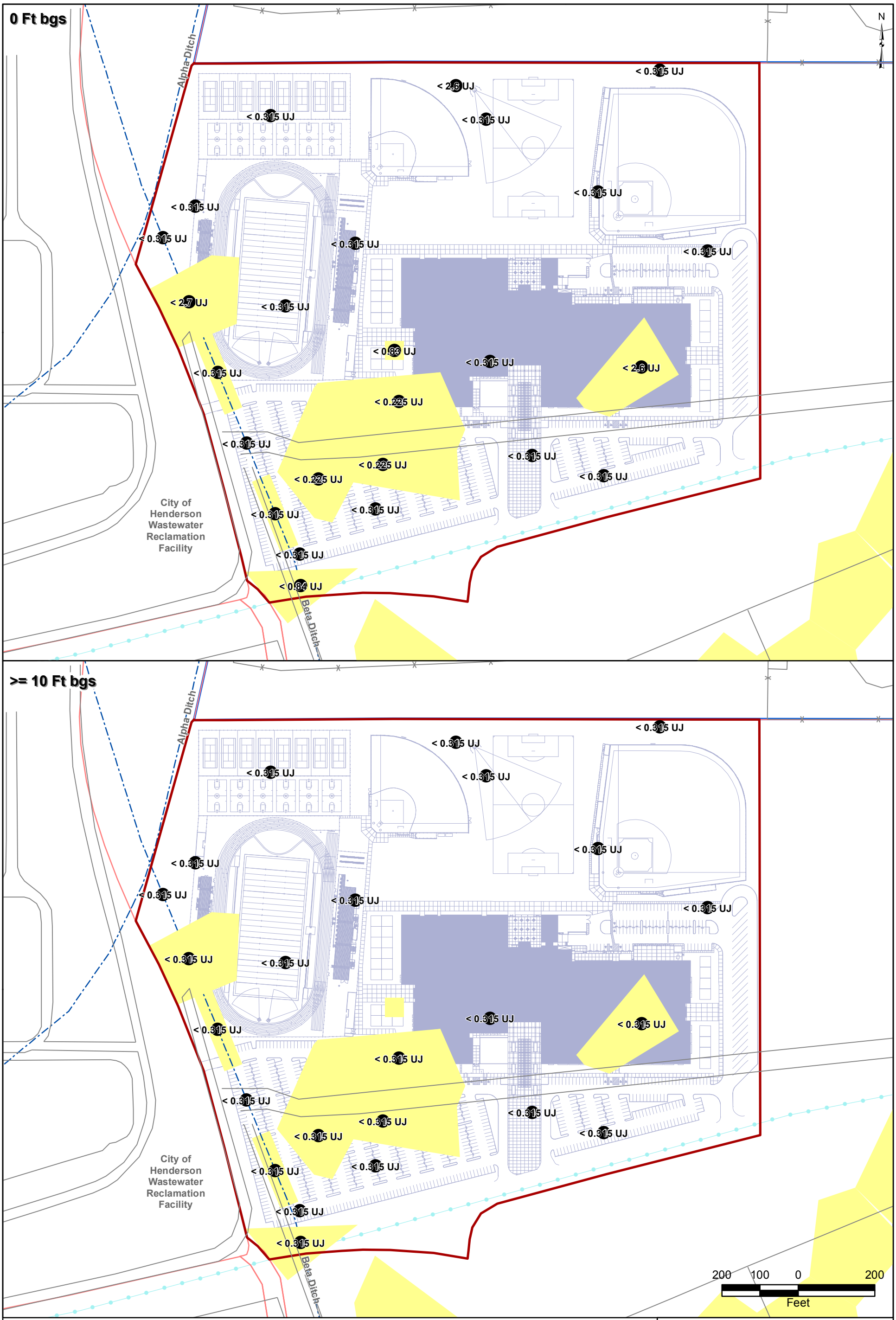
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-1B

ALUMINUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD


0 Ft bgs
Alpha Ditch
Beta Ditch
City of Henderson Wastewater Reclamation Facility
< 0.315 UJ
< 2.6 UJ
< 0.315 UJ
< 0.315 UJ
< 0.315 UJ
< 0.315 UJ
< 0.315 UJ
< 0.315 UJ
< 2.7 UJ
< 0.315 UJ
< 0.83 UJ
< 0.315 UJ
< 2.6 UJ
< 0.315 UJ
< 0.225 UJ
< 0.315 UJ
< 0.315 UJ
< 0.225 UJ
< 0.225 UJ
< 0.315 UJ
< 0.315 UJ
< 0.315 UJ
< 0.315 UJ
< 0.84 UJ
>= 10 Ft bgs
Alpha Ditch
Beta Ditch
City of Henderson Wastewater Reclamation Facility
< 0.315 UJ
< 0.315 UJ
< 0.315 UJ
< 0.315 UJ
< 0.315 UJ
< 0.315 UJ

0 Ft bgs

Alpha-Ditch

< 0.315 UJ
< 2.6 UJ
< 0.315 UJ
< 0.315 UJ
< 0.315 UJ
< 0.315 UJ
< 0.315 UJ
< 0.315 UJ
< 2.7 UJ
< 0.315 UJ
< 0.83 UJ
< 0.315 UJ
< 2.6 UJ
< 0.315 UJ
< 0.225 UJ
< 0.315 UJ
< 0.225 UJ
< 0.315 UJ
< 0.225 UJ
< 0.315 UJ
< 0.315 UJ
< 0.315 UJ
< 0.315 UJ
< 0.84 UJ

City of Henderson Wastewater Reclamation Facility

Beta Ditch

>= 10 Ft bgs

Alpha-Ditch

< 0.315 UJ
< 0.315 UJ
< 0.315 UJ
< 0.315 UJ
< 0.315 UJ
< 0.315 UJ

0 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

5.3
4.5 J
5.1 J
3.7 J
6.2
5.3
3.9 J
2.6 J
3.2 J
7.4
3.8 J
< 5.1 U
3.6 J
4.3 J
5.4
5.5 J+
3.8 J
4.3 J+
4.4 J
4.5 J+
4.8 J
3.7 J
4.3 J
5.8
5.8

>= 10 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

4 J
5.7
4.9 J
4.7 J
4.2 J
2.9 J
4.8 J
6.1
5.5
3.1 J
3 J
4.2 J
3.7 J
4.7 J
7.8
5 J
7
8.8
6.7
5.5
6.7
3.4 J
7.1
7.7

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect
< Max. Shallow Background (7.2 mg/kg)
>= Max. Shallow Background and < Max. Deep Background
>= Max. Deep Background (13.1 mg/kg)

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-3A

ARSENIC SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha-Ditch

Beta-Ditch

City of Henderson Wastewater Reclamation Facility

5.1 J
4.5 J
5.3
3.7 J
6.2
5.3
3.9 J
2.6 J
3.2 J
7.4
3.8 J
5.1 U
3.6 J
5.4
4.3 J
5.5 J+
3.8 J
4.3 J+
4.4 J
4.5 J+
4.8 J
3.7 J
4.3 J
5.8
5.8

>= 10 Ft bgs

Alpha-Ditch

Beta-Ditch

City of Henderson Wastewater Reclamation Facility

4 J
5.7
4.9 J
4.7 J
4.2 J
2.9 J
4.8 J
6.1
5.5
3.1 J
3 J
4.2 J
3.7 J
4.7 J
7.8
5 J
7
8.8
6.7
5.5
6.7
3.4 J
7.1
7.7

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< -1.5 Std. Dev.
-1.5 - -0.50 Std. Dev.
-0.50 - 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
> 1.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-3B

ARSENIC SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | ERM | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

408 J
351 J
341 J
290 J
310 J
175 J
383 J-
338 J
344 J
613 J-
253 J
455 J+
346 J
563 J
315
280 J
142
365 J
272
368 J
387 J+
307
281
235 J+
514 J+

>= 10 Ft bgs

382 J
268 J
384 J
362 J
371 J
395 J
184 J-
472 J
318 J
309 J-
328 J
433 J
362 J
293
295 J
209
391
383
314
282 J+
329
284
378 J+
472 J

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect
< Max. Shallow Background
>= Max. Shallow Background and < Residential BCL
>= Residential BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-4A

BARIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

N

408 J
351 J
341 J
290 J
310 J
175 J
383 J-
338 J
344 J
613 J-
253 J
455 J+
346 J
563 J
315
280 J
142
365 J
272
368 J
387 J+
307
281
235 J+
514 J+

>= 10 Ft bgs

382 J
268 J
384 J
362 J
371 J
395 J
184 J-
472 J
318 J
309 J-
328 J
433 J
362 J
293
295 J
209
391
383
314
282 J+
329
284
378 J+
472 J

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< -1.5 Std. Dev.
-1.5 - -0.50 Std. Dev.
-0.50 - 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
> 1.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-4B

BARIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

N

Alpha Ditch

0.62
0.65
0.61
0.61
0.77
0.4 J
0.77 J+
0.66
0.6
1.1 J+
0.55
0.7
0.63
0.61
0.66
0.7
0.45 J
0.54
0.66
0.64
0.76
0.59
0.66
0.53 J
0.71
Beta Ditch

City of Henderson Wastewater Reclamation Facility

>= 10 Ft bgs

Alpha Ditch

0.65
0.57
0.71
0.63
0.74
0.56
1.1 J+
0.64
0.54
1 J+
0.68
0.58
0.6
0.71
0.55
0.64
0.52 J
0.56
0.62
0.73
0.5 J
0.59
0.5 J
0.55
Beta Ditch

City of Henderson Wastewater Reclamation Facility

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect
< Max. Shallow Background
>= Max. Shallow Background and < Residential BCL
>= Residential BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-5A

BERYLLIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

0.62
0.65
0.61
0.61
0.77
0.4 J
0.77 J+
0.66
0.6
1.1 J+
0.55
0.7
0.63
0.61
0.66
0.7
0.45 J
0.54
0.66
0.64
0.76
0.66
0.59
0.53 J
0.71

>= 10 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

0.65
0.57
0.71
0.63
0.74
0.56
1.1 J+
0.64
0.54
1 J+
0.68
0.58
0.6
0.71
0.55
0.64
0.56
0.52 J
0.62
0.73
0.59
0.5 J
0.5 J
0.55

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< -1.5 Std. Dev.
-1.5 - -0.50 Std. Dev.
-0.50 - 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
> 1.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-5B

BERYLLIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

N

Alpha Ditch

< 16.5 U
23 J
18.6 J
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
17.2 J
< 16.5 U
47.1 J
< 16.9 U
38.9 J
< 16.5 U
< 16.5 U
< 52.2 U
< 16.5 U
< 53 U
< 51.3 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 17.1 U

City of Henderson Wastewater Reclamation Facility

Beta Ditch

>= 10 Ft bgs

Alpha Ditch

< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
18.3 J
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U

City of Henderson Wastewater Reclamation Facility

Beta Ditch

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect
< Max. Shallow Background
>= Max. Shallow Background and < Residential BCL
>= Residential BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-6A

BORON SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

< 16.5 U
23 J
18.6 J
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
17.2 J
< 16.5 U
47.1 J
< 16.9 U
38.9 J
< 16.5 U
< 16.5 U
< 52.2 U
< 16.5 U
< 16.5 U
< 53 U
< 51.3 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 17.1 U

>= 10 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
18.3 J
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U
< 16.5 U

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
> 1.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

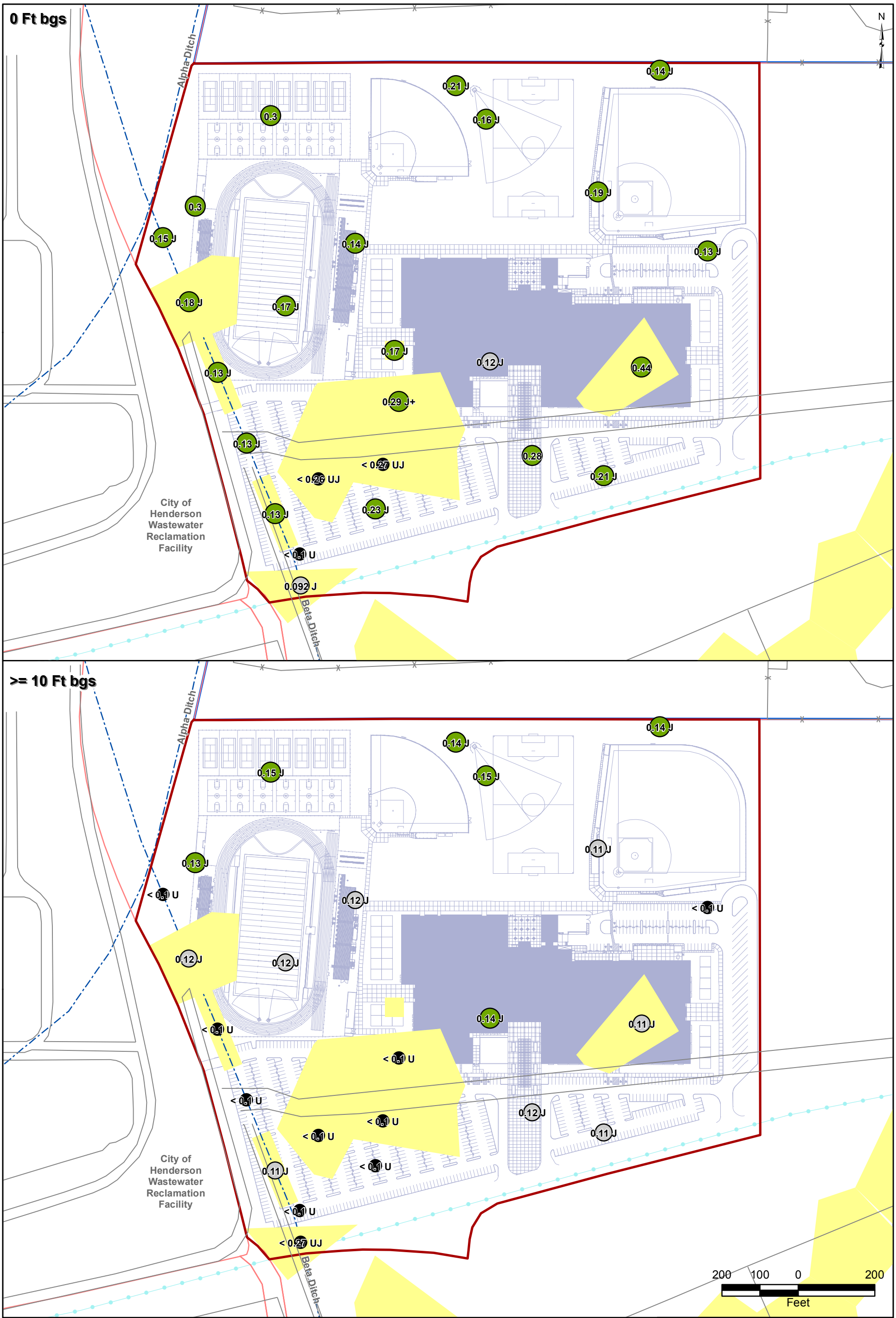
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-6B

BORON SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD


0 Ft bgs
Alpha Ditch
Beta Ditch
City of Henderson Wastewater Reclamation Facility
0.14 J
0.21 J
0.3
0.16 J
0.19 J
0.3
0.15 J
0.14 J
0.13 J
0.18 J
0.17 J
0.17 J
0.12 J
0.44
0.13 J
0.29 J+
0.13 J
< 0.27 UJ
< 0.26 UJ
0.28
0.21 J
0.13 J
0.23 J
< 0.1 U
0.092 J
>= 10 Ft bgs
0.14 J
0.14 J
0.15 J
0.15 J
0.11 J
0.13 J
< 0.1 U
0.12 J
< 0.1 U
0.12 J
0.12 J
0.14 J
0.11 J
< 0.1 U
< 0.1 U
< 0.1 U
0.12 J
< 0.1 U
0.11 J
0.11 J
< 0.1 U
< 0.27 UJ
N
200 100 0 200
Feet
Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas
Non-Detect
< Max. Shallow Background
>= Max. Shallow Background and < Residential BCL
>= Residential BCL
Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.
BMI Common Areas (Eastside)
Clark County, Nevada
FIGURE I-7A
CADMIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA
Basic Remediation COMPANY
Prepared by MKJ (ERM)
ERM
Date 11/10/10
JOB No. 0064276
FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

0.14 J
0.21 J
0.16 J
0.3
0.19 J
0.3
0.15 J
0.14 J
0.13 J
0.18 J
0.17 J
0.17 J
0.12 J
0.44
0.13 J
0.29 J+
0.13 J
0.28
< 0.27 UJ
0.21 J
< 0.26 UJ
0.23 J
0.13 J
< 0.1 U
0.092 J

>= 10 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

0.14 J
0.14 J
0.15 J
0.15 J
0.11 J
0.13 J
< 0.1 U
0.12 J
< 0.1 U
0.12 J
0.12 J
0.14 J
0.11 J
< 0.1 U
< 0.1 U
0.12 J
< 0.1 U
0.11 J
< 0.1 U
< 0.1 U
0.11 J
< 0.1 U
< 0.27 UJ

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< -0.50 Std. Dev.
-0.50 - 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
> 1.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-7B

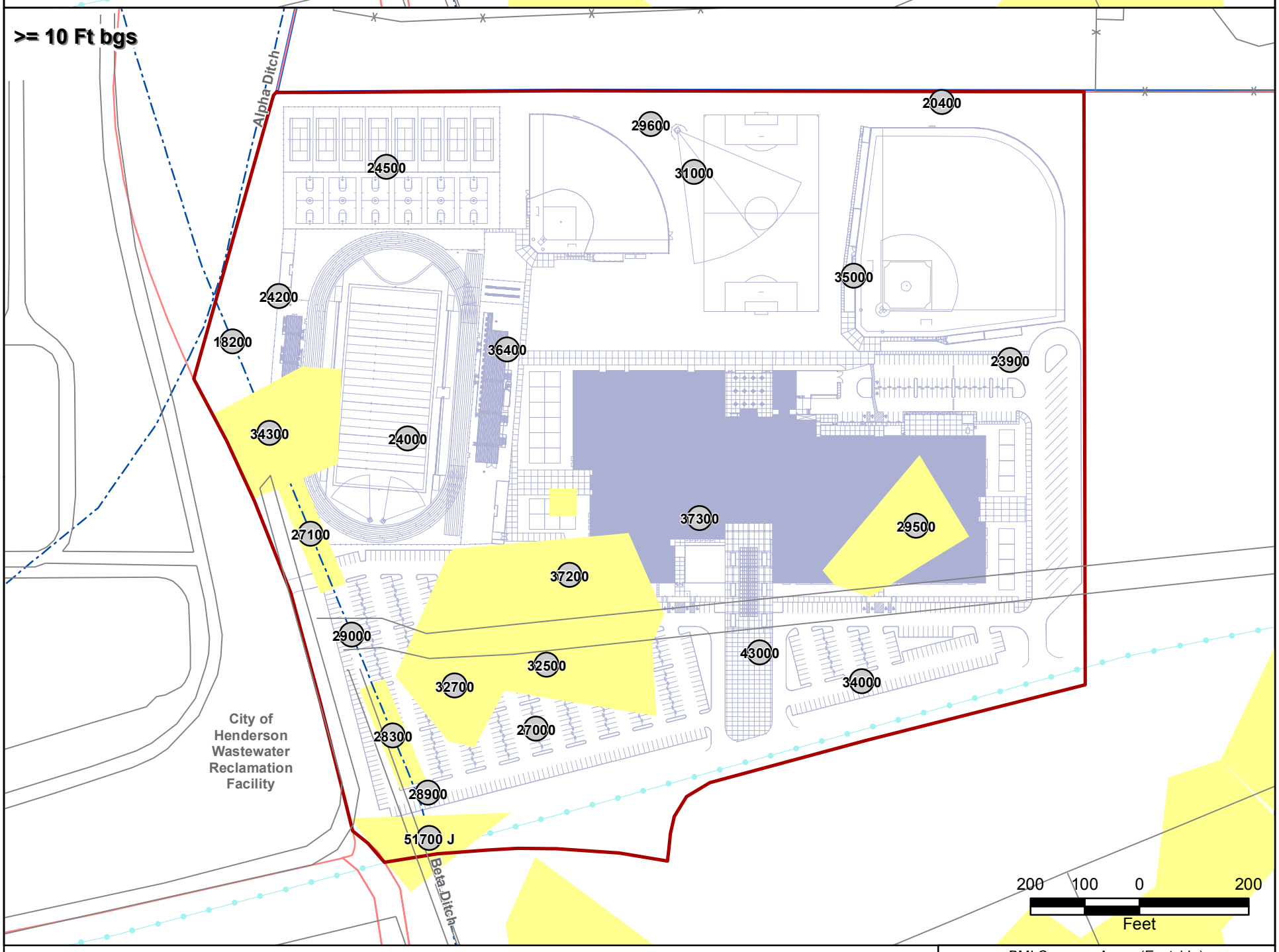
CADMIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

>= 10 Ft bgs



- Galleria North-School Site Sub-Area
- Site AOC3 Boundary
- Eastside Soil Sub-Areas
- Recent Soil Removal Areas

- Non-Detect
- < Max. Shallow Background
- >= Max. Shallow Background and < Residential BCL
- >= Residential BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-8A

CALCIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

23200
32100
30200
27600
41600
103000
24300
22200
19700
26000
40100
26700 J
22800
34400
30500
35900 J
54300
42500
19000 J
35000
24300 J
24400
34700
27700
31700 J

>= 10 Ft bgs

20400
29600
31000
24500
35000
24200
18200
36400
23900
34300
24000
37300
29500
27100
37200
29000
43000
32500
34000
32700
27000
28300
28900
51700 J

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< -0.50 Std. Dev.
-0.50 - 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
> 1.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-8B

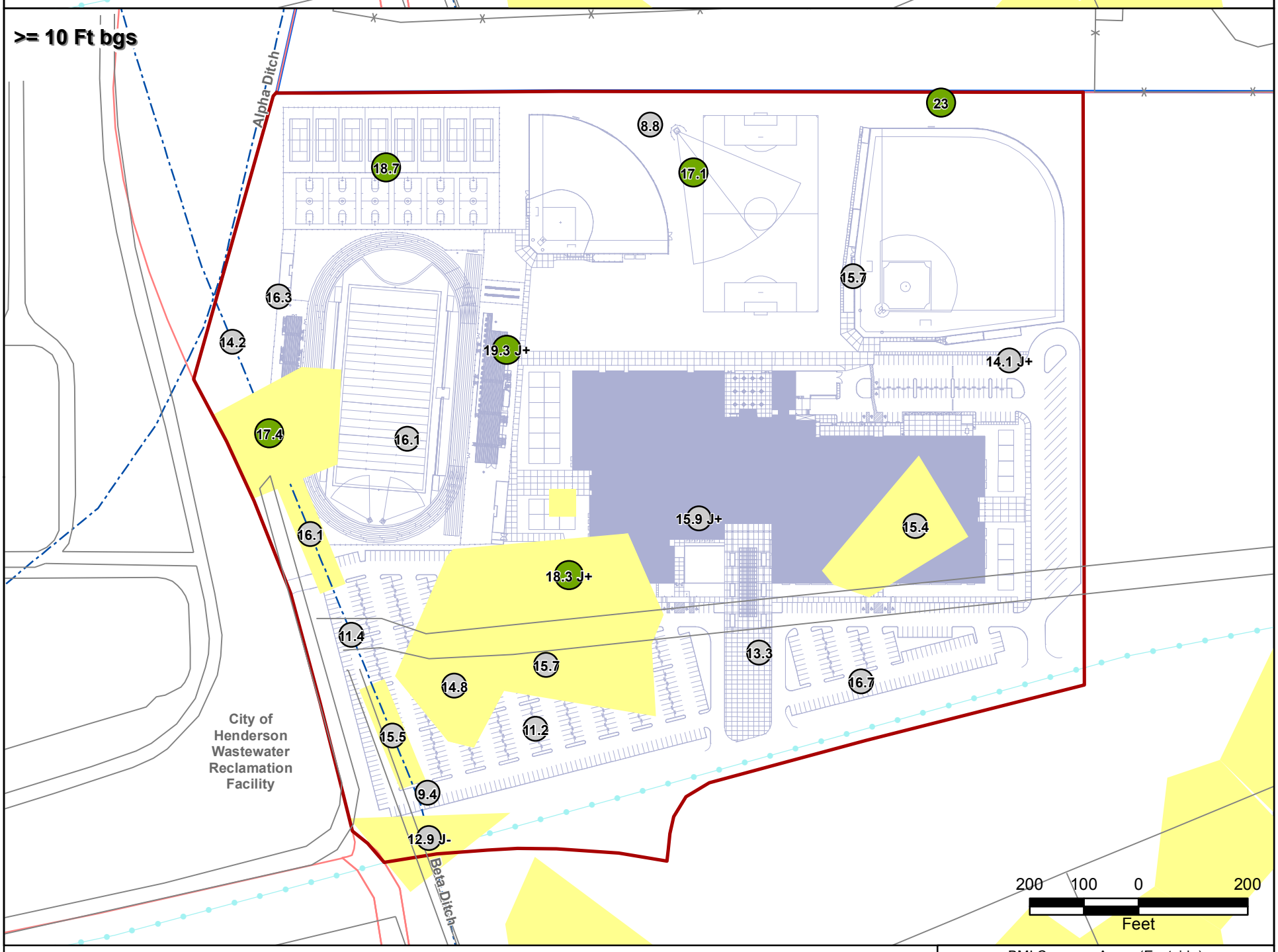
CALCIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

>= 10 Ft bgs



Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect
< Max. Shallow Background
>= Max. Shallow Background and < Residential BCL
>= Residential BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-9A

CHROMIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha-Ditch

Beta-Ditch

City of Henderson Wastewater Reclamation Facility

17.1
23.4
22
19.9
24.8
15.2
18.6
17 J+
15.4 J+
31.2
19.4
23.1
15.2 J+
62.8
14.5
15.2
11.6
13.3
17.3
14.2
19.4
16.7
14
7.3
18.3

>= 10 Ft bgs

23
8.8
18.7
17.1
15.7
16.3
14.2
19.3 J+
14.1 J+
17.4
16.1
15.9 J+
15.4
16.1
18.3 J+
11.4
15.7
13.3
14.8
16.7
15.5
11.2
9.4
12.9 J-

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< -0.50 Std. Dev.
-0.50 - 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
1.5 - 2.5 Std. Dev.
> 2.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-9B

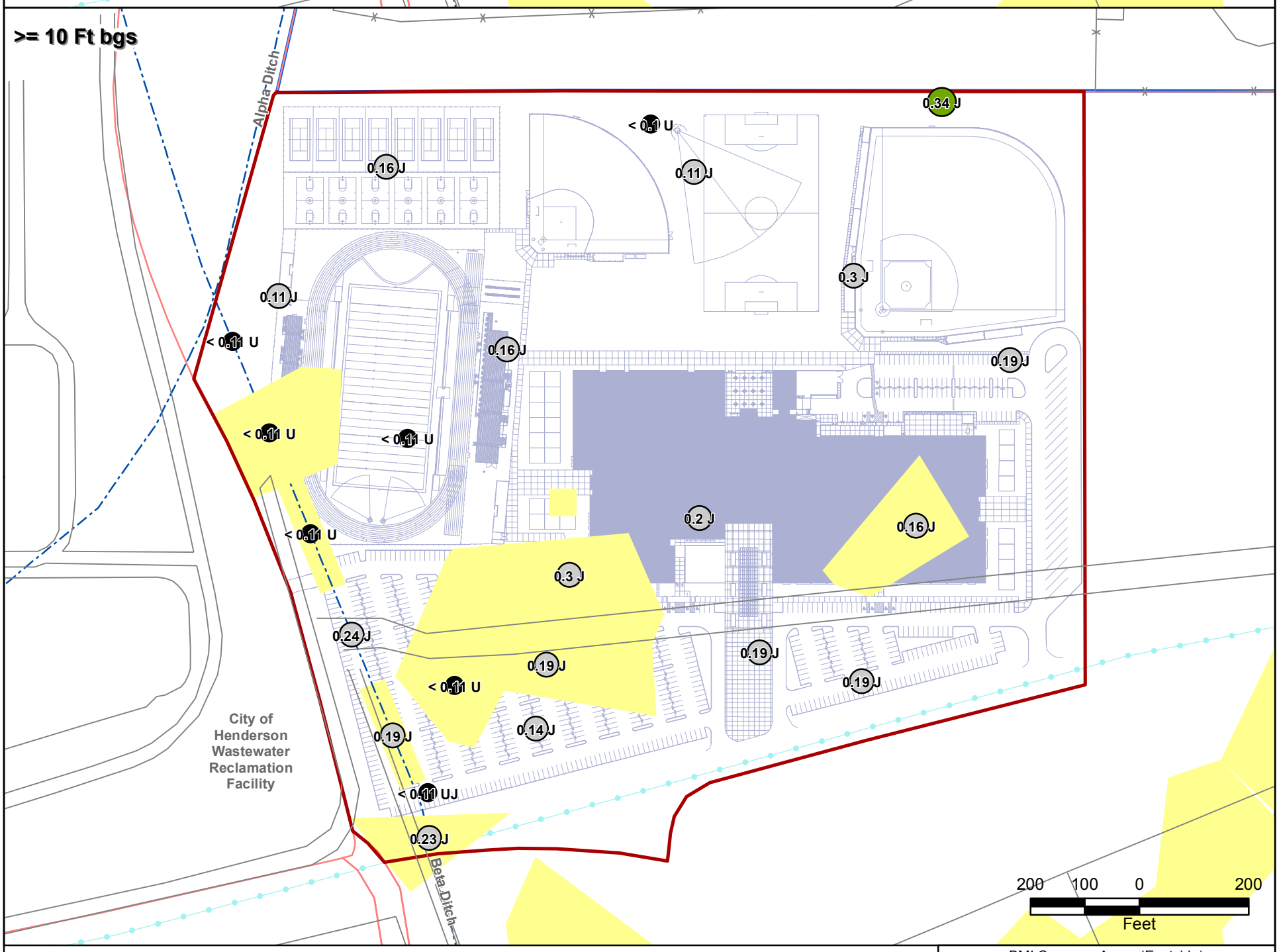
CHROMIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | ERM | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

