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**Final Geochemical Evaluation of Metals in Groundwater at the Ravenna Army
Ammunition Plant
Version 1.0**

**Ravenna Army Ammunition Plant
Ravenna, Ohio**

**Contract No. W912QR-08-D-0013
Delivery Order 0006**

Prepared for:



**US Army Corps
of Engineers[®]**

Louisville District

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June 22, 2011

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BRAC – Base Realignment and Closure

OHARNG – Ohio Army National Guard

Ohio EPA – Ohio Environmental Protection Agency

RVAAP – Ravenna Army Ammunition Plant

USACE – U.S. Army Corps of Engineers – Louisville District

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CONTRACTOR'S STATEMENT OF INDEPENDENT TECHNICAL REVIEW

Shaw Environmental & Infrastructure, Inc. has completed the *Final Geochemical Evaluation of Metals in Groundwater at the Ravenna Army Ammunition Plant*. Notice is hereby given that an independent technical review has been conducted that is appropriate to the level of risk and complexity inherent in the project. During the independent technical review, compliance with established policy, principles, and procedures, utilizing justified and valid assumptions, was verified. This included review of technical assumptions; methods, procedures and materials to be used; and whether the product meets customer's needs consistent with law and existing Corps policy.

Reviewed/Approved by:  Date: 6/22/2011

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- Appendix C Background Data
- Appendix D Responses to Comments
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Acronyms and Abbreviations

| | |
|-------|---|
| Al | aluminum |
| AOC | Area of Concern |
| As | arsenic |
| Ba | barium |
| Be | beryllium |
| Ca | calcium |
| Cd | cadmium |
| Co | cobalt |
| COC | chemical of concern |
| Cr | chromium |
| Cu | copper |
| CV | coefficient of variation |
| DO | dissolved oxygen |
| EPA | Environmental Protection Agency |
| EPRI | Electric Power Research Institute |
| Fe | iron |
| K | potassium |
| KW | Kruskal-Wallis |
| MDL | method detection limit |
| Mg | magnesium |
| mg/L | milligram(s) per liter |
| Mn | manganese |
| Na | sodium |
| Ni | nickel |
| O | oxygen |
| ORP | oxidation-reduction potential |
| PAH | polycyclic aromatic hydrocarbon |
| Pb | lead |
| redox | reduction-oxidation |
| RVAAP | Ravenna Army Ammunition Plant |
| Sb | antimony |
| Shaw | Shaw Environmental & Infrastructure, Inc. |
| TAL | Target Analyte List |
| Tl | thallium |
| UCL | upper confidence limit |
| USACE | U.S. Army Corps of Engineers |
| UTL | upper tolerance limit |
| V | vanadium |
| WRS | Wilcoxon rank sum test |

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Executive Summary

The key objective of this report is to characterize the naturally occurring background distributions of 23 elements in groundwater at RVAAP on a facility-wide basis. Complete descriptions of the statistical distributions of each element are provided, along with the actual background concentrations. The background characterization approach is based on carefully screening and evaluating Army-provided laboratory and field analytical results from a comprehensive site-wide groundwater sampling event that obtained and analyzed filtered and unfiltered samples from 234 wells during October 2009.

Some fraction of the samples is representative of natural background conditions, and the remaining fraction may be impacted by current and/or historic operations at the facility. The analytical results from each well are carefully screened to identify and remove potentially impacted samples from the candidate background data set so that the final data set is truly representative of background conditions. The background data screening process includes multiple procedures based on statistics and geochemistry that identify and remove potentially contaminated samples from the data set, so that the remaining samples contain only naturally occurring concentrations of metals.

Comparisons of concentrations to MCLs or SMCLs were not considered as part of evaluation because these limits only apply to drinking water, and no future use for groundwater is specified at this time. If the groundwater was to be used by a receptor in the future it would need to be addressed in a risk management decision at that time.

Statistical screening methods, when used alone, are ineffective in clearly distinguishing between naturally high concentrations versus contamination because they ignore the site-specific geochemical processes that control the concentrations of each element. The combination of statistical and geochemical evaluation eliminates the need for arbitrary assumptions, considers natural geochemical processes, and greatly reduces the false-positive and false-negative results that are inherent in a purely statistical approach.

A key element in the screening process is a geochemical evaluation to determine whether the observed concentrations are naturally occurring. This step involves graphically examining the concentrations of each trace element versus selected major elements to identify samples with anomalously high trace/major element ratios, which is an indicator of potential contamination. A large number of exploratory correlation and ratio plots are generated at this step to identify the site-specific elemental associations. Ratios of concentrations in filtered versus unfiltered samples are also evaluated to provide independent lines of evidence. Samples exhibiting anomalous trace

versus major element ratios are considered suspect and are eliminated from the candidate background data set.

Spatial relationships are considered during the screening process to determine whether subpopulations are present in the background data. Analyses of groundwater samples obtained from the three hydrostratigraphic units (Unconsolidated, Homewood, and Sharon) are statistically compared using the Kruskal Wallis test to determine if the concentrations in the three subpopulations are similar or different. Test results, evaluated at the 99 percent confidence level, indicate that samples from the three units are similar enough to justify combining the data rather than characterizing separate background distributions for each unit.

The screening results identified potential contamination of one or more elements in 97 of the 258 samples. Antimony, arsenic, calcium, iron, magnesium, manganese, mercury, selenium, silver, sodium, and thallium have concentrations and elemental ratios reflecting natural processes in all of the samples. There is no evidence of contamination by these 11 elements in any of the 258 samples that were evaluated in this report. The remaining 12 elements have between 2 and 52 instances of anomalously high trace/major element ratios in the 258 samples. These elements include aluminum, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, potassium, vanadium, and zinc. Concentrations of these elements in some samples cannot be explained by natural processes, and may thus be due to contamination. Samples with anomalous ratios are eliminated from the background data set.

The 161 samples that survived the multi-step statistical and geochemical screening process are regarded as representative of background concentrations at RVAAP, and are then used to calculate background summary statistics. These statistics include the number of samples, percent nondetects, distribution shape (normal, lognormal, nonparametric) minimum, median, arithmetic mean, 95th upper confidence limit of the mean, 95th upper tolerance limit, and the maximum concentration. Measures of the variance of the distributions, expressed as standard deviation, interquartile range, and coefficient of variation, are also provided.

These statistics provide a complete description of the distributions that can be used for future site-to-background comparisons. The screened data are also provided for use in nonparametric site-to-background comparison tests such as the Wilcoxon rank sum test, which requires the actual data rather than summary statistics such as the mean and standard deviation.

In addition to background characterization, the geochemical evaluation also provides an explanation of the site-specific hydrogeological and geochemical processes controlling the concentrations of major and trace elements in groundwater at RVAAP. These key processes are adsorption of trace elements to the surfaces of very fine suspended clay and iron oxide particulates, and natural differences in redox potentials within the units. Redox potentials in the

Unconsolidated unit are affected by the presence of extensive wetlands in areas of RVAAP, and in the Sharon and Homewood units by the intermittent presence of coal and pyrite-bearing organic-rich shale strata. These differences in redox potentials are a major factor controlling arsenic, iron, and manganese concentrations, which are naturally higher under reducing redox conditions. Understanding these processes is important for distinguishing between naturally high background concentrations versus contamination.

A section on remedial alternatives is included that discusses methods for removing metal contaminants from groundwater. Recommendations on optimizing the groundwater monitoring program based on the results of this background investigation are also provided.

Prior to the completion of the Final version of this document, it was concluded by stakeholders that this report will not be used in making programmatic and technical decisions related to the groundwater at RVAAP. It was decided that given the maturity of the IRP program at RVAAP, the number of technical issues yet to be resolved between stakeholders, and the availability of funding needed to resolve those differences, it was not practical to move the groundwater geochemical evaluation program beyond its current point. If, in the future, it is decided by stakeholders that the conclusions presented in this document will be used at the site, stakeholders must revisit and resolve open issues related to the report's findings.

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1.0 Introduction

Under Contract W912QR-08-D-0013, Delivery Order 0006, the Louisville District, U.S. Army Corps of Engineers (USACE) contracted Shaw Environmental and Infrastructure, Inc., (Shaw) to conduct a geochemical evaluation of metals in groundwater at the Ravenna Army Ammunition Plant (RVAAP), Ravenna, Ohio. The purpose of the geochemical evaluation is to determine if elevated concentrations of detected metals in groundwater are naturally occurring or are site-related chemicals of concern (COCs).

1.1 Project Objective

The objective of this project is to characterize the naturally occurring background distributions of 23 elements in groundwater at RVAAP on a facility-wide basis. In addition, the site-specific geochemical and hydrogeological processes controlling the concentrations of elements in groundwater at the facility are identified. This information is primarily intended to be used in future groundwater investigations for properly distinguishing between naturally occurring concentrations versus impact from site-related activities. The approach is based on carefully screening and evaluating Army-provided laboratory and field analytical results from a comprehensive site-wide groundwater sampling event that obtained samples at 234 wells during October 2009.

Prior to the completion of the Final version of this document, it was concluded by stakeholders that this report will not be used in making programmatic and technical decisions related to the groundwater at RVAAP. It was decided that given the maturity of the IRP program at RVAAP, the number of technical issues yet to be resolved between stakeholders, and the availability of funding needed to resolve those differences, it was not practical to move the groundwater geochemical evaluation program beyond its current point. If, in the future, it is decided by stakeholders that the conclusions presented in this document will be used at the site, stakeholders must revisit and resolve open issues related to the report's findings.

1.2 Document Organization

The balance of this document is organized as follows:

- Section 2.0 – General Data Evaluation Methodology
- Section 3.0 – Statistical Evaluation Methodology
- Section 4.0 – Geochemical Evaluation Methodology
- Section 5.0 – Statistical Evaluation Results
- Section 6.0 – Geochemical Evaluation Results

- Section 7.0 – Background Characterization Results
- Section 8.0 – Conclusions and Recommendations
- Section 9.0 – References

2.0 General Data Evaluation Methodology

The evaluation included analytical data from 258 samples (234 regular environmental samples and 24 field duplicates) obtained from 234 monitoring wells during the October 2009 sampling event (the Work Plan called for sampling 237 wells, but 3 of the wells did not yield enough water for sampling). An unfiltered split and a filtered split (filtered in the field with a 0.45-micron filter) were collected from each well and submitted to the laboratory, yielding a total of 516 samples. Each of the 516 samples were analyzed for the Environmental Protection Agency's (EPA) Target Analyte List of 23 elements. In addition, six standard field parameters (temperature, turbidity, specific conductivity, pH, dissolved oxygen, and oxidation-reduction potential) and depth to groundwater were collected from each well.

Some fraction of the 258 samples are representative of natural background conditions, and the remaining fraction may be impacted by current and/or historic operations at the facility. The analytical results from each well thus need to be carefully screened to identify and remove any impacted samples from the candidate background data set so that the final data set is truly representative of background conditions. The background data screening process includes multiple procedures based on statistics and geochemistry that are designed to identify and remove potentially contaminated samples from the data set, so that the remaining samples contain only naturally occurring concentrations of metals. After fully screening the data set, the surviving data are then used to characterize the background distributions of each element.

In addition to background characterization, the geochemical evaluation also provides an understanding of the site-specific hydrogeological and geochemical processes that control the concentrations of the major and trace elements in groundwater at the facility. This understanding is important for distinguishing between naturally high background concentrations versus contamination.

2.1 Screening Approach

Statistical screening methods, when used alone, are ineffective in clearly distinguishing between naturally high concentrations versus contamination. These statistical methods are based on assumptions regarding the shapes (e.g., normal, lognormal, gamma) of the distributions. If one assumes that the background concentrations should describe a normal or lognormal distribution, then one can easily identify specific concentrations that have low probabilities of being members of that assumed distribution. Such "outlier" results are often assumed to be caused by contamination. This purely statistical approach is based on incorrect assumptions because there is no geochemical reason to expect that concentrations should conform to any strict statistical distribution. In addition, a purely statistical approach ignores the site-specific geochemical

processes that control the concentrations of each element. The combination of statistical and geochemical evaluation eliminates the need for arbitrary assumptions, considers natural geochemical processes, and greatly reduces the false-positive and false-negative results that are inherent in a purely statistical approach. Furthermore, the geochemical evaluation provides a rigorous scrutiny of outliers that is specifically recommended by the EPA prior to rejecting or retaining such data points (2006). Details of the statistical methods are provided in Chapter 3, and details of the geochemical methods are provided in Chapter 4.

The initial set of analytical data was screened using the following steps. These steps were performed sequentially, although some iteration between steps was necessary.

1. Screen data for completeness and acceptable quality, considering analytical methods, method reporting limits, quantitation limits, and presence of laboratory qualifiers and field parameters.
2. Perform a statistical outlier test for each analyte. Examine outliers to determine whether they reflect site-related contamination (see Step 4), transcription errors, etc., and eliminate as appropriate.
3. Eliminate “high nondetects” (nondetect results with reporting limits that are in the upper 10 percent of the distribution). Removal of these results ensures that the background screening values are not biased high due to the presence of nondetect results with elevated reporting limits.
4. Perform geochemical evaluations to determine whether metal concentrations are naturally occurring. This step involves graphically examining each trace element versus selected major elements to identify samples with anomalously high elemental ratios, which is an indicator of potential contamination. A large number of exploratory correlation and ratio plots are generated at this step to identify the site-specific elemental associations. Ratios of concentrations in filtered versus unfiltered samples, and correlations between element concentrations versus selected field parameters are also evaluated. Samples exhibiting anomalous trace versus major element ratios are considered suspect and are eliminated from the candidate background data set. The advantage of the geochemical evaluation step is that it distinguishes between anomalously high metal concentrations versus naturally elevated concentrations in groundwater samples with elevated turbidity. Samples with elevated turbidity are retained if no evidence of contamination is observed; this allows the background groundwater data set to reflect the full range of concentrations that are likely to be observed in future site investigation data sets, thus avoiding a low bias in the background screening values. Details of the geochemical evaluation methodology are provided in Chapter 4.
5. Consider spatial relationships during the screening process to determine whether subpopulations are present in the background data sets. Groundwater samples obtained from different hydrostratigraphic units (Unconsolidated, Homewood, and Sharon) may show different distributions of concentrations. If there is evidence that the subpopulations have significantly different distributions, then these data are

subdivided into groups, and separate background distributions are defined for each group.

Samples that survive the multi-step statistical and geochemical screening process are regarded as representative of background concentrations at Ravenna, and are then used to calculate background summary statistics. These statistics include the number of samples, percent nondetects, distribution shape (normal, lognormal, nonparametric) minimum, median, arithmetic mean, 95th upper confidence limit (UCL) of the mean, 95th upper tolerance limit (UTL), and the maximum concentration. The UCLs and UTLs are calculated using nonparametric bootstrap methods to maintain consistency and avoid bias (EPA, 1997, 2009a, and 2009b).

These statistics provide a complete description of the distributions that can be used for future site-to-background comparisons. The screened data are also provided for use in nonparametric site-to-background comparison tests such as the Wilcoxon rank sum test, which requires the actual data rather than summary statistics such as the mean and standard deviation. Details of the statistical and geochemical evaluation methods are provided in Chapters 3 and 4, respectively.

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3.0 Statistical Evaluation Methodology

This chapter describes the statistical methods used to characterize background distributions of the 23 Target Analyte List (TAL) elements in groundwater. The geochemical methods are described in Chapter 4.

The statistical methodology used to characterize background distributions is based on published EPA guidance (EPA, 1989; 1992; 1994; 1995; 1997; 2006; and 2009a). The following key issues are addressed in the background characterization methodology:

- Handling of duplicates
- Handling of nondetections
- Handling of outliers
- Appropriate spatial grouping of groundwater samples
- Evaluation of distributional assumptions
- Calculation of summary statistics

The following subsections explain how these key issues are addressed.

3.1 Handling of Duplicates

The data used in the geochemical evaluation are from the analyses of 258 samples (including 24 field duplicate samples) obtained from 234 monitoring wells during the October 2009 sampling event. The full set of analytical results from the 258 samples was used in the geochemical evaluation. Analytical results for the 24 field duplicate samples were not used in the statistical characterization of background distributions to avoid any bias introduced by giving extra weight to the locations where the duplicates were obtained.

3.2 Handling of Nondetections

A certain proportion of nondetectable concentrations of elements are common in analyses of background groundwater samples. The percentage of nondetects in the 258 (pre-screening) unfiltered samples ranged from zero for the major elements calcium and magnesium to approximately 98 percent for mercury, selenium, and silver.

A variety of methods to deal with nondetections have been proposed in EPA guidance, each of which has advantages and disadvantages with respect to minimizing bias in the characterization of background distributions. In this report, nondetections were replaced with a value equal to the method detection limit (MDL) for that analyte for the purpose of calculating the mean, median,

and standard deviation. The analytical laboratory routinely assigns “estimated” (“J” flagged) qualifiers to results that fall between the MDL and the quantitation limit, so it is likely that concentrations reported as nondetectable are between zero and the MDL. Estimated (“J” flagged) results are used as reported by the laboratory.

Nondetect results with replacement values that fall within the top 10 percent of the distribution are eliminated from the data set as “high nondetects” because inclusion of these values would introduce a high bias into the calculation of background screening values.

The mean and median for elements with more than 50 percent nondetects are expressed as limits (less-than values), so the uncertainty caused by the nondetect results is accounted for and the bias is minimized. Calculations of the 95th upper confidence limit of the mean and the 95th upper tolerance limit use the Kaplan-Meier method (also known as the “product-limit estimator”) to deal with left-censored data (Kaplan and Meier, 1958), as implemented in the ProUCL software package (Version 4.00.04) (EPA, 2009b), which is described in Section 3.6. This approach assures that the elements with nondetects are handled during statistical calculations in accordance with EPA guidance.

3.3 Handling of Outliers

Outliers are defined as data points with values that are anomalously high relative to the rest of the data set (EPA, 1989). The following are possible reasons for outliers:

- Improper sampling, analytical error, or laboratory contamination
- Errors in transcription of data values, decimal points, or units
- The presence of actual contamination in the sample
- A natural background concentration that is unusually high

For each element, the concentration data are rank-ordered and the maximum value is flagged if it is greater than five times the second-highest value (EPA, 1989). Samples flagged as outliers are further examined using geochemical methods to determine if there is an error in the recorded concentration. Statistical outliers are only eliminated from consideration if there are additional reasons to suspect errors in the data or site-related contamination in the sample. The possibility of contamination is considered during the geochemical evaluation (Chapter 4).

3.4 Spatial Grouping of Groundwater Samples

It is generally preferable to characterize background distributions on as broad a spatial scale as possible and as appropriate. Arbitrarily subdividing groundwater samples by depth, watershed, region of the site, or other parameter results in smaller data sets per group; this increases the uncertainty when inferring the sampled population’s characteristics. However, if the distributions of element concentrations are indeed significantly different in spatial subgroups of samples (such

as different aquifers), then separate background characterizations should be determined for those groups.

The statistical test most often recommended in EPA guidance (EPA, 1996 and 2009) to compare two subgroups of samples is the Wilcoxon rank sum (WRS) test (a.k.a. Mann-Whitney U test). The recommended equivalent test for comparing multiple (more than two) subgroups is the Kruskal-Wallis (KW) test. Both tests evaluate the null hypothesis that the subgroups of samples are drawn from the same population. They are nonparametric tests that are performed with the actual sets of values rather than summary parameters such as the mean or standard deviation, so they are valid for a wide range of distributional shapes.

The WRS test calculates the *W* statistic and the KW test calculates the *H* statistic. These statistics are then used to find the two-sided significance. A Type I error involves rejecting the null hypothesis when it is true. If the test statistic yields a probability of a Type I error (*p*-level) less than 0.05, then there is a statistically significant difference between the medians of the groups at a 95 percent confidence level. Likewise, if the test statistic yields a *p*-level less than 0.01, then there is a statistically significant difference between the medians of the groups at a 99 percent confidence level.

The key question addressed here is whether it is valid to combine the results from the subgroups (such as samples from different aquifers) and describe them as one distribution or to keep the data separate and describe them as different distributions. The question is answered by performing up to 23 tests in parallel, one for each detectable element. Increasing the confidence level (referred to as the “Bonferroni correction”), is a multiple-comparison correction that is used when several statistical tests are being performed simultaneously to answer one question (EPA, 1989; Weisstein, 2008). A given confidence level may be appropriate for each individual comparison, but that same confidence level is overly conservative for the set of all comparisons. The confidence level is thus adjusted upward to account for the elevated false-positive error rate when multiple comparisons are performed to address a single question.

If the *p*-level is greater than the critical value, then the null hypothesis is accepted at that confidence level, and the groups are assumed to be drawn from the same population.

Several factors should be kept in mind when evaluating WRS test results:

1. Dividing the data set into subgroups results in smaller sample sizes in each group, which are thus less representative of the sampled population. This effect increases the false-positive error rate of the test (i.e., an uncontaminated data set is erroneously declared to be contaminated), and also increases the uncertainty in the estimates of the population statistics.

2. Analytes with higher variances are generally prone to higher false-positive errors in these subgroup comparison tests because more samples are needed to adequately characterize the population. When the data are subdivided into groups, then the analytes with higher variances show more frequent false-positive test results due to insufficient sample size in one or more groups.
3. The presence of nondetect results can increase the error rates of the test, especially if the surrogate values assigned to nondetects are not constant.

3.5 Evaluation of Distributional Assumptions

The shape of the distribution, considered to be either normal, lognormal, or nonparametric, is reported as part of the characterization (the term “nonparametric” does not refer to a specific shape, but is used to describe distributions that are neither normal nor lognormal, in accordance with EPA guidance). The selection of an appropriate type of statistical distribution is based on EPA guidance (EPA, 1989, 1992, 2009), which recommends the Shapiro-Wilk test for determining whether the distribution of concentration data is normal. Lognormality is tested by taking the logarithm (log-transform) of the data and testing for normality (EPA, 1992).

The test returns a p -level between 0 and 1, indicating the “goodness of fit” to the tested model. A p -level of 0.05 or greater indicates an acceptable fit to a normal (or lognormal) model at the 95 percent confidence level; therefore, there is only a 1 in 20 chance of falsely identifying the distribution as normal when it actually is not. If the test statistic for the untransformed data is above the critical value for a 95 percent confidence level and is higher than the test statistic for the transformed data, then the distribution is identified as normal. If the test statistic for the log-transformed data is above the critical value for a 95 percent confidence level and is higher than the test statistic for the untransformed data, then the distribution is identified as lognormal. If the Shapiro-Wilk test indicates that a data set is neither normal nor lognormal at this confidence level, then the data are assumed to have a nonparametric distribution. Data sets with greater than 15 percent nondetects are automatically treated as nonparametric distributions as per EPA (1989) guidance.

3.6 Calculation of Summary Statistics

Complete statistical descriptions of the background distributions of elements in groundwater are provided in Chapter 5.0. These descriptions include the number of samples, percent nondetects, minimum, median, arithmetic mean, one-sided 95th UCL of the mean, 95th UTL, and the maximum. Also provided are three measures of the variance of the distributions, including the standard deviation, interquartile range (difference between the 25th and 75th percentiles), and coefficient of variation (CV, the standard deviation divided by the arithmetic mean). The shapes of the distributions, defined as either normal, lognormal, or nonparametric, are also provided.

The 95th UCL of the mean is a value that has a 95 percent probability of bounding (being greater than) the true population mean. It is often used as an exposure point concentration in human health and ecological risk assessments. The 95th UTL is a value that has a 95 percent probability of bounding the true 95th percentile of the population. It is often used as a background screening value as recommended in EPA guidance (EPA, 1989).

The summary statistics were calculated for each element using standard Excel functions, except for the 95th UCL of the mean and the 95th UTL, which are calculated using procedures implemented in the ProUCL software package (Version 4.00.04). This software is developed, maintained, and distributed by the EPA for the specific purpose of calculating UCLs and UTLs, and is based in part on guidance provided in EPA, 2009a and 2009b. ProUCL provides several different UCLs and UTLs for each data set, which are calculated using a variety of methods. The selection of the appropriate UCL and UTL is based on careful consideration of the size of each data set, the proportion of nondetect results, and differences in the reporting limits of the nondetect results.

The UCLs and UTLs for data sets with fully detectable results were calculated using the percentile bootstrap method based on 2,000 replications. Bootstrap procedures are nonparametric techniques that operate on the actual data rather than statistical parameters (such as mean and standard deviation). They do not require assumptions regarding the statistical distribution of the underlying population and are valid for any distributional shape (EPA, 1997).

Data sets containing between 1 and 15 percent nondetects were calculated using the nonparametric Kaplan-Meier percentile bootstrap method. Data sets with greater than 15 percent nondetects were calculated using the Kaplan-Meier procedure combined with the bootstrap-*t* method. The Kaplan-Meier survival function is used to minimize bias introduced by the presence of nondetects. Details of these methods can be found in the ProUCL Technical Guide (EPA, 2009b).

The complete descriptions of background distributions that are provided in Section 7.3 are sufficient to allow the calculation of additional statistical parameters of interest, such as the variance, standard error of the mean, and two standard deviations above the mean. The descriptions can also be used to support statistical site-to-background data set comparisons. There are two general types of statistical site-to-background comparisons. Parametric comparisons, such as the two-sample *t*-test, require the means and standard deviations of the distributions that are being compared. Nonparametric comparison tests, such as the Wilcoxon rank sum test and the Gehan test, require the actual data rather than summary statistics. The fully screened background data are provided in Appendix C.

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4.0 *Geochemical Evaluation Methodology*

Trace element concentrations in groundwater are controlled by a number of site-specific parameters, including the local pH, redox conditions, concentrations of natural complexing ligands (e.g., chloride, fluoride, sulfate, carbonate, hydroxyl, phosphate), the presence of suspended particulates, and the presence of organic contaminants. Each trace element is affected by these parameters to varying degrees. Elevated concentrations of trace elements in groundwater samples may thus be due to natural or anthropogenically caused variations in pH, redox potential, or complexing ligand concentrations; the presence of suspended particulates in the samples, or direct contamination of the groundwater by trace element(s). The effects of these processes are discussed in the following paragraphs.

4.1 *Effects of Suspended Particulates*

Under natural groundwater conditions, trace element concentrations are commonly controlled through adsorption on suspended particulates. The most common suspended particulates in groundwater samples are clay minerals (hydrated aluminosilicates), hydrated aluminum oxides ($\text{Al}_2\text{O}_3 \cdot n\text{H}_2\text{O}$), and aluminum hydroxides [$\text{Al}(\text{OH})_3$], hereafter referred to as “clays”; and iron oxide (Fe_2O_3), hydrated iron oxides ($\text{Fe}_2\text{O}_3 \cdot n\text{H}_2\text{O}$), iron hydroxide [$\text{Fe}(\text{OH})_3$], and iron oxyhydroxide ($\text{FeO} \cdot \text{OH}$) minerals, hereafter referred to as “iron oxides.”

Aluminum is a primary component of all clay minerals, which have low solubilities over the neutral pH range (6 to 8). Measured concentrations of aluminum greater than approximately 1 milligram per liter (mg/L) indicate the presence of suspended clay minerals (Hem, 1985; Stumm and Morgan, 1996); the higher the aluminum concentration, the greater the mass of suspended clay minerals in the sample. Iron oxides also have very low solubilities under oxidizing neutral-pH conditions, but they are redox-sensitive. Measured iron concentrations above approximately 1 mg/L under neutral-pH and moderate to oxidizing redox conditions indicate the presence of suspended iron oxides in the sample (Hem, 1985).

Samples containing naturally occurring trace elements adsorbed on suspended clay particulates commonly show a positive correlation with aluminum concentrations, and samples containing trace elements adsorbed on suspended iron oxides commonly show a positive correlation with iron concentrations. These correlations are evaluated by generating x-y plots of the concentrations of an elevated trace element versus aluminum or iron (depending on the trace element). Divalent cations such as barium, lead, and zinc have affinities to adsorb on clay surfaces, which tend to maintain a net negative charge under neutral-pH conditions (Electric Power Research Institute [EPRI], 1984; Brookins, 1988). Concentrations of barium, lead, or zinc

in a set of samples can be evaluated through comparison to the corresponding aluminum concentrations.

Under oxidizing conditions, elements such as arsenic, selenium, and vanadium are usually present as oxyanions and have a strong affinity to adsorb on iron oxide surfaces, which tend to maintain a net positive charge (Pourbaix, 1974; Hem, 1985; Brookins, 1988; Bowell, 1994). Concentrations of arsenic, selenium, or vanadium can be evaluated through comparison to the corresponding iron concentrations. Chromium can exist as a mixture of aqueous species with different charges [$\text{Cr}(\text{OH})_2^+$, $\text{Cr}(\text{OH})_3^0$, and $\text{Cr}(\text{OH})_4^-$], depending on pH (EPRI, 1984), so it can be distributed on several different types of sorptive surfaces, including clay and iron oxide minerals.

If the concentrations of trace elements in unfiltered samples are positively correlated with aluminum or iron, then they are most likely adsorbed to the surfaces of suspended particulates. If all of the samples fall on a common trend with a positive slope, then the elevated concentrations are most likely natural.

As an example, the detected concentrations of zinc (y-axis) would be plotted against the corresponding detected concentrations of aluminum (x-axis), due to the affinity for zinc adsorption on clays under neutral-pH conditions. If all of the samples display a common trend with a positive slope (similar zinc [Zn]/aluminum [Al] ratios), then it is likely that the zinc concentrations are due to the presence of varying degrees of suspended clay minerals in the samples. If one or more samples plot above the trend established by the other samples, then those samples have an anomalously high Zn/Al ratio and likely contain excess zinc that cannot be explained by these natural processes.

It should be noted that the strengths of the correlations between trace/major element pairs vary for each element. For instance, at most sites with oxic groundwater, arsenic and vanadium usually show very strong correlations with a major element such as iron or aluminum in unimpacted samples. Other elements such as mercury, silver, and thallium often show poor correlations with iron or aluminum. There are several reasons for this. Elements such as arsenic and vanadium preferentially adsorb on only one type of suspended particulate (clay or oxide, depending on local site conditions), so the correlation with iron or aluminum is very strong. Other trace elements are distributed on several types of particulates (including suspended organic material) so the correlation with any single reference element is not as strong. In addition, the presence of a large proportion of estimated (J-flagged) results adds scatter to the correlation plots because of larger uncertainties in the true concentrations. Also, a higher degree of scatter is observed on correlation plots if some samples are from low redox environments.

Ratio plots are useful for interpreting the relationship between trace and major elements and for identifying anomalous samples that may contain a component of contamination. Ratio plots display trace element concentrations on the y-axis and trace/major element ratios on the x-axis. They are employed in conjunction with correlation plots in those cases where it is not immediately apparent which site samples have anomalously high elemental ratios on the correlation plots. However, ratio plots must be interpreted with care when depicting groundwater data. For samples from low-redox areas, redox-sensitive elements (such as arsenic, iron, and manganese) are expected to display a higher degree of scatter on correlation plots and, hence, a wider range of ratios on ratio plots.

In addition to the evaluation of trace-versus-major element correlations, the effects of suspended particulates can be assessed via the evaluation of element-versus-turbidity correlations and comparison of filtered versus unfiltered splits. Evaluations of turbidity measurements can provide additional lines of evidence that support the conclusions drawn from the evaluation of trace-versus-major element correlations. However, turbidity measurements are qualitative and cannot distinguish between suspended iron oxides, clay minerals, and natural organic material. Consequently, they do not provide the mechanistic information afforded by the correlations of trace elements versus aluminum or trace elements versus iron. Turbidity measurements are also affected by the size and shape of suspended particulates, and are therefore highly qualitative.

Comparisons of filtered versus unfiltered splits of samples are highly informative and permit the identification of elements that are mostly present as suspended particulates versus those that are mostly in true solution. The intent of filtration is to remove suspended particulates; however, the diameters of suspended particulates form a continuum of values that can range from 100 microns to 0.001 micron, depending on water velocity and the shape and charge of the particulates (Stumm and Morgan, 1996). The standard 0.45-micron pore size filter that was used for these samples is roughly in the middle of the range of suspended particulates. Filtration could thus allow some fraction of the finer range of particulates to pass if they are present in the sample. Comparisons of the analyses of filtered versus unfiltered splits of samples are, however, still useful for providing independent confirmation of the conclusions reached by evaluation of elemental ratios (Thorbjornsen and Myers, 2007). If a trace element is mostly present in particulate form, then some reduction in concentration should be observed after filtration, even if some fraction of the suspended particulates remain in the sample; whereas elements in solution should show similar concentrations in both the filtered and unfiltered splits.

A useful graphic technique for comparing analyses of a set of filtered and unfiltered samples is to plot the ratio of filtered to unfiltered concentrations on the x-axis and the corresponding unfiltered concentration on the y-axis. Only samples with detectable concentrations in both the filtered and unfiltered splits can be plotted. If most of the detected concentrations of an analyte in the unfiltered samples are in a dissolved state, then those samples will line up on a near-vertical

trend that is centered around a filtered/unfiltered ratio of 1.0. This pattern is commonly displayed by major elements with high solubilities, such as sodium and magnesium, and soluble contaminants such as hexavalent chromium.

If an analyte is mostly present in particulate form, then filtration will lower the concentrations so the filtered/unfiltered ratio will be lower than unity (1.0). This departure from unity will increase at higher unfiltered concentrations, which appears on the graph as a trend with a negative slope (lower filtered/unfiltered ratios at higher unfiltered concentrations) (Thorbjornsen and Myers, 2007 and 2008).

4.2 Effects of Reductive Dissolution

Iron oxides and manganese oxides concentrate several trace elements such as arsenic, selenium, and vanadium on mineral surfaces, as discussed above. In soils and sedimentary aquifers, these elements are almost exclusively associated with iron and manganese oxide minerals and grain coatings, as long as the redox conditions are moderate to oxidizing.

The release of organic contaminants such as diesel, gasoline, or chlorinated solvents can establish local reducing environments caused by microbial degradation of the organic compounds. The first step in these degradation reactions is oxidation of the contaminants by aerobic microbes, resulting in the consumption of dissolved oxygen.

The establishment of local reducing conditions can drive the dissolution of iron and manganese oxides, which become soluble as the redox potential drops below a threshold value. Dissolution of these oxide minerals can mobilize the trace elements adsorbed on the oxide surfaces, which is a process termed “reductive dissolution.” Several investigations have documented the mobilization of arsenic, selenium, and other trace elements under locally reducing redox conditions (Sullivan and Aller, 1996; Nickson et al., 2000; Belzile et al., 2000). Reducing conditions can also exist naturally in groundwaters and surface waters that are associated with swamp or wetland environments, or in deeper aquifers where coal or organic-rich shale is present. At RVAAP, wetland environments are present over a significant portion of the facility and coal is present in some stratigraphic units underlying the facility, so naturally reducing conditions are expected at some locations.

Evidence for reductive dissolution includes correlations between elevated trace elements (arsenic, selenium, and vanadium in particular) versus lower redox conditions. Low redox conditions can be identified by elevated unfiltered iron (Fe) and manganese concentrations, elevated unfiltered Fe/Al ratios, and filtered/unfiltered ratios for iron and manganese that are close to unity (Thorbjornsen and Myers, 2007, 2008). These redox indicators are far more reliable than the standard oxidation-reduction potential (ORP) and dissolved oxygen (DO) field

measurements. These field measurements are qualitative at best, because they are subject to a large number of interferences, calibration problems, and instrument drift.

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5.0 Statistical Evaluation Results

5.1 Data Quality Screening

The analytical results were screened for completeness and acceptable quality, considering analytical methods, method reporting limits, quantitation limits, and presence of laboratory qualifiers, validation qualifiers, and field parameters. All of the results were considered to be complete and acceptable.

5.2 Statistical Outlier Tests

A statistical outlier test was performed on each analyte as described in Section 3.3. All of the elements passed the test except for chromium, copper, and lead. These statistical outliers, along with all of the other results, were subject to a geochemical evaluation to determine if the elevated concentrations can be explained by natural processes or are due to contamination (Section 6.0).

5.3 High Nondetect Screening

Results determined to be high nondetects (nondetect results with reporting limits that are in the upper 10 percent of the distribution) were identified and removed (Section 3.2). Removal of these results ensures that the background screening values are not biased high due to the presence of nondetect results with elevated reporting limits. No high nondetect results were present in the database.

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6.0 **Geochemical Evaluation Results**

This section includes a description of general groundwater conditions, followed by summaries of the evaluations of each of the 23 elements.

6.1 **Description of Groundwater Conditions**

6.1.1 **pH**

The data set contains 234 field pH measurements. A histogram of the pH measurements is shown in Figure 6-1. The figure shows a wide range of values from 3.27 to 8.58, with a mean of 6.45 and a median of 6.62. The majority of samples are in the circumneutral range (6.0 to 8.0), but some acidic samples are present. Nineteen (19) percent of the samples have pH below 5.5.

6.1.2 **Redox Conditions**

Redox conditions are usually assessed by field measurements of DO and ORP. The 233 DO measurements range from nondetectable (less than 0.05) to 12.2 mg/L. A histogram of the measurements is provided in Figure 6-2. The histogram shows a bimodal distribution consisting of an oxic group of samples having normally distributed DO values with a mean of ~5.5 mg/L, and a second smaller group of reducing samples with DO below 1.0 mg/L. Concentrations of DO below ~0.5 mg/L suggest reducing conditions, which includes 17 percent of the samples.

The 231 ORP measurements range from -189 to +543 mV, with a mean of 76 and a median of 65 mV. A histogram of the measurements is provided in Figure 6-3. The figure shows a broad, right-skewed distribution indicating a wide range of redox potentials. Thirty-five (35) percent of the measurements are in the negative potential range. These ORP results indicate that the redox conditions span a wide range from oxidizing to reducing.

Dissolved oxygen and ORP measurements are qualitative, and are subject to interferences from contamination of reducing samples with atmospheric oxygen. In addition, the probes need to be operated properly, calibrated often, and stored correctly when not in use or they will yield erroneous results. An assessment of the reliability of the DO and ORP field measurements can be performed by comparing the two sets of results as shown in Figure 6-4, which shows the DO versus ORP measurements in the set of 231 samples. A strong correlation is not expected in the plot because any detectable DO (above ~0.5 mg/L) should correspond to relatively high ORP. However, if the readings are correct, then samples with nondetectable DO should have relatively low ORP and samples with elevated DO should have correspondingly high ORP. This general qualitative agreement that is expected between the two types of field measurements is not observed in Figure 6-4. There are many samples with nondetectable (<0.05 mg/L) DO that have

ORP above +100 mV, and there are many samples with DO above 4 mg/L that have negative ORP measurements.

This lack of agreement is commonly observed in field measurements. However, there are more accurate methods of estimating groundwater redox conditions based on selected elemental ratios and the ratios of redox-sensitive element concentrations in filtered versus unfiltered sample splits. These methods are discussed in Section 4.2 above and in Section 6.2 below.

These more accurate redox estimation methods confirm that a wide range of redox conditions exist in the set of groundwater samples. The concentrations of arsenic, iron, and manganese in groundwater are strongly controlled by the local redox conditions, so identifying the cause of the reducing conditions observed at some sampling locations is a key issue. Reducing conditions can be an indirect effect of the release of large amounts of hydrocarbon fuels or solvents, or can be natural. Releases of hydrocarbons initially stimulate aerobic microbial activity. Aerobes will oxidize the hydrocarbon compounds to yield carbon dioxide and water, and deplete the dissolved oxygen concentrations in the process. When dissolved oxygen is depleted, then anaerobes become active and continue to degrade the hydrocarbons by other metabolic pathways including manganese, iron, nitrate, and sulfate reduction; and methanogenesis. Redox conditions will become progressively more reducing during this process; eventually the iron and manganese oxides present in the aquifer will start to dissolve, allowing the arsenic to be mobilized when the local redox potential falls below the arsenate stability field.

Reducing conditions can also be natural. Wetlands and marshes cover a large percentage of the surface of Ravenna. In these environments, the accumulation and oxidation of decaying organic material (e.g., leaves, pine needles, wood) depletes local dissolved oxygen levels and can cause the dissolution of iron and manganese oxides that are present in the soil. Naturally reducing conditions are thus expected in groundwater samples from the Unconsolidated unit that are close to wetlands.

Naturally reducing conditions also exist in the deeper aquifers at the site as a result of the presence of organic-rich shales and coal seams, both of which contain pyrite. The hydrostratigraphy of Ravenna and surrounding areas of Portage County is fully described by Winslow and White, 1966. Their description includes many references to the presence of organic-rich shales and discontinuous coal seams up to a few feet in thickness throughout the stratigraphic column. The Sharon unit contains two coal-bearing strata referred to as the Sharon Coal and the Quakertown Coal. The descriptions in Winslow and White (1966) are provided below:

“The Sharon, or No.1, coal occurs near the bottom of the shale unit of the Sharon Member. The coal usually occurs as a 1- and 3-inch band, or may be represented by a

‘smut streak’ or a thin zone of carbonaceous shale. The underclay beneath the coal is generally thin. A minable deposit of the Sharon coal occurred in Palmyra Township, where the coal (now mined out) had a thickness of as much as 4 feet and occurred in a series of crooked basins, probably formed in the abandoned meanders of a Pennsylvanian river valley” (Winslow and White, 1966).

“In the upper part of the shale unit of the Sharon Member, the Quakertown, or No.2, coal was exposed in a small strip mine immediately north of State Route 18, and half a mile east of Palmyra Station. The coal is about 2 feet thick and overlies 2 or 3 feet of clay” (Winslow and White, 1966).

Winslow and White (1966) describe the coal as “usually a moderately hard bright banded bituminous coal, but in places the coal is bony to dull, and contains some bands that are rich in pyrite” (page 16). Five RVAAP bedrock wells (LL9mw-007, LL10mw-002, SCFmw-002, SCFmw-003, SCFmw-004) also noted coal seams in the well logs, and many of the bedrock wells encountered black shales described as “highly weathered, friable, partings < 0.001 feet thick, thin shaley laminations, micaceous with trace pyrite accumulations throughout.”

The presence of coal, organic carbon-rich shale, and pyrite will create local reducing conditions in portions of the aquifer that are in contact with these materials. This occurs due to the presence of organic carbon as well as pyrite (FeS_2) which act as reducing agents. Pyrite, as well as coal itself, can contain high concentrations of arsenic, which is mobile under moderately reducing conditions.

The occurrences of wetlands at the surface and pyrite-bearing coal and organic shale seams in the deeper strata are the likely cause of the reducing conditions. The low concentrations of organic contaminants observed in some groundwater samples, including scattered detections of explosives, polycyclic aromatic hydrocarbon (PAH) compounds and chlorinated solvents, most likely do not contribute to the reducing conditions. Explosives and PAH compounds have low solubilities and degrade very slowly, so they do not consume dissolved oxygen to any significant degree. The detections of chlorinated solvents were all quite low (few parts-per-billion range), so their ability to consume dissolved oxygen and create reducing conditions is limited. Based on these observations, the majority of the occurrences of reducing groundwater conditions are most likely due to natural processes, including proximity to wetlands in the shallow units or pyrite-bearing coal and organic shale seams in the deeper units.

6.2 Geochemical Screening Results

Results and conclusions of the geochemical evaluation of the 23 elements are provided in this section.

6.2.1 Aluminum

Two-hundred-fifty-five (255) of the 258 unfiltered samples have detectable concentrations of aluminum (1.2 percent nondetects), which range from 0.0239 to 425.0 mg/L. Forty-seven (47) of the detections are estimated values below the reporting limit of 0.05 mg/L.

As discussed in Section 4.1, aluminum concentrations of approximately 1 mg/L and higher in neutral-pH groundwater indicate the presence of suspended clays. Some fraction of detected aluminum will be present in solution at a pH below about 4 and above 10 (Drever, 1997), but most of the pH measurements are in the neutral range of 6.0 to 8.5. Iron concentrations in excess of approximately 1 mg/L in neutral-pH, moderate to oxidizing conditions, indicate the presence of suspended iron oxides. Iron, unlike aluminum, is a redox-sensitive element, and its dissolved concentrations will increase under reducing conditions (reducing conditions can be natural, as in wetland environments, or they can be induced by the microbial degradation of chlorinated solvents and fuels). The field-measured DO and ORP measurements suggest a wide range of reducing to oxidizing conditions at the sample locations. Where conditions are oxidizing, it is expected that most of the iron detected in the samples will be present as suspended iron oxides, and where conditions are reducing, it is expected that some fraction of the detected iron will be present in a dissolved state.

A plot of aluminum versus iron can be used as a qualitative indicator of the amount of suspended particulates in the groundwater samples, as well as an indicator of the redox conditions at each of the sample locations (Thorbjornsen and Myers, 2007 and 2008). A linear trend with a positive slope is typically observed when both elements are present in particulate form (as clays and iron oxides), with aluminum and iron present in approximately equal proportions.

Figure 6-5 shows the concentrations of aluminum versus iron in the samples. Samples from the Unconsolidated, Sharon, and Homewood stratigraphic units are shown with open diamond, open triangle, and open square symbols, respectively. Ten (10) samples from the Unconsolidated unit and 6 samples from the Sharon unit are from wells that are designated as “background,” and are shown with solid diamond and solid triangle symbols, respectively (none of the Homewood wells are designated as background). The horizontal dashed line on the figure corresponds to the reporting limit for the aluminum results. Samples that appear below the reporting limit have estimated (“J”-flagged) concentrations that have higher uncertainties than the concentration that are above the reporting limit.

Most of the samples form a common trend with a positive slope in Figure 6-5, indicating that these samples have consistent Al/Fe ratios that are independent of the absolute aluminum (Al) or iron (Fe) concentrations. Although the concentrations of both elements span ranges of approximately four orders of magnitude, the samples that lie on the trend have fairly constant Al/Fe ratios. The constant Al/Fe ratios in these samples are caused by the presence of varying

amounts of suspended particulates in a homogeneous mixture that is dominantly composed of very fine-grained aluminum-bearing clays and iron oxides. It is important to note that samples containing a higher mass of suspended clays and iron oxides are expected to contain naturally higher concentrations of trace elements that have affinities to adsorb on these mineral surfaces.

A subset of samples lies below the trend established by the majority of the samples in Figure 6-5. These samples have more iron than would be expected from the presence of suspended particulates alone, resulting in lower Al/Fe ratios. The geochemical behavior of iron differs from aluminum in that aluminum is not affected by redox conditions and remains insoluble within the neutral pH range. Iron is also insoluble within the neutral pH range as long as the redox conditions are oxidizing, but it will dissolve under reducing redox conditions. A reasonable explanation for why some samples plot below the trend in Figure 6-5 is that these samples are from reducing environments under which the detected iron is mostly dissolved instead of being present as suspended oxide particulates. Iron is evaluated in greater detail in Section 6.2.11.

A third subset of samples includes three Sharon and one Unconsolidated sample that fall slightly above the trend established by the majority of the samples in Figure 6-5. These four samples contain more aluminum than expected based on their iron concentrations, and may have some component of aluminum contamination.

A different perspective on the analytical results is provided in Figure 6-6, which shows the unfiltered aluminum concentrations versus the corresponding Al/Fe ratios in each sample. The samples that formed the linear trend with a positive slope on the correlation plot (Figure 6-5) now appear as an approximately vertical stack of points over an Al/Fe ratio of ~ 0.6 on the ratio plot (Figure 6-6). The reducing samples that fell below the trend on the correlation plot now appear to the left of the vertical stack of points on the ratio plot, and the four samples that fell above the trend on the correlation plot now appear to the right of the vertical dashed line on the ratio plot, which is centered over an Al/Fe ratio of 1.0.

Correlation plots, when viewed along with the corresponding ratio plots, are useful for clearly identifying samples that are subject to different processes controlling element concentrations. In this case, the samples with consistent Al/Fe ratios (which form the vertical stack on the ratio plot) are from oxidizing environments, and the aluminum is present in those samples as naturally occurring suspended clay minerals. The samples below the trend on the correlation plot (to the left of the vertical stack on the ratio plot) are from reducing environments, and the four samples above the trend on the correlation plot (to the right of the vertical dashed line on the ratio plot) may have some component of aluminum contamination. These four samples were eliminated from the candidate background data set. The correlation between aluminum and iron in the final screened background data set is shown in Figure 6-7. Many samples present in the pre-screening data set (Figure 6-5) are absent in Figure 6-7. These samples were removed because of the

presence of anomalously high concentrations of elements other than aluminum, as described in the following sections.

6.2.2 Antimony

Twenty-one (21) of the 258 unfiltered samples have detectable concentrations of antimony (92 percent nondetects), which range from 0.00013 to 0.0025 mg/L. The two highest concentrations of 0.0025 and 0.0021 mg/L (both from the Sharon unit) are only slightly above the reporting limit of 0.002 mg/L. The remaining 19 detections are estimated values below the reporting limit.

Antimony (Sb) exists in oxic groundwater as the oxyanion Sb(OH)_6^- that has an affinity to adsorb on the surfaces of suspended iron oxides (EPRI, 1984). A correlation between antimony and iron is thus expected in uncontaminated samples. Figure 6-8 shows the correlation between the detectable antimony versus iron concentrations. A weak correlation is observed due to the fact that most of the detections are estimated and below the reporting limit (which is shown as a horizontal dashed line), and such concentrations have a high degree of analytical uncertainty. The accompanying ratio plot (Figure 6-9) shows that the two Sharon samples with concentrations above the reporting limit also have Sb/Fe ratios that are within the range of the other samples' Sb/Fe ratios. These observations suggest that the detected antimony is naturally occurring. The correlation between antimony and iron in the final screened background data set is shown in Figure 6-10. It should be noted that fewer samples are depicted in Figure 6-10 than in Figures 6-8 and 6-9 because many samples were screened out due to the presence of anomalous concentrations of other elements.

6.2.3 Arsenic

One-hundred-seventy-three (173) of the 258 unfiltered samples have detectable arsenic concentrations (33 percent nondetects), which range from 0.003 to 1.09 mg/L. Twenty-two (22) detections are estimated values below the reporting limit of 0.005 mg/L.

The mobility of arsenic (As) in groundwater is controlled by local redox conditions. Under oxidizing conditions, arsenic is in the +5 (pentavalent) valence state and exists in groundwater as the oxyanionic species H_2AsO_4^- and HAsO_4^{2-} (Brookings, 1987). These negatively charged arsenic species have a strong affinity under neutral pH conditions to adsorb on iron oxide and hydroxide surfaces, thus limiting its mobility. Under moderately reducing conditions, arsenic reduces to the +3 (trivalent) valence state, where it exists in groundwater as an aqueous species with a neutral charge (H_3AsO_3^0). The neutral charge inhibits adsorption, so it remains mobile in groundwater. Under extremely reducing conditions where sulfate gets reduced to sulfide, arsenic will precipitate as one or more arsenic-sulfide minerals (realgar, orpiment, or arsenopyrite) that have very low solubilities, so mobility is restricted as long as conditions remain extremely reducing.

Where conditions are oxidizing, it is expected that most of the arsenic detected in the samples will be adsorbed on the surfaces of suspended clays and iron oxides, and where conditions are reducing, it is expected that some large fraction of the detected arsenic will be present in a dissolved state. As a result of this behavior, oxidizing samples are expected to show a correlation with aluminum (as discussed in the Aluminum section above) and will have filtered/unfiltered arsenic ratios less than unity; whereas reducing samples will have high As/Al ratios and filtered/unfiltered arsenic ratios close to unity.

This expected behavior is seen in Figure 6-11, which shows the correlation between arsenic and aluminum in the pre-screening data set. Samples that fall on the trend, which extends over three orders of magnitude, are from oxic groundwater locations in which the pentavalent arsenic is adsorbed on the surfaces of suspended particulates. Samples above the trend are from reducing groundwater locations, and the detected trivalent arsenic in those samples is mostly in a dissolved state. These observations are verified by examining the filtered/unfiltered ratios (Figure 6-12). In this plot, the oxidizing samples containing adsorbed pentavalent arsenic form the strong trend with a negative slope because some fraction of the suspended particulates are removed by filtration, which lowers the filtered/unfiltered ratio. Reducing samples containing dissolved trivalent arsenic have ratios closer to unity because the dissolved arsenic passes through the filter, yielding similar concentrations in the filtered and unfiltered splits.

An additional observation is that all of the samples with elevated As/Al ratios also have elevated iron concentrations, as well as elevated Fe/Al and Mn/Al ratios, providing independent evidence that these samples are from reducing groundwater locations. Samples contaminated with arsenic would not be expected to show such correlations because the presence of low concentrations of an herbicide would not itself cause reducing conditions.

Based on these observations, the arsenic concentrations appear to be controlled by local redox conditions, which vary due to proximity to wetlands in the Unconsolidated unit, and proximity to coal seams in the Sharon and Homewood units. As discussed in Section 6.1, the pyritic coal in the deeper units is a likely source of naturally occurring arsenic. There is no evidence of direct arsenic contamination in the samples.

The correlation between arsenic and aluminum in the final screened background data set is shown in Figure 6-13.

6.2.4 Barium

Two-hundred-fifty-five (255) of the 258 unfiltered samples have detectable barium concentrations (1.2 percent nondetects), which range from 0.0037 to 0.896 mg/L. Twelve (12) of the detections are estimated values below the reporting limit of 0.01 mg/L.

Barium is a soluble element that has a tendency to adsorb on suspended clay minerals. Some fraction of the barium in each sample is expected to be dissolved, and the remaining fraction is expected to be associated with suspended clay minerals. These fractions can vary between samples because the adsorption of barium on clays is dependent on pH and the concentrations of other cations such as sodium, calcium, and magnesium, which compete for sorption sites. In addition, barium (Ba) will precipitate as the mineral barite (BaSO_4) if sulfate concentrations are high.

Samples in which barium is dominantly associated with suspended clay minerals will show a positive correlation of barium versus aluminum, as shown in Figure 6-14. Barium in the samples that form the trend in the figure is mostly associated with suspended clays, and barium in the samples above the trend have a significant dissolved component.

This distribution of barium between adsorbed and dissolved forms can also be seen in Figure 6-15, which shows barium concentrations versus filtered/unfiltered ratios in each sample. The barium in the samples that form a vertical stack of points over a ratio of ~ 1.0 is present in a mostly dissolved state, and the samples that fall to the left of the stack with ratios below 1.0 have some fraction of barium adsorbed on suspended clay minerals.

Five samples were removed from the background data set due to potential barium contamination. These samples had barium concentrations above the reporting limits and barium filtered/unfiltered ratios above 1.4. The correlation between barium and aluminum in the final screened background data set is shown in Figure 6-16.

6.2.5 Beryllium

Sixty-four (64) of the 258 unfiltered samples have detectable beryllium concentrations (75 percent nondetects), which range from 0.00023 to 0.0168 mg/L. Thirty-eight (38) of the detections are estimated values below the reporting limit of 0.001 mg/L.

Beryllium (Be) exists in groundwater as Be^{2+} and BeOH^+ over the neutral pH range (EPRI, 1984). These species have affinities to adsorb on the surfaces of aluminum-bearing clay particulates, so a correlation with aluminum is expected in uncontaminated samples.

Figure 6-17 shows the correlation between beryllium and aluminum concentrations in unfiltered samples with detectable beryllium. Most of the samples fall on a clearly defined trend. These samples have nearly constant Be/Al ratios, suggesting that the source of beryllium in these samples is naturally occurring suspended clay particles. Two samples with beryllium concentrations above the reporting limit of 0.001 mg/L fall above the trend established by the other samples. This can be more clearly seen in the ratio plot (Figure 6-18), which shows beryllium concentrations versus Be/Al ratios. The vertical dashed line at a Be/Al ratio of 0.00019

was used to distinguish the samples with anomalously high Be/Al ratios. The two samples that have high Be/Al ratios and beryllium concentrations above the reporting limit were removed from the candidate background data set. They contain more beryllium than expected based on their aluminum content and thus might contain a component of beryllium contamination. The correlation between beryllium and aluminum in the final screened background data set is shown in Figure 6-19.

6.2.6 Cadmium

Fifty (50) of the 258 unfiltered samples have detectable cadmium concentrations (81 percent nondetects), which range from 0.00014 to 0.0166 mg/L. Thirty-five (35) of the detections are estimated and below the reporting limit of 0.0005 mg/L. Cadmium (Cd) is dominantly present in groundwater as the bare divalent cation Cd^{2+} over the neutral pH range (EPRI, 1984). This form of cadmium has an affinity to adsorb on the surfaces of suspended clay particulates, so a correlation with aluminum is expected if no contamination is present.

Figure 6-20 shows the correlation between cadmium and aluminum in the 50 samples with detectable cadmium. Seven samples in the upper left portion of the figure appear to have some of the highest cadmium concentrations but only low to moderate aluminum concentrations. The accompanying ratio plot (Figure 6-21) shows these samples, which fall to the right of the vertical dashed line positioned at a Cd/Al ratio of 0.00085. These seven samples have more cadmium than expected based on their aluminum content, and are suspected of being contaminated. They were removed from the candidate background data set. The correlation between cadmium and aluminum in the final screened background data set is shown in Figure 6-22.

6.2.7 Calcium

All 258 unfiltered samples have detectable calcium, with concentrations ranging from 3.13 to 996 mg/L. Calcium (Ca) is a fairly soluble major element that tends to remain in solution. At higher concentrations it may be limited by equilibrium with calcite (CaCO_3), which is the predominant mineral in limestone. Its geochemical behavior is similar to magnesium, so the concentrations of these elements are usually correlated in the absence of contamination. Figure 6-23 shows the correlation between calcium and magnesium. The consistent trend over a three order of magnitude concentration range indicates a near-constant Ca/Mg ratio in all of the samples.

The soluble form of calcium is evident in Figure 6-24, which shows unfiltered calcium concentrations versus the corresponding filtered/unfiltered ratios in each sample. The consistent ratios close to 1.0 indicate that the majority of the detected calcium is in a dissolved state. These observations suggest that the calcium concentrations reflect natural background conditions. The correlation between calcium and magnesium in the final screened background data set is shown in Figure 6-25.

6.2.8 Chromium

One-hundred-sixty-three (163) of the 258 samples have detectable chromium concentrations (37 percent nondetects), which range from 0.0014 to 0.739 mg/L. Sixty-eight (68) of the detections are estimated concentrations below the reporting limit of 0.005 mg/L.

The samples were analyzed for “total” chromium (Cr), which is the sum of trivalent and hexavalent Cr. Naturally occurring Cr is most commonly trivalent and is present in groundwater as the positively charged species $\text{Cr}(\text{OH})_2^+$, CrOH^{2+} , and Cr^{3+} over the neutral pH range (EPRI, 1984). These forms of chromium have affinities to adsorb on the negatively charged surfaces of suspended clays, so a correlation between chromium and aluminum is expected if no contamination is present.

Figure 6-26 shows the correlation between chromium and aluminum in the 163 samples with detectable chromium. The figure shows a very strong correlation, indicating that the Cr/Al ratios are nearly constant in most of the samples. A few samples from the Sharon unit plot under the trend. These are the samples with excess aluminum (see Aluminum discussion above) and were rejected from the candidate background data set for that reason. The sample with the maximum chromium concentration of 425 mg/L was also rejected due to excess aluminum that could not be explained as the result of natural processes. Three samples with elevated Cr/Al ratios and chromium concentrations above the reporting limit can be more clearly seen on the ratio plot (Figure 6-27). Although the chromium concentrations are not very high, the elevated Cr/Al ratios suggest that a small component of contamination may be present in these samples, so they were removed from the candidate background data set. Note that these three samples are from the Sharon unit and one of them is designated as a background sample. The correlation between chromium and aluminum in the final screened background data set is shown in Figure 6-28.

6.2.9 Cobalt

One-hundred-sixty-nine (169) of the 258 unfiltered samples have detectable cobalt concentrations (41 percent nondetects), which range from 0.0015 to 0.45 mg/L. Sixty-three (63) of the detections have estimated concentrations that are below the reporting limit of 0.005 mg/L.

Cobalt (Co) is dominantly present in groundwater over the neutral pH range as the divalent cation Co^{2+} (Brookins, 1988). This form of dissolved cobalt has a strong affinity to adsorb on negatively charged surfaces of suspended clay particles, so a correlation with aluminum is expected if no contamination is present.

Figure 6-29 shows the correlation between cobalt and aluminum in the 169 samples with detectable cobalt. Most of the samples fall on a consistent trend that extends over three orders of magnitude, indicating that the cobalt in those samples have a natural origin. There are, however, many samples that fall above the trend, which may be an indication of contamination. These

samples with anomalously high Co/Al ratios can be more clearly identified on the accompanying ratio plot (Figure 6-30). This perspective shows that there are 19 samples that have cobalt concentrations above the reporting limit and Co/Al ratios above a value of 0.0175 (vertical dashed line). These 19 samples were eliminated from the candidate background data set. The correlation between cobalt and aluminum in the final screened background data set is shown in Figure 6-31.

6.2.10 Copper

Eighty-four (84) of the 258 unfiltered samples have detectable copper concentrations (67 percent nondetects). Five (5) of the 84 samples have estimated concentrations that are below the reporting limit of 0.005 mg/L. Copper (Cu) is present in groundwater as Cu^+ or Cu^{2+} , depending on redox conditions (EPRI, 1984). Both species adsorb on negatively charged surfaces of suspended clay particles, so a correlation with aluminum is expected if no contamination is present.

Figure 6-32 shows the correlation between copper and aluminum in the 84 samples with detectable copper. Most of the sample fall on a consistent trend, indicating that the copper in those samples have a natural origin. There are, however, a few samples that fall above the trend, which may be an indication of contamination. These samples with anomalously high Cu/Al ratios can be more clearly identified on the accompanying ratio plot (Figure 6-33). This perspective shows that there are six samples from the Unconsolidated unit that have copper concentrations above the reporting limit and Cu/Al ratios above 0.007 (vertical dashed line). These six samples were eliminated from the candidate background data set. The correlation between copper and aluminum in the final screened background data set is shown in Figure 6-34.

6.2.11 Iron

Two-hundred-fifty-seven (257) of the 258 unfiltered samples have detectable iron concentrations (0.4 percent nondetects), which range from 0.05 to 287.0 mg/L. Sixty-seven (67) of the 257 samples have estimated concentrations that are below the reporting limit of 0.05 mg/L.

The solubility of iron in groundwater is controlled by local redox conditions, as discussed in Section 4.2. Iron is a major component of soil and aquifer matrices, and is commonly present as discrete iron oxide minerals and grain coatings. Where conditions are oxidizing, it is expected that most of the iron detected in the samples will present as suspended iron oxides; and where conditions are reducing, it is expected that some large fraction of the detected iron will be present in a dissolved state. As a result of this behavior, oxidizing samples should show a correlation with aluminum (as discussed in the section 6.2.1) and will have filtered/unfiltered iron ratios less than unity; whereas reducing samples should have high Fe/Al ratios and filtered/unfiltered iron ratios close to unity (Thorbjornsen and Myers, 2007 and 2008).

These expected relationships can be seen in Figure 6-35, which shows the correlation between iron and aluminum. Samples that fall on the trend, which extends over almost four orders of magnitude, are oxidizing samples in which the iron is present as suspended particulates. Samples that fall above the trend are reducing, and the detected iron in these samples is mostly in a dissolved state. These observations are verified by examining the filtered/unfiltered ratios, as shown in Figure 6-36. In this plot, the samples containing suspended iron oxides form the strong trend with a negative slope, and the reducing samples containing dissolved iron have ratios closer to unity. In addition, manganese and arsenic, which have similar redox behavior as iron, show the same relationships, as discussed in their respective sections.

Based on these observations, the iron concentrations appear to be controlled by local redox conditions, which vary due to proximity to wetlands in the Unconsolidated unit, and proximity to coal seams in the Sharon and Homewood units, as discussed in Section 6.1. There is no evidence of iron contamination in the candidate background samples. The correlation between iron and filtered/unfiltered ratios in the final screened background data set is shown in Figure 6-37.

6.2.12 Lead

One-hundred-twenty-three (123) of the 258 unfiltered samples have detectable lead concentrations (52 percent nondetects) that range from 0.0017 to 0.581 mg/L. Thirty-two (32) of the samples have estimated concentrations that are below the reporting limit of 0.003 mg/L. Lead (Pb) is present in groundwater over the neutral pH range as Pb^{2+} or $PbCl^+$, depending on the local chloride concentration (EPRI, 1984). Both species adsorb on negatively charged surfaces of suspended clay particles, so a correlation with aluminum is expected if no contamination is present.

Figure 6-38 shows the correlation between lead and aluminum in the 123 samples with detectable lead. Most of the sample fall on a consistent trend, indicating that the lead in those samples have a natural origin. There are, however, a few samples that fall above the trend, which may be an indication of contamination. These samples with anomalously high Pb/Al ratios can be more clearly identified on the accompanying ratio plot (Figure 6-39). This perspective shows that there are five samples that have lead concentrations above the reporting limit and Pb/Al ratios above 0.0055 (vertical dashed line). These five samples were eliminated from the candidate background data set. The correlation between lead and lead/aluminum ratios in the final screened background data set is shown in Figure 6-40.

6.2.13 Magnesium

All 258 unfiltered samples have detectable magnesium concentrations, which range from 1.97 to 444 mg/L. Magnesium (Mg) is a soluble major divalent cation that forms strong aqueous complexes with chloride, sulfate, and carbonate (anions that are commonly present in natural groundwaters), so it is usually present in a dissolved form. Its geochemical behavior is similar to

calcium, which is another soluble major divalent cation. Magnesium/calcium (Mg/Ca) ratios are expected to be fairly constant if no contamination is present. Figure 6-41 shows the correlation between the two elements. The consistent trend over a wide range of concentrations indicates a near-constant Mg/Ca ratio in all of the samples. The soluble form of the element is evident in the plot of unfiltered magnesium concentrations versus the filtered/unfiltered ratios in each sample (Figure 6-42). These observations suggest that the observed magnesium concentrations are naturally occurring. The correlation between magnesium and calcium in the final screened background data set is shown in Figure 6-43.

6.2.14 Manganese

All of the 258 unfiltered samples have detectable manganese concentrations, which range from 0.002 to 24.8 mg/L. Three of these samples have estimated concentrations that are below the reporting limit of 0.01 mg/L.

Manganese has a similar behavior as iron with respect to redox. The solubilities of both elements in groundwater are low under oxidizing conditions, and are high under reducing conditions, as discussed in Section 4.2. One difference is that manganese will dissolve at a higher redox potential than iron, so it is more sensitive to slight depressions in redox conditions.

Manganese is a minor component of soil and aquifer matrices, and is commonly present as discrete manganese oxide minerals and grain coatings. Where conditions are oxidizing, it is expected that most of the manganese detected in the samples will present as suspended oxides, and where conditions are reducing, it is expected that some large fraction of the detected manganese will be present in a dissolved state. As a result of this behavior, oxidizing samples will show a correlation with aluminum (as discussed in the Aluminum section above) and will have filtered/unfiltered manganese (Mn) ratios less than unity, whereas reducing samples will have high Mn/Al ratios and filtered/unfiltered manganese ratios close to unity (Thorbjornsen and Myers, 2007).

These effects can be seen in Figure 6-44, which shows the correlation between manganese and aluminum. Samples that fall on the trend, which extends over almost four orders of magnitude, are oxidizing samples in which the manganese is present as suspended particulates. Samples that fall above the trend are reducing, and the detected manganese is mostly in a dissolved state. These observations are verified by examining the filtered/unfiltered ratios, as shown in Figure 6-45. In this plot, the samples containing suspended manganese oxides form the strong trend with a negative slope, and the reducing samples containing dissolved manganese have ratios closer to unity. In addition, iron and arsenic, which have similar redox behavior as manganese, show the same relationships, as discussed in their respective sections.

Based on these observations, the manganese concentrations appear to be controlled by local redox conditions, which vary due to proximity to wetlands in the Unconsolidated unit, and proximity to coal seams in the Sharon and Homewood units, as discussed in Section 6.1. There is no evidence of manganese contamination in the candidate background data set. The correlation between manganese and filtered/unfiltered ratios in the final screened background data set is shown in Figure 6-46.

6.2.15 Mercury

Five (5) of the 258 unfiltered samples have detectable mercury concentrations (98 percent nondetects), which range from 0.00019 to 0.00041 mg/L. Two of the five detectable concentrations are estimated values that are below the reporting limit of 0.0002 mg/L.

Mercury can adsorb on the surfaces of iron oxide and clay minerals, but its concentrations are commonly controlled through adsorption on naturally occurring organic material (Kabata-Pendias, 2001). As a result, poor correlations for mercury versus iron or mercury versus aluminum are usually observed. A plot of detected mercury versus aluminum concentrations is shown in Figure 6-47. A trend is formed by the five samples, and the sample with the highest mercury also has the highest aluminum concentration. A plot of mercury concentrations versus filtered/unfiltered ratios is shown in Figure 6-48. This plot indicates that approximately one-half of the mercury detected in the two samples with the highest mercury concentrations is removable after filtration with a 0.45 micron filter, so most of the detected mercury in these samples is adsorbed on the surfaces of suspended particulates. The low concentrations, correlation with aluminum and partial removal after filtration suggests that the detected mercury is naturally occurring. The correlation between mercury and filtered/unfiltered ratios in the final screened background data set is shown in Figure 6-49.

6.2.16 Nickel

Two-hundred-sixteen (216) of the 258 unfiltered samples have detectable nickel concentrations (21 percent nondetects) that range from 0.0022 to 0.028 mg/L. One-hundred-two (102) of the samples have estimated concentrations that are below the reporting limit of 0.01 mg/L.

Nickel (Ni) is a soluble element that is dominantly present in groundwater over the neutral pH range as the divalent cation Ni^{2+} or NiCl^+ , depending on the local chloride concentration (EPRI, 1984). Despite its high solubility, these nickel species have a strong affinity to adsorb on negatively charged surfaces of suspended clay particles, so a correlation with aluminum is expected if no contamination is present.

Figure 6-50 shows the correlation between nickel and aluminum in the 216 samples with detectable nickel. Most of the samples fall on a consistent trend that extends over three orders of magnitude, indicating that the nickel in those samples have a natural origin. There are, however,

many samples that fall above the trend, which may be an indication of contamination. These samples with anomalously high Ni/Al ratios can be more clearly identified on the accompanying ratio plot (Figure 6-51). This perspective shows that there are 38 samples that have nickel concentrations above the reporting limit and Pb/Al ratios above a value of 0.007 (vertical dashed line). These 38 samples were eliminated from the candidate background data set. The correlation between nickel and nickel/aluminum ratios in the final screened background data set is shown in Figure 6-52.

6.2.17 Potassium

Two-hundred-forty-nine (249) of the 258 unfiltered samples have detectable potassium concentrations (3.5 percent nondetects) that range from 0.551 to 52.7 mg/L. Nineteen (19) the 258 samples have estimated concentrations that are below the reporting limit of 1.0 mg/L.

Potassium is a soluble element that has a tendency to adsorb on suspended clay minerals. Some fraction of the potassium in each sample is expected to be dissolved, and the remaining fraction is expected to be associated with suspended clay minerals. These fractions can vary between samples because the adsorption of potassium on clay minerals is dependent on pH and the concentrations of other cations such as sodium, calcium, and magnesium that compete for sorption sites.

The distribution of potassium between adsorbed and dissolved forms can be seen in Figure 6-53, which shows potassium concentrations versus filtered/unfiltered ratios in each sample. The potassium in the samples that form a vertical stack of points over a ratio of ~ 1.0 is present in a mostly dissolved state, and the samples that fall to the left of the stack with ratios below 1.0 have some fraction of potassium that is adsorbed on suspended clay minerals.

Samples that have potassium dominantly associated with suspended clay minerals will show a correlation with aluminum, as shown in Figure 6-54. Potassium in the samples that form the trend with a positive slope in the figure is mostly associated with suspended clays, and potassium in the samples that fall above the trend have a significant dissolved component.

Samples with extremely high potassium (K)/Al ratios that appear in the upper right of Figure 6-54 are considered to be suspect. Eleven (11) samples with K/Al ratios above 50 were eliminated from the background data set due to possible contamination. The correlation between potassium and filtered/unfiltered ratios in the final screened background data set is shown in Figure 6-55.

6.2.18 Selenium

Three (3) of the 258 samples have detectable selenium concentrations (99 percent nondetects). Two of these are estimated concentrations of 0.0041 (J) and 0.0047 (J) mg/L that are below the

reporting limit of 0.005 mg/L, and the third detection is a concentration of 0.0068 mg/L that is slightly above the reporting limit. One nondetect result with an elevated reporting limit of 0.25 mg/L has been rejected because the reporting limit of 0.25 mg/L is 50 times higher than the reporting limit of the other samples.

The one detected concentration that is above the reporting limit is in a sample that had relatively high aluminum and iron concentrations. Such samples are expected to have elevated trace element concentrations as discussed in the Methodology section. These observations suggest that there is no selenium contamination in the 258 groundwater samples.

6.2.19 Silver

Only 2 of the 258 unfiltered sample had detectable silver concentrations, and both of these are estimated values below the reporting limit of 0.005 mg/L. No evidence of silver contamination is present in the samples.

6.2.20 Sodium

Two-hundred-fifty-four (254) of the 258 unfiltered samples have detectable sodium concentrations (1.6 percent nondetects), which range from 0.1 to 136.0 mg/L. Sodium (Na) is a soluble major cation that is dominantly present in a dissolved form, although some small fraction may be associated with suspended clay minerals.

The major soluble cations (Ca, Mg, Na, and K) tend to be present in fixed proportions if no contamination is present. Figure 6-56 shows the correlation between sodium and magnesium. The consistent trend with a positive slope over a three order of magnitude range indicates a near-constant Na/Mg ratio in each sample. The soluble nature of the element is shown in Figure 6-57, which provides the unfiltered sodium concentrations versus the filtered/unfiltered ratios for each sample. The ratio of near unity shows that the majority of the sodium is in a dissolve state in all of the samples. These observations indicate that the sodium concentrations are naturally occurring. The correlation between sodium and magnesium in the final screened background data set is shown in Figure 6-58.

6.2.21 Thallium

Only 6 of the 258 samples had detectable thallium concentrations, which range from 0.00016 to 0.0074 mg/L. Four of those six reported concentrations are estimated values below the reporting limit of 0.001 mg/L. Thallium (Tl) is present in groundwater as Tl^+ , $Tl(OH)_2^+$, or $TlOH^{2+}$, depending on the local redox conditions (Brookins, 1988). These species have affinities to adsorb on negatively charged suspended clay particles, so a correlation with aluminum is expected if no contamination is present.

The detected concentrations show a correlation with aluminum as shown on Figure 6-59. These observations suggest that no thallium contamination is present in these samples. The correlation between thallium and aluminum in the final screened background data set is shown in Figure 6-60.

6.2.22 Vanadium

One-hundred-forty-seven (147) of the 258 unfiltered samples had detectable vanadium concentrations (43 percent nondetects) which range from 0.0013 to 0.715 mg/L. Ninety (90) of the 111 detectable concentrations were estimated values below the reporting limit of 0.01 mg/L. Vanadium in most groundwater samples is associated with suspended particulates, so a correlation with aluminum is expected if no contamination is present.

Figure 6-61 shows the correlation between vanadium versus aluminum in the 111 samples with detectable concentrations. Most of the samples form a highly correlated trend with greater scatter observed below the reporting limit where the analytical uncertainties are larger. Four samples with vanadium concentrations above the reporting limit plot above the trend established by the other samples, indicating the presence of some excess vanadium. The ratio plot of the data (Figure 6-62) shows the near-constant vanadium (V)/Al ratio that is present in most of the samples, and also shows the four samples with anomalously high ratios, which fall to the right of the vertical dashed line positioned at a V/Al ratio of 0.0035. These four samples have been removed from the candidate background data set. The correlation between vanadium and aluminum in the final screened background data set is shown in Figure 6-63.

6.2.23 Zinc

Two-hundred-fifty-two (252) of the 258 unfiltered samples had detectable zinc concentrations (2.3 percent nondetects), including 171 estimated results that were below the reporting limit of 0.01 mg/L. Zinc (Zn) is mostly present in groundwater as a mixture of the species Zn^{2+} , $ZnCl^+$, and $ZnOH^+$. The proportions of these species depend on the local pH and anion concentrations (EPRI, 1984). These positively charged species adsorb on the surfaces of negatively charged suspended clay particles, yielding a correlation between zinc and aluminum if no contamination is present.

Figure 6-64 shows the correlation between zinc and aluminum in the 252 unfiltered samples with detectable zinc concentrations. Most of the samples form a correlated trend with greater scatter observed below the reporting limit where the analytical uncertainties are larger. There are, however, a number of samples that fall above the trend, indicating the presence of some excess zinc that cannot be accounted for based on the aluminum content. The ratio plot (Figure 6-65) shows that there are 52 samples with zinc concentrations above the reporting limit and Zn/Al ratios above a value of 0.03. These 52 samples have been removed from the candidate

background data set. The correlation between zinc and aluminum in the final screened background data set is shown in Figure 6-66.

7.0 Background Characterization Results

The original candidate background set of 258 samples were screened using a combination of statistical and geochemical methods to yield a final background set of 161 samples, as described in Chapter 6. Discussions and statistical descriptions of the distributions of each element are provided in this chapter.

7.1 Comparisons of Element Distributions in the Unconsolidated, Sharon, and Homewood Hydrostratigraphic Units

The 161 samples that survived the multi-step screening process were obtained from three different hydrostratigraphic units: the Unconsolidated (106 samples), Sharon (27 samples), and Homewood (28 samples). The KW test was used to determine if the three subgroups of samples were drawn from the same underlying population or if they appear to be drawn from different populations (Section 3.4). Table 7-1 provides the p -levels for the KW test for each of the 23 elements. The test results were evaluated at the 99th confidence level, as discussed in Section 3.4. At this confidence level, elements with p -levels above 0.01 are assumed to be drawn from the same population. Seventeen (17) of the 23 elements passed the test, indicating that there is no significant difference among the distributions of these elements in the three hydrostratigraphic units. The six elements that failed included four major elements (calcium, magnesium, sodium, and potassium) and the trace elements arsenic and barium.

The four major elements have broad ranges of concentrations that span two to three orders of magnitude, so a large number of samples are required for these elements to accurately estimate the population medians of the three subgroups. By dividing the screened data into three subgroups, the Sharon and Homewood units are only represented by 27 and 28 samples, respectively, which is an insufficient number of samples to accurately estimate the median of a population with a broad range. This situation can cause errors in the KW test results.

The same issue most likely explains the test failure for arsenic. Arsenic has a CV of 2.66, which is the highest of the 23 elements. The CV is the ratio of standard deviation to the mean and is a normalized measure of the variance, or spread, of the data. If the standard deviation is much greater than the mean, then a larger number of samples is required to estimate the population statistics.

An additional factor is that one decision (to combine the subgroups or keep them separate) is being made based on the results of 23 separate tests. This is analogous to a defendant being tried for the same crime 23 times. Under these conditions, one must make allowances for a few false-positive results.

Appendix A contains a set of 23 box plots comparing the concentrations of elements in samples from the Unconsolidated, Sharon, and Homewood units. Box plots of the concentrations in each unit are placed side by side to visually compare the distributions and qualitatively determine whether the data sets are similar or distinct. These plots provide a summary view of the entire data set, including the overall location and degree of symmetry. The box encloses the central 50 percent of the data points so that the top of the box represents the 75th percentile and the bottom of the box represents the 25th percentile. The median of the data set is represented by a small square within the larger box. The upper whisker extends outward from the box to the maximum point, and the lower whisker extends to the minimum point. Lognormal concentration scales are used, which provide a complete view of these right-skewed distributions. Nondetect results are set equal to the MDL for plotting purposes, consistent with the approach used during the KW test. When interpreting the box plots, it should be kept in mind that the subgroup with the larger number of samples will usually have a higher maximum (and lower minimum) concentration, simply because it is a larger data set. The Unconsolidated unit has a higher maximum because this subgroup has almost four times as many samples as the Sharon or Homewood subgroups. Elements with nondetects in all three subgroups will generally have identical minimum values, which reflects the similarity in MDLs among the samples. The similarities in the interquartile ranges of the subgroups for all of the elements (including the six that failed the KW test) can be seen in the box plots.

Based on the quantitative KW test results and examination of the box plots, it seems reasonable to pool the samples from the three units for the purpose of calculating summary statistics. A large proportion of elements (17 of 23) passed the KW comparison tests, and 4 of the 6 elements that failed are major elements (calcium, magnesium, potassium, and sodium) that are of little regulatory concern. The advantage of pooling the data (when it is statistically valid to do so) is that the summary statistics are based on a larger number of samples, and are thus more representative of the population. Increasing the number of sample from 27 or 28 (which would be the case if the Sharon and Homewood samples were treated separately) to 161 (the fully screened data set) provides a significant increase in the confidence that can be placed in the inferred properties of the sampled population.

7.2 Processes Controlling Element Concentrations

The discussions of each element provided in Section 6.2 indicate that combinations of three key processes are controlling the concentrations of the 23 elements in groundwater. The effects of suspended particulates, natural redox variations, and potential contamination are summarized below.

7.2.1 Suspended Particulates

The majority of the trace elements detected in unfiltered, uncontaminated samples are due to the presence of very fine-grained suspended clay and oxide minerals to which the trace elements are adsorbed, as discussed in detail in Section 4.1. The importance of this process varies by element, depending on their solubilities and sorption properties.

The major elements (calcium, magnesium, potassium, and sodium) are quite soluble and do not strongly adsorb, so only small percentages of the detected concentrations of these elements are present as suspended particulates, and the larger remaining fraction is in a dissolved form. This is identified by similar concentrations in filtered and unfiltered splits (filtered/unfiltered ratios ~1.0), and lack of correlation with aluminum.

Aluminum displays opposite behavior than the major elements because its solubility over the neutral pH range is below the analytical reporting limit. Detected concentrations of aluminum are almost entirely due to the presence of suspended clay minerals, of which aluminum is a major component. Many of the trace elements have strong affinities to adsorb on the surfaces of these suspended clay particulates. Samples in which trace elements are adsorbed on suspended clay particulates are identified by filtered/unfiltered ratios less than unity, and good correlations between the trace element and aluminum.

7.2.2 Natural Redox Variations

The solubilities and sorptive behavior of iron, manganese, and arsenic are directly controlled by the local redox conditions. All three elements are dominantly present as suspended particulates under oxidizing conditions, and are present in dissolved forms under reducing conditions, as discussed in their respective sections above. Under oxidizing conditions, their concentrations are limited as some fixed fraction of the mass of suspended particulates that are present in each sample. Under reducing conditions, however, their concentrations can be considerably higher due to their relatively high solubilities when present in their reduced valence states. The natural redox conditions vary over a wide range due to the presence of wetlands at the surface and coal seams in the subsurface, as discussed in Section 6.1. Samples from naturally reducing locations are thus expected to have high concentrations of iron, manganese, and arsenic.

7.2.3 Potential Contamination

Elements for which no anomalous ratios were observed have concentrations that can be explained by natural processes, and most likely are not contaminants of concern in these samples. These elements include antimony, arsenic, calcium, iron, magnesium, manganese, mercury, selenium, silver, sodium, and thallium. There is no evidence of contamination by these 11 elements in any of the 258 samples that were evaluated in this report.

The remaining 12 elements have between 2 and 52 instances of anomalously high trace/major element ratios in the 258 samples. These elements include aluminum, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, potassium, vanadium, and zinc. Concentrations of these elements in some samples cannot be explained by suspended particulates or naturally reducing conditions, and may thus be due to contamination. The numbers of samples with anomalously high trace/major element ratios for each element are shown in Table 7-2. These occurrences are described in the discussions of each element in Section 6.2. Ninety-seven (97) of the original 258 candidate background samples (38 percent) have been rejected because the observed relationships between their element concentrations deviated from their expected relationships under natural background conditions. These samples were not necessarily contaminated, but they have been rejected from consideration as background samples as a conservative approach.

The trace elements with the most anomalous ratios were zinc, nickel, cobalt, cadmium, copper, and lead in that order. A total of 156 anomalous ratios were identified, but many of them occurred in the same sample, so the number of samples with one or more anomalous ratios is only 97. For instance, all six of the samples with anomalous copper ratios also had anomalous zinc ratios, suggesting that brass, which is a copper/zinc alloy, is a potential source. Likewise, most of the samples with anomalous cadmium ratios also had anomalous nickel and/or zinc ratios, suggesting that cadmium-plated metal parts are the source.

7.3 Characterization of Background Distributions

Statistical descriptions of the distributions of each element in unfiltered samples are provided in Table 7-3, based on the methodology described in Section 3.6 and the fully screened background data. The sample statistics include the number of samples, percent nondetects, minimum concentration, median, arithmetic mean, and the maximum concentration. The shapes of the distributions, defined as either normal, lognormal, or nonparametric, are also provided, along with three measures of the variance of the distributions, including the interquartile range (difference between the 25th and 75th percentiles), standard deviation, and the coefficient of variation (ratio of standard deviation to mean, or CV).

Population statistics that are provided include the 95th UCL of the mean and the 95th UTL. The methodology used to calculate these parameters is discussed in Section 3.6. The 95th UTLs are the recommended background screening values. In addition, probability plots of each fully screened distribution are provided in Appendix B.

The shape of each distribution was determined using the methodology described in Section 3.5. None of the elements passed the test for normality. Six of the elements passed the test for lognormality (aluminum, barium, iron, potassium, sodium, and zinc). The remaining 16 elements

were treated as nonparametric distributions, either because they failed the tests for normality and lognormality, or because they had greater than 15 percent nondetects.

Some of the statistics are expressed as limits (“less than” values) if nondetect results are present. For instance, if the minimum concentration is based on a nondetect result, then the minimum is expressed as less than the detection limit. Likewise, if there are more than 50 percent nondetects, then the median and mean are also expressed as limits. Interquartile ranges cannot be calculated for elements with more than 75 percent nondetects because the 25th and 75th percentiles are the same assumed value of the detection limit. The UCLs and UTLs for distributions containing nondetects are calculated using the Kaplan-Meier method, as implemented in ProUCL, which takes into account the nondetects. This method allows the estimation of the UCLs and UTLs for all of the elements except for silver, which only had one detectable concentration.

The complete descriptions of background distributions that are provided in Table 7-3 are sufficient to allow the calculation of additional statistical parameters of interest, such as the variance, standard error of the mean, and two standard deviations above the mean. The descriptions can also be used to support statistical site-to-background data set comparisons. There are two general types of statistical site-to-background comparisons. Parametric comparisons, such as the two-sample *t*-test, require the means and standard deviations of the distributions that are being compared. Nonparametric comparison tests, such as the Wilcoxon Rank Sum test and the Gehan test, require the actual data rather than summary statistics. The actual background data are provided in Appendix C.

7.4 Remedial Alternatives

Twelve (12) of the 23 elements that were evaluated have between 2 and 52 instances of anomalously high trace/major element ratios in the 258 samples. These elements include aluminum, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, potassium, vanadium, and zinc. Concentrations of these elements in some samples cannot be explained by suspended particulates or naturally reducing conditions, and may thus be due to contamination. Table 7-2 lists the numbers of anomalous samples by element. The table shows that the elements with the most anomalous ratios are zinc, nickel, cobalt, cadmium, and lead in that order.

A discussion of remedial alternatives is provided here as generally available technologies to address potential metals impacts. No remedies have been selected, and any formal remedy selections will be based on site-specific information and in accordance with applicable regulatory requirements.

Standard pump-and-treat methods to remove these elements from groundwater include ion exchange, reverse osmosis, and precipitation. Ion exchange systems utilize exchange resins that selectively remove one or more specific metals from the water, and are usually optimized for a

single metal. Water is pumped through an exchange column where the target metal(s) exchange with other cations (usually hydrogen ions) on the surface of the resin. Multiple columns can be used in series to remove several metals. When the exchange sites on the resin get saturated with the target metal, then the column is taken off-line and eluted with an acid which generates a small volume of water that contains a high concentration of the target metal. After elution, the column can be placed back on-line and reused.

Reverse osmosis, along with other methods such as ultrafiltration and electrodialysis, contact the water with a membrane containing pores that only allow water molecules to pass through while rejecting larger molecules such as metals and metal complexes. The water may require pretreatment such as softening (to remove calcium and magnesium), or pH adjustment (citric acid addition) to prevent precipitation of metal salts within the system that can damage the membrane. A “reject stream” with high total dissolved solids is continuously generated during operation, the volume of which can range from 10 to 50 percent of the input volume, depending on the TDS of the input stream and the design of the system. Disposal of this large volume of high-TDS water can be problematic.

Precipitation processes involve adding a base such as lime (CaO) or sodium hydroxide (NaOH) to raise the pH. The solubilities of some of the metals of concern, including chromium, copper, and zinc, have low solubilities at elevated pH conditions where they precipitate as hydroxides. A polymer flocculating agent is frequently added along with the base to accelerate the precipitation process; and a down-stream settling, clarification, or filtration system is usually used to remove the metal hydroxide precipitates. These methods require reagents (lime, flocculent, etc.) and generate a small volume of sludge which may be hazardous, depending on the concentrations of listed metals.

In situ remediation methods for metals involve the addition of sulfide to induce the precipitation of metals as low solubility sulfide minerals. Calcium polysulfide or proprietary materials such as Metals Remediation Compound[®] (manufactured by Regenesis) is injected into the treatment zone to provide a source of sulfide. Metals of potential concern that are amenable to in situ precipitation include cadmium, cobalt, copper, lead, nickel, and zinc. These metals will remain immobilized as long as local redox conditions within the treatment zone remain reducing. If redox conditions change to oxidizing, then these metals may be released to groundwater at some rate.

8.0 *Conclusions and Recommendations*

The statistical distributions of background concentrations of 23 elements in unfiltered samples are provided in Table 7-3. This background characterization is developed by carefully screening analyses of 258 samples from 234 wells using a combination of statistical and geochemical methods to remove any suspect samples. The multi-step screening process identified 97 samples with one or more suspect concentrations that were eliminated from the background data set. The 161 samples that survived the multi-step screening process are considered to be representative of background, and were used to define the background distributions in Table 7-3.

A key finding of the data evaluation is that trace element concentrations in RVAAP groundwater are controlled by a combination of adsorption on the surfaces of very fine suspended clay and iron oxide particulates; and natural differences in redox potentials within the units. Understanding these processes is important for distinguishing between naturally high background concentrations versus contamination.

Samples with high loads of suspended particulates are expected to contain naturally high trace element concentrations, but these concentrations exist in fairly fixed proportions to aluminum concentrations, which is a good indicator of the mass of suspended particulates. Samples with unusually high trace element/aluminum ratios may have some component of contamination and thus may not represent background.

Natural differences in local redox potentials have a large effect on the concentrations of some elements. Redox potentials in the Unconsolidated unit are affected by the presence of wetlands in areas of the Facility, and in the Sharon and Homewood units by the intermittent presence of coal and organic-rich shale strata. These differences in redox potentials are a major factor controlling arsenic, iron, and manganese concentrations, which are higher under reducing redox conditions. Naturally reducing samples are expected to have higher concentrations of arsenic, iron, and manganese.

The results presented here suggest that the groundwater monitoring program can be optimized by the elimination of inorganic analytes that are not constituents of concern, and by eliminating the sampling of wells that do not have any impacts.

Antimony, arsenic, calcium, iron, magnesium, manganese, mercury, selenium, silver, sodium, and thallium have concentrations and elemental ratios reflecting natural processes in all of the samples. Some of these elements can be eliminated from the analyte list because there is no evidence of contamination in any of the 258 samples. It is recommended however, that iron and manganese be retained on the analyte list because they are useful as reference elements for geochemical evaluation, and they also provide useful information on the redox state of each sample.

Prior to the completion of the Final version of this document, it was concluded by stakeholders that this report will not be used in making programmatic and technical decisions related to the groundwater at RVAAP. It was decided that given the maturity of the IRP program at RVAAP, the number of technical issues yet to be resolved between stakeholders, and the availability of funding needed to resolve those differences, it was not practical to move the groundwater geochemical evaluation program beyond its current point. If, in the future, it is decided by stakeholders that the conclusions presented in this document will be used at the site, stakeholders must revisit and resolve open issues related to the report's findings.