>= 10 Ft bgs



Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect
< Max. Shallow Background
>= Max. Shallow Background and < Residential BCL
>= Residential BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-10A

CHROMIUM (VI) SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

N

0.34 J
0.56
0.16 J
< 0.1 U
0.3 J
< 0.11 U
< 0.11 U
< 0.1 U
< 0.1 U
0.14 J
< 0.1 U
< 0.1 U
< 0.11 U
1.8
0.19 J
0.15 J
0.24 J
0.19 J
0.36 J
< 0.1 U
0.14 J
< 0.1 U
0.24 J
< 0.11 UJ
0.15 J

>= 10 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

0.34 J
< 0.1 U
0.16 J
0.11 J
0.3 J
0.11 J
< 0.11 U
0.16 J
0.19 J
< 0.11 U
< 0.11 U
0.2 J
0.16 J
< 0.11 U
0.3 J
0.24 J
0.19 J
0.19 J
< 0.11 U
0.19 J
0.14 J
< 0.11 UJ
0.23 J

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
1.5 - 2.5 Std. Dev.
> 2.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

BMI Common Areas (Eastside)
Clark County, Nevada

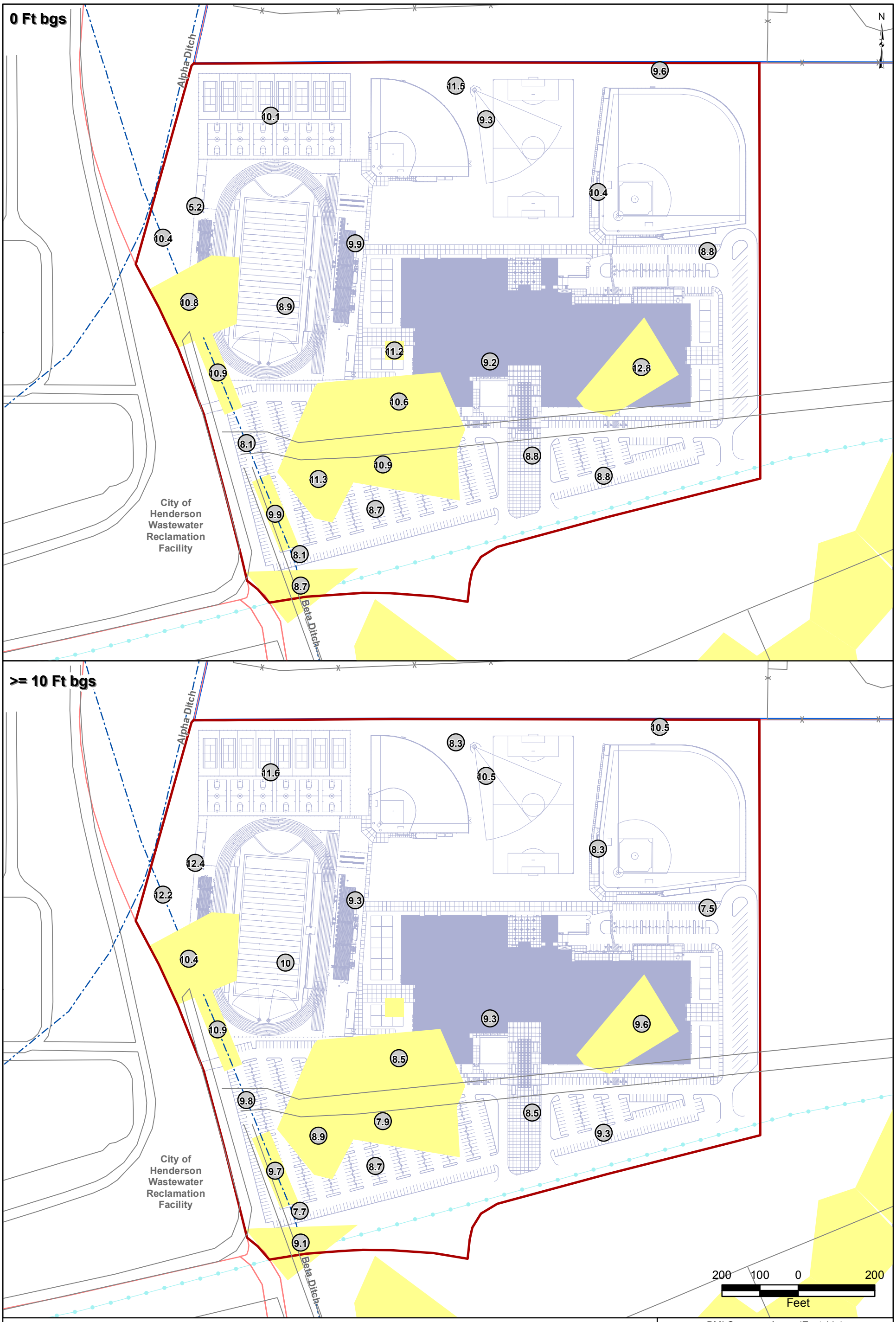
FIGURE I-10B

CHROMIUM (VI) SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs



Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect
< Max. Shallow Background
>= Max. Shallow Background and < Residential BCL
>= Residential BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-11A

COBALT SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

9.6 11.5 10.1 9.3 10.4 5.2 10.4 9.9 8.8 10.8 8.9 11.2 9.2 12.8 10.9 10.6 8.1 8.8 10.9 8.8 11.3 9.9 8.7 8.1 8.7

>= 10 Ft bgs

10.5 8.3 11.6 10.5 8.3 12.4 12.2 9.3 7.5 10.4 10 9.3 9.6 10.9 8.5 9.8 8.5 7.9 9.3 8.9 8.7 9.7 7.7 9.1

200 100 0 200

Feet

- Galleria North-School Site Sub-Area
- Site AOC3 Boundary
- Eastside Soil Sub-Areas
- Recent Soil Removal Areas

- < -2.5 Std. Dev.
- -2.5 - -1.5 Std. Dev.
- -1.5 - -0.50 Std. Dev.
- -0.50 - 0.50 Std. Dev.
- 0.50 - 1.5 Std. Dev.
- 1.5 - 2.4 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

BMI Common Areas (Eastside)
Clark County, Nevada

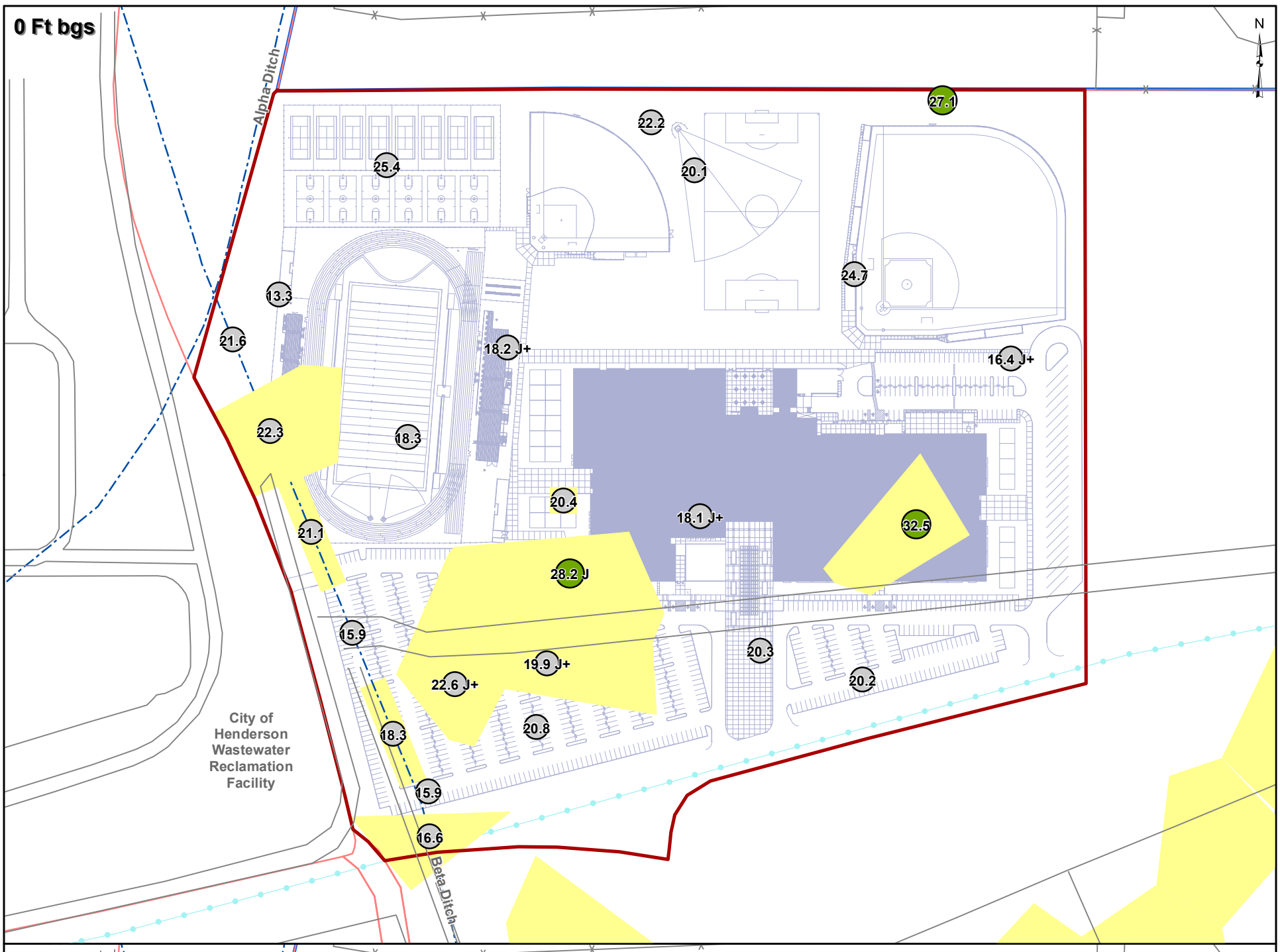
FIGURE I-11B

COBALT SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

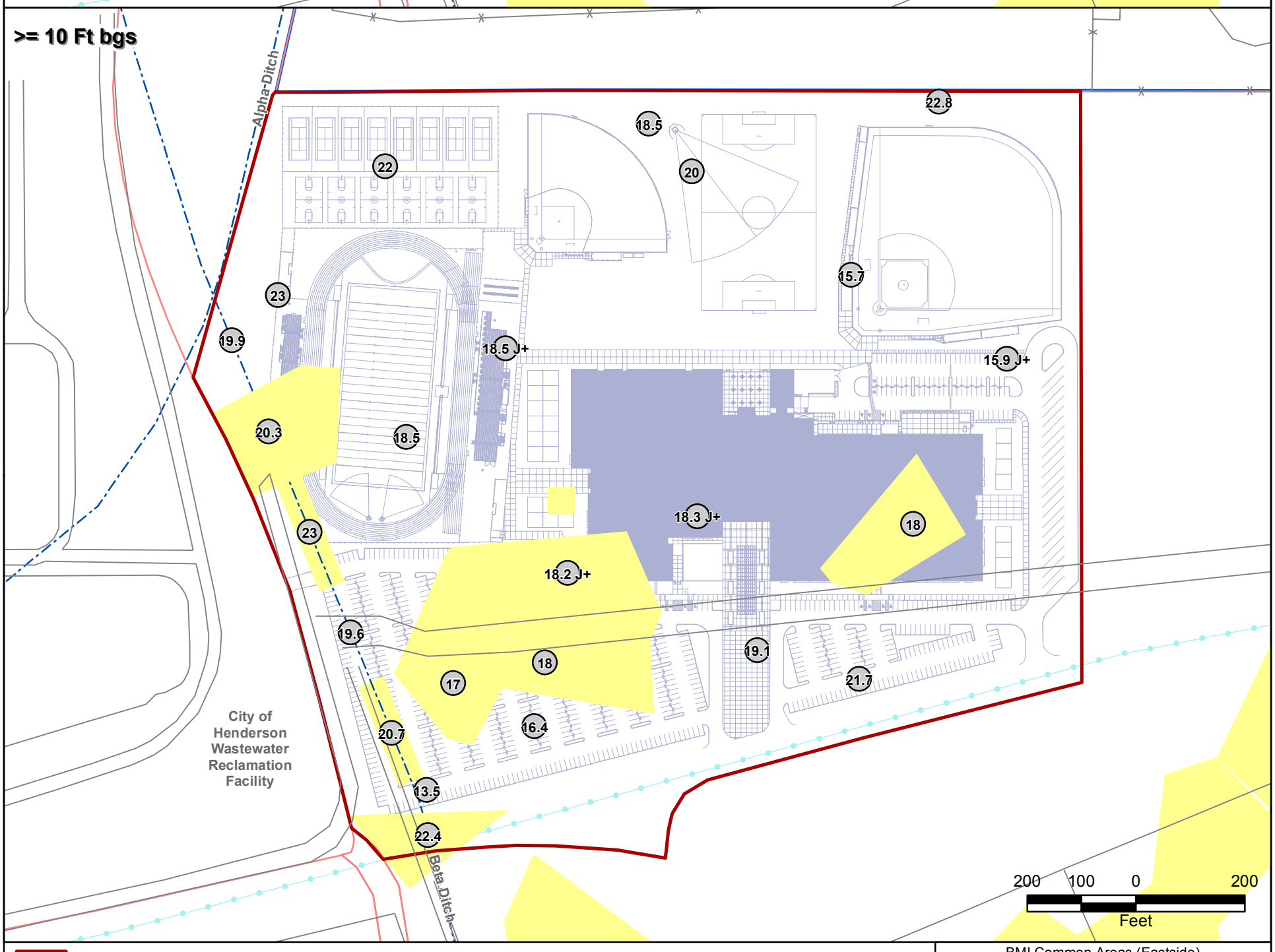
Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs



>= 10 Ft bgs



Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect
< Max. Shallow Background
>= Max. Shallow Background and < Residential BCL
>= Residential BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-12A

COPPER SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

N

27.1
22.2
25.4
20.1
24.7
13.3
21.6
18.2 J+
16.4 J+
22.3
18.3
20.4
18.1 J+
32.5
21.1
28.2 J
15.9
19.9 J+
20.3
22.6 J+
20.2
18.3
20.8
15.9
16.6

>= 10 Ft bgs

22.8
18.5
22
20
15.7
23
19.9
18.5 J+
15.9 J+
20.3
18.5
18.3 J+
18
23
18.2 J+
19.6
19.1
18
17
21.7
20.7
16.4
13.5
22.4

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< -1.5 Std. Dev.
-1.5 - -0.50 Std. Dev.
-0.50 - 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
1.5 - 2.5 Std. Dev.
> 2.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-12B

COPPER SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

N

Alpha-Ditch

19300
21200
19800
19000
21800
10200
20000 J
18300
15000
20500 J
17100
27300
16700
26900
19400
19000 J
14600
17600
17300 J
21200 J
18500
18500
17700
City of Henderson Wastewater Reclamation Facility
14300
21900
Beta Ditch

>= 10 Ft bgs

Alpha-Ditch

21400
15600
19100
21700
17700
21400
21300 J
17200
13500
19800 J
19800
15800
18800
21200
16100
18200
17400
15100
17000
19800
City of Henderson Wastewater Reclamation Facility
20500
16200
13000
16500 J
Beta Ditch

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect
< Max. Shallow Background
>= Max. Shallow Background and < Residential BCL
>= Residential BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

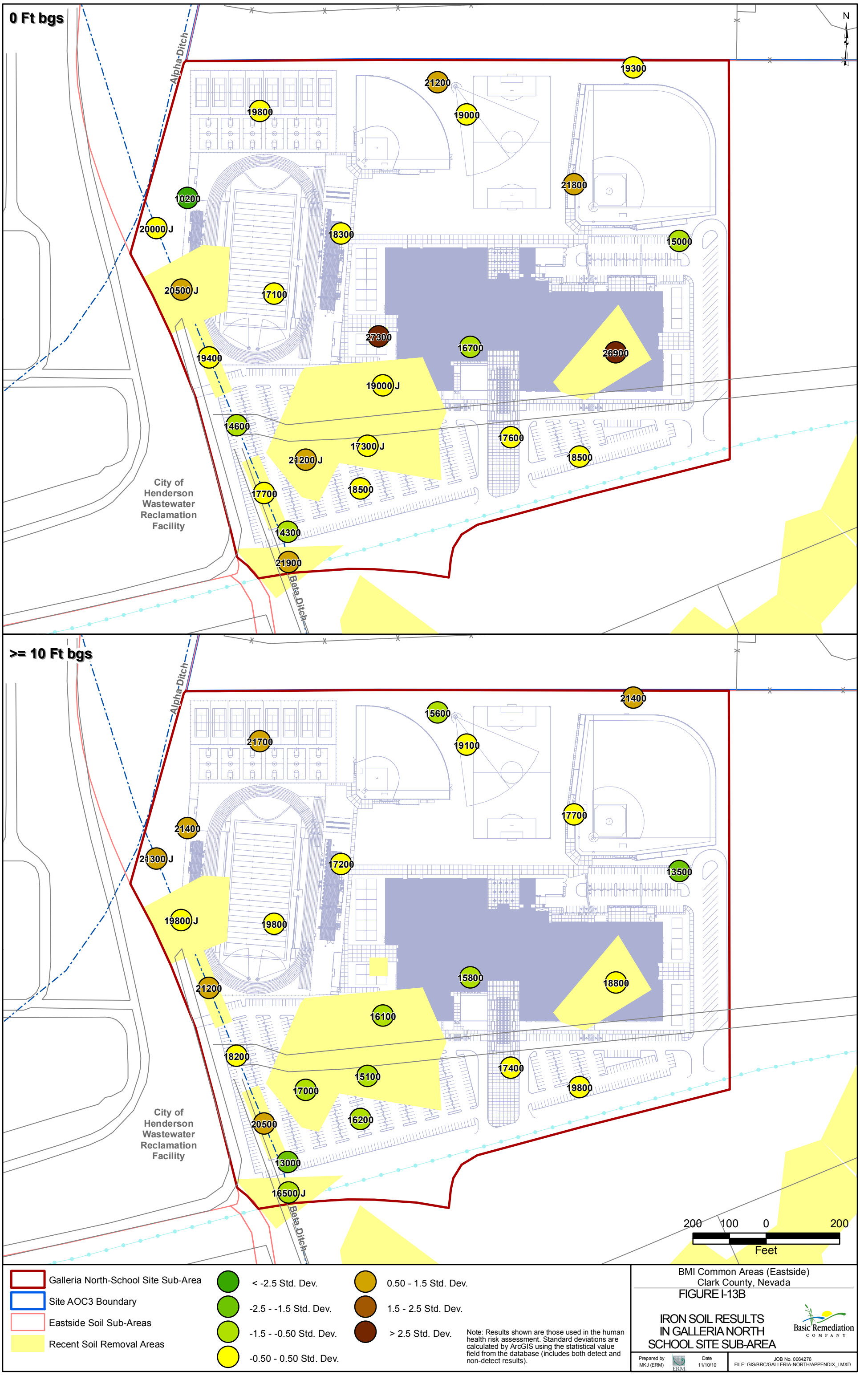
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-13A

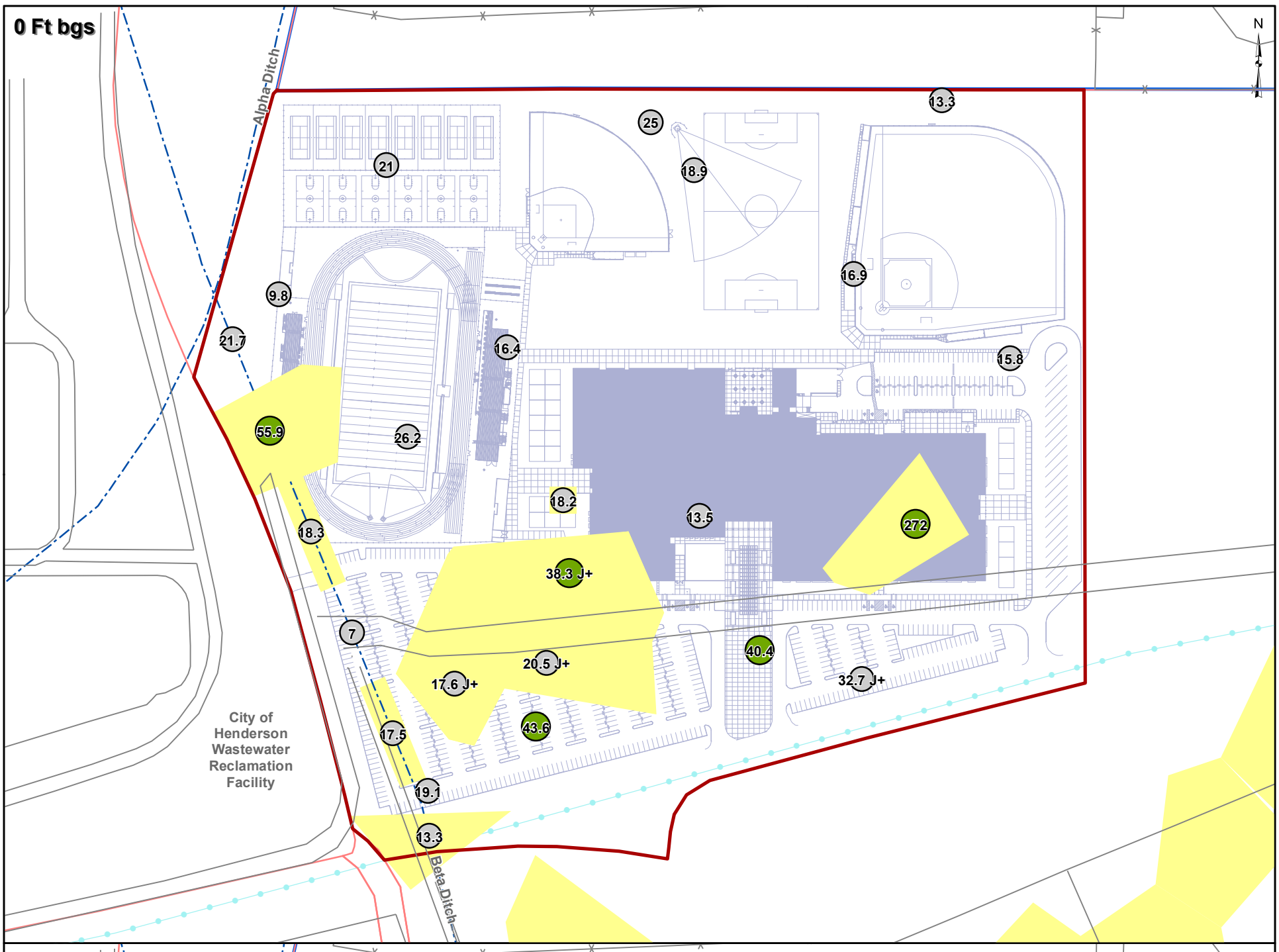
IRON SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation COMPANY

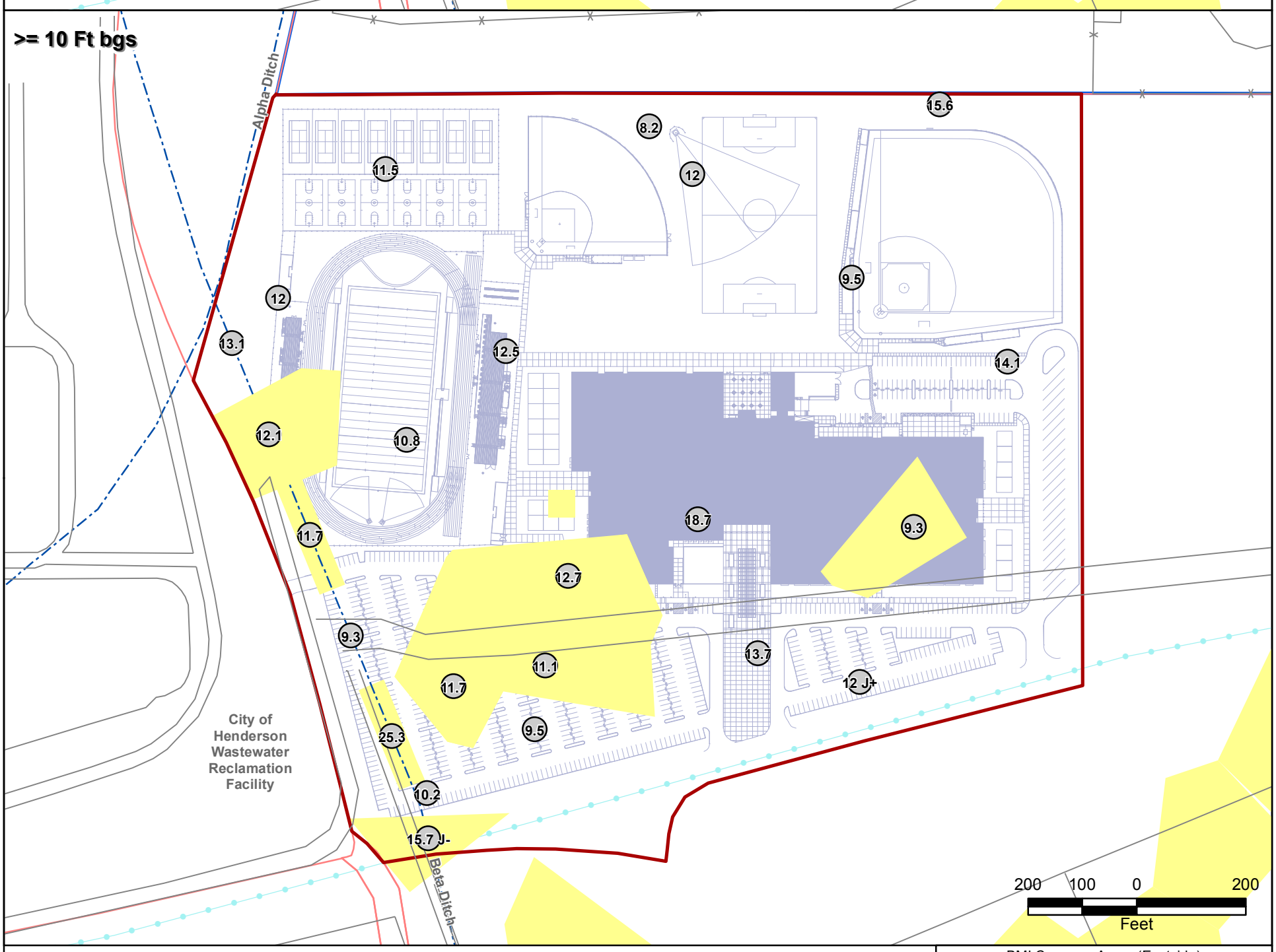
Prepared by MKJ (ERM) | ERM | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD


0 Ft bgs
Alpha Ditch
Beta Ditch
City of Henderson Wastewater Reclamation Facility
N
19300
21200
19800
19000
21800
10200
20000 J
18300
15000
20500 J
17100
27300
16700
26900
19400
19000 J
14600
17600
17300 J
21200 J
18500
18500
17700
14300
21900
>= 10 Ft bgs
21400
15600
19100
21700
17700
21400
21300 J
17200
13500
19800 J
19800
15800
18800
21200
16100
18200
17400
15100
19800
17000
16200
20500
13000
16500 J
200 100 0 200
Feet
Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas
< -2.5 Std. Dev.
-2.5 - -1.5 Std. Dev.
-1.5 - -0.50 Std. Dev.
-0.50 - 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
1.5 - 2.5 Std. Dev.
> 2.5 Std. Dev.
Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).
BMI Common Areas (Eastside)
Clark County, Nevada
FIGURE I-13B
IRON SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA
Basic Remediation Company
Prepared by MKJ (ERM)
ERM
Date 11/10/10
JOB No. 0064276
FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs



>= 10 Ft bgs



Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect
< Max. Shallow Background
>= Max. Shallow Background and < Residential BCL
>= Residential BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-14A

LEAD SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

13.3
25
21
18.9
16.9
9.8
21.7
16.4
15.8
55.9
26.2
18.2
13.5
272
18.3
38.3 J+
7
20.5 J+
40.4
17.6 J+
32.7 J+
17.5
43.6
19.1
13.3

>= 10 Ft bgs

15.6
8.2
11.5
12
9.5
12
13.1
12.5
14.1
12.1
10.8
18.7
9.3
11.7
12.7
9.3
13.7
11.1
11.7
12 J+
25.3
9.5
10.2
15.7 J-

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
> 1.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-14B

LEAD SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha-Ditch

Beta-Ditch

City of Henderson Wastewater Reclamation Facility

N

14.9
17.2
12.5
15
20.9
13.8
12.6 J+
14.3
14.2
13.4 J+
15.2
13.6
16.2
14.5
14.9
15.9 J+
12
13 J+
14.1
14.8 J+
16.3
16.1
11.8
14.4
19

>= 10 Ft bgs

16.3
14.7
17.2
17.2
14.3
14.8
16.7 J+
18
13.9
13.3 J+
16
16.2
16.4
13.6
19.7
12.7
19.2
16.4
15.4
18.8
14.7
13.4
20.3
15.7

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect
< Max. Shallow Background
>= Max. Shallow Background and < Residential BCL
>= Residential BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-15A

LITHIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

14.9 17.2 12.5 15 20.9 13.8 12.6 J+ 14.3 14.2 13.4 J+ 15.2 13.6 16.2 14.5 14.9 15.9 J+ 12 13 J+ 14.1 14.8 J+ 16.3 16.1 11.8 14.4 19

>= 10 Ft bgs

16.3 14.7 17.2 17.2 14.3 14.8 16.7 J+ 18 13.9 13.3 J+ 16 13.6 16.2 16.4 19.7 12.7 16.4 19.2 15.4 18.8 14.7 13.4 20.3 15.7

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< -1.5 Std. Dev.
-1.5 - -0.50 Std. Dev.
-0.50 - 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
1.5 - 2.5 Std. Dev.
> 2.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

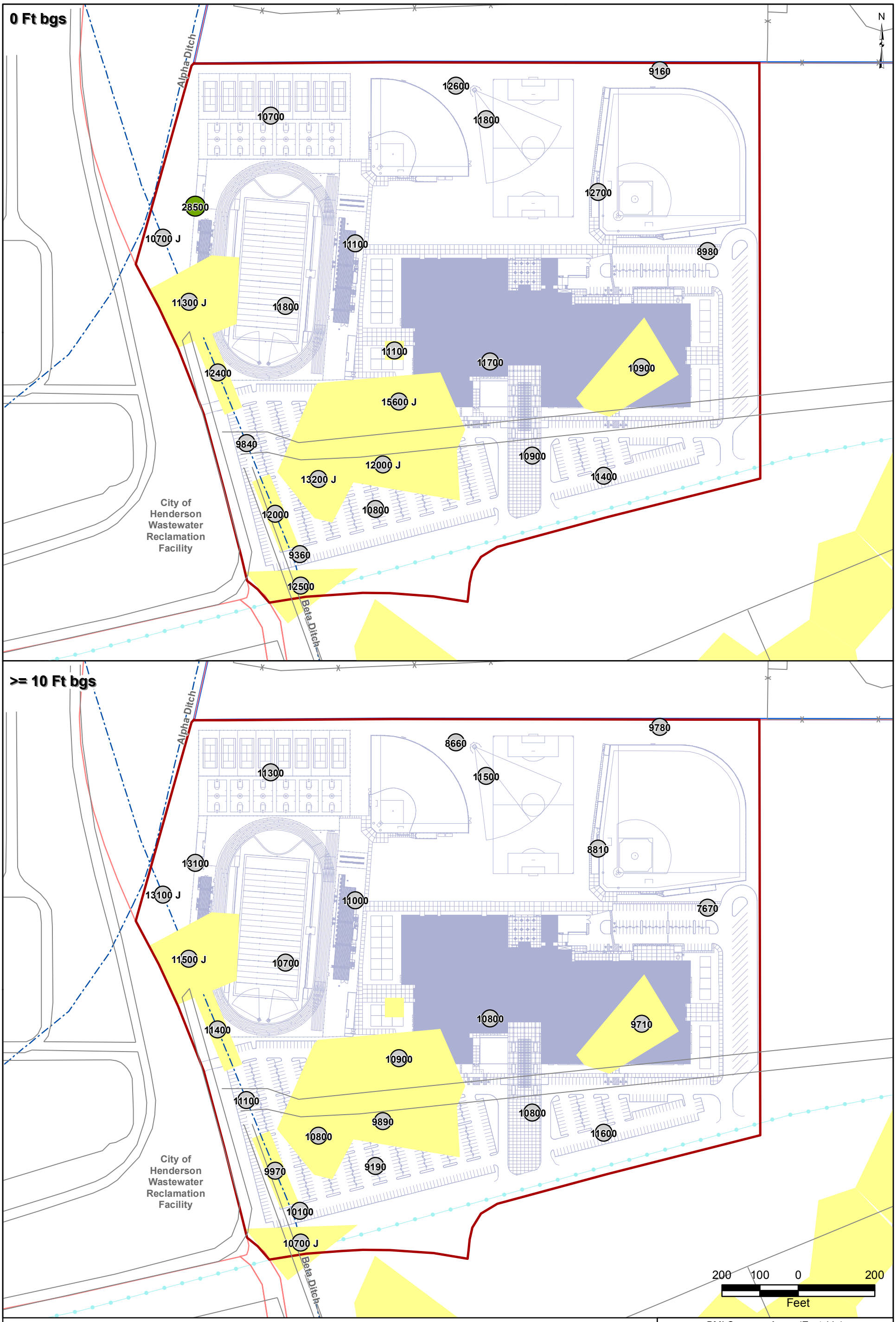
BMI Common Areas (Eastside)
Clark County, Nevada

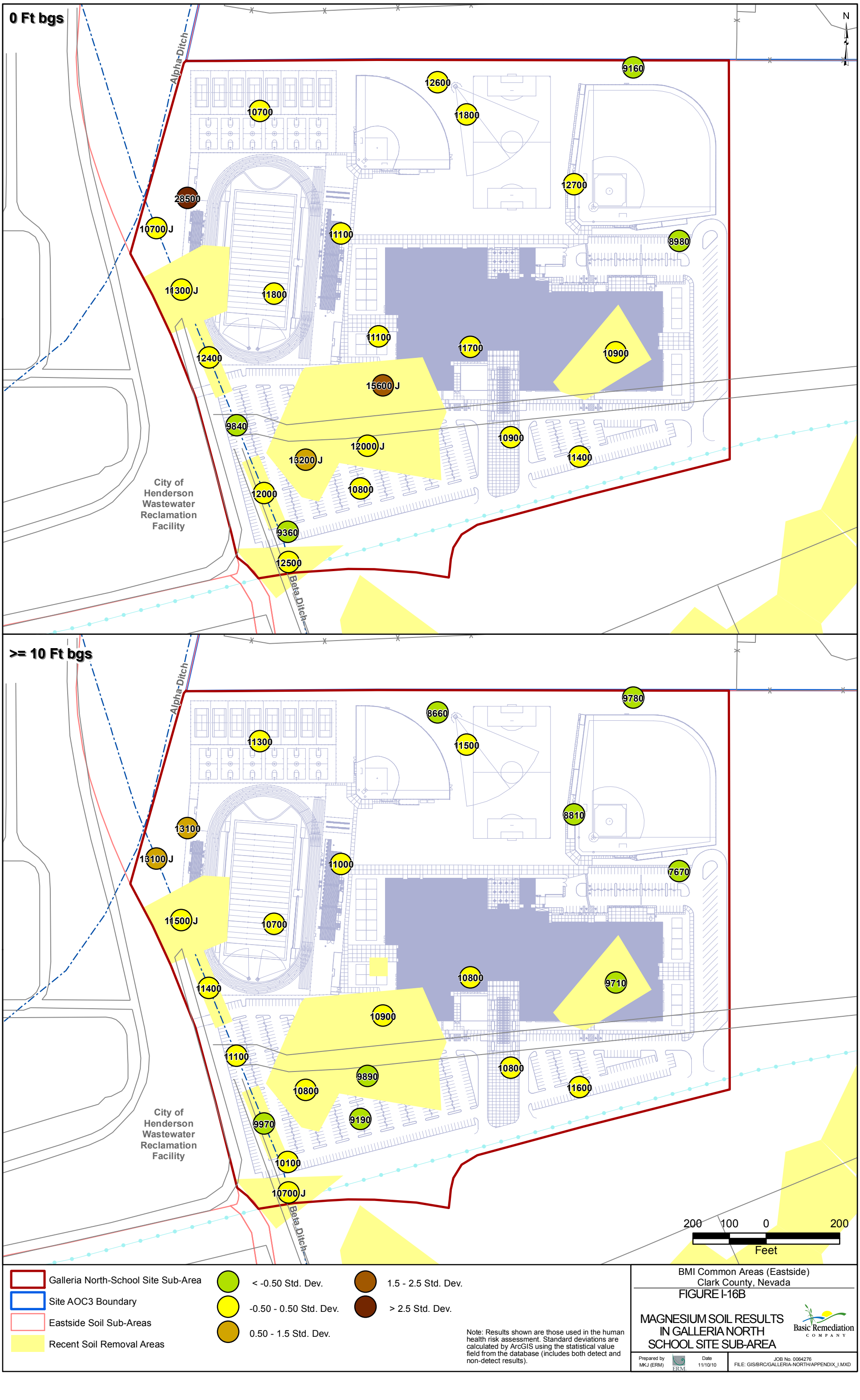
FIGURE I-15B

LITHIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD


0 Ft bgs
Alpha-Ditch
Beta Ditch
City of Henderson Wastewater Reclamation Facility
N
9160
12600
10700
11800
12700
28500
10700 J
11100
8980
11300 J
11800
11100
11700
10900
12400
15600 J
9840
12000 J
10900
13200 J
11400
12000
10800
9360
12500
>= 10 Ft bgs
9780
8660
11300
11500
8810
13100
13100 J
11000
7670
11500 J
10700
10800
9710
11400
10900
11100
9890
10800
10800
11600
9970
9190
10100
10700 J
200 100 0 200
Feet
Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas
Non-Detect
< Max. Shallow Background
>= Max. Shallow Background and < Residential BCL
>= Residential BCL
Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.
BMI Common Areas (Eastside)
Clark County, Nevada
FIGURE I-16A
MAGNESIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA
Basic Remediation COMPANY
Prepared by MKJ (ERM)
ERM
Date 11/10/10
JOB No. 0064276
FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD


0 Ft bgs
Alpha Ditch
Beta Ditch
City of Henderson Wastewater Reclamation Facility
N
9160
12600
10700
11800
12700
28500
10700 J
11100
8980
11300 J
11800
11100
11700
10900
12400
15600 J
9840
12000 J
10900
13200 J
11400
10800
12000
9360
12500
>= 10 Ft bgs
9780
8660
11300
11500
8810
13100
13100 J
11000
7670
11500 J
10700
10800
9710
11400
10900
11100
10800
9890
11600
10800
9970
9190
10100
10700 J
200 100 0 200
Feet
Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas
< -0.50 Std. Dev.
-0.50 - 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
1.5 - 2.5 Std. Dev.
> 2.5 Std. Dev.
Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).
BMI Common Areas (Eastside)
Clark County, Nevada
FIGURE I-16B
MAGNESIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA
Basic Remediation COMPANY
Prepared by MKJ (ERM)
ERM
Date 11/10/10
JOB No. 0064276
FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

N

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

489
586
550
511
508
295
692 J
543
568
808 J
614
619 J+
451
619
587 J
700 J
326 J
608 J
702 J
607
607 J
557 J
493 J
476
457 J+

>= 10 Ft bgs

606
438
778
596
441
716
612 J
455
534
530 J
567
513
444
517 J
418
481 J
408 J
397 J
477 J
475
544 J
458 J
349
491 J

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect
< Max. Shallow Background
>= Max. Shallow Background and < Residential BCL
>= Residential BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-17A

MANGANESE SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

N

489
586
550
511
508
295
692 J
543
568
808 J
614
619 J+
451
619
587 J
700 J
326 J
608 J
702 J
607
607 J
493 J
557 J
476
457 J+

>= 10 Ft bgs

606
438
778
596
441
716
612 J
455
534
530 J
567
513
444
517 J
418
481 J
408 J
397 J
475
477 J
544 J
458 J
349
491 J

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< -1.5 Std. Dev.
-1.5 - -0.50 Std. Dev.
-0.50 - 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
1.5 - 2.5 Std. Dev.
> 2.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

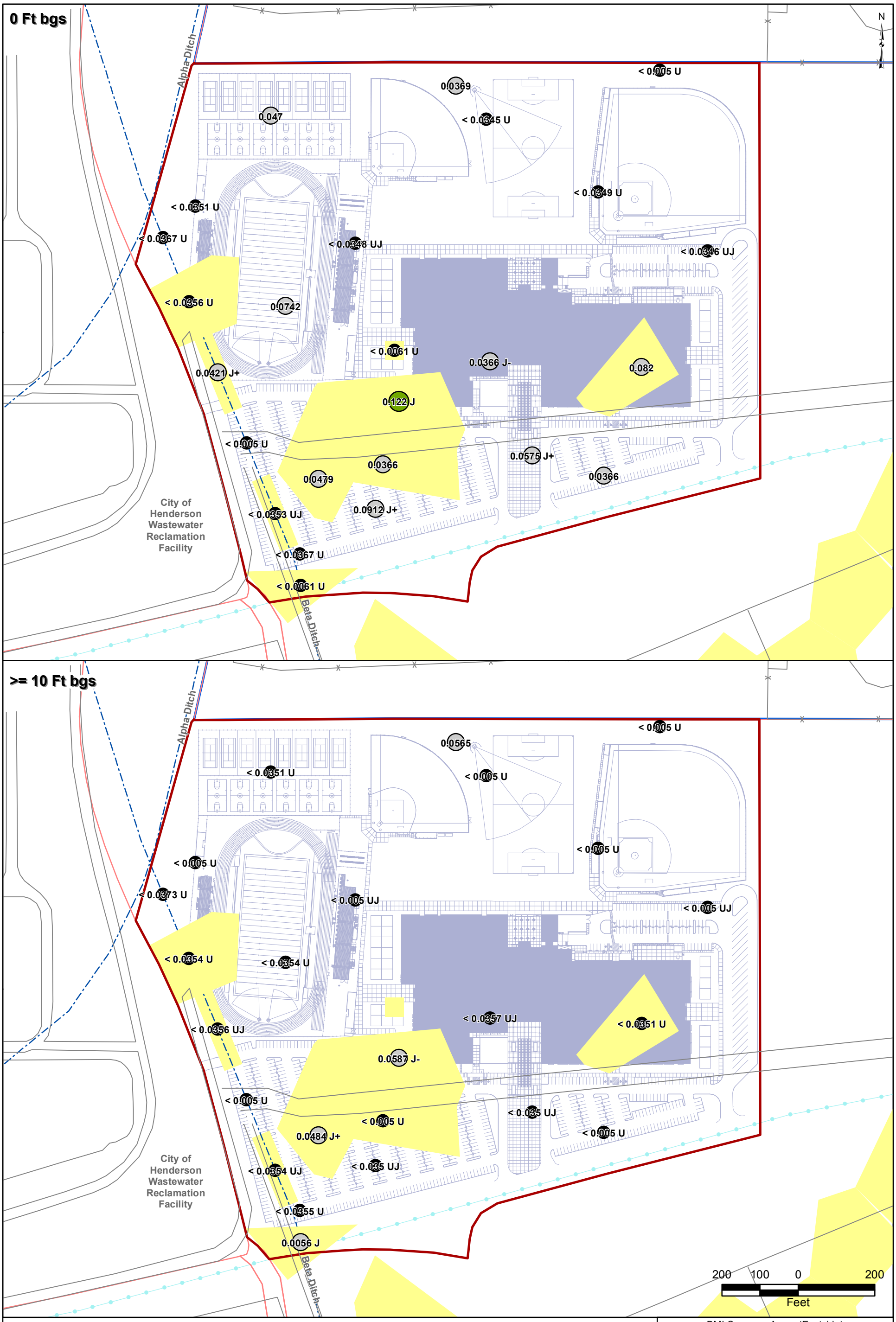
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-17B

MANGANESE SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD


0 Ft bgs
Alpha-Ditch
N
< 0.005 U
0.0369
0.047
< 0.0345 U
< 0.0349 U
< 0.0351 U
< 0.0367 U
< 0.0348 UJ
< 0.0346 UJ
< 0.0356 U
0.0742
< 0.0061 U
0.0366 J-
0.082
0.0421 J+
0.122 J
< 0.005 U
0.0575 J+
0.0366
0.0366
0.0479
0.0912 J+
< 0.0353 UJ
< 0.0367 U
< 0.0061 U
City of Henderson Wastewater Reclamation Facility
Beta Ditch
>= 10 Ft bgs
Alpha-Ditch
< 0.005 U
0.0565
< 0.0351 U
< 0.005 U
< 0.005 U
< 0.005 U
< 0.0373 U
< 0.005 UJ
< 0.005 UJ
< 0.0354 U
< 0.0354 U
< 0.0357 UJ
< 0.0351 U
< 0.0356 UJ
0.0587 J-
< 0.005 U
< 0.005 U
< 0.035 UJ
0.0484 J+
< 0.005 U
City of Henderson Wastewater Reclamation Facility
< 0.0354 UJ
< 0.035 UJ
< 0.0355 U
0.0056 J
Beta Ditch
200 100 0 200
Feet
Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas
Non-Detect
< Max. Shallow Background
>= Max. Shallow Background and < Residential BCL
>= Residential BCL
Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.
BMI Common Areas (Eastside)
Clark County, Nevada
FIGURE I-18A
MERCURY SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA
Basic Remediation COMPANY
Prepared by MKJ (ERM)
ERM
Date 11/10/10
JOB No. 0064276
FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

< 0.005 U
0.0369
0.047
< 0.0345 U
< 0.0349 U
< 0.0351 U
< 0.0367 U
< 0.0348 UJ
< 0.0346 UJ
< 0.0356 U
0.0742
< 0.0061 U
0.0366 J-
0.082
0.0421 J+
0.122 J
< 0.005 U
0.0366
0.0575 J+
0.0366
0.0479
0.0912 J+
< 0.0353 UJ
< 0.0367 U
< 0.0061 U

City of Henderson Wastewater Reclamation Facility

Beta Ditch

>= 10 Ft bgs

Alpha Ditch

< 0.005 U
0.0565
< 0.0351 U
< 0.005 U
< 0.005 U
< 0.005 U
< 0.0373 U
< 0.005 UJ
< 0.005 UJ
< 0.0354 U
< 0.0354 U
< 0.0357 UJ
< 0.0351 U
< 0.0356 UJ
0.0587 J-
< 0.005 U
< 0.035 UJ
< 0.005 U
0.0484 J+
< 0.005 U
< 0.0354 UJ
< 0.035 UJ
< 0.0355 U
0.0056 J

City of Henderson Wastewater Reclamation Facility

Beta Ditch

200 100 0 200
Feet

N

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< -0.50 Std. Dev.
-0.50 - 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
1.5 - 2.5 Std. Dev.
> 2.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-18B

MERCURY SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

1 J
0.99 J
0.74 J
0.99 J
0.66 J
1.3 J
0.65 J
1.1 J
0.76 J
1.7 J
0.93 J
< 2.5 U
1.5 J
3.2
0.9 J
< 2.6 UJ
0.69 J
< 2.7 UJ
< 2.6 UJ
0.69 J
0.89 J
0.69 J
0.58 J
< 0.47 U
< 2.6 U

>= 10 Ft bgs

0.76 J
0.67 J
1.1 J
0.99 J
1 J
1.4 J
1.1 J
1.4 J
0.77 J
1.3 J
1.2 J
1.1 J
0.61 J
1.3 J
1.1 J
0.89 J
0.76 J
1.1 J
1.1 J
0.93 J
City of Henderson Wastewater Reclamation Facility
1.7 J
0.64 J
0.62 J
0.88 J

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect
< Max. Shallow Background
>= Max. Shallow Background and < Residential BCL
>= Residential BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-19A

MOLYBDENUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

1 J
0.99 J
0.74 J
0.99 J
0.66 J
1.3 J
0.65 J
1.1 J
0.76 J
1.7 J
0.93 J
< 2.5 U
1.5 J
3.2
0.9 J
< 2.6 UJ
0.69 J
< 2.7 UJ
< 2.6 UJ
0.69 J
0.89 J
0.69 J
0.58 J
< 0.47 U
< 2.6 U

>= 10 Ft bgs

0.76 J
0.67 J
1.1 J
0.99 J
1 J
1.4 J
1.1 J
1.4 J
0.77 J
1.3 J
1.2 J
1.1 J
0.61 J
1.3 J
1.1 J
0.89 J
0.76 J
1.1 J
1.1 J
0.93 J
1.7 J
0.64 J
0.62 J
0.88 J

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< -0.50 Std. Dev.
-0.50 - 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
1.5 - 2.5 Std. Dev.
> 2.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-19B

MOLYBDENUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

16.4 19.9 19.4 18.5 21.6 13 17.5 17.7 15.2 19 16.5 20 16.7 20.5 17.8 19.7 28.2 17.7 17.2 19.5 19.4 17.7 16.2 13.3 16.6

>= 10 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

20.1 13.1 23.7 17 19.5 15.2 19.8 16 14.4 18.4 15.7 15.7 16.3 16.7 15.5 16.4 14.2 15.3 15.9 17.3 15.9 15.2 14.2 13.7

200 100 0 200
Feet

- Galleria North-School Site Sub-Area
- Site AOC3 Boundary
- Eastside Soil Sub-Areas
- Recent Soil Removal Areas

- Non-Detect
- < Max. Shallow Background
- >= Max. Shallow Background and < Residential BCL
- >= Residential BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

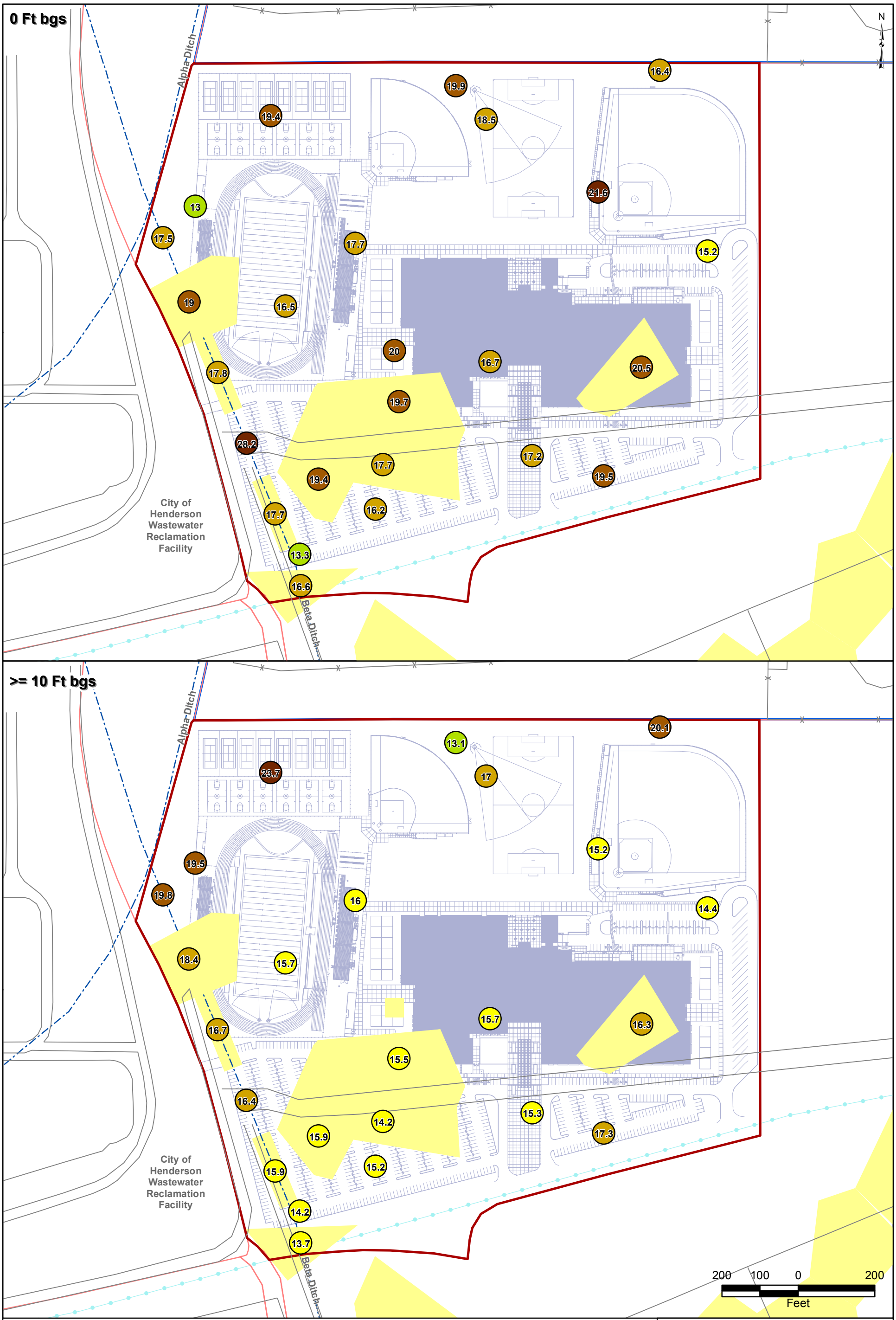
FIGURE I-20A

NICKEL SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs



Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< -1.5 Std. Dev.
-1.5 - -0.50 Std. Dev.
-0.50 - 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
> 1.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-20B

NICKEL SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | ERM | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs
Alpha Ditch
Beta Ditch
City of Henderson Wastewater Reclamation Facility
2830
2870
2580
2990
3440
2300
2520 J
3040 J+
3710 J+
2740 J
2950
3090 J+
2840 J+
2060
2540
2800 J
1620
1930 J
2660 J
2240
2390
1820
1780
1710 J+
2330 J+
N
>= 10 Ft bgs
3080
2030
2210
2230
1820
2470
2240 J
2300 J+
1610 J+
1880 J
2100
2550 J+
1830
2290
2270 J+
1770
2080
1840
1850
2710
1380
2340
1480 J+
1570 J
200 100 0 200
Feet
Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas
Non-Detect
< Max. Shallow Background
>= Max. Shallow Background and < Residential BCL
>= Residential BCL
Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.
BMI Common Areas (Eastside)
Clark County, Nevada
FIGURE I-21A
POTASSIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA
Basic Remediation COMPANY
Prepared by MKJ (ERM)
ERM
Date 11/10/10
JOB No. 0064276
FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

2830
2870
2580
2990
3440
2300
2520 J
3040 J+
3710 J+
2740 J
2950
3090 J+
2840 J+
2060
2540
2800 J
1620
1930 J
2240
2660 J
2390
City of Henderson Wastewater Reclamation Facility
1780
1820
1710 J+
2330 J+
Beta Ditch

>= 10 Ft bgs

Alpha Ditch

3080
2030
2210
2230
1820
2470
2240 J
2300 J+
1610 J+
1880 J
2100
2550 J+
1830
2290
2270 J+
1770
2080
1840
2710
1850
City of Henderson Wastewater Reclamation Facility
2340
1380
1480 J+
1570 J
Beta Ditch

N

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< -1.5 Std. Dev.
-1.5 - -0.50 Std. Dev.
-0.50 - 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
> 1.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-21B

POTASSIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | ERM | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

< 0.4 U

< 2.5 U

< 2.6 U

< 2.6 UJ

< 2.7 UJ

>= 10 Ft bgs

0.47 J

Feet: 200 100 0 200

Galleria North-School Site Sub-Area

Site AOC3 Boundary

Eastside Soil Sub-Areas

Recent Soil Removal Areas

Non-Detect

< Max. Shallow Background

>= Max. Shallow Background and < Residential BCL

>= Residential BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-22A

SELENIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

< 0.4 U
< 0.4 U
< 0.4 U
< 0.4 U
< 0.4 U
< 0.4 U
< 0.4 U
< 0.4 U
< 0.4 U
< 0.4 U
< 2.5 U
< 0.4 U
< 0.4 U
< 2.6 UJ
< 0.4 U
< 0.4 U
< 2.7 UJ
< 2.6 UJ
< 0.4 U
< 0.4 U
< 0.4 U
< 2.6 U