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Figures

Figure 6-1. Histogram of 233 pH Field Measurements

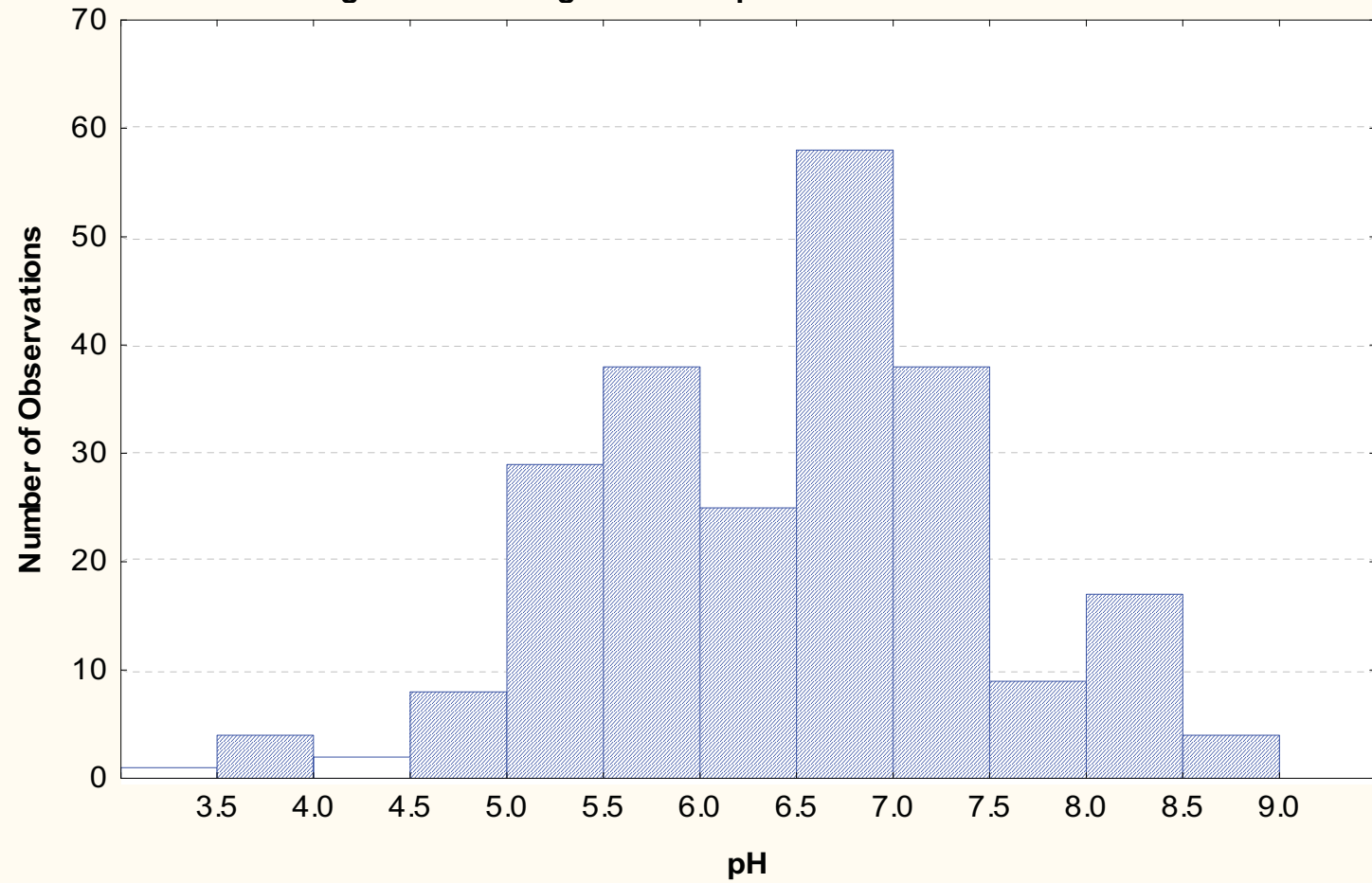


Figure 6-2. Histogram of 233 Dissolved Oxygen Field Measurements

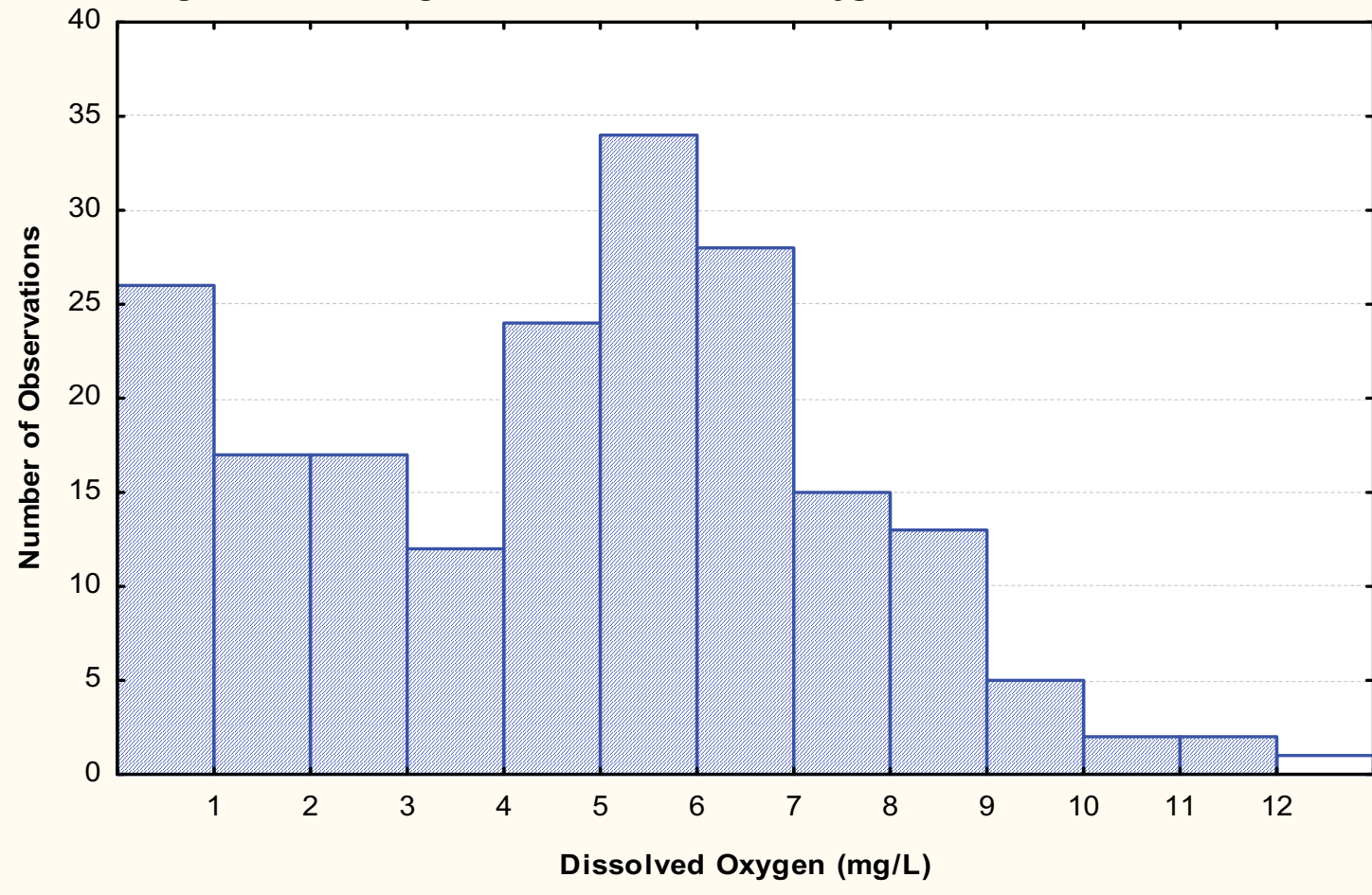


Figure 6-3. Histogram of 231 Oxidation-Reduction Potetential Field Measurements

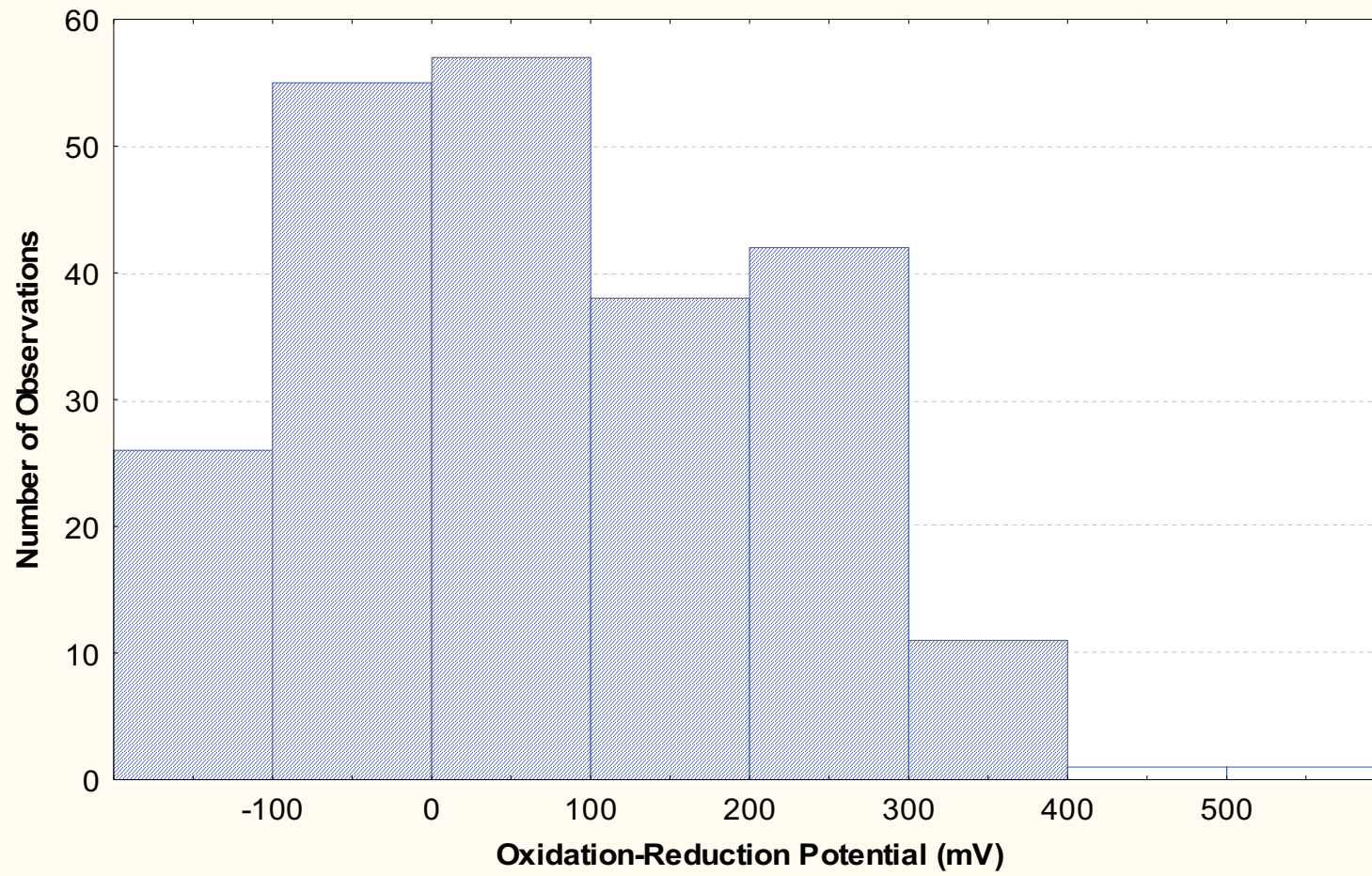


Figure 6-4. Dissolved Oxygen vs. Oxidation Reduction Potential

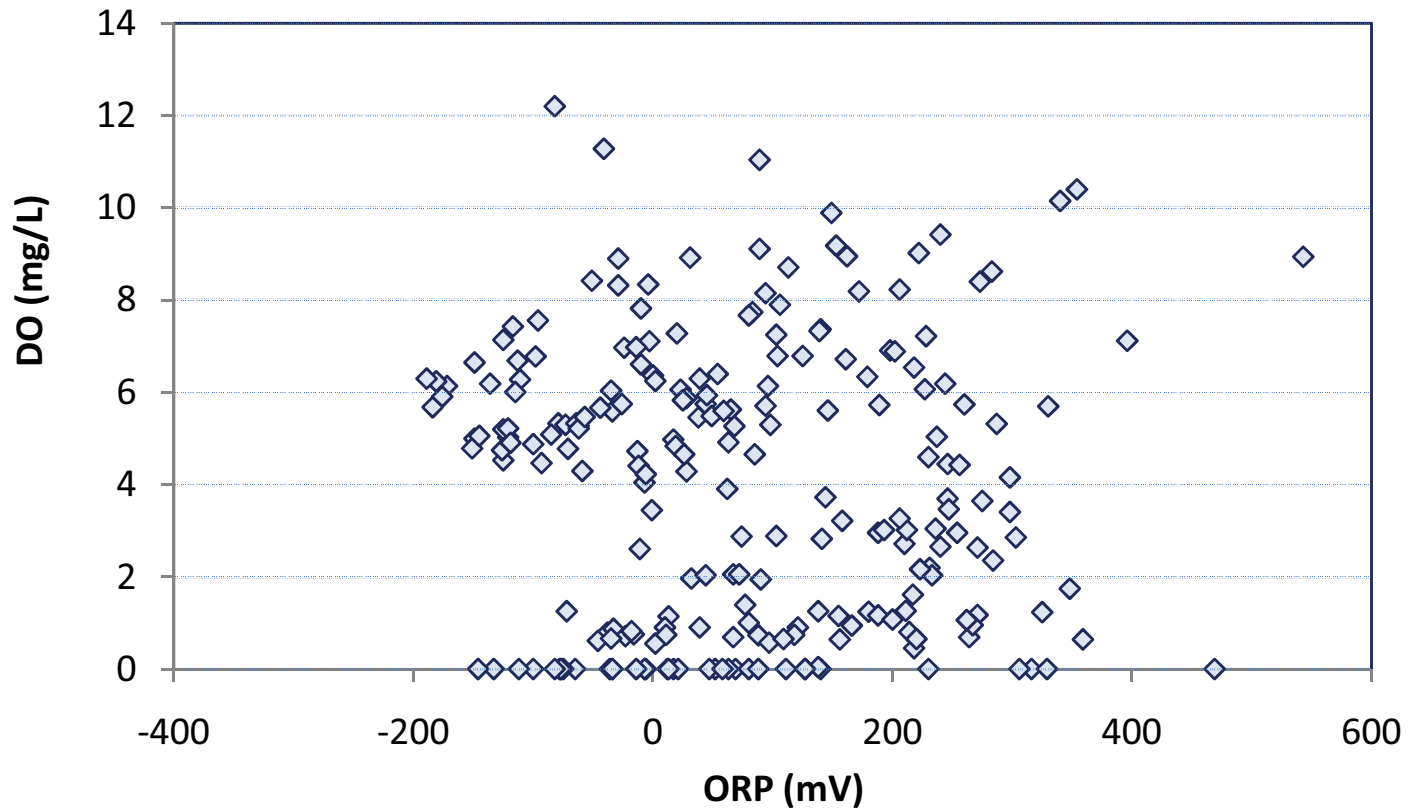


Figure 6-5. Aluminum vs. Iron - Pre Screen

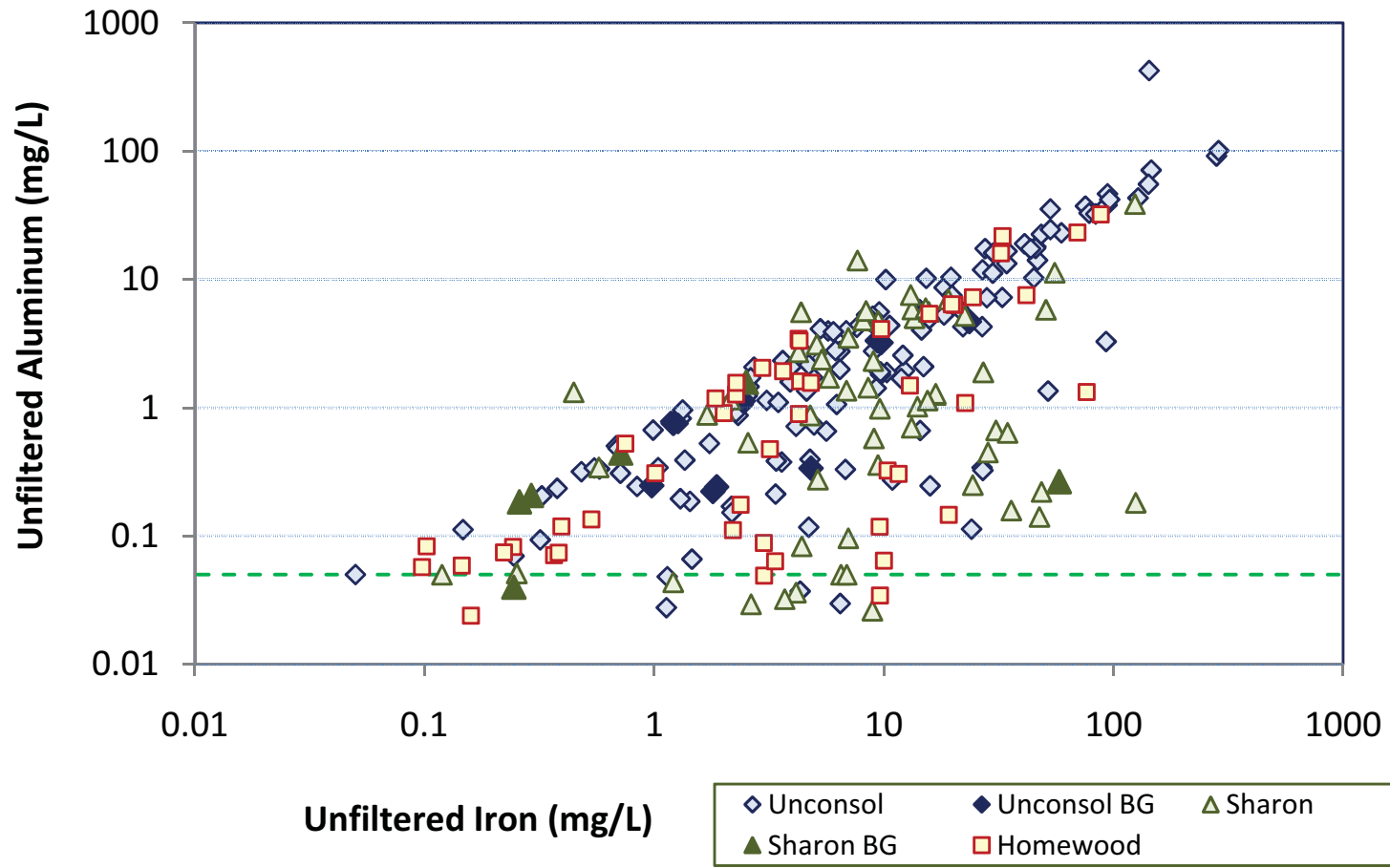


Figure 6-6. Aluminum vs. Al/Fe Ratios - Pre Screen

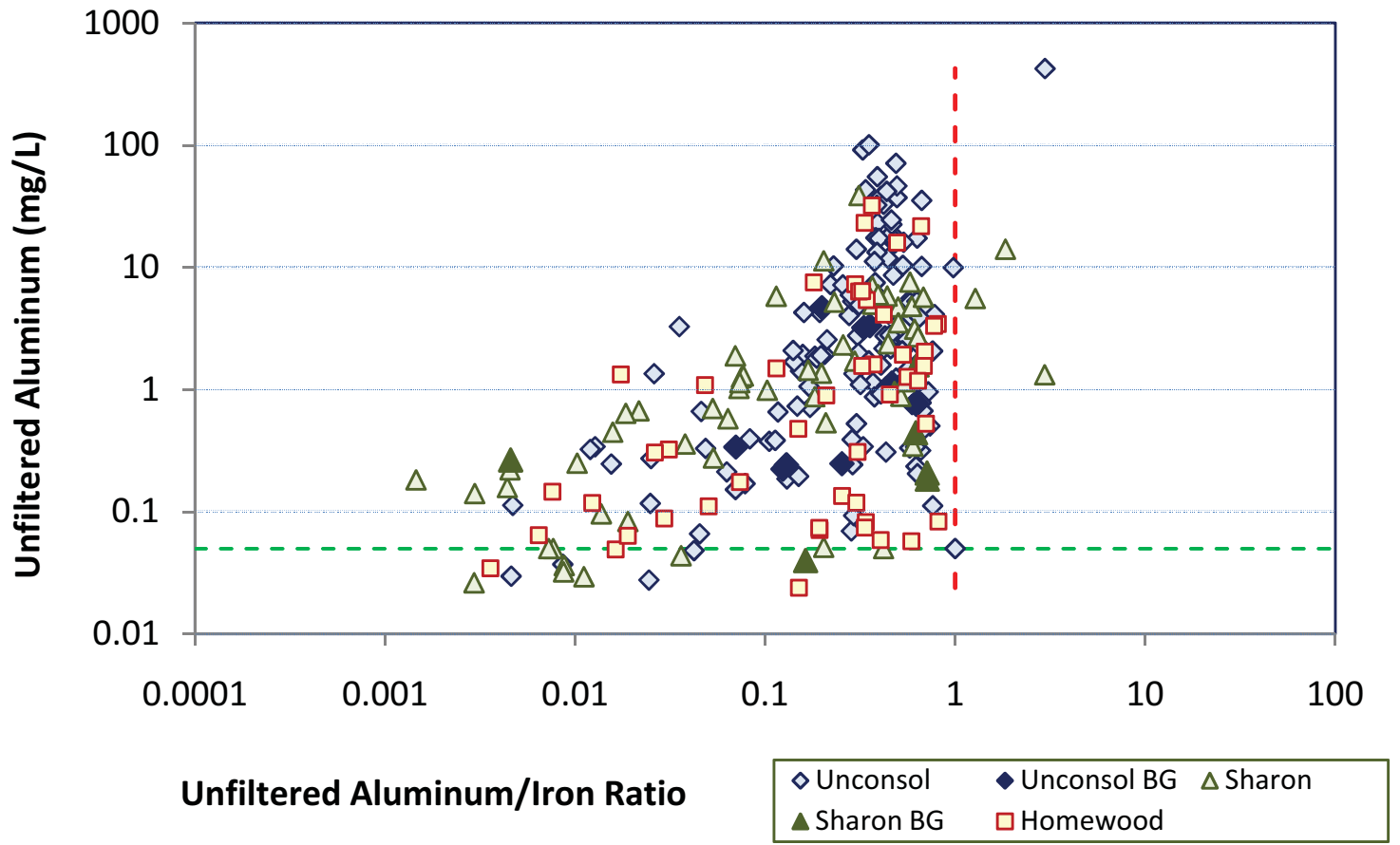


Figure 6-7. Aluminum vs. Iron - Post Screen

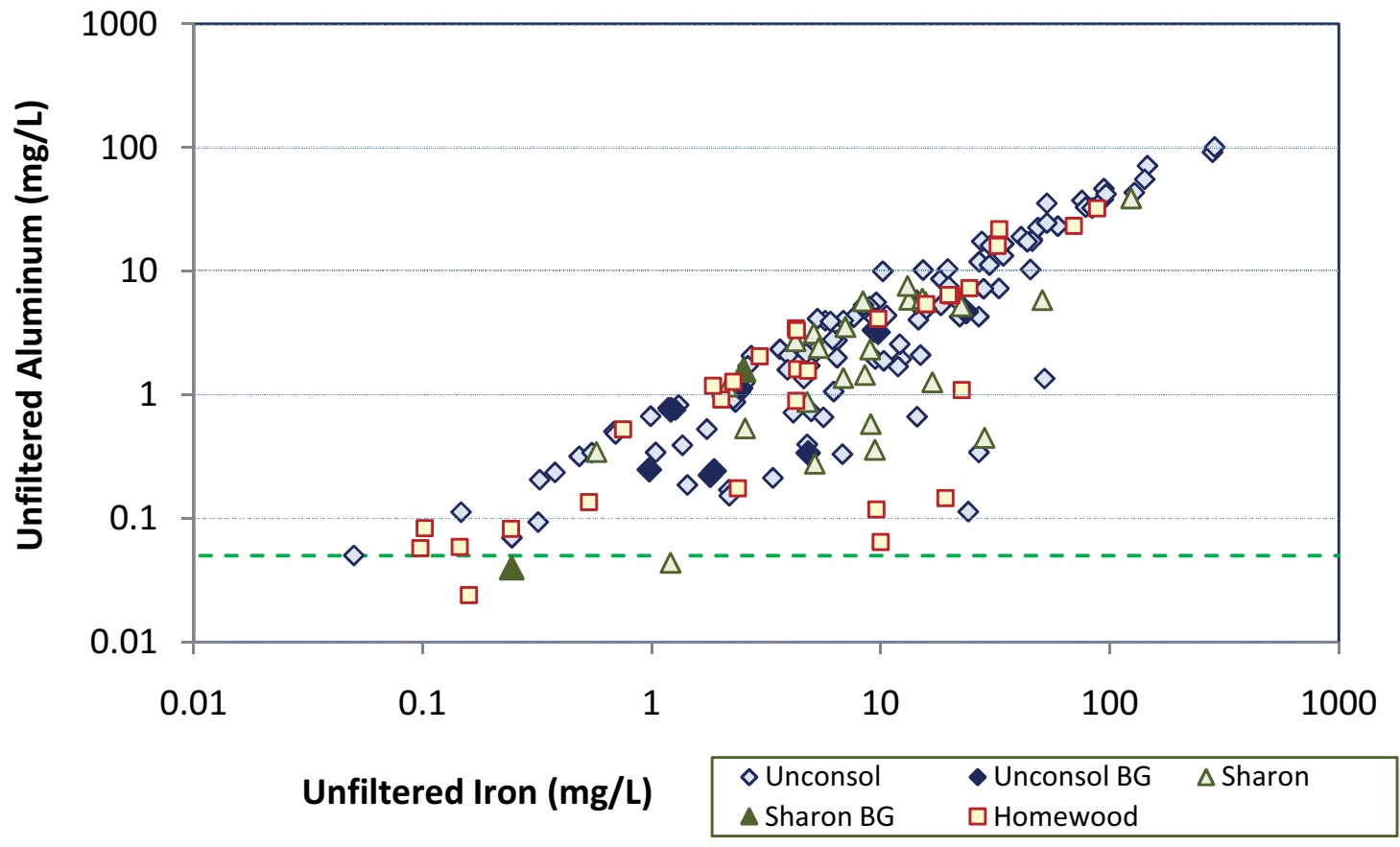


Figure 6-9. Antimony vs. Sb/Fe Ratios - Pre Screen

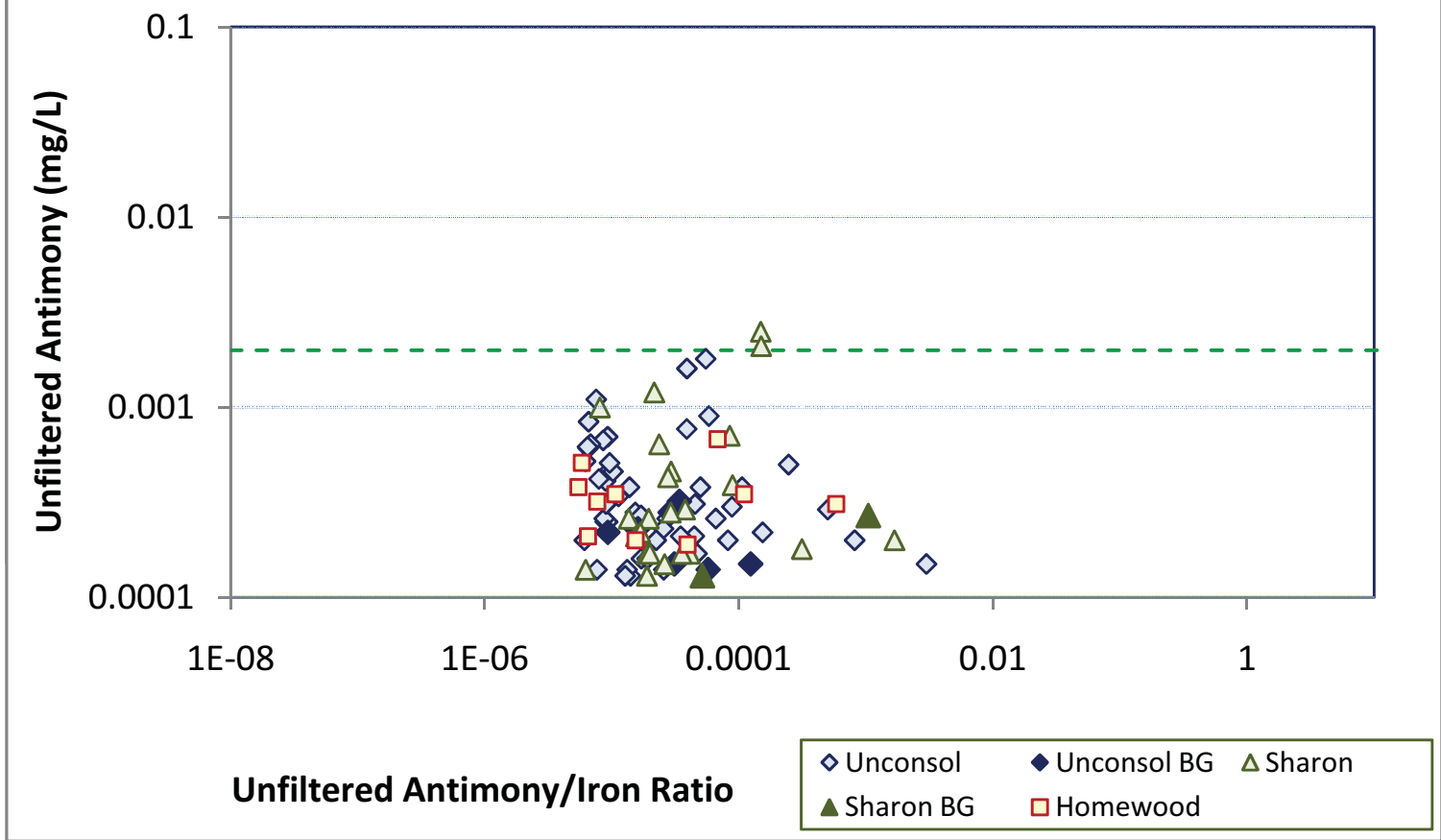


Figure 6-10. Antimony vs. Iron - Post Screen

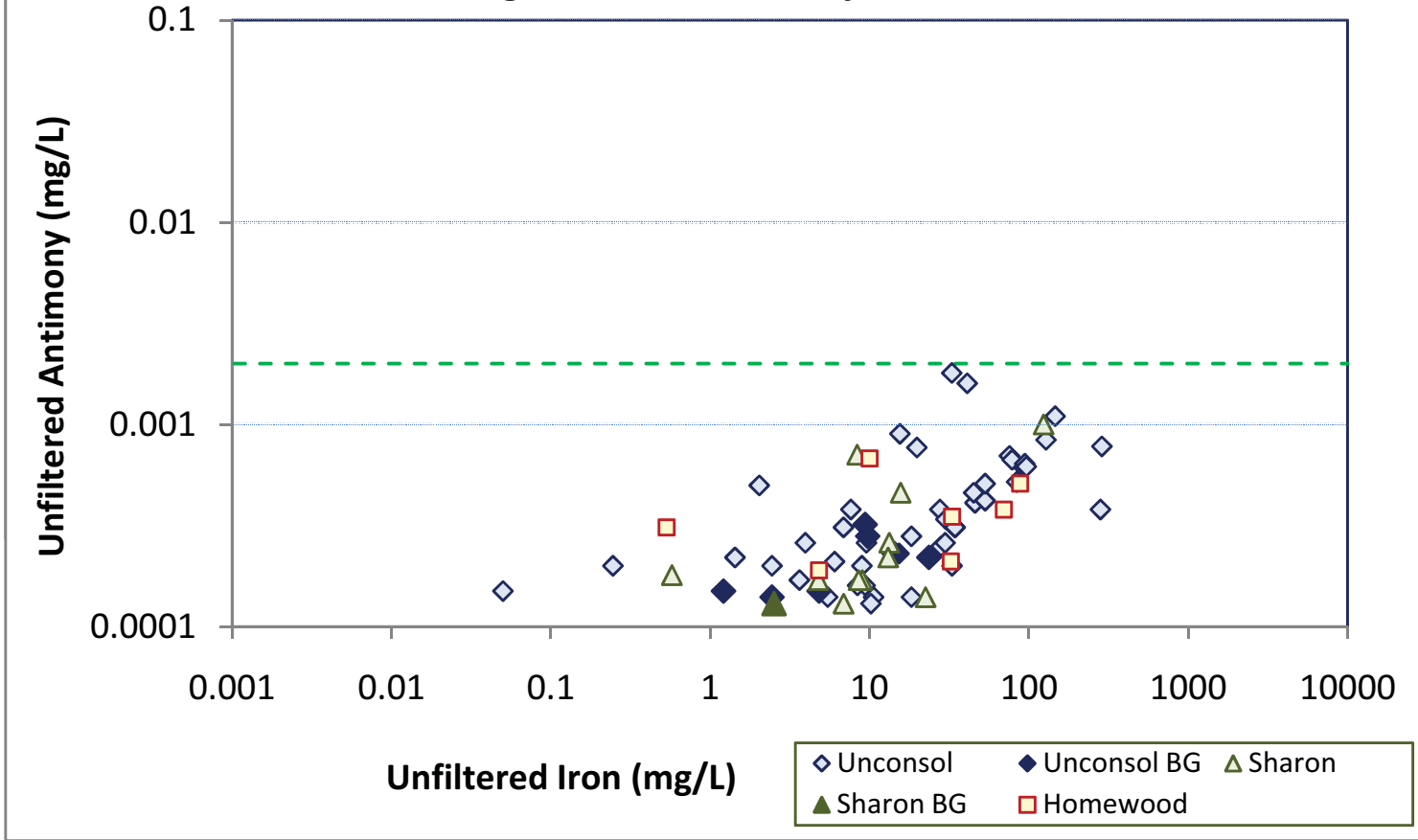


Figure 6-11. Arsenic vs. Aluminum - Pre Screen

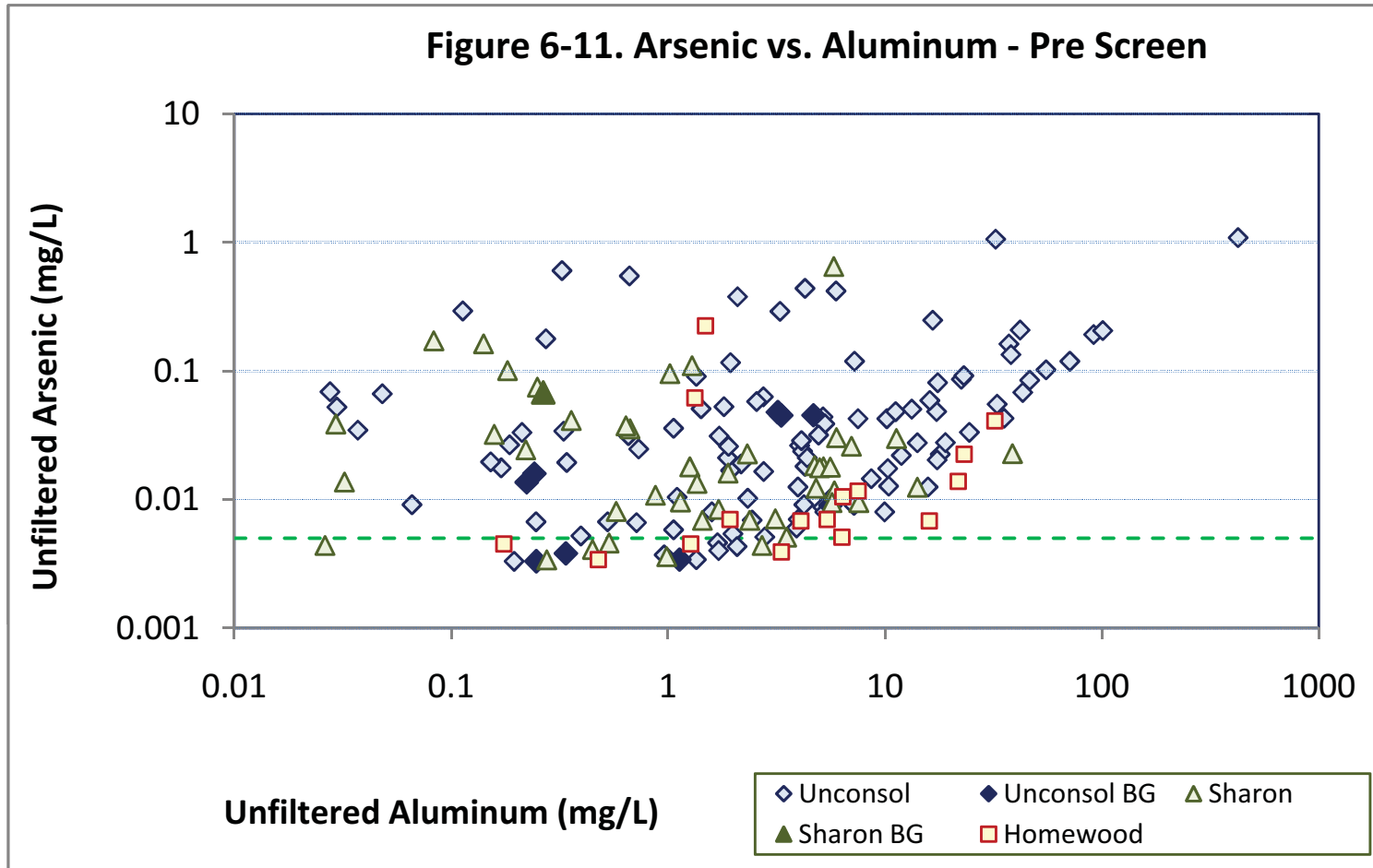


Figure 6-12. Arsenic vs. Filtered/Unfiltered Ratio - Pre Screen

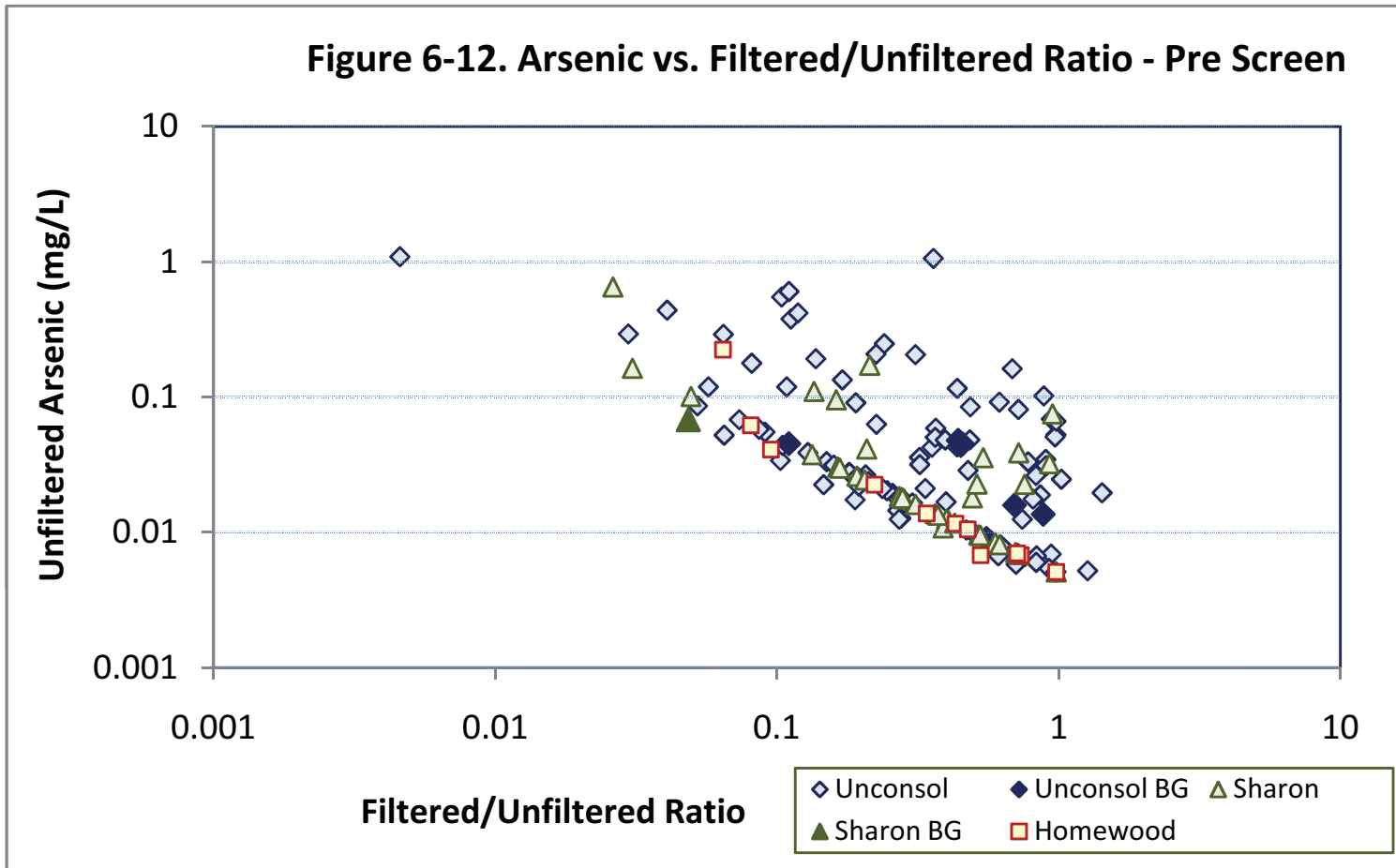


Figure 6-13. Arsenic vs. Aluminum - Post Screen

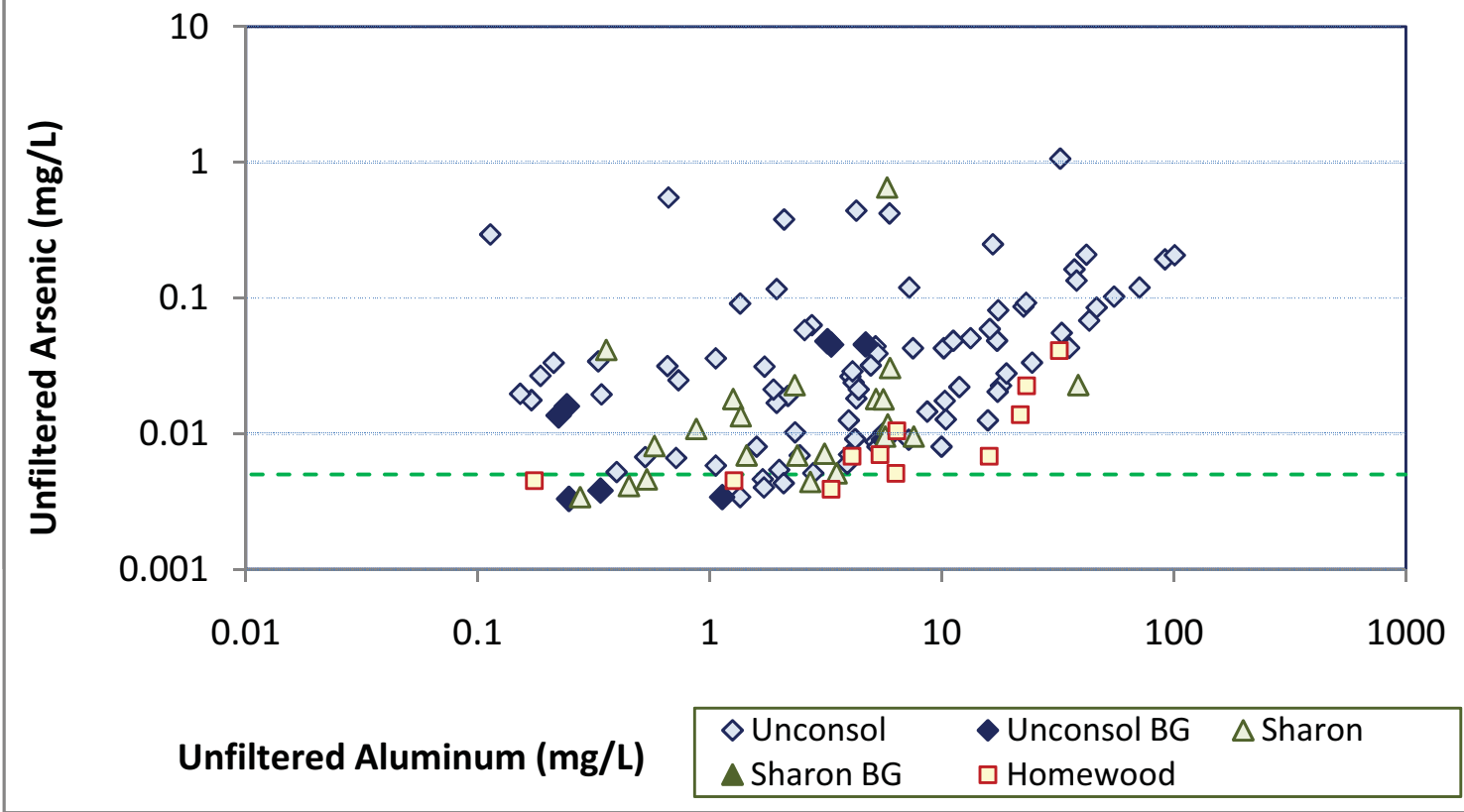


Figure 6-14. Barium vs. Aluminum - Pre Screen

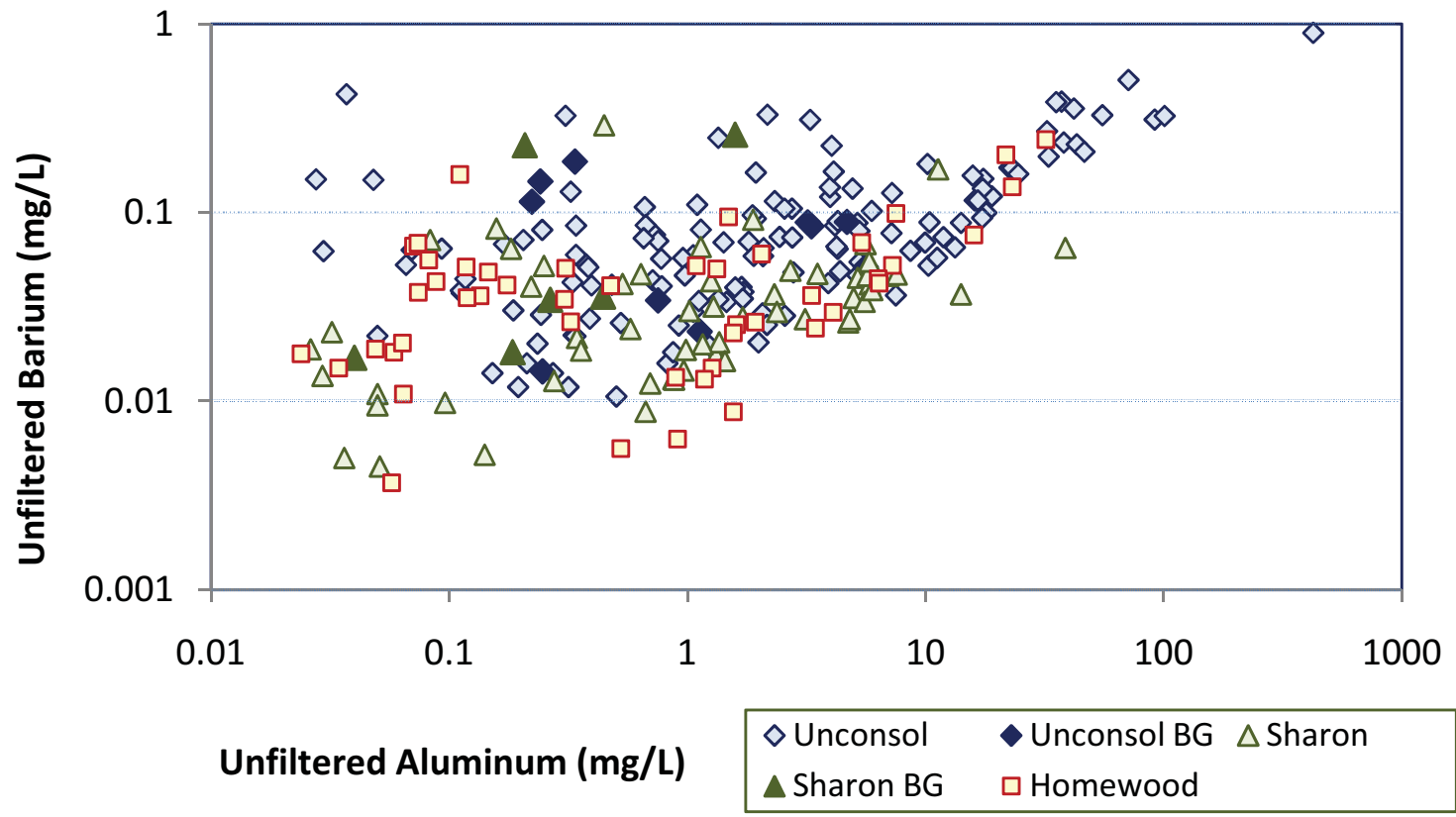


Figure 6-15. Barium vs. Filtered/Unfiltered Ratios - Pre Screen

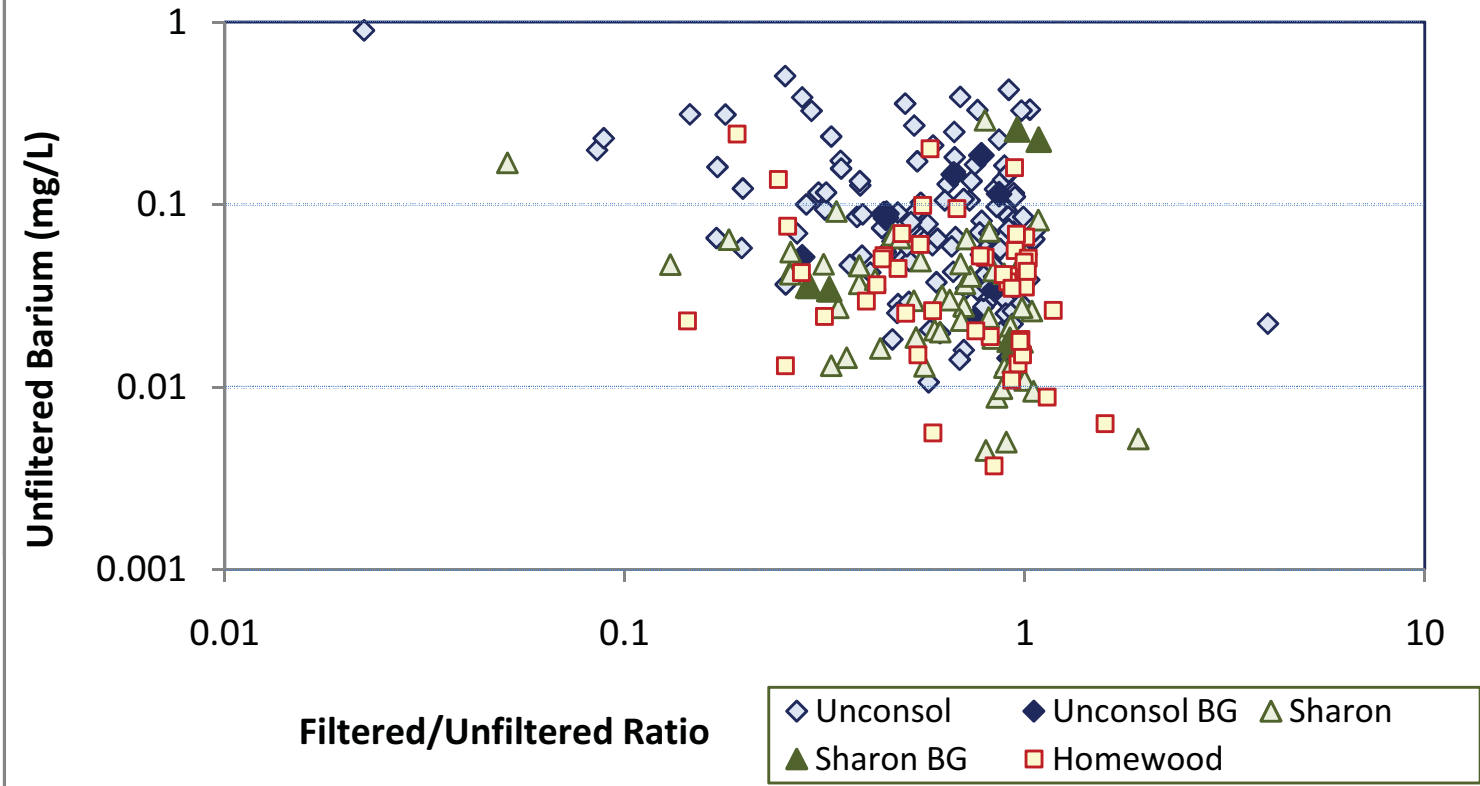


Figure 6-16. Barium vs. Aluminum - Post Screen

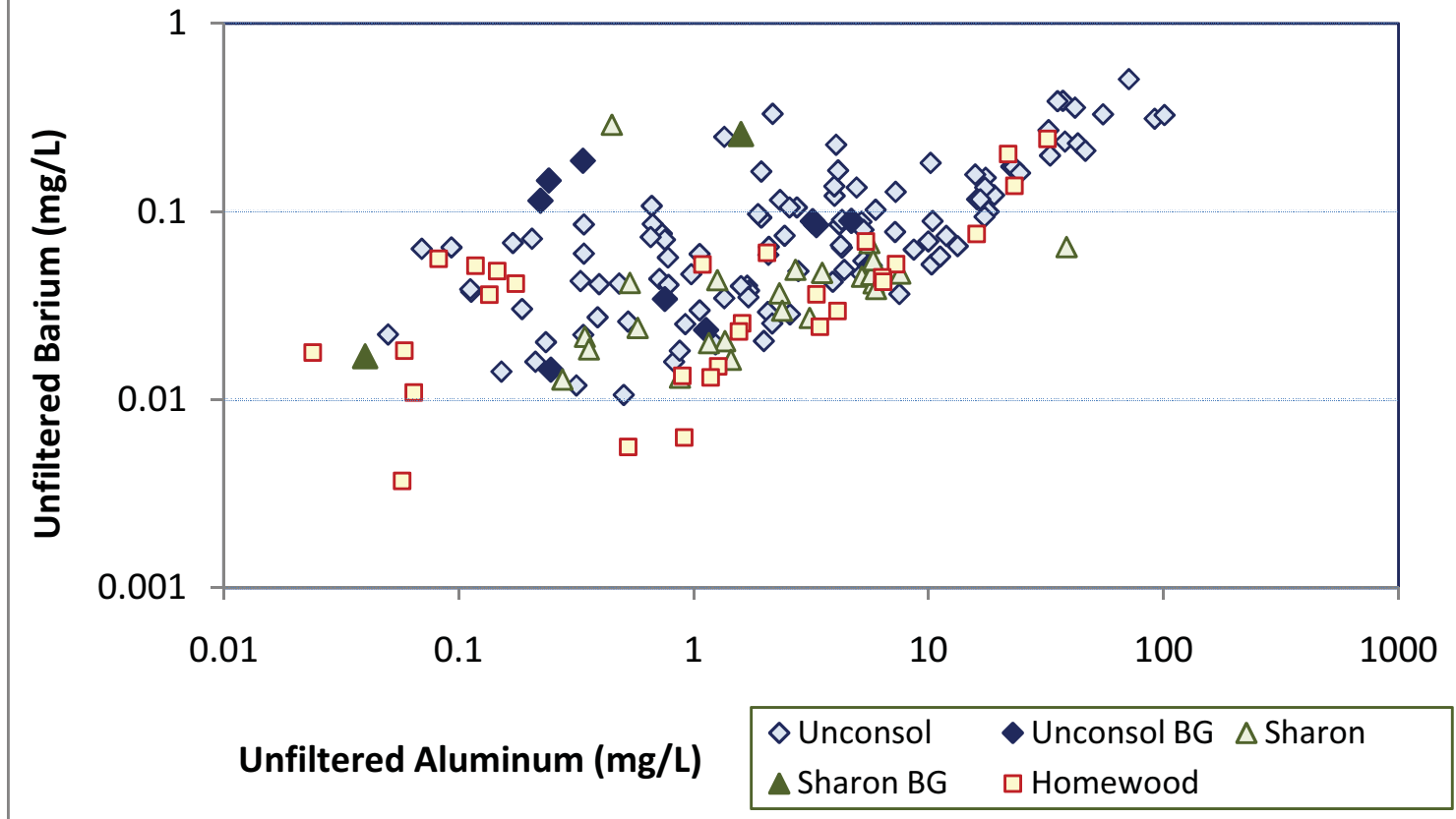


Figure 6-17. Beryllium vs. Aluminum - Pre Screen

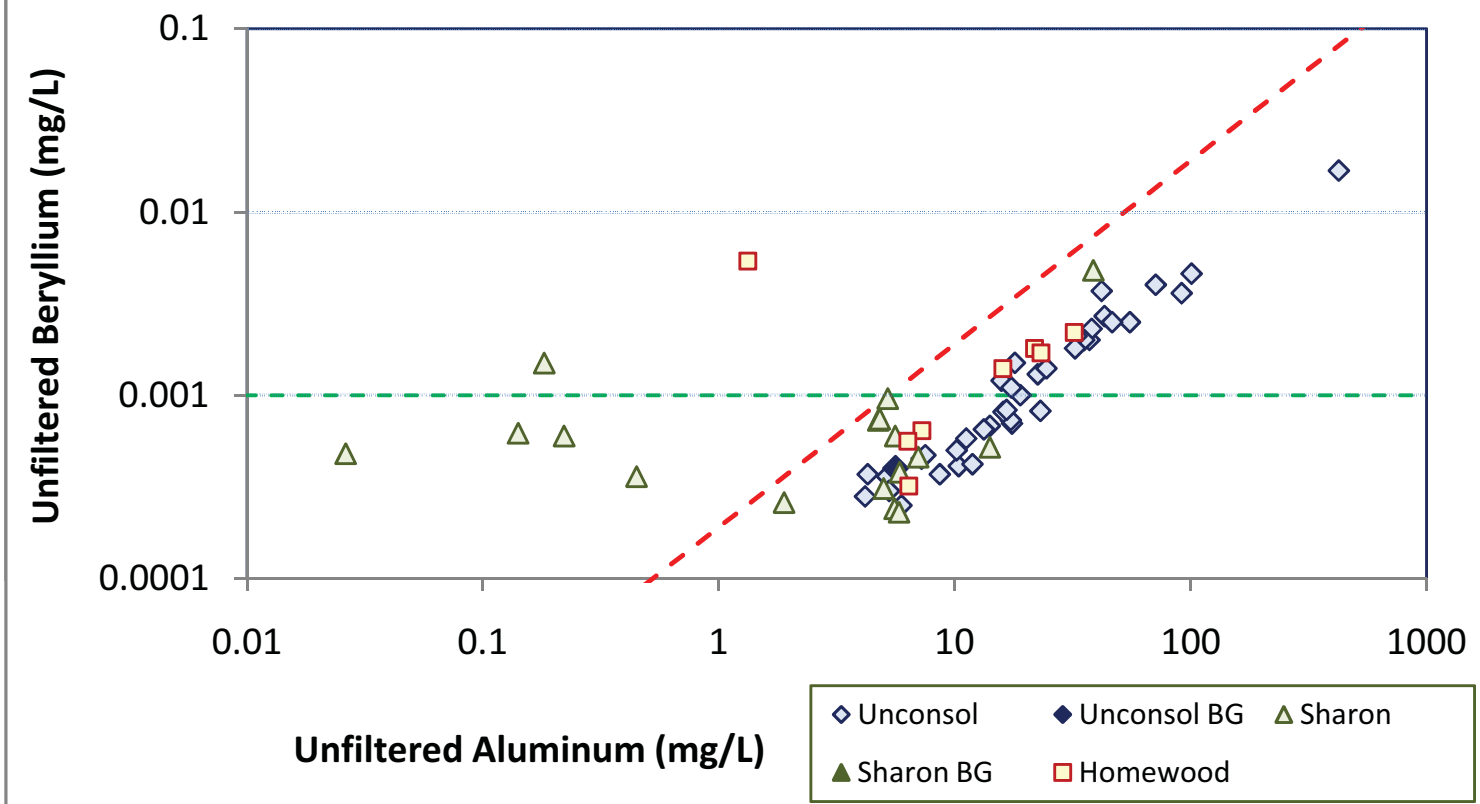


Figure 6-18. Beryllium vs. Be/Al Ratios - Pre Screen

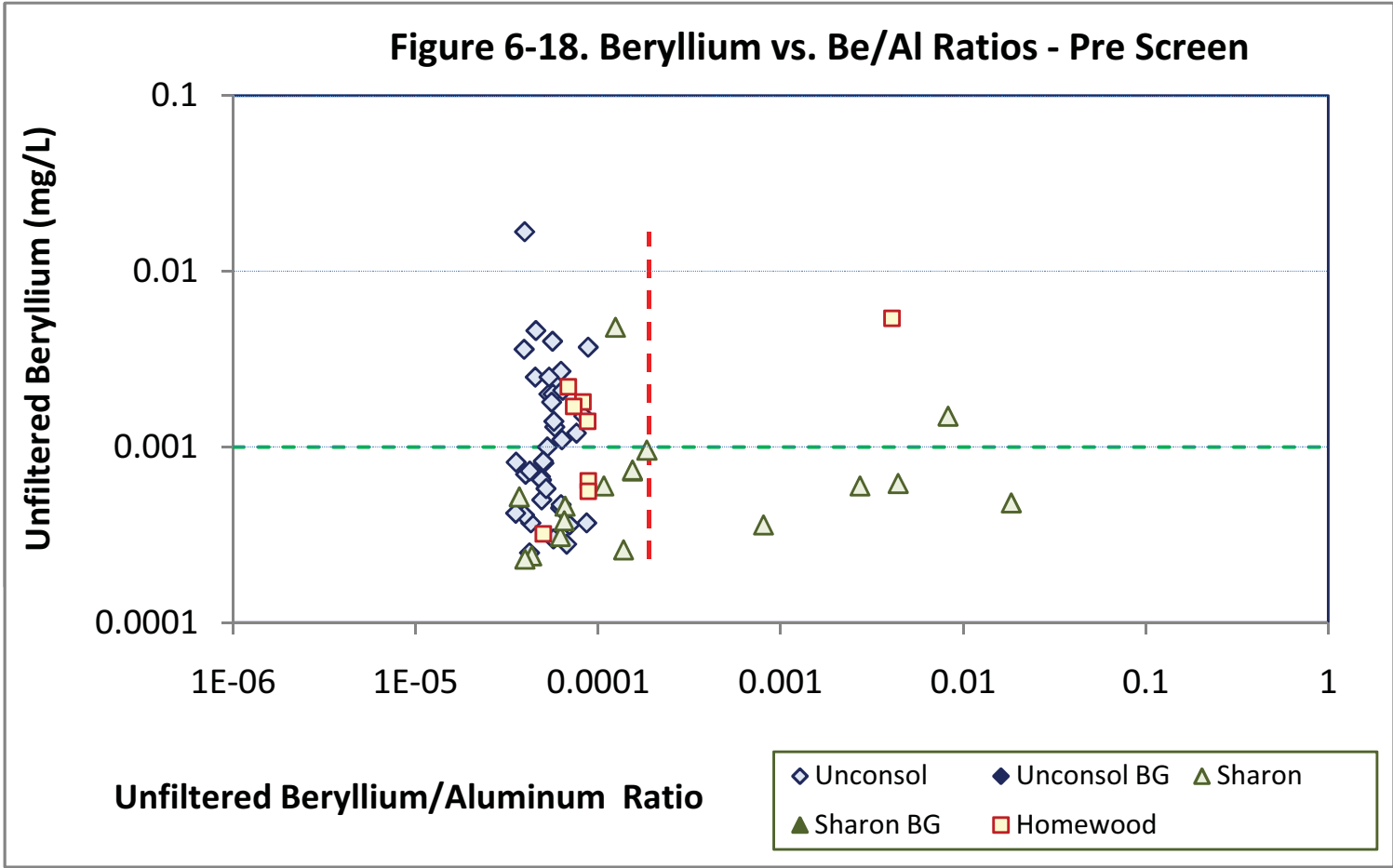


Figure 6-19. Beryllium vs. Aluminum - Post Screen

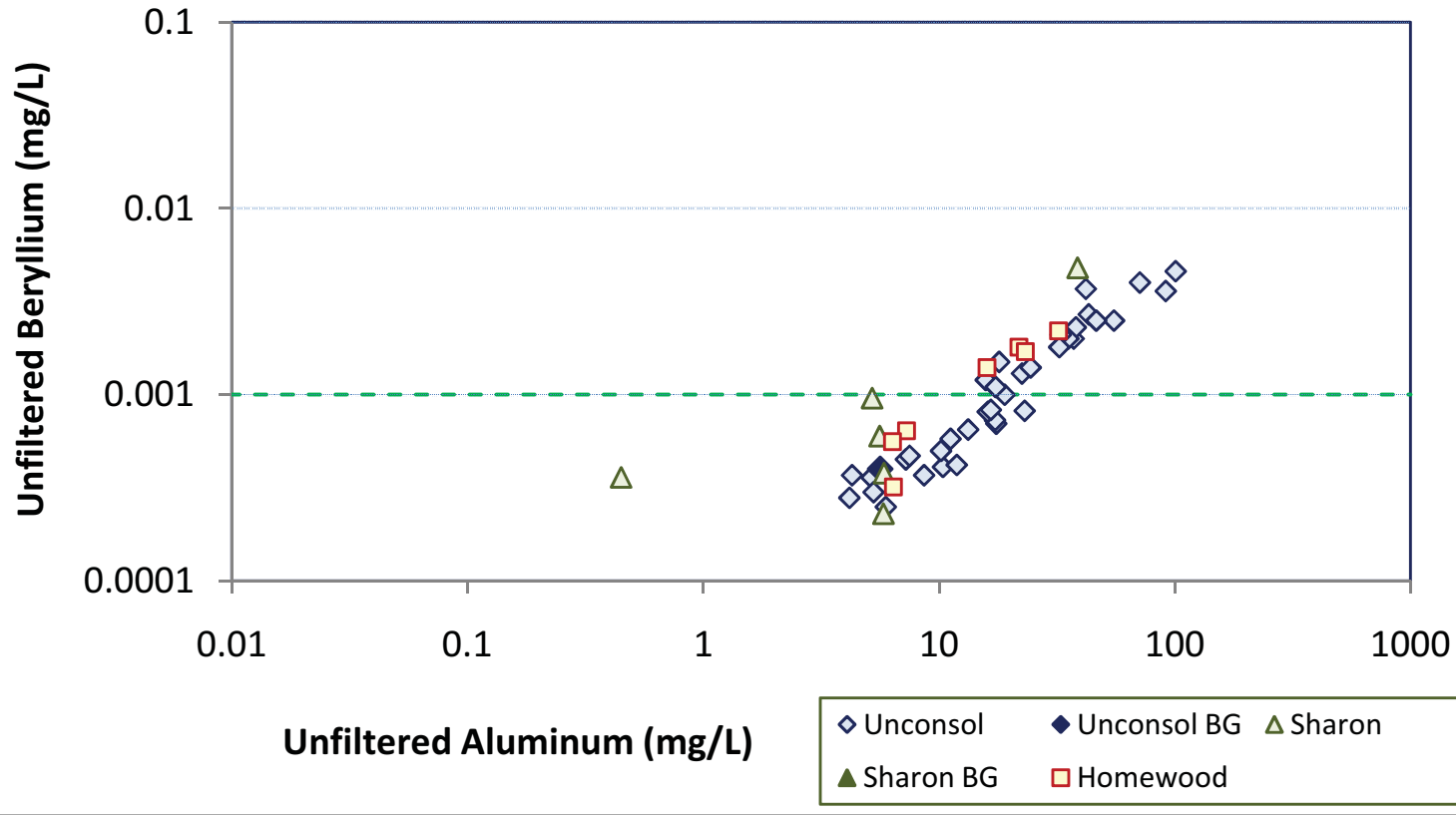


Figure 6-20. Cadmium vs. Aluminum - Pre Screen

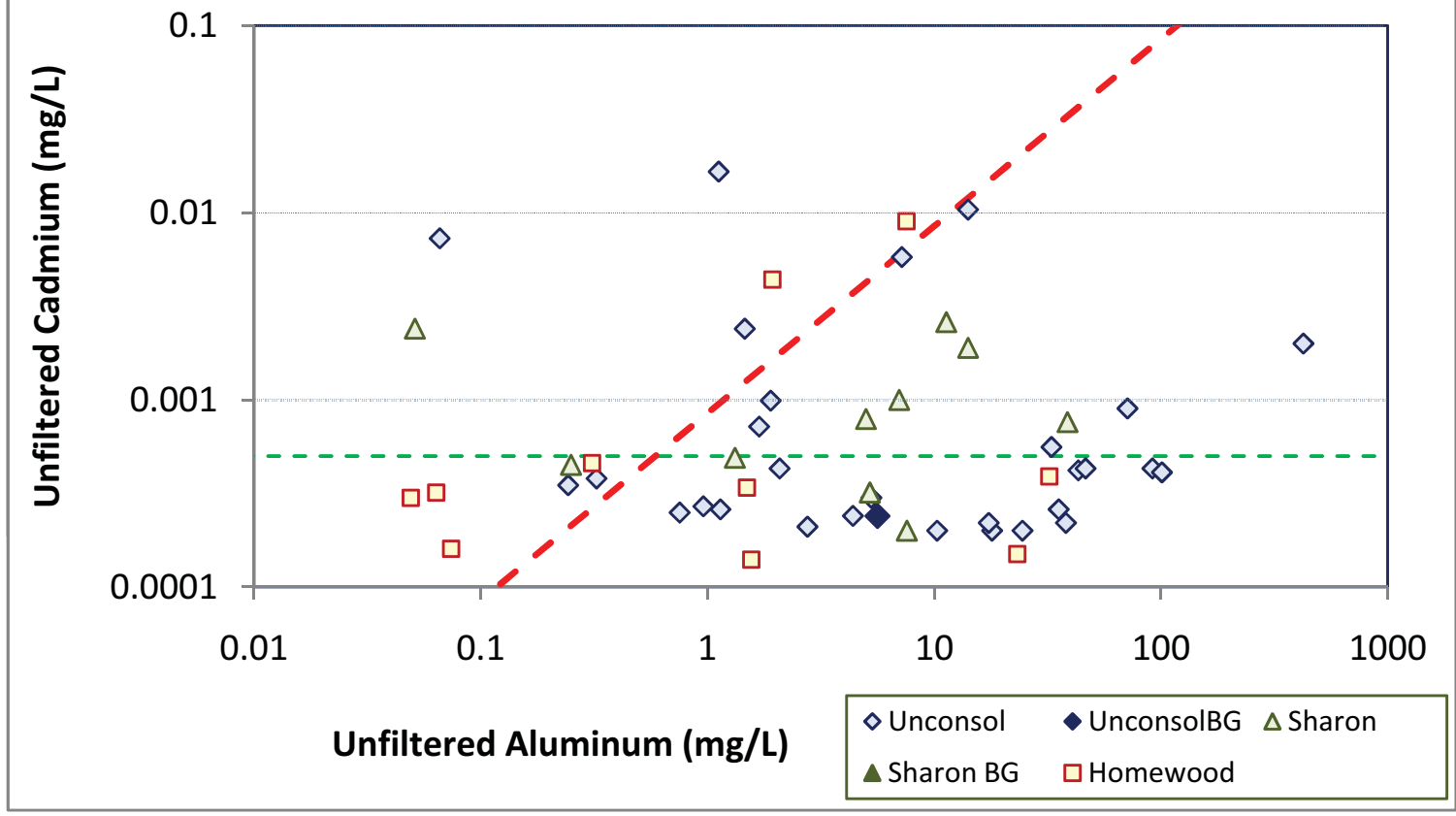


Figure 6-21. Cadmium vs. Cd/Al Ratios - Pre Screen

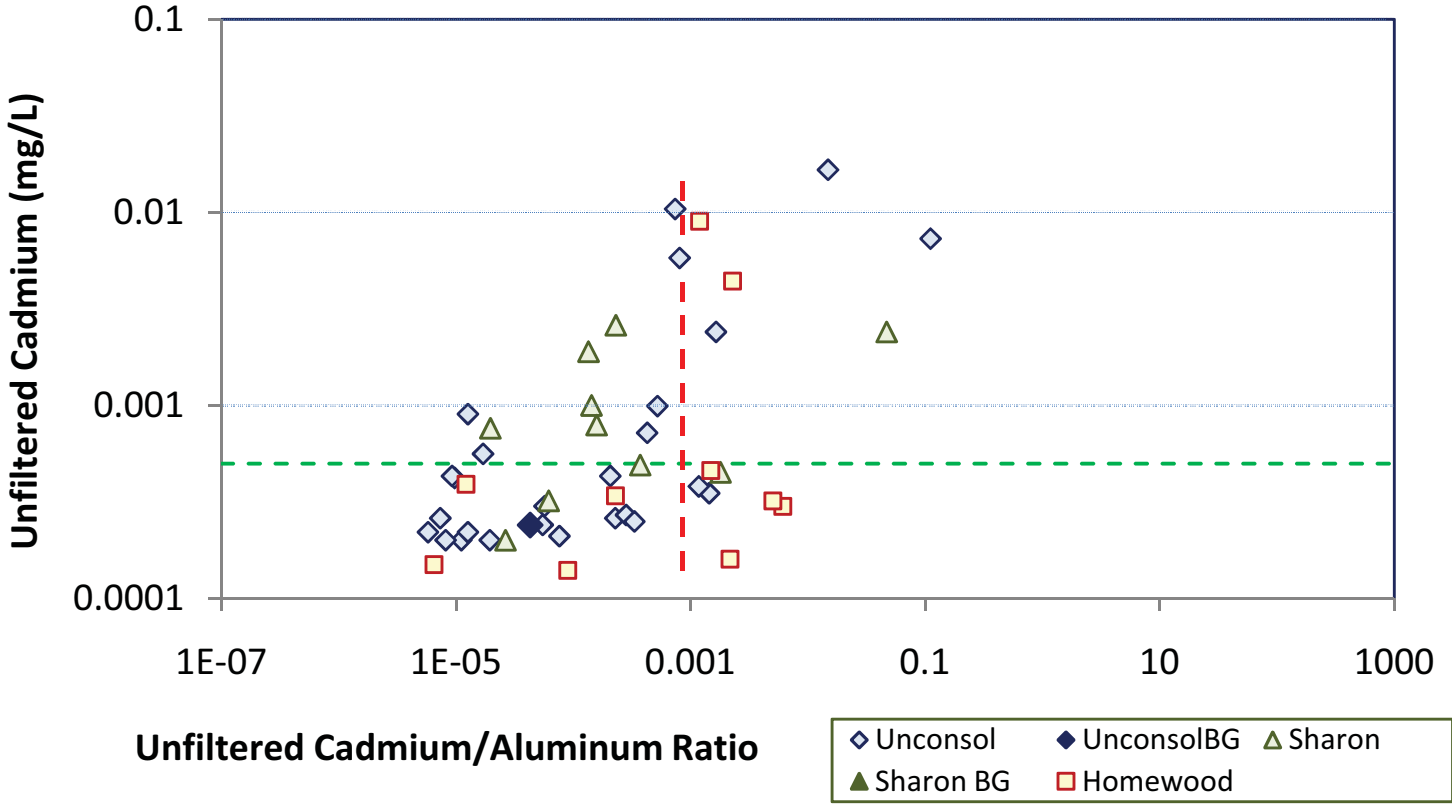


Figure 6-22. Cadmium vs. Aluminum - Post Screen

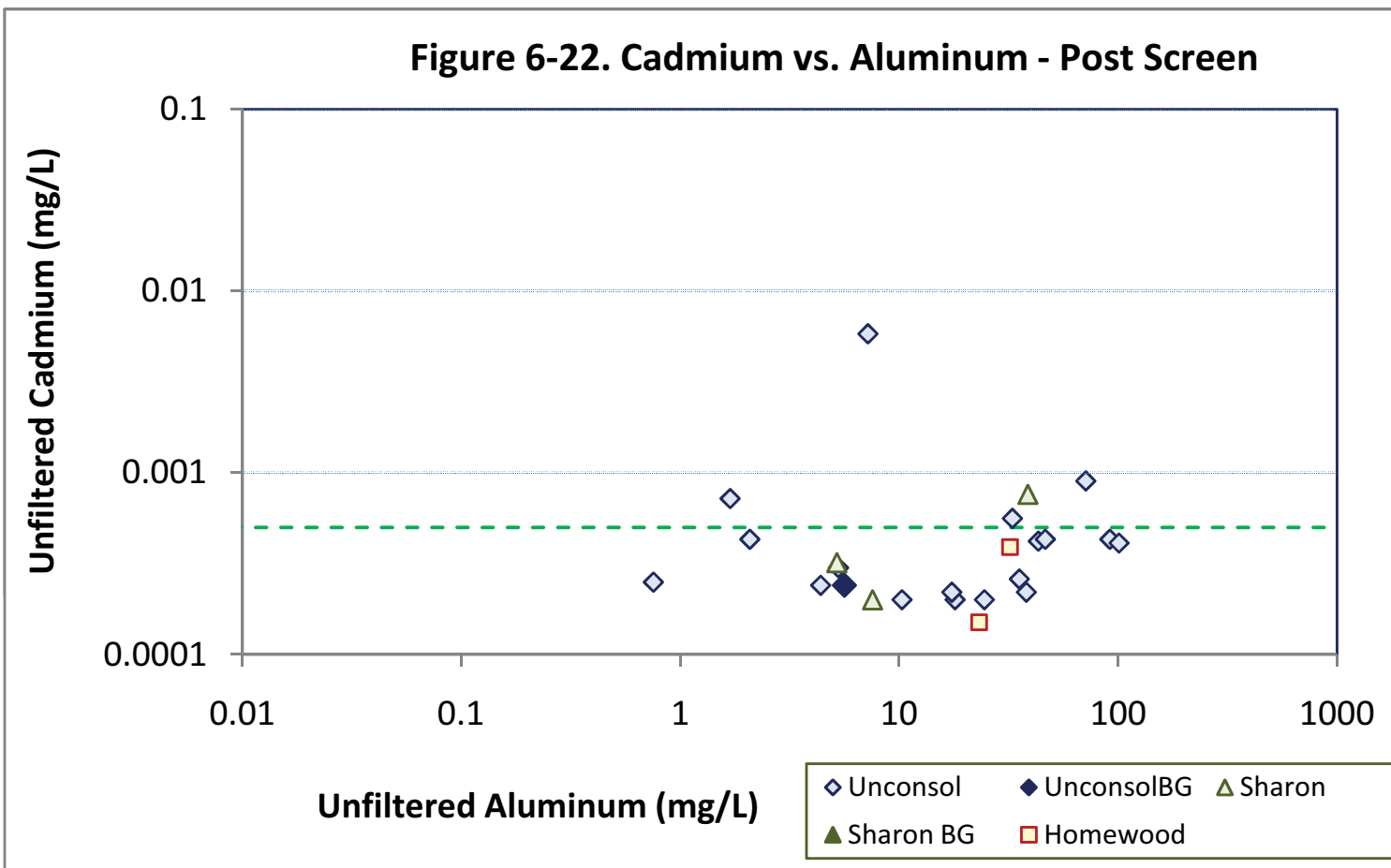


Figure 6-23. Calcium vs. Magnesium - Pre Screen

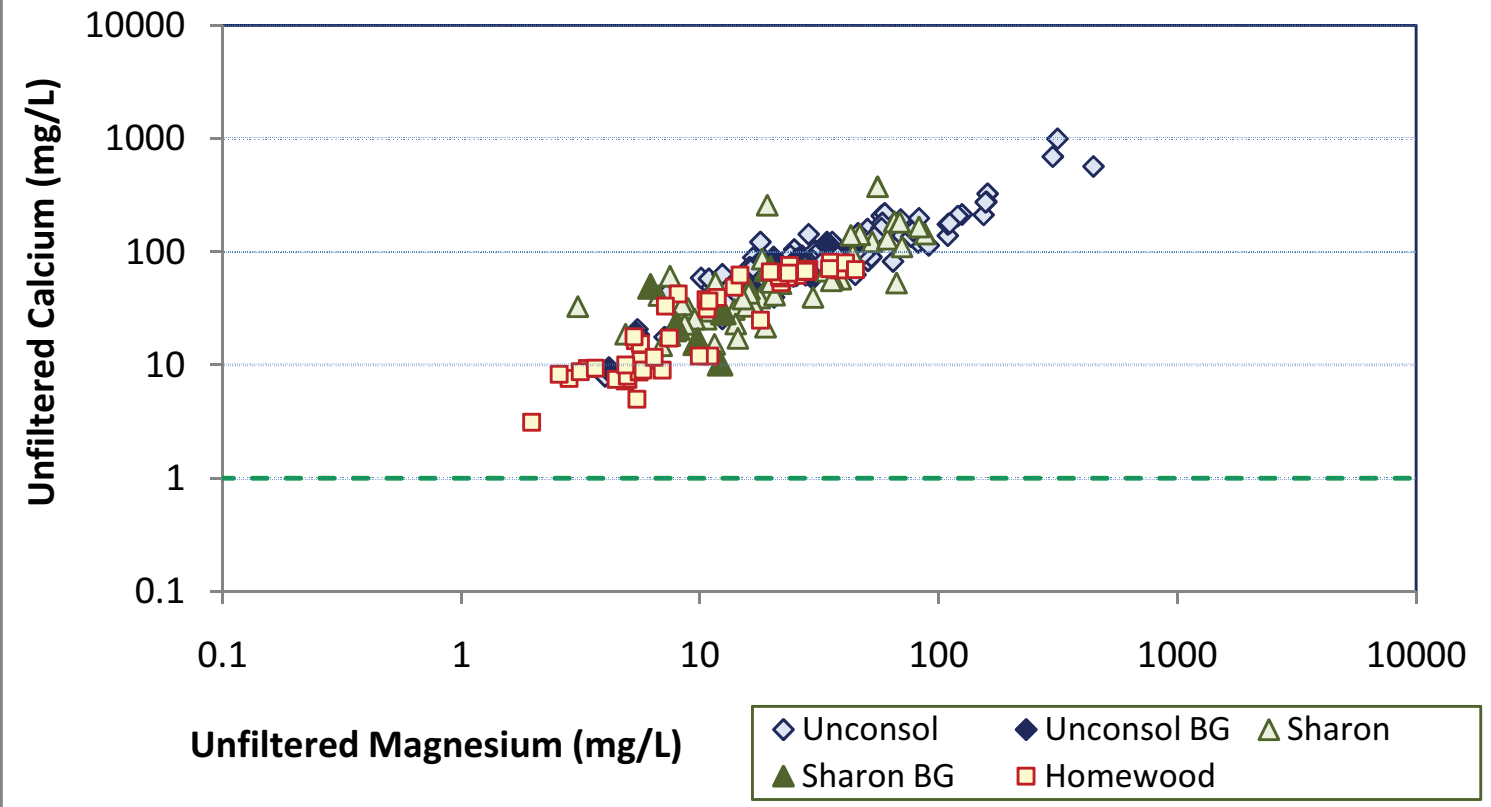


Figure 6-24. Calcium vs. Filtered/Unfiltered Ratios - Pre Screen

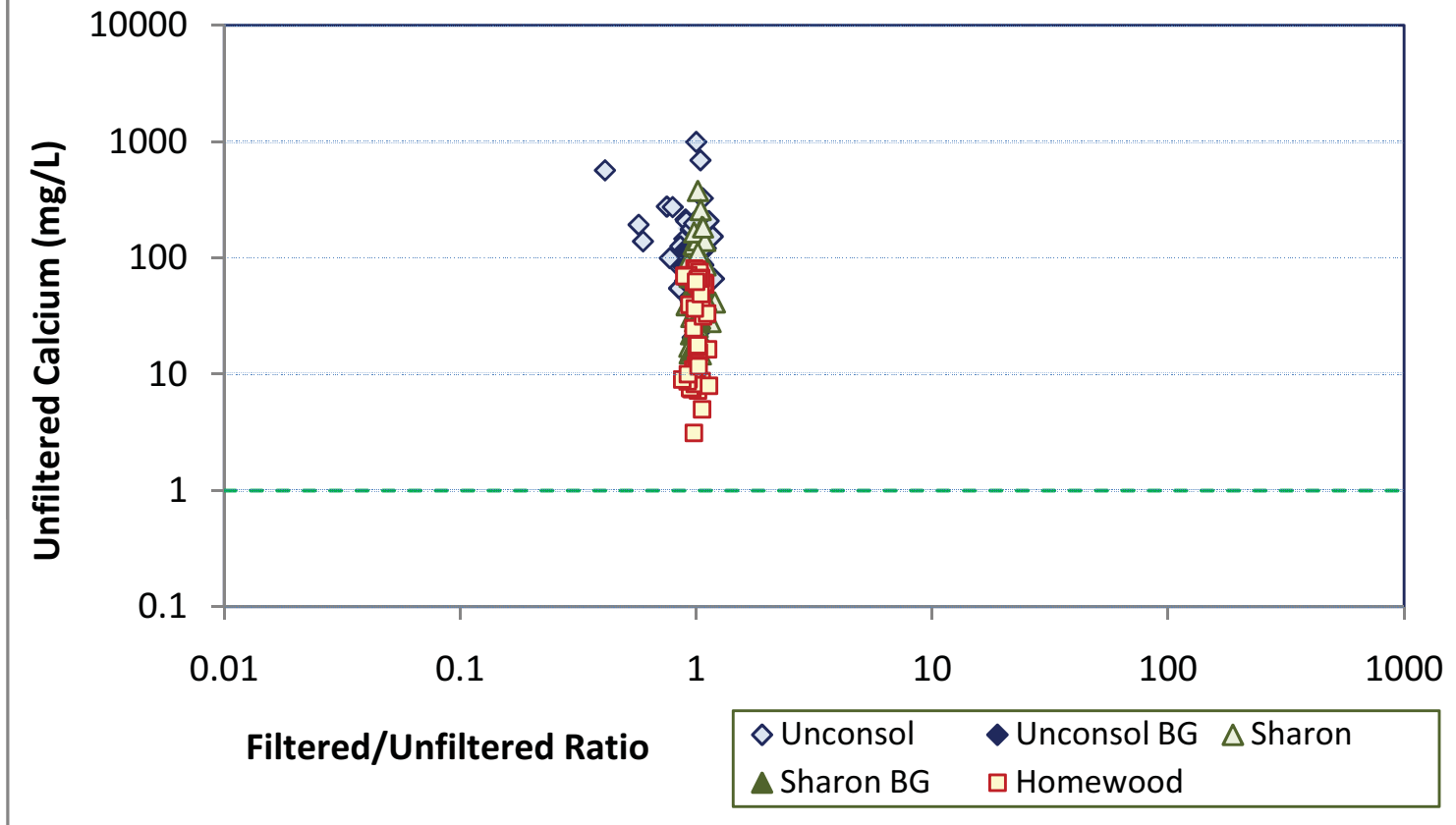


Figure 6-25. Calcium vs. Magnesium - Post Screen

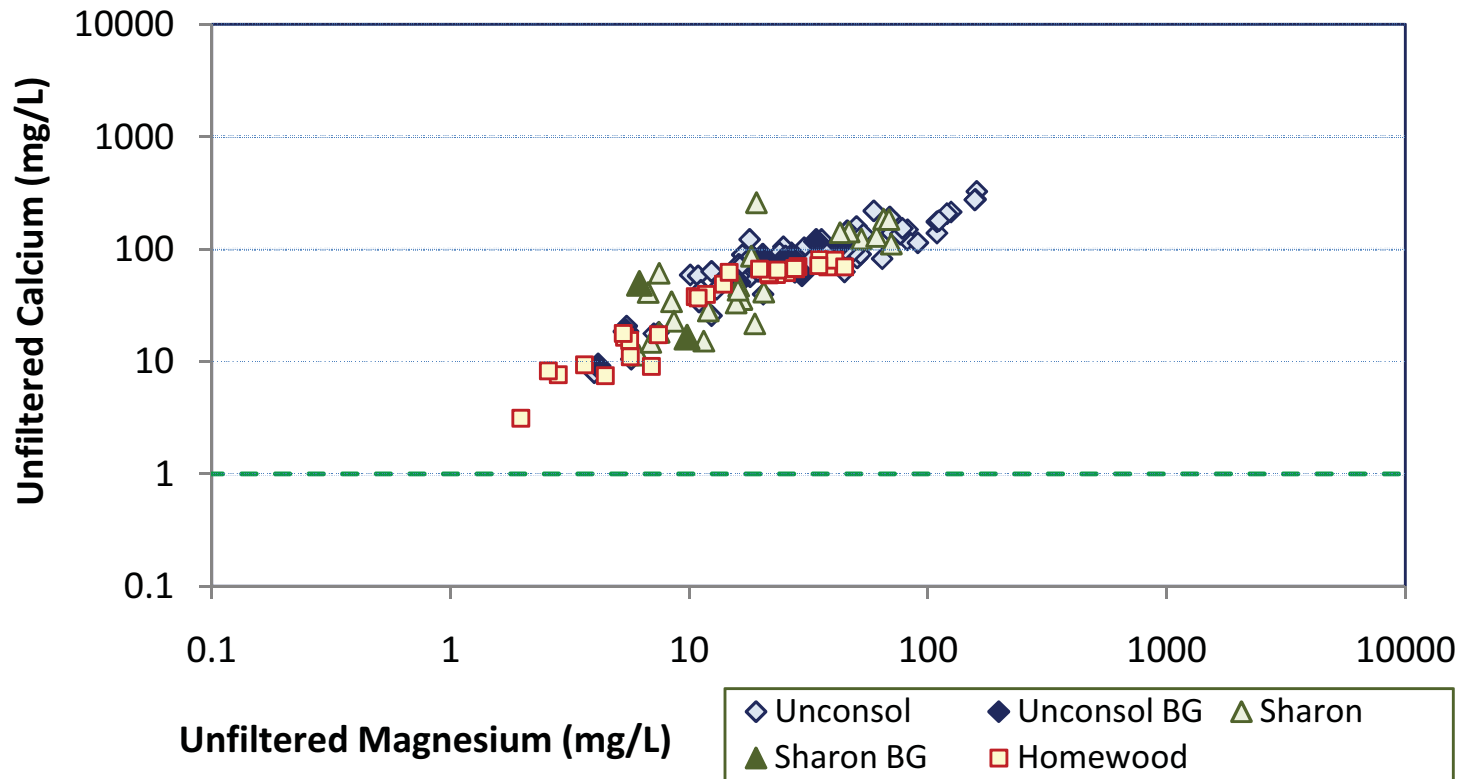


Figure 6-26. Chromium vs. Aluminum - Pre Screen

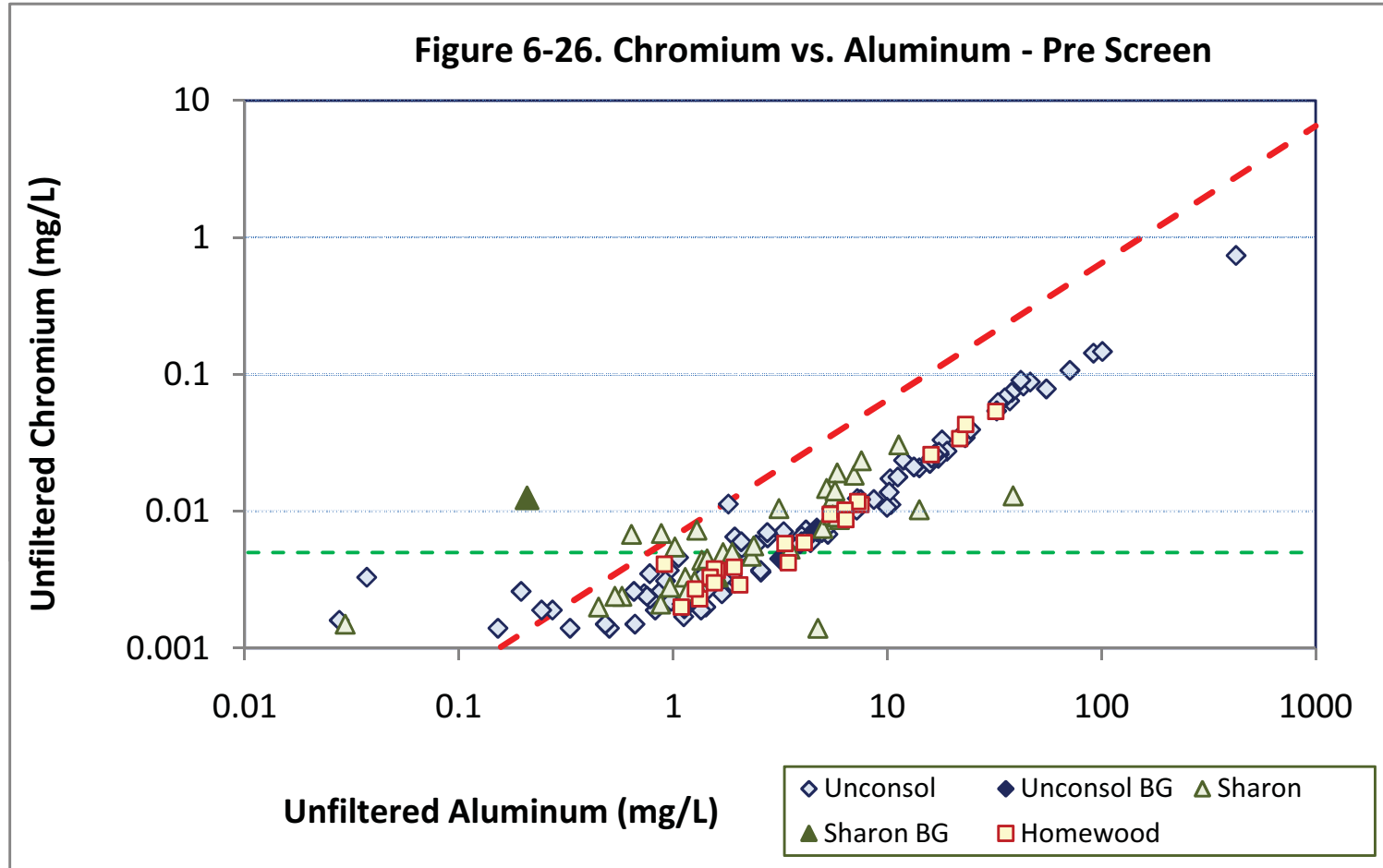


Figure 6-27. Chromium vs. Cr/Al Ratios - Pre Screen

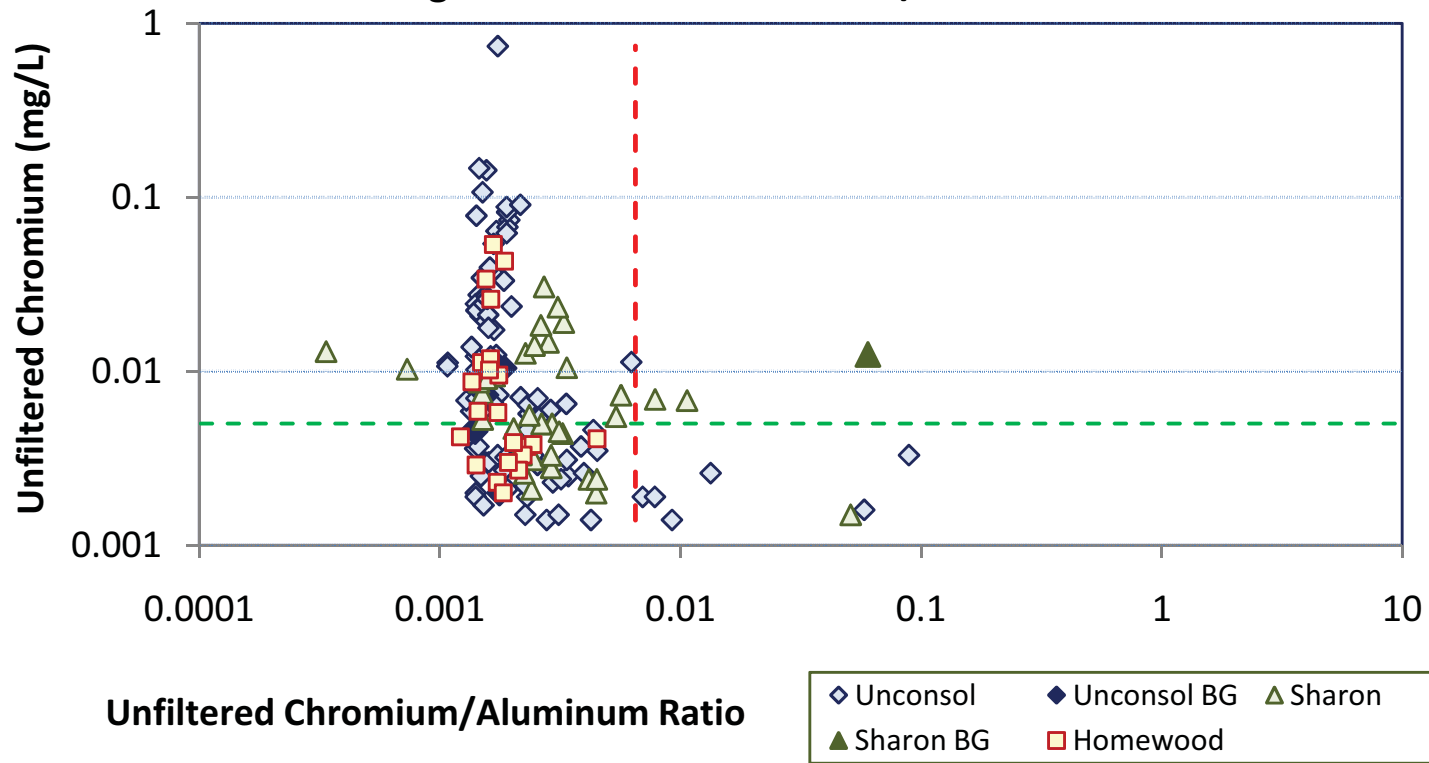


Figure 6-28. Chromium vs. Aluminum - Post Screen

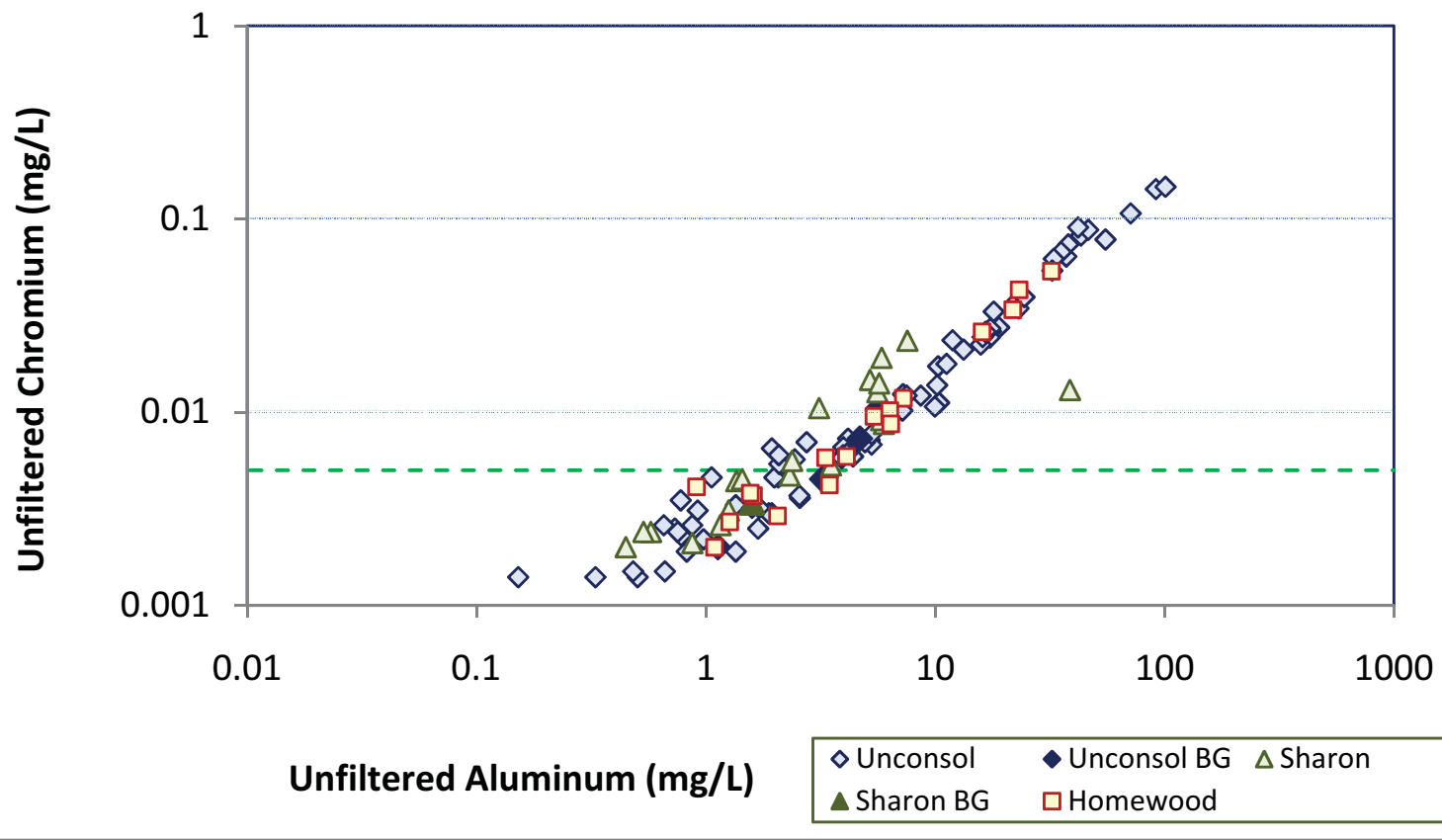


Figure 6-29. Cobalt vs. Aluminum - Pre Screen

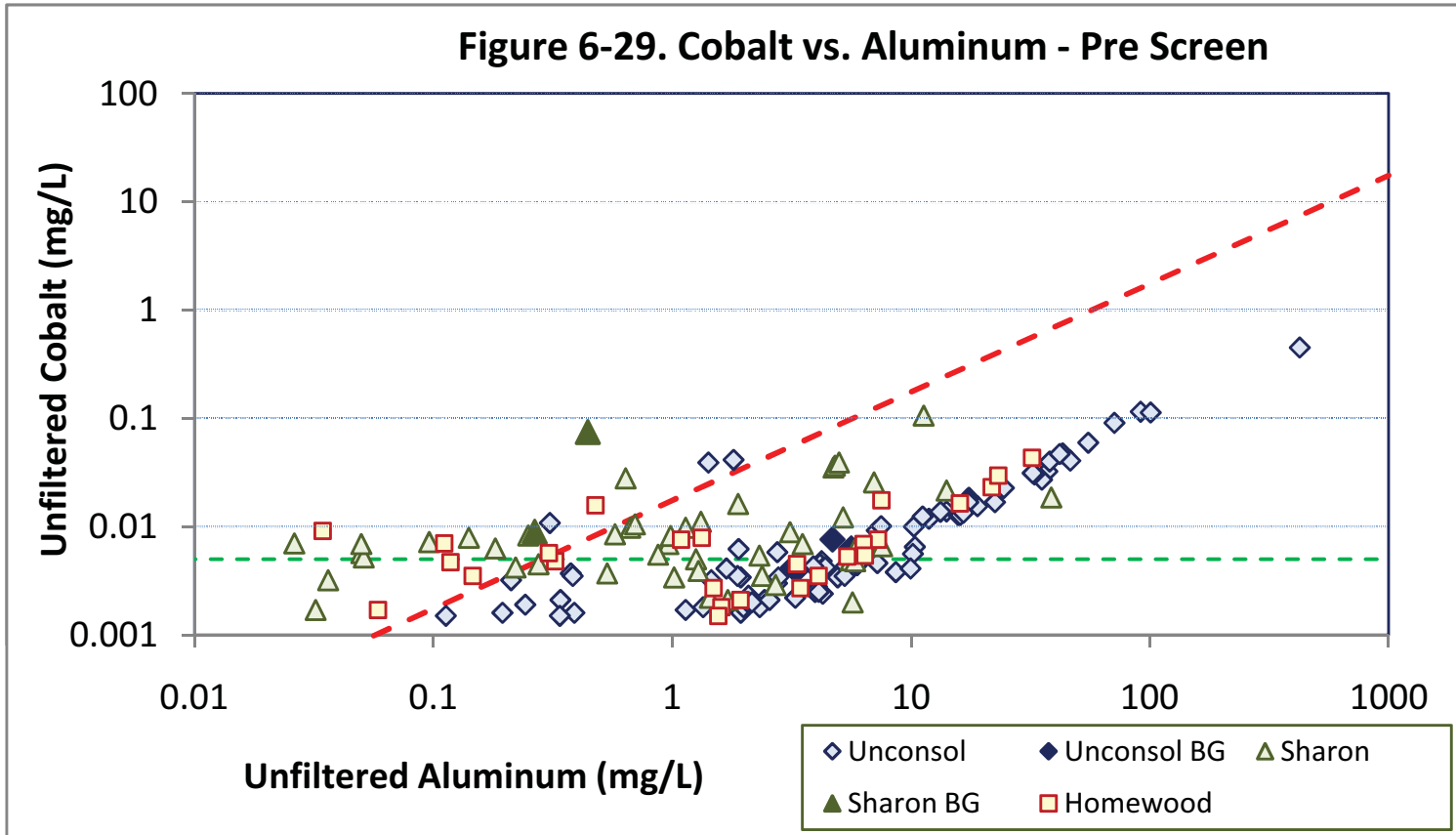


Figure 6-30. Cobalt vs. Co/Al Ratios - Pre Screen

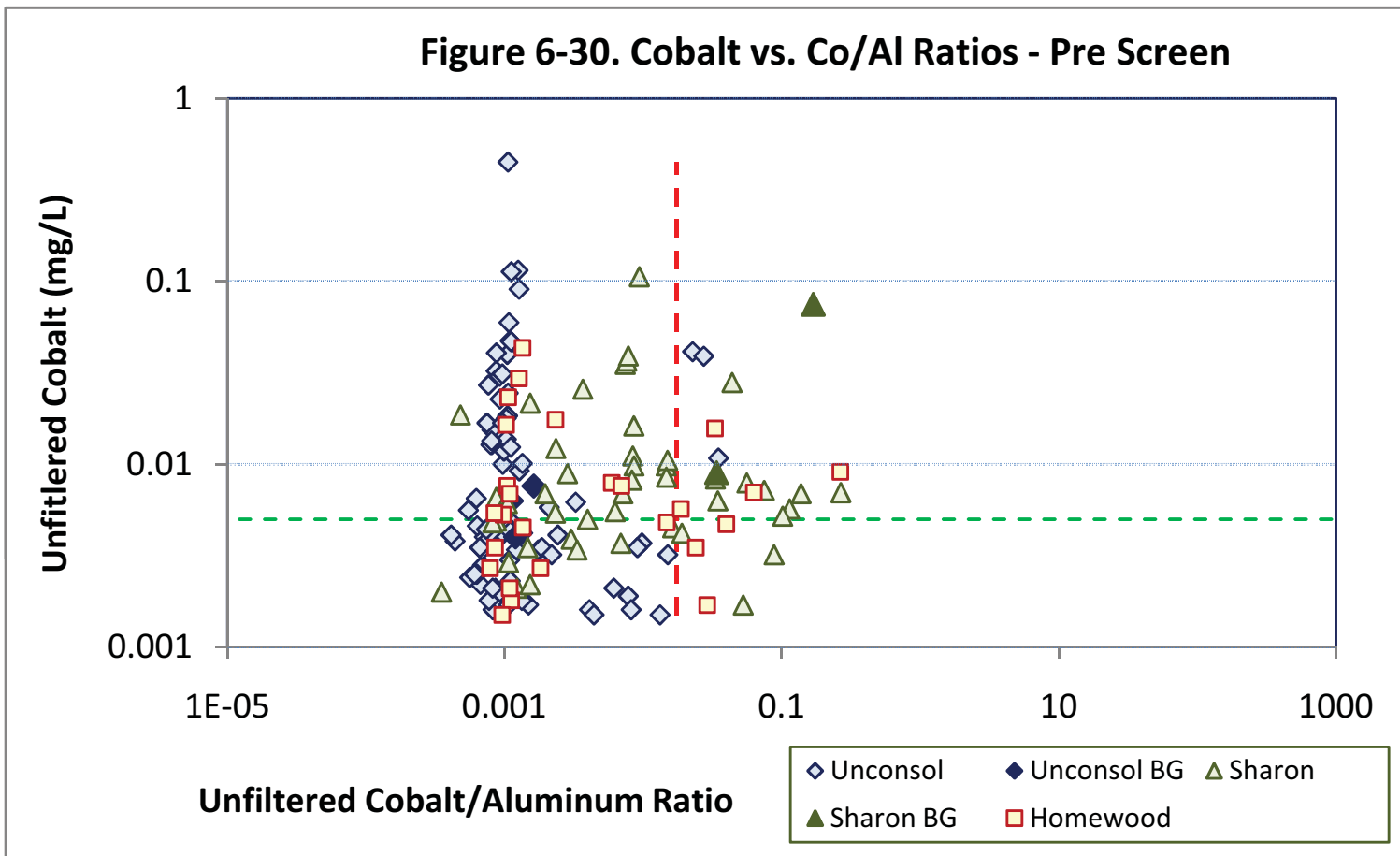


Figure 6-31. Cobalt vs. Aluminum - Post Screen

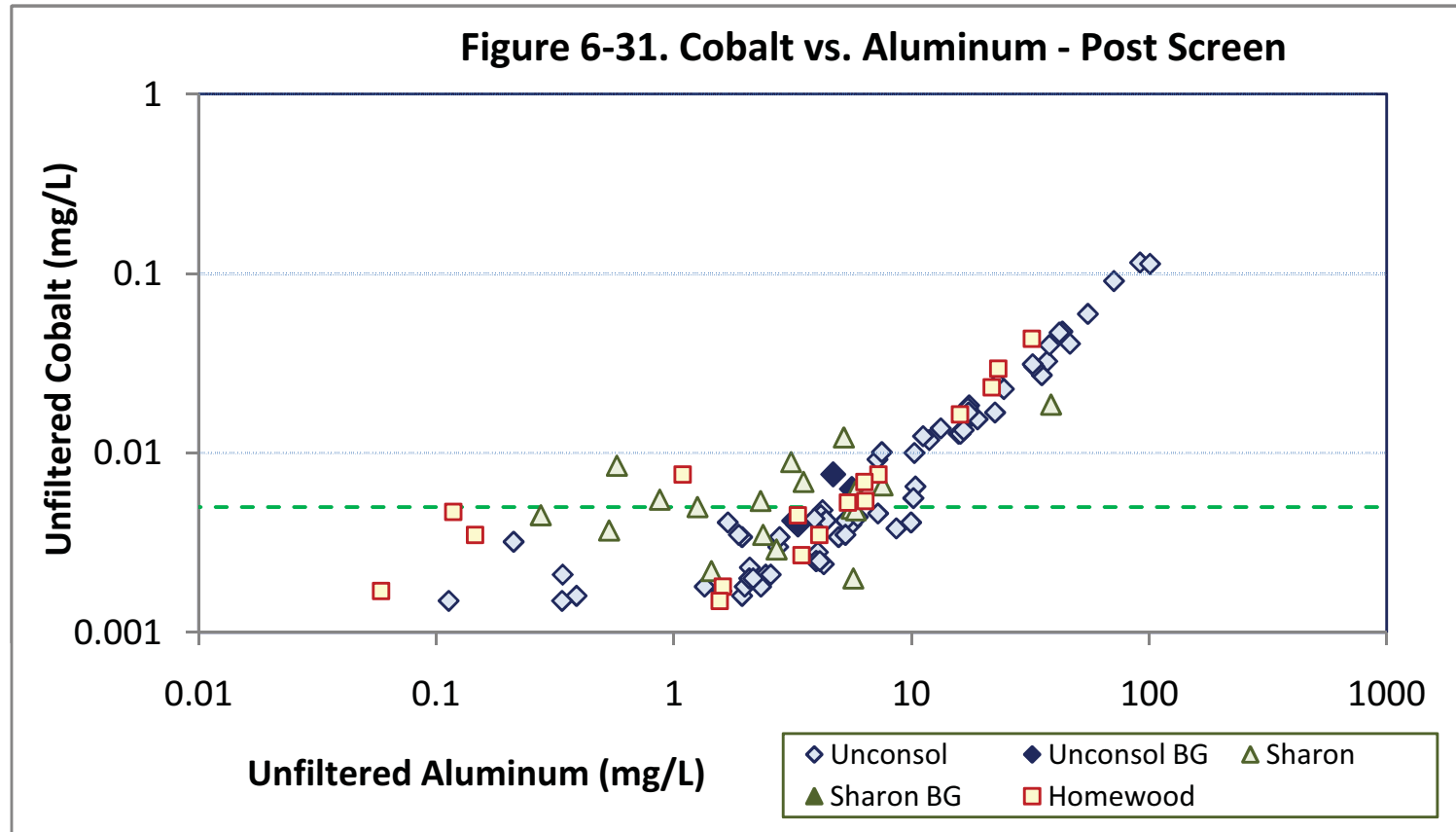


Figure 6-32. Copper vs. Aluminum - Pre Screen

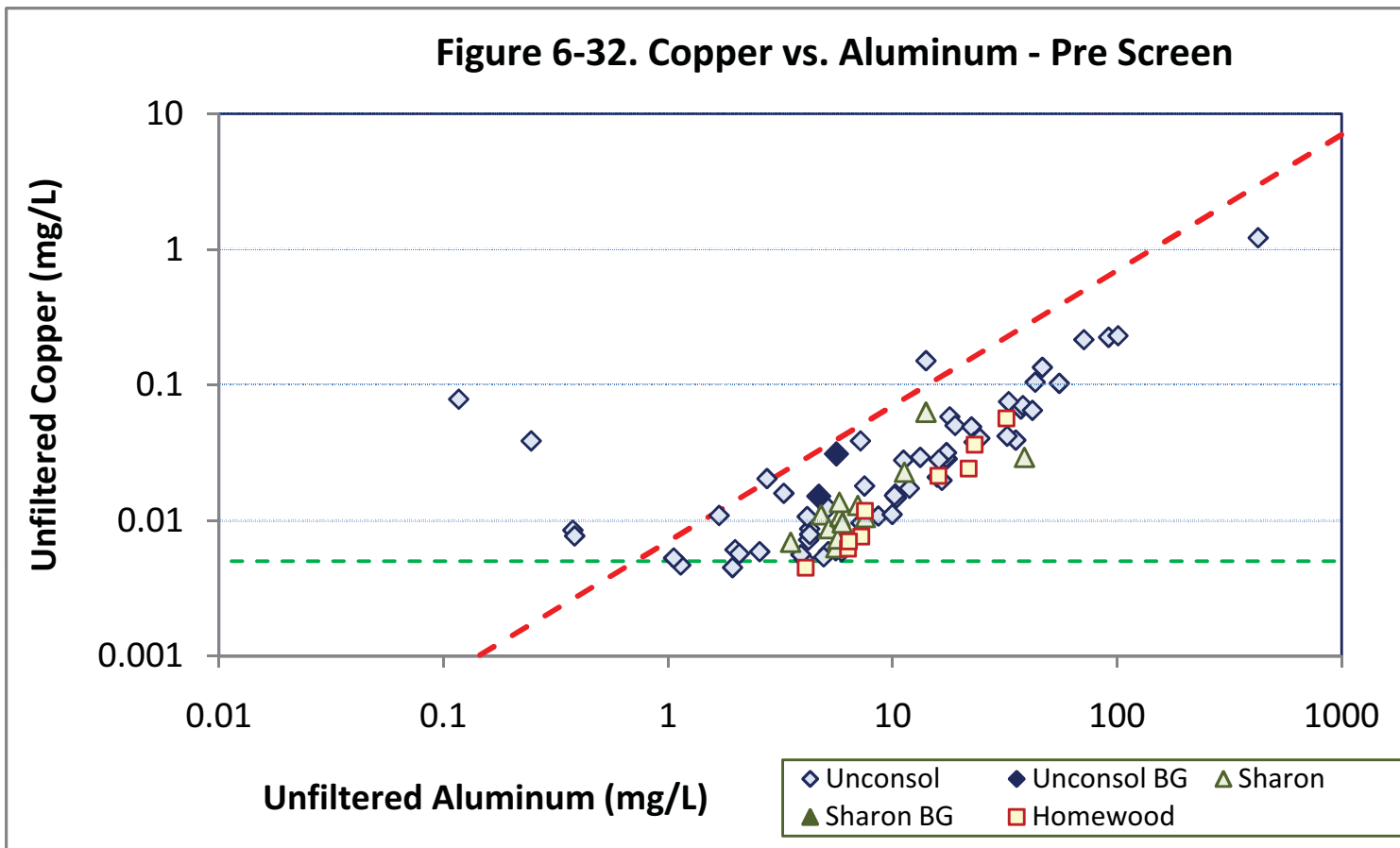


Figure 6-33. Copper vs. Cu/Al Ratios - Pre Screen

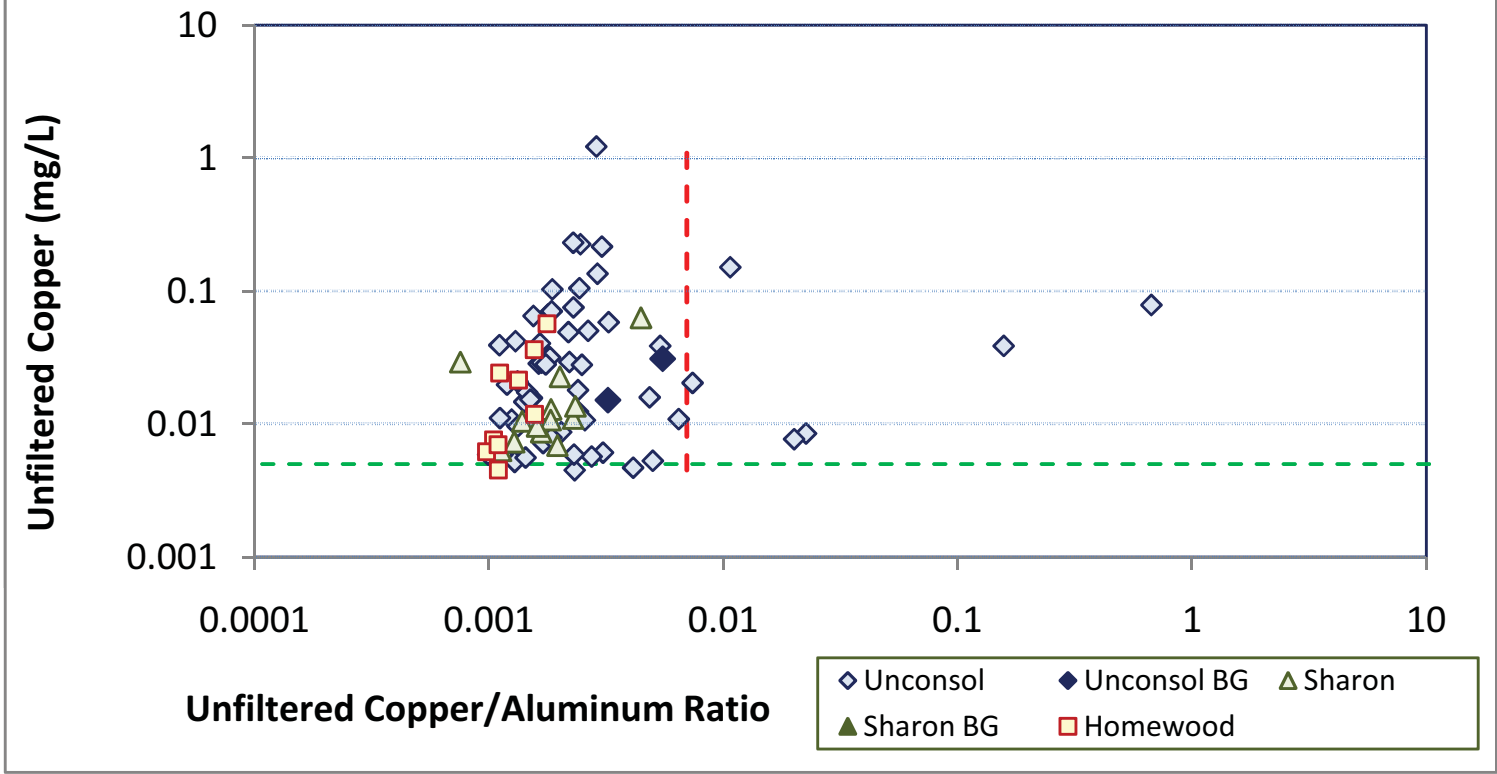


Figure 6-34. Copper vs. Aluminum - Post Screen

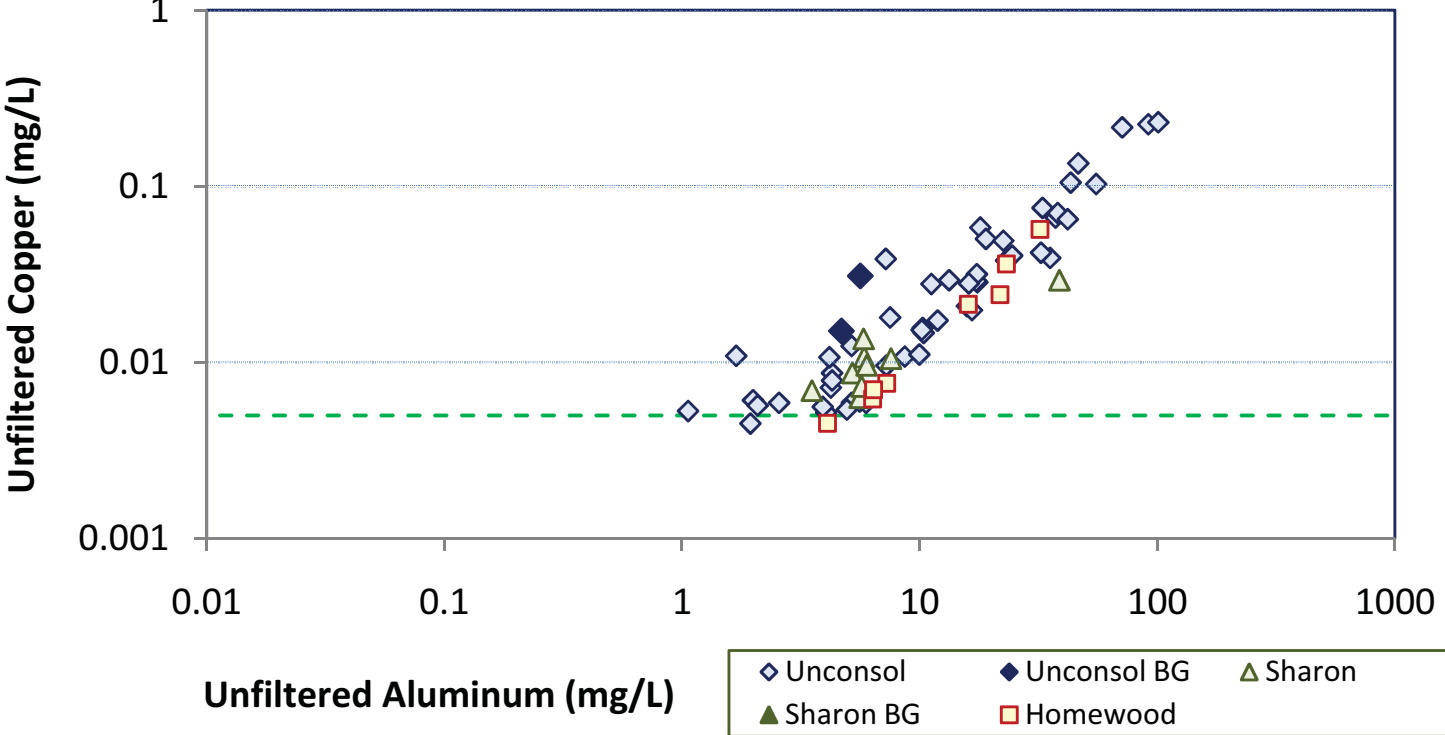


Figure 6-35. Iron vs. Aluminum - Pre Screen

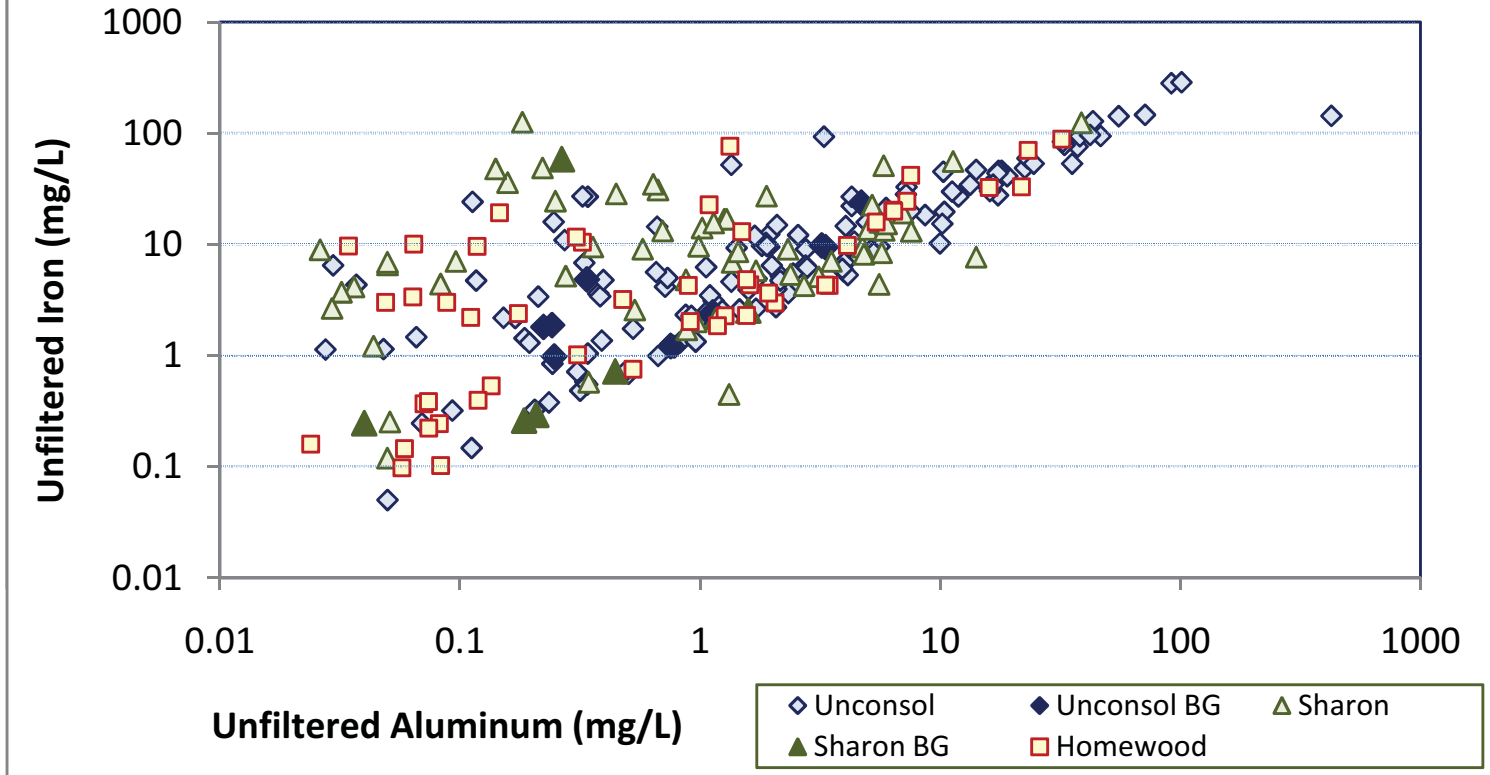


Figure 6-36. Iron vs. Filtered/Unfiltered Ratios - Pre Screen

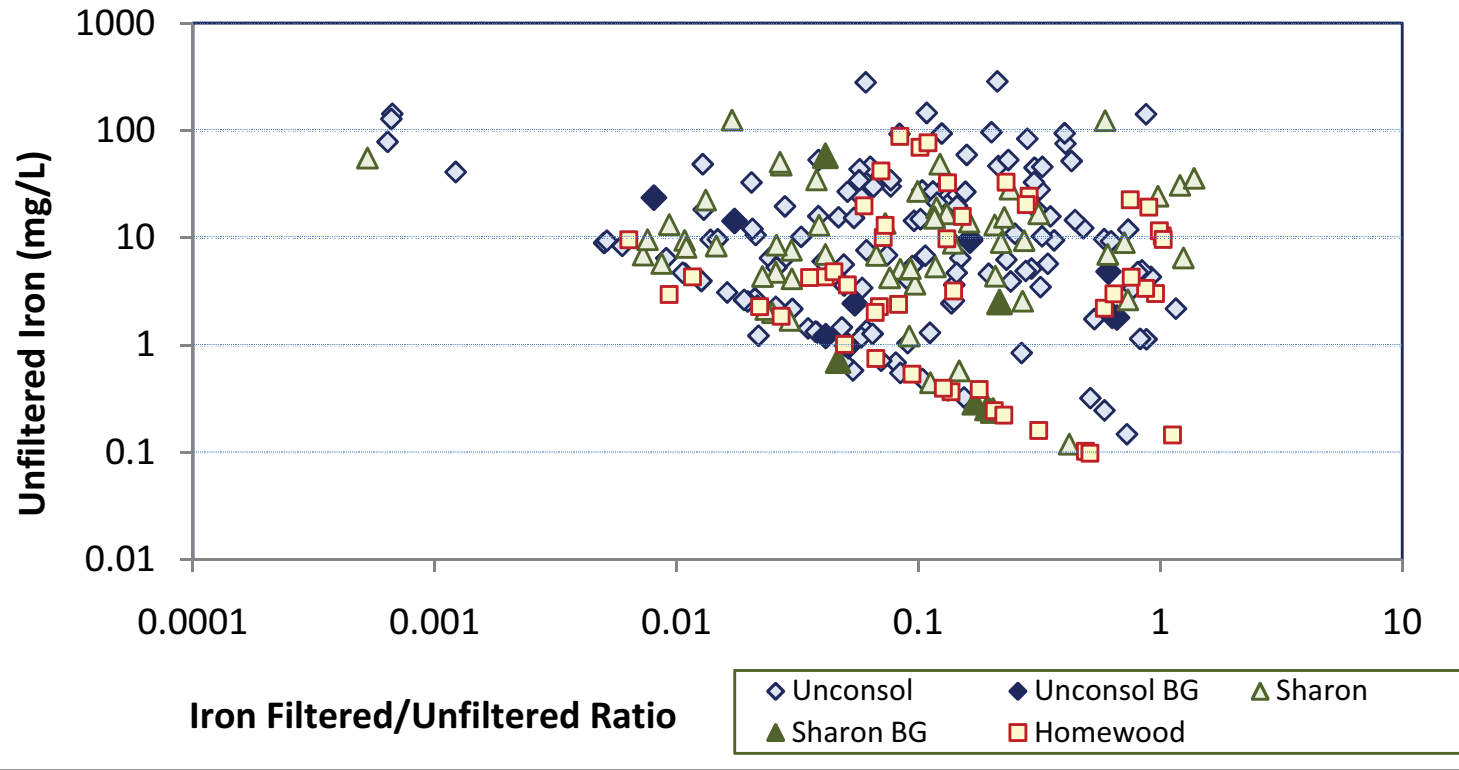


Figure 6-37. Iron vs. Filtered/Unfiltered Ratios - Post Screen

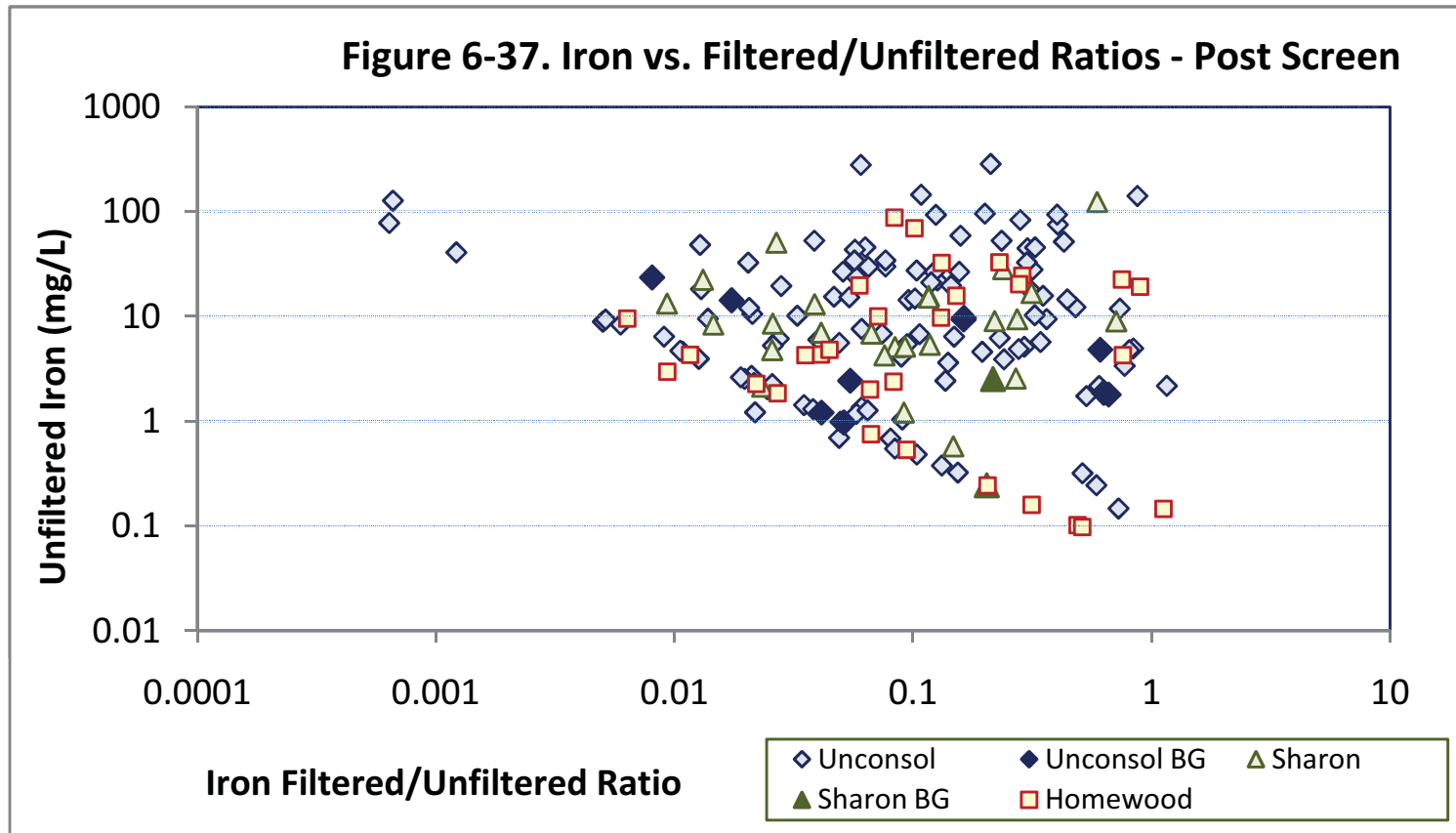


Figure 6-38. Lead vs. Aluminum - Pre Screen

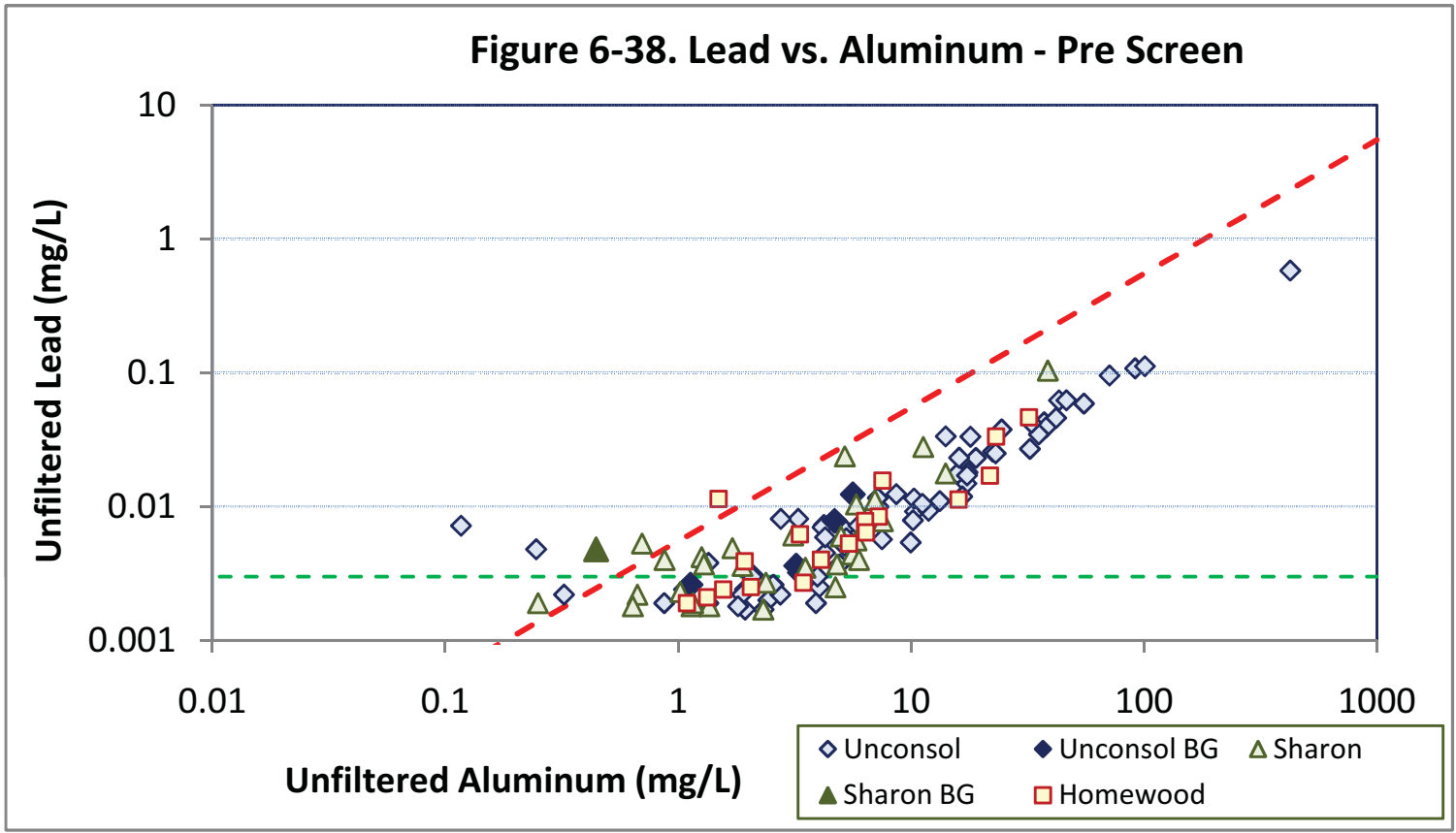


Figure 6-39. Lead vs. Pb/Al Ratios - Pre Screen

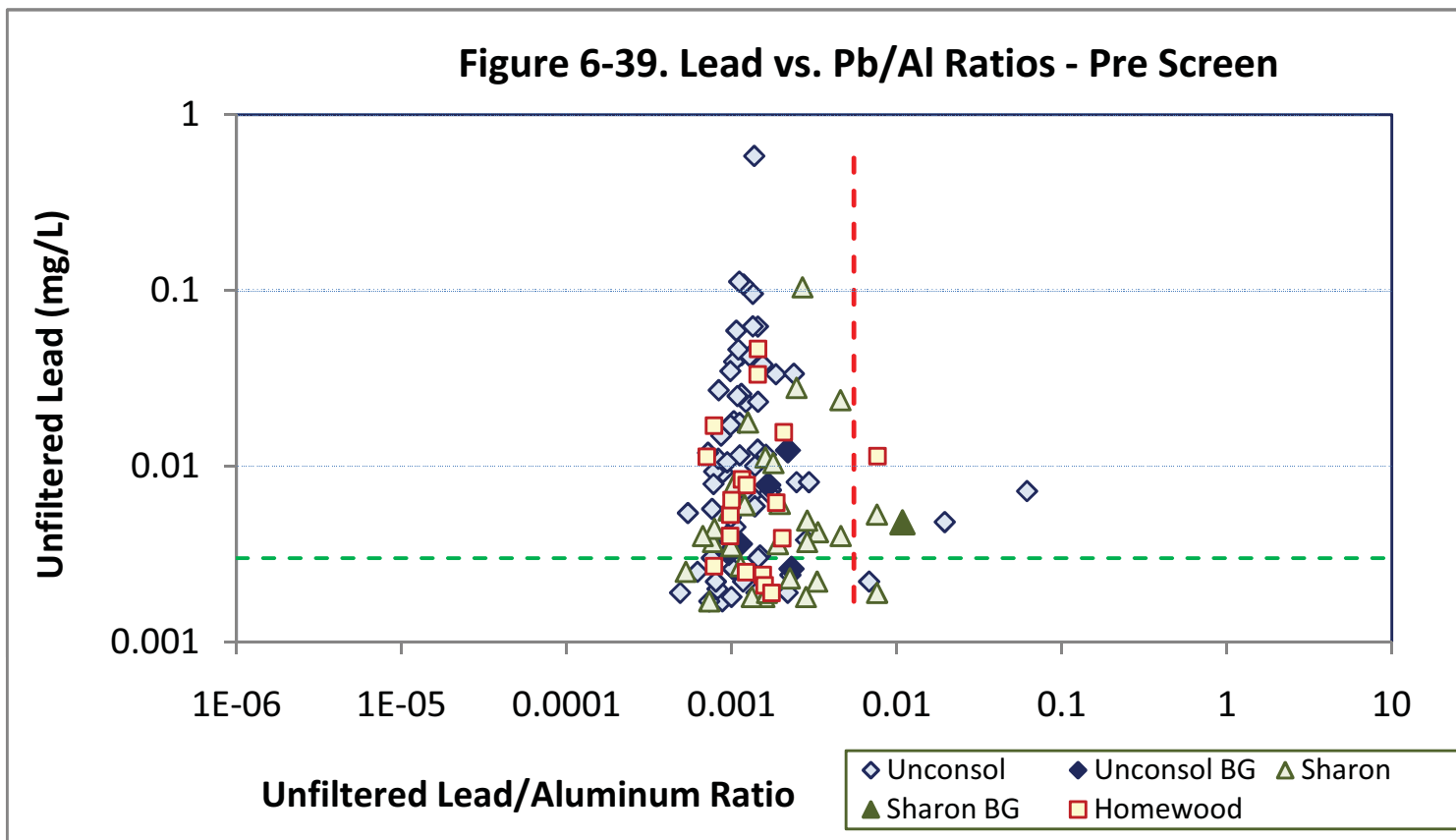


Figure 6-40. Lead vs. Pb/Al Ratios - Post Screen

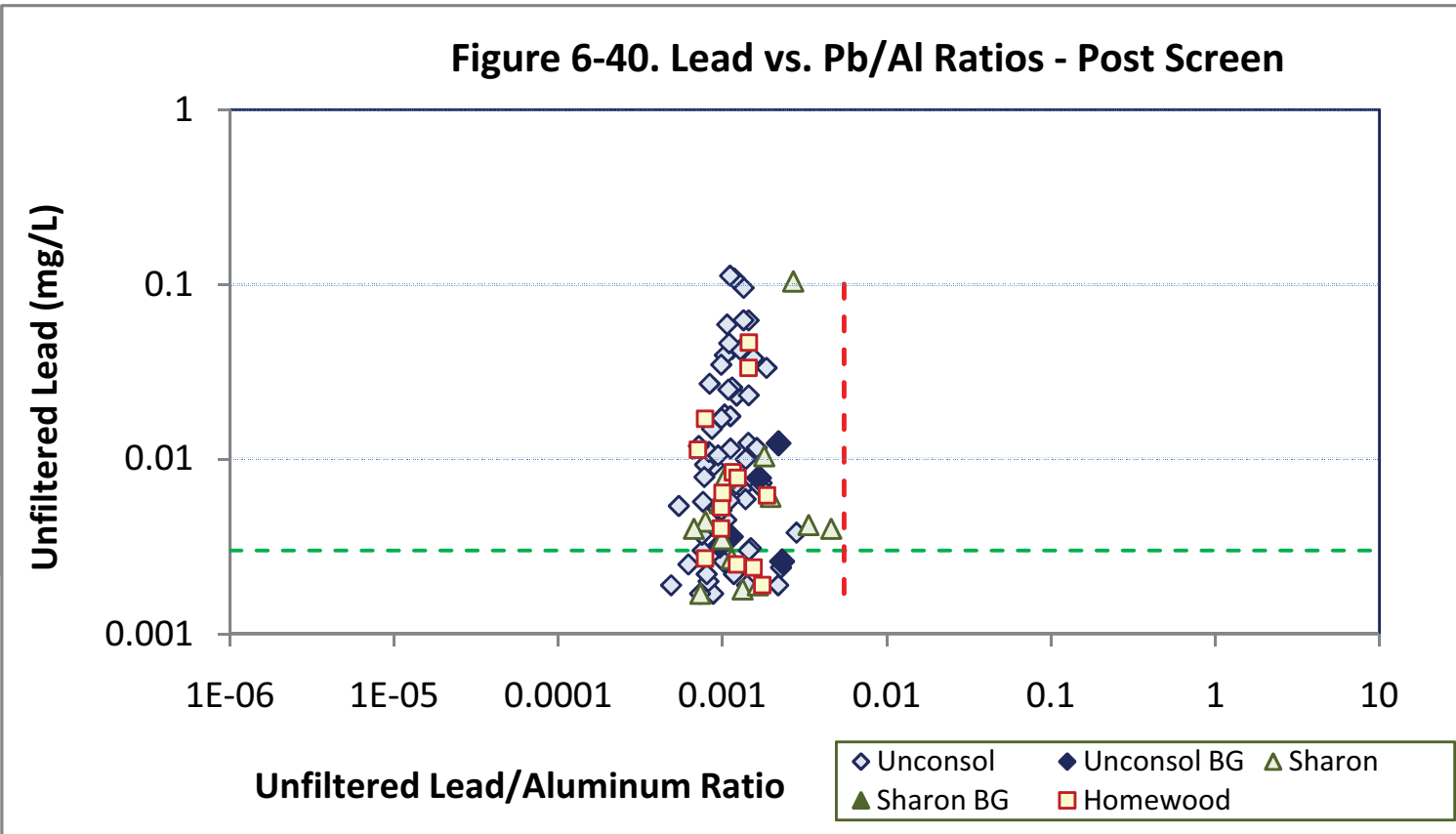


Figure 6-41. Magnesium vs. Calcium - Pre Screen