City of Henderson Wastewater Reclamation Facility

Beta Ditch

>= 10 Ft bgs

Alpha Ditch

< 0.4 U
< 0.4 U
< 0.4 U
< 0.4 U
< 0.4 U
< 0.4 U
< 0.4 U
< 0.4 U
0.47 J
< 0.4 U
< 0.4 U
< 0.4 U
< 0.4 U
< 0.4 U
< 0.4 U
< 0.4 U
< 0.4 U
< 0.4 U
< 0.4 U
< 0.4 U
< 0.4 U

City of Henderson Wastewater Reclamation Facility

Beta Ditch

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
> 1.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

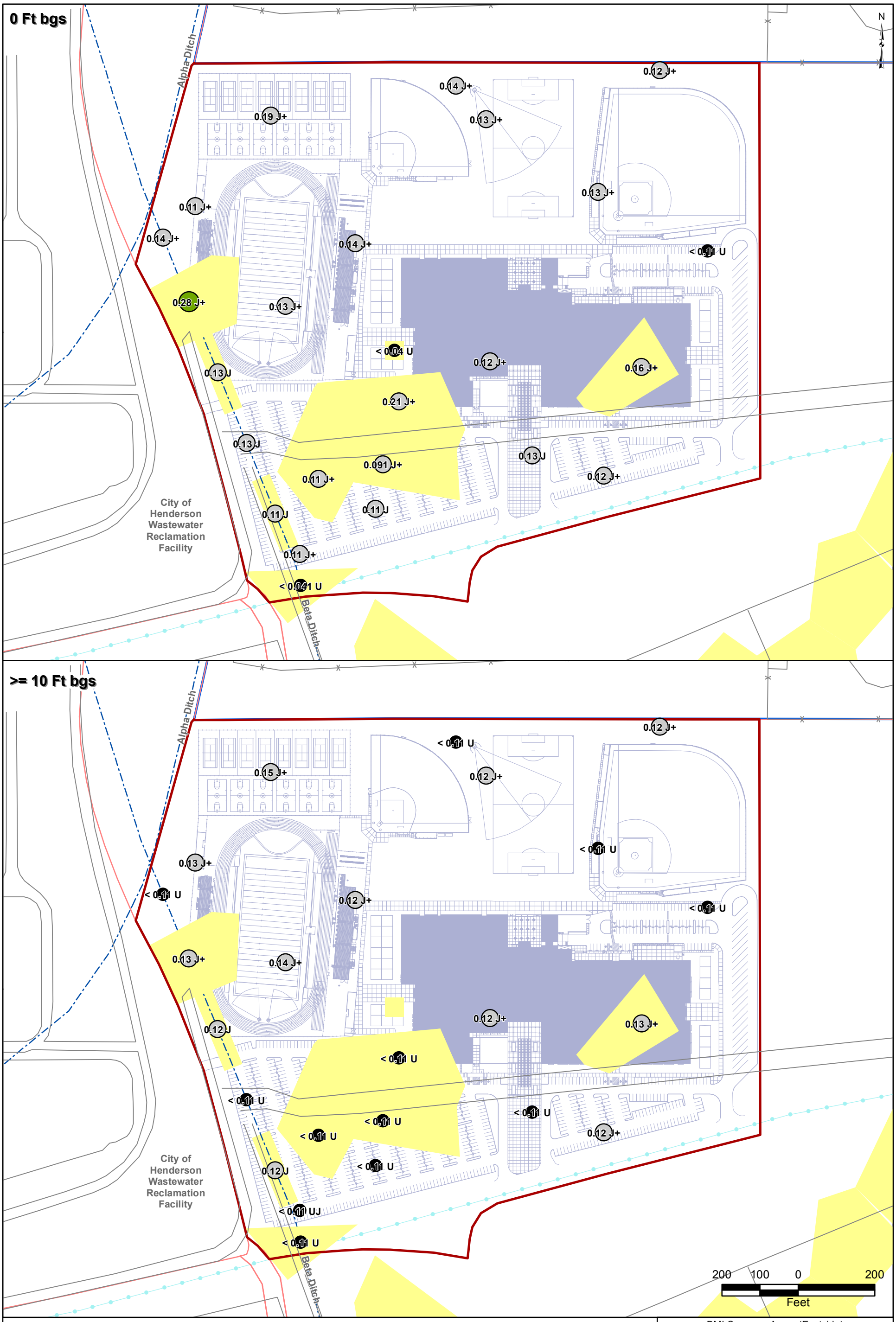
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-22B

SELENIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation COMPANY

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD


0 Ft bgs
Alpha-Ditch
Beta-Ditch
City of Henderson Wastewater Reclamation Facility
N
0.12 J+
0.14 J+
0.19 J+
0.13 J+
0.11 J+
0.14 J+
0.14 J+
< 0.11 U
0.28 J+
0.13 J+
< 0.04 U
0.12 J+
0.16 J+
0.13 J
0.21 J+
0.13 J
0.091 J+
0.13 J
0.11 J+
0.12 J+
0.11 J
0.11 J
0.11 J+
< 0.041 U
>= 10 Ft bgs
0.12 J+
< 0.11 U
0.15 J+
0.12 J+
0.13 J+
< 0.11 U
< 0.11 U
0.12 J+
< 0.11 U
0.13 J+
0.14 J+
0.12 J+
0.13 J+
0.12 J
< 0.11 U
< 0.11 U
< 0.11 U
< 0.11 U
< 0.11 U
0.12 J+
0.12 J
< 0.11 UJ
< 0.11 U
200 100 0 200
Feet
Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas
Non-Detect
< Max. Shallow Background
>= Max. Shallow Background and < Residential BCL
>= Residential BCL
Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.
BMI Common Areas (Eastside)
Clark County, Nevada
FIGURE I-23A
SILVER SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA
Basic Remediation COMPANY
Prepared by MKJ (ERM)
ERM
Date 11/10/10
JOB No. 0064276
FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

0.19 J+
0.14 J+
0.13 J+
0.12 J+
0.11 J+
0.14 J+
0.14 J+
0.13 J+
< 0.11 U
0.28 J+
0.13 J+
< 0.04 U
0.13 J
0.12 J+
0.16 J+
0.21 J+
0.13 J
0.13 J
0.091 J+
0.11 J+
0.12 J+
0.11 J
0.11 J
0.11 J+
< 0.041 U

City of Henderson Wastewater Reclamation Facility

Beta Ditch

>= 10 Ft bgs

Alpha Ditch

0.12 J+
< 0.11 U
0.15 J+
0.12 J+
< 0.11 U
0.13 J+
< 0.11 U
0.12 J+
< 0.11 U
0.13 J+
0.14 J+
0.12 J+
0.13 J+
0.12 J
< 0.11 U
< 0.11 U
< 0.11 U
< 0.11 U
< 0.11 U
0.12 J+
0.12 J
< 0.11 U
< 0.11 UJ
< 0.11 U

City of Henderson Wastewater Reclamation Facility

Beta Ditch

N

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< -1.5 Std. Dev.
-1.5 - -0.50 Std. Dev.
-0.50 - 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
> 1.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-23B

SILVER SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

1520
1160 J
651
513
656
348
534
421
1180
1480
2390
535
4420
292
871 J
1100 J+
1500
433
412 J+
277
1220 J+
284
500
604
784

>= 10 Ft bgs

504
1080
839
1210
801
1260
1330
1290
649
1040
1920
1190
599
1210
788
834
870
798
889
1050
555
1570
1040
796

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect
< Max. Shallow Background
>= Max. Shallow Background and < Residential BCL
>= Residential BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

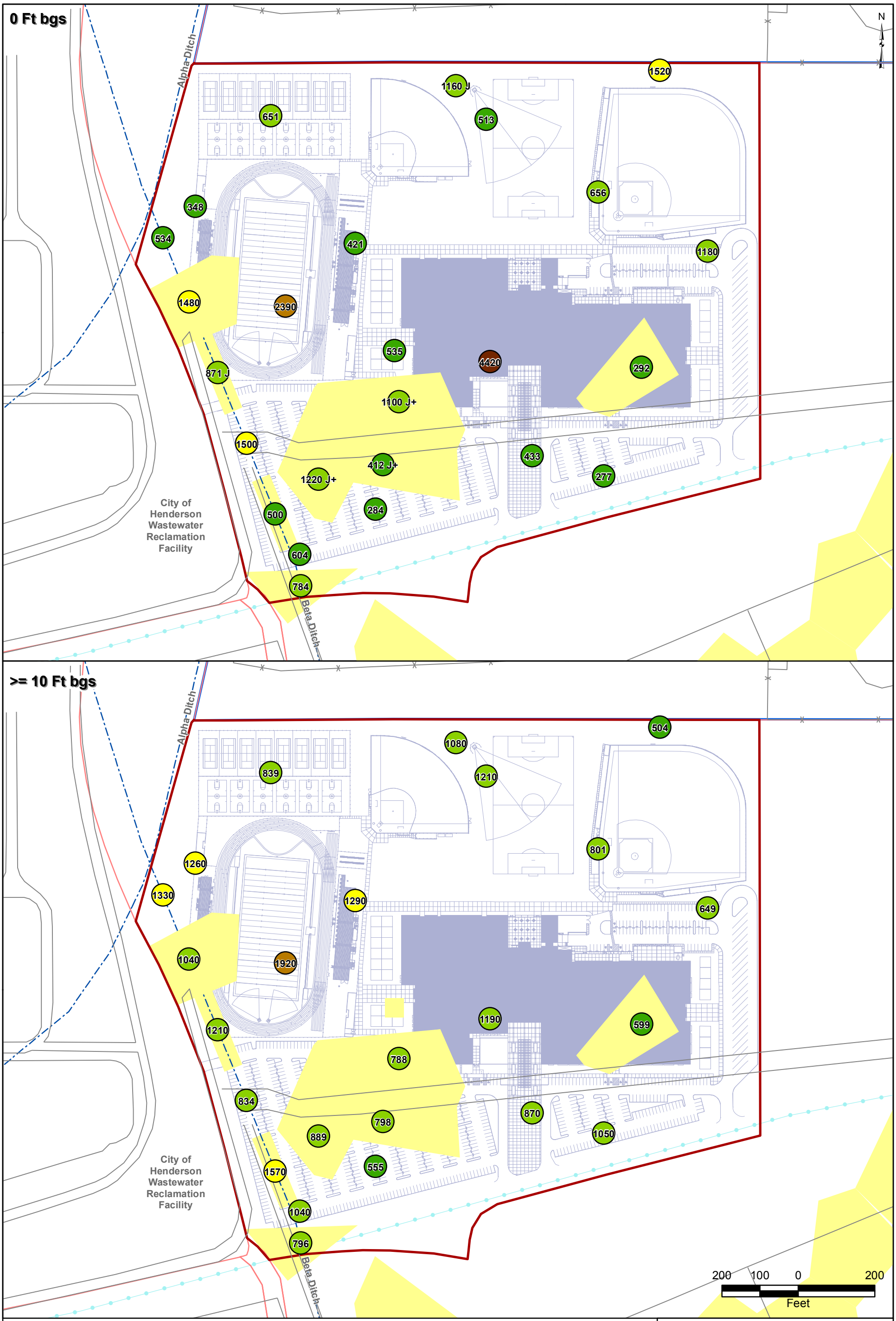
FIGURE I-24A

SODIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs



>= 10 Ft bgs

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< -0.50 Std. Dev.
-0.50 - 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
1.5 - 2.5 Std. Dev.
> 2.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

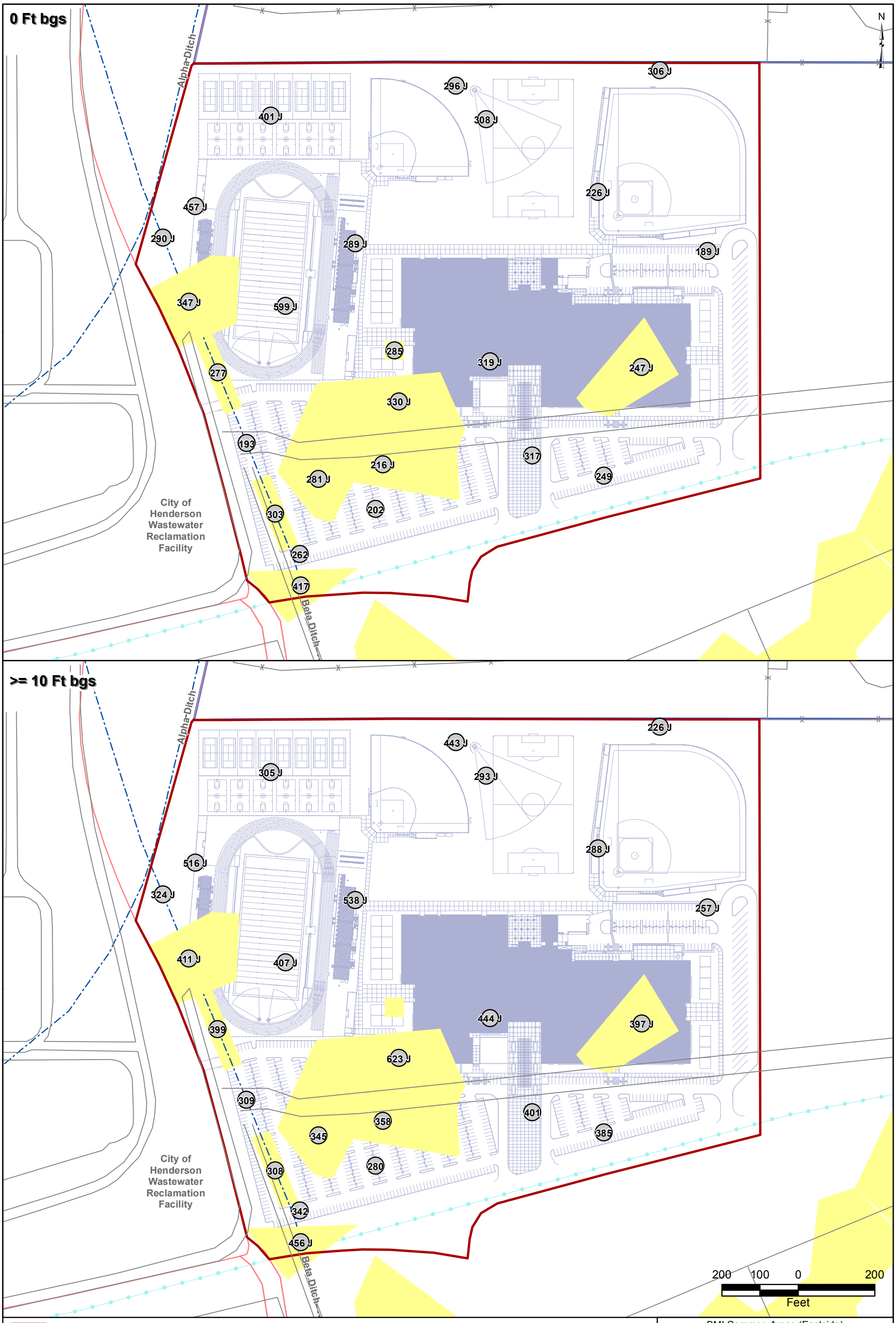
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-24B

SODIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD


0 Ft bgs
Alpha Ditch
Beta Ditch
City of Henderson Wastewater Reclamation Facility
N
306 J
296 J
308 J
401 J
226 J
457 J
290 J
289 J
189 J
347 J
599 J
285
319 J
247 J
277
330 J
193
216 J
317
281 J
249
303
202
262
417
>= 10 Ft bgs
226 J
443 J
305 J
293 J
288 J
516 J
324 J
538 J
257 J
411 J
407 J
444 J
397 J
399
623 J
309
358
401
345
385
280
308
342
456 J
200 100 0 200
Feet
Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas
Non-Detect
< Max. Shallow Background
>= Max. Shallow Background and < Residential BCL
>= Residential BCL
Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.
BMI Common Areas (Eastside)
Clark County, Nevada
FIGURE I-25A
STRONTIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA
Basic Remediation COMPANY
Prepared by MKJ (ERM)
ERM
Date 11/10/10
JOB No. 0064276
FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

N

306 J
296 J
401 J
308 J
226 J
457 J
290 J
289 J
189 J
347 J
599 J
285
319 J
247 J
277
330 J
193
216 J
317
281 J
249
303
202
262
417

>= 10 Ft bgs

226 J
443 J
305 J
293 J
288 J
516 J
324 J
538 J
257 J
411 J
407 J
444 J
397 J
399
623 J
309
401
358
385
345
280
308
342
456 J

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< -0.50 Std. Dev.
-0.50 - 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
1.5 - 2.5 Std. Dev.
> 2.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-25B

STRONTIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

< 0.75 U

< 0.29 U

< 0.105 U

< 1 U

>= 10 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

< 0.75 U

200 100 0 200

Feet

Galleria North-School Site Sub-Area

Site AOC3 Boundary

Eastside Soil Sub-Areas

Recent Soil Removal Areas

Non-Detect

< Max. Shallow Background

>= Max. Shallow Background and < Residential BCL

>= Residential BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-26A

THALLIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation COMPANY

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha-Ditch

< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.29 U
< 0.75 U
< 0.75 U
< 0.105 U
< 0.75 U
< 0.75 U
< 0.105 U
< 0.105 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 1 U

City of Henderson Wastewater Reclamation Facility

Beta Ditch

N

>= 10 Ft bgs

Alpha-Ditch

< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U

City of Henderson Wastewater Reclamation Facility

Beta Ditch

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< -2.5 Std. Dev.
-2.5 - -1.5 Std. Dev.
-1.5 - -0.50 Std. Dev.
-0.50 - 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
1.5 - 1.6 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-26B

THALLIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

N

Alpha Ditch

< 0.75 U
< 1 U
< 1.1 U
10.4
1.7 J+
1 J
4.2 J
1.2

City of Henderson Wastewater Reclamation Facility

Beta Ditch

>= 10 Ft bgs

Alpha Ditch
< 0.75 U
1.2
City of Henderson Wastewater Reclamation Facility
Beta Ditch

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect
< Max. Shallow Background
>= Max. Shallow Background and < Residential BCL
>= Residential BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-27A

TIN SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

< 0.75 U
< 1 U
< 1.1 U
< 1 U
< 1.1 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 1.1 U
< 1 U
< 1 U
< 0.75 U
< 0.75 U
10.4
1.7 J+
< 0.75 U
1 J
< 0.75 U
4.2 J
< 0.75 U
1.2
< 0.75 U
< 0.75 U
< 1 U

City of Henderson Wastewater Reclamation Facility

Beta Ditch

>= 10 Ft bgs

Alpha Ditch

1.2
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U
< 0.75 U

City of Henderson Wastewater Reclamation Facility

Beta Ditch

N

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
1.5 - 2.5 Std. Dev.
> 2.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-27B

TIN SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

1030 | 998 | 886 | 973 | 875 | 435 | 1050 J | 859 | 601 | 1350 J | 925 | 1000 | 598 | 1050 | 921 | 815 J | 791 | 583 J | 855 | 721 J | 755 | 765 | 698 | 664 | 895

>= 10 Ft bgs

1100 | 556 | 918 | 838 | 763 | 1020 | 1120 J | 789 | 486 | 1200 J | 1030 | 926 | 732 | 909 | 608 | 658 | 717 | 546 | 676 | 882 | 800 | 591 | 487 | 735 J

200 100 0 200

Feet

Galleria North-School Site Sub-Area

Site AOC3 Boundary

Eastside Soil Sub-Areas

Recent Soil Removal Areas

Non-Detect

< Max. Shallow Background

>= Max. Shallow Background and < Residential BCL

>= Residential BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-28A

TITANIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

886 998 1030 973 875 435 1050 J 859 601 1350 J 925 1000 598 1050 921 815 J 791 583 J 855 721 J 755 698 765 664 895

>= 10 Ft bgs

918 556 1100 838 763 1020 1120 J 789 486 1200 J 1030 926 732 909 608 658 717 546 676 882 800 591 487 735 J

200 100 0 200

Feet

Galleria North-School Site Sub-Area

Site AOC3 Boundary

Eastside Soil Sub-Areas

Recent Soil Removal Areas

< -1.5 Std. Dev.

-1.5 - -0.50 Std. Dev.

-0.50 - 0.50 Std. Dev.

0.50 - 1.5 Std. Dev.

1.5 - 2.5 Std. Dev.

> 2.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

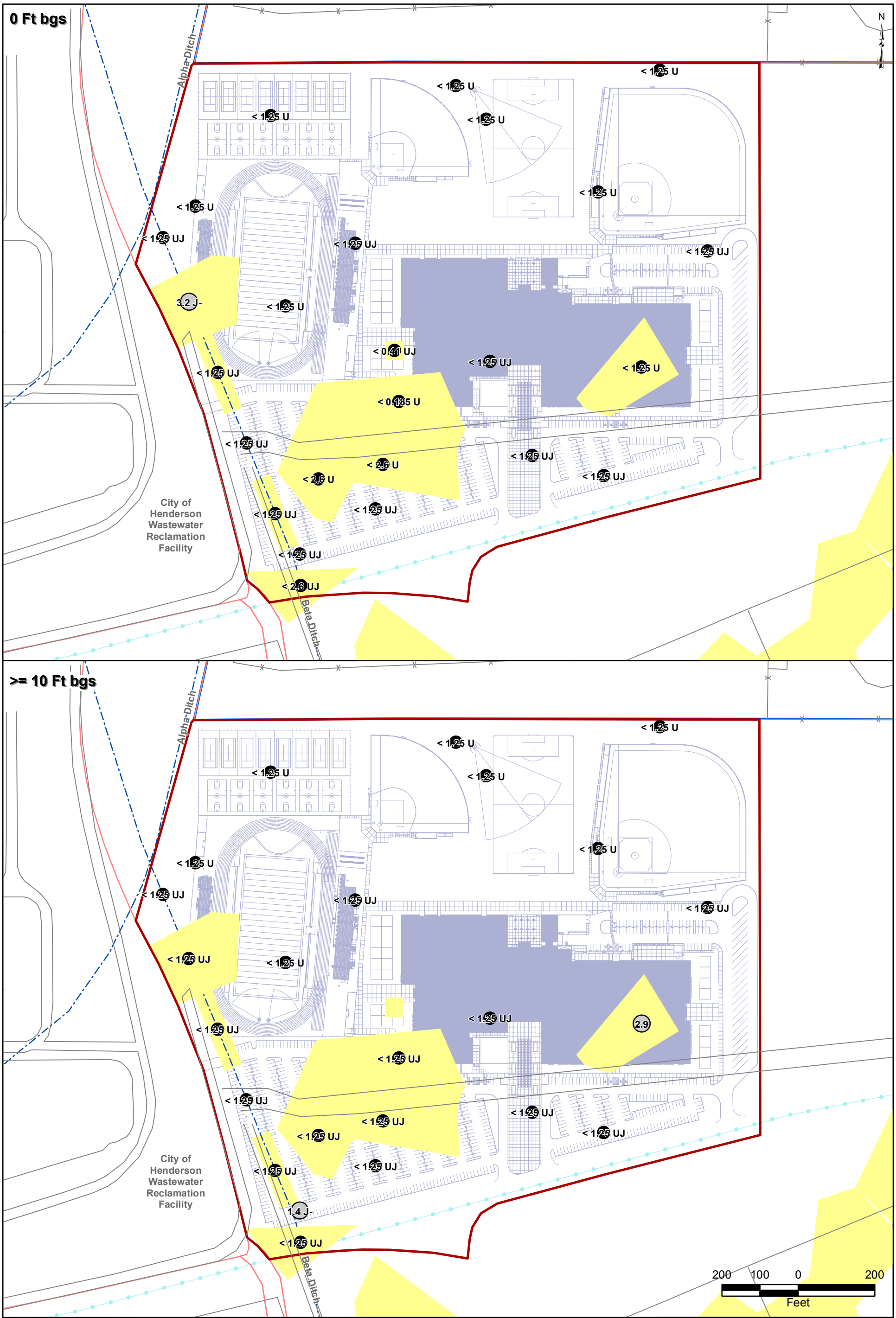
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-28B

TITANIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation COMPANY

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD


0 Ft bgs
Alpha Ditch
Beta Ditch
City of Henderson Wastewater Reclamation Facility
< 1.25 U
< 1.25 UJ
3.2 J-
< 0.41 UJ
< 0.185 U
< 2.6 U
< 2.6 UJ
>= 10 Ft bgs
2.9
1.4 J-
N
200 100 0 200
Feet
Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas
Non-Detect
< Max. Shallow Background
>= Max. Shallow Background and < Residential BCL
>= Residential BCL
Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.
BMI Common Areas (Eastside)
Clark County, Nevada
FIGURE I-29A
TUNGSTEN SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA
Basic Remediation COMPANY
Prepared by MKJ (ERM)
ERM
Date 11/10/10
JOB No. 0064276
FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

< 1.25 U
< 1.25 U
< 1.25 U
< 1.25 U
< 1.25 U
< 1.25 UJ
< 1.25 UJ
< 1.25 UJ
3.2 J-
< 1.25 U
< 0.41 UJ
< 1.25 UJ
< 1.25 UJ
< 1.25 U
< 0.185 U
< 1.25 UJ
< 2.6 U
< 2.6 U
< 1.25 UJ
< 1.25 UJ
< 1.25 UJ
< 1.25 UJ
< 2.6 UJ

City of Henderson Wastewater Reclamation Facility

Beta Ditch

>= 10 Ft bgs

Alpha Ditch

< 1.25 U
< 1.25 U
< 1.25 U
< 1.25 U
< 1.25 U
< 1.25 UJ
< 1.25 UJ
< 1.25 UJ
< 1.25 U
< 1.25 U
< 1.25 UJ
< 1.25 UJ
2.9
< 1.25 UJ
< 1.25 UJ
< 1.25 UJ
< 1.25 UJ
< 1.25 UJ
< 1.25 UJ
< 1.25 UJ
1.4 J-
< 1.25 UJ

City of Henderson Wastewater Reclamation Facility

Beta Ditch

N

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< -1.5 Std. Dev.
-1.5 - -0.50 Std. Dev.
-0.50 - 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
> 1.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-29B

TUNGSTEN SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha-Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

0.99 0.85 0.98 0.75 0.94 1.3 1.2 J+ 0.7 0.59 1.5 J+ 0.84 0.8 0.98 0.92 1.2 1.2 J+ 0.98 0.78 0.83 J+ 1 J+ 0.98 1.2 0.82 1.1 1.4

>= 10 Ft bgs

Alpha-Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

0.74 1.3 1.2 1 1.3 1.2 2.5 J+ 1.4 1.2 1.4 J+ 1 1.2 1.1 1.3 1.9 1.2 1.9 1.4 1.6 2 1.1 1.5 1.6 1.4 J

200 100 0 200

Feet

Galleria North-School Site Sub-Area

Site AOC3 Boundary

Eastside Soil Sub-Areas

Recent Soil Removal Areas

Non-Detect

< Max. Shallow Background

>= Max. Shallow Background and < Residential BCL

>= Residential BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-30A

URANIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation COMPANY

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha-Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

0.99
0.85
0.98
0.75
0.94
1.3
1.2 J+
0.7
0.59
1.5 J+
0.84
0.8
0.98
0.92
1.2
1.2 J+
0.98
0.78
0.83 J+
1 J+
0.98
1.2
0.82
1.1
1.4

>= 10 Ft bgs

0.74
1.3
1.2
1
1.2
1.3
2.5 J+
1.4
1.2
1.4 J+
1
1.2
1.1
1.3
1.9
1.2
1.9
1.4
1.6
2
1.1
1.5
1.6
1.4 J

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< -1.5 Std. Dev.
-1.5 - -0.50 Std. Dev.
-0.50 - 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
1.5 - 2.5 Std. Dev.
> 2.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-30B

URANIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs
Alpha-Ditch
Beta-Ditch
City of Henderson Wastewater Reclamation Facility
N
65.5 J-
70.7 J-
64.8 J-
59.9 J-
67.1 J-
28.2 J-
68.6
57.5 J+
48.2 J+
82.7
58.5 J-
67.3
46.1 J+
70.1 J-
55.2
55.5 J+
38.1
51.6 J+
52.1
60.6 J+
54.2
53.3
50.4
47.8
55.9
>= 10 Ft bgs
67.2 J-
48.9 J-
70.7 J-
62.7 J-
56.7 J-
69.7 J-
59.6
58.5 J+
41.8 J+
60
62 J-
52.2 J+
61.2 J-
62.7
53.4 J+
50.3
49.2
47.5
51.2
57.6
54.2
42.8
44.8
49.6 J-
200 100 0 200
Feet
Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas
Non-Detect
< Max. Shallow Background
>= Max. Shallow Background and < Residential BCL
>= Residential BCL
Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.
BMI Common Areas (Eastside)
Clark County, Nevada
FIGURE I-31A
VANADIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA
Basic Remediation COMPANY
Prepared by MKJ (ERM)
ERM
Date 11/10/10
JOB No. 0064276
FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha-Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

65.5 J-
70.7 J-
64.8 J-
59.9 J-
67.1 J-
28.2 J-
68.6
57.5 J+
48.2 J+
82.7
58.5 J-
67.3
46.1 J+
70.1 J-
55.2
55.5 J+
38.1
51.6 J+
52.1
60.6 J+
54.2
50.4
53.3
47.8
55.9

>= 10 Ft bgs

67.2 J-
48.9 J-
70.7 J-
62.7 J-
69.7 J-
56.7 J-
59.6
58.5 J+
41.8 J+
60
62 J-
52.2 J+
61.2 J-
62.7
53.4 J+
50.3
49.2
47.5
57.6
51.2
54.2
42.8
44.8
49.6 J-

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< -2.5 Std. Dev.
-2.5 - -1.5 Std. Dev.
-1.5 - -0.50 Std. Dev.
-0.50 - 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
1.5 - 2.5 Std. Dev.
> 2.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-31B

VANADIUM SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

81 62.5 47.7 55.8 65.3 52.6 58.5 J 51.8 J 41.4 J 82.2 J 52.8 52.9 47.7 J 150 52.2 84.5 J+ 48 55.2 J+ 67.2 59.3 J+ 59.2 J- 155 48 48 44.5

>= 10 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

52.6 39.6 53.4 52.8 56.4 43.8 67.9 J 43.8 J 37.2 J 63.5 J 53.1 46.3 J 49 47 45 J 44.3 41.5 36.9 38.6 44 J- 47.5 40.6 33.6 45 J-

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect
< Max. Shallow Background
>= Max. Shallow Background and < Residential BCL
>= Residential BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-32A

ZINC SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | ERM | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

81
62.5
47.7
55.8
65.3
52.6
58.5 J
51.8 J
41.4 J
82.2 J
52.8
52.9
47.7 J
150
52.2
84.5 J+
48
67.2
55.2 J+
59.3 J+
59.2 J-
155
48
44.5
Beta Ditch

City of Henderson Wastewater Reclamation Facility

N

>= 10 Ft bgs

Alpha Ditch

52.6
39.6
53.4
52.8
43.8
56.4
67.9 J
43.8 J
37.2 J
63.5 J
53.1
46.3 J
49
47
45 J
44.3
41.5
36.9
38.6
44 J-
40.6
47.5
33.6
45 J-
Beta Ditch

City of Henderson Wastewater Reclamation Facility

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

< -0.50 Std. Dev.
-0.50 - 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
1.5 - 2.5 Std. Dev.
> 2.5 Std. Dev.

Note: Results shown are those used in the human health risk assessment. Standard deviations are calculated by ArcGIS using the statistical value field from the database (includes both detect and non-detect results).

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-32B

ZINC SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

N

Alpha Ditch

< 0.00061 U
0.0012 J
0.001 J
0.00077 J
< 0.00067 U
< 0.00065 U
< 0.00039 U
0.0007 J
0.001 J
< 0.00043 U
0.0011 J
0.00069 J
< 0.00059 UJ
< 0.00058 U
0.0017 J
< 0.00059 U
< 0.00057 U
< 0.00073 U
< 0.00064 U
< 0.00037 UJ
< 0.00053 U
< 0.00055 U
< 0.0003 U
< 0.00045 U

City of Henderson Wastewater Reclamation Facility

Beta Ditch

>= 10 Ft bgs

Alpha Ditch

< 0.00035 U
0.00076 J
< 0.00056 U
< 0.00036 U
0.00069 J
< 0.00054 U
< 0.00049 U
0.00072 J
< 0.00057 U
< 0.00042 U
< 0.00064 U
0.0007 J
0.00069 J
< 0.00056 U
0.00072 J
< 0.00058 U
< 0.0006 U
0.00088 J
< 0.00049 U
< 0.00025 U
< 0.00055 U
< 0.00048 U
< 0.00023 U
< 0.00069 U

City of Henderson Wastewater Reclamation Facility

Beta Ditch

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect (or No BCL)
Detect < 1/2-Worker BCL
>= 1/2-Worker BCL and < Worker BCL
>= Worker BCL and < 10x Worker BCL
>= 10x Worker BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-33

1,2,4-TRIMETHYLBENZENE SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

< 0.0002 U
0.0073 J
0.007 J+
0.0022 J+
0.0031 J+
< 0.0002 U
< 0.00021 U
0.0018 J+
0.004
0.0031 J
0.0066 J+
0.0019 J+
0.0078 J
< 0.00021 U
0.027 J
< 0.00099 U
0.011
0.031 J+
0.0063
0.0037
0.0072
0.0045
0.0094
0.011 J+

City of Henderson Wastewater Reclamation Facility

Beta Ditch

N

>= 10 Ft bgs

Alpha Ditch

< 0.0002 U
< 0.0002 U
< 0.0002 U
< 0.0002 U
< 0.0002 U
< 0.0002 U
< 0.00021 U
< 0.00022 U
< 0.0002 U
< 0.0002 U
< 0.0002 U
< 0.00021 U
< 0.00021 U
< 0.0002 U
< 0.0002 U
< 0.0002 U
< 0.0002 U
< 0.0002 U
< 0.0002 U
< 0.0002 U
< 0.0002 U

City of Henderson Wastewater Reclamation Facility

Beta Ditch

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect (or No BCL)
Detect < 1/2-Worker BCL
>= 1/2-Worker BCL and < Worker BCL
>= Worker BCL and < 10x Worker BCL
>= 10x Worker BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

4,4-DDE is shown as representative of the x,4-DDx COPCs.

BMI Common Areas (Eastside)
Clark County, Nevada

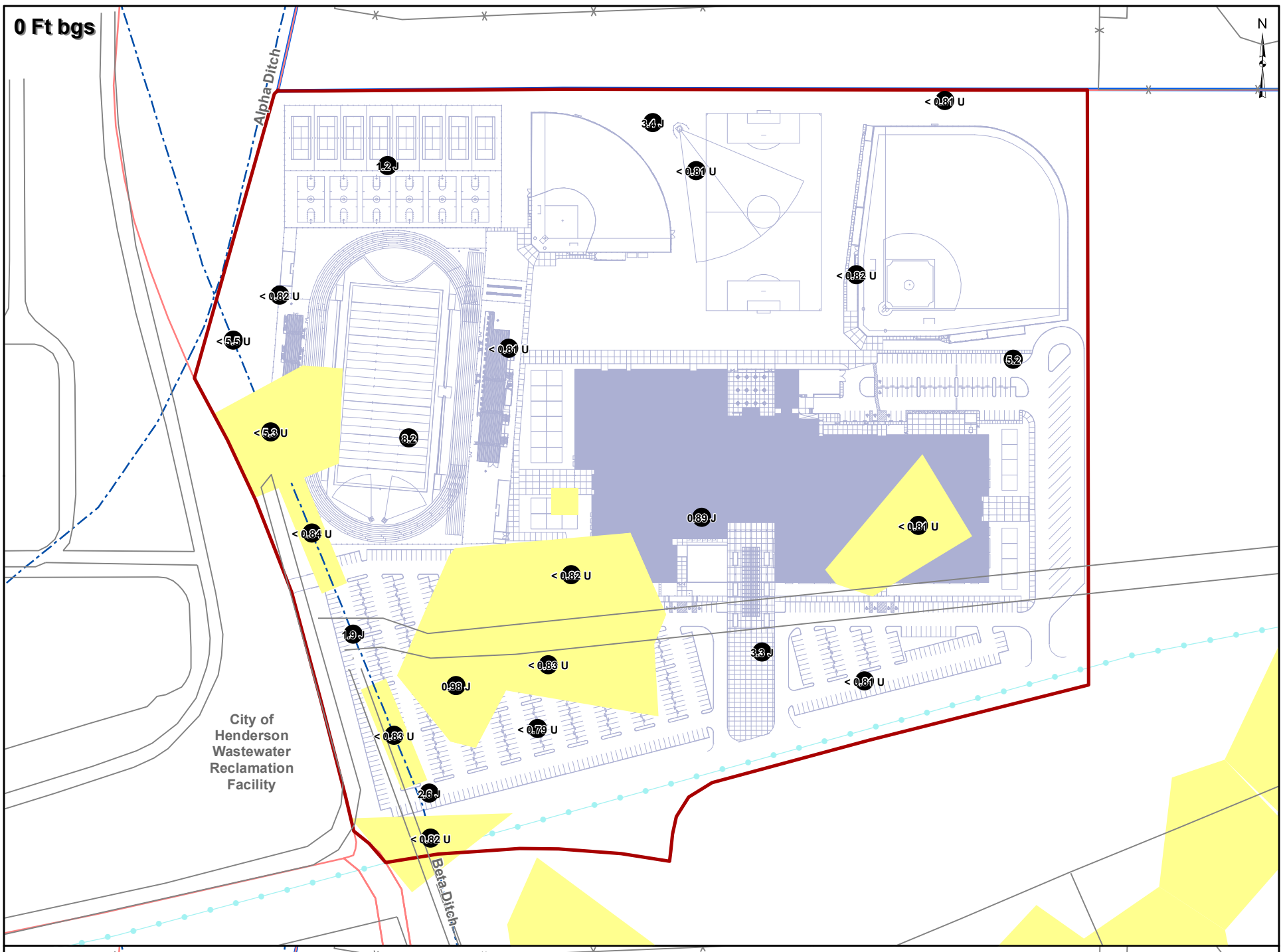
FIGURE I-34

4,4-DDE SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

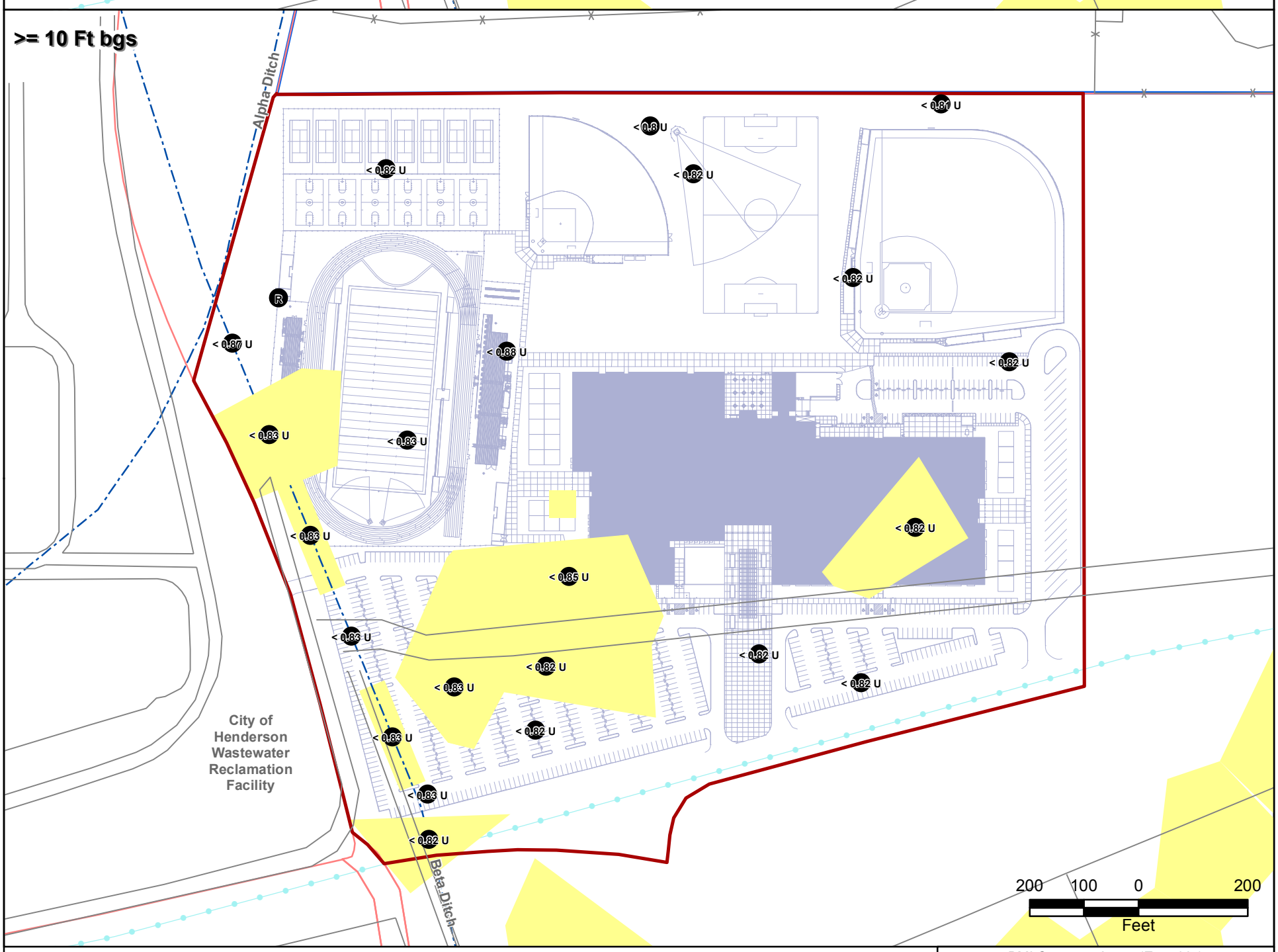
Basic Remediation COMPANY

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs



>= 10 Ft bgs



Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect (or No BCL)
Detect < 1/2-Worker BCL
>= 1/2-Worker BCL and < Worker BCL
>= Worker BCL and < 10x Worker BCL
>= 10x Worker BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

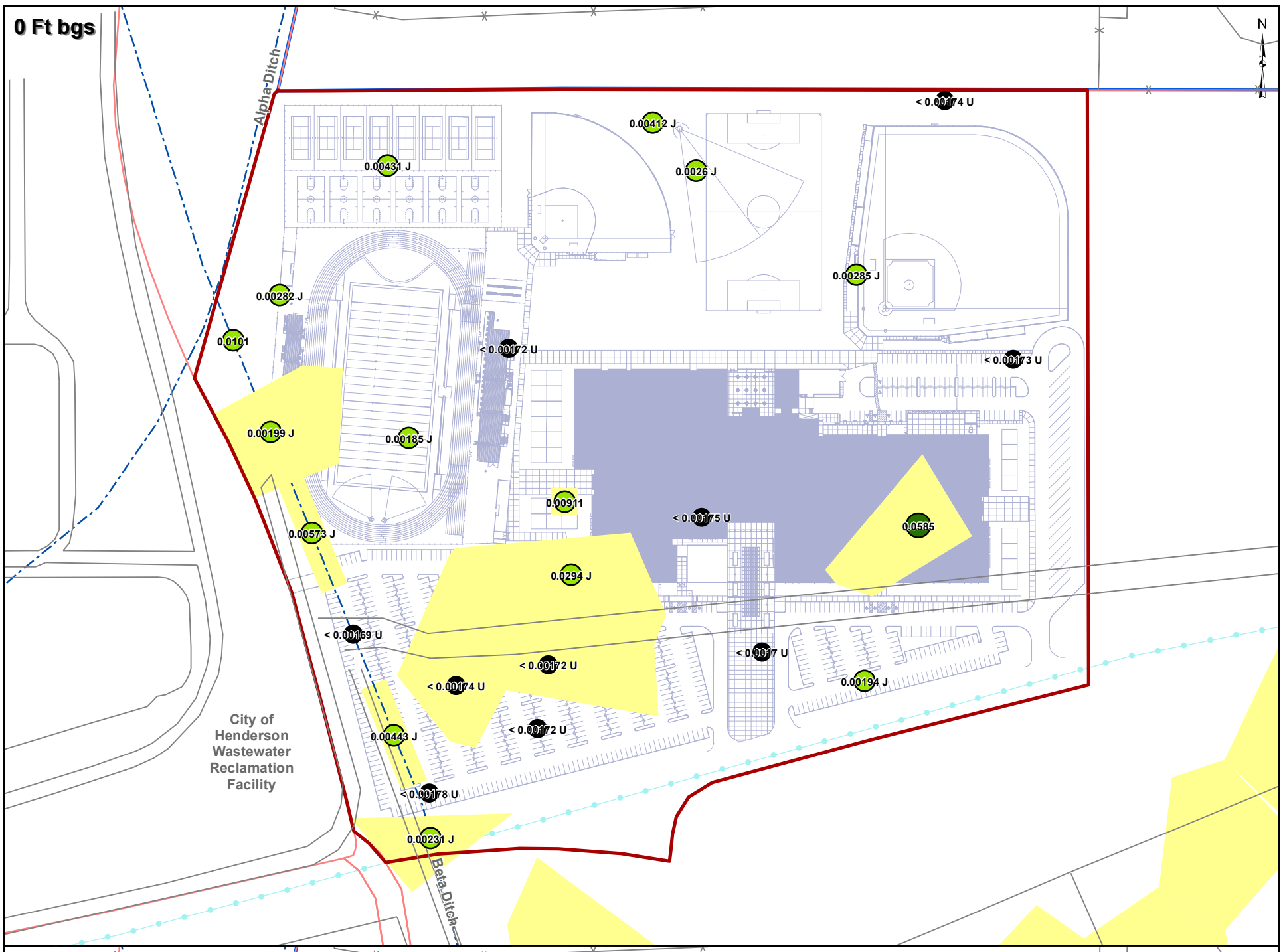
FIGURE I-35

AMMONIA (as N) SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

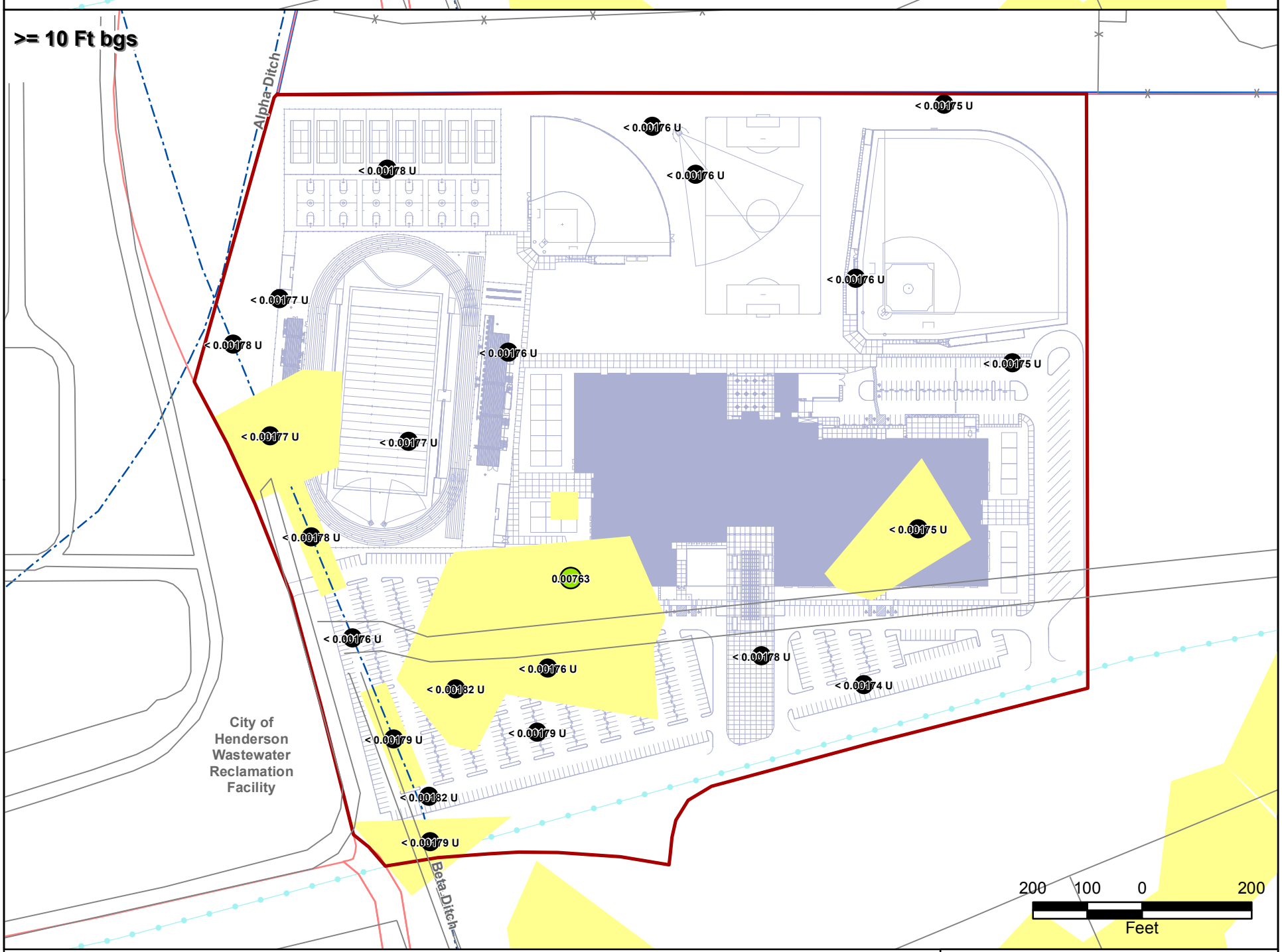
Basic Remediation COMPANY

Prepared by	Date	JOB No. 0064276
MKJ (ERM)	11/10/10	FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs



>= 10 Ft bgs



Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect (or No BCL)
Detect < 1/2-Worker BCL
>= 1/2-Worker BCL and < Worker BCL
>= Worker BCL and < 10x Worker BCL
>= 10x Worker BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

Benzo(a)pyrene is shown as representative of the PAH COPCs.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-36

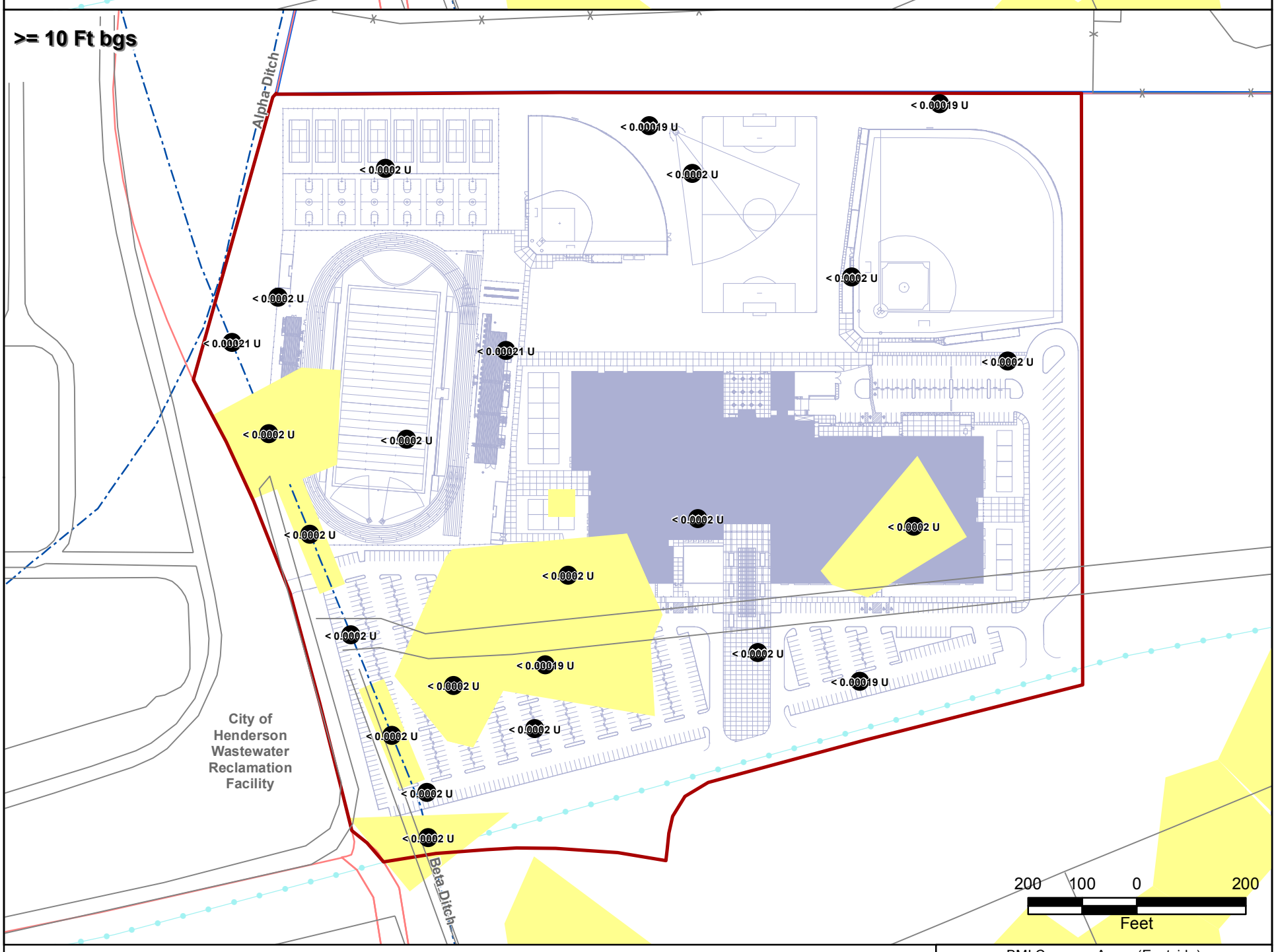
BENZO(a)PYRENE SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

>= 10 Ft bgs



- Galleria North-School Site Sub-Area
- Site AOC3 Boundary
- Eastside Soil Sub-Areas
- Recent Soil Removal Areas

- Non-Detect (or No BCL)
- Detect < 1/2-Worker BCL
- >= 1/2-Worker BCL and < Worker BCL
- >= Worker BCL and < 10x Worker BCL
- >= 10x Worker BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