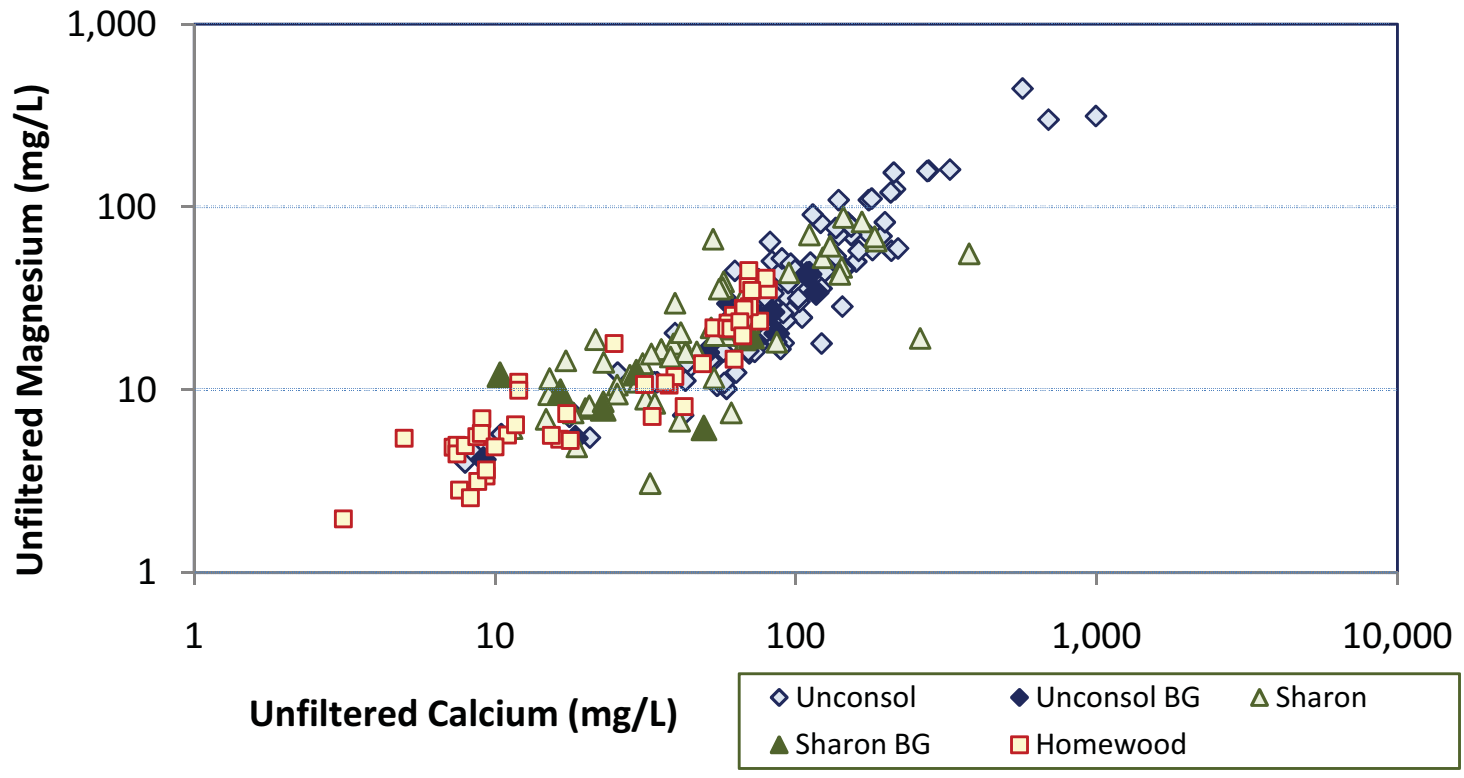


Figure 6-42. Magnesium vs. Filtered/Unfiltered Ratios -
Pre Screen

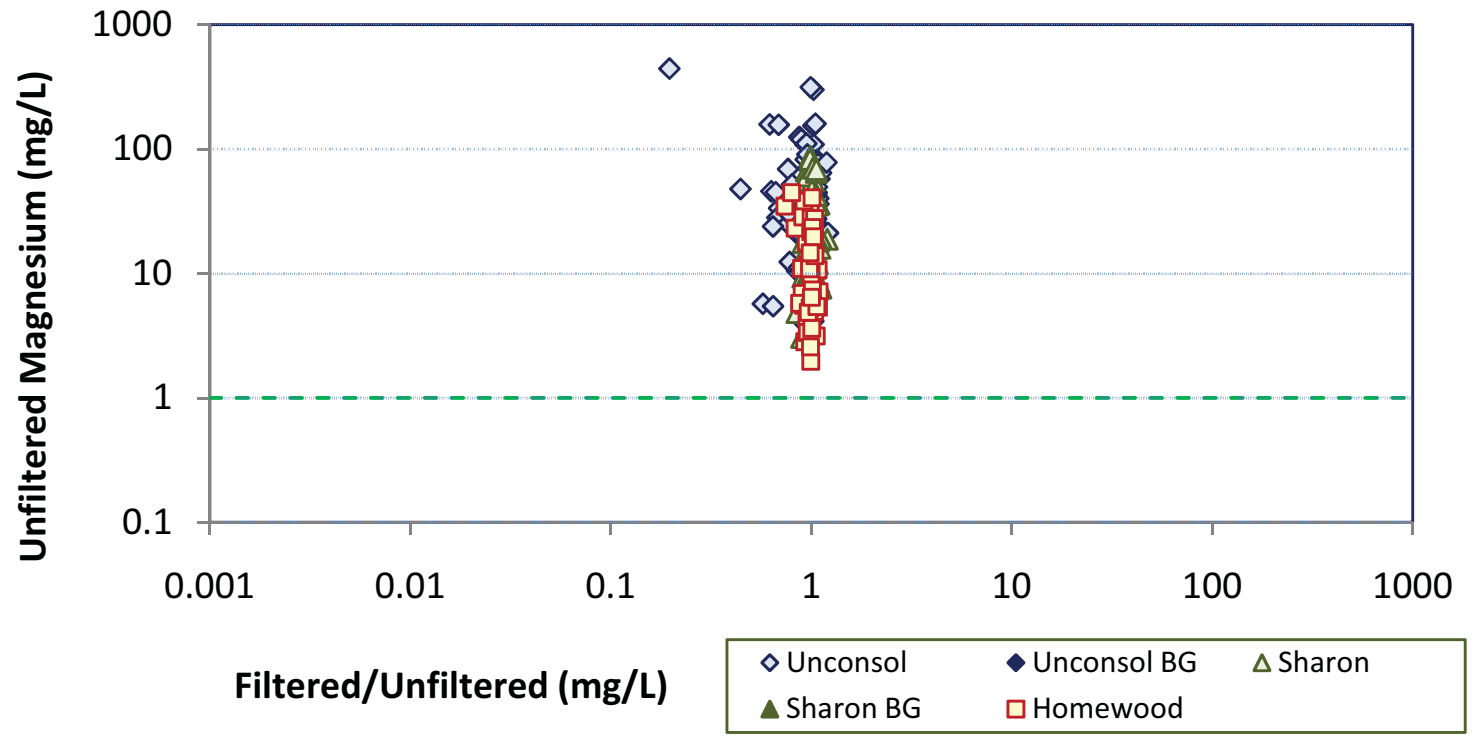


Figure 6-43. Magnesium vs. Calcium - Post Screen

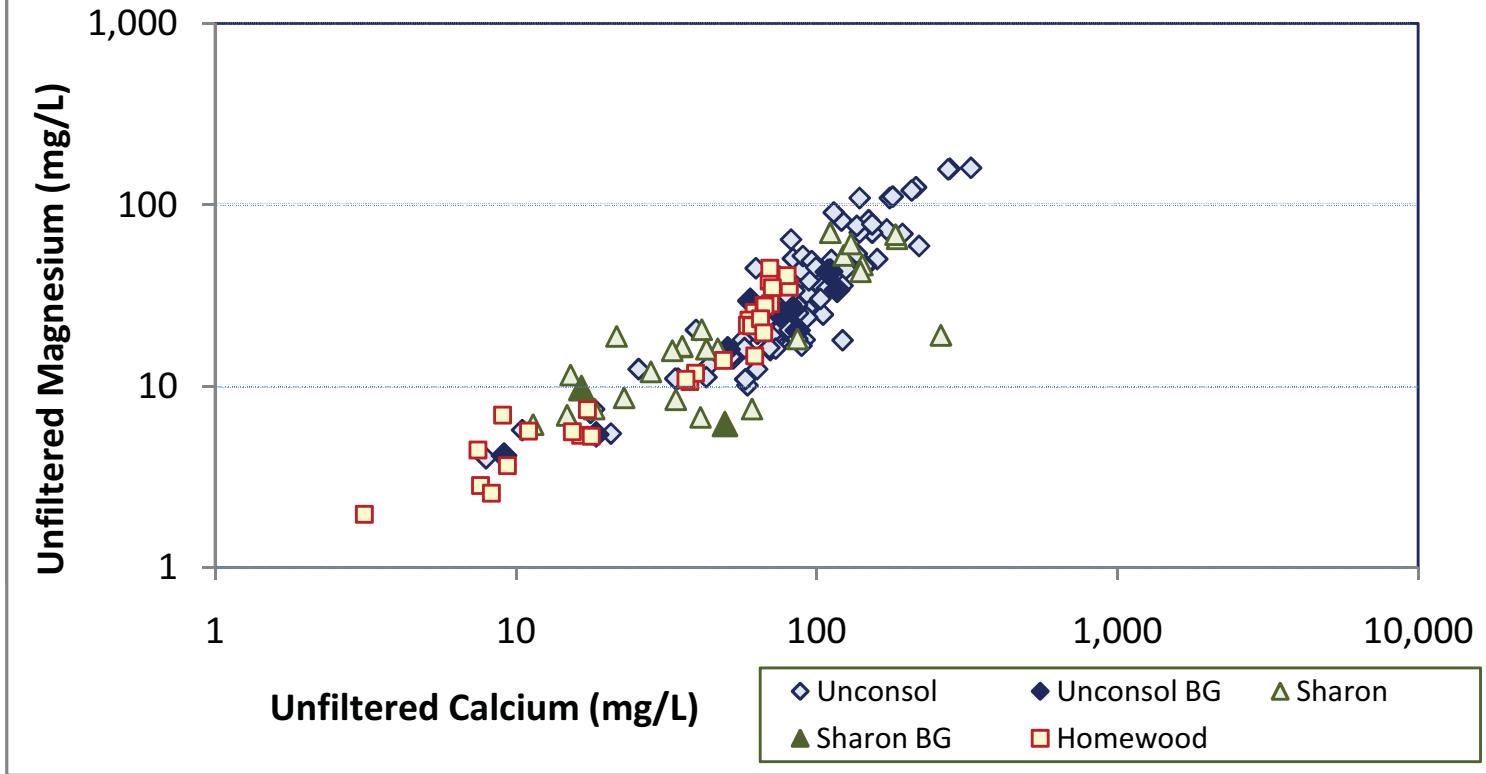


Figure 6-44. Manganese vs. Aluminum - Pre Screen

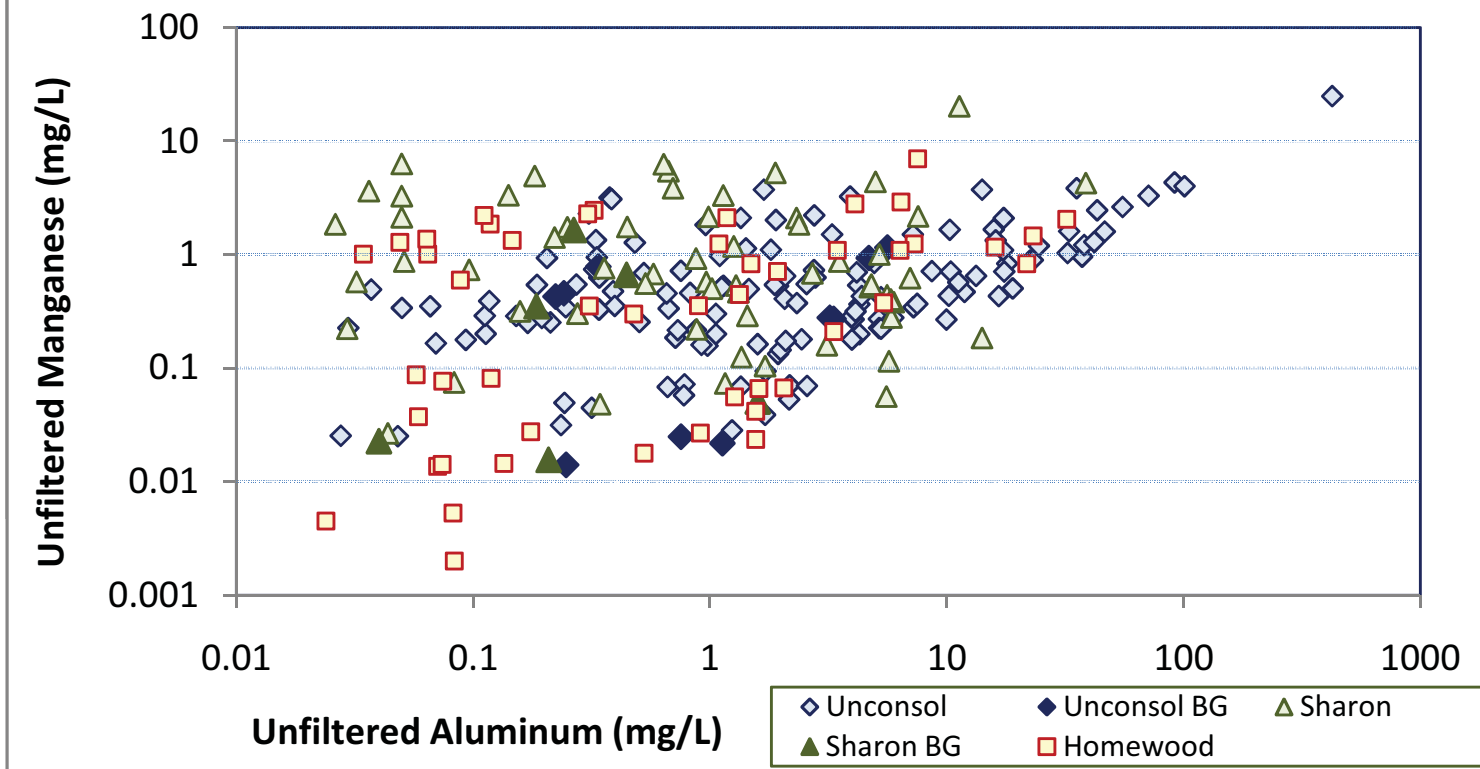


Figure 6-45. Manganese vs. Filtered/Unfiltered Ratios - Pre Screen

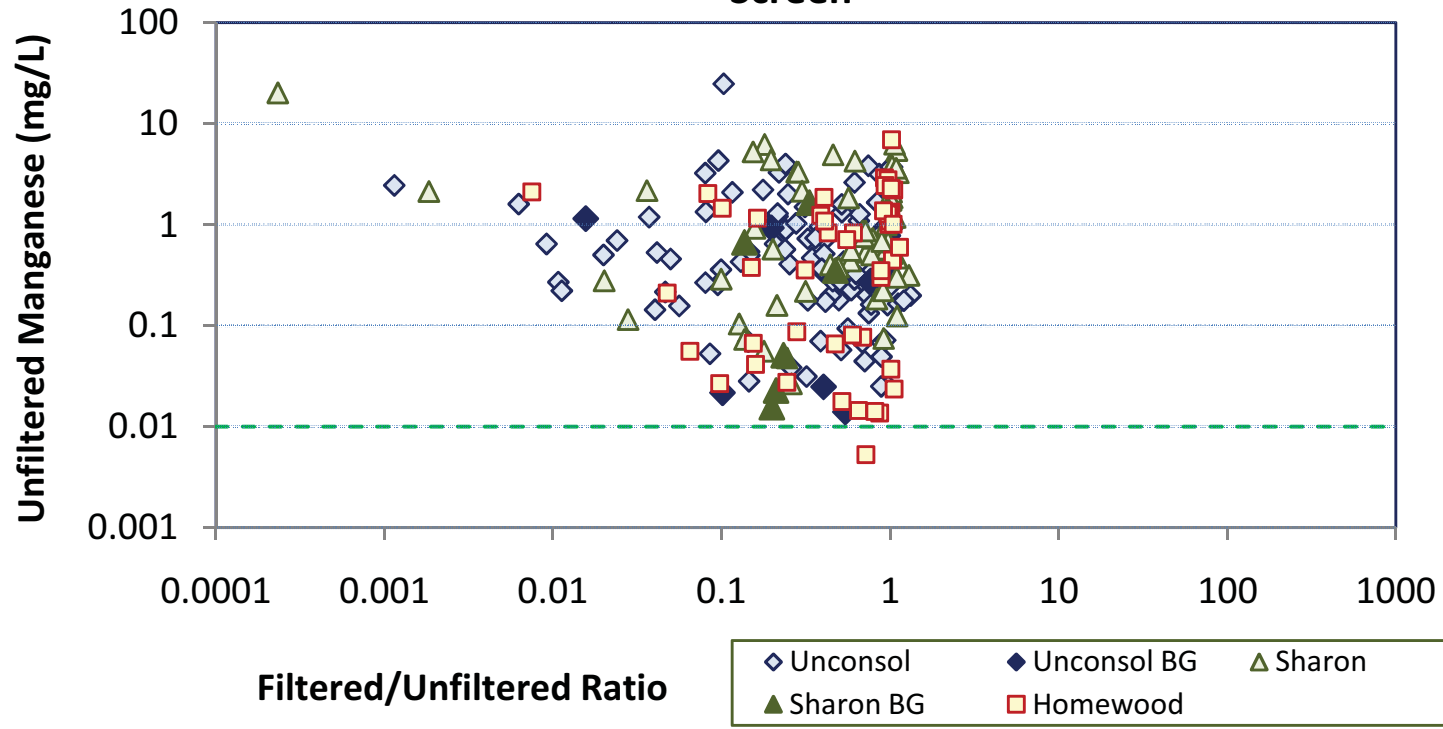


Figure 4-46. Manganese vs. Filtered/Unfiltered Ratios - Post Screen

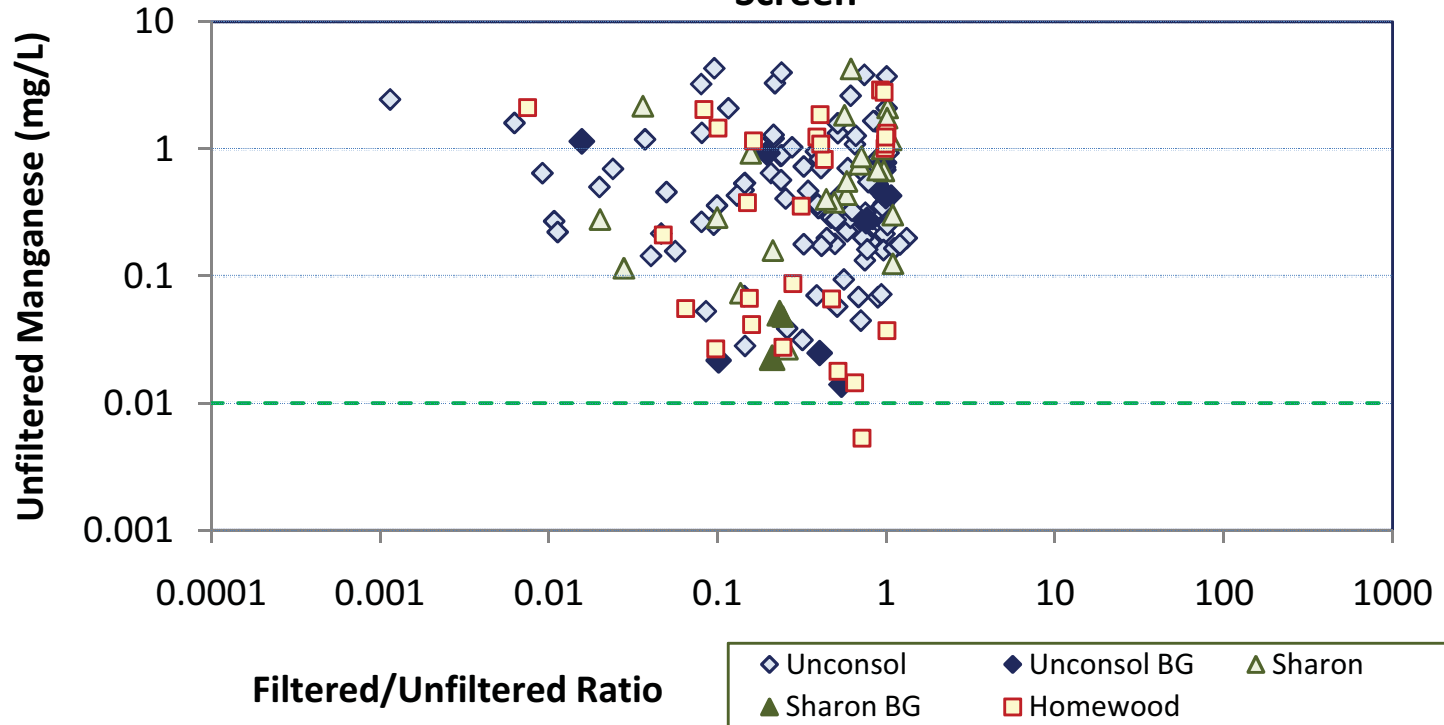


Figure 6-47. Mercury vs. Aluminum - Pre Screen

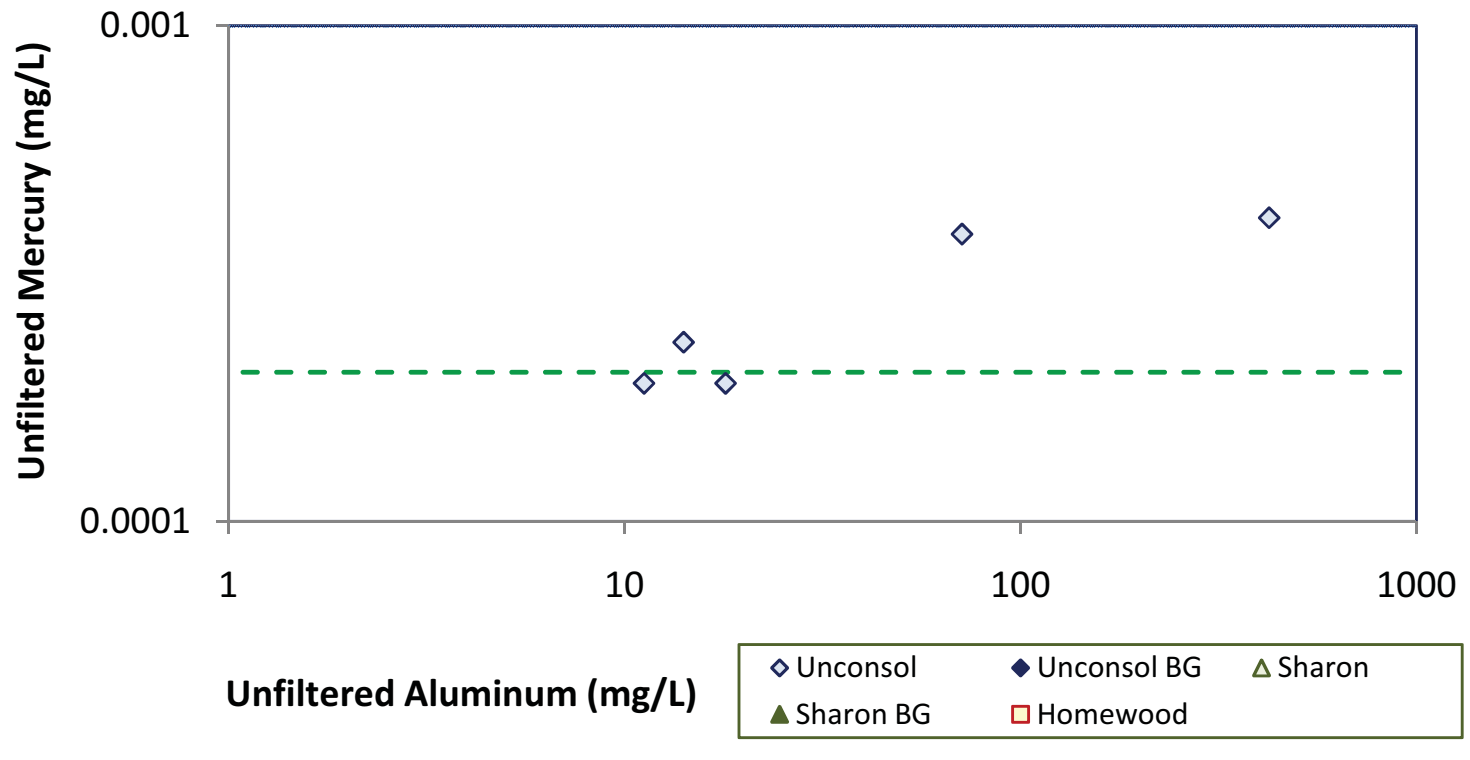


Figure 6-48. Mercury vs. Filtered/Unfiltered Ratios - Pre Screen

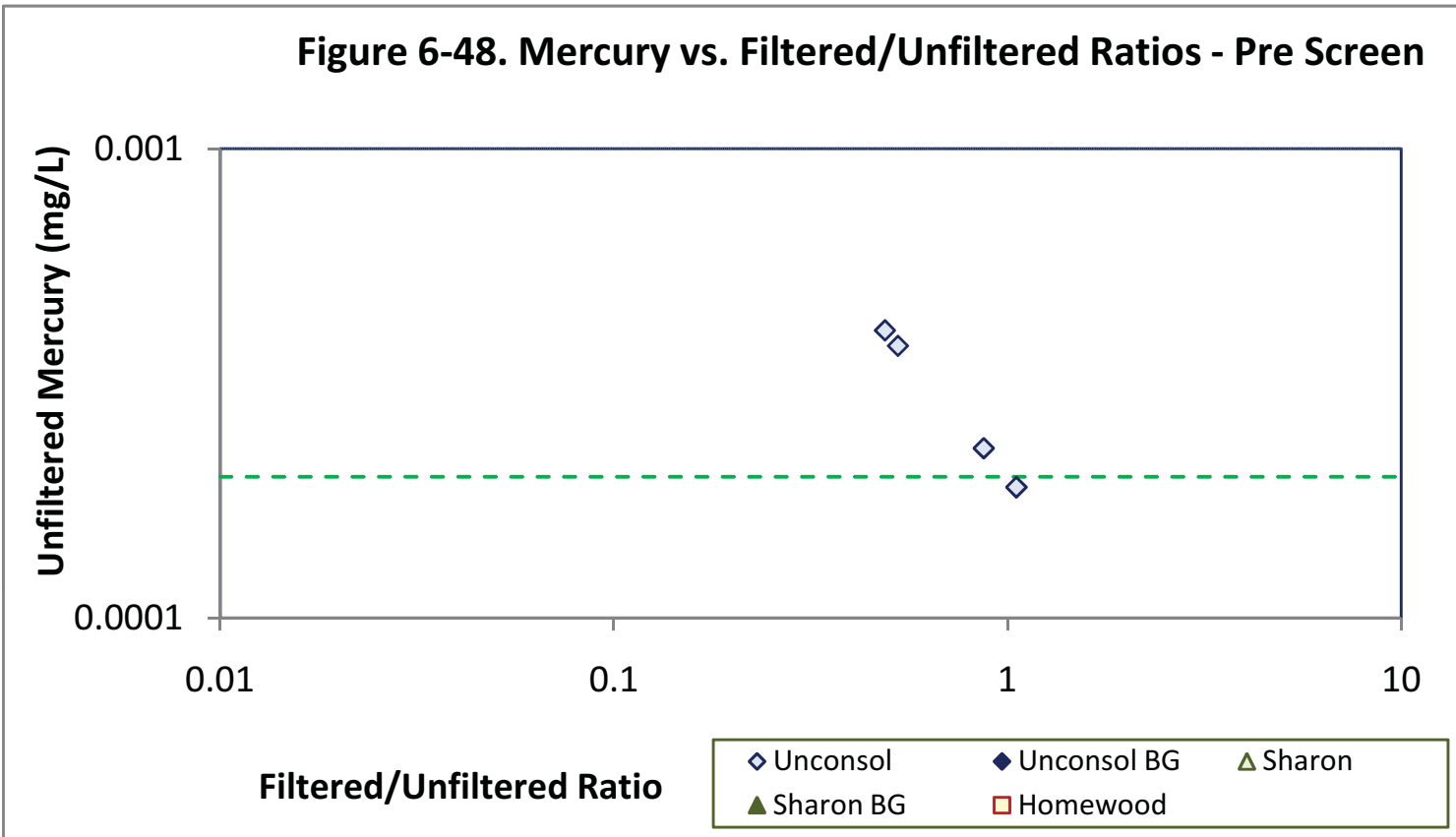


Figure 6-49. Mercury vs. Filtered/Unfiltered Ratios - Post Screen

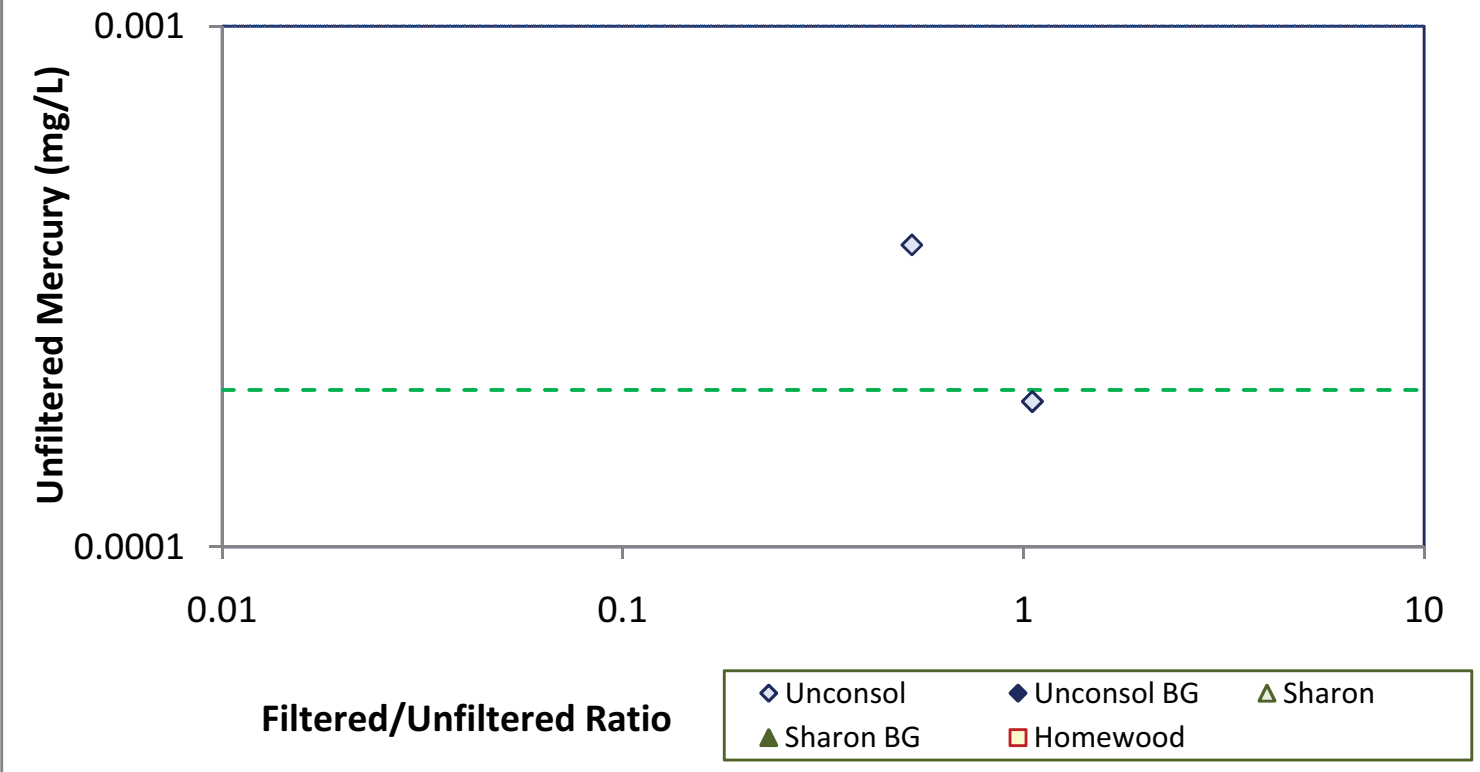


Figure 6-50. Nickel vs. Aluminum - Pre Screen

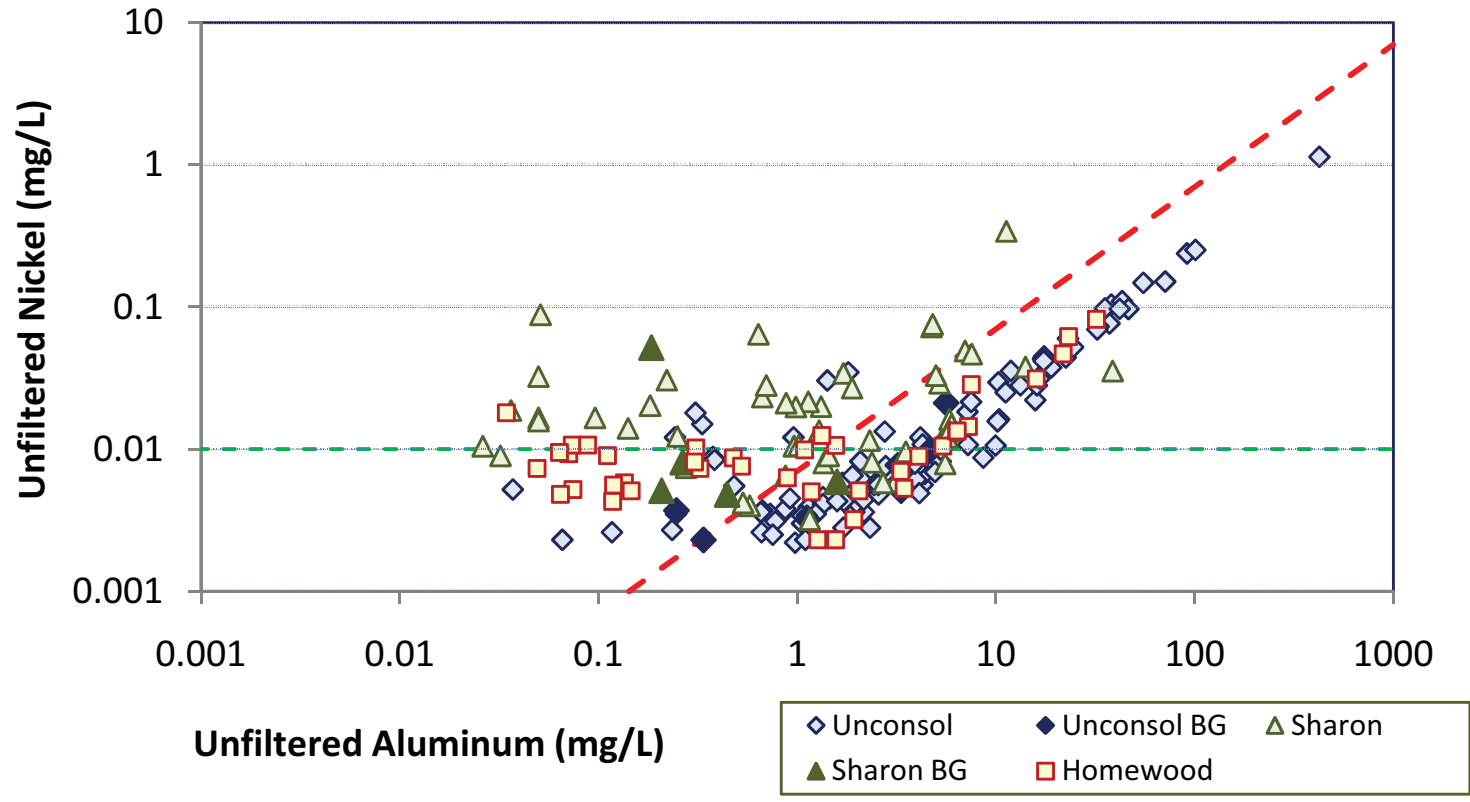


Figure 6-51. Nickel vs. Ni/Al Ratios - Pre Screen

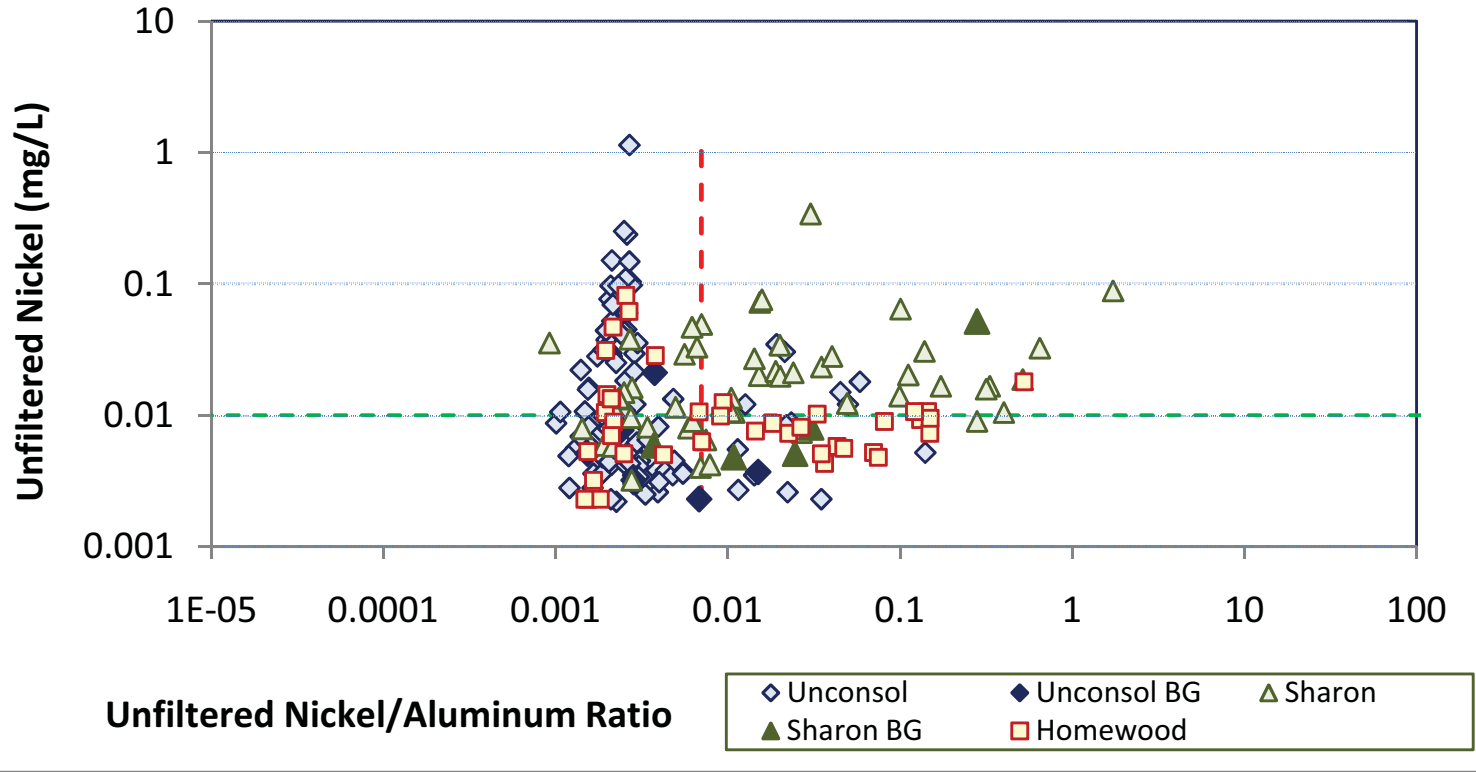


Figure 6-52. Nickel vs. Ni/Al Ratios - Post Screen

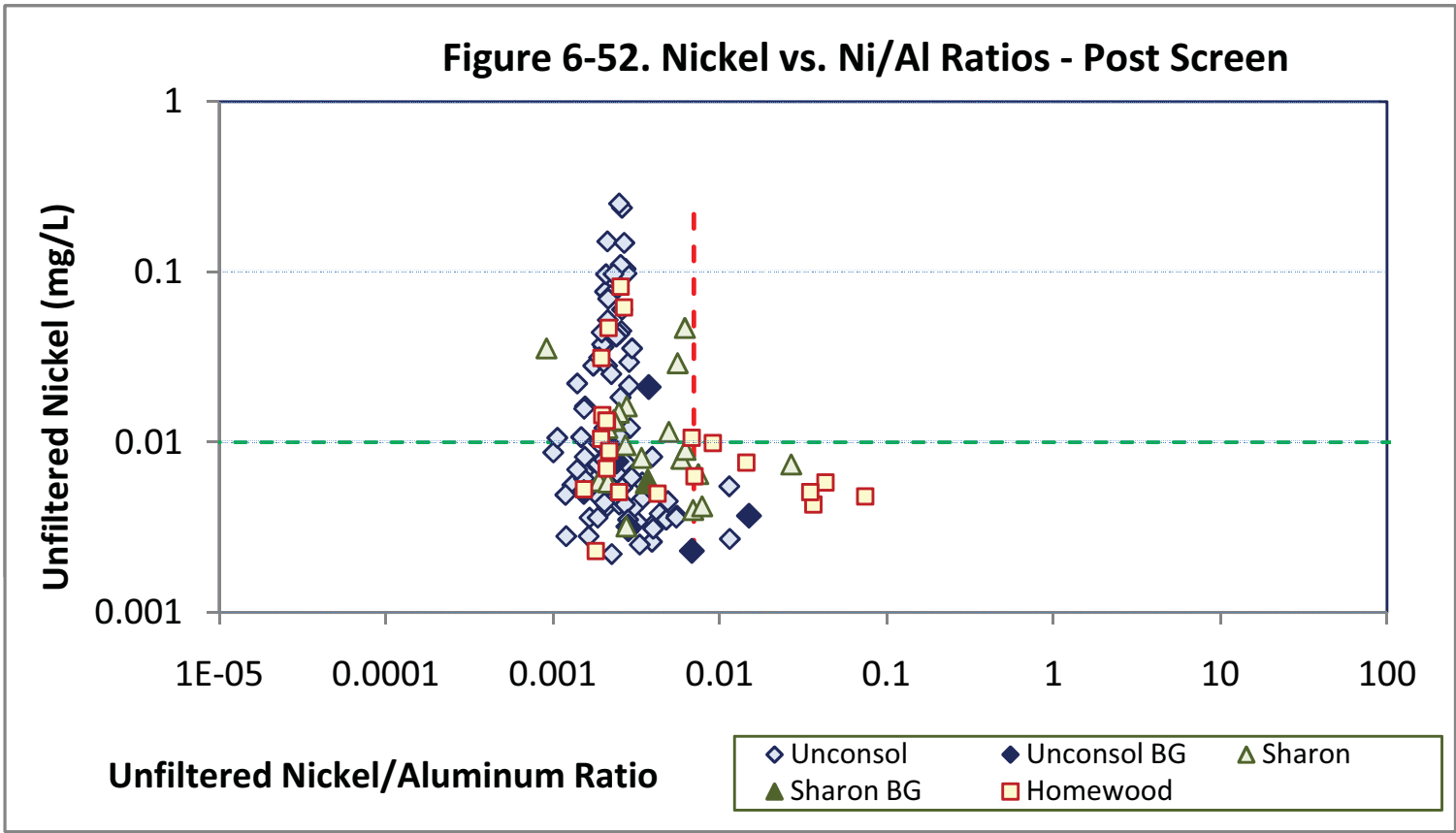


Figure 6-53. Potassium vs. Aluminum - Pre Screen

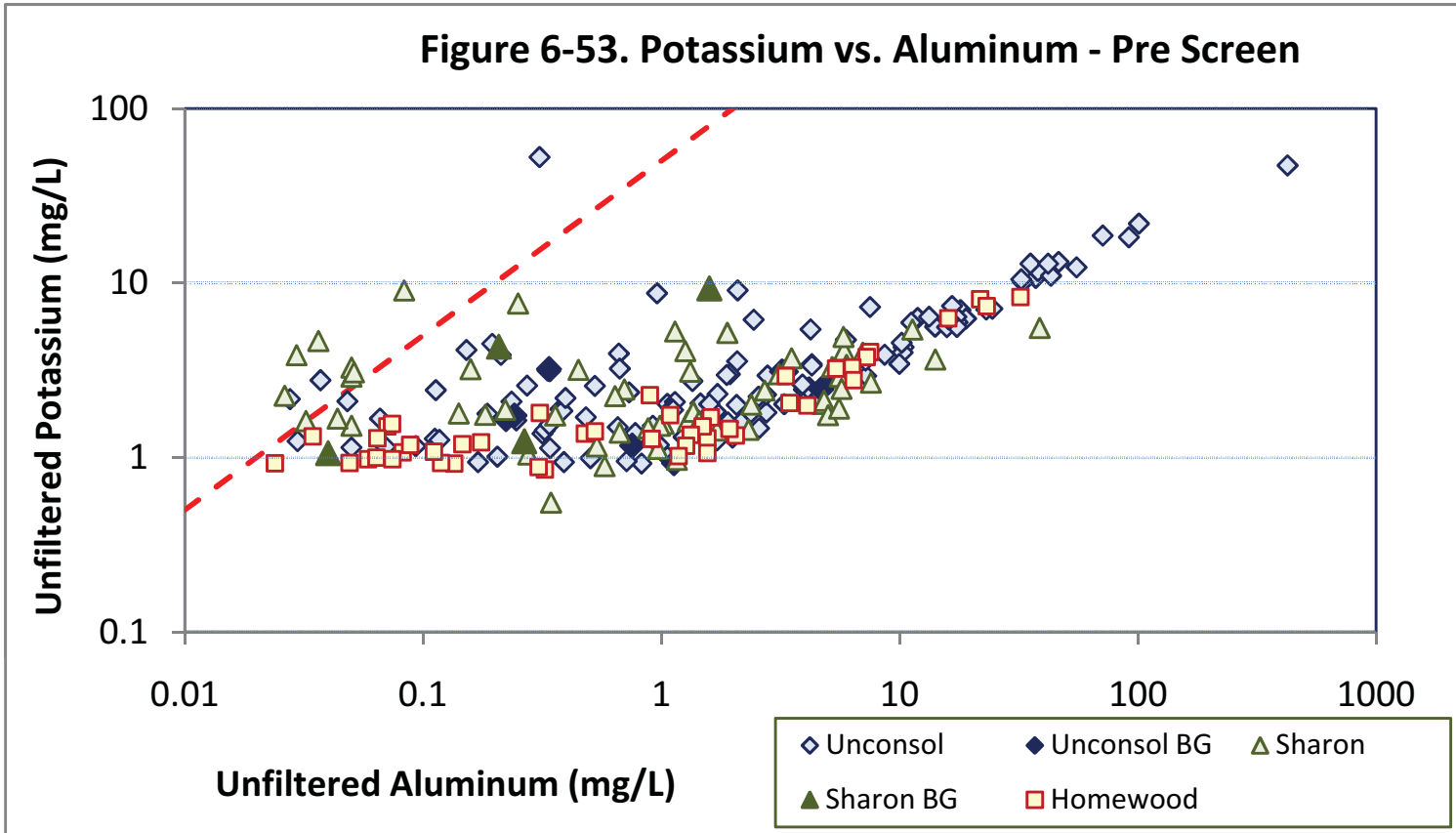


Figure 6-54. Potassium vs. Filtered/Unfiltered Ratios - Pre Screen

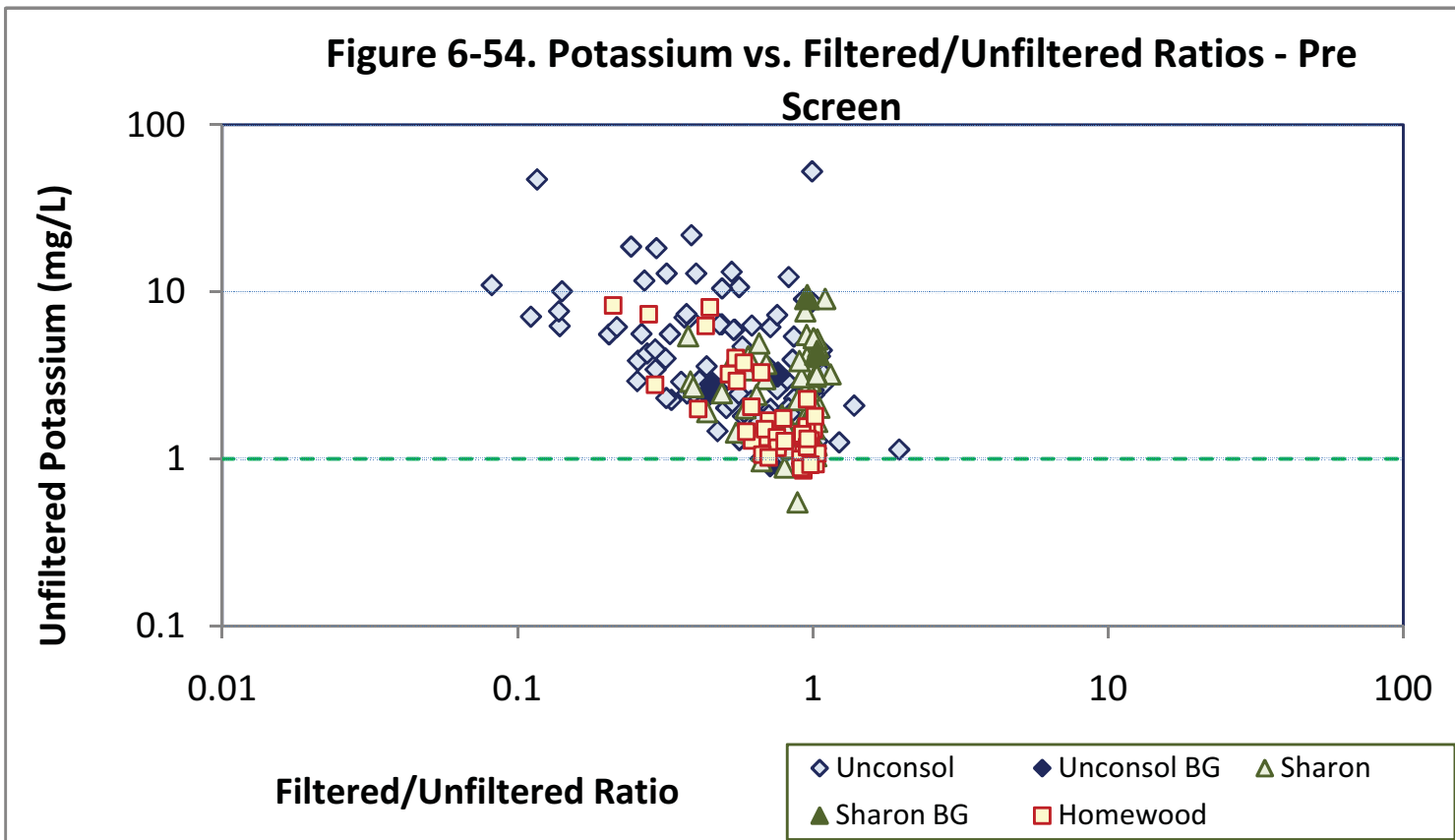


Figure 6-55. Potassium vs. Filtered/Unfiltered Ratios - Post Screen

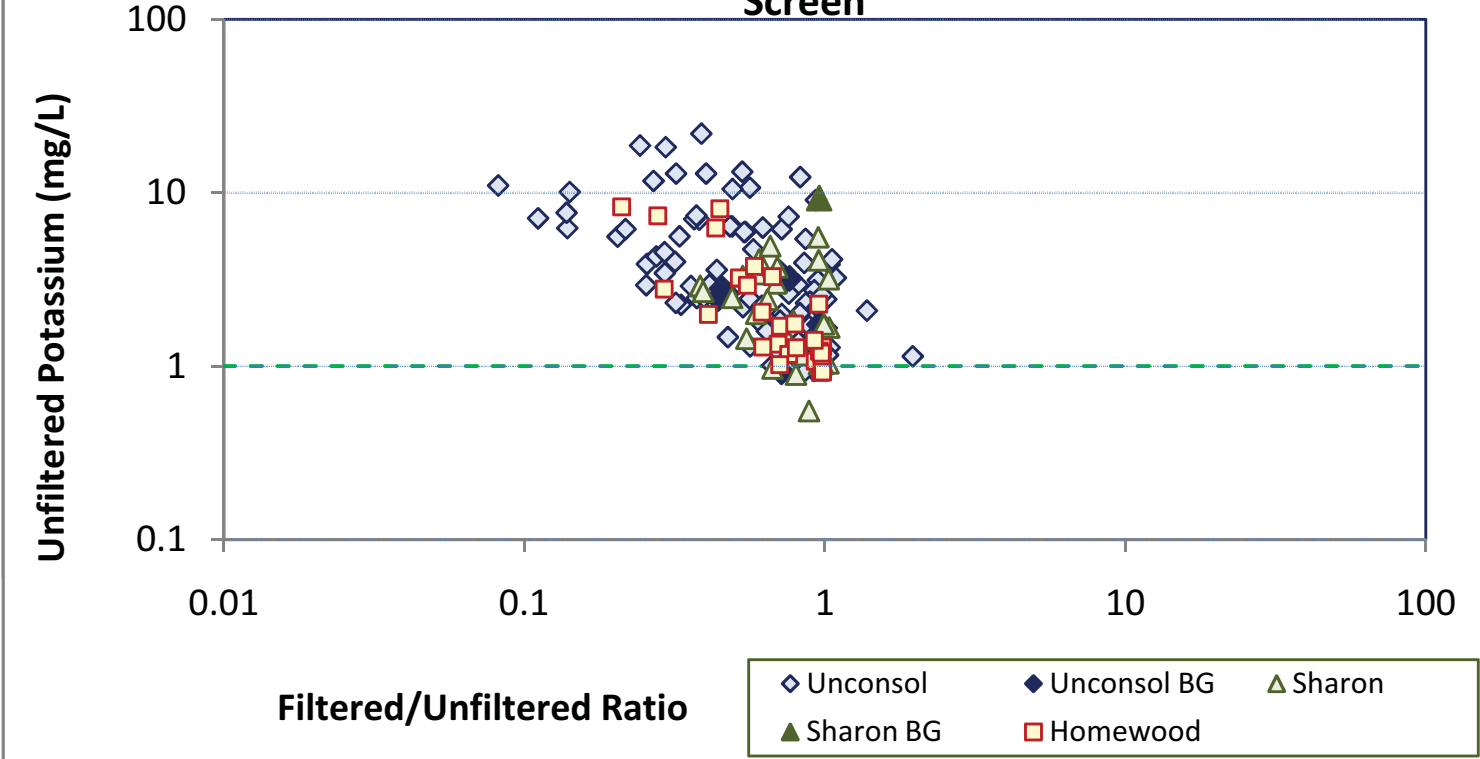


Figure 6-56. Sodium vs. Magnesium - Pre Screen

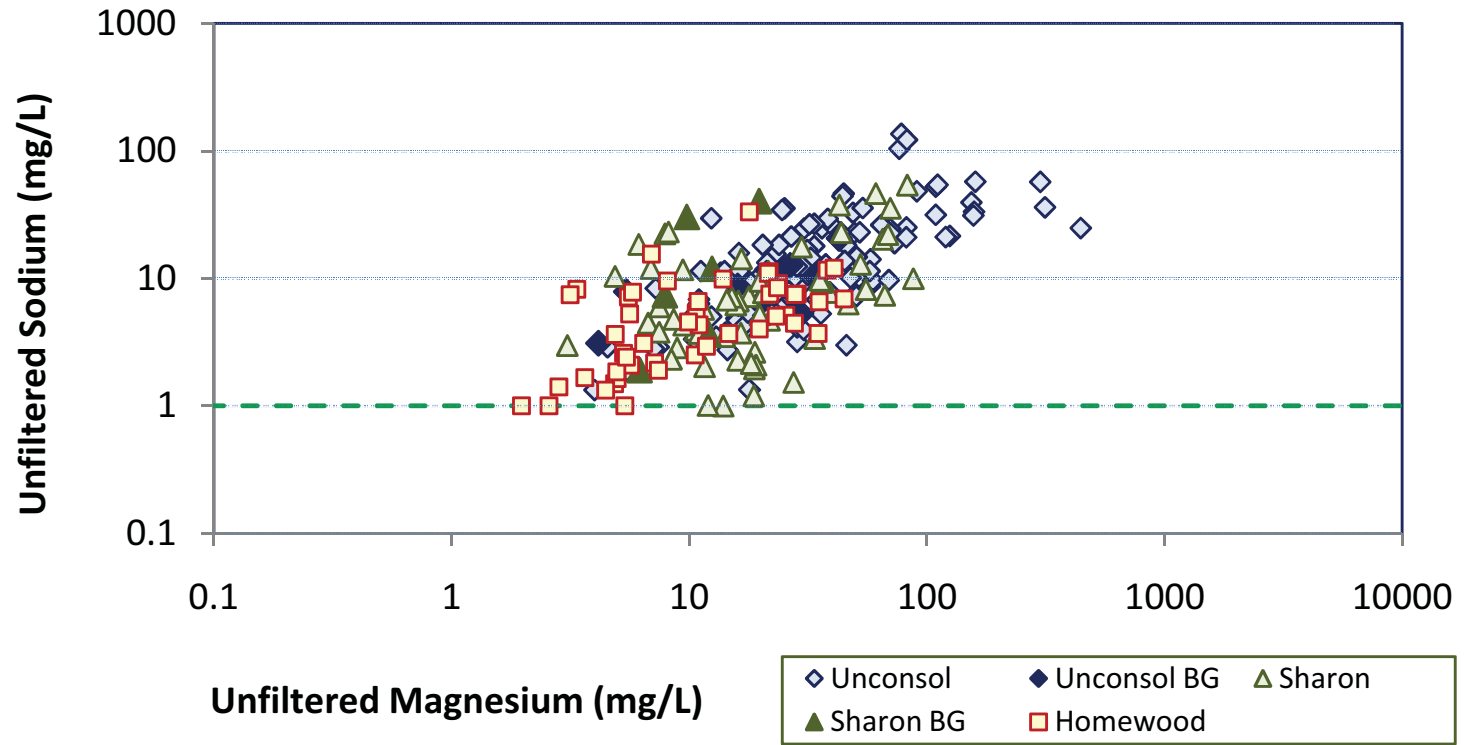


Figure 6-57. Sodium vs. Filtered/Unfiltered Ratios - Pre Screen

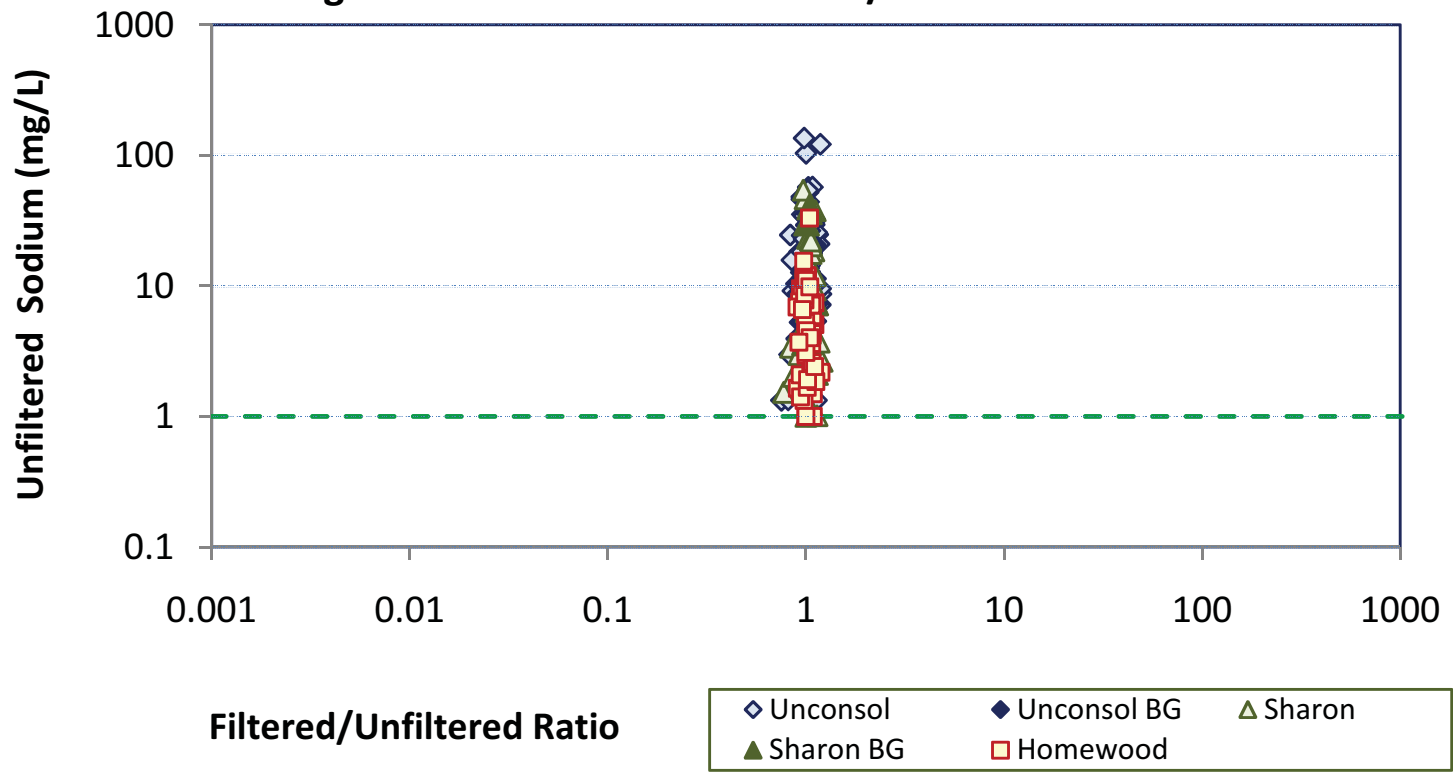


Figure 6-58. Sodium vs. Magnesium - Post Screen

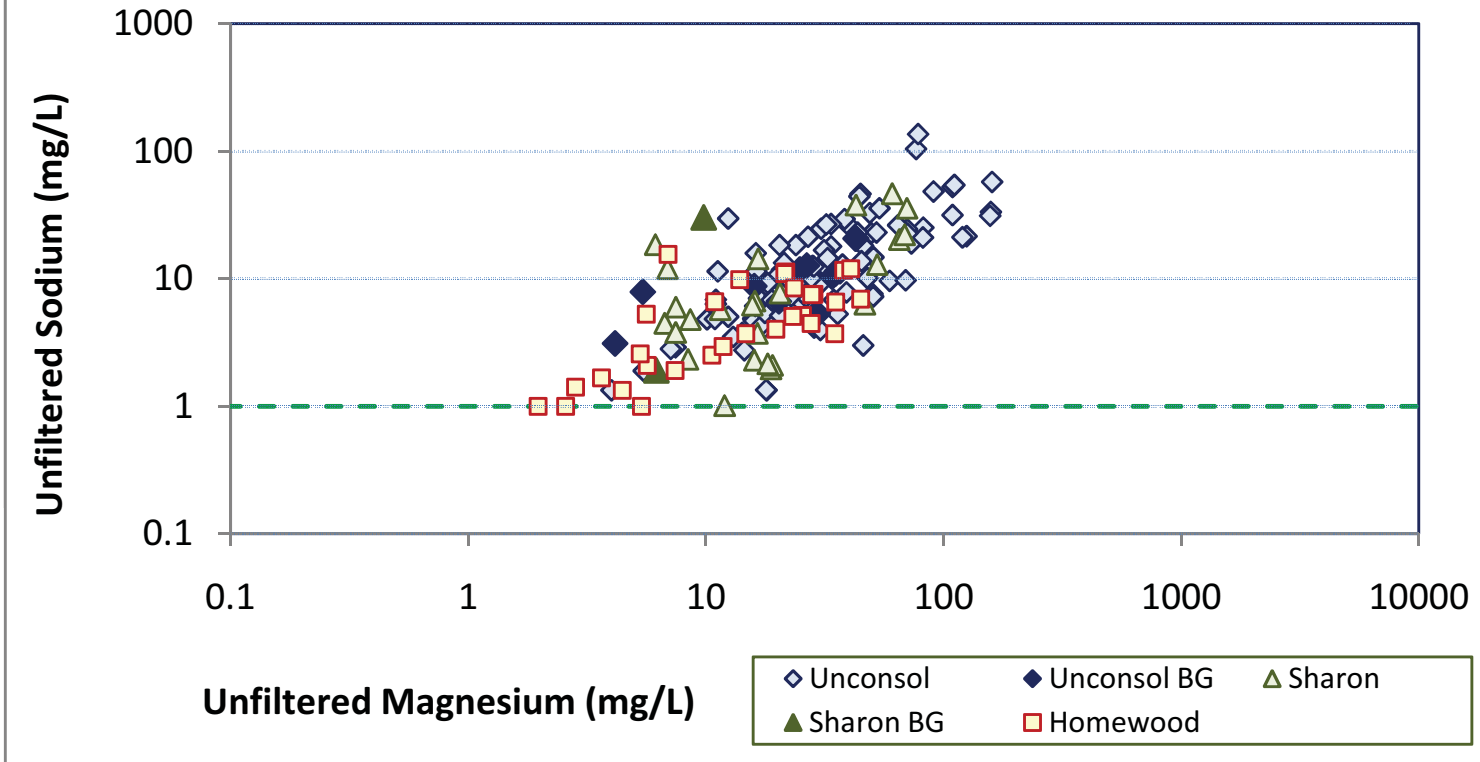


Figure 6-59. Thallium vs. Aluminum - Pre Screen

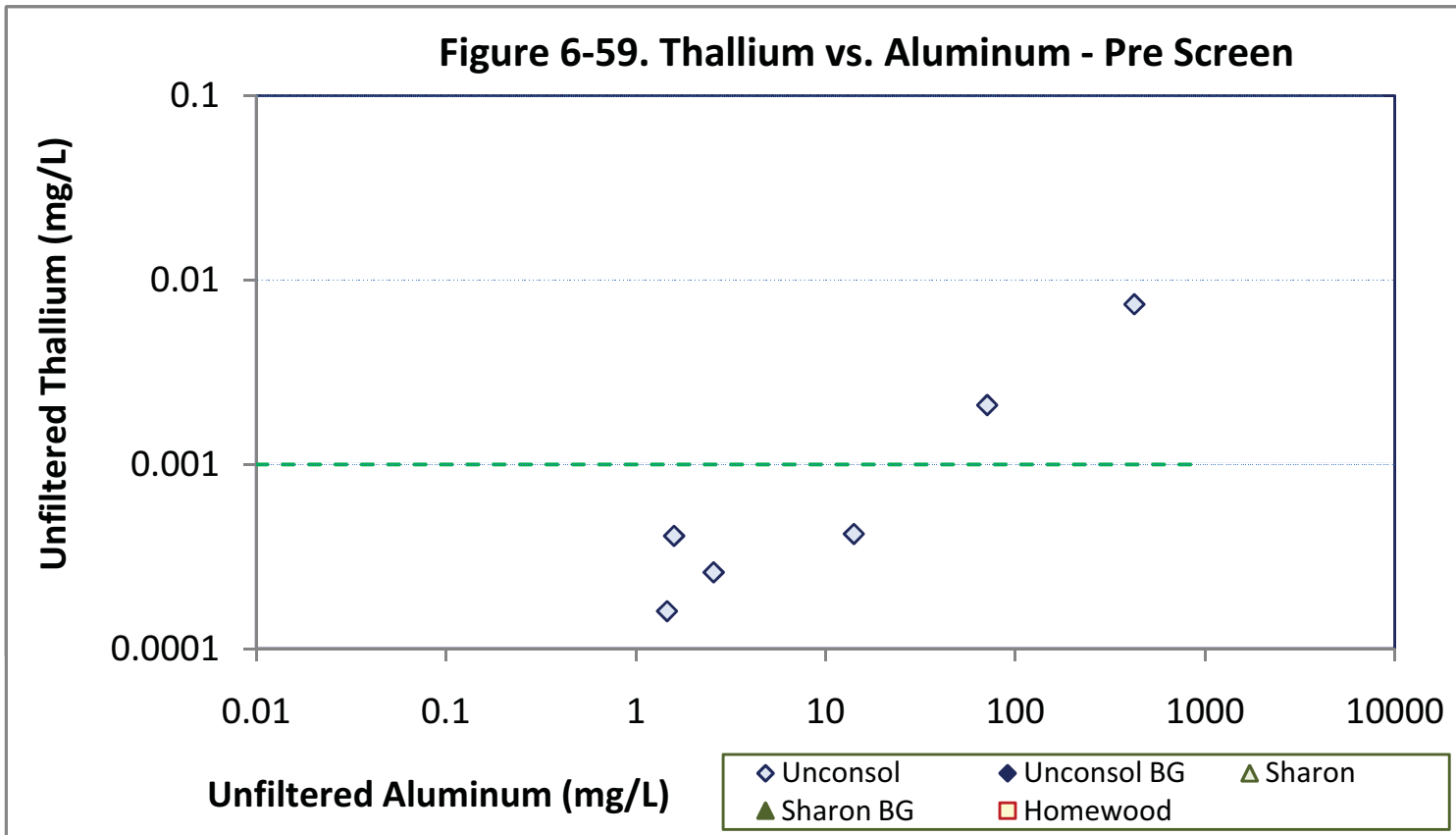


Figure 6-60. Thallium vs. Aluminum - Post Screen

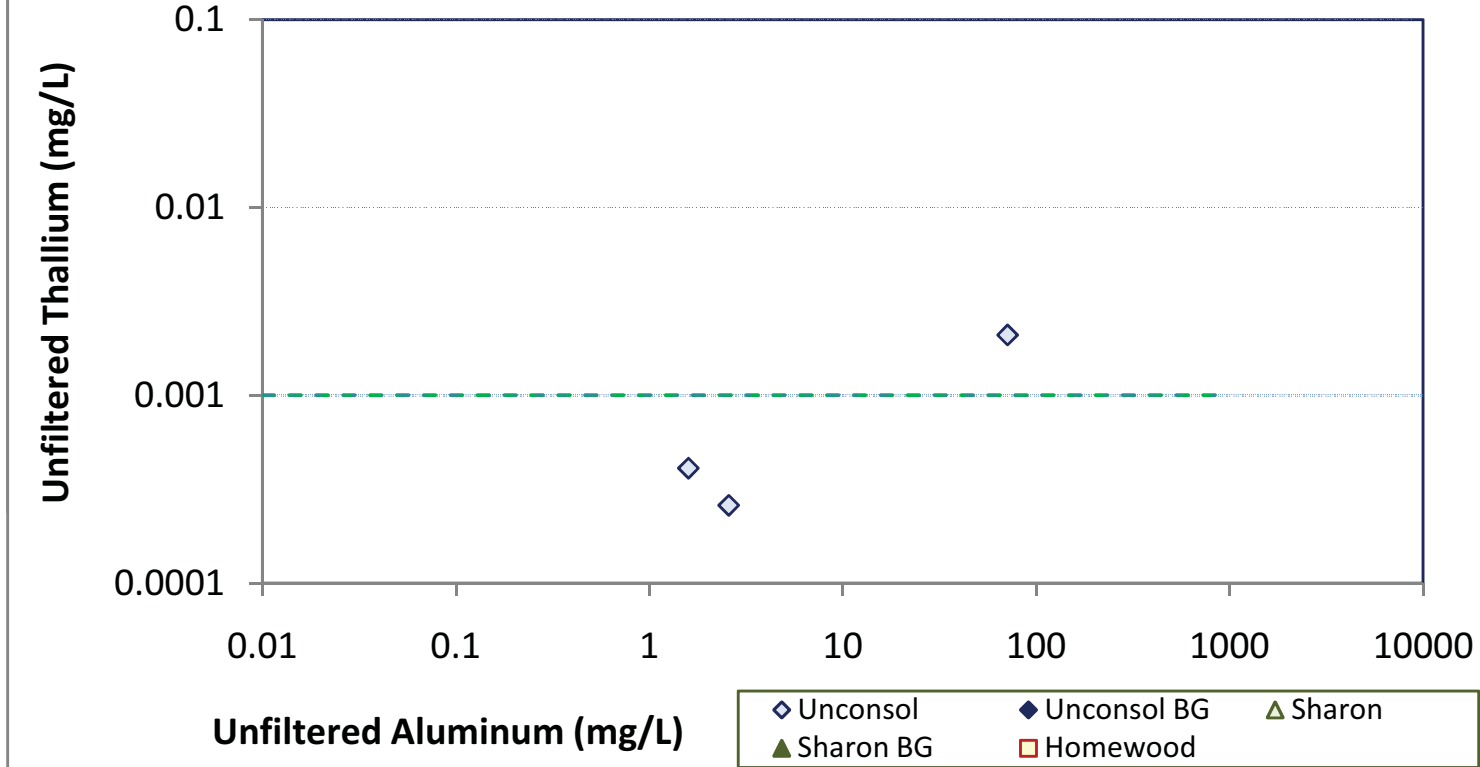


Figure 6-61. Vanadium vs. Aluminum - Pre Screen

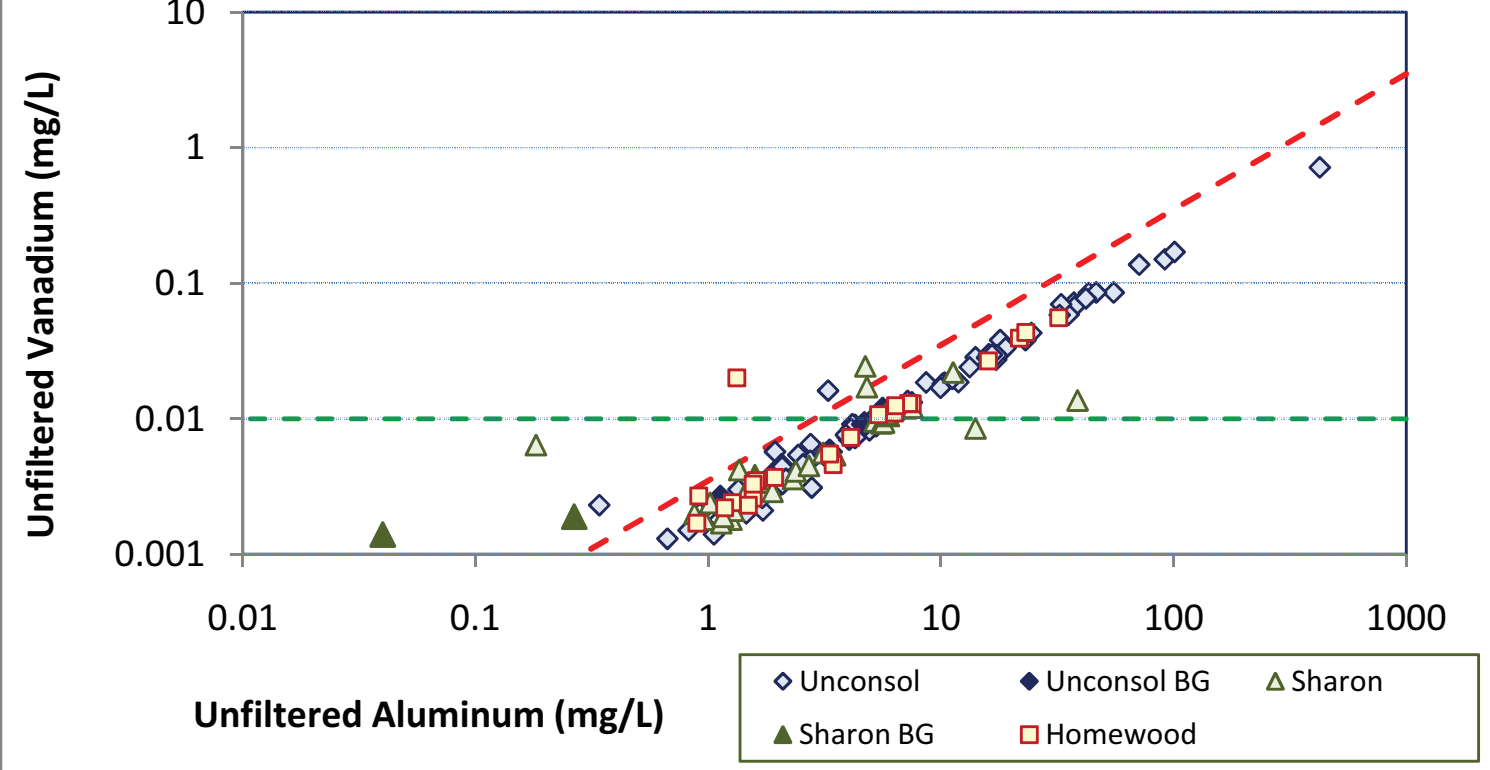


Figure 6-62. Vanadium vs. V/Al Ratios - Pre Screen

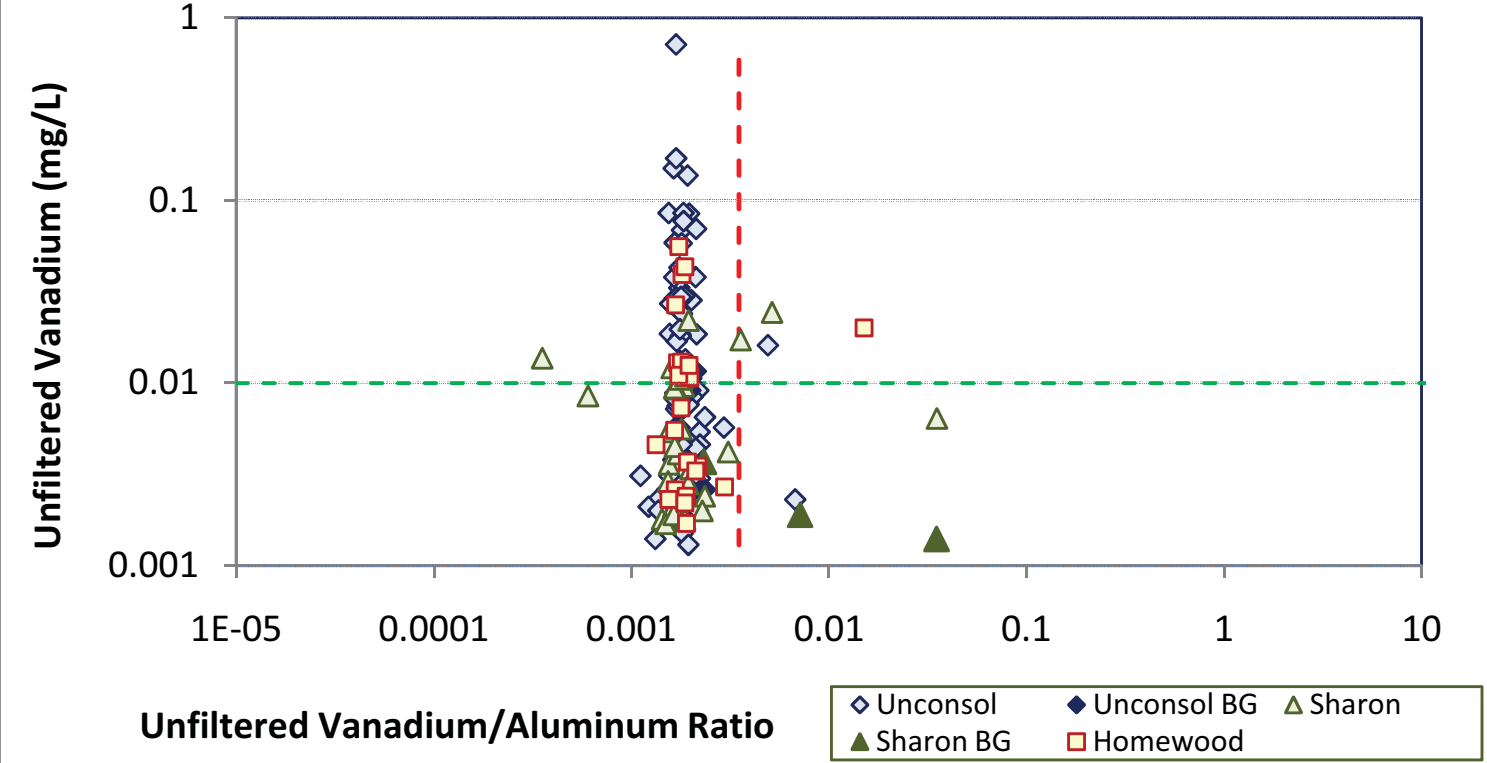


Figure 6-63. Vanadium vs. Aluminum - Post Screen

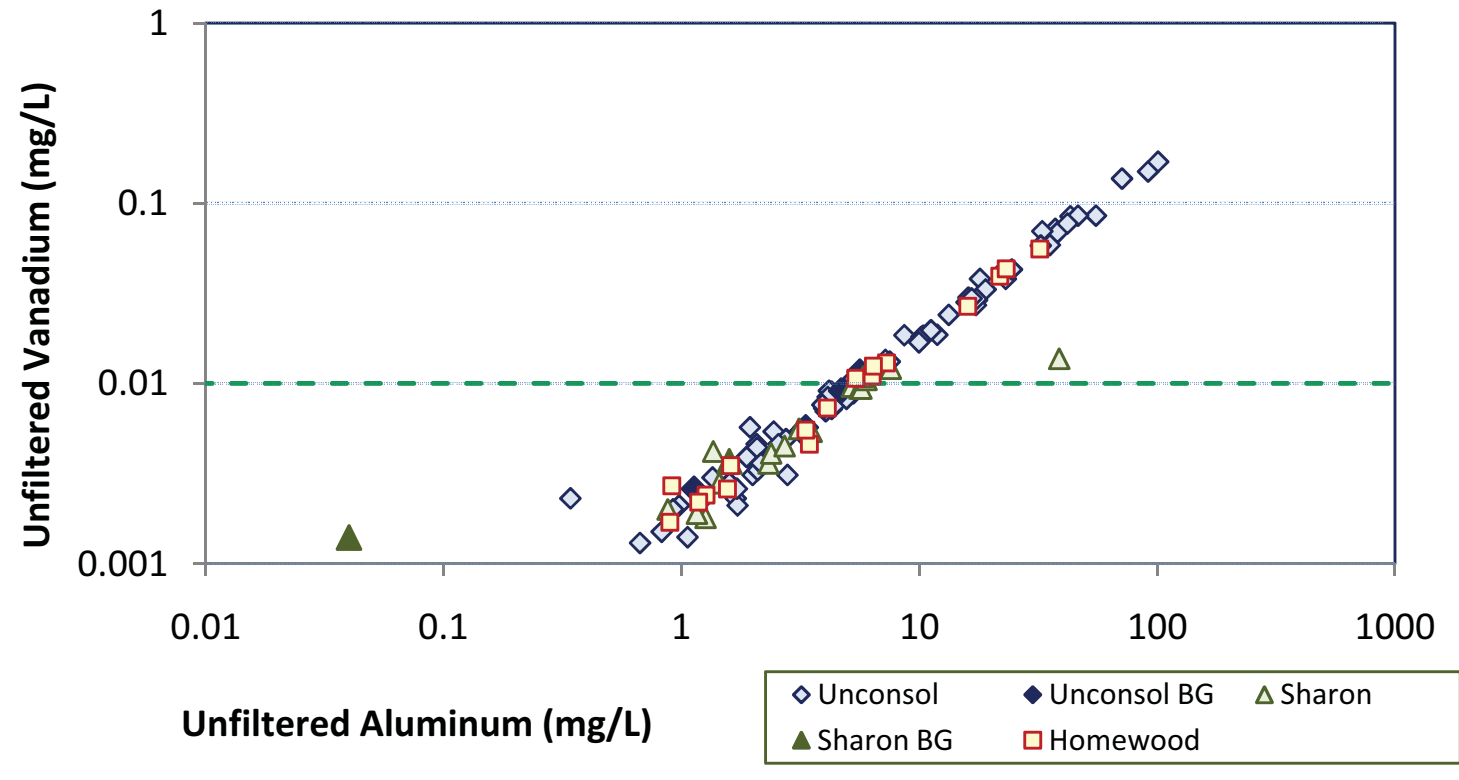


Figure 6-64. Zinc vs. Aluminum - Pre Screen

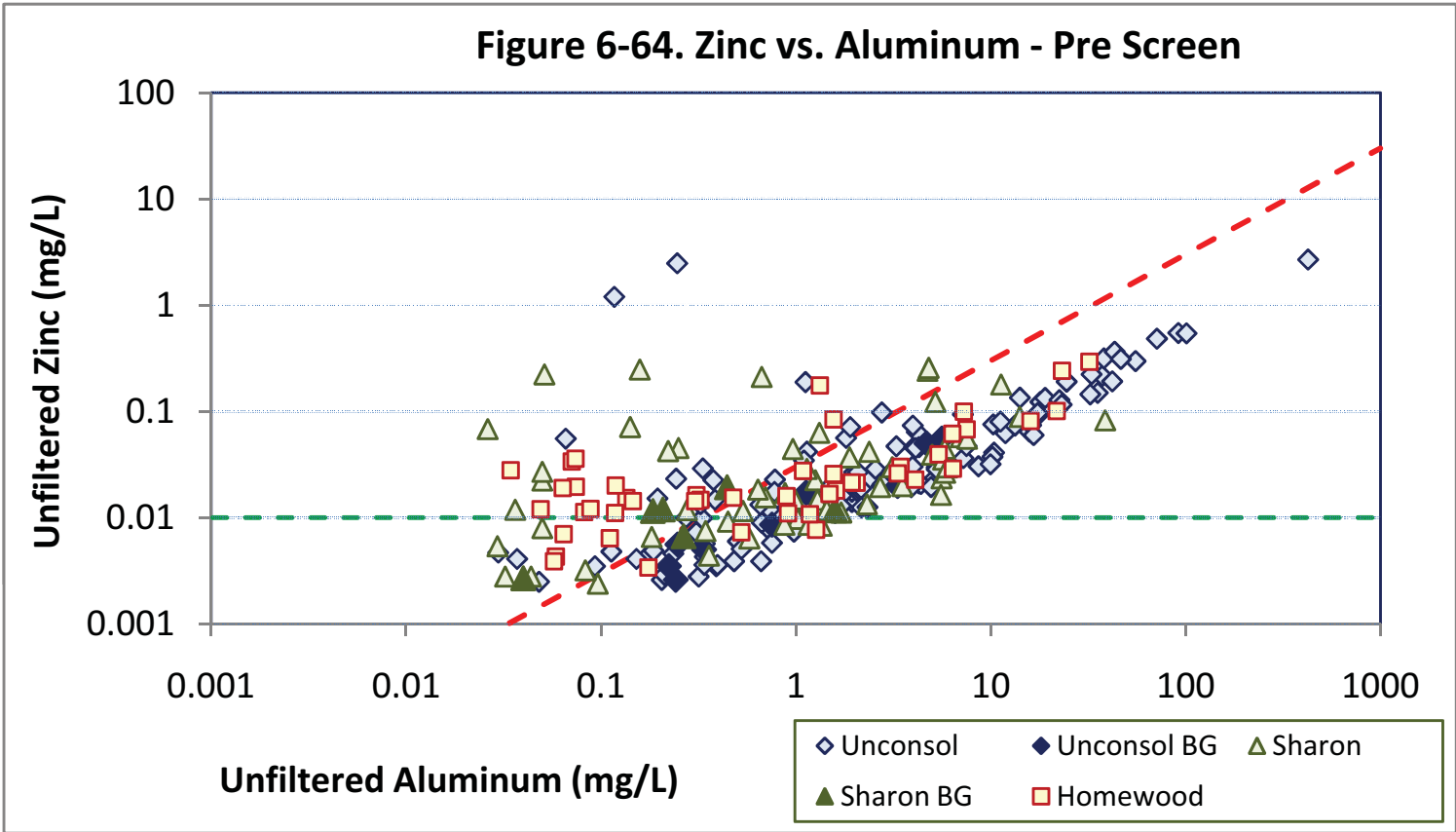


Figure 6-65. Zinc vs. Zn/Al Ratios

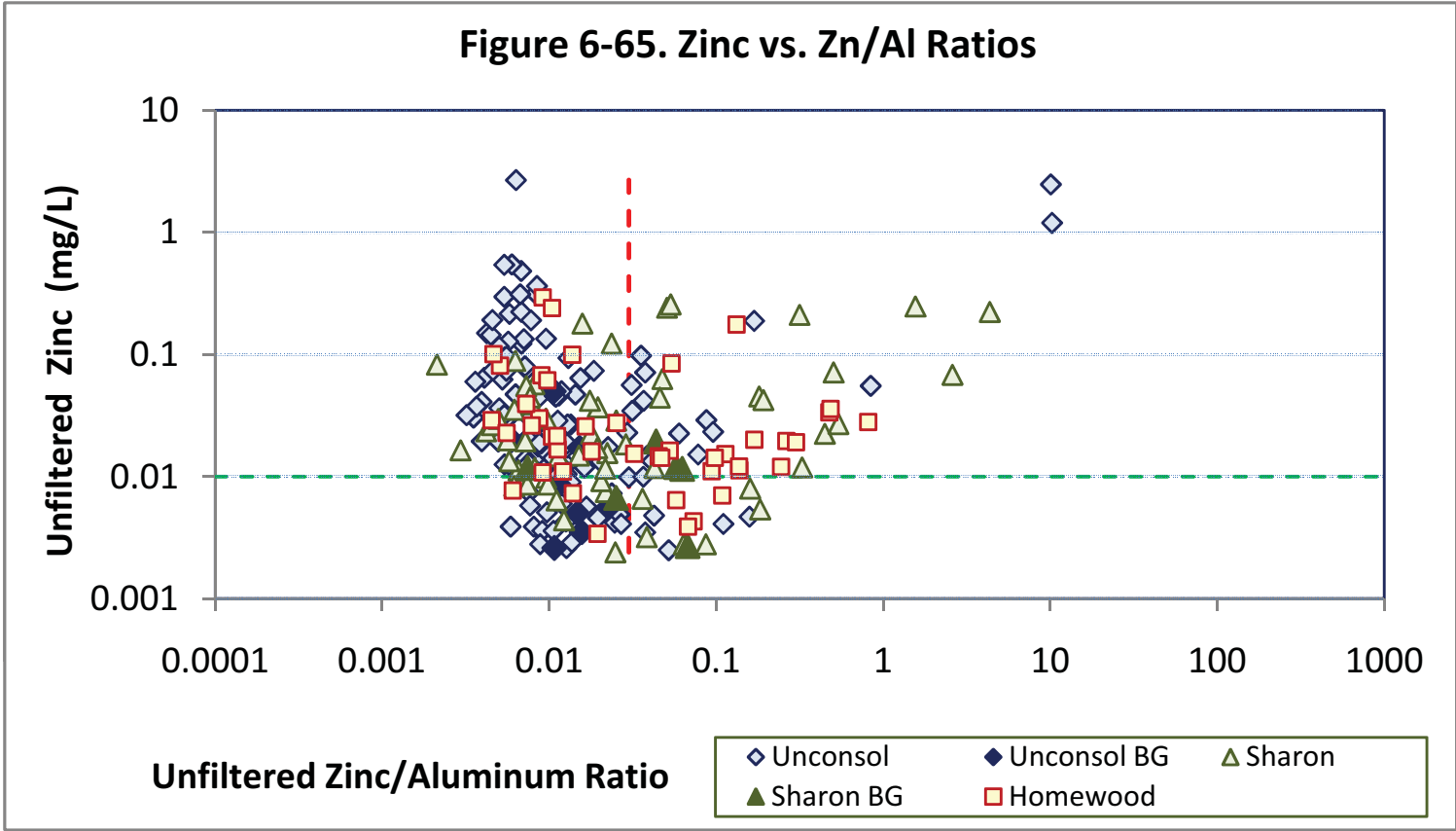
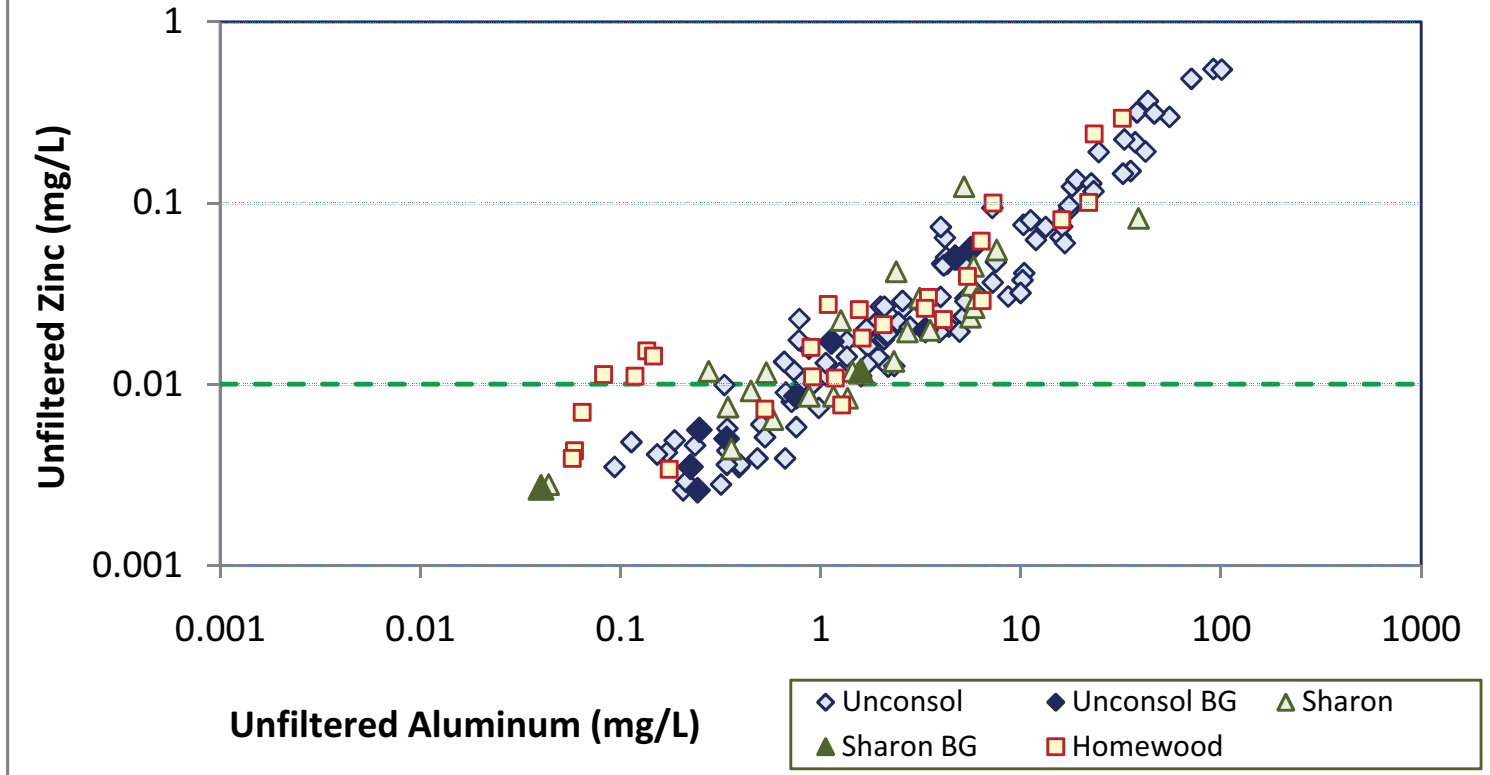


Figure 6-66. Zinc vs. Aluminum - Post Screen



Tables

Table 7-1
Kruskal Wallis Test Results

| Element | p-Level* |
|----------------|-----------------|
| Aluminum | 0.0602 |
| Antimony | 0.4954 |
| Arsenic | 0.0000 |
| Barium | 0.0000 |
| Beryllium | 0.4620 |
| Cadmium | 0.4836 |
| Calcium | 0.0000 |
| Chromium | 0.1902 |
| Cobalt | 0.5998 |
| Copper | 0.0434 |
| Iron | 0.2400 |
| Lead | 0.1097 |
| Magnesium | 0.0000 |
| Manganese | 0.4908 |
| Mercury | 0.5933 |
| Nickel | 0.9294 |
| Potassium | 0.0061 |
| Selenium | 0.5933 |
| Silver | 0.7715 |
| Sodium | 0.0000 |
| Thallium | 0.4547 |
| Vanadium | 0.1414 |
| Zinc | 0.6065 |

** Elements with p-levels greater than 0.01 are assumed to have the same statistical distributions in the three hydrostratigraphic units.*

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Table 7-2
Numbers of Samples with Anomalous
Trace/Major Element Ratios

| Element | Count |
|----------------|--------------|
| Aluminum | 4 |
| Antimony | 0 |
| Arsenic | 0 |
| Barium | 5 |
| Beryllium | 2 |
| Cadmium | 7 |
| Calcium | 0 |
| Chromium | 3 |
| Cobalt | 19 |
| Copper | 6 |
| Iron | 0 |
| Lead | 5 |
| Magnesium | 0 |
| Manganese | 0 |
| Mercury | 0 |
| Nickel | 38 |
| Potassium | 11 |
| Selenium | 0 |
| Silver | 0 |
| Sodium | 0 |
| Thallium | 0 |
| Vanadium | 4 |
| Zinc | 52 |

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Table 7-3
Summary Statistics for Screened Unfiltered Background Samples

| Element | Number of Samples | Percent Nondetects | Shape | Minimum | Median | Arithmetic Mean | 95th UCL of Mean | 95th UTL | Maximum | Standard Deviation | Interquartile Range | Coefficient of Variation |
|-----------|-------------------|--------------------|---------------|-----------|-----------|-----------------|------------------|----------|---------|--------------------|---------------------|--------------------------|
| Aluminum | 161 | 0.6 | Lognormal | < 0.019 | 2.08 | 7.37 | 9.05 | 43.0 | 91.7 | 13.5 | 5.31 | 1.83 |
| Antimony | 161 | 93.8 | Nonparametric | < 0.00013 | < 0.00013 | < 0.00015 | 0.00028 | 0.00038 | 0.00071 | N/A | N/A | 0.53 |
| Arsenic | 161 | 29.2 | Nonparametric | < 0.0033 | 0.009 | 0.046 | 0.070 | 0.42 | 1.06 | 0.123 | 0.027 | 2.66 |
| Barium | 161 | 1.2 | Lognormal | < 0.0028 | 0.0515 | 0.0837 | 0.0954 | 0.330 | 0.504 | 0.087 | 0.071 | 1.04 |
| Beryllium | 161 | 72.7 | Nonparametric | < 0.0002 | < 0.0002 | < 0.00052 | 0.00065 | 0.00269 | 0.00480 | N/A | N/A | 1.51 |
| Cadmium | 161 | 87.0 | Nonparametric | < 0.00013 | < 0.00013 | < 0.00019 | 0.00046 | 0.00043 | 0.00580 | N/A | N/A | 2.37 |
| Calcium | 161 | 0 | Nonparametric | 3.13 | 76.2 | 79.9 | 86.9 | 193 | 326 | 51.9 | 50.1 | 0.65 |
| Chromium | 161 | 29.2 | Nonparametric | < 0.0014 | 0.0041 | < 0.0125 | 0.0161 | 0.0820 | 0.143 | 0.022 | 0.009 | 1.76 |
| Cobalt | 161 | 43.5 | Nonparametric | < 0.0015 | 0.0021 | 0.0079 | 0.0105 | 0.0466 | 0.115 | 0.015 | 0.005 | 1.87 |
| Copper | 161 | 60.9 | Nonparametric | < 0.0044 | < 0.0044 | < 0.0157 | 0.0213 | 0.120 | 0.225 | 0.031 | 0.006 | 1.96 |
| Iron | 161 | 0.6 | Lognormal | < 0.026 | 6.86 | 20.0 | 24.7 | 123 | 281 | 34.7 | 19.7 | 1.74 |
| Lead | 161 | 47.2 | Nonparametric | < 0.0017 | 0.0018 | 0.0093 | 0.0123 | 0.0614 | 0.108 | 0.018 | 0.005 | 1.90 |
| Magnesium | 161 | 0 | Nonparametric | 1.97 | 23.5 | 30.9 | 34.5 | 108 | 160 | 26.7 | 24.3 | 0.86 |
| Manganese | 161 | 0 | Nonparametric | 0.002 | 0.380 | 0.712 | 0.816 | 3.22 | 4.31 | 0.83 | 0.79 | 1.16 |
| Mercury | 161 | 98.8 | Nonparametric | < 0.00016 | < 0.00016 | < 0.00016 | 0.00019 | 0.00022 | 0.00038 | N/A | N/A | 0.11 |
| Nickel | 161 | 28.0 | Nonparametric | < 0.0022 | 0.0056 | 0.0176 | 0.0228 | 0.104 | 0.238 | 0.032 | 0.011 | 1.82 |
| Potassium | 161 | 3.1 | Lognormal | < 0.3 | 2.36 | 3.49 | 3.93 | 12.87 | 18.7 | 3.30 | 2.66 | 0.94 |
| Selenium | 161 | 98.8 | Nonparametric | < 0.004 | < 0.004 | < 0.004 | 0.0047 | 0.0050 | 0.0068 | N/A | N/A | 0.06 |
| Silver | 161 | 99.4 | Nonparametric | < 0.0017 | < 0.0017 | < 0.0017 | <0.0029 | <0.0029 | 0.0029 | N/A | N/A | 0.06 |
| Sodium | 161 | 1.9 | Lognormal | < 0.972 | 7.92 | 13.3 | 15.5 | 48.1 | 136 | 16.5 | 11.1 | 1.24 |
| Thallium | 161 | 98.1 | Nonparametric | < 0.00014 | <0.00014 | < 0.00015 | 0.00037 | 0.00054 | 0.00210 | N/A | N/A | 1.01 |
| Vanadium | 161 | 32.3 | Nonparametric | < 0.0013 | 0.0038 | 0.0131 | 0.0169 | 0.084 | 0.15 | 0.023 | 0.009 | 1.79 |
| Zinc | 161 | 3.1 | Lognormal | < 0.0023 | 0.0195 | 0.0498 | 0.0615 | 0.311 | 0.548 | 0.085 | 0.038 | 1.70 |

Notes: All concentrations in units of milligrams per liter.

UCL = Upper confidence limit

UTL = Upper tolerance limit

< = Less than reported concentration.

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Appendix A
Box Plots Comparing Element Distributions in
Unconsolidated, Sharon and Homewood Units

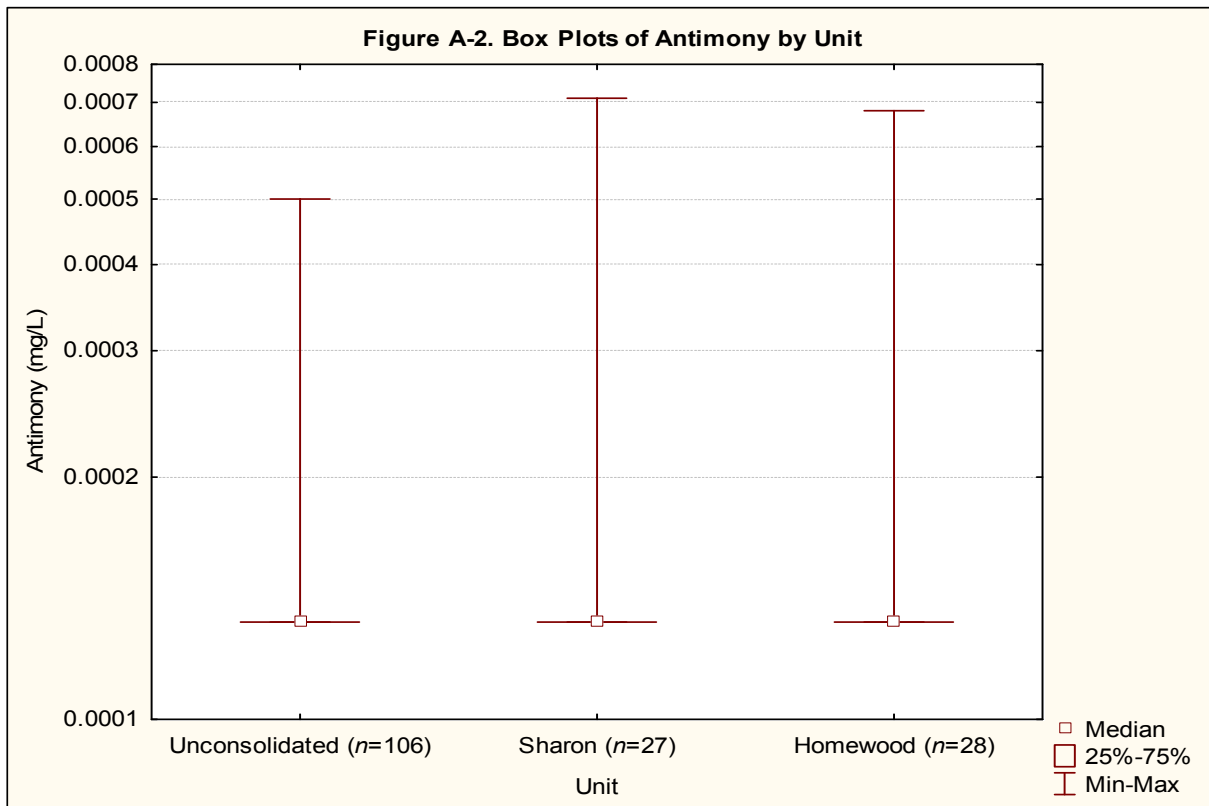
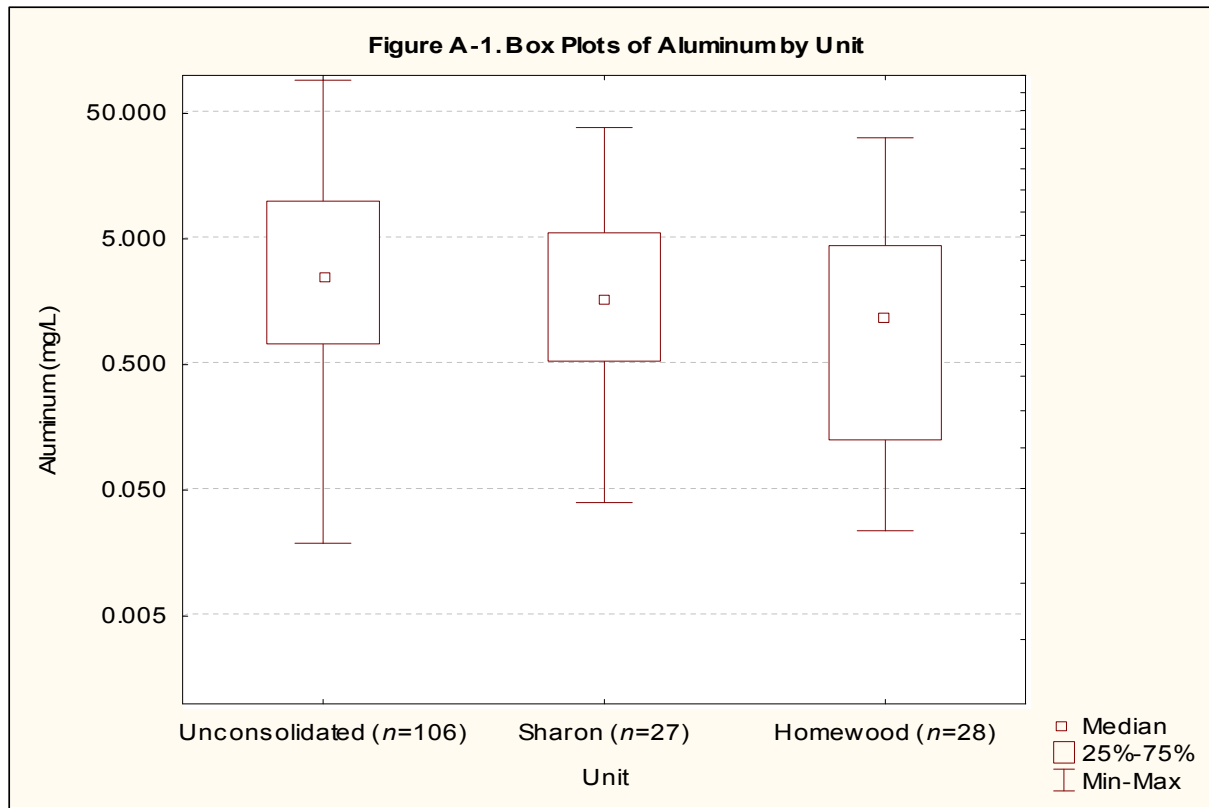


Figure A-3. Box Plots of Arsenic by Unit

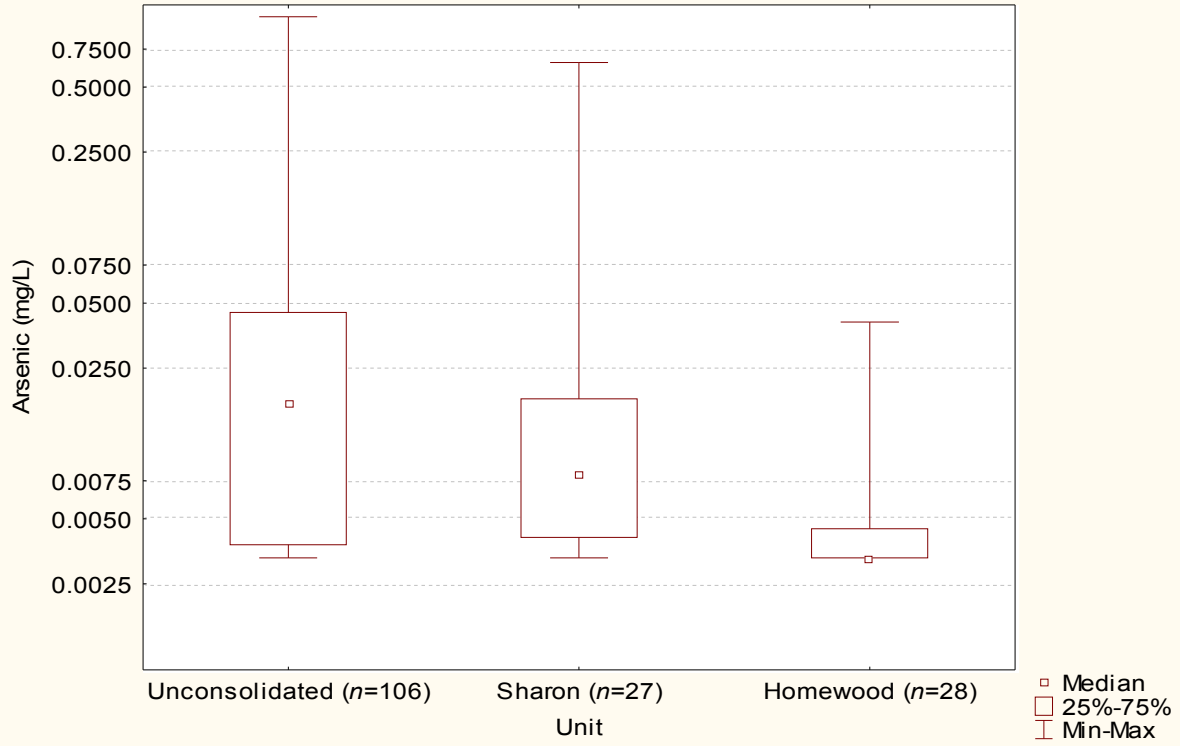
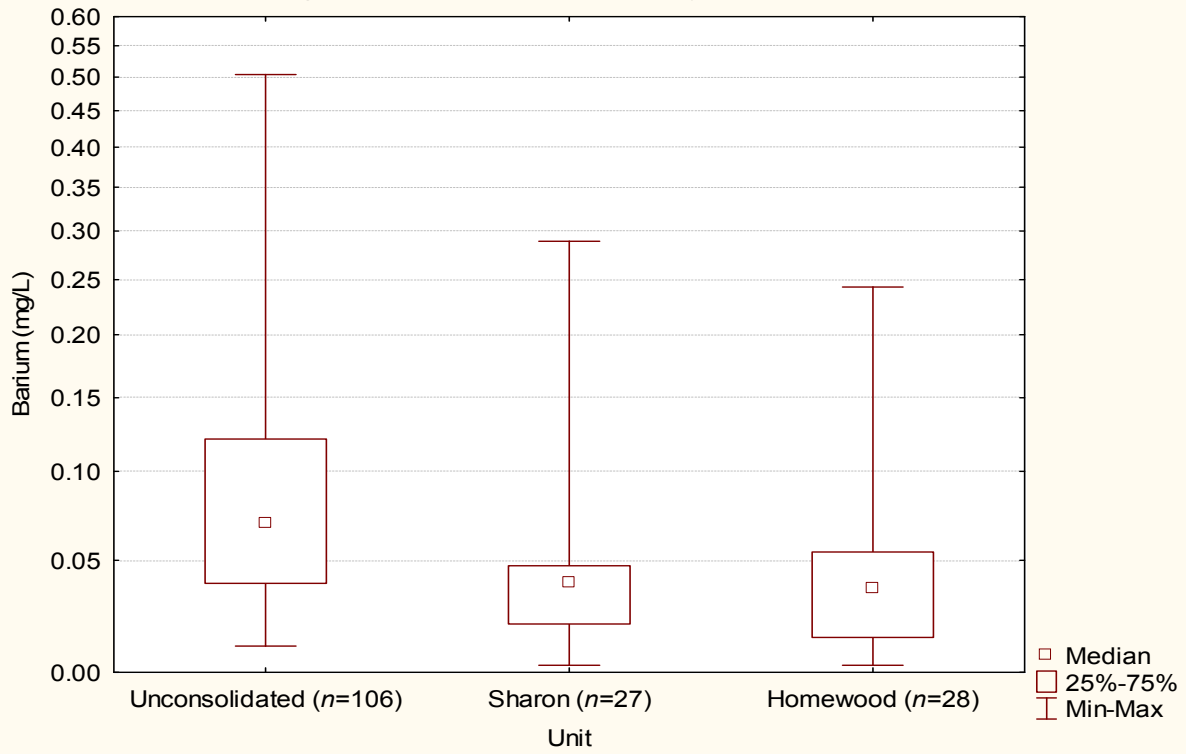
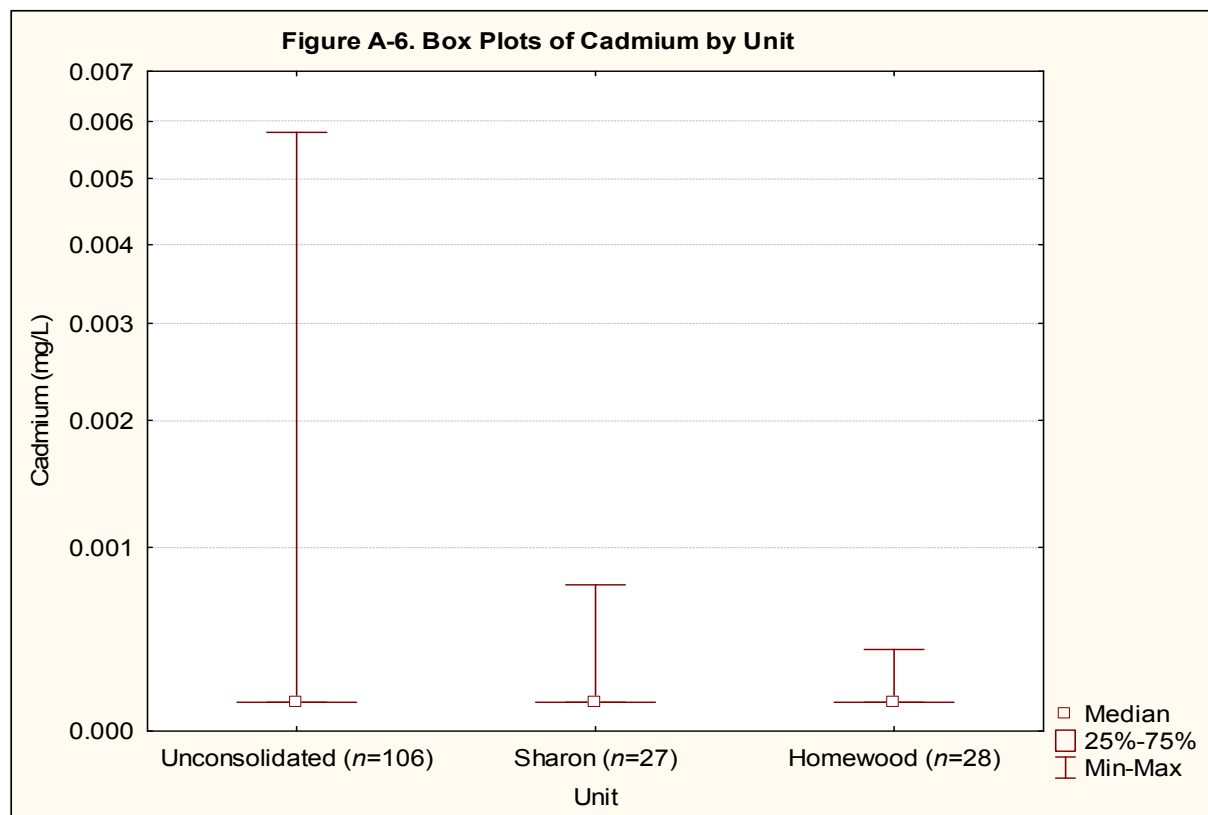
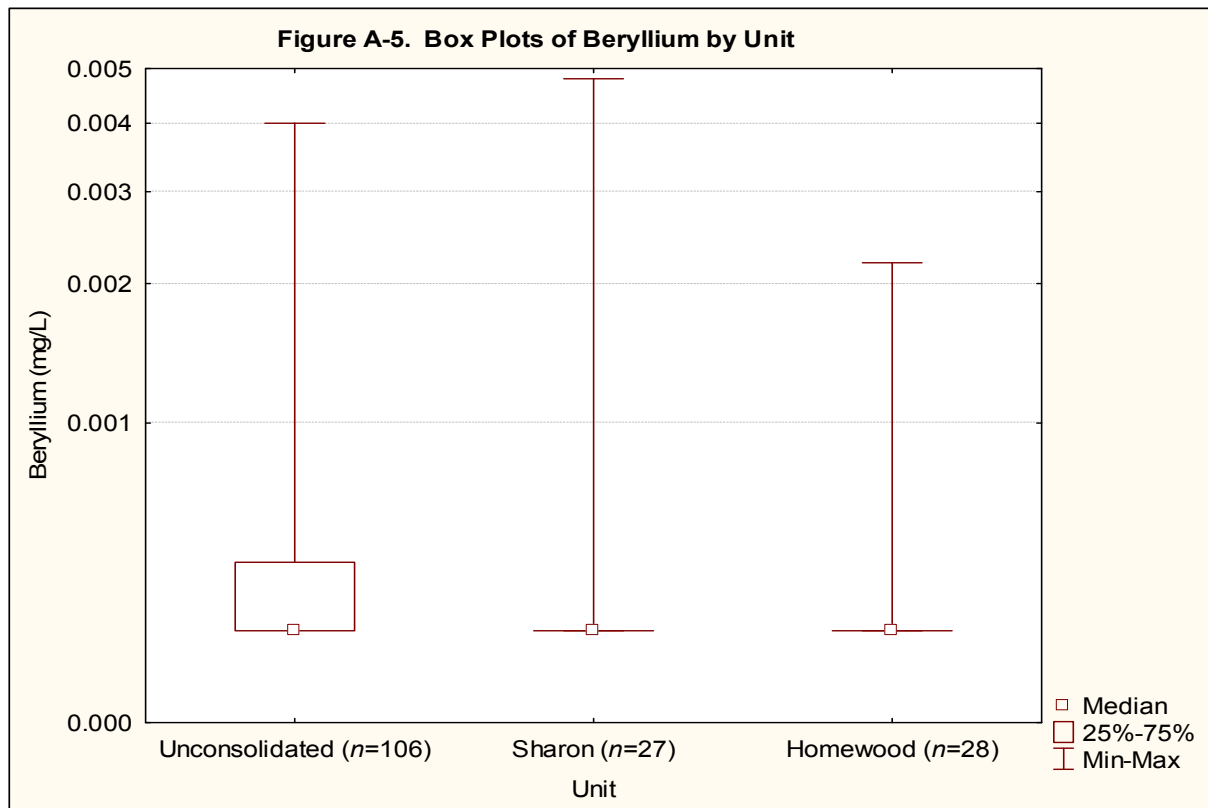
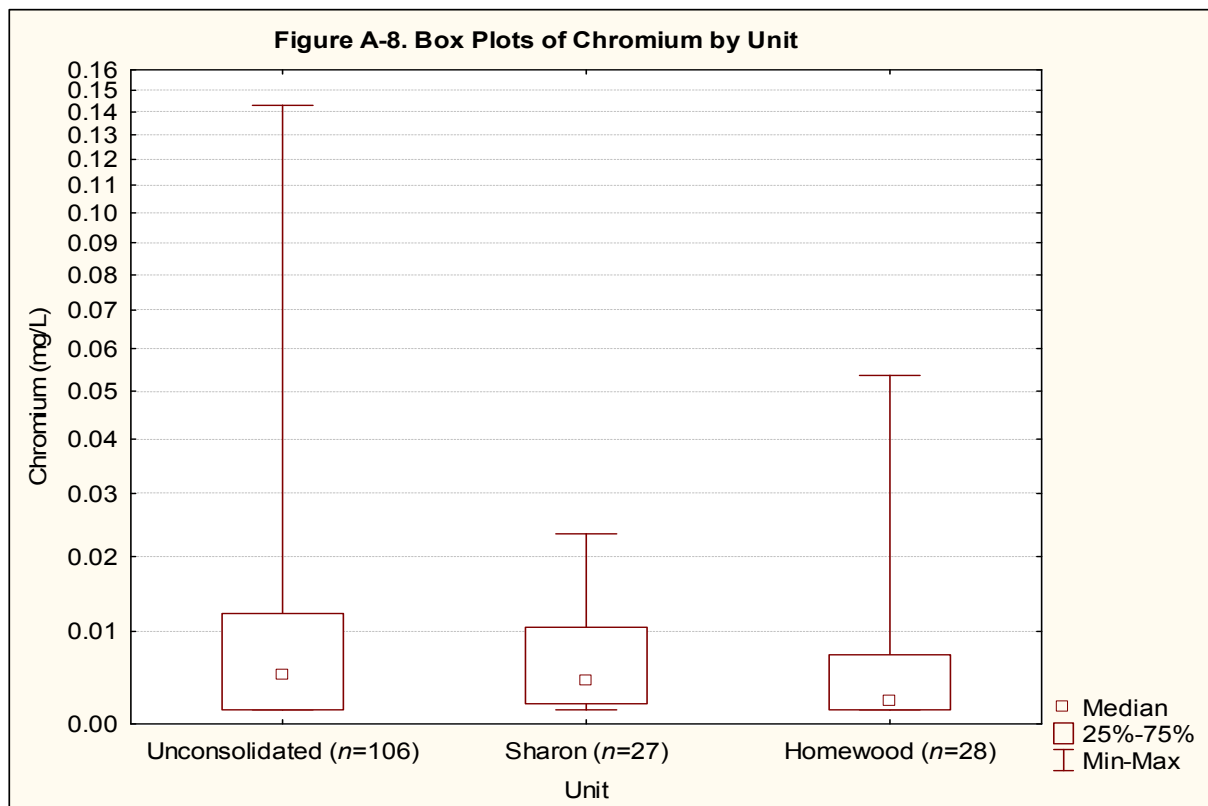
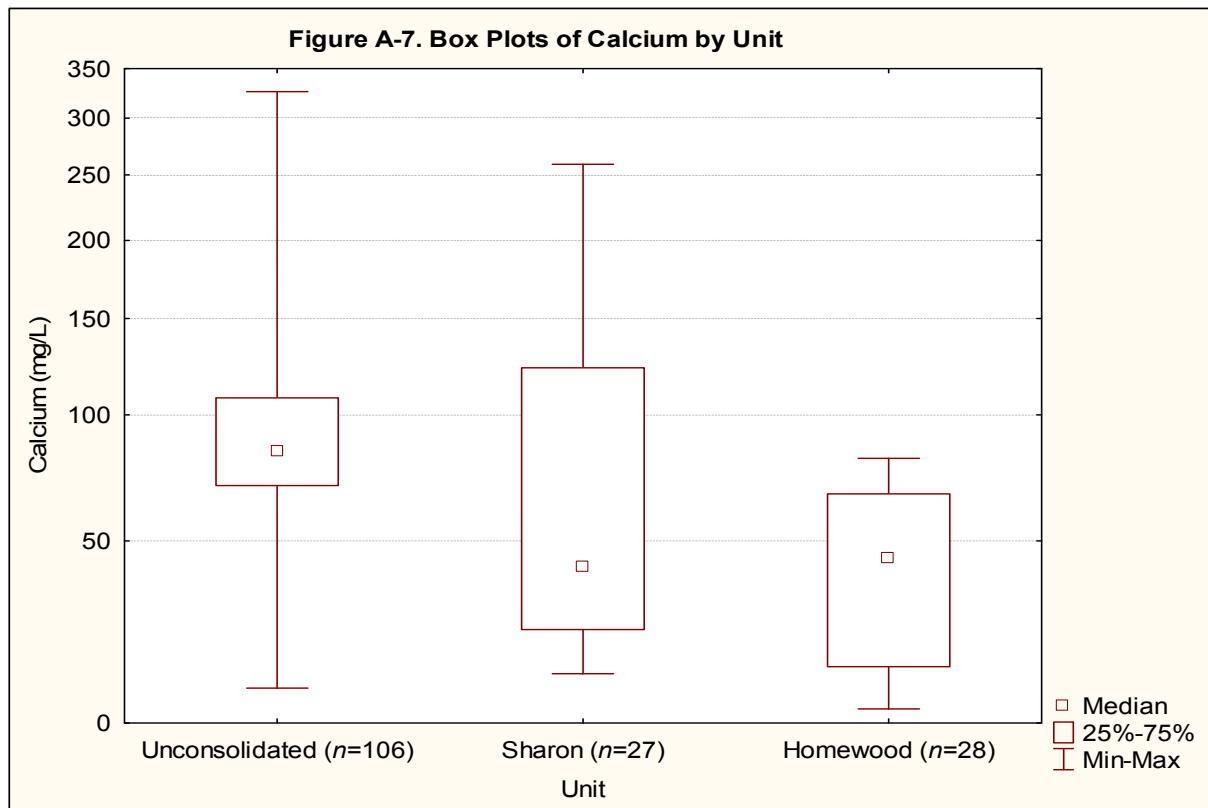
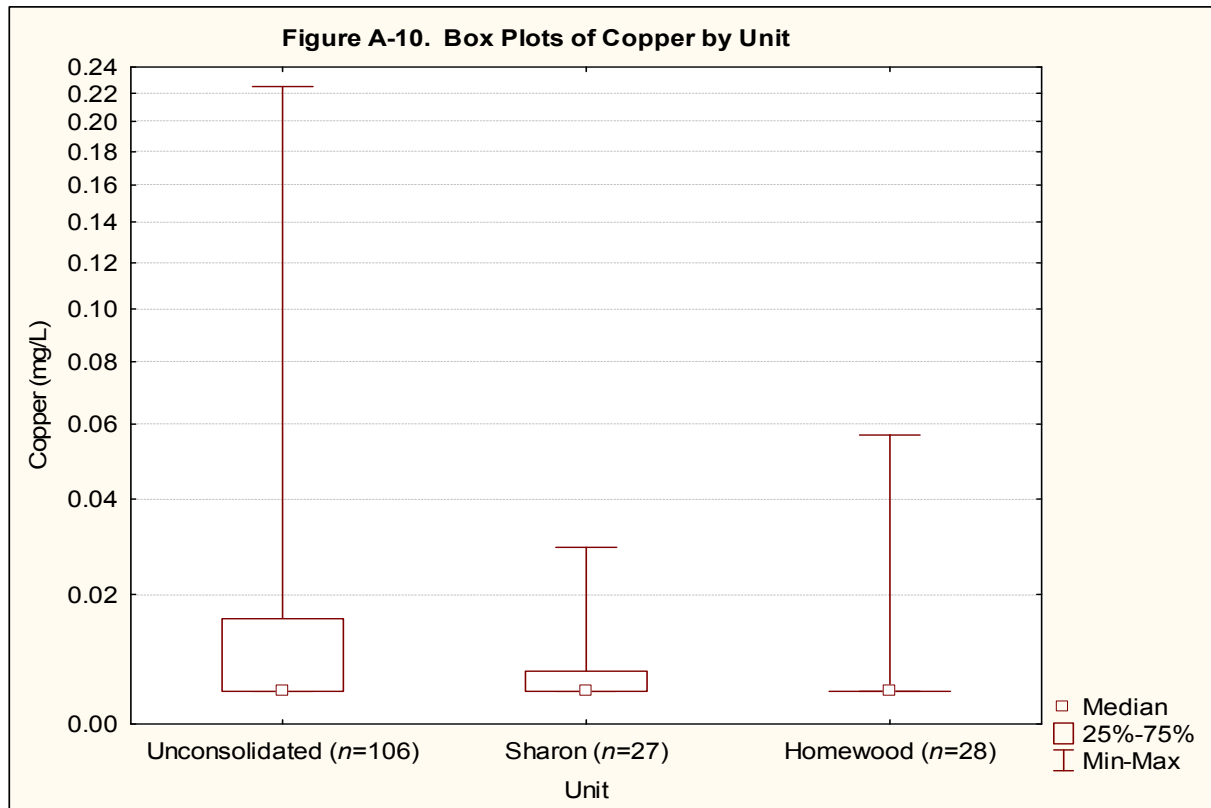
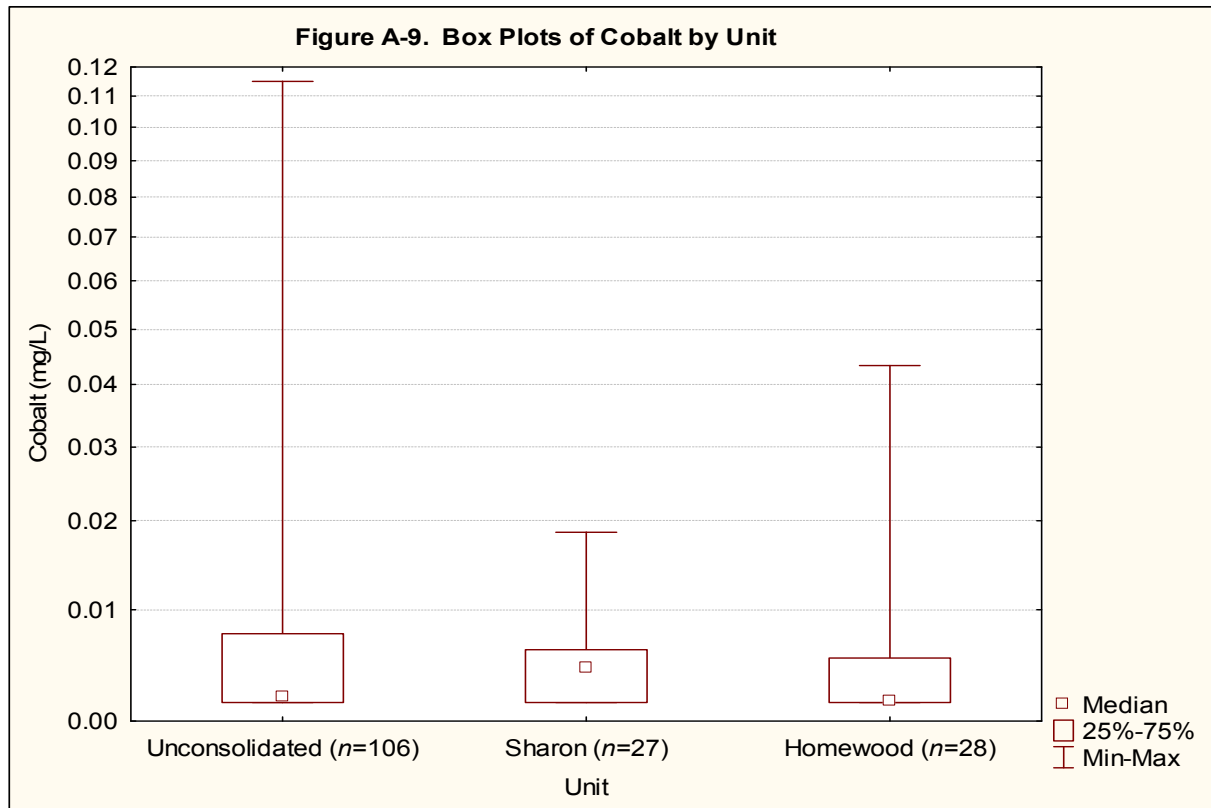