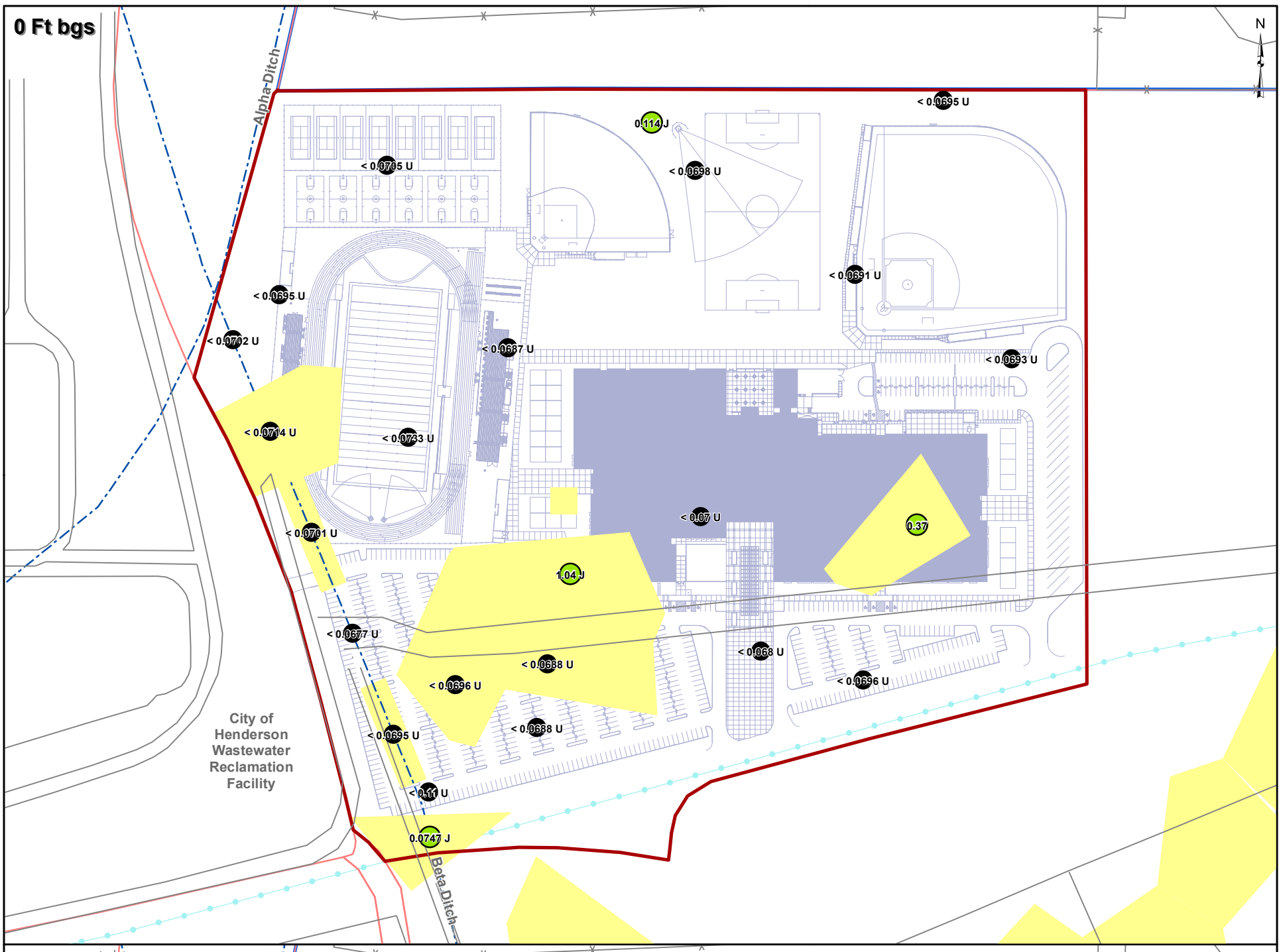
FIGURE I-37

beta-BHC SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

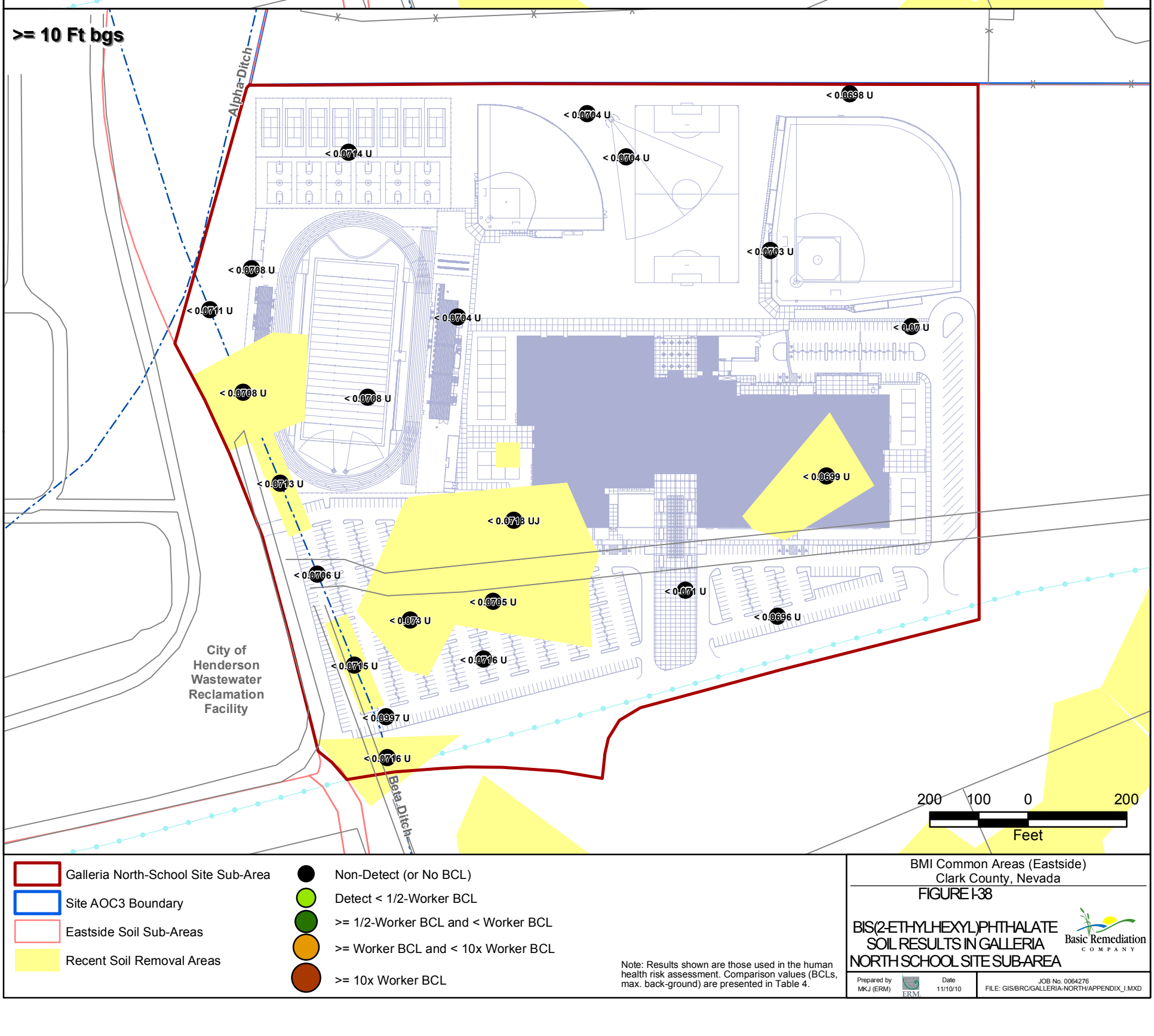
Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs



>= 10 Ft bgs



Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect (or No BCL)
Detect < 1/2-Worker BCL
>= 1/2-Worker BCL and < Worker BCL
>= Worker BCL and < 10x Worker BCL
>= 10x Worker BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-38

BIS(2-ETHYLHEXYL)PHTHALATE SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | ERM | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

N

Alpha Ditch

< 0.0024 U
< 0.0024 U
< 0.0025 U
< 0.0024 U
< 0.0024 U
< 0.0025 U
< 0.0026 U
< 0.0024 U
< 0.0024 U
< 0.0025 U
< 0.0024 U
< 0.0025 U
< 0.0025 U
< 0.0024 U
0.043 J
< 0.0012 U
< 0.0025 U
< 0.0025 U
0.02
< 0.0024 U
< 0.0025 U
< 0.0026 U
< 0.0025 U

City of Henderson Wastewater Reclamation Facility

Beta Ditch

>= 10 Ft bgs

Alpha Ditch

< 0.0024 U
< 0.0024 U
< 0.0025 U
< 0.0025 U
< 0.0025 U
< 0.0025 U
< 0.0026 U
< 0.0026 U
< 0.0025 U
< 0.0025 U
< 0.0025 U
< 0.0025 U
< 0.0025 U
< 0.0025 U
< 0.0024 U
< 0.0024 U
< 0.0025 U
< 0.0024 U
< 0.0024 U
< 0.0025 U
< 0.0025 U

City of Henderson Wastewater Reclamation Facility

Beta Ditch

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect (or No BCL)
Detect < 1/2-Worker BCL
>= 1/2-Worker BCL and < Worker BCL
>= Worker BCL and < 10x Worker BCL
>= 10x Worker BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

Chlordane is shown as representative of the x-Chlordane COPCs.

BMI Common Areas (Eastside)
Clark County, Nevada

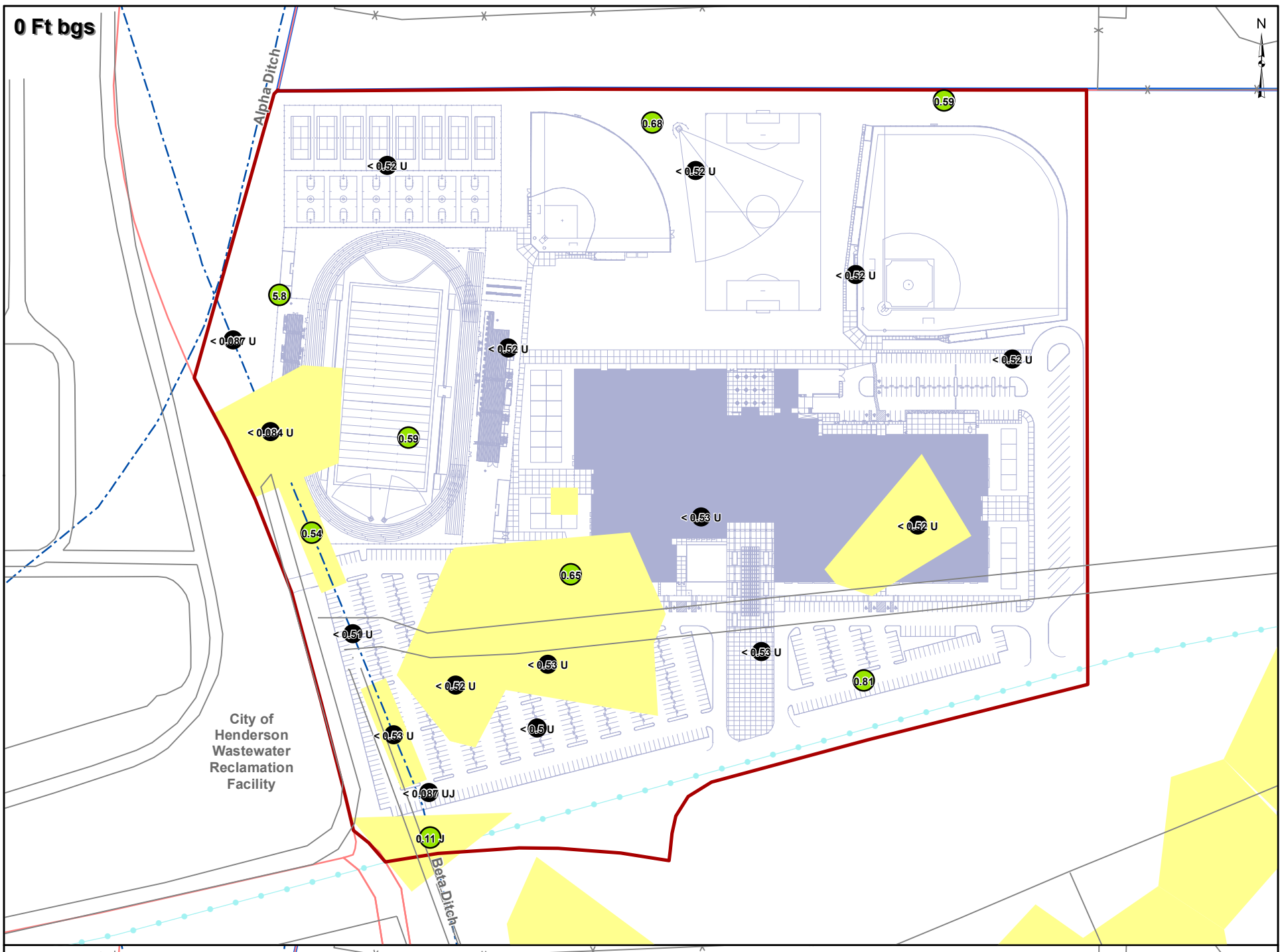
FIGURE I-39

CHLORDANE SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

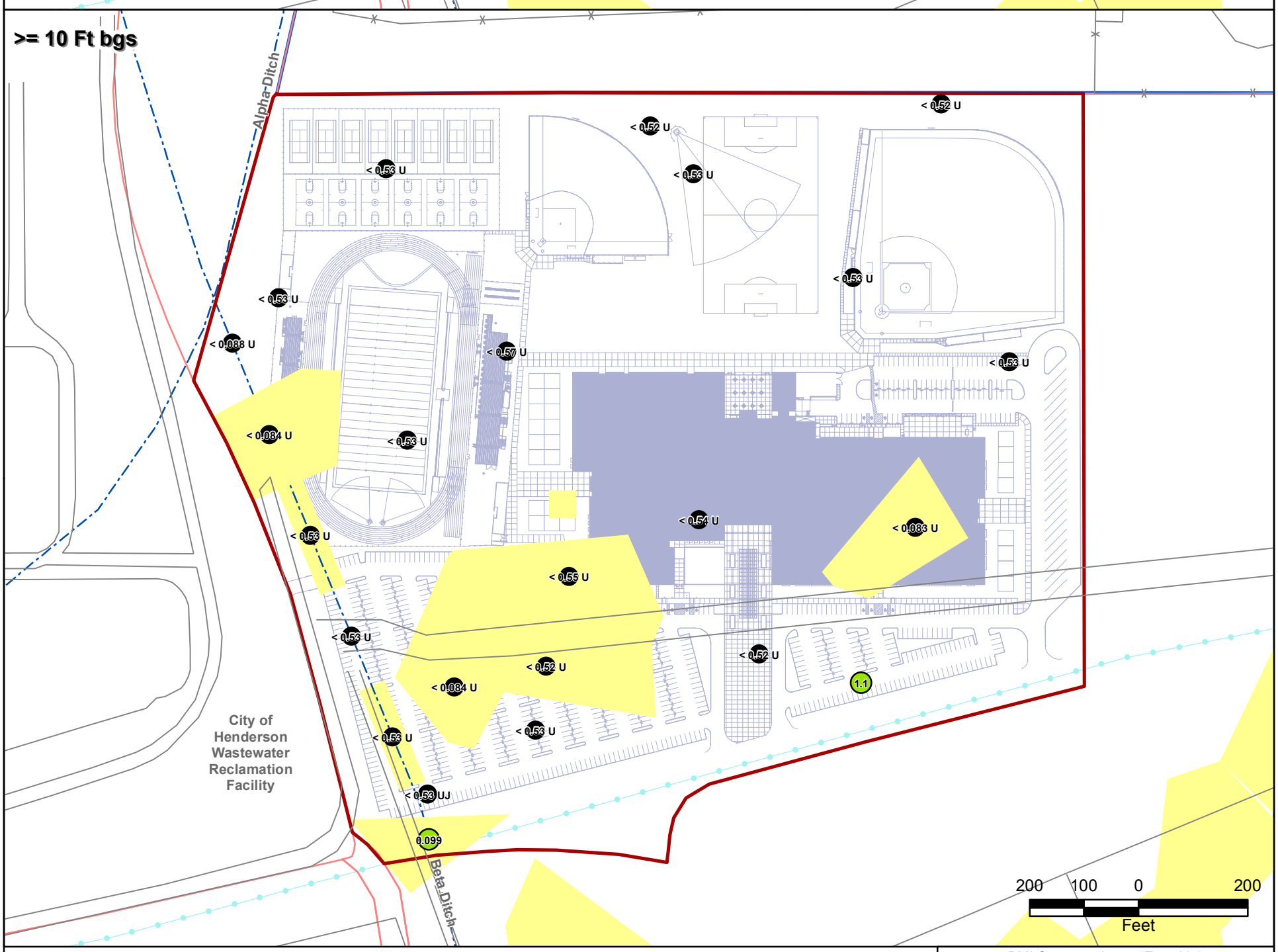
Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs



>= 10 Ft bgs



- Galleria North-School Site Sub-Area
- Site AOC3 Boundary
- Eastside Soil Sub-Areas
- Recent Soil Removal Areas

- Non-Detect (or No BCL)
- Detect < 1/2-Worker BCL
- >= 1/2-Worker BCL and < Worker BCL
- >= Worker BCL and < 10x Worker BCL
- >= 10x Worker BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-40

TOTAL CYANIDE SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by	Date	JOB No. 0064276
MKJ (ERM)	11/10/10	FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

N

0.018
< 0.0022 U
< 0.0077 UJ
< 0.00071 U
< 0.0042 U
< 0.0045 U
< 0.0038 U
< 0.00072 U
< 0.00071 U
< 0.0026 U
0.019
< 0.00073 U
< 0.0006 U
0.017
0.011 J
0.016
0.0051 J
0.0041 J
< 0.003 U
0.028 J
0.0031 J
0.0032 J
0.0099
0.012

>= 10 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

0.018
< 0.00071 U
< 0.0045 U
0.017
< 0.0038 U
< 0.0039 U
< 0.0053 U
< 0.00078 U
< 0.00073 U
< 0.0036 U
< 0.0026 U
< 0.00074 U
< 0.0041 U
0.014
< 0.00075 U
0.015
0.015
0.0046 J
0.0033 J
< 0.0025 U
0.0028 J
0.0039 J
0.0083
< 0.00073 U

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect (or No BCL)
Detect < 1/2-Worker BCL
>= 1/2-Worker BCL and < Worker BCL
>= Worker BCL and < 10x Worker BCL
>= 10x Worker BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-41

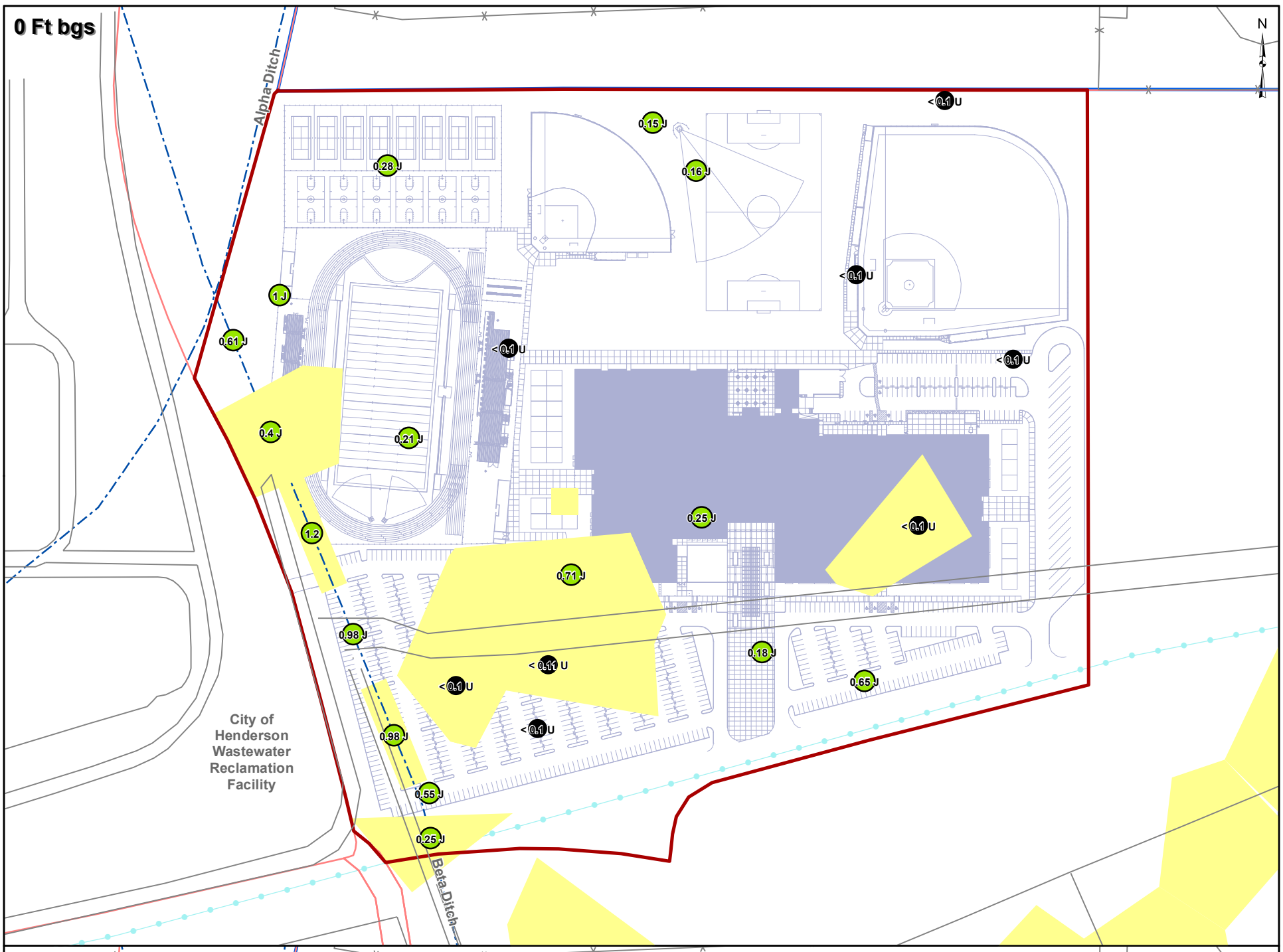
METHYLENE CHLORIDE SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs
N
Alpha Ditch
Beta Ditch
City of Henderson Wastewater Reclamation Facility
< 0.000061 U
0.000077 J
< 0.00006 U
< 0.000064 U
< 0.000062 U
< 0.000059 U
0.0002 J
>= 10 Ft bgs
< 0.000065 U
< 0.000066 U
0.000062 J
< 0.000063 U
< 0.000015 U
200 100 0 200
Feet
Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas
Non-Detect (or No BCL)
Detect < 1/2-Worker BCL
>= 1/2-Worker BCL and < Worker BCL
>= Worker BCL and < 10x Worker BCL
>= 10x Worker BCL
Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.
BMI Common Areas (Eastside)
Clark County, Nevada
FIGURE I-42
ETHYLBENZENE SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA
Basic Remediation COMPANY
Prepared by MKJ (ERM)
ERM
Date 11/10/10
JOB No. 0064276
FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs



>= 10 Ft bgs

- Galleria North-School Site Sub-Area
- Site AOC3 Boundary
- Eastside Soil Sub-Areas
- Recent Soil Removal Areas

- Non-Detect (or No BCL)
- Detect < 1/2-Worker BCL
- >= 1/2-Worker BCL and < Worker BCL
- >= Worker BCL and < 10x Worker BCL
- >= 10x Worker BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-43

FLUORIDE SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by	Date	JOB No. 0064276
MKJ (ERM)	11/10/10	FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

N

Alpha Ditch

< 0.21 U
0.231 J
< 0.246 U
0.249 J
0.525 J
< 0.385 U
< 0.213 U
0.263 J
0.284 J
< 0.211 U
0.843 J
0.211 J
< 0.362 U
0.238 J
0.582 J
0.214 J
0.887 J
0.285 J
0.371 J
0.293
0.215 J
0.496 J
0.222
< 0.372 U
Beta Ditch

City of Henderson Wastewater Reclamation Facility

>= 10 Ft bgs

Alpha Ditch

< 0.209 U
< 0.225 U
< 0.323 U
< 0.208 U
0.487 J
< 0.236 U
0.263 J
< 0.213 U
< 0.208 U
0.318 J
< 0.258 U
0.593 J
< 0.229 U
< 0.211
0.268 J
0.22 J
< 0.211
0.458 J
0.405 J
0.382
0.234 J
< 0.213
< 0.26 U
Beta Ditch

City of Henderson Wastewater Reclamation Facility

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect (or No BCL)
Detect < 1/2-Worker BCL
>= 1/2-Worker BCL and < Worker BCL
>= Worker BCL and < 10x Worker BCL
>= 10x Worker BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-44

FORMALDEHYDE SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

N

Alpha Ditch

< 0.00033 U
< 0.00033 U
< 0.00033 U
< 0.00033 U
< 0.00033 U
< 0.00035 U
< 0.00033 U
0.0086
< 0.00034 U
< 0.00033 U
< 0.00034 U
< 0.00033 U
< 0.00033 U
0.0034 J
< 0.0016 U
0.0023 J
< 0.00033 U
< 0.00033 U
< 0.00033 U
< 0.00032 U
< 0.00035 UJ
0.0044 J-

City of Henderson Wastewater Reclamation Facility

Beta Ditch

>= 10 Ft bgs

Alpha Ditch

< 0.00033 U
< 0.00032 U
< 0.00033 U
< 0.00033 U
< 0.00033 U
< 0.00035 U
< 0.00036 U
0.015
< 0.00033 U
< 0.00033 U
0.025
< 0.00034 U
< 0.00033 U
< 0.00033 U
< 0.00033 U
< 0.00034 U
< 0.00033 U
0.016
< 0.00034 UJ
< 0.00033 UJ

City of Henderson Wastewater Reclamation Facility

Beta Ditch

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect (or No BCL)
Detect < 1/2-Worker BCL
>= 1/2-Worker BCL and < Worker BCL
>= Worker BCL and < 10x Worker BCL
>= 10x Worker BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

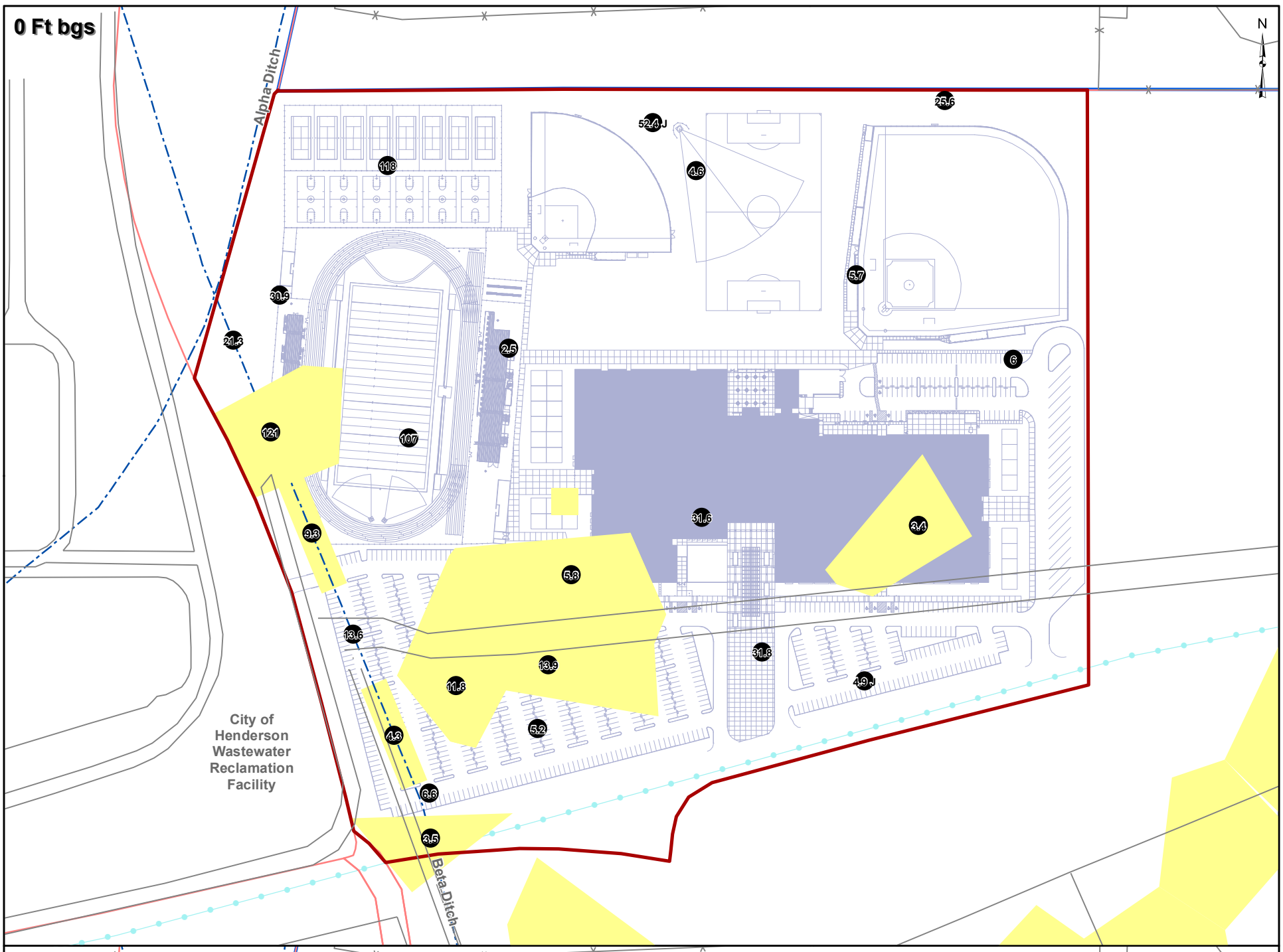
FIGURE I-45

METHOXYCHLOR SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

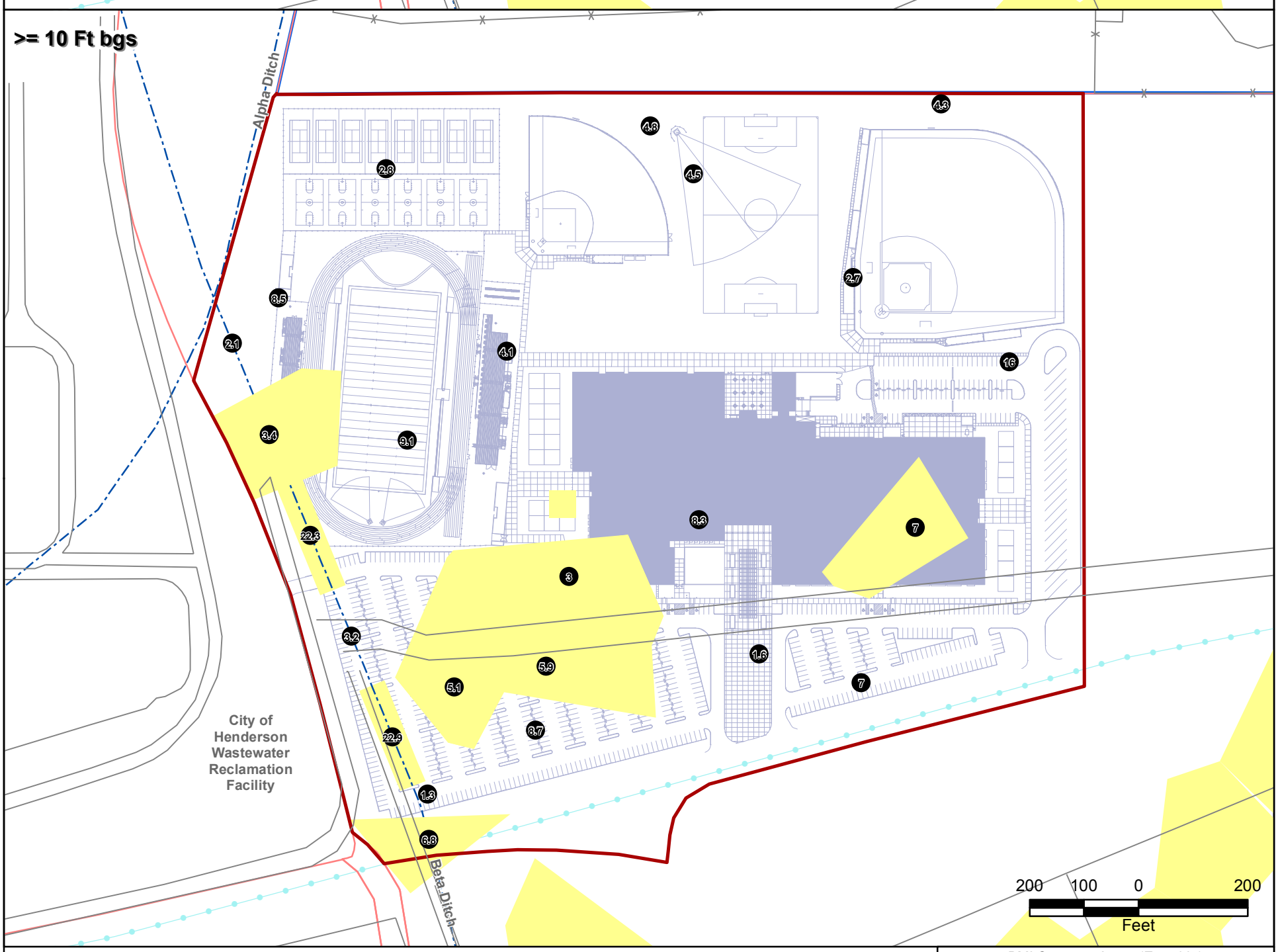
Basic Remediation Company

Prepared by MKJ (ERM) | ERM | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs



>= 10 Ft bgs



- Galleria North-School Site Sub-Area
- Site AOC3 Boundary
- Eastside Soil Sub-Areas
- Recent Soil Removal Areas

- Non-Detect (or No BCL)
- Detect < 1/2-Worker BCL
- >= 1/2-Worker BCL and < Worker BCL
- >= Worker BCL and < 10x Worker BCL
- >= 10x Worker BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-46

NITRATE SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | ERM | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

N

< 0.034 U
< 1.7 U
< 0.034 U
0.76
0.55
0.23
< 0.036 U
< 0.034 U
< 0.034 U
< 0.71 U
< 3.4 U
< 0.7 U
< 0.034 U
0.087 J
0.13 J
< 0.034 U
< 0.035 U
2.1
< 0.034 U
1.3
< 0.035 U
< 0.033 U
< 0.036 U
< 0.035 U

>= 10 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

< 0.035 U
< 0.034 U
< 0.035 U
< 0.035 U
< 0.035 U
< 0.035 U
< 0.037 U
< 0.037 U
< 0.035 U
< 1.8 U
< 0.035 U
< 0.035 U
< 0.036 U
< 0.035 U
< 0.035 U
< 0.035 U
< 0.035 U
< 0.035 U
< 0.035 U
< 0.035 U
< 0.035 U

200 100 0 200
Feet

Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect (or No BCL)
Detect < 1/2-Worker BCL
>= 1/2-Worker BCL and < Worker BCL
>= Worker BCL and < 10x Worker BCL
>= 10x Worker BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

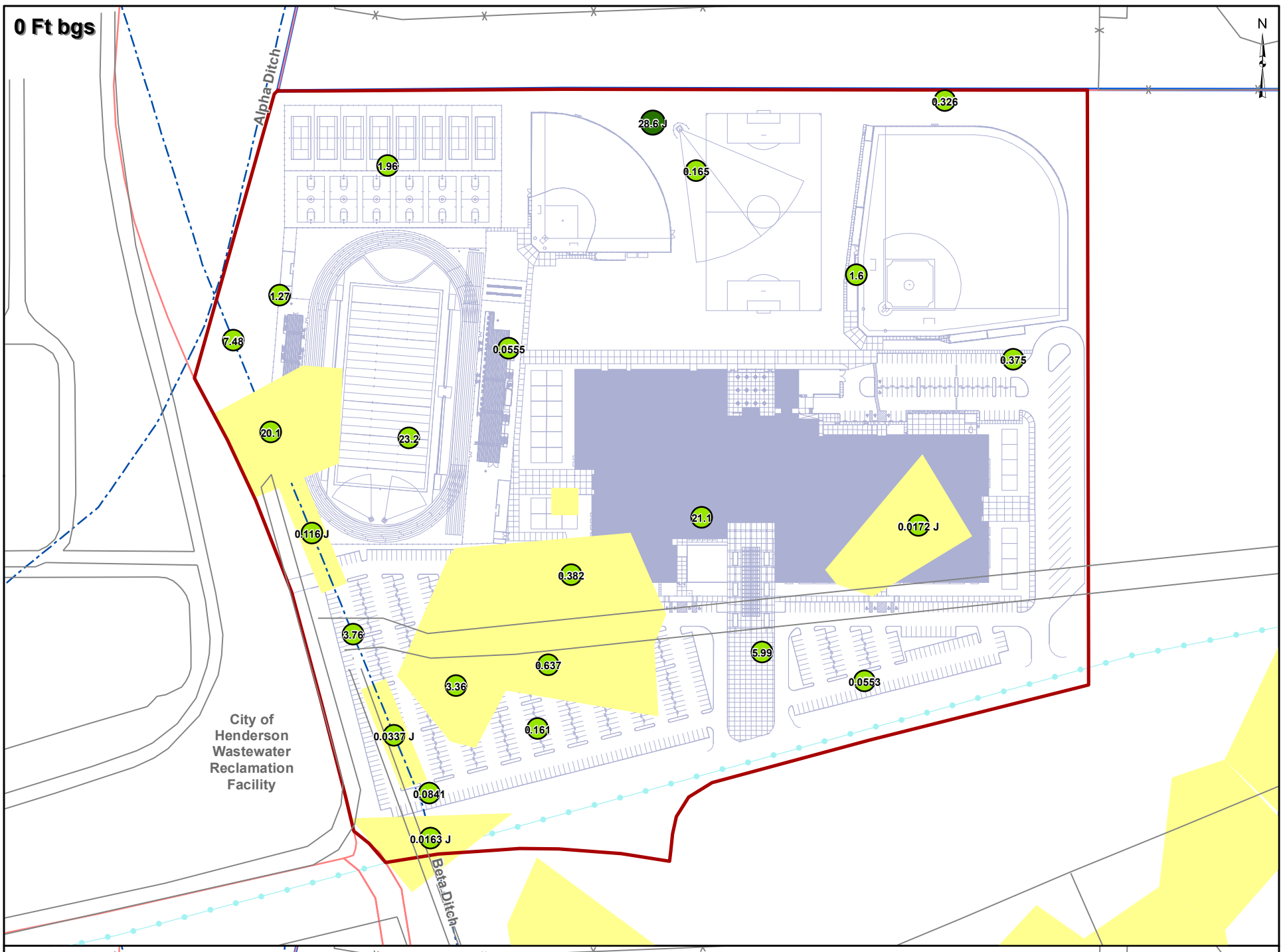
FIGURE I-47

NITRITE SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

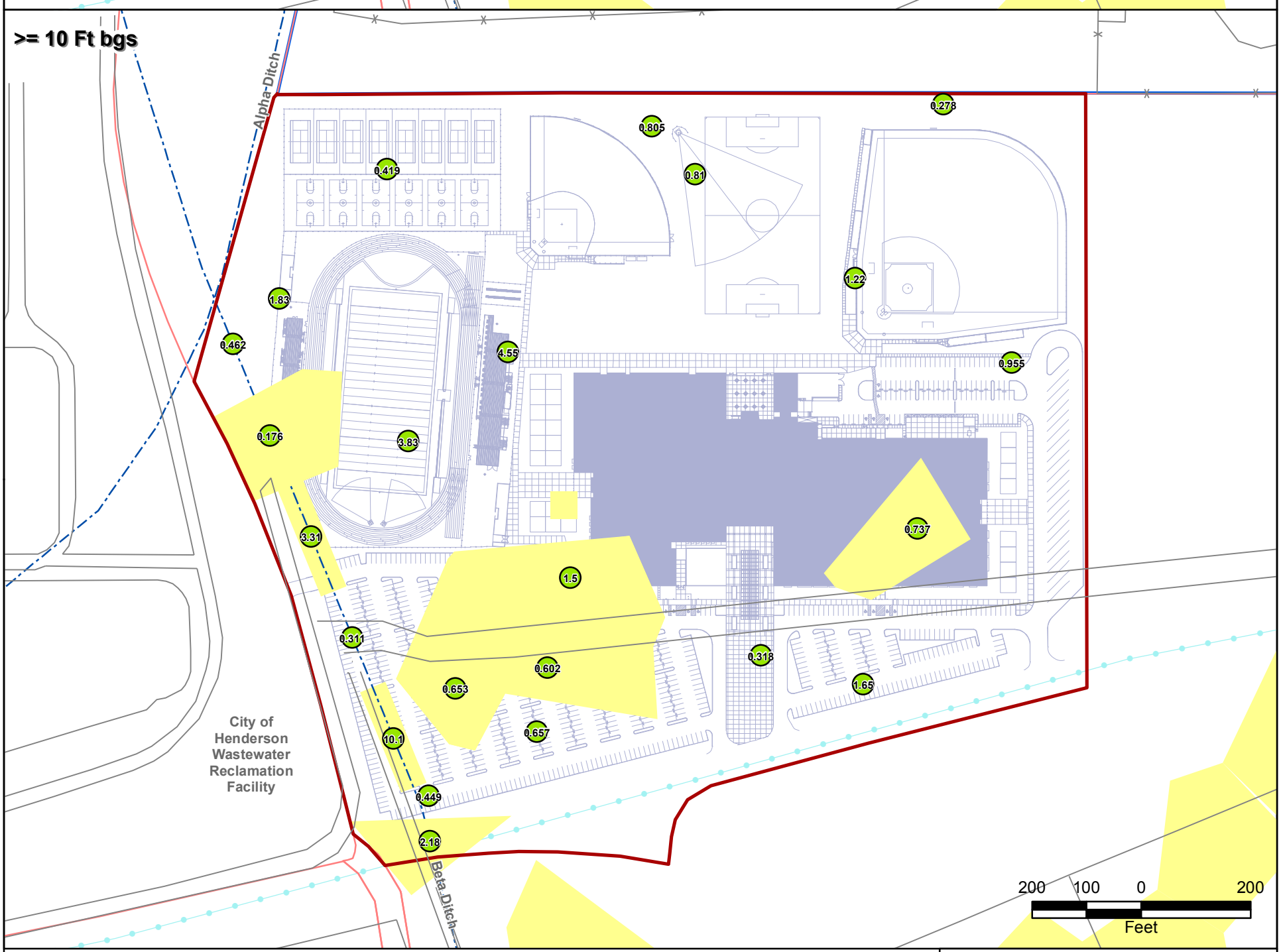
Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs



>= 10 Ft bgs



- Galleria North-School Site Sub-Area
- Site AOC3 Boundary
- Eastside Soil Sub-Areas
- Recent Soil Removal Areas

- Non-Detect (or No BCL)
- Detect < 1/2-Worker BCL
- >= 1/2-Worker BCL and < Worker BCL
- >= Worker BCL and < 10x Worker BCL
- >= 10x Worker BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-48

PERCHLORATE SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs

>= 10 Ft bgs

Alpha Ditch

Beta Ditch

City of Henderson Wastewater Reclamation Facility

N

200 100 0 200

Feet

Galleria North-School Site Sub-Area

Site AOC3 Boundary

Eastside Soil Sub-Areas

Recent Soil Removal Areas

None Detected

1 Long Chrysotile Fiber

2-3 Long Chrysotile Fibers

4-7 Long Chrysotile Fibers

>7 Long Chrysotile Fibers

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

Results shown are for long fibers. No long amphibole fibers were detected in the human health risk assessment datset.

BMI Common Areas (Eastside)
Clark County, Nevada

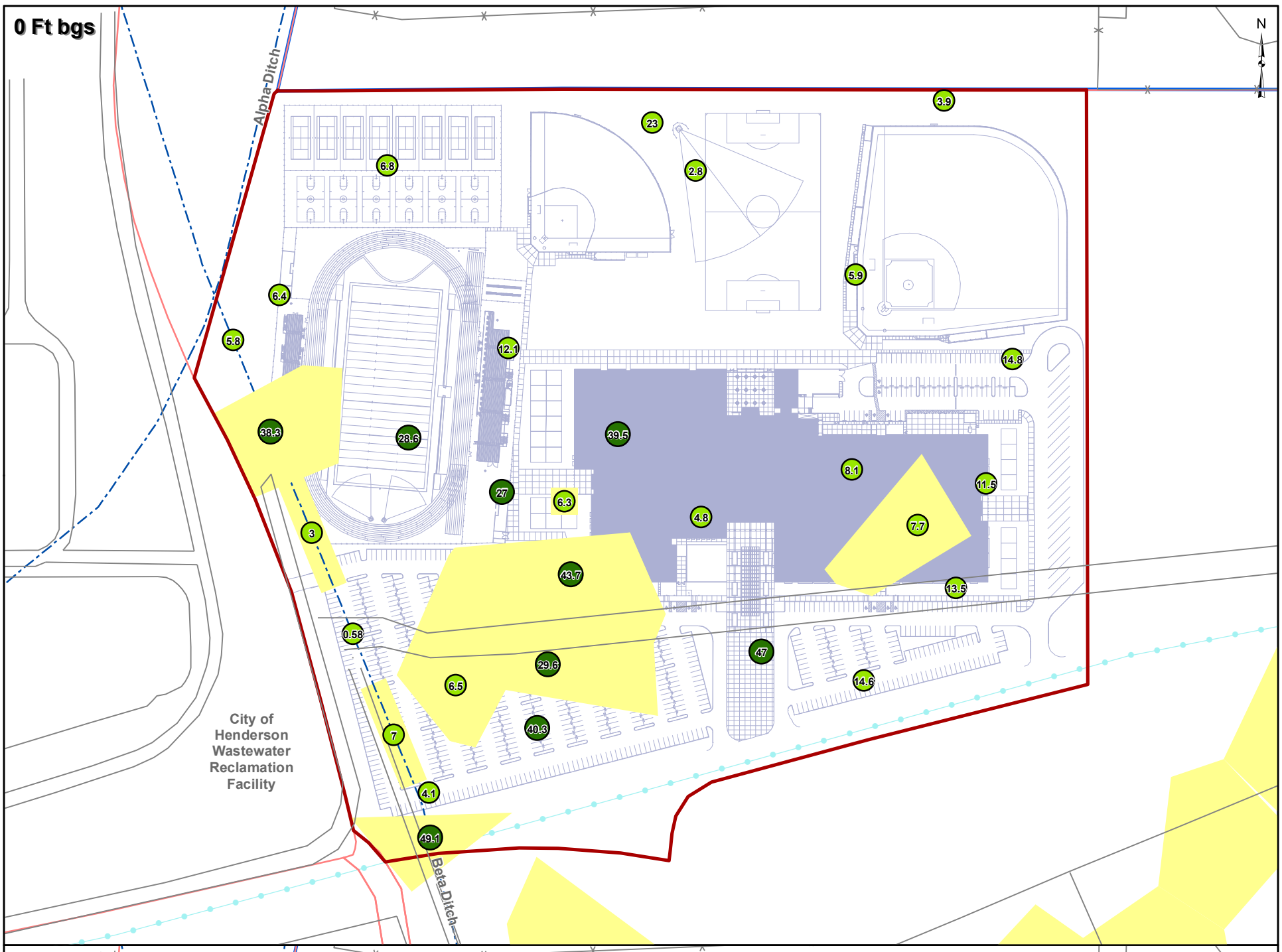
FIGURE I-49

ASBESTOS SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

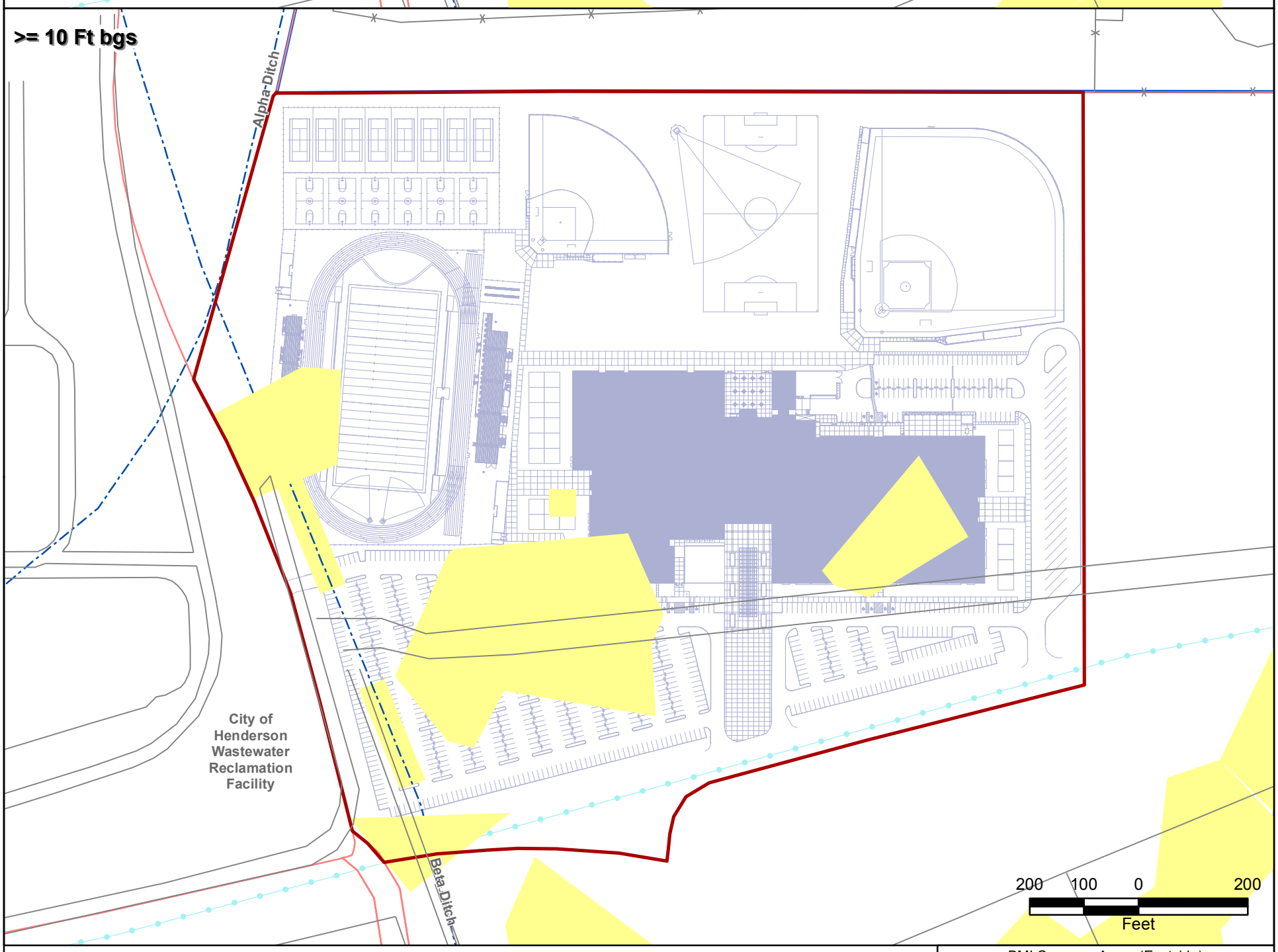
Basic Remediation COMPANY

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

0 Ft bgs



>= 10 Ft bgs



Galleria North-School Site Sub-Area
Site AOC3 Boundary
Eastside Soil Sub-Areas
Recent Soil Removal Areas

Non-Detect (or No BCL)
Detect < 1/2-Worker BCL
>= 1/2-Worker BCL and < Worker BCL
>= Worker BCL and < 10x Worker BCL
>= 10x Worker BCL

Note: Results shown are those used in the human health risk assessment. Comparison values (BCLs, max. back-ground) are presented in Table 4.

Although not a COPC in the human health risk assessment, TCDD TEQ is presented here because it is a primary chemical of interest for the project.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE I-50

TCDD TEQ SOIL RESULTS IN GALLERIA NORTH SCHOOL SITE SUB-AREA

Basic Remediation Company

Prepared by MKJ (ERM) | Date 11/10/10 | JOB No. 0064276 | FILE: GIS/BRC/GALLERIA-NORTH/APPENDIX_I.MXD

APPENDIX J

IMPACTS TO GROUNDWATER MODELING

LIST OF TABLES (APPENDIX J)

Table J-1 Rationale for COPCs Included in Impacts to Ground Water Modeling

Table J-2 Climate Parameters Used in the Impacts to Ground Water Modeling

Table J-3 Soil Physical Parameters Used in the SESOIL Modeling

Table J-4 Chemical Properties for Chemicals of Potential Concern in Vadose Zone

Table J-5 Chemical Application Data for SESOIL Modeling

Table J-6 Initial Chemical Concentrations at Time Zero for SESOIL Modeling

Table J-7 Inputs for VLEACH Modeling

Table J-8 Impacts to Groundwater Modeling Results - Baseline Rainfall Recharge Conditions

Table J-9 Impacts to Groundwater Modeling Results - Normal Post-Development Recharge Conditions

Table J-10 Impacts to Groundwater Modeling Results - Enhanced Recharge Conditions

TABLE J-1
RATIONALE FOR COPCS INCLUDED IN IMPACTS TO GROUND WATER MODELING
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter of Interest	COPC	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data			Detected Data					Residential Soil BCL	LBCL (DAF 1)	Count of Detects > DAF 1	COPC?	Detects > DAF 1	Max/BCL Ratio	Model?	Rationale
					Count	Min	Max	Count	Min	Median	Mean	Max								
Aldehydes	Formaldehyde	mg/kg	53	56.6%	23	0.208	0.385	30	0.205	0.29	0.37	0.887	10.6	--	--	Yes	No LBCL	No LBCL	Yes	(1)
General Chemistry/ Ions	Ammonia (as N)	mg/kg	52	19.2%	42	0.79	5.5	10	0.89	2.3	2.9	8.2	--	--	--	Yes	No LBCL	No LBCL	Yes	(2)
	Cyanide, Total	mg/kg	53	22.6%	41	0.083	0.57	12	0.099	0.63	1	5.8	1220	2	1	Yes	Yes	2.9	Yes	(3)
	Fluoride	mg/kg	53	77.4%	12	0.1	0.11	41	0.15	0.77	0.85	2.1	3670	--	--	Yes	No LBCL	No LBCL	No	(4)
	Nitrate	mg/kg	53	100.0%	0	--	--	53	1.3	6	16	121	--	--	--	Yes	No LBCL	No LBCL	Yes	(5)
	Perchlorate	mg/kg	52	100.0%	0	--	--	52	0.0163	0.7	3.2	28.6	54.8	--	--	Yes	No LBCL	No LBCL	Yes	(6)
Metals	Cadmium	mg/kg	55	72.7%	15	0.1	0.27	40	0.092	0.14	0.17	0.44	38.9	0.4	1	Yes	Yes	1.1	No	(7)
	Mercury	mg/kg	55	30.9%	38	0.005	0.0373	17	0.0056	0.048	0.055	0.122	12.5	0.105	1	Yes	Yes	1.2	No	(7)
	Nickel	mg/kg	55	100%	0	--	--	55	13	17	17	28.2	1540	7	55	Yes	Yes	4.0	Yes	(3)
	Zinc	mg/kg	55	100%	0	--	--	55	33.6	52	56	155	23500	620	0	Yes	No	NA	No	(8)
Organochlorine Pesticides	2,4-DDE	mg/kg	53	22.6%	41	0.00021	0.001	12	0.002	0.0036	0.0051	0.015	--	--	--	Yes	No LBCL	No LBCL	Yes	(10)
	4,4-DDD	mg/kg	53	1.9%	52	0.00009	0.00046	1	0.0044	0.0044	0.0044	0.0044	2.44	0.8	0	Yes	No	NA	No	(8)
	4,4-DDE	mg/kg	53	43.4%	30	0.0002	0.00099	23	0.0018	0.0063	0.0079	0.031	1.72	3	0	Yes	No	NA	No	(8)
	4,4-DDT	mg/kg	53	39.6%	32	0.00021	0.001	21	0.0018	0.0031	0.0048	0.016	1.72	2	0	Yes	No	NA	No	(8)
	alpha-Chlordane	mg/kg	53	3.8%	51	0.00021	0.0011	2	0.0022	0.004	0.004	0.0057	--	--	--	Yes	No LBCL	No LBCL	No	(9)
	beta-BHC	mg/kg	53	35.8%	34	0.00019	0.00096	19	0.0022	0.0047	0.0066	0.019	0.316	0.0001	19	Yes	Yes	190.0	Yes	(3)
	Chlordane	mg/kg	53	3.8%	51	0.0024	0.012	2	0.02	0.032	0.032	0.043	1.62	0.5	0	Yes	No	NA	No	(8)
	gamma-Chlordane	mg/kg	53	5.7%	50	0.000084	0.00043	3	0.0022	0.0028	0.004	0.007	--	--	--	Yes	No LBCL	No LBCL	No	(9)
	Methoxychlor	mg/kg	53	13.2%	46	0.00032	0.0016	7	0.0023	0.0086	0.011	0.025	306	8	0	Yes	No	NA	No	(8)
Polynuclear Aromatic Hydrocarbons	Acenaphthene	mg/kg	52	1.9%	51	0.00169	0.00183	1	0.00209	0.0021	0.0021	0.00209	4690	29	0	Yes	No	NA	No	(8)
	Acenaphthylene	mg/kg	52	1.9%	51	0.00169	0.00183	1	0.00206	0.0021	0.0021	0.00206	147	--	--	Yes	No LBCL	No LBCL	No	(11)
	Anthracene	mg/kg	52	15.4%	44	0.00169	0.00183	8	0.0019	0.0028	0.003	0.00599	23500	590	0	Yes	No	NA	No	(8)
	Benzo(a)anthracene	mg/kg	52	15.4%	44	0.00169	0.00183	8	0.00225	0.0042	0.012	0.0576	0.622	0.08	0	Yes	No	NA	No	(8)
	Benzo(a)pyrene	mg/kg	52	34.6%	34	0.00169	0.00182	18	0.00185	0.0042	0.0094	0.0585	0.0622	0.4	0	Yes	No	NA	No	(8)
	Benzo(b)fluoranthene	mg/kg	52	40.4%	31	0.0017	0.00183	21	0.0022	0.0084	0.019	0.129	0.622	0.2	0	Yes	No	NA	No	(8)
	Benzo(g,h,i)perylene	mg/kg	52	15.4%	44	0.00169	0.00183	8	0.00224	0.0036	0.0074	0.0295	2350	--	--	Yes	No LBCL	No LBCL	Yes	(10)
	Benzo(k)fluoranthene	mg/kg	52	11.5%	46	0.00169	0.00182	6	0.00229	0.0033	0.0038	0.00658	6.21	2	0	Yes	No	NA	No	(8)
	Chrysene	mg/kg	52	32.7%	35	0.00169	0.00182	17	0.00231	0.0061	0.016	0.0904	62.1	8	0	Yes	No	NA	No	(8)
	Dibenzo(a,h)anthracene	mg/kg	52	7.7%	48	0.00169	0.00182	4	0.00208	0.0082	0.019	0.0587	0.0622	0.08	0	Yes	No	NA	No	(8)
	Indeno(1,2,3-cd)pyrene	mg/kg	52	9.6%	47	0.00169	0.00183	5	0.00195	0.0042	0.0092	0.0311	0.622	0.7	0	Yes	No	NA	No	(8)
	Phenanthrene	mg/kg	52	32.7%	35	0.0017	0.00183	17	0.0022	0.004	0.009	0.0343	24.5	--	--	Yes	No LBCL	No LBCL	No	(11)
	Pyrene	mg/kg	52	42.3%	30	0.0017	0.00182	22	0.00209	0.0074	0.018	0.12	2350	210	0	Yes	No	NA	No	(8)
SVOCs	bis(2-Ethylhexyl) phthalate	mg/kg	51	9.8%	46	0.0677	0.11	5	0.0747	0.11	0.34	1.04	34.7	180	0	Yes	No	NA	No	(8)
VOCs	1,2,4-Trimethylbenzene	mg/kg	53	32.1%	36	0.00014	0.00073	17	0.00069	0.00077	0.00089	0.0017	144	--	--	Yes	No LBCL	No LBCL	Yes	(12)
	Dichloromethane (Methylene chloride)	mg/kg	53	47.2%	28	0.00071	0.0077	25	0.0014	0.011	0.011	0.028	11	0.001	25	Yes	Yes	28.0	Yes	(3)
	Ethylbenzene	mg/kg	53	7.5%	49	0.000059	0.00015	4	0.000062	0.00007	0.0001	0.0002	3.79	0.7	0	Yes	No	NA	No	(8)

Notes:

This table includes only data included in the risk assessment. 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 status.