Figure A-4. Box Plots of Barium by Unit









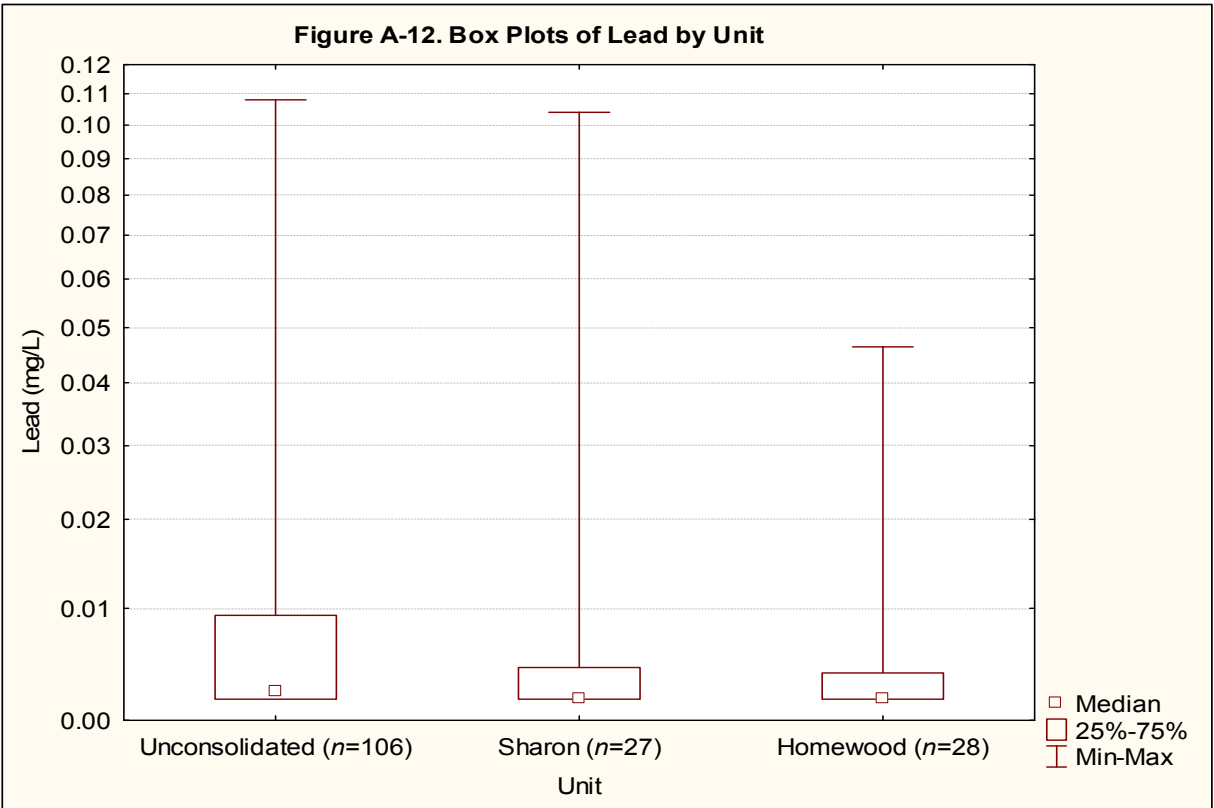
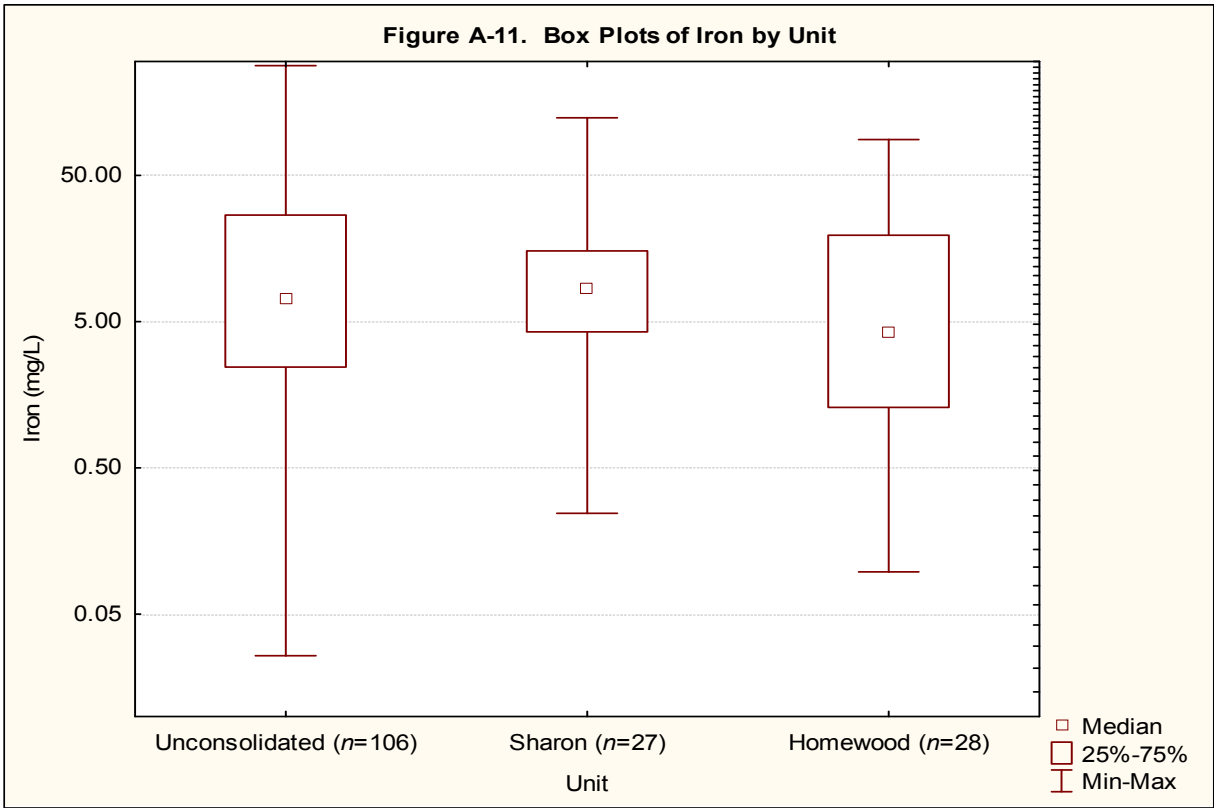


Figure A-13. Box Plots of Magnesium by Unit

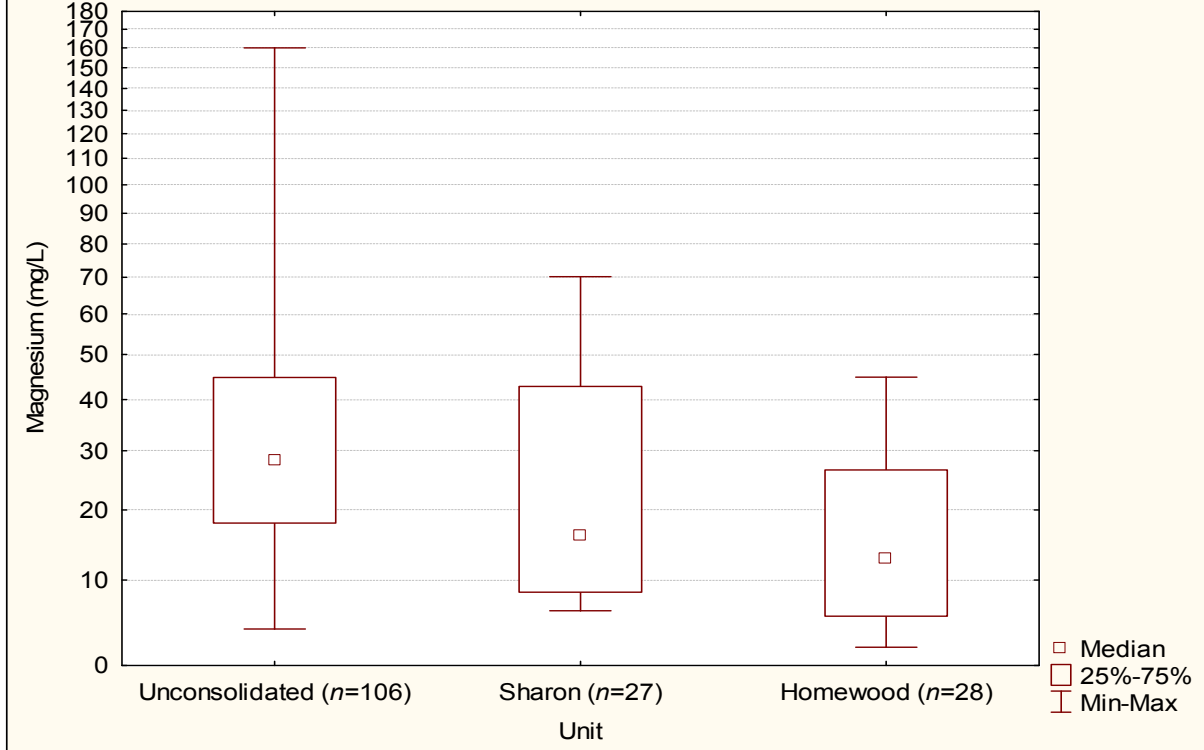
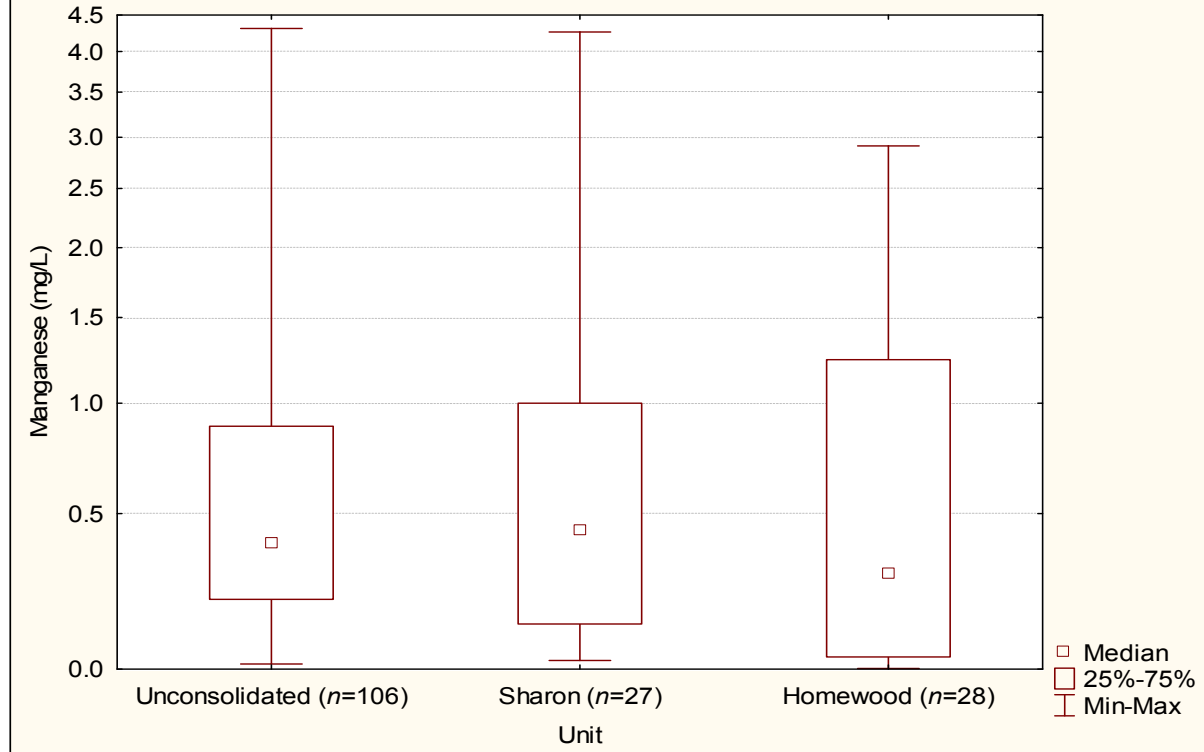
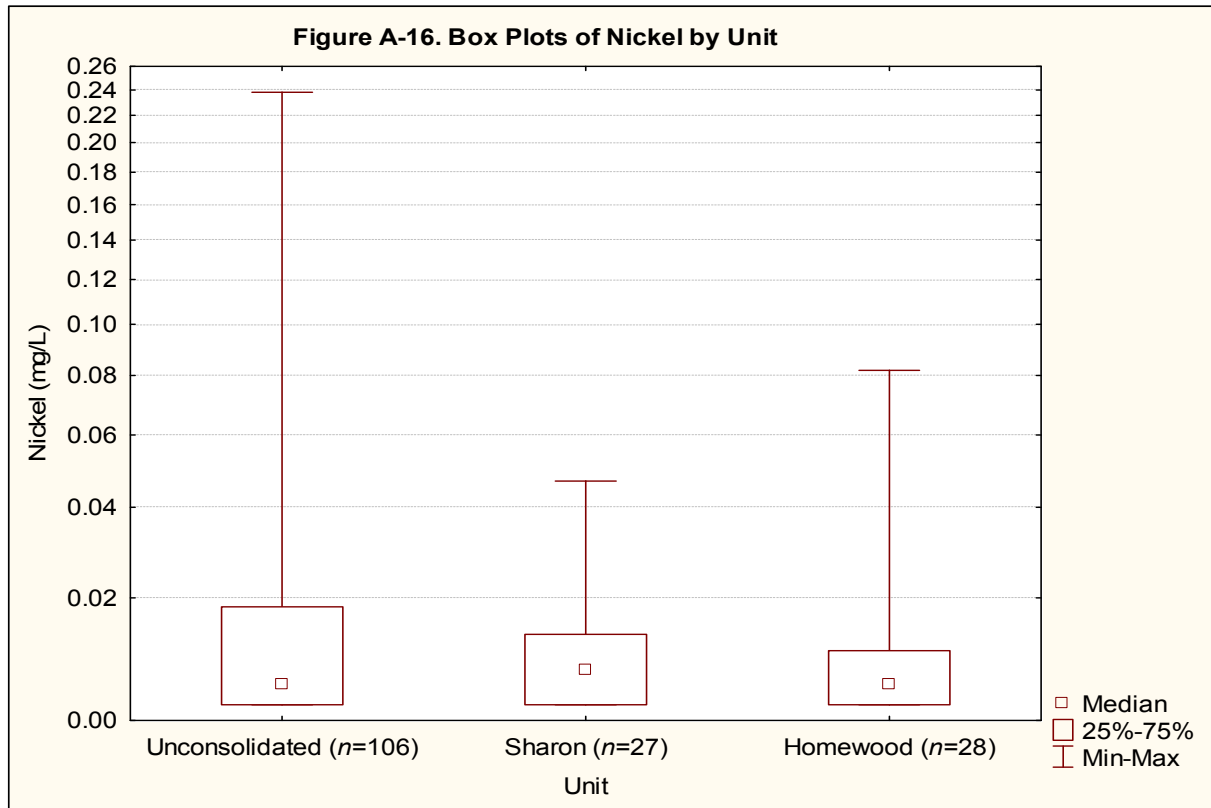
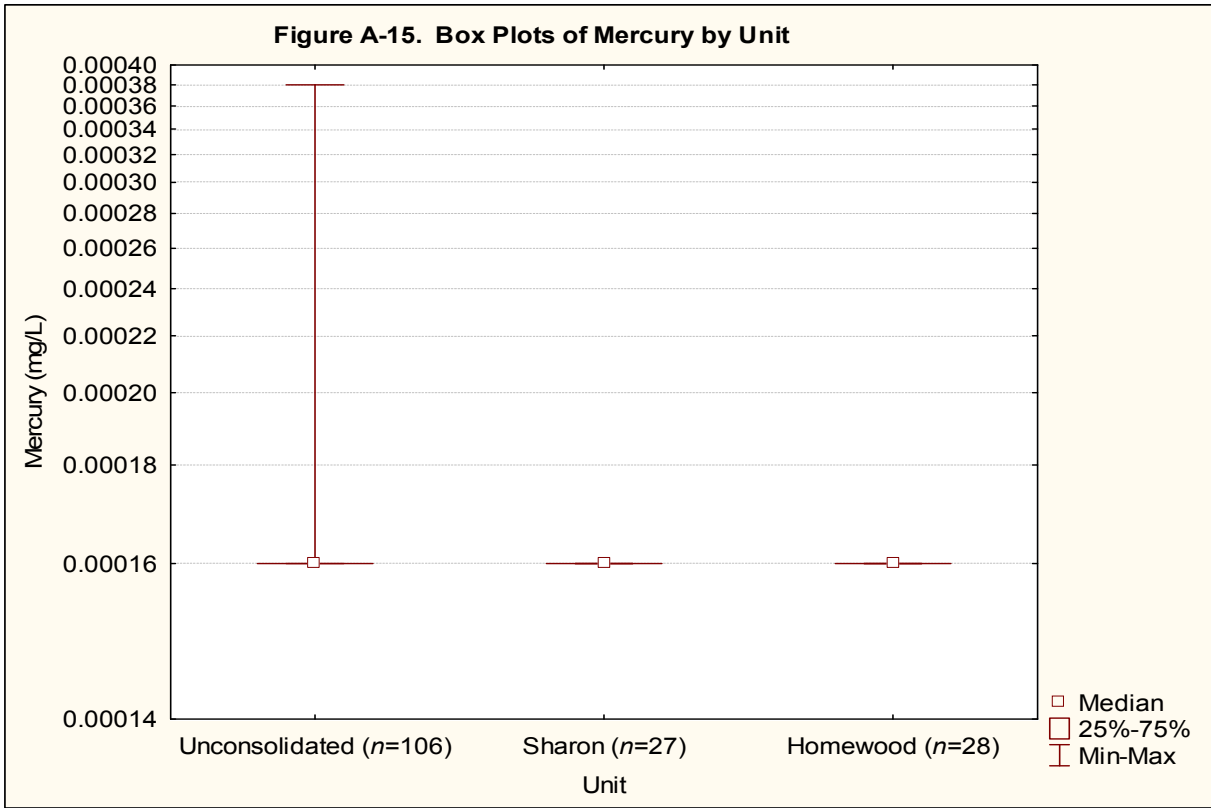
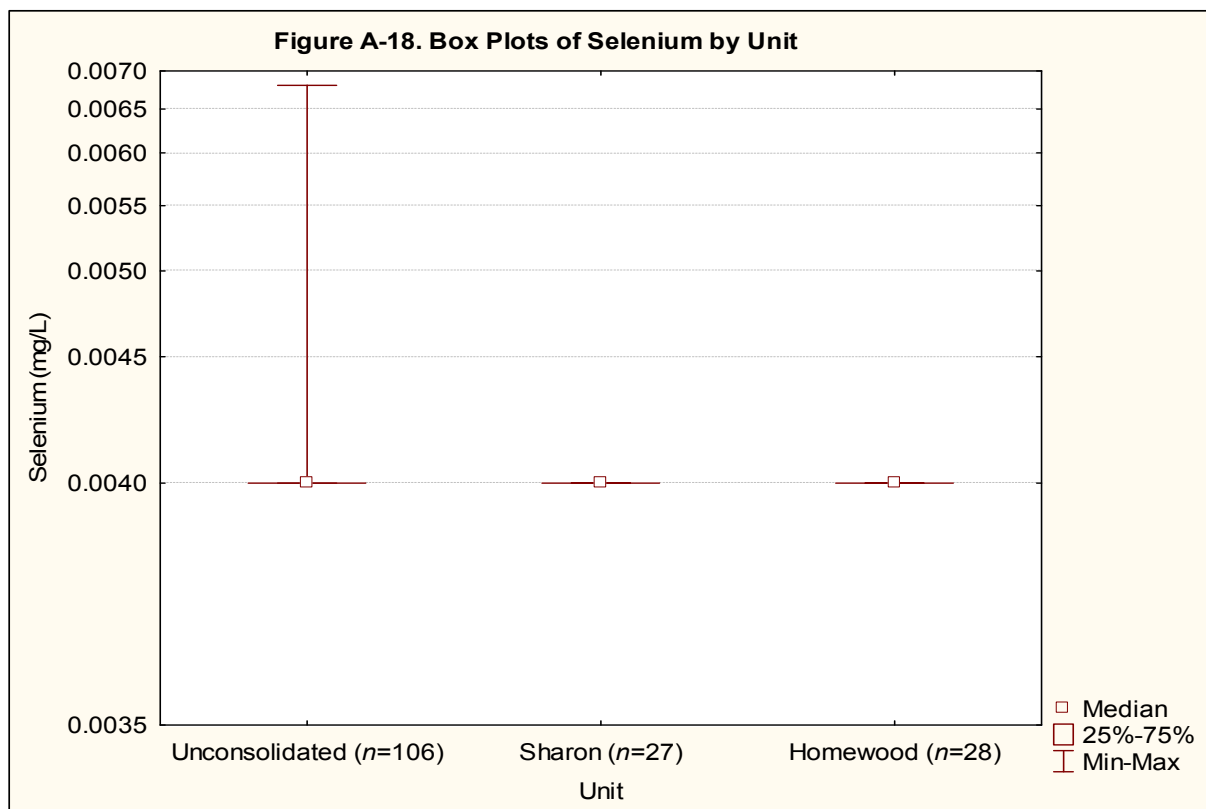
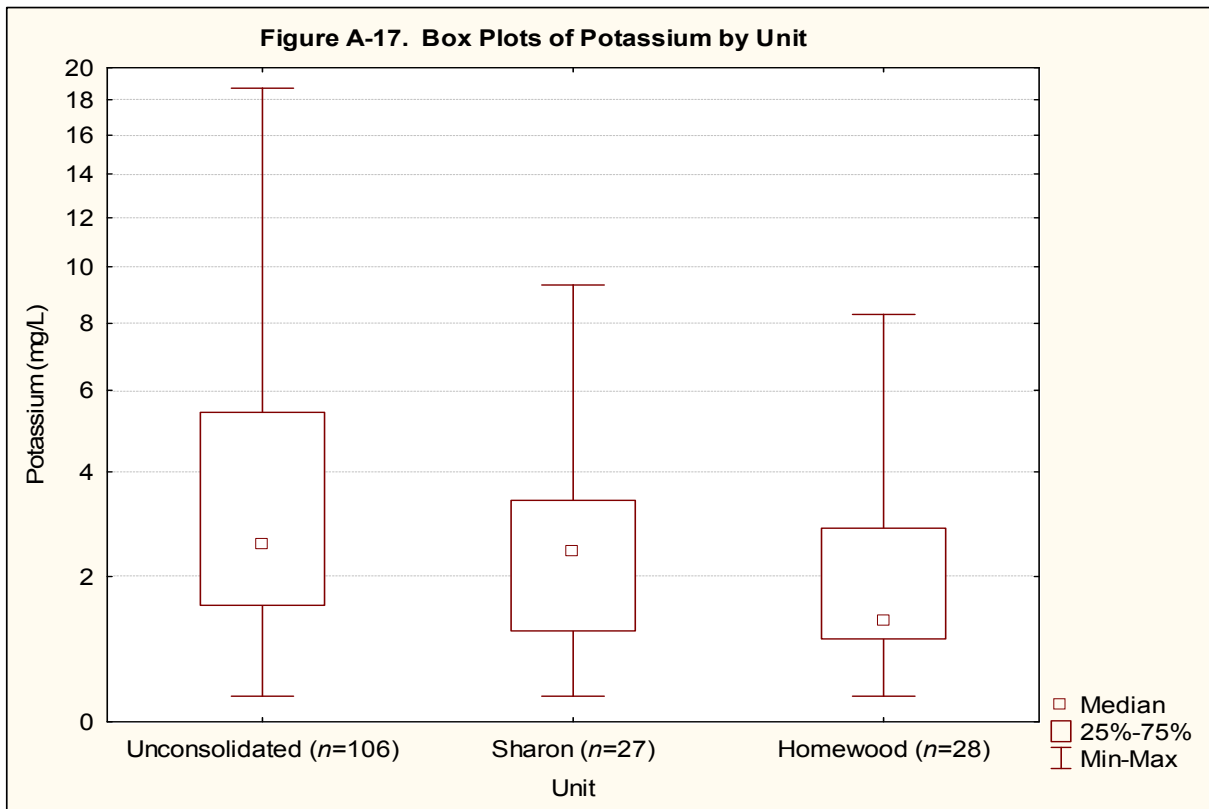
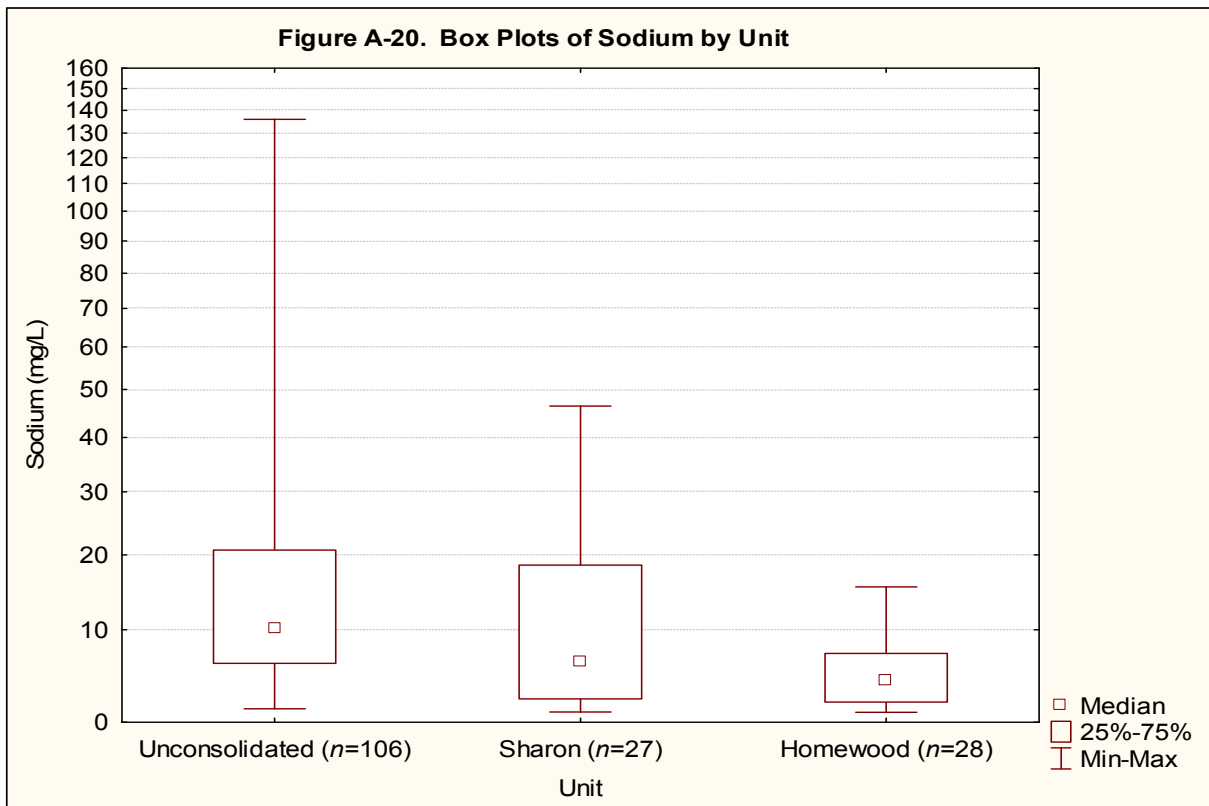
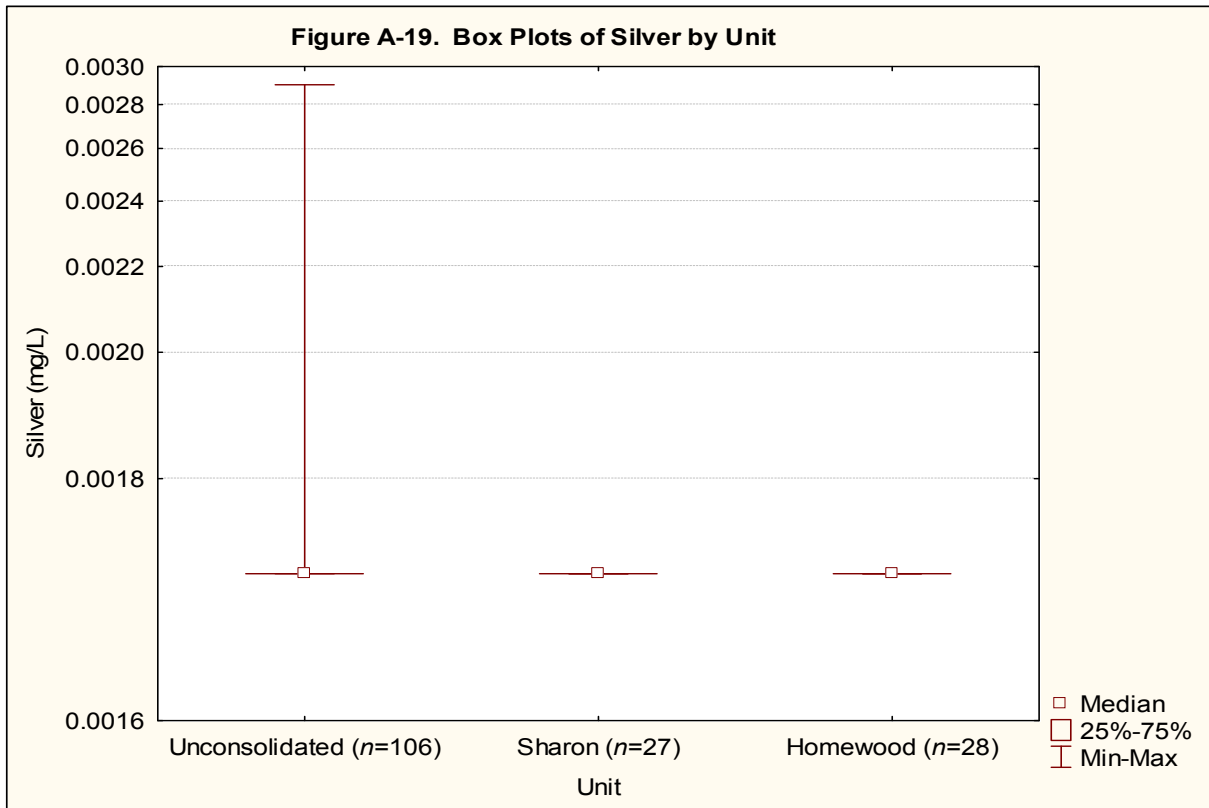


Figure A-14. Box Plots of Manganese by Unit









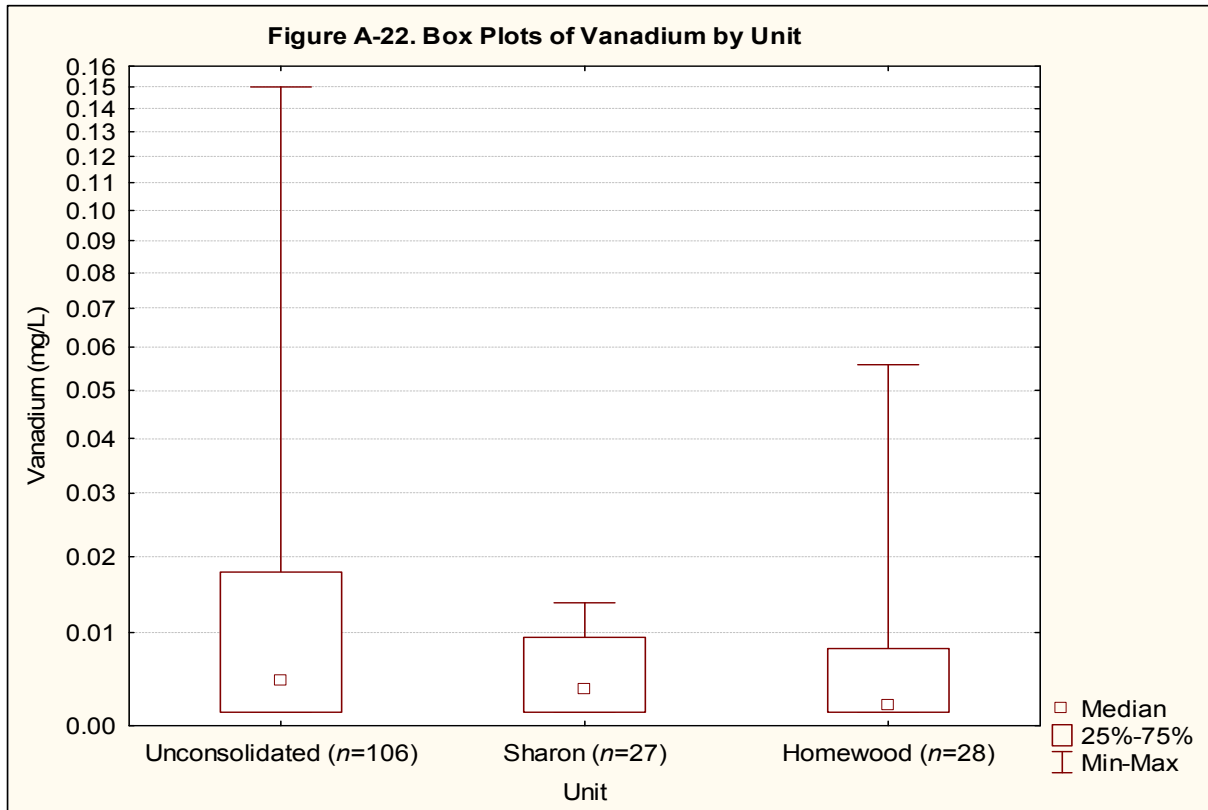
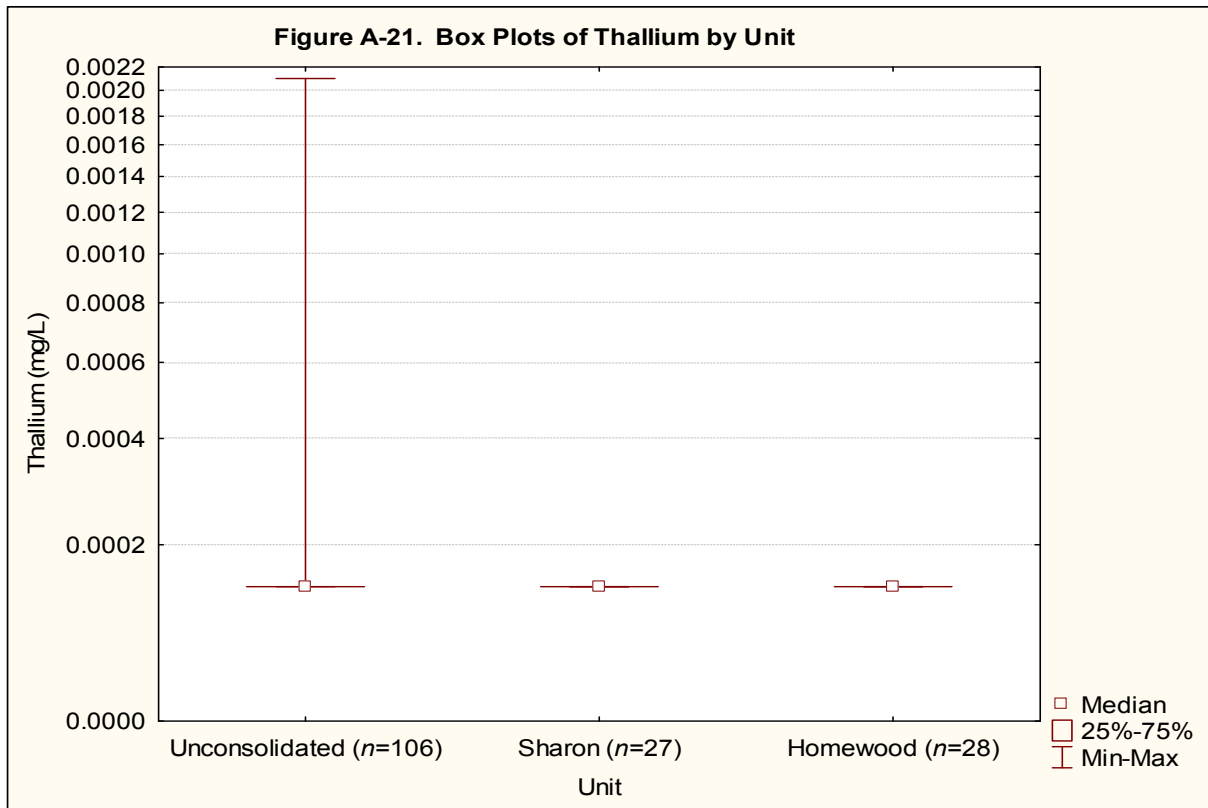
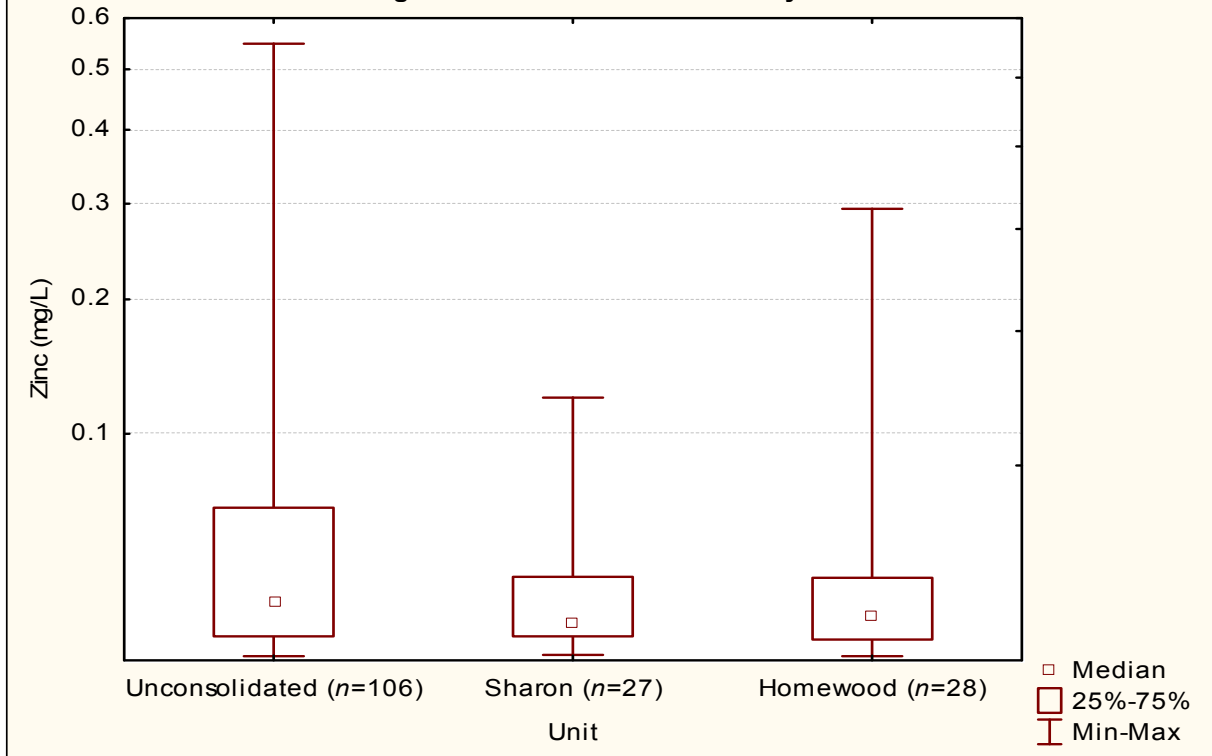


Figure A-23. Box Plots of Zinc by Unit



Appendix B
Probability Plots of Fully Screened Concentrations

Figure B-1. Lognormal Probability Plot of Aluminum

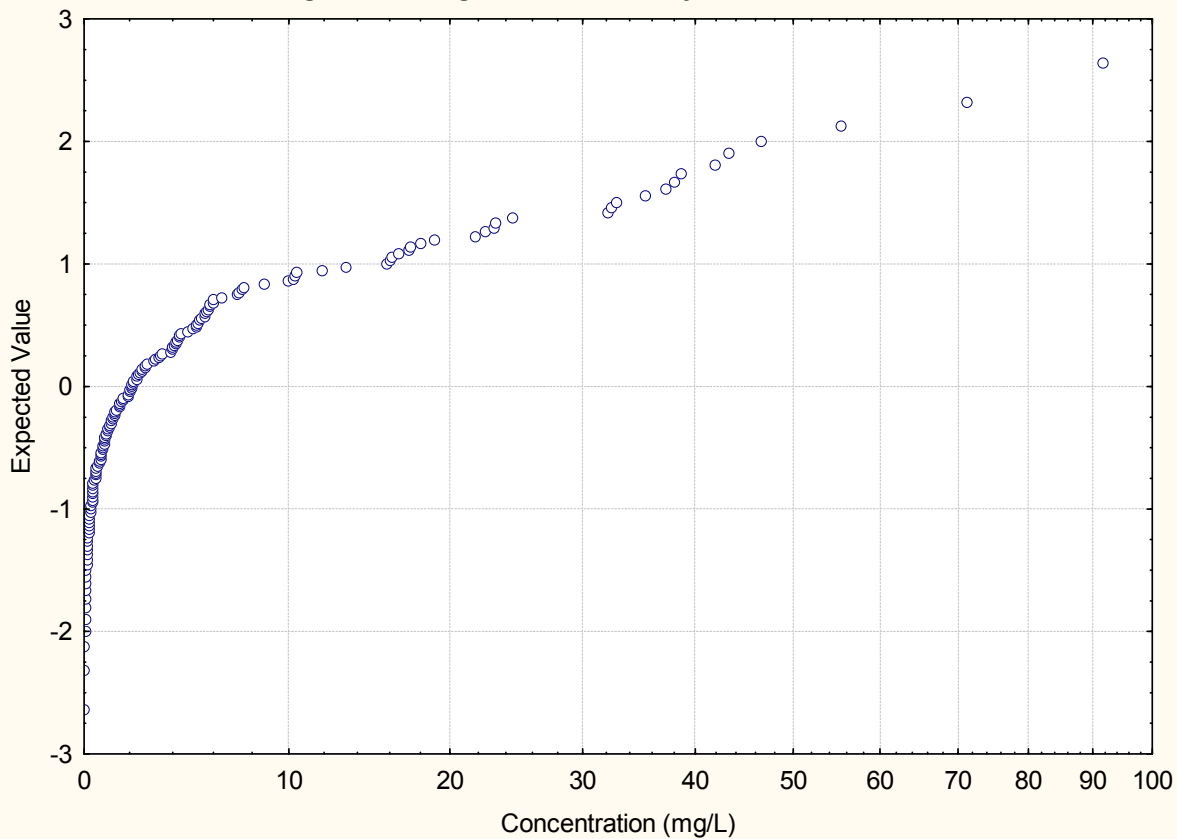


Figure B-2. Normal Probability Plot of Antimony

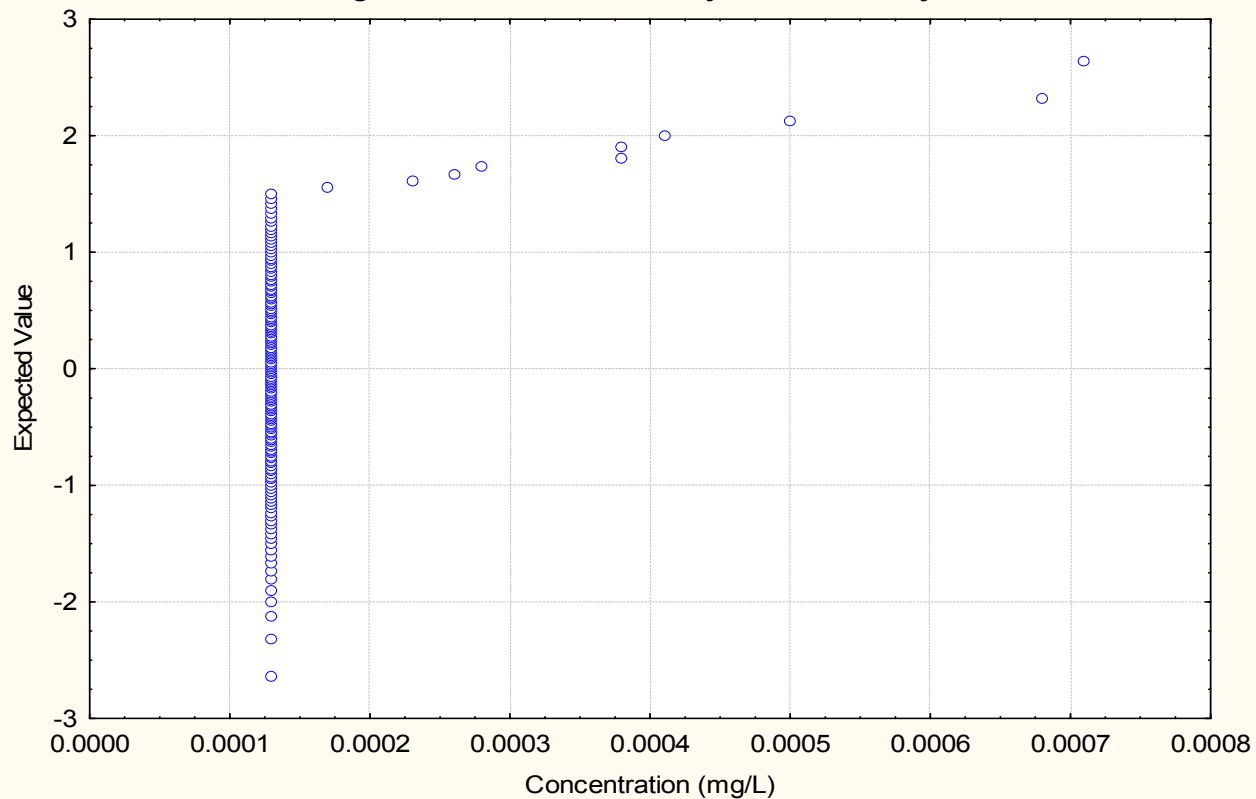


Figure B-3. Lognormal Probability Plot of Arsenic

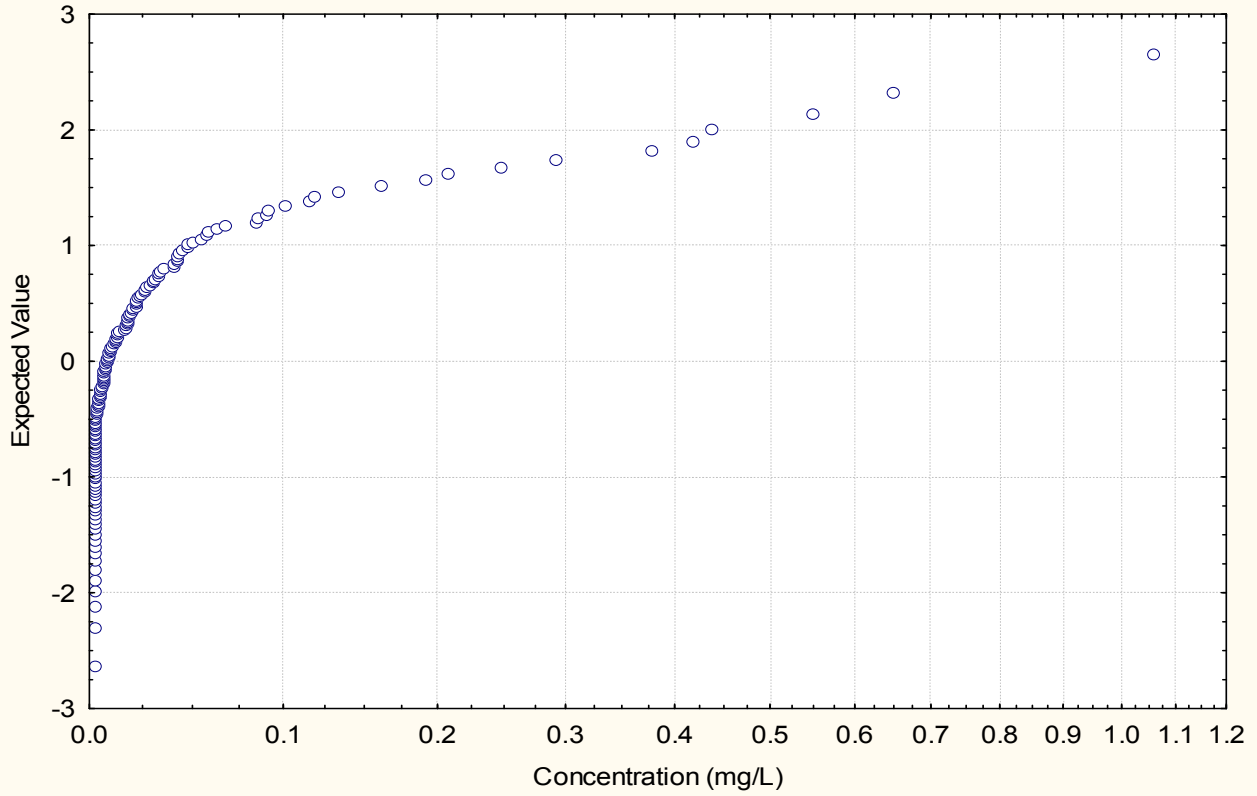
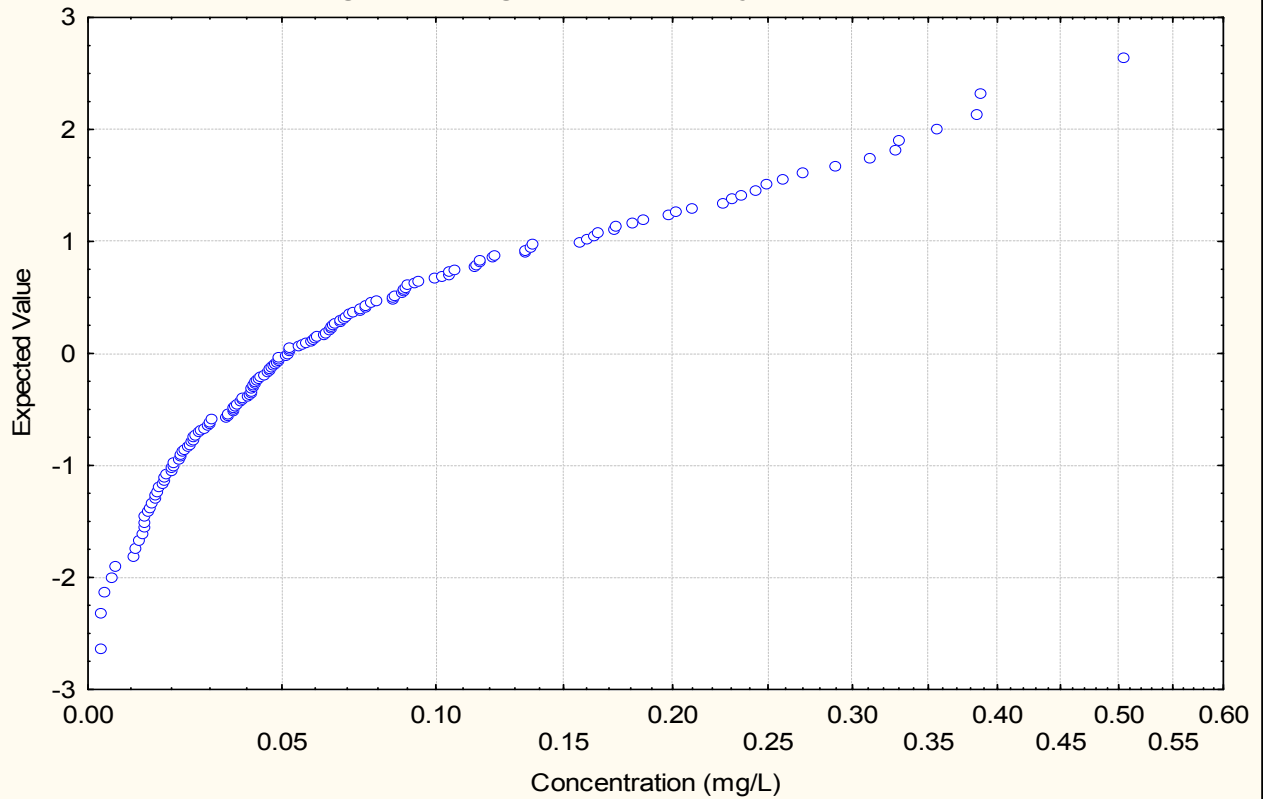


Figure B-4. Lognormal Probability Plot of Barium



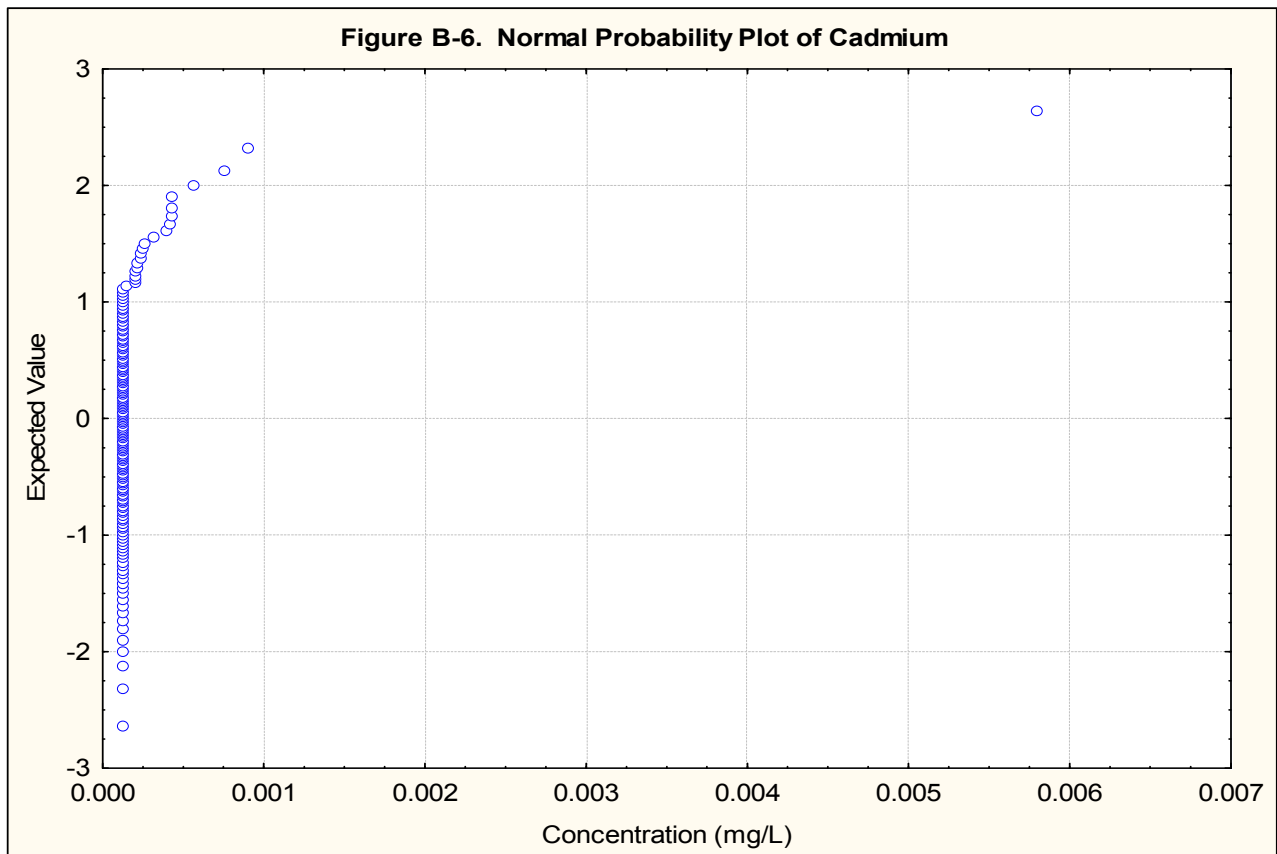
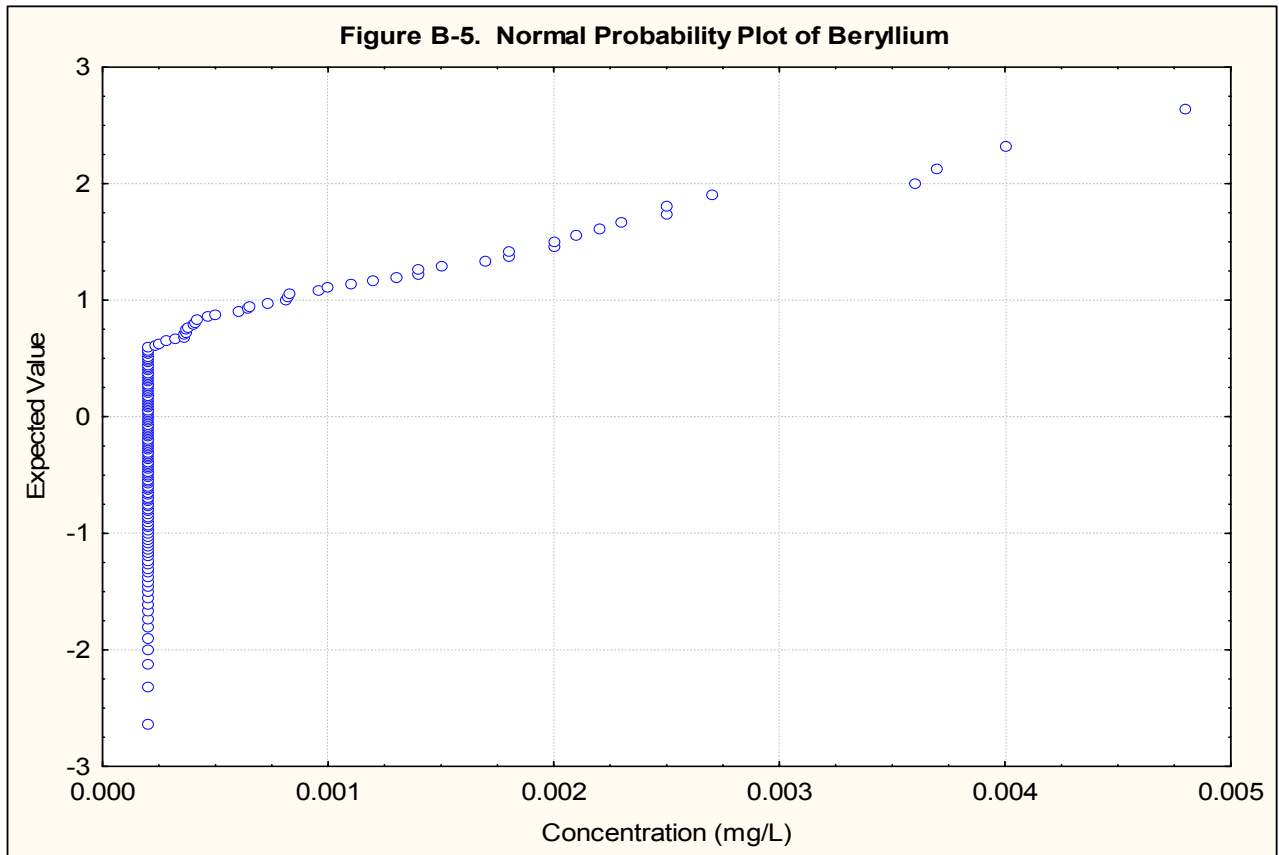


Figure B-7. Lognormal Probability Plot of Calcium

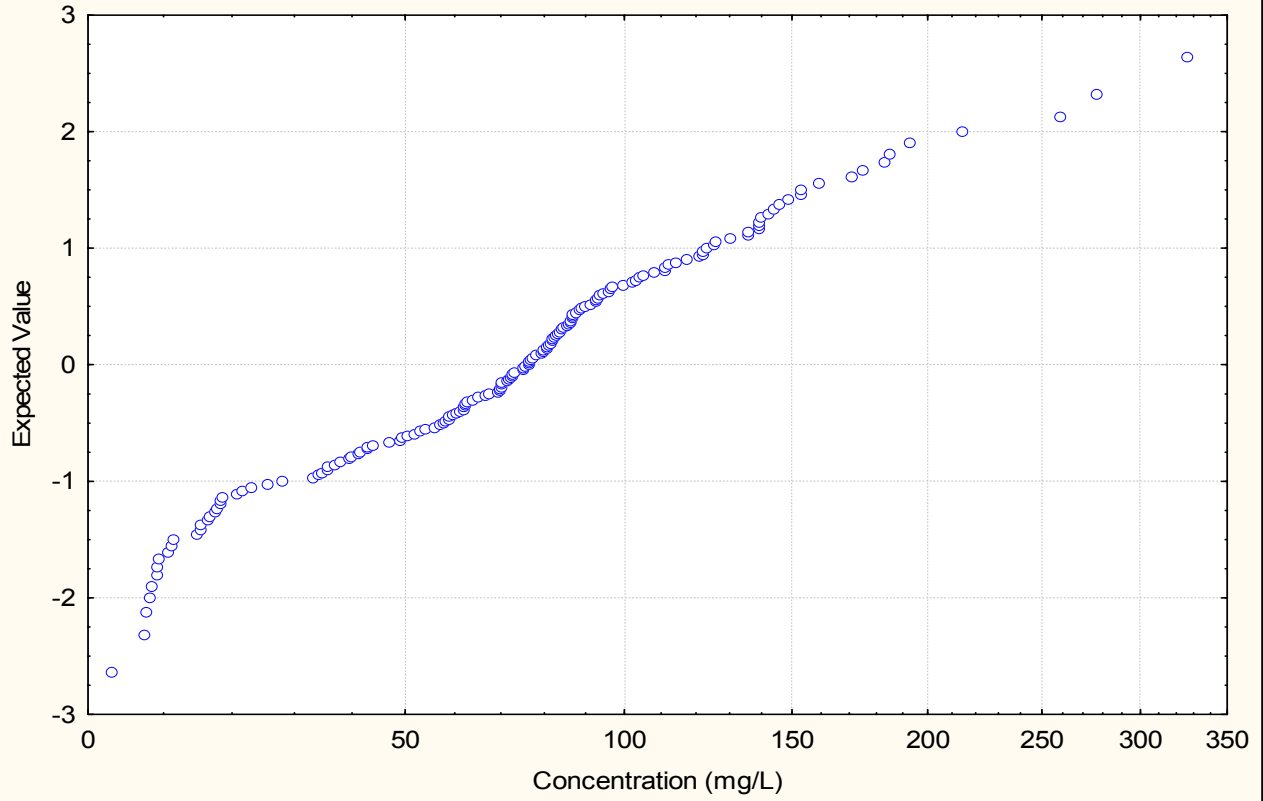


Figure B-8. Lognormal Probability Plot of Chromium

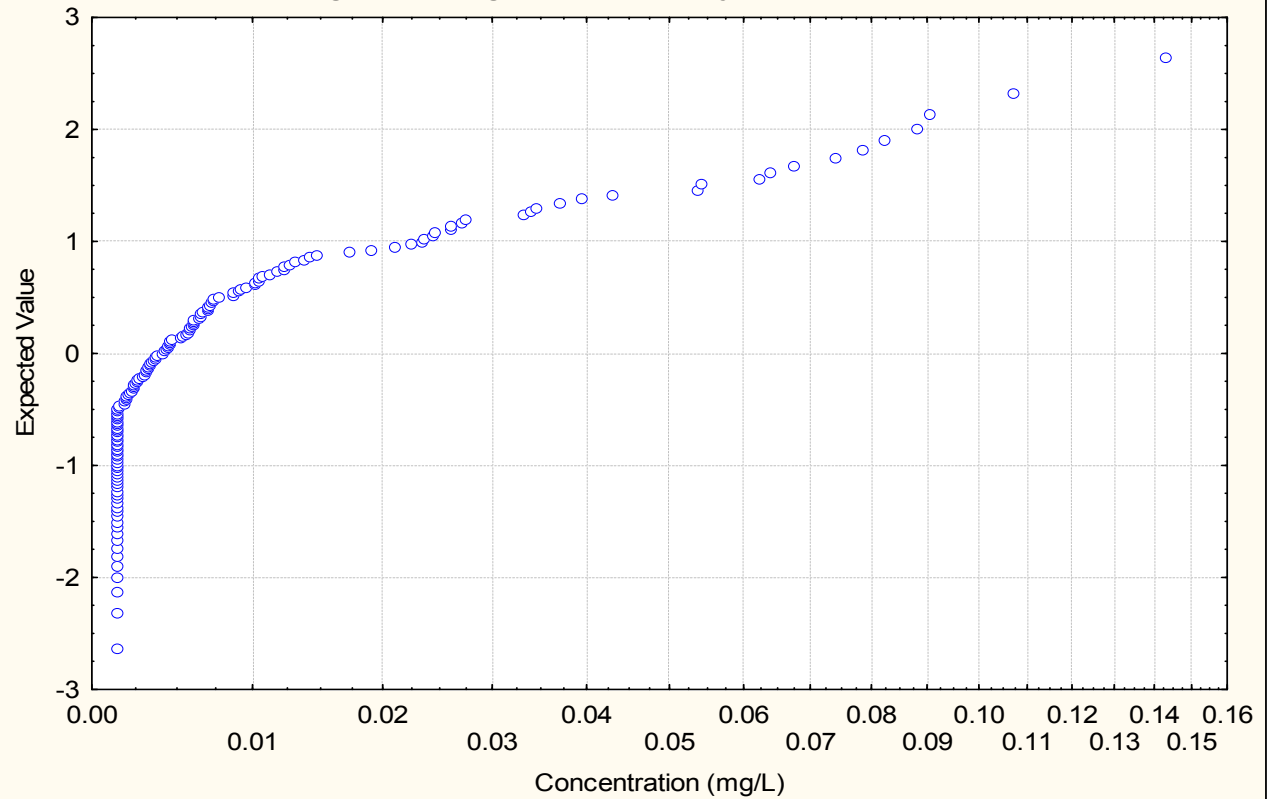


Figure B-9. Normal Probability Plot of Cobalt

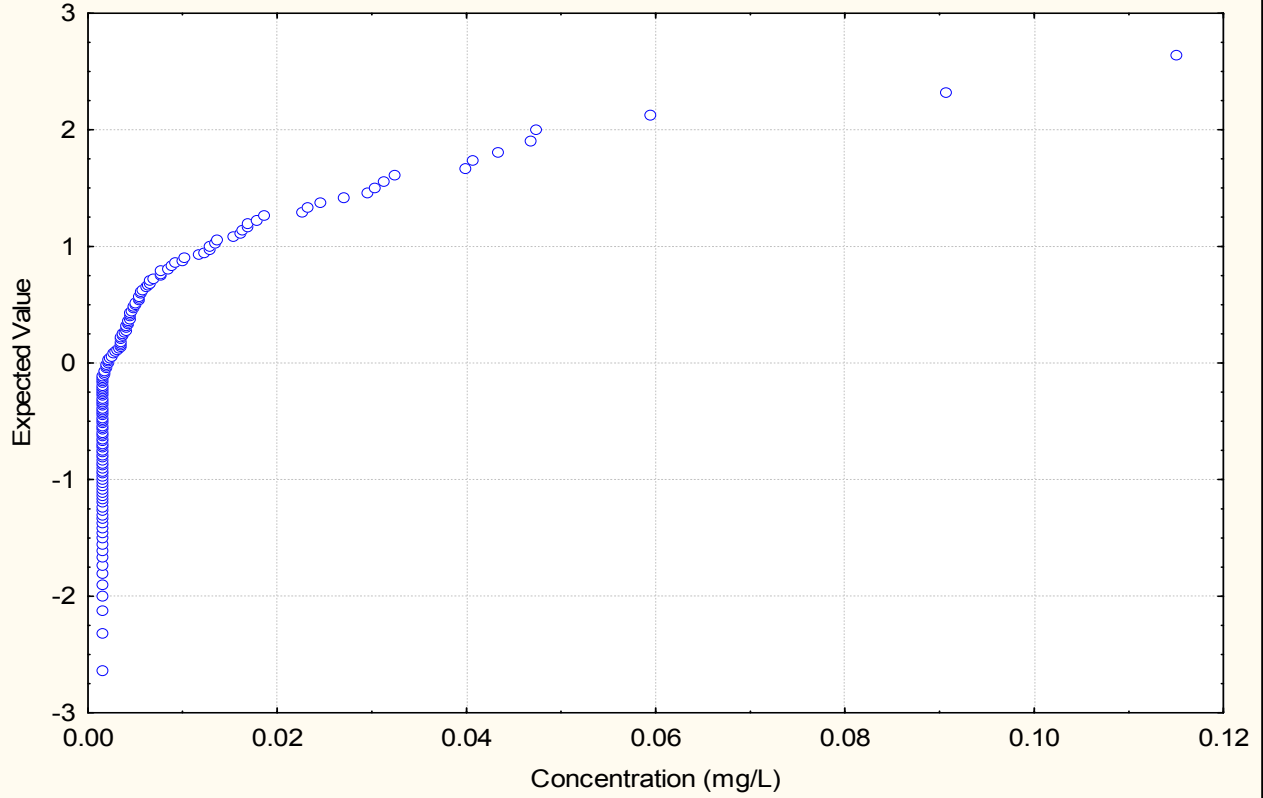


Figure B-10. Normal Probability Plot of Copper

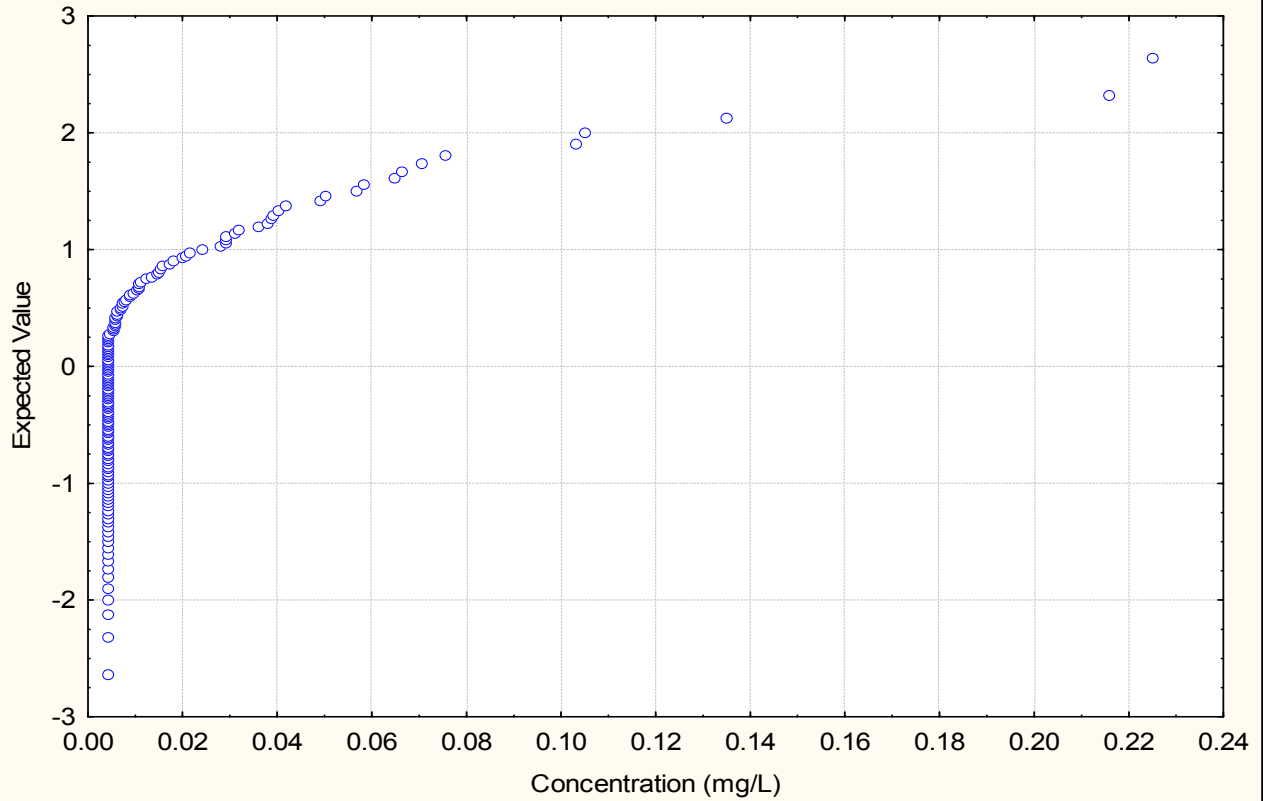


Figure B-11. Lognormal Probability Plot of Iron

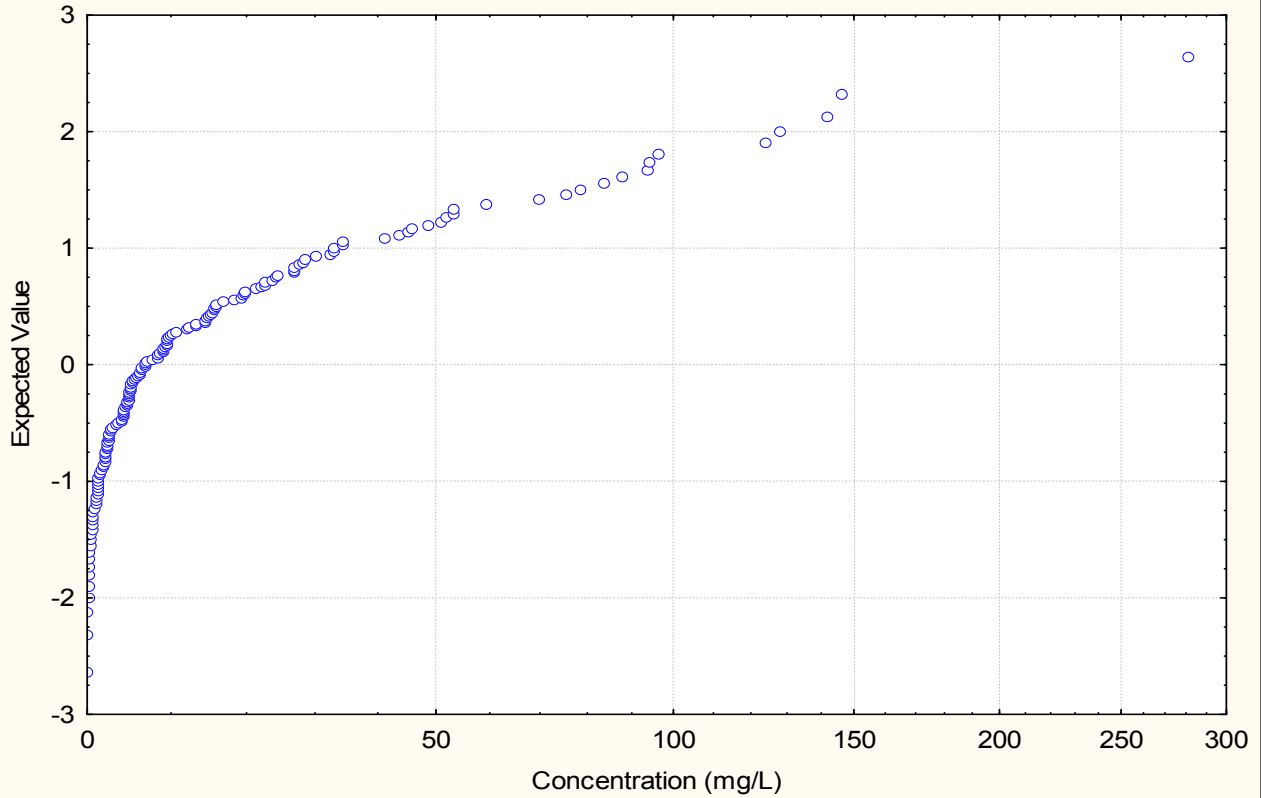


Figure B-12. Normal Probability Plot of Lead

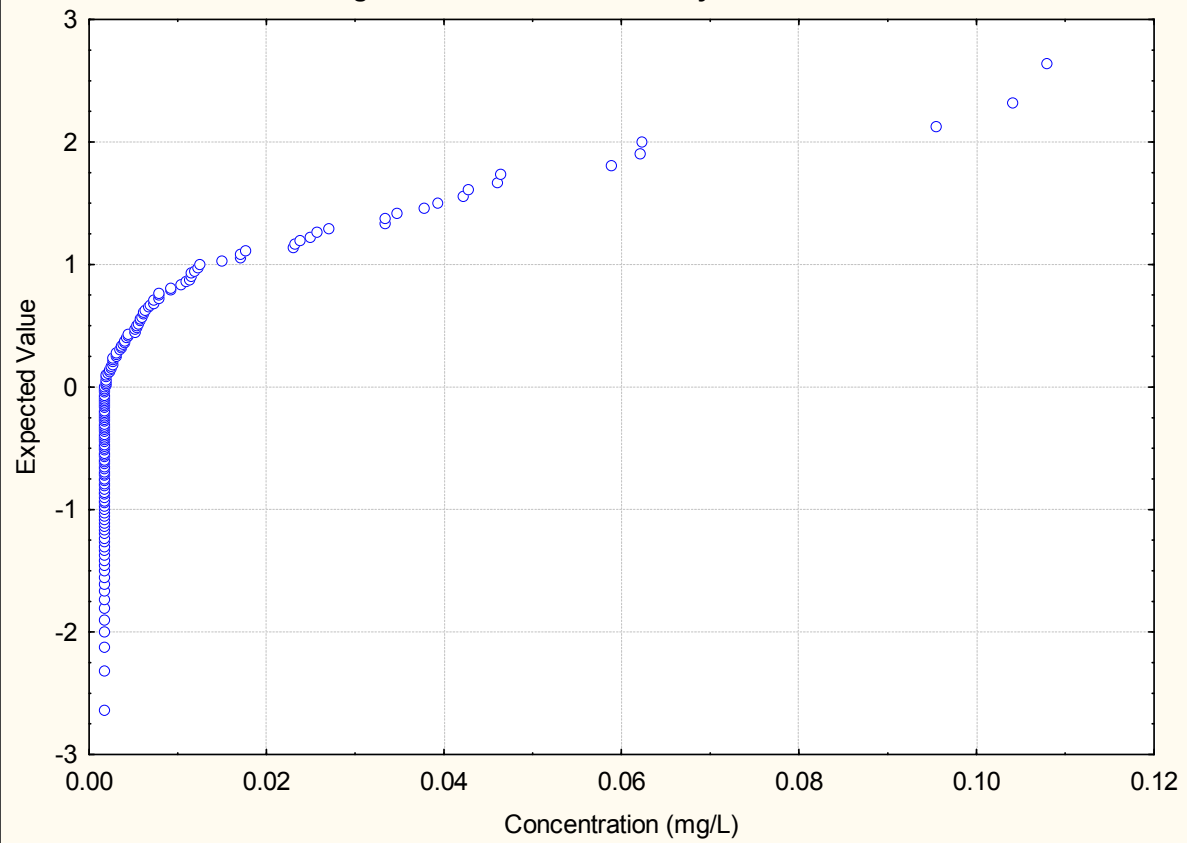


Figure B-13. Lognormal Probability Plot of Magnesium

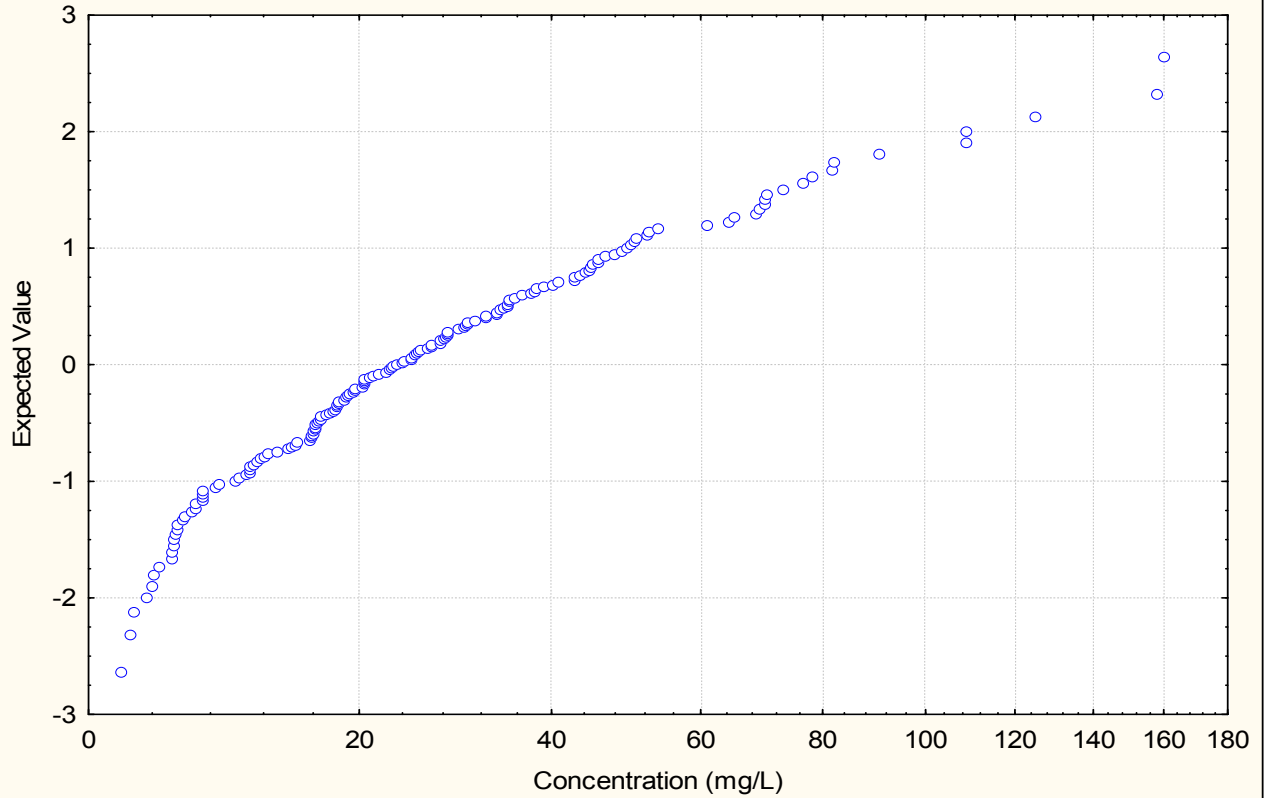


Figure B-14. Lognormal Probability Plot of Manganese

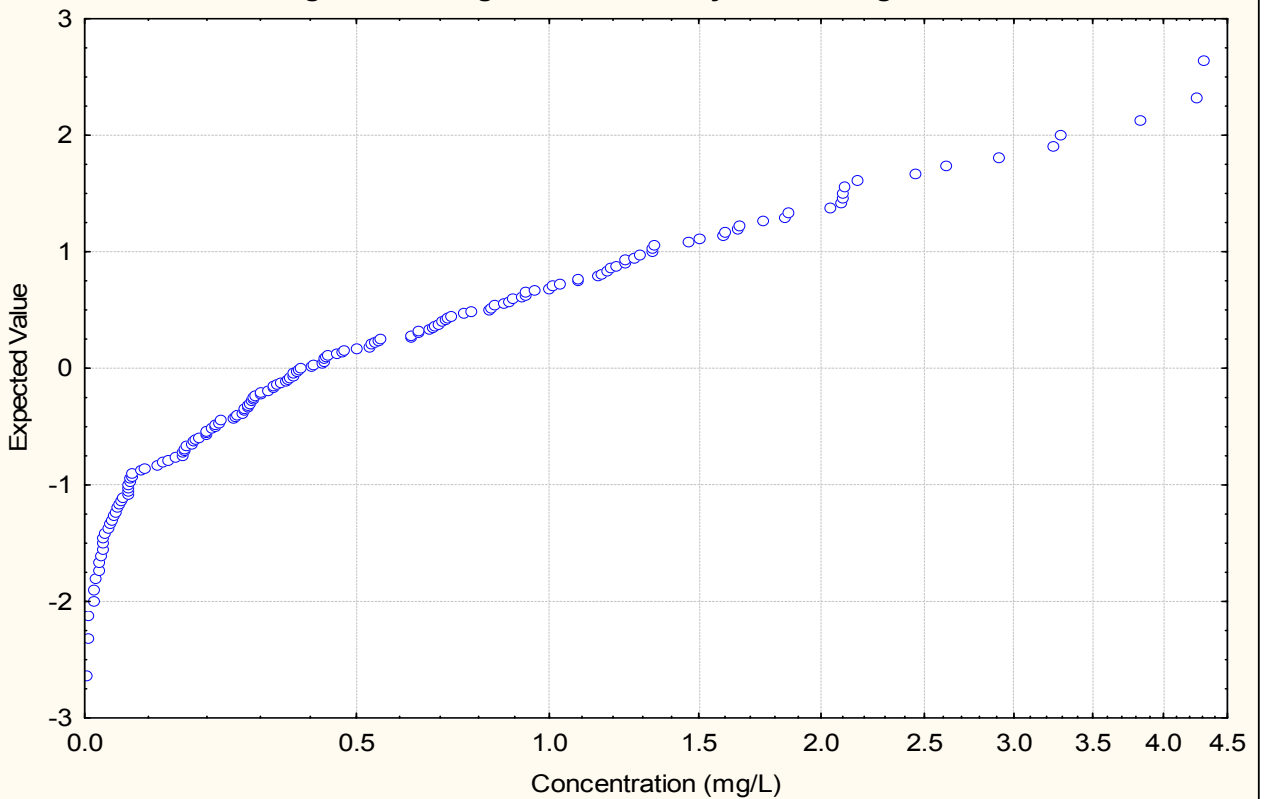


Figure B-15. Lognormal Probability Plot of Mercury

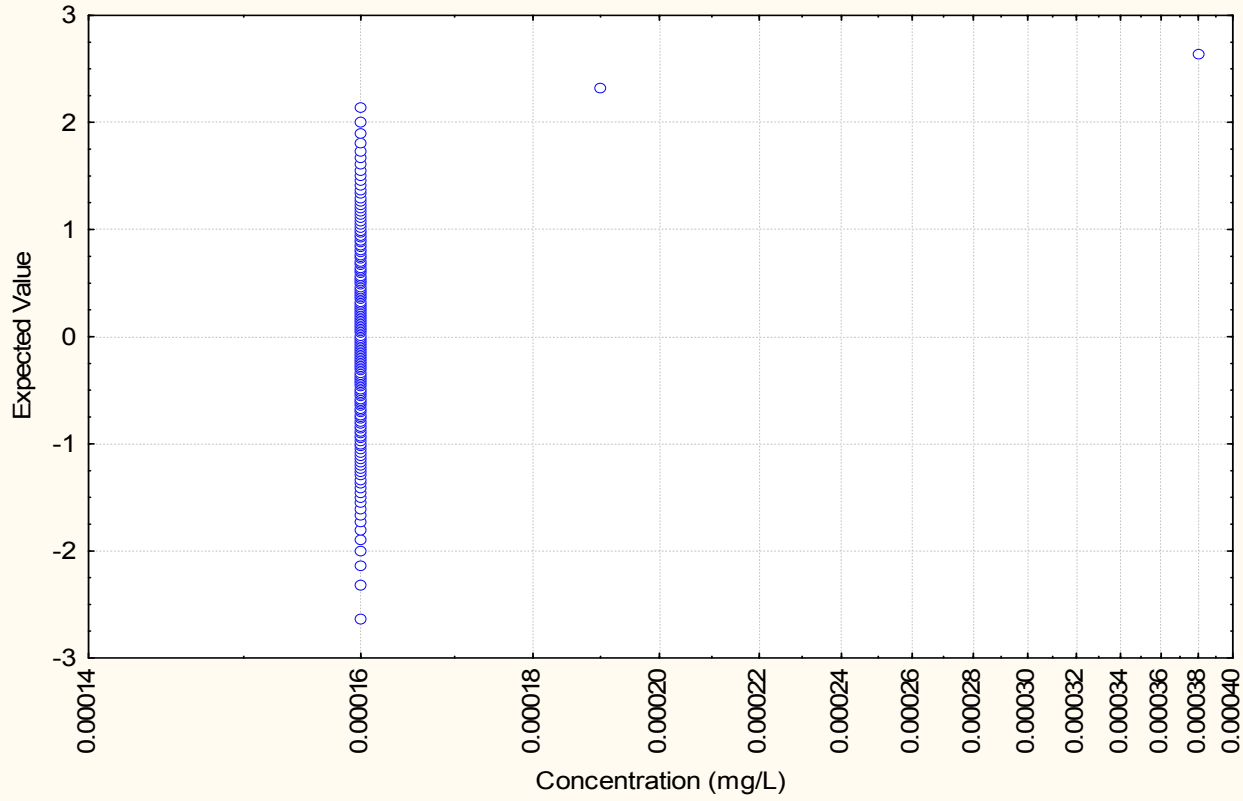


Figure B-16. Lognormal Probability Plot of Nickel

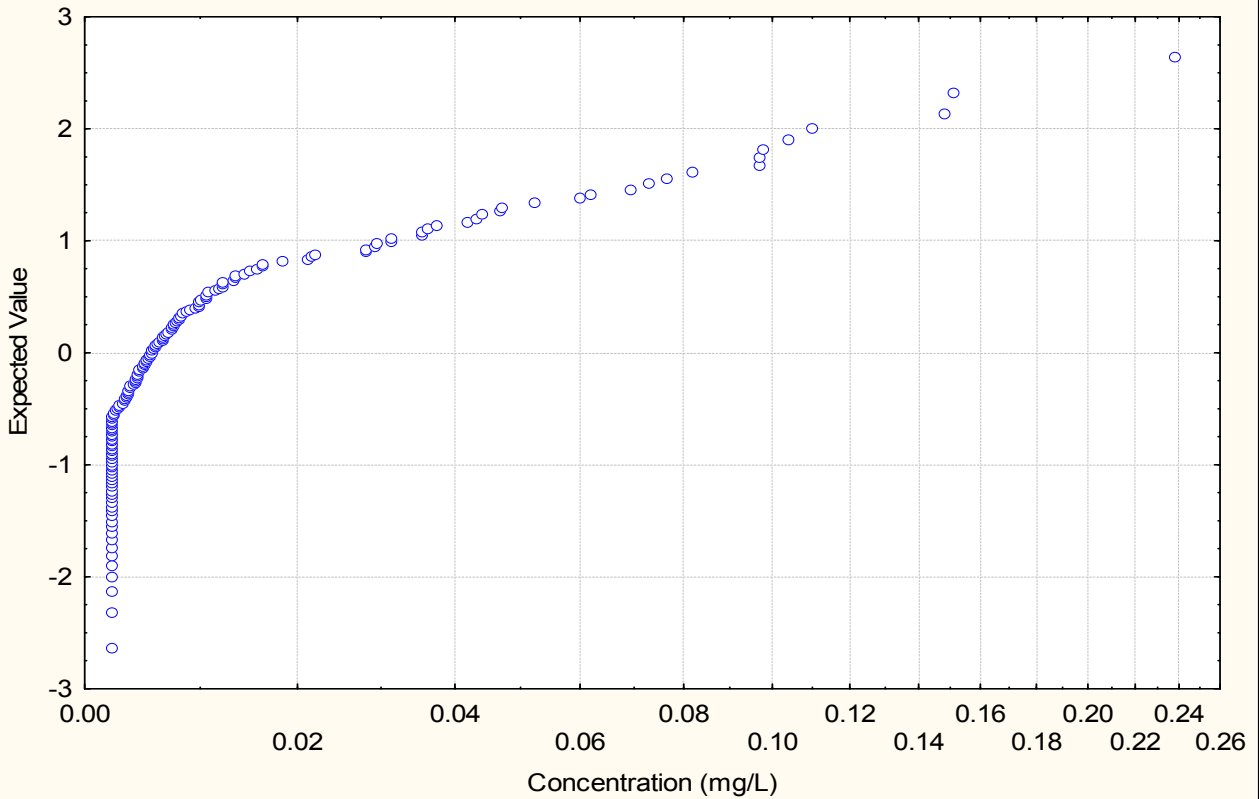


Figure B-17. Lognormal Probability Plot of Potassium

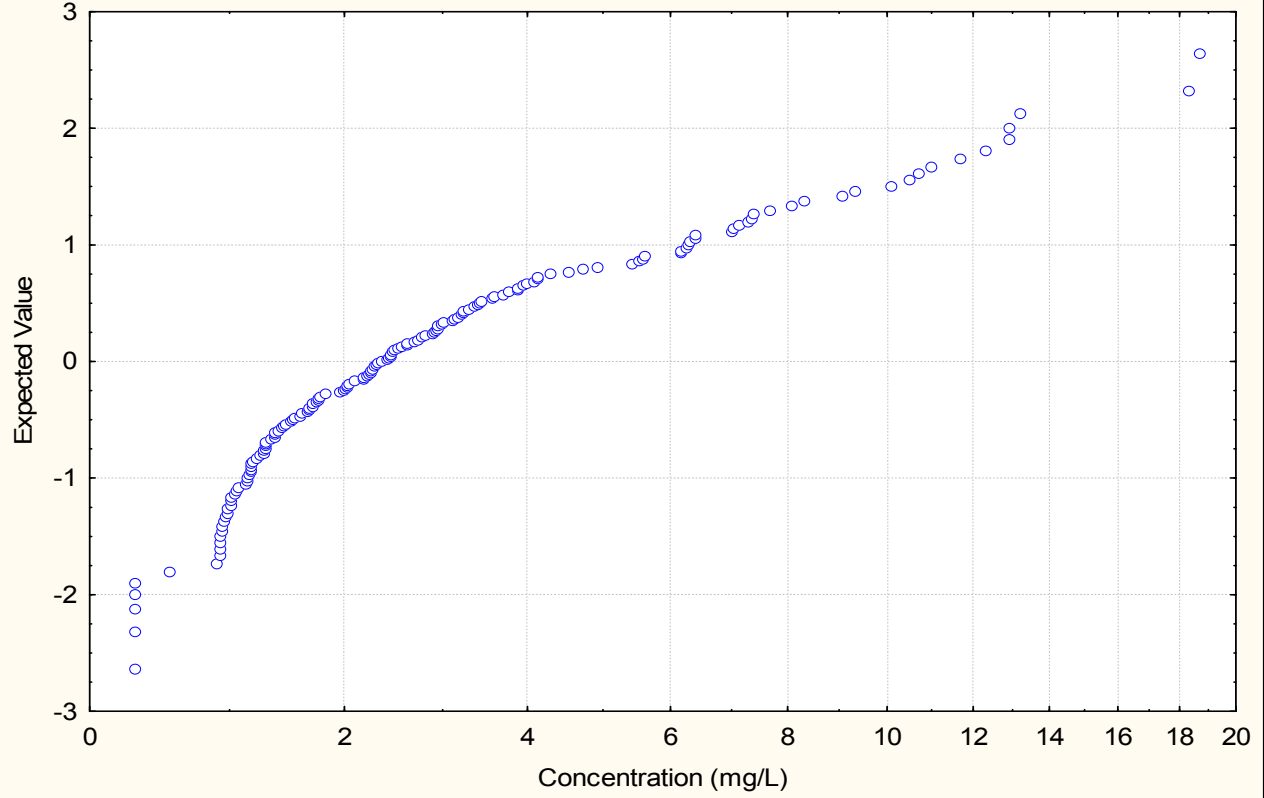


Figure B18. Lognormal Probability Plot of Selenium

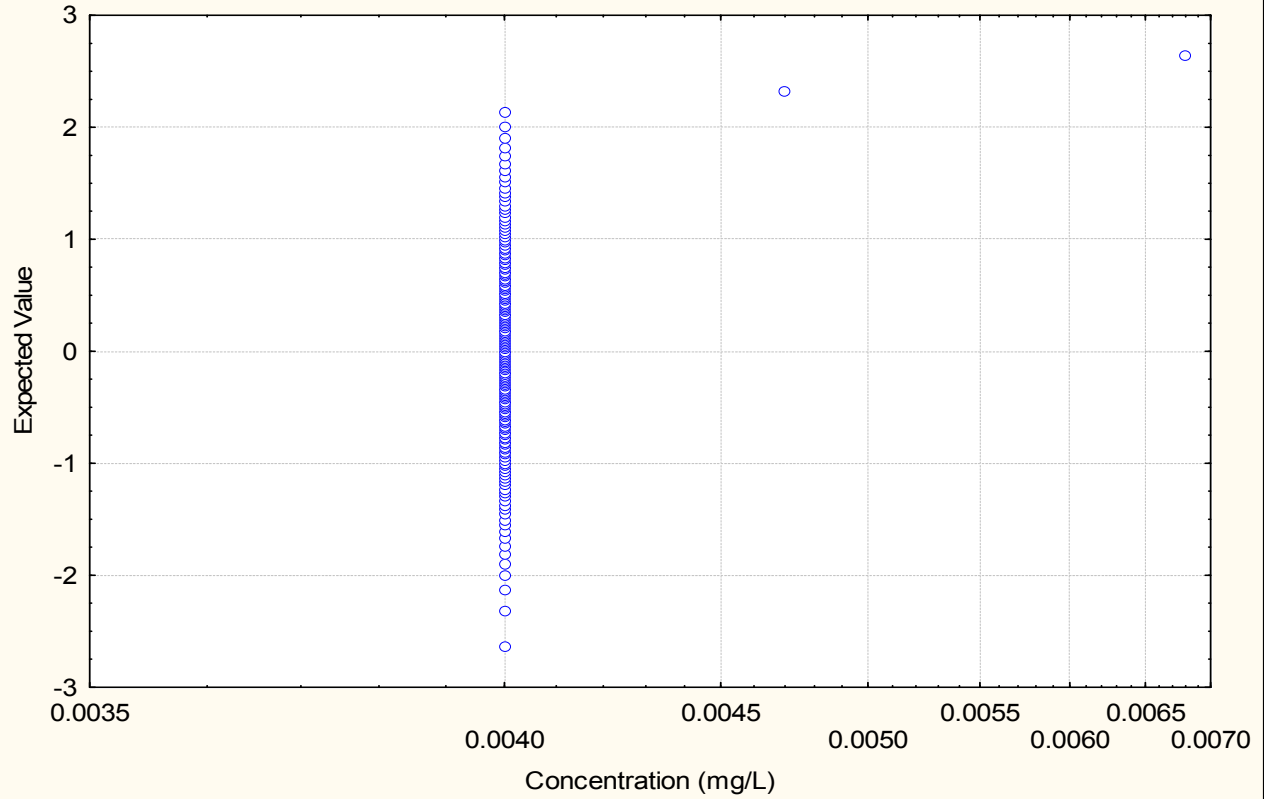


Figure B-19. Lognormal Probability Plot of Silver

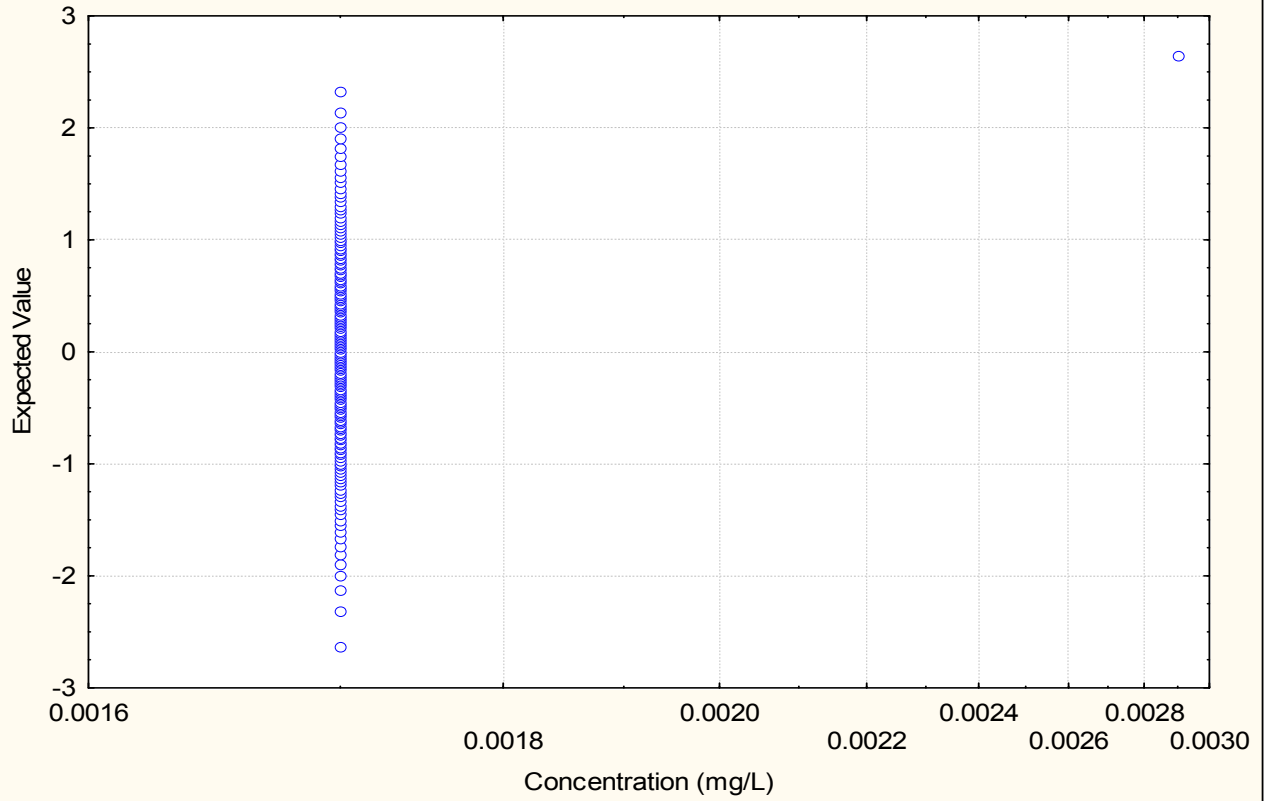


Figure B-20. Lognormal Probability Plot of Sodium

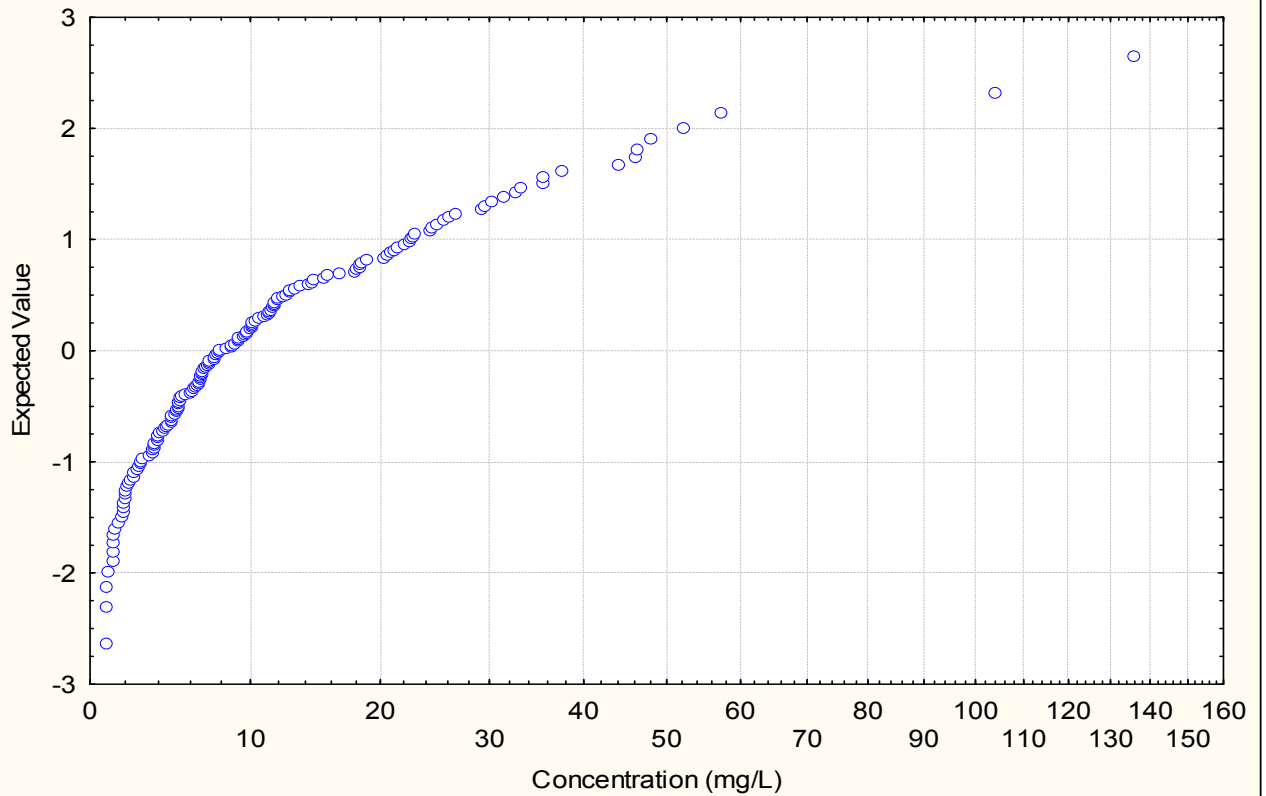


Figure B-21. Lognormal Probability Plot of Thallium

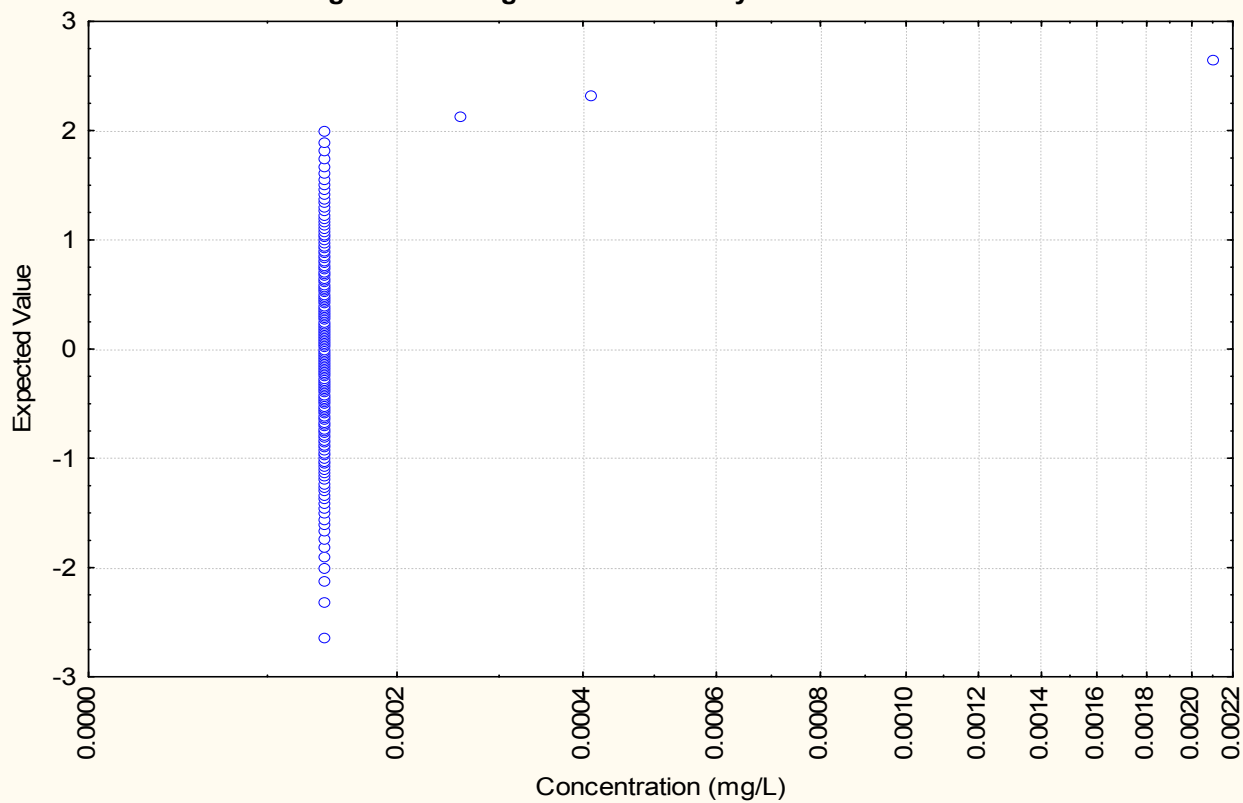


Figure B-22. Lognormal Probability Plot of Vanadium

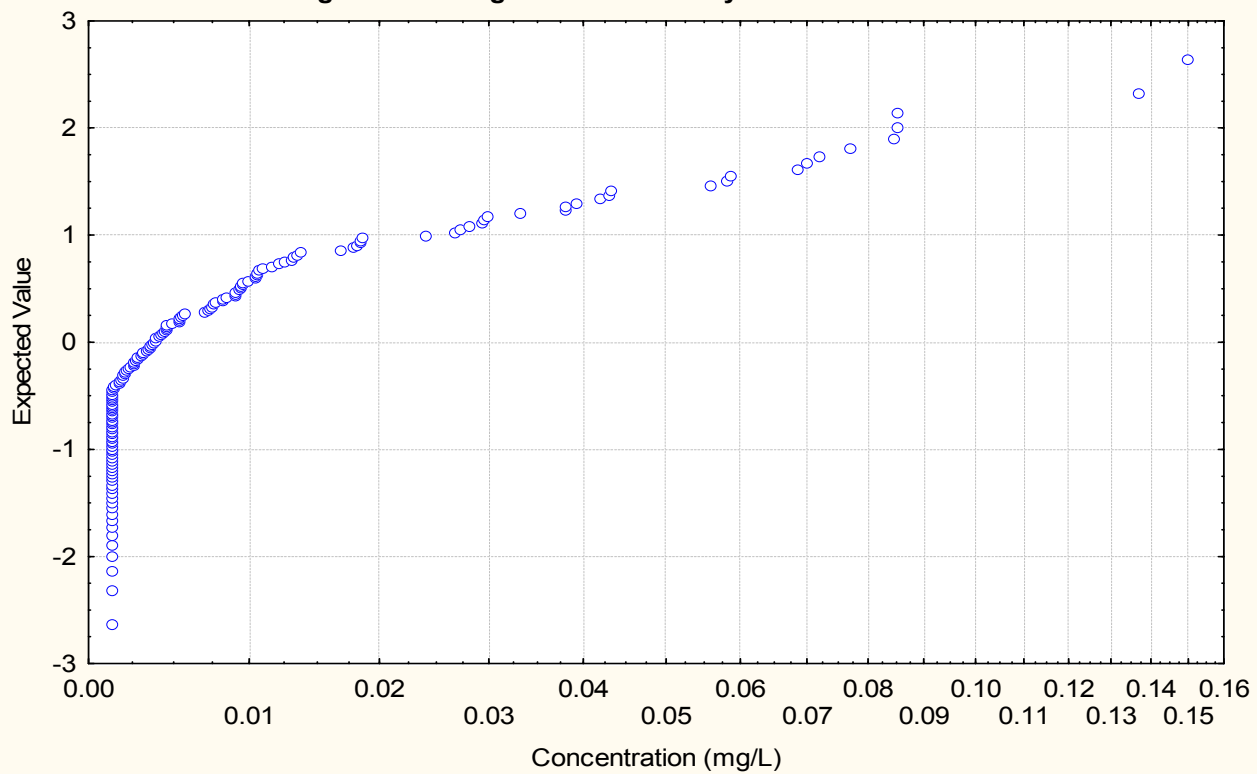
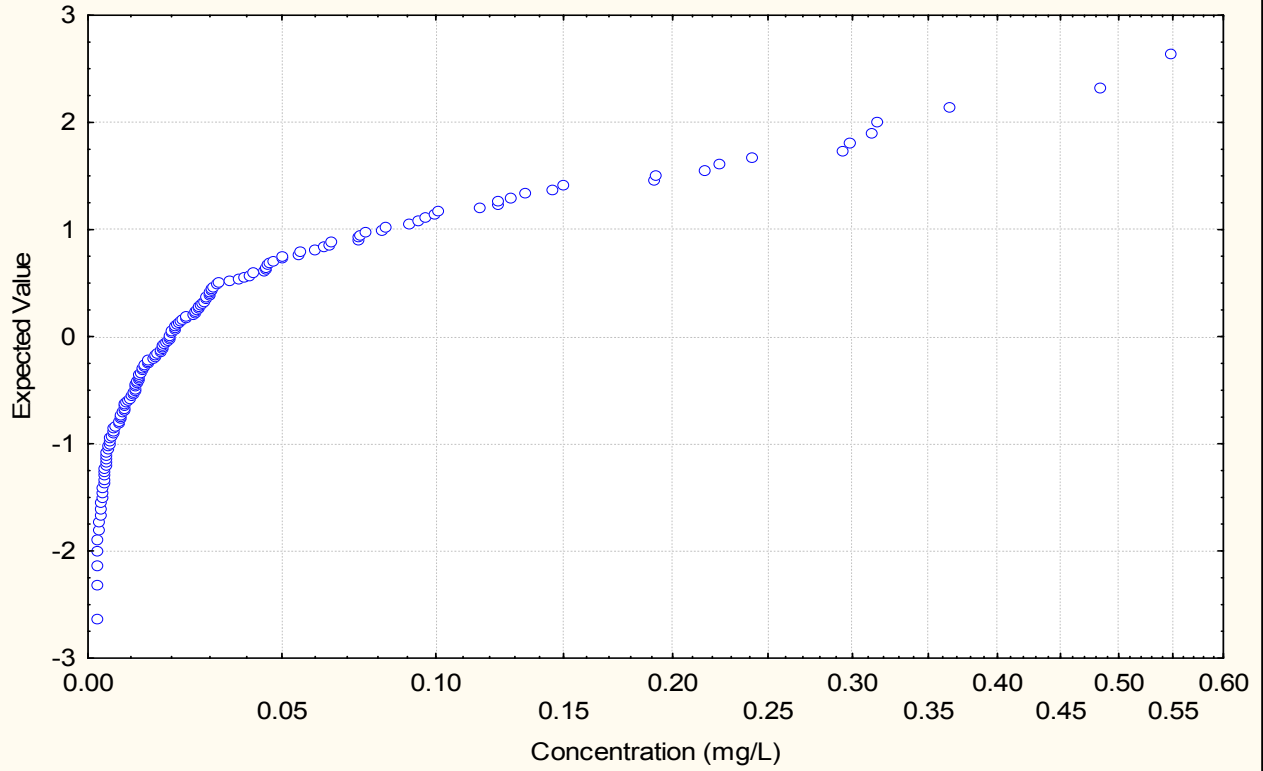