LBCL = Leaching-based BCLs from NDEP 2010a.

Max = Maximum

Min = Minimum

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

(1) Chemical has no $LBCL_{DAF1}$, has physical properties indicating relative mobility, and is the only chemical selected as a HHRA COPC in the chemical class.

(2) Chemical has no $LBCL_{DAF1}$, has physical properties indicating relatively high mobility, and has a relatively high maximum detected concentration.

(3) Detects exceed $LBCL_{DAF1}$.

(4) Chemical has relatively high residential soil BCL (indicating relatively low toxicity), and other members of the chemical class were selected for modeling. Not considered a representative chemical for modeling.

(5) High detection frequency, physical chemical parameters indicating mobility, no $LBCL_{DAF1}$.

(6) High detection frequency, physical chemical parameters indicating mobility, no $LBCL_{DAF1}$, project chemical of interest.

(7) Maximum marginally above $LBCL_{DAF1}$, physical properties indicate relatively low mobility, other chemicals in the class present at higher concentrations (max/LBCL ratio) selected for quantitative evaluation. Not considered a representative chemical for modeling.

(8) Maximum detect does not exceed $LBCL_{DAF1}$.

(9) Chemical has no $LBCL_{DAF1}$, physical parameters indicating low mobility, and other members of the chemical class were selected for modeling. Not considered a necessary representative chemical for modeling.

(10) Chemical has no $LBCL_{DAF1,}$ most of the other members of its class were $<LBCL_{DAF1}$; selected as a representative chemical for its chemical class for inclusion in modeling.

(11) Chemical has relatively high residential soil BCL (indicating relatively low toxicity), physical parameters indicating low mobility, and other members of the chemical class were selected for modeling. Not considered a necessary representative chemical for modeling.

(12) Chemical has no $LBCL_{DAF1}$, has physical properties indicating relative mobility, and is one of the only chemicals selected as an HHRA COPC in the chemical class. Selected as a representative chemical for its chemical class for inclusion in modeling.

TABLE J-2
CLIMATE PARAMETERS USED IN THE IMPACTS TO GROUND WATER MODELING
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Month	Monthly Mean Air Temperature (ºC)	Monthly Mean Cloud Cover (fraction)	Monthly Mean Rel. Humidity (fraction)	Albedo (fraction)	Monthly Mean Evapo-transpiration (cm/day)	Total Precipitation per Month (cm/mo)	Mean Duration of Individual Storm Events (days)	Mean Number of Storm Events (per month)	Length of Rainy Season Each Month (days)	Normal[b] Recharge Scenario Total Precipitation per Month (cm/mo)	Enhanced Recharge Scenario Total Precipitation per Month (cm/mo)
Oct	19.8	0.4	0.76	0.2	0[a]	0.64	0.5	4	30.4	1.522	5.42
Nov	12.0	0.4	0.76	0.2	0[a]	1.09	0.5	4.5	30.4	1.522	5.42
Dec	7.4	0.4	0.76	0.3	0[a]	0.81	0.6	5	30.4	1.522	5.42
Jan	7.0	0.4	0.76	0.3	0[a]	1.27	0.6	5	30.4	1.522	5.42
Feb	10.1	0.4	0.76	0.3	0[a]	1.17	0.55	6	30.4	1.522	5.42
Mar	12.9	0.4	0.76	0.3	0[a]	1.04	0.5	6	30.4	1.522	5.42
Apr	17.5	0.4	0.68	0.2	0[a]	0.56	0.5	6	30.4	1.522	5.42
May	22.9	0.4	0.68	0.2	0[a]	0.51	0.45	5.5	30.4	1.522	5.42
Jun	28.7	0.4	0.68	0.2	0[a]	0.23	0.4	5	30.4	1.522	5.42
Jul	32.4	0.4	0.72	0.2	0[a]	1.14	0.35	5	30.4	1.522	5.42
Aug	31.1	0.4	0.72	0.2	0[a]	1.37	0.3	4.5	30.4	1.522	5.42
Sept	26.7	0.4	0.72	0.2	0[a]	0.81	0.35	4.5	30.4	1.522	5.42

Notes: Climate data is SESOIL default data for Las Vegas, Nevada.

[a]If zero is input, SESOIL calculates evapotranspiration.

[b]Normal post development (housing) recharge.

TABLE J-3
SOIL PHYSICAL PARAMETERS USED IN THE SESOIL MODELING
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Soil Physical Parameters	Units	Values	Source
Soil Density	g/cm^3	1.64	Site Specific Average
Intrinsic Permeability	cm^2	1.16E-08	Site Specific Average
Disconnectedness Index	unitless	4.53	Model Default
Porosity	percent	40.15	Site Specific Average
Organic Carbon Content	percent	0.47%	Site Specific Average
Cation Exchange Capacity	milli. eq./100 g dry soil	0	Model Default
Freundlich Exponent	unitless	1	Model Default

TABLE J-4
CHEMICAL PROPERTIES FOR COPCs IN VADOSE ZONE
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Chemical-Specific Parameters	Units	Nickel	Benzo(g,h,i) perylene	2,4'-DDE	beta-BHC	Ammonia	Nitrate (as N)
Source	--	a	a,e	a	a	d	d
Solubility	ug/ml	2.00E+03	2.60E-04	1.20E-01	2.00E+00	4.82E+05	2.00E+03
Diffusion Coefficient in air	cm^2/sec	1.00E-03	4.30E-02	1.44E-02	1.42E-02	2.00E-01	1.00E-03
Henry's Law Constant	m^3-atm/mole	--	2.66E-07	2.10E-05	1.06E-05	1.60E-05	--
Henry's Law Constant	--	--	1.09E-05	8.61E-04	4.34E-04	6.58E-04	--
Adsorption Coefficient on Organic Carbon (Koc)	ml/g	--	9.60E+04	4.47E+06	1.23E+03	3.09E+00	--
Adsorption Coefficient on Soil[c]	ml/g	1.90E+03	--	--	--	--	--
Molecular Weight	g/mole	58.69	276.34	354	290.83	17.03	62
Valence	+/-	0	0	0	0	0	0
Neutral Hydrolysis Constant	/day	0	0	0	0	0	0
Base Hydrolysis Constant	l/mole-day	0	0	0	0	0	0
Acid Hydrolysis Constant	l/mole-day	0	0	0	0	0	0
Half Life ($t_{1/2}$)	years	0	0	0	0	0	0
Degradation Rate in Moisture	1/day	0	0	0	0	0	0
Degradation Rate on Soil	1/day	0	0	0	0	0	0
Ligand-Pollutant Stability Constant	unitless	0	0	0	0	0	0
No. Moles Ligand/Mole Pollutant	unitless	0	0	0	0	0	0

Notes:
a - USEPA 2002b. Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites.
b - NDEP 2010a. NDEP Basic Comparison Levels.
c - pH dependent soil adsorption coeffiecients for metals were selected according to the average site soil pH of 9.0.
d - ORNL. 2010.
e - Hazardous Substances Database (HSDB). http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB.

TABLE J-4
CHEMICAL PROPERTIES FOR COPCs IN VADOSE ZONE
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Chemical-Specific Parameters	Units	Perchlorate	Cyanide, Total	1,2,4-Tri-methylbenzene	Dichloro-methane	Formaldehyde
Source	--	--	a,d	b	b	b
Solubility	ug/ml	2.00E+03	1.00E+06	2.55E-01	1.32E+04	5.50E+05
Diffusion Coefficient in air	cm^2/sec	1.00E-03	2.11E-01	7.50E-02	1.01E-01	1.80E-01
Henry's Law Constant	m^3-atm/mole	--	1.33E-04	5.70E-03	2.19E-03	3.40E-07
Henry's Law Constant	--	--	5.44E-03	2.34E-01	8.98E-02	1.39E-05
Adsorption Coefficient on Organic Carbon (Koc)	ml/g	--	9.90E+00	3.72E+03	1.00E+01	3.63E+00
Adsorption Coefficient on Soil[c]	ml/g	--	--	--	--	--
Molecular Weight	g/mole	117.49	27	120.19	85	30.03
Valence	+/-	0	0	0	0	0
Neutral Hydrolysis Constant	/day	0	0	0	0	0
Base Hydrolysis Constant	l/mole-day	0	0	0	0	0
Acid Hydrolysis Constant	l/mole-day	0	0	0	0	0
Half Life ($t_{1/2}$)	years	0	0	0	0	0
Degradation Rate in Moisture	1/day	0	0	0	0	0
Degradation Rate on Soil	1/day	0	0	0	0	0
Ligand-Pollutant Stability Constant	unitless	0	0	0	0	0
No. Moles Ligand/Mole Pollutant	unitless	0	0	0	0	0

Notes:
a - USEPA 2002b. Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites.
b - NDEP 2010a. NDEP Basic Comparison Levels.
c - pH dependent soil adsorption coeffiecients for metals were selected according to the average site soil pH of 9.0.
d - ORNL. 2010.
e - Hazardous Substances Database (HSDB). http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB.

TABLE J-5
CHEMICAL APPLICATION DATA FOR SESOIL MODELING
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter	Units	Application Zone	Source
Soil Cover Efficiency	unitless	0	Site Specific
Number of Soil Infiltration Layers	unitless	4	Site Specific
Simulation run time	years	100	Site Specific
Area	acres	44	Site Specific
Application Area Latitude	degrees	35	Site Specific
Infiltration Layer 1 Thickness	cm (feet)	305 (10)	Site Specific
Infiltration Layer 2 Thickness	cm (feet)	152.4 (5)	Site Specific
Infiltration Layer 3 Thickness	cm (feet)	152.4 (5)	Site Specific
Infiltration Layer 4 Thickness	cm (feet)	152.4 (5)	Site Specific
Depth to Groundwater	cm (feet)	762 (25)	Site Specific
Infiltration Layer Where Chemical is Applied		1	Site Specific
pH of soil	unitless	8.0	Site Specific
Liquid Phase Biodegradation Ratio	unitless	1	Default
Soil Phase Biodegradation Ratio	unitless	1	Default
Organic Carbon Content Ratio	unitless	1	Default
Cation Exchange Capacity Ratio	unitless	1	Default
Frenudlich Exponent Ratio	unitless	1	Default
Adsorption Coefficient Ratio	unitless	1	Default

TABLE J-6
INITIAL CHEMICAL CONCENTRATIONS AT TIME ZERO FOR SESOIL MODELING
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Application Area	Depth (feet bgs)	Units	Source	Nickel	Benzo(g,h,i) perylene	2,4'-DDE	beta-BHC	Ammonia	Perchlorate	Cyanide, Total
Layer One										
Infiltration Sub-Layer One	0-1	mg/kg	Site Specific	28.2	0.0341	0.015	0.019	8.2	28.6	5.8
Infiltration Sub-Layer Two	1-2	mg/kg	Site Specific	28.2	0.0341	0.015	0.019	8.2	28.6	5.8
Infiltration Sub-Layer Three	2-3	mg/kg	Site Specific	28.2	0.0341	0.015	0.019	8.2	28.6	5.8
Infiltration Sub-Layer Four	3-4	mg/kg	Site Specific	28.2	0.0341	0.015	0.019	8.2	28.6	5.8
Infiltration Sub-Layer Five	4-5	mg/kg	Site Specific	28.2	0.0341	0.015	0.019	8.2	28.6	5.8
Infiltration Sub-Layer Six	5-6	mg/kg	Site Specific	28.2	0.0341	0.015	0.019	8.2	28.6	5.8
Infiltration Sub-Layer Seven	6-7	mg/kg	Site Specific	28.2	0.0341	0.015	0.019	8.2	28.6	5.8
Infiltration Sub-Layer Eight	7-8	mg/kg	Site Specific	28.2	0.0341	0.015	0.019	8.2	28.6	5.8
Infiltration Sub-Layer Nine	8-9	mg/kg	Site Specific	28.2	0.0341	0.015	0.019	8.2	28.6	5.8
Infiltration Sub-Layer Ten	9-10	mg/kg	Site Specific	28.2	0.0341	0.015	0.019	8.2	28.6	5.8
Layer Two										
Infiltration Sub-Layer One	10-11	mg/kg	Site Specific	23.7	0.00371	0	0	0	10.1	1.1
Infiltration Sub-Layer Two	11-12	mg/kg	Site Specific	19.8	0	0	0	0	1.83	0.53
Infiltration Sub-Layer Three	12-13	mg/kg	Site Specific	0	0	0	0	0	0	0
Infiltration Sub-Layer Four	13-14	mg/kg	Site Specific	0	0	0	0	0	0	0
Infiltration Sub-Layer Five	14-15	mg/kg	Site Specific	0	0	0	0	0	0	0
Layer Three										
Infiltration Sub-Layer One	15-16	mg/kg	Site Specific	0	0	0	0	0	0	0
Infiltration Sub-Layer Two	16-17	mg/kg	Site Specific	0	0	0	0	0	0	0
Infiltration Sub-Layer Three	17-18	mg/kg	Site Specific	0	0	0	0	0	0	0
Infiltration Sub-Layer Four	18-19	mg/kg	Site Specific	0	0	0	0	0	0	0
Infiltration Sub-Layer Five	19-20	mg/kg	Site Specific	0	0	0	0	0	0	0
Layer Four (sub layers one to five)	20-25	mg/kg	Site Specific	--	--	--	--	--	--	--

TABLE J-6
INITIAL CHEMICAL CONCENTRATIONS AT TIME ZERO FOR SESOIL MODELING
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Application Area	Depth (feet bgs)	Units	Source	Nickel	Benzo(g,h,i) perylene	2,4'-DDE	beta-BHC	Ammonia	Perchlorate	Cyanide, Total
Layer One										
Infiltration Sub-Layer One	0-1	ug/ml	Site Specific	46.248	0.056	0.025	0.031	13.448	46.904	9.512
Infiltration Sub-Layer Two	1-2	ug/ml	Site Specific	46.248	0.056	0.025	0.031	13.448	46.904	9.512
Infiltration Sub-Layer Three	2-3	ug/ml	Site Specific	46.248	0.056	0.025	0.031	13.448	46.904	9.512
Infiltration Sub-Layer Four	3-4	ug/ml	Site Specific	46.248	0.056	0.025	0.031	13.448	46.904	9.512
Infiltration Sub-Layer Five	4-5	ug/ml	Site Specific	46.248	0.056	0.025	0.031	13.448	46.904	9.512
Infiltration Sub-Layer Six	5-6	ug/ml	Site Specific	46.248	0.056	0.025	0.031	13.448	46.904	9.512
Infiltration Sub-Layer Seven	6-7	ug/ml	Site Specific	46.248	0.056	0.025	0.031	13.448	46.904	9.512
Infiltration Sub-Layer Eight	7-8	ug/ml	Site Specific	46.248	0.056	0.025	0.031	13.448	46.904	9.512
Infiltration Sub-Layer Nine	8-9	ug/ml	Site Specific	46.248	0.056	0.025	0.031	13.448	46.904	9.512
Infiltration Sub-Layer Ten	9-10	ug/ml	Site Specific	46.248	0.056	0.025	0.031	13.448	46.904	9.512
Layer Two										
Infiltration Sub-Layer One	10-11	ug/ml	Site Specific	38.868	0.0061	0.000	0.000	0.000	16.564	1.804
Infiltration Sub-Layer Two	11-12	ug/ml	Site Specific	32.472	0.000	0.000	0.000	0.000	3.001	0.869
Infiltration Sub-Layer Three	12-13	ug/ml	Site Specific	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Infiltration Sub-Layer Four	13-14	ug/ml	Site Specific	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Infiltration Sub-Layer Five	14-15	ug/ml	Site Specific	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Layer Three										
Infiltration Sub-Layer One	15-16	ug/ml	Site Specific	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Infiltration Sub-Layer Two	16-17	ug/ml	Site Specific	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Infiltration Sub-Layer Three	17-18	ug/ml	Site Specific	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Infiltration Sub-Layer Four	18-19	ug/ml	Site Specific	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Infiltration Sub-Layer Five	19-20	ug/ml	Site Specific	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Layer Four (sub layers one to five)	20-25	ug/ml	Site Specific	--	--	--	--	--	--	--

NOTE: Concnetrations in units mg/kg are dry weight based
and are converted to units of ug/ml based on site-specific
measurements of soil bulk density (Table J-3).

Conc.(ug/ml)=Conc.(mg/kg)×1000ug/mg×0.001kg/g×1.6131g/cm^3×1cm^3/ml

TABLE J-6
INITIAL CHEMICAL CONCENTRATIONS AT TIME ZERO FOR SESOIL MODELING
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Application Area	Depth (feet bgs)	Units	Source	1,2,4-Tri-methylbenzene	Dichloro-methane	Formaldehyde	Nitrate (as N)	Nitrate (as N) Max BKND	Nitrate (as N) Avg BKND
Layer One									
Infiltration Sub-Layer One	0-1	mg/kg	Site Specific	0.0017	0.028	0.843	121	102	8.27
Infiltration Sub-Layer Two	1-2	mg/kg	Site Specific	0.0017	0.028	0.843	121	102	8.27
Infiltration Sub-Layer Three	2-3	mg/kg	Site Specific	0.0017	0.028	0.843	121	102	8.27
Infiltration Sub-Layer Four	3-4	mg/kg	Site Specific	0.0017	0.028	0.843	121	102	8.27
Infiltration Sub-Layer Five	4-5	mg/kg	Site Specific	0.0017	0.028	0.843	121	102	8.27
Infiltration Sub-Layer Six	5-6	mg/kg	Site Specific	0.0017	0.028	0.843	121	102	8.27
Infiltration Sub-Layer Seven	6-7	mg/kg	Site Specific	0.0017	0.028	0.843	121	102	8.27
Infiltration Sub-Layer Eight	7-8	mg/kg	Site Specific	0.0017	0.028	0.843	121	102	8.27
Infiltration Sub-Layer Nine	8-9	mg/kg	Site Specific	0.0017	0.028	0.843	121	102	8.27
Infiltration Sub-Layer Ten	9-10	mg/kg	Site Specific	0.0017	0.028	0.843	121	102	8.27
Layer Two									
Infiltration Sub-Layer One	10-11	mg/kg	Site Specific	0.00088	0.018	0.593	22.9	0	0
Infiltration Sub-Layer Two	11-12	mg/kg	Site Specific	0.00054	0.0053	0.318	8.5	0	0
Infiltration Sub-Layer Three	12-13	mg/kg	Site Specific	0	0	0	0	0	0
Infiltration Sub-Layer Four	13-14	mg/kg	Site Specific	0	0	0	0	0	0
Infiltration Sub-Layer Five	14-15	mg/kg	Site Specific	0	0	0	0	0	0
Layer Three									
Infiltration Sub-Layer One	15-16	mg/kg	Site Specific	0	0	0	0	0	0
Infiltration Sub-Layer Two	16-17	mg/kg	Site Specific	0	0	0	0	0	0
Infiltration Sub-Layer Three	17-18	mg/kg	Site Specific	0	0	0	0	0	0
Infiltration Sub-Layer Four	18-19	mg/kg	Site Specific	0	0	0	0	0	0
Infiltration Sub-Layer Five	19-20	mg/kg	Site Specific	0	0	0	0	0	0
Layer Four (sub layers one to five)	20-25	mg/kg	Site Specific	--	--	--	--	--	--

TABLE J-6
INITIAL CHEMICAL CONCENTRATIONS AT TIME ZERO FOR SESOIL MODELING
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Application Area	Depth (feet bgs)	Units	Source	1,2,4-Tri-methylbenzene	Dichloro-methane	Formaldehyde	Nitrate (as N)	Nitrate (as N) Max BKND	Nitrate (as N) Avg BKND
Layer One									
Infiltration Sub-Layer One	0-1	ug/ml	Site Specific	0.0028	0.046	1.383	198.440	167.280	13.563
Infiltration Sub-Layer Two	1-2	ug/ml	Site Specific	0.0028	0.046	1.383	198.440	167.280	13.563
Infiltration Sub-Layer Three	2-3	ug/ml	Site Specific	0.0028	0.046	1.383	198.440	167.280	13.563
Infiltration Sub-Layer Four	3-4	ug/ml	Site Specific	0.0028	0.046	1.383	198.440	167.280	13.563
Infiltration Sub-Layer Five	4-5	ug/ml	Site Specific	0.0028	0.046	1.383	198.440	167.280	13.563
Infiltration Sub-Layer Six	5-6	ug/ml	Site Specific	0.0028	0.046	1.383	198.440	167.280	13.563
Infiltration Sub-Layer Seven	6-7	ug/ml	Site Specific	0.0028	0.046	1.383	198.440	167.280	13.563
Infiltration Sub-Layer Eight	7-8	ug/ml	Site Specific	0.0028	0.046	1.383	198.440	167.280	13.563
Infiltration Sub-Layer Nine	8-9	ug/ml	Site Specific	0.0028	0.046	1.383	198.440	167.280	13.563
Infiltration Sub-Layer Ten	9-10	ug/ml	Site Specific	0.0028	0.046	1.383	198.440	167.280	13.563
Layer Two									
Infiltration Sub-Layer One	10-11	ug/ml	Site Specific	0.0014	0.030	0.973	37.556	0.000	0.000
Infiltration Sub-Layer Two	11-12	ug/ml	Site Specific	0.00089	0.0087	0.5215	13.940	0.000	0.000
Infiltration Sub-Layer Three	12-13	ug/ml	Site Specific	0.000	0.000	0.000	0.000	0.000	0.000
Infiltration Sub-Layer Four	13-14	ug/ml	Site Specific	0.000	0.000	0.000	0.000	0.000	0.000
Infiltration Sub-Layer Five	14-15	ug/ml	Site Specific	0.000	0.000	0.000	0.000	0.000	0.000
Layer Three									
Infiltration Sub-Layer One	15-16	ug/ml	Site Specific	0.000	0.000	0.000	0.000	0.000	0.000
Infiltration Sub-Layer Two	16-17	ug/ml	Site Specific	0.000	0.000	0.000	0.000	0.000	0.000
Infiltration Sub-Layer Three	17-18	ug/ml	Site Specific	0.000	0.000	0.000	0.000	0.000	0.000
Infiltration Sub-Layer Four	18-19	ug/ml	Site Specific	0.000	0.000	0.000	0.000	0.000	0.000
Infiltration Sub-Layer Five	19-20	ug/ml	Site Specific	0.000	0.000	0.000	0.000	0.000	0.000
Layer Four (sub layers one to five)	20-25	ug/ml	Site Specific	--	--	--	--	--	--

NOTE: Concnetrations in units mg/kg are dry weight based and are converted to units of ug/ml based on site-specific measurements of soil bulk density (Table J-3).

$Conc.(ug/ml)=Conc.(mg/kg)\times 1000ug/mg\times 0.001kg/g\times 1.6131g/cm^3\times 1cm^3/ml$

TABLE J-7
INPUTS FOR VLEACH MODELING
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

Parameter	Units	Application Zone	Source
Simulation run time	years	100	Site Specific
Simulation step time	years	0.1	Site Specific
Number of Layers	unitless	25	Consistent with SESOIL Modeling
Soil moisture-Baseline Scenario	percent	3.8	Consistent with SESOIL Modeling
Soil moisture-Normal Scenario	percent	4.7	Consistent with SESOIL Modeling
Soil moisture-Enhanced Scenario	percent	7.9	Consistent with SESOIL Modeling
Baseline Recharge Rate	inches/year	0.08	Site Specific; SESOIL Modeling
Normal[a] Recharge Rate	inches/year	0.57	Site Specific; SESOIL Modeling
Enhanced Recharge Rate	inches/year	8.672	Site Specific; SESOIL Modeling

[a]Normal recharge rate for standard post development conditions (housing).

TABLE J-8
IMPACTS TO GROUNDWATER MODELING RESULTS - BASELINE RAINFALL RECHARGE CONDITIONS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

COPC	Time to Reach Groundwater (years)	Maximum Migration Depth (ft bgs)	Depth to Groundwater (ft bgs)	Maximum Soil Moisture Conc. at Groundwater Interface (µg/L)	Maximum Measured Groundwater Concentration[a] (µg/L)	Residential Water BCL (µg/L)
Nickel	NA	11	25	NA	12.1	730
Benzo(g,h,i)perylene	NA	11	25	NA	--	1000
Ammonia	17	GW	25	1108000	13.5	730
Nitrate (as N)	7	GW	25	2000000	27700	10000
Nitrate (as N)-Avg Background	7	GW	25	1820000	27700	10000
Nitrate (as N)-Max Background	7	GW	25	2000000	27700	10000
Perchlorate	9	GW	25	2000000	7600	18
2,4'-DDE	NA	10	25	NA	<0.01	0.2
beta-BHC	NA	12	25	NA	<0.01	0.037
Cyanide, Total	19	GW	25	9.2	4.1	200
1,2,4-Trimethylbenzene	1	GW	25	0.000418	<0.062	51.1
Dichloromethane	1	GW	25	0.191	<0.1	5
Formaldehyde	1	GW	25	3500	--	1.5

[a]From Sixth Round Groundwater Monitoring Report (Aug - Sept 2009) for the BMI Common Areas (Eastside).

TABLE J-9
IMPACTS TO GROUNDWATER MODELING RESULTS - NORMAL POST-DEVELOPMENT RECHARGE CONDITIONS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

COPC	Time to Reach Groundwater (years)	Maximum Migration Depth (ft bgs)	Depth to Groundwater (ft bgs)	Maximum Soil Moisture Conc. at Groundwater Interface (µg/L)	Maximum Measured Groundwater Concentration[a] (µg/L)	Residential Water BCL (µg/L)
Nickel	NA	11	25	NA	12.1	730
Benzo(g,h,i)perylene	NA	11	25	NA	--	1000
Ammonia	8	GW	25	638000	13.5	730
Nitrate (as N)	4	GW	25	2000000	27700	10000
Perchlorate	5	GW	25	2000000	7600	18
2,4'-DDE	NA	10	25	NA	<0.01	0.2
beta-BHC	NA	13	25	NA	<0.01	0.037
Cyanide, Total	10	GW	25	1370	4.1	200
1,2,4-Trimethylbenzene	1	GW	25	0.000433	<0.062	51.1
Dichloromethane	1	GW	25	0.209	<0.1	5
Formaldehyde	1	GW	25	15940	--	1.5

[a]From Sixth Round Groundwater Monitoring Report (Aug - Sept 2009) for the BMI Common Areas (Eastside).

TABLE J-10
IMPACTS TO GROUNDWATER MODELING RESULTS - ENHANCED RECHARGE CONDITIONS
HUMAN HEALTH RISK ASSESSMENT AND CLOSURE REPORT FOR GALLERIA NORTH-SCHOOL SITE SUB-AREA
BMI COMMON AREAS (EASTSIDE), CLARK COUNTY, NEVADA

COPC	Time to Reach Groundwater (years)	Maximum Migration Depth (ft bgs)	Depth to Groundwater (ft bgs)	Maximum Soil Moisture Conc. at Groundwater Interface (µg/L)	Maximum Measured Groundwater Concentration[a] (µg/L)	Residential Water BCL (µg/L)
Nickel	NA	12	25	NA	12.1	730
Benzo(g,h,i)perylene	NA	11	25	NA	--	1000
Ammonia	2	GW	25	166800	13.5	730
Nitrate (as N)	2	GW	25	1946000	27700	10000
Perchlorate	2	GW	25	588000	7600	18
2,4'-DDE	NA	10	25	NA	<0.01	0.2
beta-BHC	NA	22	25	NA	<0.01	0.037
Cyanide, Total	2	GW	25	32600	4.1	200
1,2,4-Trimethylbenzene	1	GW	25	0.000777	<0.062	51.1
Dichloromethane	1	GW	25	0.815	<0.1	5
Formaldehyde	1	GW	25	12630	--	1.5

[a]From Sixth Round Groundwater Monitoring Report (Aug - Sept 2009) for the BMI Common Areas (Eastside).