Figure B-23. Lognormal Probability Plot of Zinc



Appendix C

Background Data

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Aluminum | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|-----------------------|-------------|-------------|-------------|-----------|-------------|--------|----------|--------|------|--------|------|-------|----|
| RVAAP-02 Erie Burning Grounds | EBGmw-123 | Unconsolidated | FWGEBGmw-123C-125-GW | 10/19/2009 | 2380049.21 | 571747.04 | 945.59 | Grab | BP | 1.94 | | | | 0.05 | 0.019 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-124 | Unconsolidated | FWGEBGmw-124C-126-GW | 10/19/2009 | 2380030.24 | 571618.07 | 939.02 | Grab | BP | 37.3 | | | | 0.05 | 0.019 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-126 | Unconsolidated | FWGEBGmw-126C-128-GW | 10/19/2009 | 2380307.31 | 572348.81 | 938.2 | Grab | BP | 4.04 | | | | 0.05 | 0.019 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-127 | Unconsolidated | FWGEBGmw-127C-129-GW | 10/19/2009 | 2380172.16 | 571083.61 | 940.21 | Grab | BP | 2.17 | | | | 0.05 | 0.019 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-128 | Unconsolidated | FWGEBGmw-128C-130-GW | 10/19/2009 | 2379892.79 | 570970.32 | 942.47 | Grab | BP | 0.17 | | | | 0.05 | 0.019 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-129 | Unconsolidated | FWGEBGmw-129C-131-GW | 10/19/2009 | 2379240.52 | 572035.68 | 941.97 | Grab | BP | 8.65 | | | | 0.05 | 0.019 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-130 | Unconsolidated | FWGEBGmw-130C-132-GW | 10/19/2009 | 2379220.69 | 570695.61 | 941.18 | Grab | BP | 1.94 | | | | 0.05 | 0.019 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-104 | Unconsolidated | FWGDA2mw-104C-115-GW | 10/21/2009 | 2354773.248 | 561125.7023 | 1070.8244 | Grab | BP | 2.57 | | | | 0.05 | 0.019 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-107 | Unconsolidated | FWGDA2mw-107C-118-GW | 10/21/2009 | 2354923.231 | 560482.7171 | 1039.1815 | Grab | BP | 0.33 | | | | 0.05 | 0.019 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-108 | Unconsolidated | FWGDA2mw-108C-119-GW | 10/21/2009 | 2355602.421 | 560184.5864 | 1029.9156 | Grab | BP | 0.341 | | | | 0.05 | 0.019 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-109 | Unconsolidated | FWGDA2mw-109C-120-GW | 10/21/2009 | 2354796.85 | 559897.6695 | 1068.6588 | Grab | BP | 5.59 | | | | 0.05 | 0.019 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-110 | Unconsolidated | FWGDA2mw-110C-121-GW | 10/21/2009 | 2355195.202 | 559922.3928 | 1061.3878 | Grab | BP | 0.504 | | | | 0.05 | 0.019 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-112 | Unconsolidated | FWGDA2mw-112C-123-GW | 10/21/2009 | 2355019.568 | 560374.5046 | 1034.8724 | Grab | BP | 18 | | | | 0.05 | 0.019 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-113 | Unconsolidated | FWGDA2mw-113C-124-GW | 10/21/2009 | 2355150.554 | 560392.8898 | 1034.5126 | Grab | BP | 4.28 | | | | 0.05 | 0.019 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-1 | Unconsolidated | FWGDETMw-001-111-GW | 10/21/2009 | 2354959.47 | 560820.03 | 1063.97 | Grab | BP | 0.186 | | | | 0.05 | 0.019 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-2 | Unconsolidated | FWGDETMw-002C-115-GW | 10/21/2009 | 2355360.33 | 560664.71 | 1062.69 | Grab | BP | 2.44 | | | | 0.05 | 0.019 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-3 | Unconsolidated | FWGDETMw-003C-1488-GW | 10/14/2009 | 2355204.94 | 560456.1 | 1035.56 | Grab | BP | 1.06 | | | | 0.05 | 0.019 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-006 | Unconsolidated | FWGWBGmw-006C-171-GW | 10/20/2009 | 2359087.79 | 563008.87 | 1010.38 | Grab | BP | 0.39 | | | | 0.05 | 0.019 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-007 | Unconsolidated | FWGWBGmw-007C-172-GW | 10/20/2009 | 2360420.44 | 562479.87 | 995.33 | Grab | BP | 38.1 | | | | 0.05 | 0.019 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-009 | Unconsolidated | FWGWBGmw-009C-174-GW | 10/20/2009 | 2357159.2 | 561603.54 | 1042 | Grab | BP | 0.825 | | | | 0.05 | 0.019 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-010 | Unconsolidated | FWGWBGmw-010C-175-GW | 10/20/2009 | 2356051.96 | 562893.2 | 1069.85 | Grab | BP | 1.06 | | | | 0.05 | 0.019 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-011 | Unconsolidated | FWGWBGmw-011C-176-GW | 10/20/2009 | 2356187.29 | 562609.18 | 1072.38 | Grab | BP | 4.23 | | | | 0.05 | 0.019 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-012 | Unconsolidated | FWGWBGmw-012C-177-GW | 10/20/2009 | 2354810.65 | 562240.9 | 1079.11 | Grab | BP | 19 | | | | 0.05 | 0.019 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-013 | Unconsolidated | FWGWBGmw-013C-178-GW | 10/20/2009 | 2355223.25 | 561518.27 | 1071.7 | Grab | BP | 5.17 | | | | 0.05 | 0.019 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-014 | Unconsolidated | FWGWBGmw-014C-179-GW | 10/20/2009 | 2360439.22 | 562061.26 | 996.78 | Grab | BP | 2.07 | | | | 0.05 | 0.019 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-015 | Unconsolidated | FWGWBGmw-015C-180-GW | 10/20/2009 | 2359182.41 | 562340.12 | 1011.6 | Grab | BP | 2.75 | | | | 0.05 | 0.019 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-016 | Unconsolidated | FWGWBGmw-016C-181-GW | 10/20/2009 | 2360645.88 | 562709.13 | 997.03 | Grab | BP | 4.17 | | | | 0.05 | 0.019 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-017 | Unconsolidated | FWGWBGmw-017C-182-GW | 10/20/2009 | 2359603.84 | 562913.24 | 1006.62 | Grab | BP | 22.5 | | | | 0.05 | 0.019 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-064 | Unconsolidated | FWGLL1mw-064-022-GW | 10/19/2009 | 2380286.973 | 563118.7363 | 932 | Grab | BP | 5.18 | | | P | 0.05 | 0.019 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-065 | Unconsolidated | FWGLL1mw-065-023-GW | 10/19/2009 | 2380452.003 | 560916.9225 | 940 | Grab | BP | 71.2 | | | | 0.05 | 0.019 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-193 | Unconsolidated | FWGLL4mw-193-057-GW | 10/21/2009 | 2364236.52 | 554960.27 | 982.92 | Grab | BP | 0.019 | U | U | | 0.05 | 0.019 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-194 | Unconsolidated | FWGLL4mw-194C-058-GW | 10/16/2009 | 2364584.86 | 555089.22 | 983.76 | Grab | BP | 10.4 | | | | 0.05 | 0.019 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-196 | Unconsolidated | FWGLL4mw-196C-060-GW | 10/16/2009 | 2365297.1 | 555213.52 | 984.55 | Grab | BP | 0.715 | | | | 0.05 | 0.019 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-197 | Unconsolidated | FWGLL4mw-197C-061-GW | 10/16/2009 | 2365384.91 | 555397.05 | 985.46 | Grab | BP | 0.872 | | | | 0.05 | 0.019 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-198 | Unconsolidated | FWGLL4mw-198C-062-GW | 10/21/2009 | 2364991.19 | 555442.04 | 983.42 | Grab | BP | 10.3 | | | | 0.05 | 0.019 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-199 | Unconsolidated | FWGLL4mw-199C-063-GW | 10/16/2009 | 2365420.78 | 554621.62 | 977.28 | Grab | BP | 1.35 | | | | 0.05 | 0.019 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-200 | Unconsolidated | FWGLL4mw-200-064-GW | 10/21/2009 | 2365903.05 | 554580.15 | 987.93 | Grab | BP | 1.99 | | | | 0.05 | 0.019 | 1 |
| RVAAP-12 Load Line 12 | L12mw-107 | Unconsolidated | FWGLL12mw-107C-072-GW | 10/16/2009 | 2368595.67 | 556759.02 | 978.03 | Grab | BP | 0.113 | | | | 0.05 | 0.019 | 1 |
| RVAAP-12 Load Line 12 | L12mw-128 | Unconsolidated | FWGLL12mw-128C-074-GW | 10/16/2009 | 2368293.2 | 557371.54 | 976.21 | Grab | BP | 23.1 | | | | 0.05 | 0.019 | 1 |
| RVAAP-12 Load Line 12 | L12mw-153 | Unconsolidated | FWGLL12mw-153C-075-GW | 10/16/2009 | 2368138.87 | 557823.23 | 975.34 | Grab | BP | 0.732 | | | | 0.05 | 0.019 | 1 |
| RVAAP-12 Load Line 12 | L12mw-154 | Unconsolidated | FWGLL12mw-154C-076-GW | 10/16/2009 | 2368183.88 | 557754.56 | 977 | Grab | BP | 4.28 | | | | 0.05 | 0.019 | 1 |
| RVAAP-12 Load Line 12 | L12mw-182 | Unconsolidated | FWGLL12mw-182C-077-GW | 10/16/2009 | 2368853.2 | 555890.35 | 982.2 | Grab | BP | 0.663 | | | | 0.05 | 0.019 | 1 |
| RVAAP-12 Load Line 12 | L12mw-188 | Unconsolidated | FWGLL12mw-188C-083-GW | 10/15/2009 | 2367908.82 | 558132.59 | 978.46 | Grab | BP | 2.79 | | | | 0.05 | 0.019 | 1 |
| RVAAP-12 Load Line 12 | L12mw-242 | Unconsolidated | FWGLL12mw-242C-085-GW | 10/15/2009 | 2368545.29 | 558020.51 | 980 | Grab | BP | 1.72 | | | | 0.05 | 0.019 | 1 |
| RVAAP-12 Load Line 12 | L12mw-243 | Unconsolidated | FWGLL12mw-243C-086-GW | 10/16/2009 | 2368190.04 | 557376.32 | 978 | Grab | BP | 17.3 | | | | 0.05 | 0.019 | 1 |
| RVAAP-12 Load Line 12 | L12mw-244 | Unconsolidated | FWGLL12mw-244C-087-GW | 10/16/2009 | 2368751.42 | 557377.17 | 980 | Grab | BP | 55.3 | | | | 0.05 | 0.019 | 1 |
| RVAAP-12 Load Line 12 | L12mw-245 | Unconsolidated | FWGLL12mw-245C-088-GW | 10/16/2009 | 2368370.74 | 557044.55 | 978 | Grab | BP | 11.9 | | | | 0.05 | 0.019 | 1 |
| RVAAP-12 Load Line 12 | L12mw-246 | Unconsolidated | FWGLL12mw-246C-089-GW | 10/16/2009 | 2369432.17 | 556658.89 | 982.96 | Grab | BP | 2.09 | | | | 0.05 | 0.019 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-166 | Unconsolidated | FWGFBQmw-166C-133-GW | 10/22/2009 | 2349584.33 | 553123.86 | 1104.87 | Grab | BP | 0.781 | | | | 0.05 | 0.019 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-167 | Unconsolidated | FWGFBQmw-167C-134-GW | 10/22/2009 | 2349675.45 | 553556.12 | 1112.05 | Grab | BP | 7.2 | | | | 0.05 | 0.019 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-176 | Unconsolidated | FWGFBQmw-176C-143-GW | 10/22/2009 | 2350219.45 | 553273.33 | 1129.57 | Grab | BP | 15.8 | | | | 0.05 | 0.019 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-024 | Unconsolidated | FWGLNWmw-024C-145-GW | 10/20/2009 | 2358400 | 564828 | 1035.3 | Grab | BP | 17.4 | | | | 0.05 | 0.019 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-025 | Unconsolidated | FWGLNWmw-025C-146-GW | 10/20/2009 | 2358420 | 565070 | 1027.2 | Grab | BP | 4.38 | | | | 0.05 | 0.019 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-026 | Unconsolidated | FWGLNWmw-026C-147-GW | 10/20/2009 | 2358950 | 564656 | 1025 | Grab | BP | 3.98 | | | | 0.05 | 0.019 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOB | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Aluminum | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|----------|--------|------|--------|------|-------|----|
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-027 | Unconsolidated | FWGLNWmw-027C-148-GW | 10/20/2009 | 2358630 | 564519 | 1024.4 | Grab | BP | 0.482 | | | | 0.05 | 0.019 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-001 | Unconsolidated | FWGMBSmw-001C-183-GW | 10/20/2009 | 2345323 | 550759.5 | 1079.68 | Grab | BP | 2.33 | | | | 0.05 | 0.019 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-002 | Unconsolidated | FWGMBSmw-002C-184-GW | 10/20/2009 | 2345322.3 | 550886.2 | 1080.5 | Grab | BP | 3.97 | | | | 0.05 | 0.019 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-003 | Unconsolidated | FWGMBSmw-003C-185-GW | 10/20/2009 | 2345172.4 | 550922.8 | 1082.45 | Grab | BP | 0.235 | | | | 0.05 | 0.019 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-004 | Unconsolidated | FWGMBSmw-004C-186-GW | 10/20/2009 | 2345134.2 | 550767.9 | 1079.55 | Grab | BP | 0.112 | | | | 0.05 | 0.019 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-005 | Unconsolidated | FWGMBSmw-005C-187-GW | 10/20/2009 | 2345354.1 | 550800.7 | 1080.5 | Grab | BP | 4.94 | | | | 0.05 | 0.019 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-006 | Unconsolidated | FWGMBSmw-006C-188-GW | 10/20/2009 | 2345282.3 | 550726.1 | 1080.29 | Grab | BP | 0.669 | | | | 0.05 | 0.019 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-001 | Unconsolidated | FWGCPmw-001C-105-GW | 10/21/2009 | 2368948.852 | 560440.9741 | 975.2594 | Grab | BP | 0.977 | | | | 0.05 | 0.019 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-004 | Unconsolidated | FWGCPmw-004C-108-GW | 10/21/2009 | 2368674.21 | 561843.2791 | 981.198 | Grab | BP | 0.921 J | | | Pj,H | 0.05 | 0.019 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-006 | Unconsolidated | FWGCPmw-006C-110-GW | 10/21/2009 | 2367727.191 | 562830.039 | 965.13 | Grab | BP | 35.4 J | | E | Pj,H | 0.05 | 0.019 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-001 | Unconsolidated | FWGLL6mw-001C-001-GW | 10/21/2009 | 2353153.227 | 554214.8365 | 1124.1607 | Grab | B | 32.9 | | | | 0.05 | 0.019 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-002 | Unconsolidated | FWGLL6mw-002C-002-GW | 10/21/2009 | 2353820.091 | 553589.8815 | 1129.3631 | Grab | B | 43.2 J | | | H | 0.05 | 0.019 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-107 | Unconsolidated | FWGNTAmw-107C-149-GW | 10/20/2009 | 2345432.73 | 551699.09 | 1077.65 | Grab | BP | 10.2 | | | | 0.05 | 0.019 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-108 | Unconsolidated | FWGNTAmw-108C-150-GW | 10/20/2009 | 2345782.17 | 551917.92 | 1083.22 | Grab | BP | 5.28 | | | | 0.05 | 0.019 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-109 | Unconsolidated | FWGNTAmw-109C-151-GW | 10/20/2009 | 2345996.99 | 551291.19 | 1076.89 | Grab | BP | 1.35 | | | | 0.05 | 0.019 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-110 | Unconsolidated | FWGNTAmw-110C-152-GW | 10/20/2009 | 2346436.82 | 551350.8 | 1080.03 | Grab | BP | 4.12 | | | | 0.05 | 0.019 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-111 | Unconsolidated | FWGNTAmw-111C-153-GW | 10/20/2009 | 2346640.16 | 551538.99 | 1078.07 | Grab | BP | 0.0696 | | | | 0.05 | 0.019 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-112 | Unconsolidated | FWGNTAmw-112C-154-GW | 10/20/2009 | 2346889.01 | 551708.76 | 1075.36 | Grab | BP | 16.1 | | | | 0.05 | 0.019 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-113 | Unconsolidated | FWGNTAmw-113C-155-GW | 10/20/2009 | 2347081.15 | 551487.86 | 1072.61 | Grab | BP | 46.5 | | | | 0.05 | 0.019 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-115 | Unconsolidated | FWGNTAmw-115C-157-GW | 10/20/2009 | 2347582.94 | 551793.39 | 1086.91 | Grab | BP | 2.08 | | | | 0.05 | 0.019 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-116 | Unconsolidated | FWGNTAmw-116C-158-GW | 10/20/2009 | 2348196.78 | 551749.39 | 1091.68 | Grab | BP | 9.97 | | | | 0.05 | 0.019 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-117 | Unconsolidated | FWGNTAmw-117C-159-GW | 10/20/2009 | 2347994.79 | 551586.36 | 1091.67 | Grab | BP | 0.341 | | | | 0.05 | 0.019 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-118 | Unconsolidated | FWGNTAmw-118C-160-GW | 10/20/2009 | 2347608.09 | 551333.89 | 1078.86 | Grab | BP | 3.91 | | | | 0.05 | 0.019 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-003 | Unconsolidated | FWGLL5mw-003C-067-GW | 10/21/2009 | 2354962.47 | 554533.41 | 1124.7 | Grab | BP | 24.5 | | | | 0.05 | 0.019 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-001 | Unconsolidated | FWGLL8mw-001C-1436-GW | 10/13/2009 | 2351660 | 552609 | 1118.69 | Grab | BP | 1.59 | | | | 0.05 | 0.019 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-002 | Unconsolidated | FWGLL8mw-002C-1437-GW | 10/13/2009 | 2351010 | 552410 | 1121.67 | Grab | BP | 0.396 | | | | 0.05 | 0.019 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-003 | Unconsolidated | FWGLL8mw-003C-1438-GW | 10/13/2009 | 2351360 | 552231 | 1116.3 | Grab | BP | 0.526 | | | | 0.05 | 0.019 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-004 | Unconsolidated | FWGLL8mw-004C-1439-GW | 10/13/2009 | 2351260 | 551808 | 1112.73 | Grab | BP | 0.317 | | | | 0.05 | 0.019 | 1 |
| RVAAP-43 Load Line 10 | L10mw-006 | Unconsolidated | FWGLL10mw-006C-1454-GW | 10/14/2009 | 2355656.8 | 554997.25 | 1121.2 | Grab | BP | 2.16 | | | P | 0.05 | 0.019 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-001 | Unconsolidated | FWGLL11mw-001C-1455-GW | 10/14/2009 | 2352778.81 | 557504.98 | 1100.16 | Grab | BP | 0.205 | | | | 0.05 | 0.019 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-006 | Unconsolidated | FWGLL11mw-006C-1459-GW | 10/14/2009 | 2352521.51 | 558263.51 | 1086.5 | Grab | BP | 1.71 | | | | 0.05 | 0.019 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-008 | Unconsolidated | FWGLL11mw-008C-1460-GW | 10/14/2009 | 2352388.57 | 557981.26 | 1087.74 | Grab | BP | 0.777 | | | | 0.05 | 0.019 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-009 | Unconsolidated | FWGLL11mw-009C-1461-GW | 10/14/2009 | 2352577.21 | 557901.2 | 1088.28 | Grab | BP | 0.754 | | | | 0.05 | 0.019 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-010 | Unconsolidated | FWGLL11mw-010C-1462-GW | 10/14/2009 | 2352038.91 | 557675.59 | 1082.68 | Grab | BP | 2.56 | | | P | 0.05 | 0.019 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-001 | Unconsolidated | FWGCBPmw-001C-097-GW | 10/21/2009 | 2367095.431 | 561616.171 | 975.8411 | Grab | BP | 7.51 J | | | H | 0.05 | 0.019 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-002 | Unconsolidated | FWGCBPmw-002C-098-GW | 10/21/2009 | 2367295.684 | 561865.9216 | 970.0359 | Grab | BP | 13.3 J | | | H | 0.05 | 0.019 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-003 | Unconsolidated | FWGCBPmw-003C-099-GW | 10/21/2009 | 2366768.739 | 561944.2018 | 974.6665 | Grab | BP | 0.212 J | | | H | 0.05 | 0.019 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-004 | Unconsolidated | FWGCBPmw-004C-100-GW | 10/21/2009 | 2366978.819 | 562123.8244 | 971.1285 | Grab | BP | 32.4 J | | | H | 0.05 | 0.019 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-005 | Unconsolidated | FWGCBPmw-005C-101-GW | 10/21/2009 | 2366919.482 | 562311.8596 | 971.5897 | Grab | BP | 16.6 J | | J | | 0.05 | 0.019 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-006 | Unconsolidated | FWGCBPmw-006C-102-GW | 10/21/2009 | 2367243.659 | 562311.9449 | 967.6448 | Grab | BP | 42 J | | | H | 0.05 | 0.019 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-007 | Unconsolidated | FWGCBPmw-007C-103-GW | 10/21/2009 | 2366512.573 | 562006.343 | 976.3736 | Grab | BP | 0.152 J | | J | | 0.05 | 0.019 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-007 | Unconsolidated | FWGASYmw-007C-1469-GW | 10/15/2009 | 2366840 | 556820 | 981.4 | Grab | BP | 0.339 | | | | 0.05 | 0.019 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-008 | Unconsolidated | FWGASYmw-008C-1470-GW | 10/15/2009 | 2367470 | 557086 | 976.2 | Grab | BP | 91.7 | | | | 0.05 | 0.019 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-010 | Unconsolidated | FWGASYmw-010C-1472-GW | 10/15/2009 | 2366980 | 557273 | 978.2 | Grab | BP | 5.95 | | | | 0.05 | 0.019 | 1 |
| Site-wide Background Areas | BKGmw-004 | Unconsolidated | FWGBKGmw-004C-007-GW | 10/21/2009 | 2368852.973 | 569464.763 | 965.16 | Grab | BP | 1.13 | | | | 0.05 | 0.019 | 1 |
| Site-wide Background Areas | BKGmw-005 | Unconsolidated | FWGBKGmw-005C-008-GW | 10/22/2009 | 2340835.864 | 562288.445 | 1149.443 | Grab | BP | 5.62 | | | | 0.05 | 0.019 | 1 |
| Site-wide Background Areas | BKGmw-013 | Unconsolidated | FWGBKGmw-013C-013-GW | 10/21/2009 | 2361627.394 | 558269.158 | 986.588 | Grab | BP | 0.223 J | | | H | 0.05 | 0.019 | 1 |
| Site-wide Background Areas | BKGmw-016 | Unconsolidated | FWGBKGmw-016C-015-GW | 10/22/2009 | 2342407.075 | 553983.501 | 1098.419 | Grab | BP | 0.247 | | | | 0.05 | 0.019 | 1 |
| Site-wide Background Areas | BKGmw-017 | Unconsolidated | FWGBKGmw-017C-016-GW | 10/22/2009 | 2346115.351 | 562452.044 | 1132.799 | Grab | BP | 3.21 | | | | 0.05 | 0.019 | 1 |
| Site-wide Background Areas | BKGmw-019 | Unconsolidated | FWGBKGmw-019C-018-GW | 10/22/2009 | 2349882.142 | 559864.549 | 1108.239 | Grab | BP | 4.69 | | | | 0.05 | 0.019 | 1 |
| Site-wide Background Areas | BKGmw-020 | Unconsolidated | FWGBKGmw-020C-019-GW | 10/21/2009 | 2357856.237 | 558756.241 | 1065.001 | Grab | BP | 0.338 J | | J | | 0.05 | 0.019 | 1 |
| Site-wide Background Areas | BKGmw-021 | Unconsolidated | FWGBKGmw-021C-020-GW | 10/21/2009 | 2367622.953 | 571016.748 | 972.159 | Grab | BP | 0.755 | | | | 0.05 | 0.019 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Aluminum | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|----------|--------|------|--------|------|-------|----|
| RVAAP-01 Ramsdell Quarry Landfill | RQLmw-009 | Sharon | FWGRQLmw-009C-1487-GW | 10/14/2009 | 2376253.654 | 566351.1994 | 964 | Grab | BP | 1.26 | | | | 0.05 | 0.019 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-078 | Sharon | FWGLL1mw-078-025-GW | 10/19/2009 | 2376275.854 | 564623.871 | 995.84 | Grab | BP | 3.12 | | | | 0.05 | 0.019 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-080 | Sharon | FWGLL1mw-080-027-GW | 10/19/2009 | 2376845.072 | 562479.728 | 996.27 | Grab | BP | 38.7 | | | | 0.05 | 0.019 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-082 | Sharon | FWGLL1mw-082-029-GW | 10/19/2009 | 2376977.379 | 562956.86 | 1006.45 | Grab | BP | 5.2 | | | | 0.05 | 0.019 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-060 | Sharon | FWGLL2mw-060C-034-GW | 10/19/2009 | 2375978 | 558022 | 958.13 | Grab | BP | 0.344 | | | | 0.05 | 0.019 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-263 | Sharon | FWGLL2mw-263-037-GW | 10/19/2009 | 2374290.29 | 561590.92 | 1009.42 | Grab | BP | 2.32 | | | | 0.05 | 0.019 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-264 | Sharon | FWGLL2mw-264-038-GW | 10/19/2009 | 2374532.76 | 561173.63 | 1010.1 | Grab | BP | 0.874 | | | | 0.05 | 0.019 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-267 | Sharon | FWGLL2mw-267C-041-GW | 10/19/2009 | 2373714.17 | 561393.73 | 1012.81 | Grab | BP | 0.577 | | | | 0.05 | 0.019 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-268 | Sharon | FWGLL2mw-268-042-GW | 10/19/2009 | 2374156.4 | 560831.44 | 1015.47 | Grab | BP | 5.6 | | | | 0.05 | 0.019 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-269 | Sharon | FWGLL2mw-269-043-GW | 10/20/2009 | 2374756.74 | 559483.9 | 1009.49 | Grab | BP | 0.448 | | | | 0.05 | 0.019 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-270 | Sharon | FWGLL2mw-270-044-GW | 10/19/2009 | 2372858.94 | 562656.18 | 1009.93 | Grab | BP | 0.276 | | | | 0.05 | 0.019 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-238 | Sharon | FWGLL3mw-238C-051-GW | 10/20/2009 | 2370624.55 | 559569.39 | 1006.91 | Grab | BP | 5.84 | | | | 0.05 | 0.019 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-239 | Sharon | FWGLL3mw-239-052-GW | 10/20/2009 | 2370894.17 | 559101.84 | 1003.5 | Grab | BP | 1.36 | | | | 0.05 | 0.019 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-241 | Sharon | FWGLL3mw-241-054-GW | 10/20/2009 | 2370332.94 | 559299 | 994.65 | Grab | BP | 1.44 | | | | 0.05 | 0.019 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-242 | Sharon | FWGLL3mw-242-055-GW | 10/21/2009 | 2371993.44 | 557035.28 | 999.32 | Grab | BP | 7.57 | | | | 0.05 | 0.019 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-243 | Sharon | FWGLL3mw-243C-056-GW | 10/21/2009 | 2371532.06 | 556688.5 | 991.16 | Grab | BP | 5.7 | | | | 0.05 | 0.019 | 1 |
| RVAAP-12 Load Line 12 | L12mw-186 | Sharon | FWGLL12mw-186C-081-GW | 10/15/2009 | 2367912.39 | 559065.95 | 976.34 | Grab | BP | 0.535 | | | | 0.05 | 0.019 | 1 |
| RVAAP-12 Load Line 12 | L12mw-189 | Sharon | FWGLL12mw-189C-084-GW | 10/15/2009 | 2367945.92 | 558569.27 | 976.17 | Grab | BP | 5.98 | | | | 0.05 | 0.019 | 1 |
| RVAAP-13 Building 1200 | B12mw-011 | Sharon | FWGB12mw-011C-091-GW | 10/21/2009 | 2371420 | 565690 | 1003.76 | Grab | BP | 0.0437 J | | B | L | 0.05 | 0.019 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-001 | Sharon | FWGASYmw-001C-1463-GW | 10/14/2009 | 2366262.85 | 558406.04 | 978.4 | Grab | BP | 2.38 | | | | 0.05 | 0.019 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-002 | Sharon | FWGASYmw-002C-1464-GW | 10/15/2009 | 2366170 | 557890 | 982 | Grab | BP | 1.16 | | | | 0.05 | 0.019 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-003 | Sharon | FWGASYmw-003C-1465-GW | 10/15/2009 | 2366650 | 558014 | 979.7 | Grab | BP | 0.358 | | | | 0.05 | 0.019 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-005 | Sharon | FWGASYmw-005C-1467-GW | 10/15/2009 | 2367450 | 557785 | 977.6 | Grab | BP | 3.52 | | | | 0.05 | 0.019 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-006 | Sharon | FWGASYmw-006C-1468-GW | 10/15/2009 | 2366750 | 557256 | 980.2 | Grab | BP | 5.81 | | | | 0.05 | 0.019 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-009 | Sharon | FWGASYmw-009C-1471-GW | 10/15/2009 | 2366630 | 557606 | 979.9 | Grab | BP | 2.71 | | | | 0.05 | 0.019 | 1 |
| Site-wide Background Areas | BKGmw-012 | Sharon | FWGBKGmw-012C-012-GW | 10/21/2009 | 2367795.226 | 563918.862 | 997.574 | Grab | BP | 1.59 J | | | H | 0.05 | 0.019 | 1 |
| Site-wide Background Areas | BKGmw-018 | Sharon | FWGBKGmw-018C-017-GW | 10/21/2009 | 2354993.909 | 570873.349 | 1043.06 | Grab | BP | 0.04 J | | B | L | 0.05 | 0.019 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-001 | Homewood | FWGCBLmw-001C-093-GW | 10/21/2009 | 2343659.08 | 559405.12 | 1178.5 | Grab | BP | 0.135 J | | J | | 0.05 | 0.019 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-003 | Homewood | FWGCBLmw-003C-095-GW | 10/22/2009 | 2343967.67 | 559697.13 | 1172.22 | Grab | BP | 0.0822 | | | | 0.05 | 0.019 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-004 | Homewood | FWGCBLmw-004C-096-GW | 10/22/2009 | 2343687.21 | 559950 | 1172.08 | Grab | BP | 1.61 | | | | 0.05 | 0.019 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-171 | Homewood | FWGFBQmw-171C-138-GW | 10/22/2009 | 2350072.44 | 554230.93 | 1140.49 | Grab | BP | 2.05 J | | J | | 0.05 | 0.019 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-172 | Homewood | FWGFBQmw-172C-139-GW | 10/22/2009 | 2349907.37 | 554322.17 | 1145.71 | Grab | BP | 0.118 | | | | 0.05 | 0.019 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-173 | Homewood | FWGFBQmw-173C-140-GW | 10/22/2009 | 2350449.01 | 554491.35 | 1162.43 | Grab | BP | 0.0643 B | | J | F | 0.05 | 0.019 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-174 | Homewood | FWGFBQmw-174C-141-GW | 10/22/2009 | 2350289.81 | 554142.44 | 1135.78 | Grab | BP | 0.0587 B | | J | F | 0.05 | 0.019 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-175 | Homewood | FWGFBQmw-175C-142-GW | 10/22/2009 | 2350297.98 | 553989.24 | 1137.16 | Grab | BP | 1.56 | | | | 0.05 | 0.019 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-177 | Homewood | FWGFBQmw-177C-144-GW | 10/22/2009 | 2350112.18 | 553321.94 | 1125.73 | Grab | BP | 3.45 | | | | 0.05 | 0.019 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-003 | Homewood | FWGLL6mw-003C-003-GW | 10/21/2009 | 2353048.684 | 553544.3432 | 1125.3837 | Grab | BP | 16 | | | | 0.05 | 0.019 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-004 | Homewood | FWGLL6mw-004C-004-GW | 10/21/2009 | 2353368.787 | 553431.8182 | 1125.3851 | Grab | BP | 0.175 | | | | 0.05 | 0.019 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-001 | Homewood | FWGLL5mw-001C-065-GW | 10/21/2009 | 2354627.07 | 554321.25 | 1125 | Grab | BP | 5.41 | | | | 0.05 | 0.019 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-002 | Homewood | FWGLL5mw-002C-066-GW | 10/21/2009 | 2354573.52 | 554606 | 1125.8 | Grab | BP | 21.8 | | | | 0.05 | 0.019 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-004 | Homewood | FWGLL5mw-004C-068-GW | 10/21/2009 | 2355008.44 | 554071.73 | 1122.9 | Grab | BP | 32.1 | | | | 0.05 | 0.019 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-005 | Homewood | FWGLL5mw-005C-069-GW | 10/22/2009 | 2354424.02 | 554154.73 | 1126.5 | Grab | BP | 7.27 | | | | 0.05 | 0.019 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-006 | Homewood | FWGLL5mw-006C-070-GW | 10/21/2009 | 2354730 | 553981.82 | 1125.1 | Grab | BP | 23.2 | | E | | 0.05 | 0.019 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-003 | Homewood | FWGLL7mw-003C-1432-GW | 10/12/2009 | 2352349.51 | 555414.33 | 1118.23 | Grab | BP | 0.146 J | | | Z | 0.05 | 0.019 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-004 | Homewood | FWGLL7mw-004C-1433-GW | 10/12/2009 | 2352036.23 | 555583.15 | 1123.3 | Grab | BP | 1.09 J | | | Z | 0.05 | 0.019 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-005 | Homewood | FWGLL8mw-005C-1440-GW | 10/13/2009 | 2351750 | 551522 | 1112.51 | Grab | BP | 6.4 | | | P | 0.05 | 0.019 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-006 | Homewood | FWGLL8mw-006C-1441-GW | 10/13/2009 | 2351480 | 551295 | 1114.33 | Grab | BP | 3.33 | | | | 0.05 | 0.019 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-001 | Homewood | FWGLL9mw-001C-1442-GW | 10/13/2009 | 2355817.04 | 556125.81 | 1134.62 | Grab | BP | 1.27 | | | | 0.05 | 0.019 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-002 | Homewood | FWGLL9mw-002C-1443-GW | 10/13/2009 | 2355907.76 | 556755.11 | 1127.3 | Grab | BP | 0.526 | | | | 0.05 | 0.019 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-003 | Homewood | FWGLL9mw-003C-1444-GW | 10/13/2009 | 2356635.21 | 556445.31 | 1135.76 | Grab | BP | 0.894 | | | | 0.05 | 0.019 | 1 |
| RVAAP-43 Load Line 10 | L10mw-001 | Homewood | FWGLL10mw-001C-1449-GW | 10/13/2009 | 2355272.22 | 555818.25 | 1130 | Grab | BP | 0.911 | | | | 0.05 | 0.019 | 1 |
| RVAAP-43 Load Line 10 | L10mw-002 | Homewood | FWGLL10mw-002C-1450-GW | 10/13/2009 | 2355712.51 | 555525.36 | 1124.4 | Grab | BP | 0.0239 J | | B | L | 0.05 | 0.019 | 1 |
| RVAAP-43 Load Line 10 | L10mw-003 | Homewood | FWGLL10mw-003C-1451-GW | 10/13/2009 | 2355387.92 | 555496.71 | 1127.4 | Grab | BP | 0.0832 | | | | 0.05 | 0.019 | 1 |
| RVAAP-43 Load Line 10 | L10mw-004 | Homewood | FWGLL10mw-004C-1452-GW | 10/14/2009 | 2355440.2 | 555234.59 | 1119.6 | Grab | BP | 0.0574 | | | | 0.05 | 0.019 | 1 |
| RVAAP-43 Load Line 10 | L10mw-005 | Homewood | FWGLL10mw-005C-1453-GW | 10/14/2009 | 2355941.55 | 555382.53 | 1122.9 | Grab | BP | 1.18 | | | | 0.05 | 0.019 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Antimony | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|-----------------------|-------------|-------------|-------------|-----------|-------------|--------|----------|--------|------|---------|-------|---------|----|
| RVAAP-02 Erie Burning Grounds | EBGmw-123 | Unconsolidated | FWGEBGmw-123C-125-GW | 10/19/2009 | 2380049.21 | 571747.04 | 945.59 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-124 | Unconsolidated | FWGEBGmw-124C-126-GW | 10/19/2009 | 2380030.24 | 571618.07 | 939.02 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.002 | 0.00013 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-126 | Unconsolidated | FWGEBGmw-126C-128-GW | 10/19/2009 | 2380307.31 | 572348.81 | 938.2 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-127 | Unconsolidated | FWGEBGmw-127C-129-GW | 10/19/2009 | 2380172.16 | 571083.61 | 940.21 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-128 | Unconsolidated | FWGEBGmw-128C-130-GW | 10/19/2009 | 2379892.79 | 570970.32 | 942.47 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-129 | Unconsolidated | FWGEBGmw-129C-131-GW | 10/19/2009 | 2379240.52 | 572035.68 | 941.97 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.002 | 0.00013 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-130 | Unconsolidated | FWGEBGmw-130C-132-GW | 10/19/2009 | 2379220.69 | 570695.61 | 941.18 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-104 | Unconsolidated | FWGDA2mw-104C-115-GW | 10/21/2009 | 2354773.248 | 561125.7023 | 1070.8244 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-107 | Unconsolidated | FWGDA2mw-107C-118-GW | 10/21/2009 | 2354923.231 | 560482.7171 | 1039.1815 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-108 | Unconsolidated | FWGDA2mw-108C-119-GW | 10/21/2009 | 2355602.421 | 560184.5864 | 1029.9156 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-109 | Unconsolidated | FWGDA2mw-109C-120-GW | 10/21/2009 | 2354796.85 | 559897.6695 | 1068.6588 | Grab | BP | 0.00013 | UJB | B | Cb,N,L | 0.002 | 0.00013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-110 | Unconsolidated | FWGDA2mw-110C-121-GW | 10/21/2009 | 2355195.202 | 559922.3928 | 1061.3878 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-112 | Unconsolidated | FWGDA2mw-112C-123-GW | 10/21/2009 | 2355019.568 | 560374.5046 | 1034.8724 | Grab | BP | 0.00041 | JB | B | L,N | 0.002 | 0.00013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-113 | Unconsolidated | FWGDA2mw-113C-124-GW | 10/21/2009 | 2355150.554 | 560392.8898 | 1034.5126 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-1 | Unconsolidated | FWGDETmw-001-111-GW | 10/21/2009 | 2354959.47 | 560820.03 | 1063.97 | Grab | BP | 0.00013 | UJB | B | Cb,N,L | 0.002 | 0.00013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-2 | Unconsolidated | FWGDETmw-002C-112-GW | 10/21/2009 | 2355360.33 | 560664.71 | 1062.69 | Grab | BP | 0.00013 | UJB | B | Cb,N,LB | 0.002 | 0.00013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-3 | Unconsolidated | FWGDETmw-003C-1488-GW | 10/14/2009 | 2355204.94 | 560456.1 | 1035.56 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-006 | Unconsolidated | FWGWBGmw-006C-171-GW | 10/20/2009 | 2359087.79 | 563008.87 | 1010.38 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-007 | Unconsolidated | FWGWBGmw-007C-172-GW | 10/20/2009 | 2360420.44 | 562479.87 | 995.33 | Grab | BP | 0.00013 | UJB | BJ | Cb,F,L | 0.002 | 0.00013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-009 | Unconsolidated | FWGWBGmw-009C-174-GW | 10/20/2009 | 2357159.2 | 561603.54 | 1042 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-010 | Unconsolidated | FWGWBGmw-010C-175-GW | 10/20/2009 | 2356051.96 | 562893.2 | 1069.85 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.002 | 0.00013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-011 | Unconsolidated | FWGWBGmw-011C-176-GW | 10/20/2009 | 2356187.29 | 562609.18 | 1072.38 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.002 | 0.00013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-012 | Unconsolidated | FWGWBGmw-012C-177-GW | 10/20/2009 | 2354810.65 | 562240.9 | 1079.11 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.002 | 0.00013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-013 | Unconsolidated | FWGWBGmw-013C-178-GW | 10/20/2009 | 2355223.25 | 561518.27 | 1071.7 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.002 | 0.00013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-014 | Unconsolidated | FWGWBGmw-014C-179-GW | 10/20/2009 | 2360439.22 | 562061.26 | 996.78 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-015 | Unconsolidated | FWGWBGmw-015C-180-GW | 10/20/2009 | 2359182.41 | 562340.12 | 1011.6 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-016 | Unconsolidated | FWGWBGmw-016C-181-GW | 10/20/2009 | 2360645.88 | 562709.13 | 997.03 | Grab | BP | 0.00013 | UJB | BJ | Cb,F,L | 0.002 | 0.00013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-017 | Unconsolidated | FWGWBGmw-017C-182-GW | 10/20/2009 | 2359603.84 | 562913.24 | 1006.62 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.002 | 0.00013 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-064 | Unconsolidated | FWGLL1mw-064-022-GW | 10/19/2009 | 2380286.973 | 563118.7363 | 932 | Grab | BP | 0.00013 | UJ | B | Cb,P,L | 0.002 | 0.00013 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-065 | Unconsolidated | FWGLL1mw-065-023-GW | 10/19/2009 | 2380452.003 | 560916.9225 | 940 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.002 | 0.00013 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-193 | Unconsolidated | FWGLL4mw-193-057-GW | 10/21/2009 | 2364236.52 | 554960.27 | 982.92 | Grab | BP | 0.00013 | UJB | B | Cb,N,L | 0.002 | 0.00013 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-194 | Unconsolidated | FWGLL4mw-194C-058-GW | 10/16/2009 | 2364584.86 | 555089.22 | 983.76 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-196 | Unconsolidated | FWGLL4mw-196C-060-GW | 10/16/2009 | 2365297.1 | 555213.52 | 984.55 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-197 | Unconsolidated | FWGLL4mw-197C-061-GW | 10/16/2009 | 2365384.91 | 555397.05 | 985.46 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-198 | Unconsolidated | FWGLL4mw-198C-062-GW | 10/21/2009 | 2364991.19 | 555442.04 | 983.42 | Grab | BP | 0.00013 | UJB | B | Cb,N,L | 0.002 | 0.00013 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-199 | Unconsolidated | FWGLL4mw-199C-063-GW | 10/16/2009 | 2365420.78 | 554621.62 | 977.28 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-200 | Unconsolidated | FWGLL4mw-200-064-GW | 10/21/2009 | 2365903.05 | 554580.15 | 987.93 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-107 | Unconsolidated | FWGLL12mw-107C-072-GW | 10/16/2009 | 2368595.67 | 556759.02 | 978.03 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-128 | Unconsolidated | FWGLL12mw-128C-074-GW | 10/16/2009 | 2368293.2 | 557371.54 | 976.21 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-153 | Unconsolidated | FWGLL12mw-153C-075-GW | 10/16/2009 | 2368138.87 | 557823.23 | 975.34 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-154 | Unconsolidated | FWGLL12mw-154C-076-GW | 10/16/2009 | 2368183.88 | 557754.56 | 977 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-182 | Unconsolidated | FWGLL12mw-182C-077-GW | 10/16/2009 | 2368853.2 | 555890.35 | 982.2 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-188 | Unconsolidated | FWGLL12mw-188C-083-GW | 10/15/2009 | 2367908.82 | 558132.59 | 978.46 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-242 | Unconsolidated | FWGLL12mw-242C-085-GW | 10/15/2009 | 2368545.29 | 558020.51 | 980 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-243 | Unconsolidated | FWGLL12mw-243C-086-GW | 10/16/2009 | 2368190.04 | 557376.32 | 978 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-244 | Unconsolidated | FWGLL12mw-244C-087-GW | 10/16/2009 | 2368751.42 | 557377.17 | 980 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-245 | Unconsolidated | FWGLL12mw-245C-088-GW | 10/16/2009 | 2368370.74 | 557044.55 | 978 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-246 | Unconsolidated | FWGLL12mw-246C-089-GW | 10/16/2009 | 2369432.17 | 556658.89 | 982.96 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-166 | Unconsolidated | FWGFBQmw-166C-133-GW | 10/22/2009 | 2349584.33 | 553123.86 | 1104.87 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-167 | Unconsolidated | FWGFBQmw-167C-134-GW | 10/22/2009 | 2349675.45 | 553556.12 | 1112.05 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.002 | 0.00013 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-176 | Unconsolidated | FWGFBQmw-176C-143-GW | 10/22/2009 | 2350219.45 | 553273.33 | 1129.57 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.002 | 0.00013 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-024 | Unconsolidated | FWGLNWmw-024C-145-GW | 10/20/2009 | 2358400 | 564828 | 1035.3 | Grab | BP | 0.00038 | J | B | L | 0.002 | 0.00013 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-025 | Unconsolidated | FWGLNWmw-025C-146-GW | 10/20/2009 | 2358420 | 565070 | 1027.2 | Grab | BP | 0.00013 | UJB | BJ | Cb,F,L | 0.002 | 0.00013 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-026 | Unconsolidated | FWGLNWmw-026C-147-GW | 10/20/2009 | 2358950 | 564656 | 1025 | Grab | BP | 0.00013 | UJB | BJ | Cb,F,L | 0.002 | 0.00013 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Antimony | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|----------|--------|------|----------|-------|---------|----|
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-027 | Unconsolidated | FWGLNWmw-027C-148-GW | 10/20/2009 | 2358630 | 564519 | 1024.4 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-001 | Unconsolidated | FWGMBSmw-001C-183-GW | 10/20/2009 | 2345323 | 550759.5 | 1079.68 | Grab | BP | 0.00013 | UJB | BJ | Cb,F,L | 0.002 | 0.00013 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-002 | Unconsolidated | FWGMBSmw-002C-184-GW | 10/20/2009 | 2345322.3 | 550886.2 | 1080.5 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-003 | Unconsolidated | FWGMBSmw-003C-185-GW | 10/20/2009 | 2345172.4 | 550922.8 | 1082.45 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-004 | Unconsolidated | FWGMBSmw-004C-186-GW | 10/20/2009 | 2345134.2 | 550767.9 | 1079.55 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-005 | Unconsolidated | FWGMBSmw-005C-187-GW | 10/20/2009 | 2345354.1 | 550800.7 | 1080.5 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-006 | Unconsolidated | FWGMBSmw-006C-188-GW | 10/20/2009 | 2345282.3 | 550726.1 | 1080.29 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-001 | Unconsolidated | FWGCPmw-001C-105-GW | 10/21/2009 | 2368948.852 | 560440.9741 | 975.2594 | Grab | BP | 0.0005 | JB | B | L,N | 0.002 | 0.00013 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-004 | Unconsolidated | FWGCPmw-004C-108-GW | 10/21/2009 | 2368674.21 | 561843.2791 | 981.198 | Grab | BP | 0.00013 | UJ | U | H | 0.002 | 0.00013 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-006 | Unconsolidated | FWGCPmw-006C-110-GW | 10/21/2009 | 2367727.191 | 562830.039 | 965.13 | Grab | BP | 0.00013 | UJB | B | Cb,N,H,L | 0.002 | 0.00013 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-001 | Unconsolidated | FWGLL6mw-001C-001-GW | 10/21/2009 | 2353153.227 | 554214.8365 | 1124.1607 | Grab | B | 0.00013 | UJB | B | Cb,N,L | 0.002 | 0.00013 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-002 | Unconsolidated | FWGLL6mw-002C-002-GW | 10/21/2009 | 2353820.091 | 553589.8815 | 1129.3631 | Grab | B | 0.00013 | UJB | B | Cb,N,H,L | 0.002 | 0.00013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-107 | Unconsolidated | FWGNTAmw-107C-149-GW | 10/20/2009 | 2345432.73 | 551699.09 | 1077.65 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.002 | 0.00013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-108 | Unconsolidated | FWGNTAmw-108C-150-GW | 10/20/2009 | 2345782.17 | 551917.92 | 1083.22 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.002 | 0.00013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-109 | Unconsolidated | FWGNTAmw-109C-151-GW | 10/20/2009 | 2345996.99 | 551291.19 | 1076.89 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-110 | Unconsolidated | FWGNTAmw-110C-152-GW | 10/20/2009 | 2346436.82 | 551350.8 | 1080.03 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-111 | Unconsolidated | FWGNTAmw-111C-153-GW | 10/20/2009 | 2346640.16 | 551538.99 | 1078.07 | Grab | BP | 0.00013 | UJ | B | Cb,P,L | 0.002 | 0.00013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-112 | Unconsolidated | FWGNTAmw-112C-154-GW | 10/20/2009 | 2346889.01 | 551708.76 | 1075.36 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.002 | 0.00013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-113 | Unconsolidated | FWGNTAmw-113C-155-GW | 10/20/2009 | 2347081.15 | 551487.86 | 1072.61 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.002 | 0.00013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-115 | Unconsolidated | FWGNTAmw-115C-157-GW | 10/20/2009 | 2347582.94 | 551793.39 | 1086.91 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.002 | 0.00013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-116 | Unconsolidated | FWGNTAmw-116C-158-GW | 10/20/2009 | 2348196.78 | 551749.39 | 1091.68 | Grab | BP | 0.00013 | UJB | BJ | Cb,F,L | 0.002 | 0.00013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-117 | Unconsolidated | FWGNTAmw-117C-159-GW | 10/20/2009 | 2347994.79 | 551586.36 | 1091.67 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-118 | Unconsolidated | FWGNTAmw-118C-160-GW | 10/20/2009 | 2347608.09 | 551333.89 | 1078.86 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.002 | 0.00013 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-003 | Unconsolidated | FWGLL5mw-003C-067-GW | 10/21/2009 | 2354962.47 | 554533.41 | 1124.7 | Grab | BP | 0.00013 | UJB | B | Cb,N,L | 0.002 | 0.00013 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-001 | Unconsolidated | FWGLL8mw-001C-1436-GW | 10/13/2009 | 2351660 | 552609 | 1118.69 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-002 | Unconsolidated | FWGLL8mw-002C-1437-GW | 10/13/2009 | 2351010 | 552410 | 1121.67 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-003 | Unconsolidated | FWGLL8mw-003C-1438-GW | 10/13/2009 | 2351360 | 552231 | 1116.3 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-004 | Unconsolidated | FWGLL8mw-004C-1439-GW | 10/13/2009 | 2351260 | 551808 | 1112.73 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-43 Load Line 10 | L10mw-006 | Unconsolidated | FWGLL10mw-006C-1454-GW | 10/14/2009 | 2355656.8 | 554997.25 | 1121.2 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-001 | Unconsolidated | FWGLL11mw-001C-1455-GW | 10/14/2009 | 2352778.81 | 557504.98 | 1100.16 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-006 | Unconsolidated | FWGLL11mw-006C-1459-GW | 10/14/2009 | 2352521.51 | 558263.51 | 1086.5 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-008 | Unconsolidated | FWGLL11mw-008C-1460-GW | 10/14/2009 | 2352388.57 | 557981.26 | 1087.74 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-009 | Unconsolidated | FWGLL11mw-009C-1461-GW | 10/14/2009 | 2352577.21 | 557901.2 | 1088.28 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-010 | Unconsolidated | FWGLL11mw-010C-1462-GW | 10/14/2009 | 2352038.91 | 557675.59 | 1082.68 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-001 | Unconsolidated | FWGCBPmw-001C-097-GW | 10/21/2009 | 2367095.431 | 561616.171 | 975.8411 | Grab | BP | 0.00013 | UJB | B | Cb,N,L | 0.002 | 0.00013 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-002 | Unconsolidated | FWGCBPmw-002C-098-GW | 10/21/2009 | 2367295.684 | 561865.9216 | 970.0359 | Grab | BP | 0.00013 | UJB | B | Cb,N,L | 0.002 | 0.00013 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-003 | Unconsolidated | FWGCBPmw-003C-099-GW | 10/21/2009 | 2366768.739 | 561944.2018 | 974.6665 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-004 | Unconsolidated | FWGCBPmw-004C-100-GW | 10/21/2009 | 2366978.819 | 562123.8244 | 971.1285 | Grab | BP | 0.00013 | UJB | B | Cb,N,L | 0.002 | 0.00013 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-005 | Unconsolidated | FWGCBPmw-005C-101-GW | 10/21/2009 | 2366919.482 | 562311.8596 | 971.5897 | Grab | BP | 0.00013 | UJB | BJ | Cb,N,F,L | 0.002 | 0.00013 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-006 | Unconsolidated | FWGCBPmw-006C-102-GW | 10/21/2009 | 2367243.659 | 562311.9449 | 967.6448 | Grab | BP | 0.00013 | UJB | B | Cb,N,L | 0.002 | 0.00013 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-007 | Unconsolidated | FWGCBPmw-007C-103-GW | 10/21/2009 | 2366512.573 | 562006.343 | 976.3736 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-007 | Unconsolidated | FWGASYmw-007C-1469-GW | 10/15/2009 | 2366840 | 556820 | 981.4 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-008 | Unconsolidated | FWGASYmw-008C-1470-GW | 10/15/2009 | 2367470 | 557086 | 976.2 | Grab | BP | 0.00038 | J | B | L,P | 0.002 | 0.00013 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-010 | Unconsolidated | FWGASYmw-010C-1472-GW | 10/15/2009 | 2366980 | 557273 | 978.2 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| Site-wide Background Areas | BKGmw-004 | Unconsolidated | FWGBKGmw-004C-007-GW | 10/21/2009 | 2368852.973 | 569464.763 | 965.16 | Grab | BP | 0.00013 | UJB | B | Cb,N,L | 0.002 | 0.00013 | 1 |
| Site-wide Background Areas | BKGmw-005 | Unconsolidated | FWGBKGmw-005C-008-GW | 10/22/2009 | 2340835.864 | 562288.445 | 1149.443 | Grab | BP | 0.00023 | J | B | L | 0.002 | 0.00013 | 1 |
| Site-wide Background Areas | BKGmw-013 | Unconsolidated | FWGBKGmw-013C-013-GW | 10/21/2009 | 2361627.394 | 558269.158 | 986.588 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| Site-wide Background Areas | BKGmw-016 | Unconsolidated | FWGBKGmw-016C-015-GW | 10/22/2009 | 2342407.075 | 553983.501 | 1098.419 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| Site-wide Background Areas | BKGmw-017 | Unconsolidated | FWGBKGmw-017C-016-GW | 10/22/2009 | 2346115.351 | 562452.044 | 1132.799 | Grab | BP | 0.00028 | J | B | L | 0.002 | 0.00013 | 1 |
| Site-wide Background Areas | BKGmw-019 | Unconsolidated | FWGBKGmw-019C-018-GW | 10/22/2009 | 2349882.142 | 559864.549 | 1108.239 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.002 | 0.00013 | 1 |
| Site-wide Background Areas | BKGmw-020 | Unconsolidated | FWGBKGmw-020C-019-GW | 10/21/2009 | 2357856.237 | 558756.241 | 1065.001 | Grab | BP | 0.00013 | UJB | BJ | Cb,N,F,L | 0.002 | 0.00013 | 1 |
| Site-wide Background Areas | BKGmw-021 | Unconsolidated | FWGBKGmw-021C-020-GW | 10/21/2009 | 2367622.953 | 571016.748 | 972.159 | Grab | BP | 0.00013 | UJB | B | Cb,N,L | 0.002 | 0.00013 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Antimony | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|----------|--------|------|----------|-------|---------|----|
| RVAAP-01 Ramsdell Quarry Landfill | RQLmw-009 | Sharon | FWGRQLmw-009C-1487-GW | 10/14/2009 | 2376253.654 | 566351.1994 | 964 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-078 | Sharon | FWGLL1mw-078-025-GW | 10/19/2009 | 2376275.854 | 564623.871 | 995.84 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-080 | Sharon | FWGLL1mw-080-027-GW | 10/19/2009 | 2376845.072 | 562479.728 | 996.27 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.002 | 0.00013 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-082 | Sharon | FWGLL1mw-082-029-GW | 10/19/2009 | 2376977.379 | 562956.86 | 1006.45 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.002 | 0.00013 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-060 | Sharon | FWGLL2mw-060C-034-GW | 10/19/2009 | 2375978 | 558022 | 958.13 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.002 | 0.00013 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-263 | Sharon | FWGLL2mw-263-037-GW | 10/19/2009 | 2374290.29 | 561590.92 | 1009.42 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.002 | 0.00013 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-264 | Sharon | FWGLL2mw-264-038-GW | 10/19/2009 | 2374532.76 | 561173.63 | 1010.1 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.002 | 0.00013 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-267 | Sharon | FWGLL2mw-267C-041-GW | 10/19/2009 | 2373714.17 | 561393.73 | 1012.81 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-268 | Sharon | FWGLL2mw-268-042-GW | 10/19/2009 | 2374156.4 | 560831.44 | 1015.47 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.002 | 0.00013 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-269 | Sharon | FWGLL2mw-269-043-GW | 10/20/2009 | 2374756.74 | 559483.9 | 1009.49 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-270 | Sharon | FWGLL2mw-270-044-GW | 10/19/2009 | 2372858.94 | 562656.18 | 1009.93 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-238 | Sharon | FWGLL3mw-238C-051-GW | 10/20/2009 | 2370624.55 | 559569.39 | 1006.91 | Grab | BP | 0.00026 | J | B | L | 0.002 | 0.00013 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-239 | Sharon | FWGLL3mw-239-052-GW | 10/20/2009 | 2370894.17 | 559101.84 | 1003.5 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.002 | 0.00013 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-241 | Sharon | FWGLL3mw-241-054-GW | 10/20/2009 | 2370332.94 | 559299 | 994.65 | Grab | BP | 0.00017 | J | B | L | 0.002 | 0.00013 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-242 | Sharon | FWGLL3mw-242-055-GW | 10/21/2009 | 2371993.44 | 557035.28 | 999.32 | Grab | BP | 0.00013 | UJB | B | Cb,N,L | 0.002 | 0.00013 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-243 | Sharon | FWGLL3mw-243C-056-GW | 10/21/2009 | 2371532.06 | 556688.5 | 991.16 | Grab | BP | 0.00071 | J | B | L | 0.002 | 0.00013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-186 | Sharon | FWGLL12mw-186C-081-GW | 10/15/2009 | 2367912.39 | 559065.95 | 976.34 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-189 | Sharon | FWGLL12mw-189C-084-GW | 10/15/2009 | 2367945.92 | 558569.27 | 976.17 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-13 Building 1200 | B12mw-011 | Sharon | FWGB12mw-011C-091-GW | 10/21/2009 | 2371420 | 565690 | 1003.76 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-001 | Sharon | FWGASYmw-001C-1463-GW | 10/14/2009 | 2366262.85 | 558406.04 | 978.4 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-002 | Sharon | FWGASYmw-002C-1464-GW | 10/15/2009 | 2366170 | 557890 | 982 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-003 | Sharon | FWGASYmw-003C-1465-GW | 10/15/2009 | 2366650 | 558014 | 979.7 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-005 | Sharon | FWGASYmw-005C-1467-GW | 10/15/2009 | 2367450 | 557785 | 977.6 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-006 | Sharon | FWGASYmw-006C-1468-GW | 10/15/2009 | 2366750 | 557256 | 980.2 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-009 | Sharon | FWGASYmw-009C-1471-GW | 10/15/2009 | 2366630 | 557606 | 979.9 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| Site-wide Background Areas | BKGmw-012 | Sharon | FWGBKGMw-012C-012-GW | 10/21/2009 | 2367795.226 | 563918.862 | 997.574 | Grab | BP | 0.00013 | UJB | B | Cb,N,H,L | 0.002 | 0.00013 | 1 |
| Site-wide Background Areas | BKGmw-018 | Sharon | FWGBKGMw-018C-017-GW | 10/21/2009 | 2354993.909 | 570873.349 | 1043.06 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-001 | Homewood | FWGCBLmw-001C-093-GW | 10/21/2009 | 2343659.08 | 559405.12 | 1178.5 | Grab | BP | 0.00013 | UJB | BJ | Cb,N,F,L | 0.002 | 0.00013 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-003 | Homewood | FWGCBLmw-003C-095-GW | 10/22/2009 | 2343967.67 | 559697.13 | 1172.22 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-004 | Homewood | FWGCBLmw-004C-096-GW | 10/22/2009 | 2343687.21 | 559950 | 1172.08 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-171 | Homewood | FWGFBQmw-171C-138-GW | 10/22/2009 | 2350072.44 | 554230.93 | 1140.49 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-172 | Homewood | FWGFBQmw-172C-139-GW | 10/22/2009 | 2349907.37 | 554322.17 | 1145.71 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-173 | Homewood | FWGFBQmw-173C-140-GW | 10/22/2009 | 2350449.01 | 554491.35 | 1162.43 | Grab | BP | 0.00068 | JB | BJ | L,F | 0.002 | 0.00013 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-174 | Homewood | FWGFBQmw-174C-141-GW | 10/22/2009 | 2350289.81 | 554142.44 | 1135.78 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-175 | Homewood | FWGFBQmw-175C-142-GW | 10/22/2009 | 2350297.98 | 553989.24 | 1137.16 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.002 | 0.00013 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-177 | Homewood | FWGFBQmw-177C-144-GW | 10/22/2009 | 2350112.18 | 553321.94 | 1125.73 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-003 | Homewood | FWGLL6mw-003C-003-GW | 10/21/2009 | 2353048.684 | 553544.3432 | 1125.3837 | Grab | BP | 0.00013 | UJB | B | Cb,N,L | 0.002 | 0.00013 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-004 | Homewood | FWGLL6mw-004C-004-GW | 10/21/2009 | 2353368.787 | 553431.8182 | 1125.3851 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-001 | Homewood | FWGLL5mw-001C-065-GW | 10/21/2009 | 2354627.07 | 554321.25 | 1125 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-002 | Homewood | FWGLL5mw-002C-066-GW | 10/21/2009 | 2354573.52 | 554606 | 1125.8 | Grab | BP | 0.00013 | UJB | B | Cb,N,L | 0.002 | 0.00013 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-004 | Homewood | FWGLL5mw-004C-068-GW | 10/21/2009 | 2355008.44 | 554071.73 | 1122.9 | Grab | BP | 0.00013 | UJB | B | Cb,N,L | 0.002 | 0.00013 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-005 | Homewood | FWGLL5mw-005C-069-GW | 10/22/2009 | 2354424.02 | 554154.73 | 1126.5 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-006 | Homewood | FWGLL5mw-006C-070-GW | 10/21/2009 | 2354730 | 553981.82 | 1125.1 | Grab | BP | 0.00013 | UJB | B | Cb,N,L | 0.002 | 0.00013 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-003 | Homewood | FWGLL7mw-003C-1432-GW | 10/12/2009 | 2352349.51 | 555414.33 | 1118.23 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-004 | Homewood | FWGLL7mw-004C-1433-GW | 10/12/2009 | 2352036.23 | 555583.15 | 1123.3 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-005 | Homewood | FWGLL8mw-005C-1440-GW | 10/13/2009 | 2351750 | 551522 | 1112.51 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-006 | Homewood | FWGLL8mw-006C-1441-GW | 10/13/2009 | 2351480 | 551295 | 1114.33 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-001 | Homewood | FWGLL9mw-001C-1442-GW | 10/13/2009 | 2355817.04 | 556125.81 | 1134.62 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-002 | Homewood | FWGLL9mw-002C-1443-GW | 10/13/2009 | 2355907.76 | 556755.11 | 1127.3 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-003 | Homewood | FWGLL9mw-003C-1444-GW | 10/13/2009 | 2356635.21 | 556445.31 | 1135.76 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-43 Load Line 10 | L10mw-001 | Homewood | FWGLL10mw-001C-1449-GW | 10/13/2009 | 2355272.22 | 555818.25 | 1130 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-43 Load Line 10 | L10mw-002 | Homewood | FWGLL10mw-002C-1450-GW | 10/13/2009 | 2355712.51 | 555525.36 | 1124.4 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-43 Load Line 10 | L10mw-003 | Homewood | FWGLL10mw-003C-1451-GW | 10/13/2009 | 2355387.92 | 555496.71 | 1127.4 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-43 Load Line 10 | L10mw-004 | Homewood | FWGLL10mw-004C-1452-GW | 10/14/2009 | 2355440.2 | 555234.59 | 1119.6 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |
| RVAAP-43 Load Line 10 | L10mw-005 | Homewood | FWGLL10mw-005C-1453-GW | 10/14/2009 | 2355941.55 | 555382.53 | 1122.9 | Grab | BP | 0.00013 | U | U | | 0.002 | 0.00013 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Arsenic | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|-----------------------|-------------|-------------|-------------|-----------|-------------|--------|----------|--------|------|--------|-------|--------|----|
| RVAAP-02 Erie Burning Grounds | EBGmw-123 | Unconsolidated | FWGEBGmw-123C-125-GW | 10/19/2009 | 2380049.21 | 571747.04 | 945.59 | Grab | BP | 0.116 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-124 | Unconsolidated | FWGEBGmw-124C-126-GW | 10/19/2009 | 2380030.24 | 571618.07 | 939.02 | Grab | BP | 0.162 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-126 | Unconsolidated | FWGEBGmw-126C-128-GW | 10/19/2009 | 2380307.31 | 572348.81 | 938.2 | Grab | BP | 0.0263 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-127 | Unconsolidated | FWGEBGmw-127C-129-GW | 10/19/2009 | 2380172.16 | 571083.61 | 940.21 | Grab | BP | 0.0189 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-128 | Unconsolidated | FWGEBGmw-128C-130-GW | 10/19/2009 | 2379892.79 | 570970.32 | 942.47 | Grab | BP | 0.0176 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-129 | Unconsolidated | FWGEBGmw-129C-131-GW | 10/19/2009 | 2379240.52 | 572035.68 | 941.97 | Grab | BP | 0.0145 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-130 | Unconsolidated | FWGEBGmw-130C-132-GW | 10/19/2009 | 2379220.69 | 570695.61 | 941.18 | Grab | BP | 0.0168 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-104 | Unconsolidated | FWGDA2mw-104C-115-GW | 10/21/2009 | 2354773.248 | 561125.7023 | 1070.8244 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-107 | Unconsolidated | FWGDA2mw-107C-118-GW | 10/21/2009 | 2354923.231 | 560482.7171 | 1039.1815 | Grab | BP | 0.034 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-108 | Unconsolidated | FWGDA2mw-108C-119-GW | 10/21/2009 | 2355602.421 | 560184.5864 | 1029.9156 | Grab | BP | 0.0194 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-109 | Unconsolidated | FWGDA2mw-109C-120-GW | 10/21/2009 | 2354796.85 | 559897.6695 | 1068.6588 | Grab | BP | 0.0101 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-110 | Unconsolidated | FWGDA2mw-110C-121-GW | 10/21/2009 | 2355195.202 | 559922.3928 | 1061.3878 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-112 | Unconsolidated | FWGDA2mw-112C-123-GW | 10/21/2009 | 2355019.568 | 560374.5046 | 1034.8724 | Grab | BP | 0.0225 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-113 | Unconsolidated | FWGDA2mw-113C-124-GW | 10/21/2009 | 2355150.554 | 560392.8898 | 1034.5126 | Grab | BP | 0.0181 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-1 | Unconsolidated | FWGDETMw-001-111-GW | 10/21/2009 | 2354959.47 | 560820.03 | 1063.97 | Grab | BP | 0.0266 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-2 | Unconsolidated | FWGDETMw-002C-115-GW | 10/21/2009 | 2355360.33 | 560664.71 | 1062.69 | Grab | BP | 0.0069 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-3 | Unconsolidated | FWGDETMw-003C-1488-GW | 10/14/2009 | 2355204.94 | 560456.1 | 1035.56 | Grab | BP | 0.0358 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-006 | Unconsolidated | FWGWBGmw-006C-171-GW | 10/20/2009 | 2359087.79 | 563008.87 | 1010.38 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-007 | Unconsolidated | FWGWBGmw-007C-172-GW | 10/20/2009 | 2360420.44 | 562479.87 | 995.33 | Grab | BP | 0.134 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-009 | Unconsolidated | FWGWBGmw-009C-174-GW | 10/20/2009 | 2357159.2 | 561603.54 | 1042 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-010 | Unconsolidated | FWGWBGmw-010C-175-GW | 10/20/2009 | 2356051.96 | 562893.2 | 1069.85 | Grab | BP | 0.0058 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-011 | Unconsolidated | FWGWBGmw-011C-176-GW | 10/20/2009 | 2356187.29 | 562609.18 | 1072.38 | Grab | BP | 0.0091 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-012 | Unconsolidated | FWGWBGmw-012C-177-GW | 10/20/2009 | 2354810.65 | 562240.9 | 1079.11 | Grab | BP | 0.0277 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-013 | Unconsolidated | FWGWBGmw-013C-178-GW | 10/20/2009 | 2355223.25 | 561518.27 | 1071.7 | Grab | BP | 0.0087 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-014 | Unconsolidated | FWGWBGmw-014C-179-GW | 10/20/2009 | 2360439.22 | 562061.26 | 996.78 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-015 | Unconsolidated | FWGWBGmw-015C-180-GW | 10/20/2009 | 2359182.41 | 562340.12 | 1011.6 | Grab | BP | 0.0629 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-016 | Unconsolidated | FWGWBGmw-016C-181-GW | 10/20/2009 | 2360645.88 | 562709.13 | 997.03 | Grab | BP | 0.0237 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-017 | Unconsolidated | FWGWBGmw-017C-182-GW | 10/20/2009 | 2359603.84 | 562913.24 | 1006.62 | Grab | BP | 0.0861 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-064 | Unconsolidated | FWGLL1mw-064-022-GW | 10/19/2009 | 2380286.973 | 563118.7363 | 932 | Grab | BP | 0.0439 | | | P | 0.005 | 0.0033 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-065 | Unconsolidated | FWGLL1mw-065-023-GW | 10/19/2009 | 2380452.003 | 560916.9225 | 940 | Grab | BP | 0.119 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-193 | Unconsolidated | FWGLL4mw-193-057-GW | 10/21/2009 | 2364236.52 | 554960.27 | 982.92 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-194 | Unconsolidated | FWGLL4mw-194C-058-GW | 10/16/2009 | 2364584.86 | 555089.22 | 983.76 | Grab | BP | 0.0127 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-196 | Unconsolidated | FWGLL4mw-196C-060-GW | 10/16/2009 | 2365297.1 | 555213.52 | 984.55 | Grab | BP | 0.0066 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-197 | Unconsolidated | FWGLL4mw-197C-061-GW | 10/16/2009 | 2365384.91 | 555397.05 | 985.46 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-198 | Unconsolidated | FWGLL4mw-198C-062-GW | 10/21/2009 | 2364991.19 | 555442.04 | 983.42 | Grab | BP | 0.0174 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-199 | Unconsolidated | FWGLL4mw-199C-063-GW | 10/16/2009 | 2365420.78 | 554621.62 | 977.28 | Grab | BP | 0.0907 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-200 | Unconsolidated | FWGLL4mw-200-064-GW | 10/21/2009 | 2365903.05 | 554580.15 | 987.93 | Grab | BP | 0.0054 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-12 Load Line 12 | L12mw-107 | Unconsolidated | FWGLL12mw-107C-072-GW | 10/16/2009 | 2368595.67 | 556759.02 | 978.03 | Grab | BP | 0.293 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-12 Load Line 12 | L12mw-128 | Unconsolidated | FWGLL12mw-128C-074-GW | 10/16/2009 | 2368293.2 | 557371.54 | 976.21 | Grab | BP | 0.0918 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-12 Load Line 12 | L12mw-153 | Unconsolidated | FWGLL12mw-153C-075-GW | 10/16/2009 | 2368138.87 | 557823.23 | 975.34 | Grab | BP | 0.0247 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-12 Load Line 12 | L12mw-154 | Unconsolidated | FWGLL12mw-154C-076-GW | 10/16/2009 | 2368183.88 | 557754.56 | 977 | Grab | BP | 0.439 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-12 Load Line 12 | L12mw-182 | Unconsolidated | FWGLL12mw-182C-077-GW | 10/16/2009 | 2368853.2 | 555890.35 | 982.2 | Grab | BP | 0.549 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-12 Load Line 12 | L12mw-188 | Unconsolidated | FWGLL12mw-188C-083-GW | 10/15/2009 | 2367908.82 | 558132.59 | 978.46 | Grab | BP | 0.0051 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-12 Load Line 12 | L12mw-242 | Unconsolidated | FWGLL12mw-242C-085-GW | 10/15/2009 | 2368545.29 | 558020.51 | 980 | Grab | BP | 0.0311 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-12 Load Line 12 | L12mw-243 | Unconsolidated | FWGLL12mw-243C-086-GW | 10/16/2009 | 2368190.04 | 557376.32 | 978 | Grab | BP | 0.0483 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-12 Load Line 12 | L12mw-244 | Unconsolidated | FWGLL12mw-244C-087-GW | 10/16/2009 | 2368751.42 | 557377.17 | 980 | Grab | BP | 0.102 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-12 Load Line 12 | L12mw-245 | Unconsolidated | FWGLL12mw-245C-088-GW | 10/16/2009 | 2368370.74 | 557044.55 | 978 | Grab | BP | 0.022 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-12 Load Line 12 | L12mw-246 | Unconsolidated | FWGLL12mw-246C-089-GW | 10/16/2009 | 2369432.17 | 556658.89 | 982.96 | Grab | BP | 0.378 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-166 | Unconsolidated | FWGFBQmw-166C-133-GW | 10/22/2009 | 2349584.33 | 553123.86 | 1104.87 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-167 | Unconsolidated | FWGFBQmw-167C-134-GW | 10/22/2009 | 2349675.45 | 553556.12 | 1112.05 | Grab | BP | 0.009 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-176 | Unconsolidated | FWGFBQmw-176C-143-GW | 10/22/2009 | 2350219.45 | 553273.33 | 1129.57 | Grab | BP | 0.0125 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-024 | Unconsolidated | FWGLNWmw-024C-145-GW | 10/20/2009 | 2358400 | 564828 | 1035.3 | Grab | BP | 0.0203 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-025 | Unconsolidated | FWGLNWmw-025C-146-GW | 10/20/2009 | 2358420 | 565070 | 1027.2 | Grab | BP | 0.0211 | | | P | 0.005 | 0.0033 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-026 | Unconsolidated | FWGLNWmw-026C-147-GW | 10/20/2009 | 2358950 | 564656 | 1025 | Grab | BP | 0.007 | | | | 0.005 | 0.0033 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOB | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Arsenic | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|---------|--------|------|--------|-------|--------|----|
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-027 | Unconsolidated | FWGLNWmw-027C-148-GW | 10/20/2009 | 2358630 | 564519 | 1024.4 | Grab | BP | 0.0033 | U | U | | 0.005 | 0.0033 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-001 | Unconsolidated | FWGMBSmw-001C-183-GW | 10/20/2009 | 2345323 | 550759.5 | 1079.68 | Grab | BP | 0.0102 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-002 | Unconsolidated | FWGMBSmw-002C-184-GW | 10/20/2009 | 2345322.3 | 550886.2 | 1080.5 | Grab | BP | 0.0125 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-003 | Unconsolidated | FWGMBSmw-003C-185-GW | 10/20/2009 | 2345172.4 | 550922.8 | 1082.45 | Grab | BP | 0.0033 | U | U | | 0.005 | 0.0033 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-004 | Unconsolidated | FWGMBSmw-004C-186-GW | 10/20/2009 | 2345134.2 | 550767.9 | 1079.55 | Grab | BP | 0.0033 | U | U | | 0.005 | 0.0033 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-005 | Unconsolidated | FWGMBSmw-005C-187-GW | 10/20/2009 | 2345354.1 | 550800.7 | 1080.5 | Grab | BP | 0.0317 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-006 | Unconsolidated | FWGMBSmw-006C-188-GW | 10/20/2009 | 2345282.3 | 550726.1 | 1080.29 | Grab | BP | 0.0033 | U | U | | 0.005 | 0.0033 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-001 | Unconsolidated | FWGCPmw-001C-105-GW | 10/21/2009 | 2368948.852 | 560440.9741 | 975.2594 | Grab | BP | 0.0033 | U | U | | 0.005 | 0.0033 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-004 | Unconsolidated | FWGCPmw-004C-108-GW | 10/21/2009 | 2368674.21 | 561843.2791 | 981.198 | Grab | BP | 0.0033 | U | U | | 0.005 | 0.0033 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-006 | Unconsolidated | FWGCPmw-006C-110-GW | 10/21/2009 | 2367727.191 | 562830.039 | 965.13 | Grab | BP | 0.0428 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-001 | Unconsolidated | FWGLL6mw-001C-001-GW | 10/21/2009 | 2353153.227 | 554214.8365 | 1124.1607 | Grab | B | 0.0551 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-002 | Unconsolidated | FWGLL6mw-002C-002-GW | 10/21/2009 | 2353820.091 | 553589.8815 | 1129.3631 | Grab | B | 0.068 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-107 | Unconsolidated | FWGNTAmw-107C-149-GW | 10/20/2009 | 2345432.73 | 551699.09 | 1077.65 | Grab | BP | 0.0425 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-108 | Unconsolidated | FWGNTAmw-108C-150-GW | 10/20/2009 | 2345782.17 | 551917.92 | 1083.22 | Grab | BP | 0.008 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-109 | Unconsolidated | FWGNTAmw-109C-151-GW | 10/20/2009 | 2345996.99 | 551291.19 | 1076.89 | Grab | BP | 0.0034 | J | B | L | 0.005 | 0.0033 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-110 | Unconsolidated | FWGNTAmw-110C-152-GW | 10/20/2009 | 2346436.82 | 551350.8 | 1080.03 | Grab | BP | 0.0287 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-111 | Unconsolidated | FWGNTAmw-111C-153-GW | 10/20/2009 | 2346640.16 | 551538.99 | 1078.07 | Grab | BP | 0.0033 | U | U | | 0.005 | 0.0033 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-112 | Unconsolidated | FWGNTAmw-112C-154-GW | 10/20/2009 | 2346889.01 | 551708.76 | 1075.36 | Grab | BP | 0.0589 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-113 | Unconsolidated | FWGNTAmw-113C-155-GW | 10/20/2009 | 2347081.15 | 551487.86 | 1072.61 | Grab | BP | 0.0847 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-115 | Unconsolidated | FWGNTAmw-115C-157-GW | 10/20/2009 | 2347582.94 | 551793.39 | 1086.91 | Grab | BP | 0.0043 | J | B | L | 0.005 | 0.0033 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-116 | Unconsolidated | FWGNTAmw-116C-158-GW | 10/20/2009 | 2348196.78 | 551749.39 | 1091.68 | Grab | BP | 0.008 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-117 | Unconsolidated | FWGNTAmw-117C-159-GW | 10/20/2009 | 2347994.79 | 551586.36 | 1091.67 | Grab | BP | 0.0033 | U | U | | 0.005 | 0.0033 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-118 | Unconsolidated | FWGNTAmw-118C-160-GW | 10/20/2009 | 2347608.09 | 551333.89 | 1078.86 | Grab | BP | 0.006 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-003 | Unconsolidated | FWGLL5mw-003C-067-GW | 10/21/2009 | 2354962.47 | 554533.41 | 1124.7 | Grab | BP | 0.0333 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-001 | Unconsolidated | FWGLL8mw-001C-1436-GW | 10/13/2009 | 2351660 | 552609 | 1118.69 | Grab | BP | 0.008 | J | | Z | 0.005 | 0.0033 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-002 | Unconsolidated | FWGLL8mw-002C-1437-GW | 10/13/2009 | 2351010 | 552410 | 1121.67 | Grab | BP | 0.0052 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-003 | Unconsolidated | FWGLL8mw-003C-1438-GW | 10/13/2009 | 2351360 | 552231 | 1116.3 | Grab | BP | 0.0067 | J | | Z | 0.005 | 0.0033 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-004 | Unconsolidated | FWGLL8mw-004C-1439-GW | 10/13/2009 | 2351260 | 551808 | 1112.73 | Grab | BP | 0.0033 | U | U | | 0.005 | 0.0033 | 1 |
| RVAAP-43 Load Line 10 | L10mw-006 | Unconsolidated | FWGLL10mw-006C-1454-GW | 10/14/2009 | 2355656.8 | 554997.25 | 1121.2 | Grab | BP | 0.0033 | U | U | | 0.005 | 0.0033 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-001 | Unconsolidated | FWGLL11mw-001C-1455-GW | 10/14/2009 | 2352778.81 | 557504.98 | 1100.16 | Grab | BP | 0.0033 | U | U | | 0.005 | 0.0033 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-006 | Unconsolidated | FWGLL11mw-006C-1459-GW | 10/14/2009 | 2352521.51 | 558263.51 | 1086.5 | Grab | BP | 0.004 | J | B | L | 0.005 | 0.0033 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-008 | Unconsolidated | FWGLL11mw-008C-1460-GW | 10/14/2009 | 2352388.57 | 557981.26 | 1087.74 | Grab | BP | 0.0033 | U | U | | 0.005 | 0.0033 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-009 | Unconsolidated | FWGLL11mw-009C-1461-GW | 10/14/2009 | 2352577.21 | 557901.2 | 1088.28 | Grab | BP | 0.0033 | U | U | | 0.005 | 0.0033 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-010 | Unconsolidated | FWGLL11mw-010C-1462-GW | 10/14/2009 | 2352038.91 | 557675.59 | 1082.68 | Grab | BP | 0.0578 | | | P | 0.005 | 0.0033 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-001 | Unconsolidated | FWGCBPmw-001C-097-GW | 10/21/2009 | 2367095.431 | 561616.171 | 975.8411 | Grab | BP | 0.0425 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-002 | Unconsolidated | FWGCBPmw-002C-098-GW | 10/21/2009 | 2367295.684 | 561865.9216 | 970.0359 | Grab | BP | 0.0504 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-003 | Unconsolidated | FWGCBPmw-003C-099-GW | 10/21/2009 | 2366768.739 | 561944.2018 | 974.6665 | Grab | BP | 0.0332 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-004 | Unconsolidated | FWGCBPmw-004C-100-GW | 10/21/2009 | 2366978.819 | 562123.8244 | 971.1285 | Grab | BP | 1.06 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-005 | Unconsolidated | FWGCBPmw-005C-101-GW | 10/21/2009 | 2366919.482 | 562311.8596 | 971.5897 | Grab | BP | 0.248 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-006 | Unconsolidated | FWGCBPmw-006C-102-GW | 10/21/2009 | 2367243.659 | 562311.9449 | 967.6448 | Grab | BP | 0.208 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-007 | Unconsolidated | FWGCBPmw-007C-103-GW | 10/21/2009 | 2366512.573 | 562006.343 | 976.3736 | Grab | BP | 0.0196 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-007 | Unconsolidated | FWGASYmw-007C-1469-GW | 10/15/2009 | 2366840 | 556820 | 981.4 | Grab | BP | 0.0033 | U | U | | 0.005 | 0.0033 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-008 | Unconsolidated | FWGASYmw-008C-1470-GW | 10/15/2009 | 2367470 | 557086 | 976.2 | Grab | BP | 0.192 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-010 | Unconsolidated | FWGASYmw-010C-1472-GW | 10/15/2009 | 2366980 | 557273 | 978.2 | Grab | BP | 0.419 | | | | 0.005 | 0.0033 | 1 |
| Site-wide Background Areas | BKGmw-004 | Unconsolidated | FWGBKGmw-004C-007-GW | 10/21/2009 | 2368852.973 | 569464.763 | 965.16 | Grab | BP | 0.0034 | J | B | L | 0.005 | 0.0033 | 1 |
| Site-wide Background Areas | BKGmw-005 | Unconsolidated | FWGBKGmw-005C-008-GW | 10/22/2009 | 2340835.864 | 562288.445 | 1149.443 | Grab | BP | 0.009 | | | | 0.005 | 0.0033 | 1 |
| Site-wide Background Areas | BKGmw-013 | Unconsolidated | FWGBKGmw-013C-013-GW | 10/21/2009 | 2361627.394 | 558269.158 | 986.588 | Grab | BP | 0.0136 | | | | 0.005 | 0.0033 | 1 |
| Site-wide Background Areas | BKGmw-016 | Unconsolidated | FWGBKGmw-016C-015-GW | 10/22/2009 | 2342407.075 | 553983.501 | 1098.419 | Grab | BP | 0.0033 | J | B | L | 0.005 | 0.0033 | 1 |
| Site-wide Background Areas | BKGmw-017 | Unconsolidated | FWGBKGmw-017C-016-GW | 10/22/2009 | 2346115.351 | 562452.044 | 1132.799 | Grab | BP | 0.0479 | | | | 0.005 | 0.0033 | 1 |
| Site-wide Background Areas | BKGmw-019 | Unconsolidated | FWGBKGmw-019C-018-GW | 10/22/2009 | 2349882.142 | 559864.549 | 1108.239 | Grab | BP | 0.0453 | | | | 0.005 | 0.0033 | 1 |
| Site-wide Background Areas | BKGmw-020 | Unconsolidated | FWGBKGmw-020C-019-GW | 10/21/2009 | 2357856.237 | 558756.241 | 1065.001 | Grab | BP | 0.0038 | J | B | L | 0.005 | 0.0033 | 1 |
| Site-wide Background Areas | BKGmw-021 | Unconsolidated | FWGBKGmw-021C-020-GW | 10/21/2009 | 2367622.953 | 571016.748 | 972.159 | Grab | BP | 0.0033 | U | U | | 0.005 | 0.0033 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Arsenic | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|----------|--------|------|--------|-------|--------|----|
| RVAAP-01 Ramsdell Quarry Landfill | RQLmw-009 | Sharon | FWGRQLmw-009C-1487-GW | 10/14/2009 | 2376253.654 | 566351.1994 | 964 | Grab | BP | 0.018 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-078 | Sharon | FWGLL1mw-078-025-GW | 10/19/2009 | 2376275.854 | 564623.871 | 995.84 | Grab | BP | 0.0071 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-080 | Sharon | FWGLL1mw-080-027-GW | 10/19/2009 | 2376845.072 | 562479.728 | 996.27 | Grab | BP | 0.0228 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-082 | Sharon | FWGLL1mw-082-029-GW | 10/19/2009 | 2376977.379 | 562956.86 | 1006.45 | Grab | BP | 0.018 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-060 | Sharon | FWGLL2mw-060C-034-GW | 10/19/2009 | 2375978 | 558022 | 958.13 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-263 | Sharon | FWGLL2mw-263-037-GW | 10/19/2009 | 2374290.29 | 561590.92 | 1009.42 | Grab | BP | 0.0227 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-264 | Sharon | FWGLL2mw-264-038-GW | 10/19/2009 | 2374532.76 | 561173.63 | 1010.1 | Grab | BP | 0.0108 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-267 | Sharon | FWGLL2mw-267C-051-GW | 10/19/2009 | 2373714.17 | 561393.73 | 1012.81 | Grab | BP | 0.0081 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-268 | Sharon | FWGLL2mw-268-042-GW | 10/19/2009 | 2374156.4 | 560831.44 | 1015.47 | Grab | BP | 0.0179 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-269 | Sharon | FWGLL2mw-269-043-GW | 10/20/2009 | 2374756.74 | 559483.9 | 1009.49 | Grab | BP | 0.0041 J | | B | L | 0.005 | 0.0033 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-270 | Sharon | FWGLL2mw-270-044-GW | 10/19/2009 | 2372858.94 | 562656.18 | 1009.93 | Grab | BP | 0.0034 J | | B | L | 0.005 | 0.0033 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-238 | Sharon | FWGLL3mw-238C-051-GW | 10/20/2009 | 2370624.55 | 559569.39 | 1006.91 | Grab | BP | 0.0117 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-239 | Sharon | FWGLL3mw-239-052-GW | 10/20/2009 | 2370894.17 | 559101.84 | 1003.5 | Grab | BP | 0.0134 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-241 | Sharon | FWGLL3mw-241-054-GW | 10/20/2009 | 2370332.94 | 559299 | 994.65 | Grab | BP | 0.0069 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-242 | Sharon | FWGLL3mw-242-055-GW | 10/21/2009 | 2371993.44 | 557035.28 | 999.32 | Grab | BP | 0.0095 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-243 | Sharon | FWGLL3mw-243C-056-GW | 10/21/2009 | 2371532.06 | 556688.5 | 991.16 | Grab | BP | 0.0095 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-12 Load Line 12 | L12mw-186 | Sharon | FWGLL12mw-186C-081-GW | 10/15/2009 | 2367912.39 | 559065.95 | 976.34 | Grab | BP | 0.0046 J | | B | L | 0.005 | 0.0033 | 1 |
| RVAAP-12 Load Line 12 | L12mw-189 | Sharon | FWGLL12mw-189C-084-GW | 10/15/2009 | 2367945.92 | 558569.27 | 976.17 | Grab | BP | 0.0304 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-13 Building 1200 | B12mw-011 | Sharon | FWGB12mw-011C-091-GW | 10/21/2009 | 2371420 | 565690 | 1003.76 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-001 | Sharon | FWGASYmw-001C-1463-GW | 10/14/2009 | 2366262.85 | 558406.04 | 978.4 | Grab | BP | 0.0069 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-002 | Sharon | FWGASYmw-002C-1464-GW | 10/15/2009 | 2366170 | 557890 | 982 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-003 | Sharon | FWGASYmw-003C-1465-GW | 10/15/2009 | 2366650 | 558014 | 979.7 | Grab | BP | 0.0413 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-005 | Sharon | FWGASYmw-005C-1467-GW | 10/15/2009 | 2367450 | 557785 | 977.6 | Grab | BP | 0.0051 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-006 | Sharon | FWGASYmw-006C-1468-GW | 10/15/2009 | 2366750 | 557256 | 980.2 | Grab | BP | 0.65 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-009 | Sharon | FWGASYmw-009C-1471-GW | 10/15/2009 | 2366630 | 557606 | 979.9 | Grab | BP | 0.0044 J | | B | L | 0.005 | 0.0033 | 1 |
| Site-wide Background Areas | BKGmw-012 | Sharon | FWGBKGmw-012C-012-GW | 10/21/2009 | 2367795.226 | 563918.862 | 997.574 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| Site-wide Background Areas | BKGmw-018 | Sharon | FWGBKGmw-018C-017-GW | 10/21/2009 | 2354993.909 | 570873.349 | 1043.06 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-001 | Homewood | FWGCBLmw-001C-093-GW | 10/21/2009 | 2343659.08 | 559405.12 | 1178.5 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-003 | Homewood | FWGCBLmw-003C-095-GW | 10/22/2009 | 2343967.67 | 559697.13 | 1172.22 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-004 | Homewood | FWGCBLmw-004C-096-GW | 10/22/2009 | 2343687.21 | 559950 | 1172.08 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-171 | Homewood | FWGFBQmw-171C-138-GW | 10/22/2009 | 2350072.44 | 554230.93 | 1140.49 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-172 | Homewood | FWGFBQmw-172C-139-GW | 10/22/2009 | 2349907.37 | 554322.17 | 1145.71 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-173 | Homewood | FWGFBQmw-173C-140-GW | 10/22/2009 | 2350449.01 | 554491.35 | 1162.43 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-174 | Homewood | FWGFBQmw-174C-141-GW | 10/22/2009 | 2350289.81 | 554142.44 | 1135.78 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-175 | Homewood | FWGFBQmw-175C-142-GW | 10/22/2009 | 2350297.98 | 553989.24 | 1137.16 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-177 | Homewood | FWGFBQmw-177C-144-GW | 10/22/2009 | 2350112.18 | 553321.94 | 1125.73 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-003 | Homewood | FWGLL6mw-003C-003-GW | 10/21/2009 | 2353048.684 | 553544.3432 | 1125.3837 | Grab | BP | 0.0068 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-004 | Homewood | FWGLL6mw-004C-004-GW | 10/21/2009 | 2353368.787 | 553431.8182 | 1125.3851 | Grab | BP | 0.0045 J | | B | L | 0.005 | 0.0033 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-001 | Homewood | FWGLL5mw-001C-065-GW | 10/21/2009 | 2354627.07 | 554321.25 | 1125 | Grab | BP | 0.007 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-002 | Homewood | FWGLL5mw-002C-066-GW | 10/21/2009 | 2354573.52 | 554606 | 1125.8 | Grab | BP | 0.0138 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-004 | Homewood | FWGLL5mw-004C-068-GW | 10/21/2009 | 2355008.44 | 554071.73 | 1122.9 | Grab | BP | 0.0409 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-005 | Homewood | FWGLL5mw-005C-069-GW | 10/22/2009 | 2354424.02 | 554154.73 | 1126.5 | Grab | BP | 0.0033 U | | U | P | 0.005 | 0.0033 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-006 | Homewood | FWGLL5mw-006C-070-GW | 10/21/2009 | 2354730 | 553981.82 | 1125.1 | Grab | BP | 0.0225 | | | | 0.005 | 0.0033 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-003 | Homewood | FWGLL7mw-003C-1432-GW | 10/12/2009 | 2352349.51 | 555414.33 | 1118.23 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-004 | Homewood | FWGLL7mw-004C-1433-GW | 10/12/2009 | 2352036.23 | 555583.15 | 1123.3 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-005 | Homewood | FWGLL8mw-005C-1440-GW | 10/13/2009 | 2351750 | 551522 | 1112.51 | Grab | BP | 0.0105 | | | P | 0.005 | 0.0033 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-006 | Homewood | FWGLL8mw-006C-1441-GW | 10/13/2009 | 2351480 | 551295 | 1114.33 | Grab | BP | 0.0039 J | | B | L | 0.005 | 0.0033 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-001 | Homewood | FWGLL9mw-001C-1442-GW | 10/13/2009 | 2355817.04 | 556125.81 | 1134.62 | Grab | BP | 0.0045 J | | B | L | 0.005 | 0.0033 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-002 | Homewood | FWGLL9mw-002C-1443-GW | 10/13/2009 | 2355907.76 | 556755.11 | 1127.3 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-003 | Homewood | FWGLL9mw-003C-1444-GW | 10/13/2009 | 2356635.21 | 556445.31 | 1135.76 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-43 Load Line 10 | L10mw-001 | Homewood | FWGLL10mw-001C-1449-GW | 10/13/2009 | 2355272.22 | 555818.25 | 1130 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-43 Load Line 10 | L10mw-002 | Homewood | FWGLL10mw-002C-1450-GW | 10/13/2009 | 2355712.51 | 555525.36 | 1124.4 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-43 Load Line 10 | L10mw-003 | Homewood | FWGLL10mw-003C-1451-GW | 10/13/2009 | 2355387.92 | 555496.71 | 1127.4 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-43 Load Line 10 | L10mw-004 | Homewood | FWGLL10mw-004C-1452-GW | 10/14/2009 | 2355440.2 | 555234.59 | 1119.6 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |
| RVAAP-43 Load Line 10 | L10mw-005 | Homewood | FWGLL10mw-005C-1453-GW | 10/14/2009 | 2355941.55 | 555382.53 | 1122.9 | Grab | BP | 0.0033 U | | U | | 0.005 | 0.0033 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Barium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|-----------------------|-------------|-------------|-------------|-----------|-------------|--------|--------|--------|------|--------|------|--------|----|
| RVAAP-02 Erie Burning Grounds | EBGmw-123 | Unconsolidated | FWGEBGmw-123C-125-GW | 10/19/2009 | 2380049.21 | 571747.04 | 945.59 | Grab | BP | 0.163 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-124 | Unconsolidated | FWGEBGmw-124C-126-GW | 10/19/2009 | 2380030.24 | 571618.07 | 939.02 | Grab | BP | 0.387 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-126 | Unconsolidated | FWGEBGmw-126C-128-GW | 10/19/2009 | 2380307.31 | 572348.81 | 938.2 | Grab | BP | 0.226 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-127 | Unconsolidated | FWGEBGmw-127C-129-GW | 10/19/2009 | 2380172.16 | 571083.61 | 940.21 | Grab | BP | 0.33 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-128 | Unconsolidated | FWGEBGmw-128C-130-GW | 10/19/2009 | 2379892.79 | 570970.32 | 942.47 | Grab | BP | 0.068 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-129 | Unconsolidated | FWGEBGmw-129C-131-GW | 10/19/2009 | 2379240.52 | 572035.68 | 941.97 | Grab | BP | 0.0627 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-130 | Unconsolidated | FWGEBGmw-130C-132-GW | 10/19/2009 | 2379220.69 | 570695.61 | 941.18 | Grab | BP | 0.0928 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-104 | Unconsolidated | FWGDA2mw-104C-115-GW | 10/21/2009 | 2354773.248 | 561125.7023 | 1070.8244 | Grab | BP | 0.0284 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-107 | Unconsolidated | FWGDA2mw-107C-118-GW | 10/21/2009 | 2354923.231 | 560482.7171 | 1039.1815 | Grab | BP | 0.0427 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-108 | Unconsolidated | FWGDA2mw-108C-119-GW | 10/21/2009 | 2355602.421 | 560184.5864 | 1029.9156 | Grab | BP | 0.0597 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-109 | Unconsolidated | FWGDA2mw-109C-120-GW | 10/21/2009 | 2354796.85 | 559897.6695 | 1068.6588 | Grab | BP | 0.0493 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-110 | Unconsolidated | FWGDA2mw-110C-121-GW | 10/21/2009 | 2355195.202 | 559922.3928 | 1061.3878 | Grab | BP | 0.0106 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-112 | Unconsolidated | FWGDA2mw-112C-123-GW | 10/21/2009 | 2355019.568 | 560374.5046 | 1034.8724 | Grab | BP | 0.0998 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-113 | Unconsolidated | FWGDA2mw-113C-124-GW | 10/21/2009 | 2355150.554 | 560392.8898 | 1034.5126 | Grab | BP | 0.0642 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-1 | Unconsolidated | FWGDETMw-001-111-GW | 10/21/2009 | 2354959.47 | 560820.03 | 1063.97 | Grab | BP | 0.0303 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-2 | Unconsolidated | FWGDETMw-002C-112-GW | 10/21/2009 | 2355360.33 | 560664.71 | 1062.69 | Grab | BP | 0.0743 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-3 | Unconsolidated | FWGDETMw-003C-1488-GW | 10/14/2009 | 2355204.94 | 560456.1 | 1035.56 | Grab | BP | 0.0594 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-006 | Unconsolidated | FWGWBGmw-006C-171-GW | 10/20/2009 | 2359087.79 | 563008.87 | 1010.38 | Grab | BP | 0.0274 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-007 | Unconsolidated | FWGWBGmw-007C-172-GW | 10/20/2009 | 2360420.44 | 562479.87 | 995.33 | Grab | BP | 0.235 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-009 | Unconsolidated | FWGWBGmw-009C-174-GW | 10/20/2009 | 2357159.2 | 561603.54 | 1042 | Grab | BP | 0.0159 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-010 | Unconsolidated | FWGWBGmw-010C-175-GW | 10/20/2009 | 2356051.96 | 562893.2 | 1069.85 | Grab | BP | 0.0298 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-011 | Unconsolidated | FWGWBGmw-011C-176-GW | 10/20/2009 | 2356187.29 | 562609.18 | 1072.38 | Grab | BP | 0.0661 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-012 | Unconsolidated | FWGWBGmw-012C-177-GW | 10/20/2009 | 2354810.65 | 562240.9 | 1079.11 | Grab | BP | 0.122 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-013 | Unconsolidated | FWGWBGmw-013C-178-GW | 10/20/2009 | 2355223.25 | 561518.27 | 1071.7 | Grab | BP | 0.0465 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-014 | Unconsolidated | FWGWBGmw-014C-179-GW | 10/20/2009 | 2360439.22 | 562061.26 | 996.78 | Grab | BP | 0.0292 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-015 | Unconsolidated | FWGWBGmw-015C-180-GW | 10/20/2009 | 2359182.41 | 562340.12 | 1011.6 | Grab | BP | 0.105 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-016 | Unconsolidated | FWGWBGmw-016C-181-GW | 10/20/2009 | 2360645.88 | 562709.13 | 997.03 | Grab | BP | 0.0853 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-017 | Unconsolidated | FWGWBGmw-017C-182-GW | 10/20/2009 | 2359603.84 | 562913.24 | 1006.62 | Grab | BP | 0.173 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-064 | Unconsolidated | FWGLL1mw-064-022-GW | 10/19/2009 | 2380286.973 | 563118.7363 | 932 | Grab | BP | 0.0881 | | P | | 0.01 | 0.0028 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-065 | Unconsolidated | FWGLL1mw-065-023-GW | 10/19/2009 | 2380452.003 | 560916.9225 | 940 | Grab | BP | 0.504 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-193 | Unconsolidated | FWGLL4mw-193-057-GW | 10/21/2009 | 2364236.52 | 554960.27 | 982.92 | Grab | BP | 0.0222 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-194 | Unconsolidated | FWGLL4mw-194C-058-GW | 10/16/2009 | 2364584.86 | 555089.22 | 983.76 | Grab | BP | 0.0888 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-196 | Unconsolidated | FWGLL4mw-196C-060-GW | 10/16/2009 | 2365297.1 | 555213.52 | 984.55 | Grab | BP | 0.0438 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-197 | Unconsolidated | FWGLL4mw-197C-061-GW | 10/16/2009 | 2365384.91 | 555397.05 | 985.46 | Grab | BP | 0.0182 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-198 | Unconsolidated | FWGLL4mw-198C-062-GW | 10/21/2009 | 2364991.19 | 555442.04 | 983.42 | Grab | BP | 0.0523 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-199 | Unconsolidated | FWGLL4mw-199C-063-GW | 10/16/2009 | 2365420.78 | 554621.62 | 977.28 | Grab | BP | 0.249 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-200 | Unconsolidated | FWGLL4mw-200-064-GW | 10/21/2009 | 2365903.05 | 554580.15 | 987.93 | Grab | BP | 0.0205 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-12 Load Line 12 | L12mw-107 | Unconsolidated | FWGLL12mw-107C-072-GW | 10/16/2009 | 2368595.67 | 556759.02 | 978.03 | Grab | BP | 0.0374 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-12 Load Line 12 | L12mw-128 | Unconsolidated | FWGLL12mw-128C-074-GW | 10/16/2009 | 2368293.2 | 557371.54 | 976.21 | Grab | BP | 0.172 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-12 Load Line 12 | L12mw-153 | Unconsolidated | FWGLL12mw-153C-075-GW | 10/16/2009 | 2368138.87 | 557823.23 | 975.34 | Grab | BP | 0.0762 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-12 Load Line 12 | L12mw-154 | Unconsolidated | FWGLL12mw-154C-076-GW | 10/16/2009 | 2368183.88 | 557754.56 | 977 | Grab | BP | 0.0901 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-12 Load Line 12 | L12mw-182 | Unconsolidated | FWGLL12mw-182C-077-GW | 10/16/2009 | 2368853.2 | 555890.35 | 982.2 | Grab | BP | 0.107 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-12 Load Line 12 | L12mw-188 | Unconsolidated | FWGLL12mw-188C-083-GW | 10/15/2009 | 2367908.82 | 558132.59 | 978.46 | Grab | BP | 0.0482 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-12 Load Line 12 | L12mw-242 | Unconsolidated | FWGLL12mw-242C-085-GW | 10/15/2009 | 2368545.29 | 558020.51 | 980 | Grab | BP | 0.038 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-12 Load Line 12 | L12mw-243 | Unconsolidated | FWGLL12mw-243C-086-GW | 10/16/2009 | 2368190.04 | 557376.32 | 978 | Grab | BP | 0.0937 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-12 Load Line 12 | L12mw-244 | Unconsolidated | FWGLL12mw-244C-087-GW | 10/16/2009 | 2368751.42 | 557377.17 | 980 | Grab | BP | 0.328 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-12 Load Line 12 | L12mw-245 | Unconsolidated | FWGLL12mw-245C-088-GW | 10/16/2009 | 2368370.74 | 557044.55 | 978 | Grab | BP | 0.0741 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-12 Load Line 12 | L12mw-246 | Unconsolidated | FWGLL12mw-246C-089-GW | 10/16/2009 | 2369432.17 | 556658.89 | 982.96 | Grab | BP | 0.0648 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-166 | Unconsolidated | FWGFBQmw-166C-133-GW | 10/22/2009 | 2349584.33 | 553123.86 | 1104.87 | Grab | BP | 0.0407 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-167 | Unconsolidated | FWGFBQmw-167C-134-GW | 10/22/2009 | 2349675.45 | 553556.12 | 1112.05 | Grab | BP | 0.0778 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-176 | Unconsolidated | FWGFBQmw-176C-143-GW | 10/22/2009 | 2350219.45 | 553273.33 | 1129.57 | Grab | BP | 0.157 | | E | | 0.01 | 0.0028 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-024 | Unconsolidated | FWGLNWmw-024C-145-GW | 10/20/2009 | 2358400 | 564828 | 1035.3 | Grab | BP | 0.134 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-025 | Unconsolidated | FWGLNWmw-025C-146-GW | 10/20/2009 | 2358420 | 565070 | 1027.2 | Grab | BP | 0.0489 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-026 | Unconsolidated | FWGLNWmw-026C-147-GW | 10/20/2009 | 2358950 | 564656 | 1025 | Grab | BP | 0.121 | | | | 0.01 | 0.0028 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Barium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|--------|--------|------|--------|------|--------|----|
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-027 | Unconsolidated | FWGLNWmw-027C-148-GW | 10/20/2009 | 2358630 | 564519 | 1024.4 | Grab | BP | 0.0414 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-001 | Unconsolidated | FWGMBSmw-001C-183-GW | 10/20/2009 | 2345323 | 550759.5 | 1079.68 | Grab | BP | 0.115 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-002 | Unconsolidated | FWGMBSmw-002C-184-GW | 10/20/2009 | 2345322.3 | 550886.2 | 1080.5 | Grab | BP | 0.136 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-003 | Unconsolidated | FWGMBSmw-003C-185-GW | 10/20/2009 | 2345172.4 | 550922.8 | 1082.45 | Grab | BP | 0.0202 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-004 | Unconsolidated | FWGMBSmw-004C-186-GW | 10/20/2009 | 2345134.2 | 550767.9 | 1079.55 | Grab | BP | 0.0386 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-005 | Unconsolidated | FWGMBSmw-005C-187-GW | 10/20/2009 | 2345354.1 | 550800.7 | 1080.5 | Grab | BP | 0.134 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-006 | Unconsolidated | FWGMBSmw-006C-188-GW | 10/20/2009 | 2345282.3 | 550726.1 | 1080.29 | Grab | BP | 0.0857 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-001 | Unconsolidated | FWGCPmw-001C-105-GW | 10/21/2009 | 2368948.852 | 560440.9741 | 975.2594 | Grab | BP | 0.0464 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-004 | Unconsolidated | FWGCPmw-004C-108-GW | 10/21/2009 | 2368674.21 | 561843.2791 | 981.198 | Grab | BP | 0.0252 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-006 | Unconsolidated | FWGCPmw-006C-110-GW | 10/21/2009 | 2367727.191 | 562830.039 | 965.13 | Grab | BP | 0.385 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-001 | Unconsolidated | FWGLL6mw-001C-001-GW | 10/21/2009 | 2353153.227 | 554214.8365 | 1124.1607 | Grab | B | 0.198 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-002 | Unconsolidated | FWGLL6mw-002C-002-GW | 10/21/2009 | 2353820.091 | 553589.8815 | 1129.3631 | Grab | B | 0.23 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-107 | Unconsolidated | FWGNTAmw-107C-149-GW | 10/20/2009 | 2345432.73 | 551699.09 | 1077.65 | Grab | BP | 0.181 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-108 | Unconsolidated | FWGNTAmw-108C-150-GW | 10/20/2009 | 2345782.17 | 551917.92 | 1083.22 | Grab | BP | 0.0798 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-109 | Unconsolidated | FWGNTAmw-109C-151-GW | 10/20/2009 | 2345996.99 | 551291.19 | 1076.89 | Grab | BP | 0.0346 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-110 | Unconsolidated | FWGNTAmw-110C-152-GW | 10/20/2009 | 2346436.82 | 551350.8 | 1080.03 | Grab | BP | 0.165 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-111 | Unconsolidated | FWGNTAmw-111C-153-GW | 10/20/2009 | 2346640.16 | 551538.99 | 1078.07 | Grab | BP | 0.0633 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-112 | Unconsolidated | FWGNTAmw-112C-154-GW | 10/20/2009 | 2346889.01 | 551708.76 | 1075.36 | Grab | BP | 0.116 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-113 | Unconsolidated | FWGNTAmw-113C-155-GW | 10/20/2009 | 2347081.15 | 551487.86 | 1072.61 | Grab | BP | 0.21 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-115 | Unconsolidated | FWGNTAmw-115C-157-GW | 10/20/2009 | 2347582.94 | 551793.39 | 1086.91 | Grab | BP | 0.0588 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-116 | Unconsolidated | FWGNTAmw-116C-158-GW | 10/20/2009 | 2348196.78 | 551749.39 | 1091.68 | Grab | BP | 0.0693 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-117 | Unconsolidated | FWGNTAmw-117C-159-GW | 10/20/2009 | 2347994.79 | 551586.36 | 1091.67 | Grab | BP | 0.0853 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-118 | Unconsolidated | FWGNTAmw-118C-160-GW | 10/20/2009 | 2347608.09 | 551333.89 | 1078.86 | Grab | BP | 0.0423 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-003 | Unconsolidated | FWGLL5mw-003C-067-GW | 10/21/2009 | 2354962.47 | 554533.41 | 1124.7 | Grab | BP | 0.16 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-001 | Unconsolidated | FWGLL8mw-001C-1436-GW | 10/13/2009 | 2351660 | 552609 | 1118.69 | Grab | BP | 0.0401 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-002 | Unconsolidated | FWGLL8mw-002C-1437-GW | 10/13/2009 | 2351010 | 552410 | 1121.67 | Grab | BP | 0.0411 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-003 | Unconsolidated | FWGLL8mw-003C-1438-GW | 10/13/2009 | 2351360 | 552231 | 1116.3 | Grab | BP | 0.026 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-004 | Unconsolidated | FWGLL8mw-004C-1439-GW | 10/13/2009 | 2351260 | 551808 | 1112.73 | Grab | BP | 0.0119 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-43 Load Line 10 | L10mw-006 | Unconsolidated | FWGLL10mw-006C-1454-GW | 10/14/2009 | 2355656.8 | 554997.25 | 1121.2 | Grab | BP | 0.0254 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-001 | Unconsolidated | FWGLL11mw-001C-1455-GW | 10/14/2009 | 2352778.81 | 557504.98 | 1100.16 | Grab | BP | 0.0716 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-006 | Unconsolidated | FWGLL11mw-006C-1459-GW | 10/14/2009 | 2352521.51 | 558263.51 | 1086.5 | Grab | BP | 0.035 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-008 | Unconsolidated | FWGLL11mw-008C-1460-GW | 10/14/2009 | 2352388.57 | 557981.26 | 1087.74 | Grab | BP | 0.0569 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-009 | Unconsolidated | FWGLL11mw-009C-1461-GW | 10/14/2009 | 2352577.21 | 557901.2 | 1088.28 | Grab | BP | 0.0707 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-010 | Unconsolidated | FWGLL11mw-010C-1462-GW | 10/14/2009 | 2352038.91 | 557675.59 | 1082.68 | Grab | BP | 0.105 | | P | | 0.01 | 0.0028 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-001 | Unconsolidated | FWGCBPmw-001C-097-GW | 10/21/2009 | 2367095.431 | 561616.171 | 975.8411 | Grab | BP | 0.0364 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-002 | Unconsolidated | FWGCBPmw-002C-098-GW | 10/21/2009 | 2367295.684 | 561865.9216 | 970.0359 | Grab | BP | 0.0654 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-003 | Unconsolidated | FWGCBPmw-003C-099-GW | 10/21/2009 | 2366768.739 | 561944.2018 | 974.6665 | Grab | BP | 0.0159 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-004 | Unconsolidated | FWGCBPmw-004C-100-GW | 10/21/2009 | 2366978.819 | 562123.8244 | 971.1285 | Grab | BP | 0.27 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-005 | Unconsolidated | FWGCBPmw-005C-101-GW | 10/21/2009 | 2366919.482 | 562311.8596 | 971.5897 | Grab | BP | 0.116 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-006 | Unconsolidated | FWGCBPmw-006C-102-GW | 10/21/2009 | 2367243.659 | 562311.9449 | 967.6448 | Grab | BP | 0.356 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-007 | Unconsolidated | FWGCBPmw-007C-103-GW | 10/21/2009 | 2366512.573 | 562006.343 | 976.3736 | Grab | BP | 0.0141 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-007 | Unconsolidated | FWGASYmw-007C-1469-GW | 10/15/2009 | 2366840 | 556820 | 981.4 | Grab | BP | 0.0221 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-008 | Unconsolidated | FWGASYmw-008C-1470-GW | 10/15/2009 | 2367470 | 557086 | 976.2 | Grab | BP | 0.311 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-010 | Unconsolidated | FWGASYmw-010C-1472-GW | 10/15/2009 | 2366980 | 557273 | 978.2 | Grab | BP | 0.102 | | | | 0.01 | 0.0028 | 1 |
| Site-wide Background Areas | BKGmw-004 | Unconsolidated | FWGBKGmw-004C-007-GW | 10/21/2009 | 2368852.973 | 569464.763 | 965.16 | Grab | BP | 0.0234 | | | | 0.01 | 0.0028 | 1 |
| Site-wide Background Areas | BKGmw-005 | Unconsolidated | FWGBKGmw-005C-008-GW | 10/22/2009 | 2340835.864 | 562288.445 | 1149.443 | Grab | BP | 0.0515 | | | | 0.01 | 0.0028 | 1 |
| Site-wide Background Areas | BKGmw-013 | Unconsolidated | FWGBKGmw-013C-013-GW | 10/21/2009 | 2361627.394 | 558269.158 | 986.588 | Grab | BP | 0.114 | | | | 0.01 | 0.0028 | 1 |
| Site-wide Background Areas | BKGmw-016 | Unconsolidated | FWGBKGmw-016C-015-GW | 10/22/2009 | 2342407.075 | 553983.501 | 1098.419 | Grab | BP | 0.0144 | | | | 0.01 | 0.0028 | 1 |
| Site-wide Background Areas | BKGmw-017 | Unconsolidated | FWGBKGmw-017C-016-GW | 10/22/2009 | 2346115.351 | 562452.044 | 1132.799 | Grab | BP | 0.0887 | | | | 0.01 | 0.0028 | 1 |
| Site-wide Background Areas | BKGmw-019 | Unconsolidated | FWGBKGmw-019C-018-GW | 10/22/2009 | 2349882.142 | 559864.549 | 1108.239 | Grab | BP | 0.0891 | | | | 0.01 | 0.0028 | 1 |
| Site-wide Background Areas | BKGmw-020 | Unconsolidated | FWGBKGmw-020C-019-GW | 10/21/2009 | 2357856.237 | 558756.241 | 1065.001 | Grab | BP | 0.186 | | | | 0.01 | 0.0028 | 1 |
| Site-wide Background Areas | BKGmw-021 | Unconsolidated | FWGBKGmw-021C-020-GW | 10/21/2009 | 2367622.953 | 571016.748 | 972.159 | Grab | BP | 0.0342 | | | | 0.01 | 0.0028 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Barium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|--------|--------|------|--------|------|--------|----|
| RVAAP-01 Ramsdell Quarry Landfill | RQLmw-009 | Sharon | FWGRQLmw-009C-1487-GW | 10/14/2009 | 2376253.654 | 566351.1994 | 964 | Grab | BP | 0.0432 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-078 | Sharon | FWGLL1mw-078-025-GW | 10/19/2009 | 2376275.854 | 564623.871 | 995.84 | Grab | BP | 0.0272 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-080 | Sharon | FWGLL1mw-080-027-GW | 10/19/2009 | 2376845.072 | 562479.728 | 996.27 | Grab | BP | 0.0648 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-082 | Sharon | FWGLL1mw-082-029-GW | 10/19/2009 | 2376977.379 | 562956.86 | 1006.45 | Grab | BP | 0.045 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-060 | Sharon | FWGLL2mw-060C-034-GW | 10/19/2009 | 2375978 | 558022 | 958.13 | Grab | BP | 0.0216 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-263 | Sharon | FWGLL2mw-263-037-GW | 10/19/2009 | 2374290.29 | 561590.92 | 1009.42 | Grab | BP | 0.0368 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-264 | Sharon | FWGLL2mw-264-038-GW | 10/19/2009 | 2374532.76 | 561173.63 | 1010.1 | Grab | BP | 0.0131 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-267 | Sharon | FWGLL2mw-267C-041-GW | 10/19/2009 | 2373714.17 | 561393.73 | 1012.81 | Grab | BP | 0.0241 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-268 | Sharon | FWGLL2mw-268-042-GW | 10/19/2009 | 2374156.4 | 560831.44 | 1015.47 | Grab | BP | 0.068 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-269 | Sharon | FWGLL2mw-269-043-GW | 10/20/2009 | 2374756.74 | 559483.9 | 1009.49 | Grab | BP | 0.289 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-270 | Sharon | FWGLL2mw-270-044-GW | 10/19/2009 | 2372858.94 | 562656.18 | 1009.93 | Grab | BP | 0.0128 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-238 | Sharon | FWGLL3mw-238C-051-GW | 10/20/2009 | 2370624.55 | 559569.39 | 1006.91 | Grab | BP | 0.0416 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-239 | Sharon | FWGLL3mw-239-052-GW | 10/20/2009 | 2370894.17 | 559101.84 | 1003.5 | Grab | BP | 0.0205 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-241 | Sharon | FWGLL3mw-241-054-GW | 10/20/2009 | 2370332.94 | 559299 | 994.65 | Grab | BP | 0.0163 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-242 | Sharon | FWGLL3mw-242-055-GW | 10/21/2009 | 2371993.44 | 557035.28 | 999.32 | Grab | BP | 0.0469 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-243 | Sharon | FWGLL3mw-243C-056-GW | 10/21/2009 | 2371532.06 | 556688.5 | 991.16 | Grab | BP | 0.0461 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-12 Load Line 12 | L12mw-186 | Sharon | FWGLL12mw-186C-081-GW | 10/15/2009 | 2367912.39 | 559065.95 | 976.34 | Grab | BP | 0.0418 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-12 Load Line 12 | L12mw-189 | Sharon | FWGLL12mw-189C-084-GW | 10/15/2009 | 2367945.92 | 558569.27 | 976.17 | Grab | BP | 0.0388 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-13 Building 1200 | B12mw-011 | Sharon | FWGB12mw-011C-091-GW | 10/21/2009 | 2371420 | 565690 | 1003.76 | Grab | BP | 0.0028 | U | U | | 0.01 | 0.0028 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-001 | Sharon | FWGASYmw-001C-1463-GW | 10/14/2009 | 2366262.85 | 558406.04 | 978.4 | Grab | BP | 0.0297 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-002 | Sharon | FWGASYmw-002C-1464-GW | 10/15/2009 | 2366170 | 557890 | 982 | Grab | BP | 0.02 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-003 | Sharon | FWGASYmw-003C-1465-GW | 10/15/2009 | 2366650 | 558014 | 979.7 | Grab | BP | 0.0185 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-005 | Sharon | FWGASYmw-005C-1467-GW | 10/15/2009 | 2367450 | 557785 | 977.6 | Grab | BP | 0.0473 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-006 | Sharon | FWGASYmw-006C-1468-GW | 10/15/2009 | 2366750 | 557256 | 980.2 | Grab | BP | 0.055 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-009 | Sharon | FWGASYmw-009C-1471-GW | 10/15/2009 | 2366630 | 557606 | 979.9 | Grab | BP | 0.049 | | | | 0.01 | 0.0028 | 1 |
| Site-wide Background Areas | BKGmw-012 | Sharon | FWGBKGMw-012C-012-GW | 10/21/2009 | 2367795.226 | 563918.862 | 997.574 | Grab | BP | 0.258 | | | | 0.01 | 0.0028 | 1 |
| Site-wide Background Areas | BKGmw-018 | Sharon | FWGBKGMw-018C-017-GW | 10/21/2009 | 2354993.909 | 570873.349 | 1043.06 | Grab | BP | 0.017 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-001 | Homewood | FWGCBLmw-001C-093-GW | 10/21/2009 | 2343659.08 | 559405.12 | 1178.5 | Grab | BP | 0.0361 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-003 | Homewood | FWGCBLmw-003C-095-GW | 10/22/2009 | 2343967.67 | 559697.13 | 1172.22 | Grab | BP | 0.056 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-004 | Homewood | FWGCBLmw-004C-096-GW | 10/22/2009 | 2343687.21 | 559950 | 1172.08 | Grab | BP | 0.0254 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-171 | Homewood | FWGFBQmw-171C-138-GW | 10/22/2009 | 2350072.44 | 554230.93 | 1140.49 | Grab | BP | 0.0603 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-172 | Homewood | FWGFBQmw-172C-139-GW | 10/22/2009 | 2349907.37 | 554322.17 | 1145.71 | Grab | BP | 0.0514 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-173 | Homewood | FWGFBQmw-173C-140-GW | 10/22/2009 | 2350449.01 | 554491.35 | 1162.43 | Grab | BP | 0.0109 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-174 | Homewood | FWGFBQmw-174C-141-GW | 10/22/2009 | 2350289.81 | 554142.44 | 1135.78 | Grab | BP | 0.0182 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-175 | Homewood | FWGFBQmw-175C-142-GW | 10/22/2009 | 2350297.98 | 553989.24 | 1137.16 | Grab | BP | 0.023 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-177 | Homewood | FWGFBQmw-177C-144-GW | 10/22/2009 | 2350112.18 | 553321.94 | 1125.73 | Grab | BP | 0.0244 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-003 | Homewood | FWGLL6mw-003C-003-GW | 10/21/2009 | 2353048.684 | 553544.3432 | 1125.3837 | Grab | BP | 0.0759 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-004 | Homewood | FWGLL6mw-004C-004-GW | 10/21/2009 | 2353368.787 | 553431.8182 | 1125.3851 | Grab | BP | 0.0413 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-001 | Homewood | FWGLL5mw-001C-065-GW | 10/21/2009 | 2354627.07 | 554321.25 | 1125 | Grab | BP | 0.0692 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-002 | Homewood | FWGLL5mw-002C-066-GW | 10/21/2009 | 2354573.52 | 554606 | 1125.8 | Grab | BP | 0.202 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-004 | Homewood | FWGLL5mw-004C-068-GW | 10/21/2009 | 2355008.44 | 554071.73 | 1122.9 | Grab | BP | 0.243 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-005 | Homewood | FWGLL5mw-005C-069-GW | 10/22/2009 | 2354424.02 | 554154.73 | 1126.5 | Grab | BP | 0.0524 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-006 | Homewood | FWGLL5mw-006C-070-GW | 10/21/2009 | 2354730 | 553981.82 | 1125.1 | Grab | BP | 0.137 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-003 | Homewood | FWGLL7mw-003C-1432-GW | 10/12/2009 | 2352349.51 | 555414.33 | 1118.23 | Grab | BP | 0.0483 | | E | | 0.01 | 0.0028 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-004 | Homewood | FWGLL7mw-004C-1433-GW | 10/12/2009 | 2352036.23 | 555583.15 | 1123.3 | Grab | BP | 0.0523 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-005 | Homewood | FWGLL8mw-005C-1440-GW | 10/13/2009 | 2351750 | 551522 | 1112.51 | Grab | BP | 0.0423 | | | P | 0.01 | 0.0028 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-006 | Homewood | FWGLL8mw-006C-1441-GW | 10/13/2009 | 2351480 | 551295 | 1114.33 | Grab | BP | 0.0363 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-001 | Homewood | FWGLL9mw-001C-1442-GW | 10/13/2009 | 2355817.04 | 556125.81 | 1134.62 | Grab | BP | 0.015 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-002 | Homewood | FWGLL9mw-002C-1443-GW | 10/13/2009 | 2355907.76 | 556755.11 | 1127.3 | Grab | BP | 0.0056 | J | B | L | 0.01 | 0.0028 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-003 | Homewood | FWGLL9mw-003C-1444-GW | 10/13/2009 | 2356635.21 | 556445.31 | 1135.76 | Grab | BP | 0.0134 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-43 Load Line 10 | L10mw-001 | Homewood | FWGLL10mw-001C-1449-GW | 10/13/2009 | 2355272.22 | 555818.25 | 1130 | Grab | BP | 0.0063 | J | B | L | 0.01 | 0.0028 | 1 |
| RVAAP-43 Load Line 10 | L10mw-002 | Homewood | FWGLL10mw-002C-1450-GW | 10/13/2009 | 2355712.51 | 555525.36 | 1124.4 | Grab | BP | 0.0178 | | | | 0.01 | 0.0028 | 1 |
| RVAAP-43 Load Line 10 | L10mw-003 | Homewood | FWGLL10mw-003C-1451-GW | 10/13/2009 | 2355387.92 | 555496.71 | 1127.4 | Grab | BP | 0.0028 | U | U | | 0.01 | 0.0028 | 1 |
| RVAAP-43 Load Line 10 | L10mw-004 | Homewood | FWGLL10mw-004C-1452-GW | 10/14/2009 | 2355440.2 | 555234.59 | 1119.6 | Grab | BP | 0.0037 | J | B | L | 0.01 | 0.0028 | 1 |
| RVAAP-43 Load Line 10 | L10mw-005 | Homewood | FWGLL10mw-005C-1453-GW | 10/14/2009 | 2355941.55 | 555382.53 | 1122.9 | Grab | BP | 0.0131 | | | | 0.01 | 0.0028 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Beryllium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|-----------------------|-------------|-------------|-------------|-----------|-------------|--------|-----------|--------|------|--------|-------|--------|----|
| RVAAP-02 Erie Burning Grounds | EBGmw-123 | Unconsolidated | FWGEBGmw-123C-125-GW | 10/19/2009 | 2380049.21 | 571747.04 | 945.59 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-124 | Unconsolidated | FWGEBGmw-124C-126-GW | 10/19/2009 | 2380030.24 | 571618.07 | 939.02 | Grab | BP | 0.002 | | | | 0.001 | 0.0002 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-126 | Unconsolidated | FWGEBGmw-126C-128-GW | 10/19/2009 | 2380307.31 | 572348.81 | 938.2 | Grab | BP | 0.0002 | UJ | B | Cb,L | 0.001 | 0.0002 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-127 | Unconsolidated | FWGEBGmw-127C-129-GW | 10/19/2009 | 2380172.16 | 571083.61 | 940.21 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-128 | Unconsolidated | FWGEBGmw-128C-130-GW | 10/19/2009 | 2379892.79 | 570970.32 | 942.47 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-129 | Unconsolidated | FWGEBGmw-129C-131-GW | 10/19/2009 | 2379240.52 | 572035.68 | 941.97 | Grab | BP | 0.00037 | J | B | L | 0.001 | 0.0002 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-130 | Unconsolidated | FWGEBGmw-130C-132-GW | 10/19/2009 | 2379220.69 | 570695.61 | 941.18 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-104 | Unconsolidated | FWGDA2mw-104C-115-GW | 10/21/2009 | 2354773.248 | 561125.7023 | 1070.8244 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-107 | Unconsolidated | FWGDA2mw-107C-118-GW | 10/21/2009 | 2354923.231 | 560482.7171 | 1039.1815 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-108 | Unconsolidated | FWGDA2mw-108C-119-GW | 10/21/2009 | 2355602.421 | 560184.5864 | 1029.9156 | Grab | BP | 0.0002 | UJ | B | Cb,L | 0.001 | 0.0002 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-109 | Unconsolidated | FWGDA2mw-109C-120-GW | 10/21/2009 | 2354796.85 | 559897.6695 | 1068.6588 | Grab | BP | 0.0002 | UJ | B | Cb,L | 0.001 | 0.0002 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-110 | Unconsolidated | FWGDA2mw-110C-121-GW | 10/21/2009 | 2355195.202 | 559922.3928 | 1061.3878 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-112 | Unconsolidated | FWGDA2mw-112C-123-GW | 10/21/2009 | 2355019.568 | 560374.5046 | 1034.8724 | Grab | BP | 0.0015 | | | | 0.001 | 0.0002 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-113 | Unconsolidated | FWGDA2mw-113C-124-GW | 10/21/2009 | 2355150.554 | 560392.8898 | 1034.5126 | Grab | BP | 0.00037 | J | B | L | 0.001 | 0.0002 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-1 | Unconsolidated | FWGDETMw-001-111-GW | 10/21/2009 | 2354959.47 | 560820.03 | 1063.97 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-2 | Unconsolidated | FWGDETMw-002C-115-GW | 10/21/2009 | 2355360.33 | 560664.71 | 1062.69 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-3 | Unconsolidated | FWGDETMw-003C-1488-GW | 10/14/2009 | 2355204.94 | 560456.1 | 1035.56 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-006 | Unconsolidated | FWGWBGmw-006C-171-GW | 10/20/2009 | 2359087.79 | 563008.87 | 1010.38 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-007 | Unconsolidated | FWGWBGmw-007C-172-GW | 10/20/2009 | 2360420.44 | 562479.87 | 995.33 | Grab | BP | 0.0023 | | | | 0.001 | 0.0002 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-009 | Unconsolidated | FWGWBGmw-009C-174-GW | 10/20/2009 | 2357159.2 | 561603.54 | 1042 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-010 | Unconsolidated | FWGWBGmw-010C-175-GW | 10/20/2009 | 2356051.96 | 562893.2 | 1069.85 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-011 | Unconsolidated | FWGWBGmw-011C-176-GW | 10/20/2009 | 2356187.29 | 562609.18 | 1072.38 | Grab | BP | 0.0002 | UJ | B | Cb,L | 0.001 | 0.0002 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-012 | Unconsolidated | FWGWBGmw-012C-177-GW | 10/20/2009 | 2354810.65 | 562240.9 | 1079.11 | Grab | BP | 0.001 | | | | 0.001 | 0.0002 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-013 | Unconsolidated | FWGWBGmw-013C-178-GW | 10/20/2009 | 2355223.25 | 561518.27 | 1071.7 | Grab | BP | 0.00036 | J | B | L | 0.001 | 0.0002 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-014 | Unconsolidated | FWGWBGmw-014C-179-GW | 10/20/2009 | 2360439.22 | 562061.26 | 996.78 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-015 | Unconsolidated | FWGWBGmw-015C-180-GW | 10/20/2009 | 2359182.41 | 562340.12 | 1011.6 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-016 | Unconsolidated | FWGWBGmw-016C-181-GW | 10/20/2009 | 2360645.88 | 562709.13 | 997.03 | Grab | BP | 0.00028 | J | B | L | 0.001 | 0.0002 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-017 | Unconsolidated | FWGWBGmw-017C-182-GW | 10/20/2009 | 2359603.84 | 562913.24 | 1006.62 | Grab | BP | 0.0013 | | | | 0.001 | 0.0002 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-064 | Unconsolidated | FWGLL1mw-064-022-GW | 10/19/2009 | 2380286.973 | 563118.7363 | 932 | Grab | BP | 0.0002 | UJ | B | Cb,L | 0.001 | 0.0002 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-065 | Unconsolidated | FWGLL1mw-065-023-GW | 10/19/2009 | 2380452.003 | 560916.9225 | 940 | Grab | BP | 0.004 | | | | 0.001 | 0.0002 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-193 | Unconsolidated | FWGLL4mw-193-057-GW | 10/21/2009 | 2364236.52 | 554960.27 | 982.92 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-194 | Unconsolidated | FWGLL4mw-194C-058-GW | 10/16/2009 | 2364584.86 | 555089.22 | 983.76 | Grab | BP | 0.00041 | J | B | L | 0.001 | 0.0002 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-196 | Unconsolidated | FWGLL4mw-196C-060-GW | 10/16/2009 | 2365297.1 | 555213.52 | 984.55 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-197 | Unconsolidated | FWGLL4mw-197C-061-GW | 10/16/2009 | 2365384.91 | 555397.05 | 985.46 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-198 | Unconsolidated | FWGLL4mw-198C-062-GW | 10/21/2009 | 2364991.19 | 555442.04 | 983.42 | Grab | BP | 0.0002 | UJ | B | Cb,L | 0.001 | 0.0002 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-199 | Unconsolidated | FWGLL4mw-199C-063-GW | 10/16/2009 | 2365420.78 | 554621.62 | 977.28 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-200 | Unconsolidated | FWGLL4mw-200-064-GW | 10/21/2009 | 2365903.05 | 554580.15 | 987.93 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-12 Load Line 12 | L12mw-107 | Unconsolidated | FWGLL12mw-107C-072-GW | 10/16/2009 | 2368595.67 | 556759.02 | 978.03 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-12 Load Line 12 | L12mw-128 | Unconsolidated | FWGLL12mw-128C-074-GW | 10/16/2009 | 2368293.2 | 557371.54 | 976.21 | Grab | BP | 0.00082 | J | B | L | 0.001 | 0.0002 | 1 |
| RVAAP-12 Load Line 12 | L12mw-153 | Unconsolidated | FWGLL12mw-153C-075-GW | 10/16/2009 | 2368138.87 | 557823.23 | 975.34 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-12 Load Line 12 | L12mw-154 | Unconsolidated | FWGLL12mw-154C-076-GW | 10/16/2009 | 2368183.88 | 557754.56 | 977 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-12 Load Line 12 | L12mw-182 | Unconsolidated | FWGLL12mw-182C-077-GW | 10/16/2009 | 2368853.2 | 555890.35 | 982.2 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-12 Load Line 12 | L12mw-188 | Unconsolidated | FWGLL12mw-188C-083-GW | 10/15/2009 | 2367908.82 | 558132.59 | 978.46 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-12 Load Line 12 | L12mw-242 | Unconsolidated | FWGLL12mw-242C-085-GW | 10/15/2009 | 2368545.29 | 558020.51 | 980 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-12 Load Line 12 | L12mw-243 | Unconsolidated | FWGLL12mw-243C-086-GW | 10/16/2009 | 2368190.04 | 557376.32 | 978 | Grab | BP | 0.00073 | J | B | L | 0.001 | 0.0002 | 1 |
| RVAAP-12 Load Line 12 | L12mw-244 | Unconsolidated | FWGLL12mw-244C-087-GW | 10/16/2009 | 2368751.42 | 557377.17 | 980 | Grab | BP | 0.0025 | | | | 0.001 | 0.0002 | 1 |
| RVAAP-12 Load Line 12 | L12mw-245 | Unconsolidated | FWGLL12mw-245C-088-GW | 10/16/2009 | 2368370.74 | 557044.55 | 978 | Grab | BP | 0.00042 | J | B | L | 0.001 | 0.0002 | 1 |
| RVAAP-12 Load Line 12 | L12mw-246 | Unconsolidated | FWGLL12mw-246C-089-GW | 10/16/2009 | 2369432.17 | 556658.89 | 982.96 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-166 | Unconsolidated | FWGFBQmw-166C-133-GW | 10/22/2009 | 2349584.33 | 553123.86 | 1104.87 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-167 | Unconsolidated | FWGFBQmw-167C-134-GW | 10/22/2009 | 2349675.45 | 553556.12 | 1112.05 | Grab | BP | 0.0002 | UJ | B | Cb,L | 0.001 | 0.0002 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-176 | Unconsolidated | FWGFBQmw-176C-143-GW | 10/22/2009 | 2350219.45 | 553273.33 | 1129.57 | Grab | BP | 0.0012 | | | | 0.001 | 0.0002 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-024 | Unconsolidated | FWGLNWmw-024C-145-GW | 10/20/2009 | 2358400 | 564828 | 1035.3 | Grab | BP | 0.0011 | | | | 0.001 | 0.0002 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-025 | Unconsolidated | FWGLNWmw-025C-146-GW | 10/20/2009 | 2358420 | 565070 | 1027.2 | Grab | BP | 0.0002 | U | U | P | 0.001 | 0.0002 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-026 | Unconsolidated | FWGLNWmw-026C-147-GW | 10/20/2009 | 2358950 | 564656 | 1025 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Beryllium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|-----------|--------|------|--------|-------|--------|----|
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-027 | Unconsolidated | FWGLNWmw-027C-148-GW | 10/20/2009 | 2358630 | 564519 | 1024.4 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-001 | Unconsolidated | FWGMBSmw-001C-183-GW | 10/20/2009 | 2345323 | 550759.5 | 1079.68 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-002 | Unconsolidated | FWGMBSmw-002C-184-GW | 10/20/2009 | 2345322.3 | 550886.2 | 1080.5 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-003 | Unconsolidated | FWGMBSmw-003C-185-GW | 10/20/2009 | 2345172.4 | 550922.8 | 1082.45 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-004 | Unconsolidated | FWGMBSmw-004C-186-GW | 10/20/2009 | 2345134.2 | 550767.9 | 1079.55 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-005 | Unconsolidated | FWGMBSmw-005C-187-GW | 10/20/2009 | 2345354.1 | 550800.7 | 1080.5 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-006 | Unconsolidated | FWGMBSmw-006C-188-GW | 10/20/2009 | 2345282.3 | 550726.1 | 1080.29 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-001 | Unconsolidated | FWGCPmw-001C-105-GW | 10/21/2009 | 2368948.852 | 560440.9741 | 975.2594 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-004 | Unconsolidated | FWGCPmw-004C-108-GW | 10/21/2009 | 2368674.21 | 561843.2791 | 981.198 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-006 | Unconsolidated | FWGCPmw-006C-110-GW | 10/21/2009 | 2367727.191 | 562830.039 | 965.13 | Grab | BP | 0.002 | | | | 0.001 | 0.0002 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-001 | Unconsolidated | FWGLL6mw-001C-001-GW | 10/21/2009 | 2353153.227 | 554214.8365 | 1124.1607 | Grab | B | 0.0021 | | | | 0.001 | 0.0002 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-002 | Unconsolidated | FWGLL6mw-002C-002-GW | 10/21/2009 | 2353820.091 | 553589.8815 | 1129.3631 | Grab | B | 0.0027 | | | | 0.001 | 0.0002 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-107 | Unconsolidated | FWGNTAmw-107C-149-GW | 10/20/2009 | 2345432.73 | 551699.09 | 1077.65 | Grab | BP | 0.0005 | J | B | L | 0.001 | 0.0002 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-108 | Unconsolidated | FWGNTAmw-108C-150-GW | 10/20/2009 | 2345782.17 | 551917.92 | 1083.22 | Grab | BP | 0.0002 | UJ | B | Cb,L | 0.001 | 0.0002 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-109 | Unconsolidated | FWGNTAmw-109C-151-GW | 10/20/2009 | 2345996.99 | 551291.19 | 1076.89 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-110 | Unconsolidated | FWGNTAmw-110C-152-GW | 10/20/2009 | 2346436.82 | 551350.8 | 1080.03 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-111 | Unconsolidated | FWGNTAmw-111C-153-GW | 10/20/2009 | 2346640.16 | 551538.99 | 1078.07 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-112 | Unconsolidated | FWGNTAmw-112C-154-GW | 10/20/2009 | 2346889.01 | 551708.76 | 1075.36 | Grab | BP | 0.00081 | J | B | L | 0.001 | 0.0002 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-113 | Unconsolidated | FWGNTAmw-113C-155-GW | 10/20/2009 | 2347081.15 | 551487.86 | 1072.61 | Grab | BP | 0.0025 | | | | 0.001 | 0.0002 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-115 | Unconsolidated | FWGNTAmw-115C-157-GW | 10/20/2009 | 2347582.94 | 551793.39 | 1086.91 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-116 | Unconsolidated | FWGNTAmw-116C-158-GW | 10/20/2009 | 2348196.78 | 551749.39 | 1091.68 | Grab | BP | 0.0002 | UJ | B | Cb,L | 0.001 | 0.0002 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-117 | Unconsolidated | FWGNTAmw-117C-159-GW | 10/20/2009 | 2347994.79 | 551586.36 | 1091.67 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-118 | Unconsolidated | FWGNTAmw-118C-160-GW | 10/20/2009 | 2347608.09 | 551333.89 | 1078.86 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-003 | Unconsolidated | FWGLL5mw-003C-067-GW | 10/21/2009 | 2354962.47 | 554533.41 | 1124.7 | Grab | BP | 0.0014 | | | | 0.001 | 0.0002 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-001 | Unconsolidated | FWGLL8mw-001C-1436-GW | 10/13/2009 | 2351660 | 552609 | 1118.69 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-002 | Unconsolidated | FWGLL8mw-002C-1437-GW | 10/13/2009 | 2351010 | 552410 | 1121.67 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-003 | Unconsolidated | FWGLL8mw-003C-1438-GW | 10/13/2009 | 2351360 | 552231 | 1116.3 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-004 | Unconsolidated | FWGLL8mw-004C-1439-GW | 10/13/2009 | 2351260 | 551808 | 1112.73 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-43 Load Line 10 | L10mw-006 | Unconsolidated | FWGLL10mw-006C-1454-GW | 10/14/2009 | 2355656.8 | 554997.25 | 1121.2 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-001 | Unconsolidated | FWGLL11mw-001C-1455-GW | 10/14/2009 | 2352778.81 | 557504.98 | 1100.16 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-006 | Unconsolidated | FWGLL11mw-006C-1459-GW | 10/14/2009 | 2352521.51 | 558263.51 | 1086.5 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-008 | Unconsolidated | FWGLL11mw-008C-1460-GW | 10/14/2009 | 2352388.57 | 557981.26 | 1087.74 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-009 | Unconsolidated | FWGLL11mw-009C-1461-GW | 10/14/2009 | 2352577.21 | 557901.2 | 1088.28 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-010 | Unconsolidated | FWGLL11mw-010C-1462-GW | 10/14/2009 | 2352038.91 | 557675.59 | 1082.68 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-001 | Unconsolidated | FWGCBPmw-001C-097-GW | 10/21/2009 | 2367095.431 | 561616.171 | 975.8411 | Grab | BP | 0.00047 | J | B | L | 0.001 | 0.0002 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-002 | Unconsolidated | FWGCBPmw-002C-098-GW | 10/21/2009 | 2367295.684 | 561865.9216 | 970.0359 | Grab | BP | 0.00065 | J | B | L | 0.001 | 0.0002 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-003 | Unconsolidated | FWGCBPmw-003C-099-GW | 10/21/2009 | 2366768.739 | 561944.2018 | 974.6665 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-004 | Unconsolidated | FWGCBPmw-004C-100-GW | 10/21/2009 | 2366978.819 | 562123.8244 | 971.1285 | Grab | BP | 0.0018 | | | | 0.001 | 0.0002 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-005 | Unconsolidated | FWGCBPmw-005C-101-GW | 10/21/2009 | 2366919.482 | 562311.8596 | 971.5897 | Grab | BP | 0.00083 | J | B | L | 0.001 | 0.0002 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-006 | Unconsolidated | FWGCBPmw-006C-102-GW | 10/21/2009 | 2367243.659 | 562311.9449 | 967.6448 | Grab | BP | 0.0037 | | | | 0.001 | 0.0002 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-007 | Unconsolidated | FWGCBPmw-007C-103-GW | 10/21/2009 | 2366512.573 | 562006.343 | 976.3736 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-007 | Unconsolidated | FWGASYmw-007C-1469-GW | 10/15/2009 | 2366840 | 556820 | 981.4 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-008 | Unconsolidated | FWGASYmw-008C-1470-GW | 10/15/2009 | 2367470 | 557086 | 976.2 | Grab | BP | 0.0036 | | | | 0.001 | 0.0002 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-010 | Unconsolidated | FWGASYmw-010C-1472-GW | 10/15/2009 | 2366980 | 557273 | 978.2 | Grab | BP | 0.00025 | J | B | L | 0.001 | 0.0002 | 1 |
| Site-wide Background Areas | BKGmw-004 | Unconsolidated | FWGBKGmw-004C-007-GW | 10/21/2009 | 2368852.973 | 569464.763 | 965.16 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| Site-wide Background Areas | BKGmw-005 | Unconsolidated | FWGBKGmw-005C-008-GW | 10/22/2009 | 2340835.864 | 562288.445 | 1149.443 | Grab | BP | 0.0004 | J | B | L | 0.001 | 0.0002 | 1 |
| Site-wide Background Areas | BKGmw-013 | Unconsolidated | FWGBKGmw-013C-013-GW | 10/21/2009 | 2361627.394 | 558269.158 | 986.588 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| Site-wide Background Areas | BKGmw-016 | Unconsolidated | FWGBKGmw-016C-015-GW | 10/22/2009 | 2342407.075 | 553983.501 | 1098.419 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| Site-wide Background Areas | BKGmw-017 | Unconsolidated | FWGBKGmw-017C-016-GW | 10/22/2009 | 2346115.351 | 562452.044 | 1132.799 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| Site-wide Background Areas | BKGmw-019 | Unconsolidated | FWGBKGmw-019C-018-GW | 10/22/2009 | 2349882.142 | 559864.549 | 1108.239 | Grab | BP | 0.0002 | UJ | B | Cb,L | 0.001 | 0.0002 | 1 |
| Site-wide Background Areas | BKGmw-020 | Unconsolidated | FWGBKGmw-020C-019-GW | 10/21/2009 | 2357856.237 | 558756.241 | 1065.001 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |
| Site-wide Background Areas | BKGmw-021 | Unconsolidated | FWGBKGmw-021C-020-GW | 10/21/2009 | 2367622.953 | 571016.748 | 972.159 | Grab | BP | 0.0002 | U | U | | 0.001 | 0.0002 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Beryllium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|-----------|--------|------|--------|-------|--------|----|
| RVAAP-01 Ramsdell Quarry Landfill | RQLmw-009 | Sharon | FWGRQLmw-009C-1487-GW | 10/14/2009 | 2376253.654 | 566351.1994 | 964 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-078 | Sharon | FWGLL1mw-078-025-GW | 10/19/2009 | 2376275.854 | 564623.871 | 995.84 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-080 | Sharon | FWGLL1mw-080-027-GW | 10/19/2009 | 2376845.072 | 562479.728 | 996.27 | Grab | BP | 0.0048 | | | | 0.001 | 0.0002 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-082 | Sharon | FWGLL1mw-082-029-GW | 10/19/2009 | 2376977.379 | 562956.86 | 1006.45 | Grab | BP | 0.00096 J | B | L | | 0.001 | 0.0002 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-060 | Sharon | FWGLL2mw-060C-034-GW | 10/19/2009 | 2375978 | 558022 | 958.13 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-263 | Sharon | FWGLL2mw-263-037-GW | 10/19/2009 | 2374290.29 | 561590.92 | 1009.42 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-264 | Sharon | FWGLL2mw-264-038-GW | 10/19/2009 | 2374532.76 | 561173.63 | 1010.1 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-267 | Sharon | FWGLL2mw-267C-041-GW | 10/19/2009 | 2373714.17 | 561393.73 | 1012.81 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-268 | Sharon | FWGLL2mw-268-042-GW | 10/19/2009 | 2374156.4 | 560831.44 | 1015.47 | Grab | BP | 0.0006 J | B | L | | 0.001 | 0.0002 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-269 | Sharon | FWGLL2mw-269-043-GW | 10/20/2009 | 2374756.74 | 559483.9 | 1009.49 | Grab | BP | 0.00036 J | B | L | | 0.001 | 0.0002 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-270 | Sharon | FWGLL2mw-270-044-GW | 10/19/2009 | 2372858.94 | 562656.18 | 1009.93 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-238 | Sharon | FWGLL3mw-238C-051-GW | 10/20/2009 | 2370624.55 | 559569.39 | 1006.91 | Grab | BP | 0.00038 J | B | L | | 0.001 | 0.0002 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-239 | Sharon | FWGLL3mw-239-052-GW | 10/20/2009 | 2370894.17 | 559101.84 | 1003.5 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-241 | Sharon | FWGLL3mw-241-054-GW | 10/20/2009 | 2370332.94 | 559299 | 994.65 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-242 | Sharon | FWGLL3mw-242-055-GW | 10/21/2009 | 2371993.44 | 557035.28 | 999.32 | Grab | BP | 0.0002 UJ | B | Cb,L | | 0.001 | 0.0002 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-243 | Sharon | FWGLL3mw-243C-056-GW | 10/21/2009 | 2371532.06 | 556688.5 | 991.16 | Grab | BP | 0.0002 UJ | B | Cb,L | | 0.001 | 0.0002 | 1 |
| RVAAP-12 Load Line 12 | L12mw-186 | Sharon | FWGLL12mw-186C-081-GW | 10/15/2009 | 2367912.39 | 559065.95 | 976.34 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-12 Load Line 12 | L12mw-189 | Sharon | FWGLL12mw-189C-084-GW | 10/15/2009 | 2367945.92 | 558569.27 | 976.17 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-13 Building 1200 | B12mw-011 | Sharon | FWGB12mw-011C-091-GW | 10/21/2009 | 2371420 | 565690 | 1003.76 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-001 | Sharon | FWGASYmw-001C-1463-GW | 10/14/2009 | 2366262.85 | 558406.04 | 978.4 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-002 | Sharon | FWGASYmw-002C-1464-GW | 10/15/2009 | 2366170 | 557890 | 982 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-003 | Sharon | FWGASYmw-003C-1465-GW | 10/15/2009 | 2366650 | 558014 | 979.7 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-005 | Sharon | FWGASYmw-005C-1467-GW | 10/15/2009 | 2367450 | 557785 | 977.6 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-006 | Sharon | FWGASYmw-006C-1468-GW | 10/15/2009 | 2366750 | 557256 | 980.2 | Grab | BP | 0.00023 J | B | L | | 0.001 | 0.0002 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-009 | Sharon | FWGASYmw-009C-1471-GW | 10/15/2009 | 2366630 | 557606 | 979.9 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| Site-wide Background Areas | BKGmw-012 | Sharon | FWGBKGMw-012C-012-GW | 10/21/2009 | 2367795.226 | 563918.862 | 997.574 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| Site-wide Background Areas | BKGmw-018 | Sharon | FWGBKGMw-018C-017-GW | 10/21/2009 | 2354993.909 | 570873.349 | 1043.06 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-001 | Homewood | FWGCBLmw-001C-093-GW | 10/21/2009 | 2343659.08 | 559405.12 | 1178.5 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-003 | Homewood | FWGCBLmw-003C-095-GW | 10/22/2009 | 2343967.67 | 559697.13 | 1172.22 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-004 | Homewood | FWGCBLmw-004C-096-GW | 10/22/2009 | 2343687.21 | 559950 | 1172.08 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-171 | Homewood | FWGFBQmw-171C-138-GW | 10/22/2009 | 2350072.44 | 554230.93 | 1140.49 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-172 | Homewood | FWGFBQmw-172C-139-GW | 10/22/2009 | 2349907.37 | 554322.17 | 1145.71 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-173 | Homewood | FWGFBQmw-173C-140-GW | 10/22/2009 | 2350449.01 | 554491.35 | 1162.43 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-174 | Homewood | FWGFBQmw-174C-141-GW | 10/22/2009 | 2350289.81 | 554142.44 | 1135.78 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-175 | Homewood | FWGFBQmw-175C-142-GW | 10/22/2009 | 2350297.98 | 553989.24 | 1137.16 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-177 | Homewood | FWGFBQmw-177C-144-GW | 10/22/2009 | 2350112.18 | 553321.94 | 1125.73 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-003 | Homewood | FWGLL6mw-003C-003-GW | 10/21/2009 | 2353048.684 | 553544.3432 | 1125.3837 | Grab | BP | 0.0014 | | | | 0.001 | 0.0002 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-004 | Homewood | FWGLL6mw-004C-004-GW | 10/21/2009 | 2353368.787 | 553431.8182 | 1125.3851 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-001 | Homewood | FWGLL5mw-001C-065-GW | 10/21/2009 | 2354627.07 | 554321.25 | 1125 | Grab | BP | 0.0002 UJ | B | Cb,L | | 0.001 | 0.0002 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-002 | Homewood | FWGLL5mw-002C-066-GW | 10/21/2009 | 2354573.52 | 554606 | 1125.8 | Grab | BP | 0.0018 | | | | 0.001 | 0.0002 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-004 | Homewood | FWGLL5mw-004C-068-GW | 10/21/2009 | 2355008.44 | 554071.73 | 1122.9 | Grab | BP | 0.0022 | | | | 0.001 | 0.0002 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-005 | Homewood | FWGLL5mw-005C-069-GW | 10/22/2009 | 2354424.02 | 554154.73 | 1126.5 | Grab | BP | 0.00064 J | B | L | | 0.001 | 0.0002 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-006 | Homewood | FWGLL5mw-006C-070-GW | 10/21/2009 | 2354730 | 553981.82 | 1125.1 | Grab | BP | 0.0017 | | | | 0.001 | 0.0002 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-003 | Homewood | FWGLL7mw-003C-1432-GW | 10/12/2009 | 2352349.51 | 555414.33 | 1118.23 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-004 | Homewood | FWGLL7mw-004C-1433-GW | 10/12/2009 | 2352036.23 | 555583.15 | 1123.3 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-005 | Homewood | FWGLL8mw-005C-1440-GW | 10/13/2009 | 2351750 | 551522 | 1112.51 | Grab | BP | 0.00032 J | B | L,P | | 0.001 | 0.0002 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-006 | Homewood | FWGLL8mw-006C-1441-GW | 10/13/2009 | 2351480 | 551295 | 1114.33 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-001 | Homewood | FWGLL9mw-001C-1442-GW | 10/13/2009 | 2355817.04 | 556125.81 | 1134.62 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-002 | Homewood | FWGLL9mw-002C-1443-GW | 10/13/2009 | 2355907.76 | 556755.11 | 1127.3 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-003 | Homewood | FWGLL9mw-003C-1444-GW | 10/13/2009 | 2356635.21 | 556445.31 | 1135.76 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-43 Load Line 10 | L10mw-001 | Homewood | FWGLL10mw-001C-1449-GW | 10/13/2009 | 2355272.22 | 555818.25 | 1130 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-43 Load Line 10 | L10mw-002 | Homewood | FWGLL10mw-002C-1450-GW | 10/13/2009 | 2355712.51 | 555525.36 | 1124.4 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-43 Load Line 10 | L10mw-003 | Homewood | FWGLL10mw-003C-1451-GW | 10/13/2009 | 2355387.92 | 555496.71 | 1127.4 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-43 Load Line 10 | L10mw-004 | Homewood | FWGLL10mw-004C-1452-GW | 10/14/2009 | 2355440.2 | 555234.59 | 1119.6 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |
| RVAAP-43 Load Line 10 | L10mw-005 | Homewood | FWGLL10mw-005C-1453-GW | 10/14/2009 | 2355941.55 | 555382.53 | 1122.9 | Grab | BP | 0.0002 U | U | | | 0.001 | 0.0002 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Cadmium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|-----------------------|-------------|-------------|-------------|-----------|-------------|--------|---------|--------|------|-----------|--------|---------|----|
| RVAAP-02 Erie Burning Grounds | EBGmw-123 | Unconsolidated | FWGEBGmw-123C-125-GW | 10/19/2009 | 2380049.21 | 571747.04 | 945.59 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-124 | Unconsolidated | FWGEBGmw-124C-126-GW | 10/19/2009 | 2380030.24 | 571618.07 | 939.02 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.0005 | 0.00013 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-126 | Unconsolidated | FWGEBGmw-126C-128-GW | 10/19/2009 | 2380307.31 | 572348.81 | 938.2 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-127 | Unconsolidated | FWGEBGmw-127C-129-GW | 10/19/2009 | 2380172.16 | 571083.61 | 940.21 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-128 | Unconsolidated | FWGEBGmw-128C-130-GW | 10/19/2009 | 2379892.79 | 570970.32 | 942.47 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-129 | Unconsolidated | FWGEBGmw-129C-131-GW | 10/19/2009 | 2379240.52 | 572035.68 | 941.97 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-130 | Unconsolidated | FWGEBGmw-130C-132-GW | 10/19/2009 | 2379220.69 | 570695.61 | 941.18 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-104 | Unconsolidated | FWGDA2mw-104C-115-GW | 10/21/2009 | 2354773.248 | 561125.7023 | 1070.8244 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-107 | Unconsolidated | FWGDA2mw-107C-118-GW | 10/21/2009 | 2354923.231 | 560482.7171 | 1039.1815 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-108 | Unconsolidated | FWGDA2mw-108C-119-GW | 10/21/2009 | 2355602.421 | 560184.5864 | 1029.9156 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-109 | Unconsolidated | FWGDA2mw-109C-120-GW | 10/21/2009 | 2354796.85 | 559897.6695 | 1068.6588 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-110 | Unconsolidated | FWGDA2mw-110C-121-GW | 10/21/2009 | 2355195.202 | 559922.3928 | 1061.3878 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-112 | Unconsolidated | FWGDA2mw-112C-123-GW | 10/21/2009 | 2355019.568 | 560374.5046 | 1034.8724 | Grab | BP | 0.0002 | J | B | L | 0.0005 | 0.00013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-113 | Unconsolidated | FWGDA2mw-113C-124-GW | 10/21/2009 | 2355150.554 | 560392.8898 | 1034.5126 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-1 | Unconsolidated | FWGDETMw-001-111-GW | 10/21/2009 | 2354959.47 | 560820.03 | 1063.97 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-2 | Unconsolidated | FWGDETMw-002C-115-GW | 10/21/2009 | 2355360.33 | 560664.71 | 1062.69 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-3 | Unconsolidated | FWGDETMw-003C-1488-GW | 10/14/2009 | 2355204.94 | 560456.1 | 1035.56 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-006 | Unconsolidated | FWGWBGmw-006C-171-GW | 10/20/2009 | 2359087.79 | 563008.87 | 1010.38 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-007 | Unconsolidated | FWGWBGmw-007C-172-GW | 10/20/2009 | 2360420.44 | 562479.87 | 995.33 | Grab | BP | 0.00022 | J | B | L | 0.0005 | 0.00013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-009 | Unconsolidated | FWGWBGmw-009C-174-GW | 10/20/2009 | 2357159.2 | 561603.54 | 1042 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-010 | Unconsolidated | FWGWBGmw-010C-175-GW | 10/20/2009 | 2356051.96 | 562893.2 | 1069.85 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-011 | Unconsolidated | FWGWBGmw-011C-176-GW | 10/20/2009 | 2356187.29 | 562609.18 | 1072.38 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-012 | Unconsolidated | FWGWBGmw-012C-177-GW | 10/20/2009 | 2354810.65 | 562240.9 | 1079.11 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-013 | Unconsolidated | FWGWBGmw-013C-178-GW | 10/20/2009 | 2355223.25 | 561518.27 | 1071.7 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-014 | Unconsolidated | FWGWBGmw-014C-179-GW | 10/20/2009 | 2360439.22 | 562061.26 | 996.78 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-015 | Unconsolidated | FWGWBGmw-015C-180-GW | 10/20/2009 | 2359182.41 | 562340.12 | 1011.6 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-016 | Unconsolidated | FWGWBGmw-016C-181-GW | 10/20/2009 | 2360645.88 | 562709.13 | 997.03 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-017 | Unconsolidated | FWGWBGmw-017C-182-GW | 10/20/2009 | 2359603.84 | 562913.24 | 1006.62 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-064 | Unconsolidated | FWGLL1mw-064-022-GW | 10/19/2009 | 2380286.973 | 563118.7363 | 932 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-065 | Unconsolidated | FWGLL1mw-065-023-GW | 10/19/2009 | 2380452.003 | 560916.9225 | 940 | Grab | BP | 0.0009 | | | | 0.0005 | 0.00013 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-193 | Unconsolidated | FWGLL4mw-193-057-GW | 10/21/2009 | 2364236.52 | 554960.27 | 982.92 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-194 | Unconsolidated | FWGLL4mw-194C-058-GW | 10/16/2009 | 2364584.86 | 555089.22 | 983.76 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-196 | Unconsolidated | FWGLL4mw-196C-060-GW | 10/16/2009 | 2365297.1 | 555213.52 | 984.55 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-197 | Unconsolidated | FWGLL4mw-197C-061-GW | 10/16/2009 | 2365384.91 | 555397.05 | 985.46 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-198 | Unconsolidated | FWGLL4mw-198C-062-GW | 10/21/2009 | 2364991.19 | 555442.04 | 983.42 | Grab | BP | 0.0002 | J | B | L | 0.0005 | 0.00013 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-199 | Unconsolidated | FWGLL4mw-199C-063-GW | 10/16/2009 | 2365420.78 | 554621.62 | 977.28 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-200 | Unconsolidated | FWGLL4mw-200-064-GW | 10/21/2009 | 2365903.05 | 554580.15 | 987.93 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-107 | Unconsolidated | FWGLL12mw-107C-072-GW | 10/16/2009 | 2368595.67 | 556759.02 | 978.03 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-128 | Unconsolidated | FWGLL12mw-128C-074-GW | 10/16/2009 | 2368293.2 | 557371.54 | 976.21 | Grab | BP | 0.00013 | UJ | B | Pj,P,L,Cb | 0.0005 | 0.00013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-153 | Unconsolidated | FWGLL12mw-153C-075-GW | 10/16/2009 | 2368138.87 | 557823.23 | 975.34 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-154 | Unconsolidated | FWGLL12mw-154C-076-GW | 10/16/2009 | 2368183.88 | 557754.56 | 977 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-182 | Unconsolidated | FWGLL12mw-182C-077-GW | 10/16/2009 | 2368853.2 | 555890.35 | 982.2 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-188 | Unconsolidated | FWGLL12mw-188C-083-GW | 10/15/2009 | 2367908.82 | 558132.59 | 978.46 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-242 | Unconsolidated | FWGLL12mw-242C-085-GW | 10/15/2009 | 2368545.29 | 558020.51 | 980 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-243 | Unconsolidated | FWGLL12mw-243C-086-GW | 10/16/2009 | 2368190.04 | 557376.32 | 978 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-244 | Unconsolidated | FWGLL12mw-244C-087-GW | 10/16/2009 | 2368751.42 | 557377.17 | 980 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.0005 | 0.00013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-245 | Unconsolidated | FWGLL12mw-245C-088-GW | 10/16/2009 | 2368370.74 | 557044.55 | 978 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-246 | Unconsolidated | FWGLL12mw-246C-089-GW | 10/16/2009 | 2369432.17 | 556658.89 | 982.96 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-166 | Unconsolidated | FWGFBQmw-166C-133-GW | 10/22/2009 | 2349584.33 | 553123.86 | 1104.87 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-167 | Unconsolidated | FWGFBQmw-167C-134-GW | 10/22/2009 | 2349675.45 | 553556.12 | 1112.05 | Grab | BP | 0.0058 | | | | 0.0005 | 0.00013 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-176 | Unconsolidated | FWGFBQmw-176C-143-GW | 10/22/2009 | 2350219.45 | 553273.33 | 1129.57 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-024 | Unconsolidated | FWGLNWmw-024C-145-GW | 10/20/2009 | 2358400 | 564828 | 1035.3 | Grab | BP | 0.00022 | J | B | L | 0.0005 | 0.00013 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-025 | Unconsolidated | FWGLNWmw-025C-146-GW | 10/20/2009 | 2358420 | 565070 | 1027.2 | Grab | BP | 0.00024 | J | B | L | 0.0005 | 0.00013 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-026 | Unconsolidated | FWGLNWmw-026C-147-GW | 10/20/2009 | 2358950 | 564656 | 1025 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Cadmium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|---------|--------|------|--------|--------|---------|----|
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-027 | Unconsolidated | FWGLNWmw-027C-148-GW | 10/20/2009 | 2358630 | 564519 | 1024.4 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-001 | Unconsolidated | FWGMBSmw-001C-183-GW | 10/20/2009 | 2345323 | 550759.5 | 1079.68 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-002 | Unconsolidated | FWGMBSmw-002C-184-GW | 10/20/2009 | 2345322.3 | 550886.2 | 1080.5 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-003 | Unconsolidated | FWGMBSmw-003C-185-GW | 10/20/2009 | 2345172.4 | 550922.8 | 1082.45 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-004 | Unconsolidated | FWGMBSmw-004C-186-GW | 10/20/2009 | 2345134.2 | 550767.9 | 1079.55 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-005 | Unconsolidated | FWGMBSmw-005C-187-GW | 10/20/2009 | 2345354.1 | 550800.7 | 1080.5 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-006 | Unconsolidated | FWGMBSmw-006C-188-GW | 10/20/2009 | 2345282.3 | 550726.1 | 1080.29 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.0005 | 0.00013 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-001 | Unconsolidated | FWGCPmw-001C-105-GW | 10/21/2009 | 2368948.852 | 560440.9741 | 975.2594 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-004 | Unconsolidated | FWGCPmw-004C-108-GW | 10/21/2009 | 2368674.21 | 561843.2791 | 981.198 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-006 | Unconsolidated | FWGCPmw-006C-110-GW | 10/21/2009 | 2367727.191 | 562830.039 | 965.13 | Grab | BP | 0.00026 | J | B | L | 0.0005 | 0.00013 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-001 | Unconsolidated | FWGLL6mw-001C-001-GW | 10/21/2009 | 2353153.227 | 554214.8365 | 1124.1607 | Grab | B | 0.00056 | | | | 0.0005 | 0.00013 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-002 | Unconsolidated | FWGLL6mw-002C-002-GW | 10/21/2009 | 2353820.091 | 553589.8815 | 1129.3631 | Grab | B | 0.00042 | J | B | L | 0.0005 | 0.00013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-107 | Unconsolidated | FWGNTAmw-107C-149-GW | 10/20/2009 | 2345432.73 | 551699.09 | 1077.65 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-108 | Unconsolidated | FWGNTAmw-108C-150-GW | 10/20/2009 | 2345782.17 | 551917.92 | 1083.22 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-109 | Unconsolidated | FWGNTAmw-109C-151-GW | 10/20/2009 | 2345996.99 | 551291.19 | 1076.89 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-110 | Unconsolidated | FWGNTAmw-110C-152-GW | 10/20/2009 | 2346436.82 | 551350.8 | 1080.03 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-111 | Unconsolidated | FWGNTAmw-111C-153-GW | 10/20/2009 | 2346640.16 | 551538.99 | 1078.07 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-112 | Unconsolidated | FWGNTAmw-112C-154-GW | 10/20/2009 | 2346889.01 | 551708.76 | 1075.36 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-113 | Unconsolidated | FWGNTAmw-113C-155-GW | 10/20/2009 | 2347081.15 | 551487.86 | 1072.61 | Grab | BP | 0.00043 | J | B | L | 0.0005 | 0.00013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-115 | Unconsolidated | FWGNTAmw-115C-157-GW | 10/20/2009 | 2347582.94 | 551793.39 | 1086.91 | Grab | BP | 0.00043 | J | B | L | 0.0005 | 0.00013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-116 | Unconsolidated | FWGNTAmw-116C-158-GW | 10/20/2009 | 2348196.78 | 551749.39 | 1091.68 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-117 | Unconsolidated | FWGNTAmw-117C-159-GW | 10/20/2009 | 2347994.79 | 551586.36 | 1091.67 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-118 | Unconsolidated | FWGNTAmw-118C-160-GW | 10/20/2009 | 2347608.09 | 551333.89 | 1078.86 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-003 | Unconsolidated | FWGLL5mw-003C-067-GW | 10/21/2009 | 2354962.47 | 554533.41 | 1124.7 | Grab | BP | 0.0002 | J | B | L | 0.0005 | 0.00013 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-001 | Unconsolidated | FWGLL8mw-001C-1436-GW | 10/13/2009 | 2351660 | 552609 | 1118.69 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-002 | Unconsolidated | FWGLL8mw-002C-1437-GW | 10/13/2009 | 2351010 | 552410 | 1121.67 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-003 | Unconsolidated | FWGLL8mw-003C-1438-GW | 10/13/2009 | 2351360 | 552231 | 1116.3 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-004 | Unconsolidated | FWGLL8mw-004C-1439-GW | 10/13/2009 | 2351260 | 551808 | 1112.73 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-43 Load Line 10 | L10mw-006 | Unconsolidated | FWGLL10mw-006C-1454-GW | 10/14/2009 | 2355656.8 | 554997.25 | 1121.2 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-001 | Unconsolidated | FWGLL11mw-001C-1455-GW | 10/14/2009 | 2352778.81 | 557504.98 | 1100.16 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-006 | Unconsolidated | FWGLL11mw-006C-1459-GW | 10/14/2009 | 2352521.51 | 558263.51 | 1086.5 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-008 | Unconsolidated | FWGLL11mw-008C-1460-GW | 10/14/2009 | 2352388.57 | 557981.26 | 1087.74 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-009 | Unconsolidated | FWGLL11mw-009C-1461-GW | 10/14/2009 | 2352577.21 | 557901.2 | 1088.28 | Grab | BP | 0.00025 | J | B | L | 0.0005 | 0.00013 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-010 | Unconsolidated | FWGLL11mw-010C-1462-GW | 10/14/2009 | 2352038.91 | 557675.59 | 1082.68 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-001 | Unconsolidated | FWGCBPmw-001C-097-GW | 10/21/2009 | 2367095.431 | 561616.171 | 975.8411 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-002 | Unconsolidated | FWGCBPmw-002C-098-GW | 10/21/2009 | 2367295.684 | 561865.9216 | 970.0359 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-003 | Unconsolidated | FWGCBPmw-003C-099-GW | 10/21/2009 | 2366768.739 | 561944.2018 | 974.6665 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-004 | Unconsolidated | FWGCBPmw-004C-100-GW | 10/21/2009 | 2366978.819 | 562123.8244 | 971.1285 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-005 | Unconsolidated | FWGCBPmw-005C-101-GW | 10/21/2009 | 2366919.482 | 562311.8596 | 971.5897 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-006 | Unconsolidated | FWGCBPmw-006C-102-GW | 10/21/2009 | 2367243.659 | 562311.9449 | 967.6448 | Grab | BP | 0.00013 | UJ | B | Cb,L | 0.0005 | 0.00013 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-007 | Unconsolidated | FWGCBPmw-007C-103-GW | 10/21/2009 | 2366512.573 | 562006.343 | 976.3736 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-007 | Unconsolidated | FWGASYmw-007C-1469-GW | 10/15/2009 | 2366840 | 556820 | 981.4 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-008 | Unconsolidated | FWGASYmw-008C-1470-GW | 10/15/2009 | 2367470 | 557086 | 976.2 | Grab | BP | 0.00043 | J | B | L | 0.0005 | 0.00013 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-010 | Unconsolidated | FWGASYmw-010C-1472-GW | 10/15/2009 | 2366980 | 557273 | 978.2 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| Site-wide Background Areas | BKGmw-004 | Unconsolidated | FWGBKGmw-004C-007-GW | 10/21/2009 | 2368852.973 | 569464.763 | 965.16 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| Site-wide Background Areas | BKGmw-005 | Unconsolidated | FWGBKGmw-005C-008-GW | 10/22/2009 | 2340835.864 | 562288.445 | 1149.443 | Grab | BP | 0.00024 | J | B | L | 0.0005 | 0.00013 | 1 |
| Site-wide Background Areas | BKGmw-013 | Unconsolidated | FWGBKGmw-013C-013-GW | 10/21/2009 | 2361627.394 | 558269.158 | 986.588 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| Site-wide Background Areas | BKGmw-016 | Unconsolidated | FWGBKGmw-016C-015-GW | 10/22/2009 | 2342407.075 | 553983.501 | 1098.419 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| Site-wide Background Areas | BKGmw-017 | Unconsolidated | FWGBKGmw-017C-016-GW | 10/22/2009 | 2346115.351 | 562452.044 | 1132.799 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| Site-wide Background Areas | BKGmw-019 | Unconsolidated | FWGBKGmw-019C-018-GW | 10/22/2009 | 2349882.142 | 559864.549 | 1108.239 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| Site-wide Background Areas | BKGmw-020 | Unconsolidated | FWGBKGmw-020C-019-GW | 10/21/2009 | 2357856.237 | 558756.241 | 1065.001 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |
| Site-wide Background Areas | BKGmw-021 | Unconsolidated | FWGBKGmw-021C-020-GW | 10/21/2009 | 2367622.953 | 571016.748 | 972.159 | Grab | BP | 0.00013 | U | U | | 0.0005 | 0.00013 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Cadmium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|------------|--------|------|--------|---------|-----|----|
| RVAAP-01 Ramsdell Quarry Landfill | RQLmw-009 | Sharon | FWGRQLmw-009C-1487-GW | 10/14/2009 | 2376253.654 | 566351.1994 | 964 | Grab | BP | 0.00013 UJ | B | Cb,L | 0.0005 | 0.00013 | 1 | |
| RVAAP-08 Load Line 1 | LL1mw-078 | Sharon | FWGLL1mw-078-025-GW | 10/19/2009 | 2376275.854 | 564623.871 | 995.84 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-08 Load Line 1 | LL1mw-080 | Sharon | FWGLL1mw-080-027-GW | 10/19/2009 | 2376845.072 | 562479.728 | 996.27 | Grab | BP | 0.00076 | | | 0.0005 | 0.00013 | 1 | |
| RVAAP-08 Load Line 1 | LL1mw-082 | Sharon | FWGLL1mw-082-029-GW | 10/19/2009 | 2376977.379 | 562956.86 | 1006.45 | Grab | BP | 0.00032 J | B | L | 0.0005 | 0.00013 | 1 | |
| RVAAP-09 Load Line 2 | LL2mw-060 | Sharon | FWGLL2mw-060C-034-GW | 10/19/2009 | 2375978 | 558022 | 958.13 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-09 Load Line 2 | LL2mw-263 | Sharon | FWGLL2mw-263-037-GW | 10/19/2009 | 2374290.29 | 561590.92 | 1009.42 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-09 Load Line 2 | LL2mw-264 | Sharon | FWGLL2mw-264-038-GW | 10/19/2009 | 2374532.76 | 561173.63 | 1010.1 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-09 Load Line 2 | LL2mw-267 | Sharon | FWGLL2mw-267C-041-GW | 10/19/2009 | 2373714.17 | 561393.73 | 1012.81 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-09 Load Line 2 | LL2mw-268 | Sharon | FWGLL2mw-268-042-GW | 10/19/2009 | 2374156.4 | 560831.44 | 1015.47 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-09 Load Line 2 | LL2mw-269 | Sharon | FWGLL2mw-269-043-GW | 10/20/2009 | 2374756.74 | 559483.9 | 1009.49 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-09 Load Line 2 | LL2mw-270 | Sharon | FWGLL2mw-270-044-GW | 10/19/2009 | 2372858.94 | 562656.18 | 1009.93 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-10 Load Line 3 | LL3mw-238 | Sharon | FWGLL3mw-238C-051-GW | 10/20/2009 | 2370624.55 | 559569.39 | 1006.91 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-10 Load Line 3 | LL3mw-239 | Sharon | FWGLL3mw-239-052-GW | 10/20/2009 | 2370894.17 | 559101.84 | 1003.5 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-10 Load Line 3 | LL3mw-241 | Sharon | FWGLL3mw-241-054-GW | 10/20/2009 | 2370332.94 | 559299 | 994.65 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-10 Load Line 3 | LL3mw-242 | Sharon | FWGLL3mw-242-055-GW | 10/21/2009 | 2371993.44 | 557035.28 | 999.32 | Grab | BP | 0.0002 J | B | L | 0.0005 | 0.00013 | 1 | |
| RVAAP-10 Load Line 3 | LL3mw-243 | Sharon | FWGLL3mw-243C-056-GW | 10/21/2009 | 2371532.06 | 556688.5 | 991.16 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-12 Load Line 12 | L12mw-186 | Sharon | FWGLL12mw-186C-081-GW | 10/15/2009 | 2367912.39 | 559065.95 | 976.34 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-12 Load Line 12 | L12mw-189 | Sharon | FWGLL12mw-189C-084-GW | 10/15/2009 | 2367945.92 | 558569.27 | 976.17 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-13 Building 1200 | B12mw-011 | Sharon | FWGB12mw-011C-091-GW | 10/21/2009 | 2371420 | 565690 | 1003.76 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-50 Atlas Scrap Yard | ASYmw-001 | Sharon | FWGASYmw-001C-1463-GW | 10/14/2009 | 2366262.85 | 558406.04 | 978.4 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-50 Atlas Scrap Yard | ASYmw-002 | Sharon | FWGASYmw-002C-1464-GW | 10/15/2009 | 2366170 | 557890 | 982 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-50 Atlas Scrap Yard | ASYmw-003 | Sharon | FWGASYmw-003C-1465-GW | 10/15/2009 | 2366650 | 558014 | 979.7 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-50 Atlas Scrap Yard | ASYmw-005 | Sharon | FWGASYmw-005C-1467-GW | 10/15/2009 | 2367450 | 557785 | 977.6 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-50 Atlas Scrap Yard | ASYmw-006 | Sharon | FWGASYmw-006C-1468-GW | 10/15/2009 | 2366750 | 557256 | 980.2 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-50 Atlas Scrap Yard | ASYmw-009 | Sharon | FWGASYmw-009C-1471-GW | 10/15/2009 | 2366630 | 557606 | 979.9 | Grab | BP | 0.00013 UJ | B | Cb,L | 0.0005 | 0.00013 | 1 | |
| Site-wide Background Areas | BKGmw-012 | Sharon | FWGBKGmw-012C-012-GW | 10/21/2009 | 2367795.226 | 563918.862 | 997.574 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| Site-wide Background Areas | BKGmw-018 | Sharon | FWGBKGmw-018C-017-GW | 10/21/2009 | 2354993.909 | 570873.349 | 1043.06 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-06 C Block Quarry | CBLmw-001 | Homewood | FWGCBLmw-001C-093-GW | 10/21/2009 | 2343659.08 | 559405.12 | 1178.5 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-06 C Block Quarry | CBLmw-003 | Homewood | FWGCBLmw-003C-095-GW | 10/22/2009 | 2343967.67 | 559697.13 | 1172.22 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-06 C Block Quarry | CBLmw-004 | Homewood | FWGCBLmw-004C-096-GW | 10/22/2009 | 2343687.21 | 559950 | 1172.08 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-171 | Homewood | FWGFBQmw-171C-138-GW | 10/22/2009 | 2350072.44 | 554230.93 | 1140.49 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-172 | Homewood | FWGFBQmw-172C-139-GW | 10/22/2009 | 2349907.37 | 554322.17 | 1145.71 | Grab | BP | 0.00013 UJ | B | Cb,L | 0.0005 | 0.00013 | 1 | |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-173 | Homewood | FWGFBQmw-173C-140-GW | 10/22/2009 | 2350449.01 | 554491.35 | 1162.43 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-174 | Homewood | FWGFBQmw-174C-141-GW | 10/22/2009 | 2350289.81 | 554142.44 | 1135.78 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-175 | Homewood | FWGFBQmw-175C-142-GW | 10/22/2009 | 2350297.98 | 553989.24 | 1137.16 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-177 | Homewood | FWGFBQmw-177C-144-GW | 10/22/2009 | 2350112.18 | 553321.94 | 1125.73 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-33 Load Line 6 | LL6mw-003 | Homewood | FWGLL6mw-003C-003-GW | 10/21/2009 | 2353048.684 | 553544.3432 | 1125.3837 | Grab | BP | 0.00013 UJ | B | Cb,L | 0.0005 | 0.00013 | 1 | |
| RVAAP-33 Load Line 6 | LL6mw-004 | Homewood | FWGLL6mw-004C-004-GW | 10/21/2009 | 2353368.787 | 553431.8182 | 1125.3851 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-39 Load Line 5 | LL5mw-001 | Homewood | FWGLL5mw-001C-065-GW | 10/21/2009 | 2354627.07 | 554321.25 | 1125 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-39 Load Line 5 | LL5mw-002 | Homewood | FWGLL5mw-002C-066-GW | 10/21/2009 | 2354573.52 | 554606 | 1125.8 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-39 Load Line 5 | LL5mw-004 | Homewood | FWGLL5mw-004C-068-GW | 10/21/2009 | 2355008.44 | 554071.73 | 1122.9 | Grab | BP | 0.00039 J | B | L | 0.0005 | 0.00013 | 1 | |
| RVAAP-39 Load Line 5 | LL5mw-005 | Homewood | FWGLL5mw-005C-069-GW | 10/22/2009 | 2354424.02 | 554154.73 | 1126.5 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-39 Load Line 5 | LL5mw-006 | Homewood | FWGLL5mw-006C-070-GW | 10/21/2009 | 2354730 | 553981.82 | 1125.1 | Grab | BP | 0.00015 J | B | L | 0.0005 | 0.00013 | 1 | |
| RVAAP-40 Load Line 7 | LL7mw-003 | Homewood | FWGLL7mw-003C-1432-GW | 10/12/2009 | 2352349.51 | 555414.33 | 1118.23 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-40 Load Line 7 | LL7mw-004 | Homewood | FWGLL7mw-004C-1433-GW | 10/12/2009 | 2352036.23 | 555583.15 | 1123.3 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-41 Load Line 8 | LL8mw-005 | Homewood | FWGLL8mw-005C-1440-GW | 10/13/2009 | 2351750 | 551522 | 1112.51 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-41 Load Line 8 | LL8mw-006 | Homewood | FWGLL8mw-006C-1441-GW | 10/13/2009 | 2351480 | 551295 | 1114.33 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-42 Load Line 9 | LL9mw-001 | Homewood | FWGLL9mw-001C-1442-GW | 10/13/2009 | 2355817.04 | 556125.81 | 1134.62 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-42 Load Line 9 | LL9mw-002 | Homewood | FWGLL9mw-002C-1443-GW | 10/13/2009 | 2355907.76 | 556755.11 | 1127.3 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-42 Load Line 9 | LL9mw-003 | Homewood | FWGLL9mw-003C-1444-GW | 10/13/2009 | 2356635.21 | 556445.31 | 1135.76 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-43 Load Line 10 | L10mw-001 | Homewood | FWGLL10mw-001C-1449-GW | 10/13/2009 | 2355272.22 | 555818.25 | 1130 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-43 Load Line 10 | L10mw-002 | Homewood | FWGLL10mw-002C-1450-GW | 10/13/2009 | 2355712.51 | 555525.36 | 1124.4 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-43 Load Line 10 | L10mw-003 | Homewood | FWGLL10mw-003C-1451-GW | 10/13/2009 | 2355387.92 | 555496.71 | 1127.4 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-43 Load Line 10 | L10mw-004 | Homewood | FWGLL10mw-004C-1452-GW | 10/14/2009 | 2355440.2 | 555234.59 | 1119.6 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |
| RVAAP-43 Load Line 10 | L10mw-005 | Homewood | FWGLL10mw-005C-1453-GW | 10/14/2009 | 2355941.55 | 555382.53 | 1122.9 | Grab | BP | 0.00013 U | U | | 0.0005 | 0.00013 | 1 | |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Calcium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|-----------------------|-------------|-------------|-------------|-----------|-------------|--------|---------|--------|------|--------|----|-------|----|
| RVAAP-02 Erie Burning Grounds | EBGmw-123 | Unconsolidated | FWGEBGmw-123C-125-GW | 10/19/2009 | 2380049.21 | 571747.04 | 945.59 | Grab | BP | 91.3 | | | | 1 | 0.634 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-124 | Unconsolidated | FWGEBGmw-124C-126-GW | 10/19/2009 | 2380030.24 | 571618.07 | 939.02 | Grab | BP | 102 | | | | 1 | 0.634 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-126 | Unconsolidated | FWGEBGmw-126C-128-GW | 10/19/2009 | 2380307.31 | 572348.81 | 938.2 | Grab | BP | 89.1 | | | | 1 | 0.634 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-127 | Unconsolidated | FWGEBGmw-127C-129-GW | 10/19/2009 | 2380172.16 | 571083.61 | 940.21 | Grab | BP | 75.1 | | | | 1 | 0.634 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-128 | Unconsolidated | FWGEBGmw-128C-130-GW | 10/19/2009 | 2379892.79 | 570970.32 | 942.47 | Grab | BP | 58.9 | | | | 1 | 0.634 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-129 | Unconsolidated | FWGEBGmw-129C-131-GW | 10/19/2009 | 2379240.52 | 572035.68 | 941.97 | Grab | BP | 52.8 | | | | 1 | 0.634 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-130 | Unconsolidated | FWGEBGmw-130C-132-GW | 10/19/2009 | 2379220.69 | 570695.61 | 941.18 | Grab | BP | 70.1 | | | | 1 | 0.634 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-104 | Unconsolidated | FWGDA2mw-104C-115-GW | 10/21/2009 | 2354773.248 | 561125.7023 | 1070.8244 | Grab | BP | 43.9 | | | | 1 | 0.634 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-107 | Unconsolidated | FWGDA2mw-107C-118-GW | 10/21/2009 | 2354923.231 | 560482.7171 | 1039.1815 | Grab | BP | 76.2 | | | | 1 | 0.634 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-108 | Unconsolidated | FWGDA2mw-108C-119-GW | 10/21/2009 | 2355602.421 | 560184.5864 | 1029.9156 | Grab | BP | 97 | | | | 1 | 0.634 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-109 | Unconsolidated | FWGDA2mw-109C-120-GW | 10/21/2009 | 2354796.85 | 559897.6695 | 1068.6588 | Grab | BP | 96 | | | | 1 | 0.634 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-110 | Unconsolidated | FWGDA2mw-110C-121-GW | 10/21/2009 | 2355195.202 | 559922.3928 | 1061.3878 | Grab | BP | 54 | | | | 1 | 0.634 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-112 | Unconsolidated | FWGDA2mw-112C-123-GW | 10/21/2009 | 2355019.568 | 560374.5046 | 1034.8724 | Grab | BP | 93.7 | | | | 1 | 0.634 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-113 | Unconsolidated | FWGDA2mw-113C-124-GW | 10/21/2009 | 2355150.554 | 560392.8898 | 1034.5126 | Grab | BP | 92.6 | | | | 1 | 0.634 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-1 | Unconsolidated | FWGDETMw-001-111-GW | 10/21/2009 | 2354959.47 | 560820.03 | 1063.97 | Grab | BP | 76.4 | | | | 1 | 0.634 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-2 | Unconsolidated | FWGDETMw-002C-112-GW | 10/21/2009 | 2355360.33 | 560664.71 | 1062.69 | Grab | BP | 80.7 | | | | 1 | 0.634 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-3 | Unconsolidated | FWGDETMw-003C-1488-GW | 10/14/2009 | 2355204.94 | 560456.1 | 1035.56 | Grab | BP | 87.7 | | | | 1 | 0.634 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-006 | Unconsolidated | FWGWBGmw-006C-171-GW | 10/20/2009 | 2359087.79 | 563008.87 | 1010.38 | Grab | BP | 70.1 | | | | 1 | 0.634 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-007 | Unconsolidated | FWGWBGmw-007C-172-GW | 10/20/2009 | 2360420.44 | 562479.87 | 995.33 | Grab | BP | 72.2 | | | | 1 | 0.634 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-009 | Unconsolidated | FWGWBGmw-009C-174-GW | 10/20/2009 | 2357159.22 | 561603.54 | 1042 | Grab | BP | 56 | | | | 1 | 0.634 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-010 | Unconsolidated | FWGWBGmw-010C-175-GW | 10/20/2009 | 2356051.96 | 562893.2 | 1069.85 | Grab | BP | 85.4 | | | | 1 | 0.634 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-011 | Unconsolidated | FWGWBGmw-011C-176-GW | 10/20/2009 | 2356187.29 | 562609.18 | 1072.38 | Grab | BP | 83.7 | | | | 1 | 0.634 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-012 | Unconsolidated | FWGWBGmw-012C-177-GW | 10/20/2009 | 2354810.65 | 562240.9 | 1079.11 | Grab | BP | 79.6 | | | | 1 | 0.634 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-013 | Unconsolidated | FWGWBGmw-013C-178-GW | 10/20/2009 | 2355223.25 | 561518.27 | 1071.7 | Grab | BP | 51.9 | | | | 1 | 0.634 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-014 | Unconsolidated | FWGWBGmw-014C-179-GW | 10/20/2009 | 2360439.22 | 562061.26 | 996.78 | Grab | BP | 72.5 | | | | 1 | 0.634 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-015 | Unconsolidated | FWGWBGmw-015C-180-GW | 10/20/2009 | 2359182.41 | 562340.12 | 1011.6 | Grab | BP | 81.7 | | | | 1 | 0.634 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-016 | Unconsolidated | FWGWBGmw-016C-181-GW | 10/20/2009 | 2360645.88 | 562709.13 | 997.03 | Grab | BP | 79.4 | | | | 1 | 0.634 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-017 | Unconsolidated | FWGWBGmw-017C-182-GW | 10/20/2009 | 2359603.84 | 562913.24 | 1006.62 | Grab | BP | 76.8 | | | | 1 | 0.634 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-064 | Unconsolidated | FWGLL1mw-064-022-GW | 10/19/2009 | 2380286.973 | 563118.7363 | 932 | Grab | BP | 57.9 | | | | 1 | 0.634 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-065 | Unconsolidated | FWGLL1mw-065-023-GW | 10/19/2009 | 2380452.003 | 560916.9225 | 940 | Grab | BP | 139 | | | | 1 | 0.634 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-193 | Unconsolidated | FWGLL4mw-193-057-GW | 10/21/2009 | 2364236.52 | 554960.27 | 982.92 | Grab | BP | 104 | | | | 1 | 0.634 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-194 | Unconsolidated | FWGLL4mw-194C-058-GW | 10/16/2009 | 2364584.86 | 555089.22 | 983.76 | Grab | BP | 108 | | | | 1 | 0.634 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-196 | Unconsolidated | FWGLL4mw-196C-060-GW | 10/16/2009 | 2365297.1 | 555213.52 | 984.55 | Grab | BP | 56.8 | | | | 1 | 0.634 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-197 | Unconsolidated | FWGLL4mw-197C-061-GW | 10/16/2009 | 2365384.91 | 555397.05 | 985.46 | Grab | BP | 122 | | | | 1 | 0.634 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-198 | Unconsolidated | FWGLL4mw-198C-062-GW | 10/21/2009 | 2364991.19 | 555442.04 | 983.42 | Grab | BP | 39.7 | | | | 1 | 0.634 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-199 | Unconsolidated | FWGLL4mw-199C-063-GW | 10/16/2009 | 2365420.78 | 554621.62 | 977.28 | Grab | BP | 105 | | | | 1 | 0.634 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-200 | Unconsolidated | FWGLL4mw-200-064-GW | 10/21/2009 | 2365903.05 | 554580.15 | 987.93 | Grab | BP | 159 | | | | 1 | 0.634 | 1 |
| RVAAP-12 Load Line 12 | L12mw-107 | Unconsolidated | FWGLL12mw-107C-072-GW | 10/16/2009 | 2368595.67 | 556759.02 | 978.03 | Grab | BP | 171 | | | | 1 | 0.634 | 1 |
| RVAAP-12 Load Line 12 | L12mw-128 | Unconsolidated | FWGLL12mw-128C-074-GW | 10/16/2009 | 2368293.2 | 557371.54 | 976.21 | Grab | BP | 214 | | | | 1 | 0.634 | 1 |
| RVAAP-12 Load Line 12 | L12mw-153 | Unconsolidated | FWGLL12mw-153C-075-GW | 10/16/2009 | 2368138.87 | 557823.23 | 975.34 | Grab | BP | 149 | | | | 1 | 0.634 | 1 |
| RVAAP-12 Load Line 12 | L12mw-154 | Unconsolidated | FWGLL12mw-154C-076-GW | 10/16/2009 | 2368183.88 | 557754.56 | 977 | Grab | BP | 153 | | | | 1 | 0.634 | 1 |
| RVAAP-12 Load Line 12 | L12mw-182 | Unconsolidated | FWGLL12mw-182C-077-GW | 10/16/2009 | 2368853.2 | 555890.35 | 982.2 | Grab | BP | 82.2 | | | | 1 | 0.634 | 1 |
| RVAAP-12 Load Line 12 | L12mw-188 | Unconsolidated | FWGLL12mw-188C-083-GW | 10/15/2009 | 2367908.82 | 558132.59 | 978.46 | Grab | BP | 139 | | | | 1 | 0.634 | 1 |
| RVAAP-12 Load Line 12 | L12mw-242 | Unconsolidated | FWGLL12mw-242C-085-GW | 10/15/2009 | 2368545.29 | 558020.51 | 980 | Grab | BP | 62.8 | | | | 1 | 0.634 | 1 |
| RVAAP-12 Load Line 12 | L12mw-243 | Unconsolidated | FWGLL12mw-243C-086-GW | 10/16/2009 | 2368190.04 | 557376.32 | 978 | Grab | BP | 121 | | | | 1 | 0.634 | 1 |
| RVAAP-12 Load Line 12 | L12mw-244 | Unconsolidated | FWGLL12mw-244C-087-GW | 10/16/2009 | 2368751.42 | 557377.17 | 980 | Grab | BP | 193 | | | | 1 | 0.634 | 1 |
| RVAAP-12 Load Line 12 | L12mw-245 | Unconsolidated | FWGLL12mw-245C-088-GW | 10/16/2009 | 2368370.74 | 557044.55 | 978 | Grab | BP | 139 | | | | 1 | 0.634 | 1 |
| RVAAP-12 Load Line 12 | L12mw-246 | Unconsolidated | FWGLL12mw-246C-089-GW | 10/16/2009 | 2369432.17 | 556658.89 | 982.96 | Grab | BP | 112 | | | | 1 | 0.634 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-166 | Unconsolidated | FWGFBQmw-166C-133-GW | 10/22/2009 | 2349584.33 | 553123.86 | 1104.87 | Grab | BP | 92.7 | | | | 1 | 0.634 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-167 | Unconsolidated | FWGFBQmw-167C-134-GW | 10/22/2009 | 2349675.45 | 553556.12 | 1112.05 | Grab | BP | 25.6 | | | | 1 | 0.634 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-176 | Unconsolidated | FWGFBQmw-176C-143-GW | 10/22/2009 | 2350219.45 | 553273.33 | 1129.57 | Grab | BP | 10.5 | | | | 1 | 0.634 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-024 | Unconsolidated | FWGLNWmw-024C-145-GW | 10/20/2009 | 2358400 | 564828 | 1035.3 | Grab | BP | 82.8 | | | | 1 | 0.634 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-025 | Unconsolidated | FWGLNWmw-025C-146-GW | 10/20/2009 | 2358420 | 565070 | 1027.2 | Grab | BP | 34.6 | | | | 1 | 0.634 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-026 | Unconsolidated | FWGLNWmw-026C-147-GW | 10/20/2009 | 2358950 | 564656 | 1025 | Grab | BP | 43 | | | | 1 | 0.634 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Calcium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|---------|--------|------|--------|----|-------|----|
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-027 | Unconsolidated | FWGLNWmw-027C-148-GW | 10/20/2009 | 2358630 | 564519 | 1024.4 | Grab | BP | 63.6 | | | | 1 | 0.634 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-001 | Unconsolidated | FWGMBSmw-001C-183-GW | 10/20/2009 | 2345323 | 550759.5 | 1079.68 | Grab | BP | 76.2 | | | | 1 | 0.634 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-002 | Unconsolidated | FWGMBSmw-002C-184-GW | 10/20/2009 | 2345322.3 | 550886.2 | 1080.5 | Grab | BP | 72.7 | | | | 1 | 0.634 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-003 | Unconsolidated | FWGMBSmw-003C-185-GW | 10/20/2009 | 2345172.4 | 550922.8 | 1082.45 | Grab | BP | 86.5 | | | | 1 | 0.634 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-004 | Unconsolidated | FWGMBSmw-004C-186-GW | 10/20/2009 | 2345134.2 | 550767.9 | 1079.55 | Grab | BP | 78 | | | | 1 | 0.634 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-005 | Unconsolidated | FWGMBSmw-005C-187-GW | 10/20/2009 | 2345354.1 | 550800.7 | 1080.5 | Grab | BP | 84.3 | | | | 1 | 0.634 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-006 | Unconsolidated | FWGMBSmw-006C-188-GW | 10/20/2009 | 2345282.3 | 550726.1 | 1080.29 | Grab | BP | 71.8 | | | | 1 | 0.634 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-001 | Unconsolidated | FWGCPmw-001C-105-GW | 10/21/2009 | 2368948.852 | 560440.9741 | 975.2594 | Grab | BP | 73.1 | | | | 1 | 0.634 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-004 | Unconsolidated | FWGCPmw-004C-108-GW | 10/21/2009 | 2368674.21 | 561843.2791 | 981.198 | Grab | BP | 61.8 | | | | 1 | 0.634 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-006 | Unconsolidated | FWGCPmw-006C-110-GW | 10/21/2009 | 2367727.191 | 562830.039 | 965.13 | Grab | BP | 93 | | | | 1 | 0.634 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-001 | Unconsolidated | FWGLL6mw-001C-001-GW | 10/21/2009 | 2353153.227 | 554214.8365 | 1124.1607 | Grab | B | 83.4 | | | | 1 | 0.634 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-002 | Unconsolidated | FWGLL6mw-002C-002-GW | 10/21/2009 | 2353820.091 | 553589.8815 | 1129.3631 | Grab | B | 146 | | | | 1 | 0.634 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-107 | Unconsolidated | FWGNTAmw-107C-149-GW | 10/20/2009 | 2345432.73 | 551699.09 | 1077.65 | Grab | BP | 77 | | | | 1 | 0.634 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-108 | Unconsolidated | FWGNTAmw-108C-150-GW | 10/20/2009 | 2345782.17 | 551917.92 | 1083.22 | Grab | BP | 86.7 | | | | 1 | 0.634 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-109 | Unconsolidated | FWGNTAmw-109C-151-GW | 10/20/2009 | 2345996.99 | 551291.19 | 1076.89 | Grab | BP | 7.96 | | | | 1 | 0.634 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-110 | Unconsolidated | FWGNTAmw-110C-152-GW | 10/20/2009 | 2346436.82 | 551350.8 | 1080.03 | Grab | BP | 57.6 | | | | 1 | 0.634 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-111 | Unconsolidated | FWGNTAmw-111C-153-GW | 10/20/2009 | 2346640.16 | 551538.99 | 1078.07 | Grab | BP | 80.6 | | | | 1 | 0.634 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-112 | Unconsolidated | FWGNTAmw-112C-154-GW | 10/20/2009 | 2346889.01 | 551708.76 | 1075.36 | Grab | BP | 144 | | | | 1 | 0.634 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-113 | Unconsolidated | FWGNTAmw-113C-155-GW | 10/20/2009 | 2347081.15 | 551487.86 | 1072.61 | Grab | BP | 126 | | | | 1 | 0.634 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-115 | Unconsolidated | FWGNTAmw-115C-157-GW | 10/20/2009 | 2347582.94 | 551793.39 | 1086.91 | Grab | BP | 69.6 | | | | 1 | 0.634 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-116 | Unconsolidated | FWGNTAmw-116C-158-GW | 10/20/2009 | 2348196.78 | 551749.39 | 1091.68 | Grab | BP | 20.7 | | | | 1 | 0.634 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-117 | Unconsolidated | FWGNTAmw-117C-159-GW | 10/20/2009 | 2347994.79 | 551586.36 | 1091.67 | Grab | BP | 81.3 | | | | 1 | 0.634 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-118 | Unconsolidated | FWGNTAmw-118C-160-GW | 10/20/2009 | 2347608.09 | 551333.89 | 1078.86 | Grab | BP | 62.1 | | | | 1 | 0.634 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-003 | Unconsolidated | FWGLL5mw-003C-067-GW | 10/21/2009 | 2354962.47 | 554533.41 | 1124.7 | Grab | BP | 103 | | | | 1 | 0.634 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-001 | Unconsolidated | FWGLL8mw-001C-1436-GW | 10/13/2009 | 2351660 | 552609 | 1118.69 | Grab | BP | 75.2 | | | | 1 | 0.634 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-002 | Unconsolidated | FWGLL8mw-002C-1437-GW | 10/13/2009 | 2351010 | 552410 | 1121.67 | Grab | BP | 94.4 | | | | 1 | 0.634 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-003 | Unconsolidated | FWGLL8mw-003C-1438-GW | 10/13/2009 | 2351360 | 552231 | 1116.3 | Grab | BP | 125 | | | | 1 | 0.634 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-004 | Unconsolidated | FWGLL8mw-004C-1439-GW | 10/13/2009 | 2351260 | 551808 | 1112.73 | Grab | BP | 88.4 | | | | 1 | 0.634 | 1 |
| RVAAP-43 Load Line 10 | L10mw-006 | Unconsolidated | FWGLL10mw-006C-1454-GW | 10/14/2009 | 2355656.8 | 554997.25 | 1121.2 | Grab | BP | 18.2 | | | | 1 | 0.634 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-001 | Unconsolidated | FWGLL11mw-001C-1455-GW | 10/14/2009 | 2352778.81 | 557504.98 | 1100.16 | Grab | BP | 86 | | | | 1 | 0.634 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-006 | Unconsolidated | FWGLL11mw-006C-1459-GW | 10/14/2009 | 2352521.51 | 558263.51 | 1086.5 | Grab | BP | 86.2 | | | | 1 | 0.634 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-008 | Unconsolidated | FWGLL11mw-008C-1460-GW | 10/14/2009 | 2352388.57 | 557981.26 | 1087.74 | Grab | BP | 122 | | | | 1 | 0.634 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-009 | Unconsolidated | FWGLL11mw-009C-1461-GW | 10/14/2009 | 2352577.21 | 557901.2 | 1088.28 | Grab | BP | 81.9 | | | | 1 | 0.634 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-010 | Unconsolidated | FWGLL11mw-010C-1462-GW | 10/14/2009 | 2352038.91 | 557675.59 | 1082.68 | Grab | BP | 84.4 | | | | 1 | 0.634 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-001 | Unconsolidated | FWGCBPmw-001C-097-GW | 10/21/2009 | 2367095.431 | 561616.171 | 975.8411 | Grab | BP | 326 | | | | 1 | 0.634 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-002 | Unconsolidated | FWGCBPmw-002C-098-GW | 10/21/2009 | 2367295.684 | 561865.9216 | 970.0359 | Grab | BP | 175 | | | | 1 | 0.634 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-003 | Unconsolidated | FWGCBPmw-003C-099-GW | 10/21/2009 | 2366768.739 | 561944.2018 | 974.6665 | Grab | BP | 136 | | | | 1 | 0.634 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-004 | Unconsolidated | FWGCBPmw-004C-100-GW | 10/21/2009 | 2366978.819 | 562123.8244 | 971.1285 | Grab | BP | 90 | | | | 1 | 0.634 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-005 | Unconsolidated | FWGCBPmw-005C-101-GW | 10/21/2009 | 2366919.482 | 562311.8596 | 971.5897 | Grab | BP | 96.3 | | | | 1 | 0.634 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-006 | Unconsolidated | FWGCBPmw-006C-102-GW | 10/21/2009 | 2367243.659 | 562311.9449 | 967.6448 | Grab | BP | 99.6 | | | | 1 | 0.634 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-007 | Unconsolidated | FWGCBPmw-007C-103-GW | 10/21/2009 | 2366512.573 | 562006.343 | 976.3736 | Grab | BP | 153 | | | | 1 | 0.634 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-007 | Unconsolidated | FWGASYmw-007C-1469-GW | 10/15/2009 | 2366840 | 556820 | 981.4 | Grab | BP | 136 | | | | 1 | 0.634 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-008 | Unconsolidated | FWGASYmw-008C-1470-GW | 10/15/2009 | 2367470 | 557086 | 976.2 | Grab | BP | 277 | | | | 1 | 0.634 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-010 | Unconsolidated | FWGASYmw-010C-1472-GW | 10/15/2009 | 2366980 | 557273 | 978.2 | Grab | BP | 114 | | | | 1 | 0.634 | 1 |
| Site-wide Background Areas | BKGmw-004 | Unconsolidated | FWGBKGmw-004C-007-GW | 10/21/2009 | 2368852.973 | 569464.763 | 965.16 | Grab | BP | 18.5 | | | | 1 | 0.634 | 1 |
| Site-wide Background Areas | BKGmw-005 | Unconsolidated | FWGBKGmw-005C-008-GW | 10/22/2009 | 2340835.864 | 562288.445 | 1149.443 | Grab | BP | 86.5 | | | | 1 | 0.634 | 1 |
| Site-wide Background Areas | BKGmw-013 | Unconsolidated | FWGBKGmw-013C-013-GW | 10/21/2009 | 2361627.394 | 558269.158 | 986.588 | Grab | BP | 75.5 | | | | 1 | 0.634 | 1 |
| Site-wide Background Areas | BKGmw-016 | Unconsolidated | FWGBKGmw-016C-015-GW | 10/22/2009 | 2342407.075 | 553983.501 | 1098.419 | Grab | BP | 9.14 | | | | 1 | 0.634 | 1 |
| Site-wide Background Areas | BKGmw-017 | Unconsolidated | FWGBKGmw-017C-016-GW | 10/22/2009 | 2346115.351 | 562452.044 | 1132.799 | Grab | BP | 111 | | | | 1 | 0.634 | 1 |
| Site-wide Background Areas | BKGmw-019 | Unconsolidated | FWGBKGmw-019C-018-GW | 10/22/2009 | 2349882.142 | 559864.549 | 1108.239 | Grab | BP | 117 | | | | 1 | 0.634 | 1 |
| Site-wide Background Areas | BKGmw-020 | Unconsolidated | FWGBKGmw-020C-019-GW | 10/21/2009 | 2357856.237 | 558756.241 | 1065.001 | Grab | BP | 50.6 | | | | 1 | 0.634 | 1 |
| Site-wide Background Areas | BKGmw-021 | Unconsolidated | FWGBKGmw-021C-020-GW | 10/21/2009 | 2367622.953 | 571016.748 | 972.159 | Grab | BP | 60.2 | | | | 1 | 0.634 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Calcium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|---------|--------|------|--------|----|-------|----|
| RVAAP-01 Ramsdell Quarry Landfill | RQLmw-009 | Sharon | FWGRQLmw-009C-1487-GW | 10/14/2009 | 2376253.654 | 566351.1994 | 964 | Grab | BP | 21.6 | | | | 1 | 0.634 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-078 | Sharon | FWGLL1mw-078-025-GW | 10/19/2009 | 2376275.854 | 564623.871 | 995.84 | Grab | BP | 41.1 | | | | 1 | 0.634 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-080 | Sharon | FWGLL1mw-080-027-GW | 10/19/2009 | 2376845.072 | 562479.728 | 996.27 | Grab | BP | 259 | | | | 1 | 0.634 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-082 | Sharon | FWGLL1mw-082-029-GW | 10/19/2009 | 2376977.379 | 562956.86 | 1006.45 | Grab | BP | 28.1 | | | | 1 | 0.634 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-060 | Sharon | FWGLL2mw-060C-034-GW | 10/19/2009 | 2375978 | 558022 | 958.13 | Grab | BP | 34 | | | | 1 | 0.634 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-263 | Sharon | FWGLL2mw-263-037-GW | 10/19/2009 | 2374290.29 | 561590.92 | 1009.42 | Grab | BP | 35.7 | | | | 1 | 0.634 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-264 | Sharon | FWGLL2mw-264-038-GW | 10/19/2009 | 2374532.76 | 561173.63 | 1010.1 | Grab | BP | 46.9 | | | | 1 | 0.634 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-267 | Sharon | FWGLL2mw-267C-041-GW | 10/19/2009 | 2373714.17 | 561393.73 | 1012.81 | Grab | BP | 35.7 | | | | 1 | 0.634 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-268 | Sharon | FWGLL2mw-268-042-GW | 10/19/2009 | 2374156.4 | 560831.44 | 1015.47 | Grab | BP | 41.5 | | | | 1 | 0.634 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-269 | Sharon | FWGLL2mw-269-043-GW | 10/20/2009 | 2374756.74 | 559483.9 | 1009.49 | Grab | BP | 33.1 | | | | 1 | 0.634 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-270 | Sharon | FWGLL2mw-270-044-GW | 10/19/2009 | 2372858.94 | 562656.18 | 1009.93 | Grab | BP | 43 | | | | 1 | 0.634 | 1 |
| RVAAP-09 Load Line 3 | LL3mw-238 | Sharon | FWGLL3mw-238C-051-GW | 10/20/2009 | 2370624.55 | 559569.39 | 1006.91 | Grab | BP | 61 | | | | 1 | 0.634 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-239 | Sharon | FWGLL3mw-239-052-GW | 10/20/2009 | 2370894.17 | 559101.84 | 1003.5 | Grab | BP | 11.4 | | | | 1 | 0.634 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-241 | Sharon | FWGLL3mw-241-054-GW | 10/20/2009 | 2370332.94 | 559299 | 994.65 | Grab | BP | 22.9 | | | | 1 | 0.634 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-242 | Sharon | FWGLL3mw-242-055-GW | 10/21/2009 | 2371993.44 | 557035.28 | 999.32 | Grab | BP | 14.8 | | | | 1 | 0.634 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-243 | Sharon | FWGLL3mw-243C-056-GW | 10/21/2009 | 2371532.06 | 556688.5 | 991.16 | Grab | BP | 18.2 | | | | 1 | 0.634 | 1 |
| RVAAP-12 Load Line 12 | L12mw-186 | Sharon | FWGLL12mw-186C-081-GW | 10/15/2009 | 2367912.39 | 559065.95 | 976.34 | Grab | BP | 123 | | | | 1 | 0.634 | 1 |
| RVAAP-12 Load Line 12 | L12mw-189 | Sharon | FWGLL12mw-189C-084-GW | 10/15/2009 | 2367945.92 | 558569.27 | 976.17 | Grab | BP | 130 | | | | 1 | 0.634 | 1 |
| RVAAP-13 Building 1200 | B12mw-011 | Sharon | FWGB12mw-011C-091-GW | 10/21/2009 | 2371420 | 565690 | 1003.76 | Grab | BP | 15.2 | | | | 1 | 0.634 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-001 | Sharon | FWGASYmw-001C-1463-GW | 10/14/2009 | 2366262.85 | 558406.04 | 978.4 | Grab | BP | 142 | | | | 1 | 0.634 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-002 | Sharon | FWGASYmw-002C-1464-GW | 10/15/2009 | 2366170 | 557890 | 982 | Grab | BP | 86.4 | | | | 1 | 0.634 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-003 | Sharon | FWGASYmw-003C-1465-GW | 10/15/2009 | 2366650 | 558014 | 979.7 | Grab | BP | 185 | | | | 1 | 0.634 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-005 | Sharon | FWGASYmw-005C-1467-GW | 10/15/2009 | 2367450 | 557785 | 977.6 | Grab | BP | 140 | | | | 1 | 0.634 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-006 | Sharon | FWGASYmw-006C-1468-GW | 10/15/2009 | 2366750 | 557256 | 980.2 | Grab | BP | 111 | | | | 1 | 0.634 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-009 | Sharon | FWGASYmw-009C-1471-GW | 10/15/2009 | 2366630 | 557606 | 979.9 | Grab | BP | 183 | | | | 1 | 0.634 | 1 |
| Site-wide Background Areas | BKGmw-012 | Sharon | FWGBKGMw-012C-012-GW | 10/21/2009 | 2367795.226 | 563918.862 | 997.574 | Grab | BP | 16.5 | | | | 1 | 0.634 | 1 |
| Site-wide Background Areas | BKGmw-018 | Sharon | FWGBKGMw-018C-017-GW | 10/21/2009 | 2354993.909 | 570873.349 | 1043.06 | Grab | BP | 49.5 | | | | 1 | 0.634 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-001 | Homewood | FWGCBLmw-001C-093-GW | 10/21/2009 | 2343659.08 | 559405.12 | 1178.5 | Grab | BP | 3.13 | | | | 1 | 0.634 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-003 | Homewood | FWGCBLmw-003C-095-GW | 10/22/2009 | 2343967.67 | 559697.13 | 1172.22 | Grab | BP | 7.47 | | | | 1 | 0.634 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-004 | Homewood | FWGCBLmw-004C-096-GW | 10/22/2009 | 2343687.21 | 559950 | 1172.08 | Grab | BP | 7.62 | | | | 1 | 0.634 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-171 | Homewood | FWGFBQmw-171C-138-GW | 10/22/2009 | 2350072.44 | 554230.93 | 1140.49 | Grab | BP | 16.4 | | | | 1 | 0.634 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-172 | Homewood | FWGFBQmw-172C-139-GW | 10/22/2009 | 2349907.37 | 554322.17 | 1145.71 | Grab | BP | 81 | | | | 1 | 0.634 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-173 | Homewood | FWGFBQmw-173C-140-GW | 10/22/2009 | 2350449.01 | 554491.35 | 1162.43 | Grab | BP | 9.37 | | | | 1 | 0.634 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-174 | Homewood | FWGFBQmw-174C-141-GW | 10/22/2009 | 2350289.81 | 554142.44 | 1135.78 | Grab | BP | 8.28 | | | | 1 | 0.634 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-175 | Homewood | FWGFBQmw-175C-142-GW | 10/22/2009 | 2350297.98 | 553989.24 | 1137.16 | Grab | BP | 11 | | | | 1 | 0.634 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-177 | Homewood | FWGFBQmw-177C-144-GW | 10/22/2009 | 2350112.18 | 553321.94 | 1125.73 | Grab | BP | 37.9 | | | | 1 | 0.634 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-003 | Homewood | FWGLL6mw-003C-003-GW | 10/21/2009 | 2353048.684 | 553544.3432 | 1125.3837 | Grab | BP | 69.5 | | | | 1 | 0.634 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-004 | Homewood | FWGLL6mw-004C-004-GW | 10/21/2009 | 2353368.787 | 553431.8182 | 1125.3851 | Grab | BP | 79.7 | | | | 1 | 0.634 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-001 | Homewood | FWGLL5mw-001C-065-GW | 10/21/2009 | 2354627.07 | 554321.25 | 1125 | Grab | BP | 62 | | | | 1 | 0.634 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-002 | Homewood | FWGLL5mw-002C-066-GW | 10/21/2009 | 2354573.52 | 554606 | 1125.8 | Grab | BP | 59.5 | | | | 1 | 0.634 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-004 | Homewood | FWGLL5mw-004C-068-GW | 10/21/2009 | 2355008.44 | 554071.73 | 1122.9 | Grab | BP | 71.3 | | | | 1 | 0.634 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-005 | Homewood | FWGLL5mw-005C-069-GW | 10/22/2009 | 2354424.02 | 554154.73 | 1126.5 | Grab | BP | 70.1 | | | | 1 | 0.634 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-006 | Homewood | FWGLL5mw-006C-070-GW | 10/21/2009 | 2354730 | 553981.82 | 1125.1 | Grab | BP | 69.8 | | | | 1 | 0.634 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-003 | Homewood | FWGLL7mw-003C-1432-GW | 10/12/2009 | 2352349.51 | 555414.33 | 1118.23 | Grab | BP | 15.4 | | | | 1 | 0.634 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-004 | Homewood | FWGLL7mw-004C-1433-GW | 10/12/2009 | 2352036.23 | 555583.15 | 1123.3 | Grab | BP | 9.04 | | | | 1 | 0.634 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-005 | Homewood | FWGLL8mw-005C-1440-GW | 10/13/2009 | 2351750 | 551522 | 1112.51 | Grab | BP | 58.9 | | | | 1 | 0.634 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-006 | Homewood | FWGLL8mw-006C-1441-GW | 10/13/2009 | 2351480 | 551295 | 1114.33 | Grab | BP | 67.3 | | | | 1 | 0.634 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-001 | Homewood | FWGLL9mw-001C-1442-GW | 10/13/2009 | 2355817.04 | 556125.81 | 1134.62 | Grab | BP | 39.6 | | | | 1 | 0.634 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-002 | Homewood | FWGLL9mw-002C-1443-GW | 10/13/2009 | 2355907.76 | 556755.11 | 1127.3 | Grab | BP | 17.3 | | | | 1 | 0.634 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-003 | Homewood | FWGLL9mw-003C-1444-GW | 10/13/2009 | 2356635.21 | 556445.31 | 1135.76 | Grab | BP | 17.8 | | | | 1 | 0.634 | 1 |
| RVAAP-43 Load Line 10 | L10mw-001 | Homewood | FWGLL10mw-001C-1449-GW | 10/13/2009 | 2355272.22 | 555818.25 | 1130 | Grab | BP | 65.1 | | | | 1 | 0.634 | 1 |
| RVAAP-43 Load Line 10 | L10mw-002 | Homewood | FWGLL10mw-002C-1450-GW | 10/13/2009 | 2355712.51 | 555525.36 | 1124.4 | Grab | BP | 36.8 | | | | 1 | 0.634 | 1 |
| RVAAP-43 Load Line 10 | L10mw-003 | Homewood | FWGLL10mw-003C-1451-GW | 10/13/2009 | 2355387.92 | 555496.71 | 1127.4 | Grab | BP | 48.9 | | | | 1 | 0.634 | 1 |
| RVAAP-43 Load Line 10 | L10mw-004 | Homewood | FWGLL10mw-004C-1452-GW | 10/14/2009 | 2355440.2 | 555234.59 | 1119.6 | Grab | BP | 66.6 | | | | 1 | 0.634 | 1 |
| RVAAP-43 Load Line 10 | L10mw-005 | Homewood | FWGLL10mw-005C-1453-GW | 10/14/2009 | 2355941.55 | 555382.53 | 1122.9 | Grab | BP | 62.3 | | | | 1 | 0.634 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Chromium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|-----------------------|-------------|-------------|-------------|-----------|-------------|--------|----------|--------|------|-----------|-------|--------|----|
| RVAAP-02 Erie Burning Grounds | EBGmw-123 | Unconsolidated | FWGEBGmw-123C-125-GW | 10/19/2009 | 2380049.21 | 571747.04 | 945.59 | Grab | BP | 0.0065 | B | | N | 0.005 | 0.0014 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-124 | Unconsolidated | FWGEBGmw-124C-126-GW | 10/19/2009 | 2380030.24 | 571618.07 | 939.02 | Grab | BP | 0.064 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-126 | Unconsolidated | FWGEBGmw-126C-128-GW | 10/19/2009 | 2380307.31 | 572348.81 | 938.2 | Grab | BP | 0.0064 | B | | N | 0.005 | 0.0014 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-127 | Unconsolidated | FWGEBGmw-127C-129-GW | 10/19/2009 | 2380172.16 | 571083.61 | 940.21 | Grab | BP | 0.0014 | UJB | B | Cb,N,L | 0.005 | 0.0014 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-128 | Unconsolidated | FWGEBGmw-128C-130-GW | 10/19/2009 | 2379892.79 | 570970.32 | 942.47 | Grab | BP | 0.0014 | UJB | B | Cb,N,L | 0.005 | 0.0014 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-129 | Unconsolidated | FWGEBGmw-129C-131-GW | 10/19/2009 | 2379240.52 | 572035.68 | 941.97 | Grab | BP | 0.0122 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-130 | Unconsolidated | FWGEBGmw-130C-132-GW | 10/19/2009 | 2379220.69 | 570695.61 | 941.18 | Grab | BP | 0.003 | JB | B | L,N | 0.005 | 0.0014 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-104 | Unconsolidated | FWGDA2mw-104C-115-GW | 10/21/2009 | 2354773.248 | 561125.7023 | 1070.8244 | Grab | BP | 0.0036 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-107 | Unconsolidated | FWGDA2mw-107C-118-GW | 10/21/2009 | 2354923.231 | 560482.7171 | 1039.1815 | Grab | BP | 0.0014 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-108 | Unconsolidated | FWGDA2mw-108C-119-GW | 10/21/2009 | 2355602.421 | 560184.5864 | 1029.9156 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-109 | Unconsolidated | FWGDA2mw-109C-120-GW | 10/21/2009 | 2354796.85 | 559897.6695 | 1068.6588 | Grab | BP | 0.0092 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-110 | Unconsolidated | FWGDA2mw-110C-121-GW | 10/21/2009 | 2355195.202 | 559922.3928 | 1061.3878 | Grab | BP | 0.0014 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-112 | Unconsolidated | FWGDA2mw-112C-123-GW | 10/21/2009 | 2355019.568 | 560374.5046 | 1034.8724 | Grab | BP | 0.0332 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-113 | Unconsolidated | FWGDA2mw-113C-124-GW | 10/21/2009 | 2355150.554 | 560392.8898 | 1034.5126 | Grab | BP | 0.007 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-1 | Unconsolidated | FWGDETMw-001-111-GW | 10/21/2009 | 2354959.47 | 560820.03 | 1063.97 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-2 | Unconsolidated | FWGDETMw-002C-115-GW | 10/21/2009 | 2355360.33 | 560664.71 | 1062.69 | Grab | BP | 0.0057 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-3 | Unconsolidated | FWGDETMw-003C-1488-GW | 10/14/2009 | 2355204.94 | 560456.1 | 1035.56 | Grab | BP | 0.0014 | UJ | B | Cb,L | 0.005 | 0.0014 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-006 | Unconsolidated | FWGWBGmw-006C-171-GW | 10/20/2009 | 2359087.79 | 563008.87 | 1010.38 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-007 | Unconsolidated | FWGWBGmw-007C-172-GW | 10/20/2009 | 2360420.44 | 562479.87 | 995.33 | Grab | BP | 0.074 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-009 | Unconsolidated | FWGWBGmw-009C-174-GW | 10/20/2009 | 2357159.22 | 561603.54 | 1042 | Grab | BP | 0.0019 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-010 | Unconsolidated | FWGWBGmw-010C-175-GW | 10/20/2009 | 2356051.96 | 562893.2 | 1069.85 | Grab | BP | 0.0046 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-011 | Unconsolidated | FWGWBGmw-011C-176-GW | 10/20/2009 | 2356187.29 | 562609.18 | 1072.38 | Grab | BP | 0.0061 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-012 | Unconsolidated | FWGWBGmw-012C-177-GW | 10/20/2009 | 2354810.65 | 562240.9 | 1079.11 | Grab | BP | 0.0275 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-013 | Unconsolidated | FWGWBGmw-013C-178-GW | 10/20/2009 | 2355223.25 | 561518.27 | 1071.7 | Grab | BP | 0.0071 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-014 | Unconsolidated | FWGWBGmw-014C-179-GW | 10/20/2009 | 2360439.22 | 562061.26 | 996.78 | Grab | BP | 0.0046 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-015 | Unconsolidated | FWGWBGmw-015C-180-GW | 10/20/2009 | 2359182.41 | 562340.12 | 1011.6 | Grab | BP | 0.007 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-016 | Unconsolidated | FWGWBGmw-016C-181-GW | 10/20/2009 | 2360645.88 | 562709.13 | 997.03 | Grab | BP | 0.0073 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-017 | Unconsolidated | FWGWBGmw-017C-182-GW | 10/20/2009 | 2359603.84 | 562913.24 | 1006.62 | Grab | BP | 0.0371 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-064 | Unconsolidated | FWGLL1mw-064-022-GW | 10/19/2009 | 2380286.973 | 563118.7363 | 932 | Grab | BP | 0.0072 | B | | P,N | 0.005 | 0.0014 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-065 | Unconsolidated | FWGLL1mw-065-023-GW | 10/19/2009 | 2380452.003 | 560916.9225 | 940 | Grab | BP | 0.107 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-193 | Unconsolidated | FWGLL4mw-193-057-GW | 10/21/2009 | 2364236.52 | 554960.27 | 982.92 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-194 | Unconsolidated | FWGLL4mw-194C-058-GW | 10/16/2009 | 2364584.86 | 555089.22 | 983.76 | Grab | BP | 0.0112 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-196 | Unconsolidated | FWGLL4mw-196C-060-GW | 10/16/2009 | 2365297.1 | 555213.52 | 984.55 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-197 | Unconsolidated | FWGLL4mw-197C-061-GW | 10/16/2009 | 2365384.91 | 555397.05 | 985.46 | Grab | BP | 0.0026 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-198 | Unconsolidated | FWGLL4mw-198C-062-GW | 10/21/2009 | 2364991.19 | 555442.04 | 983.42 | Grab | BP | 0.0173 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-199 | Unconsolidated | FWGLL4mw-199C-063-GW | 10/16/2009 | 2365420.78 | 554621.62 | 977.28 | Grab | BP | 0.0033 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-200 | Unconsolidated | FWGLL4mw-200-064-GW | 10/21/2009 | 2365903.05 | 554580.15 | 987.93 | Grab | BP | 0.0046 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-12 Load Line 12 | L12mw-107 | Unconsolidated | FWGLL12mw-107C-072-GW | 10/16/2009 | 2368595.67 | 556759.02 | 978.03 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-12 Load Line 12 | L12mw-128 | Unconsolidated | FWGLL12mw-128C-074-GW | 10/16/2009 | 2368293.2 | 557371.54 | 976.21 | Grab | BP | 0.0345 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-12 Load Line 12 | L12mw-153 | Unconsolidated | FWGLL12mw-153C-075-GW | 10/16/2009 | 2368138.87 | 557823.23 | 975.34 | Grab | BP | 0.0025 | JB | BJ | Pj,F,L,Cb | 0.005 | 0.0014 | 1 |
| RVAAP-12 Load Line 12 | L12mw-154 | Unconsolidated | FWGLL12mw-154C-076-GW | 10/16/2009 | 2368183.88 | 557754.56 | 977 | Grab | BP | 0.0065 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-12 Load Line 12 | L12mw-182 | Unconsolidated | FWGLL12mw-182C-077-GW | 10/16/2009 | 2368853.2 | 555890.35 | 982.2 | Grab | BP | 0.0015 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-12 Load Line 12 | L12mw-188 | Unconsolidated | FWGLL12mw-188C-083-GW | 10/15/2009 | 2367908.82 | 558132.59 | 978.46 | Grab | BP | 0.0014 | UJ | B | Cb,L | 0.005 | 0.0014 | 1 |
| RVAAP-12 Load Line 12 | L12mw-242 | Unconsolidated | FWGLL12mw-242C-085-GW | 10/15/2009 | 2368545.29 | 558020.51 | 980 | Grab | BP | 0.0014 | UJB | BJ | Cb,F,L | 0.005 | 0.0014 | 1 |
| RVAAP-12 Load Line 12 | L12mw-243 | Unconsolidated | FWGLL12mw-243C-086-GW | 10/16/2009 | 2368190.04 | 557376.32 | 978 | Grab | BP | 0.0244 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-12 Load Line 12 | L12mw-244 | Unconsolidated | FWGLL12mw-244C-087-GW | 10/16/2009 | 2368751.42 | 557377.17 | 980 | Grab | BP | 0.0784 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-12 Load Line 12 | L12mw-245 | Unconsolidated | FWGLL12mw-245C-088-GW | 10/16/2009 | 2368370.74 | 557044.55 | 978 | Grab | BP | 0.0236 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-12 Load Line 12 | L12mw-246 | Unconsolidated | FWGLL12mw-246C-089-GW | 10/16/2009 | 2369432.17 | 556658.89 | 982.96 | Grab | BP | 0.0054 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-166 | Unconsolidated | FWGFBQmw-166C-133-GW | 10/22/2009 | 2349584.33 | 553123.86 | 1104.87 | Grab | BP | 0.0023 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-167 | Unconsolidated | FWGFBQmw-167C-134-GW | 10/22/2009 | 2349675.45 | 553556.12 | 1112.05 | Grab | BP | 0.0102 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-176 | Unconsolidated | FWGFBQmw-176C-143-GW | 10/22/2009 | 2350219.45 | 553273.33 | 1129.57 | Grab | BP | 0.0224 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-024 | Unconsolidated | FWGLNWmw-024C-145-GW | 10/20/2009 | 2358400 | 564828 | 1035.3 | Grab | BP | 0.0271 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-025 | Unconsolidated | FWGLNWmw-025C-146-GW | 10/20/2009 | 2358420 | 565070 | 1027.2 | Grab | BP | 0.0059 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-026 | Unconsolidated | FWGLNWmw-026C-147-GW | 10/20/2009 | 2358950 | 564656 | 1025 | Grab | BP | 0.0066 | | | | 0.005 | 0.0014 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Chromium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|----------|--------|------|--------|-------|--------|----|
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-027 | Unconsolidated | FWGLNWmw-027C-148-GW | 10/20/2009 | 2358630 | 564519 | 1024.4 | Grab | BP | 0.0015 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-001 | Unconsolidated | FWGMBSmw-001C-183-GW | 10/20/2009 | 2345323 | 550759.5 | 1079.68 | Grab | BP | 0.0014 | UJ | B | Cb,L | 0.005 | 0.0014 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-002 | Unconsolidated | FWGMBSmw-002C-184-GW | 10/20/2009 | 2345322.3 | 550886.2 | 1080.5 | Grab | BP | 0.006 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-003 | Unconsolidated | FWGMBSmw-003C-185-GW | 10/20/2009 | 2345172.4 | 550922.8 | 1082.45 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-004 | Unconsolidated | FWGMBSmw-004C-186-GW | 10/20/2009 | 2345134.2 | 550767.9 | 1079.55 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-005 | Unconsolidated | FWGMBSmw-005C-187-GW | 10/20/2009 | 2345354.1 | 550800.7 | 1080.5 | Grab | BP | 0.007 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-006 | Unconsolidated | FWGMBSmw-006C-188-GW | 10/20/2009 | 2345282.3 | 550726.1 | 1080.29 | Grab | BP | 0.0014 | UJ | B | Cb,L | 0.005 | 0.0014 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-001 | Unconsolidated | FWGCPmw-001C-105-GW | 10/21/2009 | 2368948.852 | 560440.9741 | 975.2594 | Grab | BP | 0.0022 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-004 | Unconsolidated | FWGCPmw-004C-108-GW | 10/21/2009 | 2368674.21 | 561843.2791 | 981.198 | Grab | BP | 0.0031 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-006 | Unconsolidated | FWGCPmw-006C-110-GW | 10/21/2009 | 2367727.191 | 562830.039 | 965.13 | Grab | BP | 0.0675 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-001 | Unconsolidated | FWGLL6mw-001C-001-GW | 10/21/2009 | 2353153.227 | 554214.8365 | 1124.1607 | Grab | B | 0.0623 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-002 | Unconsolidated | FWGLL6mw-002C-002-GW | 10/21/2009 | 2353820.091 | 553589.8815 | 1129.3631 | Grab | B | 0.0822 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-107 | Unconsolidated | FWGNTAmw-107C-149-GW | 10/20/2009 | 2345432.73 | 551699.09 | 1077.65 | Grab | BP | 0.0138 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-108 | Unconsolidated | FWGNTAmw-108C-150-GW | 10/20/2009 | 2345782.17 | 551917.92 | 1083.22 | Grab | BP | 0.0077 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-109 | Unconsolidated | FWGNTAmw-109C-151-GW | 10/20/2009 | 2345996.99 | 551291.19 | 1076.89 | Grab | BP | 0.0019 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-110 | Unconsolidated | FWGNTAmw-110C-152-GW | 10/20/2009 | 2346436.82 | 551350.8 | 1080.03 | Grab | BP | 0.0061 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-111 | Unconsolidated | FWGNTAmw-111C-153-GW | 10/20/2009 | 2346640.16 | 551538.99 | 1078.07 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-112 | Unconsolidated | FWGNTAmw-112C-154-GW | 10/20/2009 | 2346889.01 | 551708.76 | 1075.36 | Grab | BP | 0.0245 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-113 | Unconsolidated | FWGNTAmw-113C-155-GW | 10/20/2009 | 2347081.15 | 551487.86 | 1072.61 | Grab | BP | 0.088 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-115 | Unconsolidated | FWGNTAmw-115C-157-GW | 10/20/2009 | 2347582.94 | 551793.39 | 1086.91 | Grab | BP | 0.006 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-116 | Unconsolidated | FWGNTAmw-116C-158-GW | 10/20/2009 | 2348196.78 | 551749.39 | 1091.68 | Grab | BP | 0.0107 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-117 | Unconsolidated | FWGNTAmw-117C-159-GW | 10/20/2009 | 2347994.79 | 551586.36 | 1091.67 | Grab | BP | 0.0014 | UJ | B | Cb,L | 0.005 | 0.0014 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-118 | Unconsolidated | FWGNTAmw-118C-160-GW | 10/20/2009 | 2347608.09 | 551333.89 | 1078.86 | Grab | BP | 0.0058 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-003 | Unconsolidated | FWGLL5mw-003C-067-GW | 10/21/2009 | 2354962.47 | 554533.41 | 1124.7 | Grab | BP | 0.0395 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-001 | Unconsolidated | FWGLL8mw-001C-1436-GW | 10/13/2009 | 2351660 | 552609 | 1118.69 | Grab | BP | 0.0032 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-002 | Unconsolidated | FWGLL8mw-002C-1437-GW | 10/13/2009 | 2351010 | 552410 | 1121.67 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-003 | Unconsolidated | FWGLL8mw-003C-1438-GW | 10/13/2009 | 2351360 | 552231 | 1116.3 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-004 | Unconsolidated | FWGLL8mw-004C-1439-GW | 10/13/2009 | 2351260 | 551808 | 1112.73 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-43 Load Line 10 | L10mw-006 | Unconsolidated | FWGLL10mw-006C-1454-GW | 10/14/2009 | 2355656.8 | 554997.25 | 1121.2 | Grab | BP | 0.0014 | U | | Cb,P | 0.005 | 0.0014 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-001 | Unconsolidated | FWGLL11mw-001C-1455-GW | 10/14/2009 | 2352778.81 | 557504.98 | 1100.16 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-006 | Unconsolidated | FWGLL11mw-006C-1459-GW | 10/14/2009 | 2352521.51 | 558263.51 | 1086.5 | Grab | BP | 0.0032 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-008 | Unconsolidated | FWGLL11mw-008C-1460-GW | 10/14/2009 | 2352388.57 | 557981.26 | 1087.74 | Grab | BP | 0.0035 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-009 | Unconsolidated | FWGLL11mw-009C-1461-GW | 10/14/2009 | 2352577.21 | 557901.2 | 1088.28 | Grab | BP | 0.0024 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-010 | Unconsolidated | FWGLL11mw-010C-1462-GW | 10/14/2009 | 2352038.91 | 557675.59 | 1082.68 | Grab | BP | 0.0037 | J | B | L,P | 0.005 | 0.0014 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-001 | Unconsolidated | FWGCBPmw-001C-097-GW | 10/21/2009 | 2367095.431 | 561616.171 | 975.8411 | Grab | BP | 0.0122 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-002 | Unconsolidated | FWGCBPmw-002C-098-GW | 10/21/2009 | 2367295.684 | 561865.9216 | 970.0359 | Grab | BP | 0.0211 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-003 | Unconsolidated | FWGCBPmw-003C-099-GW | 10/21/2009 | 2366768.739 | 561944.2018 | 974.6665 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-004 | Unconsolidated | FWGCBPmw-004C-100-GW | 10/21/2009 | 2366978.819 | 562123.8244 | 971.1285 | Grab | BP | 0.0541 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-005 | Unconsolidated | FWGCBPmw-005C-101-GW | 10/21/2009 | 2366919.482 | 562311.8596 | 971.5897 | Grab | BP | 0.0261 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-006 | Unconsolidated | FWGCBPmw-006C-102-GW | 10/21/2009 | 2367243.659 | 562311.9449 | 967.6448 | Grab | BP | 0.0906 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-007 | Unconsolidated | FWGCBPmw-007C-103-GW | 10/21/2009 | 2366512.573 | 562006.343 | 976.3736 | Grab | BP | 0.0014 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-007 | Unconsolidated | FWGASYmw-007C-1469-GW | 10/15/2009 | 2366840 | 556820 | 981.4 | Grab | BP | 0.0014 | UJB | BJ | Cb,F,L | 0.005 | 0.0014 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-008 | Unconsolidated | FWGASYmw-008C-1470-GW | 10/15/2009 | 2367470 | 557086 | 976.2 | Grab | BP | 0.143 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-010 | Unconsolidated | FWGASYmw-010C-1472-GW | 10/15/2009 | 2366980 | 557273 | 978.2 | Grab | BP | 0.0102 | | | | 0.005 | 0.0014 | 1 |
| Site-wide Background Areas | BKGmw-004 | Unconsolidated | FWGBKGmw-004C-007-GW | 10/21/2009 | 2368852.973 | 569464.763 | 965.16 | Grab | BP | 0.002 | J | B | L | 0.005 | 0.0014 | 1 |
| Site-wide Background Areas | BKGmw-005 | Unconsolidated | FWGBKGmw-005C-008-GW | 10/22/2009 | 2340835.864 | 562288.445 | 1149.443 | Grab | BP | 0.0104 | | | | 0.005 | 0.0014 | 1 |
| Site-wide Background Areas | BKGmw-013 | Unconsolidated | FWGBKGmw-013C-013-GW | 10/21/2009 | 2361627.394 | 558269.158 | 986.588 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| Site-wide Background Areas | BKGmw-016 | Unconsolidated | FWGBKGmw-016C-015-GW | 10/22/2009 | 2342407.075 | 553983.501 | 1098.419 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| Site-wide Background Areas | BKGmw-017 | Unconsolidated | FWGBKGmw-017C-016-GW | 10/22/2009 | 2346115.351 | 562452.044 | 1132.799 | Grab | BP | 0.0045 | J | B | L | 0.005 | 0.0014 | 1 |
| Site-wide Background Areas | BKGmw-019 | Unconsolidated | FWGBKGmw-019C-018-GW | 10/22/2009 | 2349882.142 | 559864.549 | 1108.239 | Grab | BP | 0.0073 | | | | 0.005 | 0.0014 | 1 |
| Site-wide Background Areas | BKGmw-020 | Unconsolidated | FWGBKGmw-020C-019-GW | 10/21/2009 | 2357856.237 | 558756.241 | 1065.001 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| Site-wide Background Areas | BKGmw-021 | Unconsolidated | FWGBKGmw-021C-020-GW | 10/21/2009 | 2367622.953 | 571016.748 | 972.159 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Chromium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|----------|--------|------|--------|-------|--------|----|
| RVAAP-01 Ramsdell Quarry Landfill | RQLmw-009 | Sharon | FWGRQLmw-009C-1487-GW | 10/14/2009 | 2376253.654 | 566351.1994 | 964 | Grab | BP | 0.0031 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-078 | Sharon | FWGLL1mw-078-025-GW | 10/19/2009 | 2376275.854 | 564623.871 | 995.84 | Grab | BP | 0.0105 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-080 | Sharon | FWGLL1mw-080-027-GW | 10/19/2009 | 2376845.072 | 562479.728 | 996.27 | Grab | BP | 0.013 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-082 | Sharon | FWGLL1mw-082-029-GW | 10/19/2009 | 2376977.379 | 562956.86 | 1006.45 | Grab | BP | 0.0147 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-060 | Sharon | FWGLL2mw-060C-034-GW | 10/19/2009 | 2375978 | 558022 | 958.13 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-263 | Sharon | FWGLL2mw-263-037-GW | 10/19/2009 | 2374290.29 | 561590.92 | 1009.42 | Grab | BP | 0.0047 | JB | B | L,N | 0.005 | 0.0014 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-264 | Sharon | FWGLL2mw-264-038-GW | 10/19/2009 | 2374532.76 | 561173.63 | 1010.1 | Grab | BP | 0.0021 | JB | B | L,N | 0.005 | 0.0014 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-267 | Sharon | FWGLL2mw-267C-041-GW | 10/19/2009 | 2373714.17 | 561393.73 | 1012.81 | Grab | BP | 0.0024 | JB | B | L,N | 0.005 | 0.0014 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-268 | Sharon | FWGLL2mw-268-042-GW | 10/19/2009 | 2374156.4 | 560831.44 | 1015.47 | Grab | BP | 0.0127 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-269 | Sharon | FWGLL2mw-269-043-GW | 10/20/2009 | 2374756.74 | 559483.9 | 1009.49 | Grab | BP | 0.002 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-270 | Sharon | FWGLL2mw-270-044-GW | 10/19/2009 | 2372858.94 | 562656.18 | 1009.93 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-238 | Sharon | FWGLL3mw-238C-051-GW | 10/20/2009 | 2370624.55 | 559569.39 | 1006.91 | Grab | BP | 0.0191 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-239 | Sharon | FWGLL3mw-239-052-GW | 10/20/2009 | 2370894.17 | 559101.84 | 1003.5 | Grab | BP | 0.0044 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-241 | Sharon | FWGLL3mw-241-054-GW | 10/20/2009 | 2370332.94 | 559299 | 994.65 | Grab | BP | 0.0045 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-242 | Sharon | FWGLL3mw-242-055-GW | 10/21/2009 | 2371993.44 | 557035.28 | 999.32 | Grab | BP | 0.0234 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-243 | Sharon | FWGLL3mw-243C-056-GW | 10/21/2009 | 2371532.06 | 556688.5 | 991.16 | Grab | BP | 0.0141 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-12 Load Line 12 | L12mw-186 | Sharon | FWGLL12mw-186C-081-GW | 10/15/2009 | 2367912.39 | 559065.95 | 976.34 | Grab | BP | 0.0024 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-12 Load Line 12 | L12mw-189 | Sharon | FWGLL12mw-189C-084-GW | 10/15/2009 | 2367945.92 | 558569.27 | 976.17 | Grab | BP | 0.0087 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-13 Building 1200 | B12mw-011 | Sharon | FWGB12mw-011C-091-GW | 10/21/2009 | 2371420 | 565690 | 1003.76 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-001 | Sharon | FWGASYmw-001C-1463-GW | 10/14/2009 | 2366262.85 | 558406.04 | 978.4 | Grab | BP | 0.0056 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-002 | Sharon | FWGASYmw-002C-1464-GW | 10/15/2009 | 2366170 | 557890 | 982 | Grab | BP | 0.0026 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-003 | Sharon | FWGASYmw-003C-1465-GW | 10/15/2009 | 2366650 | 558014 | 979.7 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-005 | Sharon | FWGASYmw-005C-1467-GW | 10/15/2009 | 2367450 | 557785 | 977.6 | Grab | BP | 0.0053 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-006 | Sharon | FWGASYmw-006C-1468-GW | 10/15/2009 | 2366750 | 557256 | 980.2 | Grab | BP | 0.0091 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-009 | Sharon | FWGASYmw-009C-1471-GW | 10/15/2009 | 2366630 | 557606 | 979.9 | Grab | BP | 0.0014 | UJ | B | Cb,L | 0.005 | 0.0014 | 1 |
| Site-wide Background Areas | BKGmw-012 | Sharon | FWGBKGmw-012C-012-GW | 10/21/2009 | 2367795.226 | 563918.862 | 997.574 | Grab | BP | 0.0034 | J | B | L | 0.005 | 0.0014 | 1 |
| Site-wide Background Areas | BKGmw-018 | Sharon | FWGBKGmw-018C-017-GW | 10/21/2009 | 2354993.909 | 570873.349 | 1043.06 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-001 | Homewood | FWGCBLmw-001C-093-GW | 10/21/2009 | 2343659.08 | 559405.12 | 1178.5 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-003 | Homewood | FWGCBLmw-003C-095-GW | 10/22/2009 | 2343967.67 | 559697.13 | 1172.22 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-004 | Homewood | FWGCBLmw-004C-096-GW | 10/22/2009 | 2343687.21 | 559950 | 1172.08 | Grab | BP | 0.0037 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-171 | Homewood | FWGFBQmw-171C-138-GW | 10/22/2009 | 2350072.44 | 554230.93 | 1140.49 | Grab | BP | 0.0029 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-172 | Homewood | FWGFBQmw-172C-139-GW | 10/22/2009 | 2349907.37 | 554322.17 | 1145.71 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-173 | Homewood | FWGFBQmw-173C-140-GW | 10/22/2009 | 2350449.01 | 554491.35 | 1162.43 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-174 | Homewood | FWGFBQmw-174C-141-GW | 10/22/2009 | 2350289.81 | 554142.44 | 1135.78 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-175 | Homewood | FWGFBQmw-175C-142-GW | 10/22/2009 | 2350297.98 | 553989.24 | 1137.16 | Grab | BP | 0.0038 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-177 | Homewood | FWGFBQmw-177C-144-GW | 10/22/2009 | 2350112.18 | 553321.94 | 1125.73 | Grab | BP | 0.0042 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-003 | Homewood | FWGLL6mw-003C-003-GW | 10/21/2009 | 2353048.684 | 553544.3432 | 1125.3837 | Grab | BP | 0.026 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-004 | Homewood | FWGLL6mw-004C-004-GW | 10/21/2009 | 2353368.787 | 553431.8182 | 1125.3851 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-001 | Homewood | FWGLL5mw-001C-065-GW | 10/21/2009 | 2354627.07 | 554321.25 | 1125 | Grab | BP | 0.0095 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-002 | Homewood | FWGLL5mw-002C-066-GW | 10/21/2009 | 2354573.52 | 554606 | 1125.8 | Grab | BP | 0.0339 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-004 | Homewood | FWGLL5mw-004C-068-GW | 10/21/2009 | 2355008.44 | 554071.73 | 1122.9 | Grab | BP | 0.0536 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-005 | Homewood | FWGLL5mw-005C-069-GW | 10/22/2009 | 2354424.02 | 554154.73 | 1126.5 | Grab | BP | 0.0118 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-006 | Homewood | FWGLL5mw-006C-070-GW | 10/21/2009 | 2354730 | 553981.82 | 1125.1 | Grab | BP | 0.043 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-003 | Homewood | FWGLL7mw-003C-1432-GW | 10/12/2009 | 2352349.51 | 555414.33 | 1118.23 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-004 | Homewood | FWGLL7mw-004C-1433-GW | 10/12/2009 | 2352036.23 | 555583.15 | 1123.3 | Grab | BP | 0.002 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-005 | Homewood | FWGLL8mw-005C-1440-GW | 10/13/2009 | 2351750 | 551522 | 1112.51 | Grab | BP | 0.0087 | | | P | 0.005 | 0.0014 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-006 | Homewood | FWGLL8mw-006C-1441-GW | 10/13/2009 | 2351480 | 551295 | 1114.33 | Grab | BP | 0.0058 | | | | 0.005 | 0.0014 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-001 | Homewood | FWGLL9mw-001C-1442-GW | 10/13/2009 | 2355817.04 | 556125.81 | 1134.62 | Grab | BP | 0.0027 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-002 | Homewood | FWGLL9mw-002C-1443-GW | 10/13/2009 | 2355907.76 | 556755.11 | 1127.3 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-003 | Homewood | FWGLL9mw-003C-1444-GW | 10/13/2009 | 2356635.21 | 556445.31 | 1135.76 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-43 Load Line 10 | L10mw-001 | Homewood | FWGLL10mw-001C-1449-GW | 10/13/2009 | 2355272.22 | 555818.25 | 1130 | Grab | BP | 0.0041 | J | B | L | 0.005 | 0.0014 | 1 |
| RVAAP-43 Load Line 10 | L10mw-002 | Homewood | FWGLL10mw-002C-1450-GW | 10/13/2009 | 2355712.51 | 555525.36 | 1124.4 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-43 Load Line 10 | L10mw-003 | Homewood | FWGLL10mw-003C-1451-GW | 10/13/2009 | 2355387.92 | 555496.71 | 1127.4 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-43 Load Line 10 | L10mw-004 | Homewood | FWGLL10mw-004C-1452-GW | 10/14/2009 | 2355440.2 | 555234.59 | 1119.6 | Grab | BP | 0.0014 | U | U | | 0.005 | 0.0014 | 1 |
| RVAAP-43 Load Line 10 | L10mw-005 | Homewood | FWGLL10mw-005C-1453-GW | 10/14/2009 | 2355941.55 | 555382.53 | 1122.9 | Grab | BP | 0.0014 | UJ | B | Cb,L | 0.005 | 0.0014 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Cobalt | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|-----------------------|-------------|-------------|-------------|-----------|-------------|--------|--------|--------|------|--------|-------|--------|----|
| RVAAP-02 Erie Burning Grounds | EBGmw-123 | Unconsolidated | FWGEBGmw-123C-125-GW | 10/19/2009 | 2380049.21 | 571747.04 | 945.59 | Grab | BP | 0.0016 | J | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-124 | Unconsolidated | FWGEBGmw-124C-126-GW | 10/19/2009 | 2380030.24 | 571618.07 | 939.02 | Grab | BP | 0.0324 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-126 | Unconsolidated | FWGEBGmw-126C-128-GW | 10/19/2009 | 2380307.31 | 572348.81 | 938.2 | Grab | BP | 0.0028 | J | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-127 | Unconsolidated | FWGEBGmw-127C-129-GW | 10/19/2009 | 2380172.16 | 571083.61 | 940.21 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-128 | Unconsolidated | FWGEBGmw-128C-130-GW | 10/19/2009 | 2379892.79 | 570970.32 | 942.47 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-129 | Unconsolidated | FWGEBGmw-129C-131-GW | 10/19/2009 | 2379240.52 | 572035.68 | 941.97 | Grab | BP | 0.0038 | J | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-130 | Unconsolidated | FWGEBGmw-130C-132-GW | 10/19/2009 | 2379220.69 | 570695.61 | 941.18 | Grab | BP | 0.0034 | J | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-104 | Unconsolidated | FWGDA2mw-104C-115-GW | 10/21/2009 | 2354773.248 | 561125.7023 | 1070.8244 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-107 | Unconsolidated | FWGDA2mw-107C-118-GW | 10/21/2009 | 2354923.231 | 560482.7171 | 1039.1815 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-108 | Unconsolidated | FWGDA2mw-108C-119-GW | 10/21/2009 | 2355602.421 | 560184.5864 | 1029.9156 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-109 | Unconsolidated | FWGDA2mw-109C-120-GW | 10/21/2009 | 2354796.85 | 559897.6695 | 1068.6588 | Grab | BP | 0.004 | J | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-110 | Unconsolidated | FWGDA2mw-110C-121-GW | 10/21/2009 | 2355195.202 | 559922.3928 | 1061.3878 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-112 | Unconsolidated | FWGDA2mw-112C-123-GW | 10/21/2009 | 2355019.568 | 560374.5046 | 1034.8724 | Grab | BP | 0.0161 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-113 | Unconsolidated | FWGDA2mw-113C-124-GW | 10/21/2009 | 2355150.554 | 560392.8898 | 1034.5126 | Grab | BP | 0.0015 | UJ | B | Cb,L | 0.005 | 0.0015 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-1 | Unconsolidated | FWGDETMw-001-111-GW | 10/21/2009 | 2354959.47 | 560820.03 | 1063.97 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-2 | Unconsolidated | FWGDETMw-002C-112-GW | 10/21/2009 | 2355360.33 | 560664.71 | 1062.69 | Grab | BP | 0.0021 | J | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-3 | Unconsolidated | FWGDETMw-003C-1488-GW | 10/14/2009 | 2355204.94 | 560456.1 | 1035.56 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-006 | Unconsolidated | FWGWBGmw-006C-171-GW | 10/20/2009 | 2359087.79 | 563008.87 | 1010.38 | Grab | BP | 0.0016 | J | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-007 | Unconsolidated | FWGWBGmw-007C-172-GW | 10/20/2009 | 2360420.44 | 562479.87 | 995.33 | Grab | BP | 0.0399 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-009 | Unconsolidated | FWGWBGmw-009C-174-GW | 10/20/2009 | 2357159.2 | 561603.54 | 1042 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-010 | Unconsolidated | FWGWBGmw-010C-175-GW | 10/20/2009 | 2356051.96 | 562893.2 | 1069.85 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-011 | Unconsolidated | FWGWBGmw-011C-176-GW | 10/20/2009 | 2356187.29 | 562609.18 | 1072.38 | Grab | BP | 0.0048 | J | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-012 | Unconsolidated | FWGWBGmw-012C-177-GW | 10/20/2009 | 2354810.65 | 562240.9 | 1079.11 | Grab | BP | 0.0154 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-013 | Unconsolidated | FWGWBGmw-013C-178-GW | 10/20/2009 | 2355223.25 | 561518.27 | 1071.7 | Grab | BP | 0.0037 | J | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-014 | Unconsolidated | FWGWBGmw-014C-179-GW | 10/20/2009 | 2360439.22 | 562061.26 | 996.78 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-015 | Unconsolidated | FWGWBGmw-015C-180-GW | 10/20/2009 | 2359182.41 | 562340.12 | 1011.6 | Grab | BP | 0.003 | J | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-016 | Unconsolidated | FWGWBGmw-016C-181-GW | 10/20/2009 | 2360645.88 | 562709.13 | 997.03 | Grab | BP | 0.0045 | J | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-017 | Unconsolidated | FWGWBGmw-017C-182-GW | 10/20/2009 | 2359603.84 | 562913.24 | 1006.62 | Grab | BP | 0.0168 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-064 | Unconsolidated | FWGLL1mw-064-022-GW | 10/19/2009 | 2380286.973 | 563118.7363 | 932 | Grab | BP | 0.0015 | U | U | P | 0.005 | 0.0015 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-065 | Unconsolidated | FWGLL1mw-065-023-GW | 10/19/2009 | 2380452.003 | 560916.9225 | 940 | Grab | BP | 0.0907 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-193 | Unconsolidated | FWGLL4mw-193-057-GW | 10/21/2009 | 2364236.52 | 554960.27 | 982.92 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-194 | Unconsolidated | FWGLL4mw-194C-058-GW | 10/16/2009 | 2364584.86 | 555089.22 | 983.76 | Grab | BP | 0.0065 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-196 | Unconsolidated | FWGLL4mw-196C-060-GW | 10/16/2009 | 2365297.1 | 555213.52 | 984.55 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-197 | Unconsolidated | FWGLL4mw-197C-061-GW | 10/16/2009 | 2365384.91 | 555397.05 | 985.46 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-198 | Unconsolidated | FWGLL4mw-198C-062-GW | 10/21/2009 | 2364991.19 | 555442.04 | 983.42 | Grab | BP | 0.01 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-199 | Unconsolidated | FWGLL4mw-199C-063-GW | 10/16/2009 | 2365420.78 | 554621.62 | 977.28 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-200 | Unconsolidated | FWGLL4mw-200-064-GW | 10/21/2009 | 2365903.05 | 554580.15 | 987.93 | Grab | BP | 0.0018 | J | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-12 Load Line 12 | L12mw-107 | Unconsolidated | FWGLL12mw-107C-072-GW | 10/16/2009 | 2368595.67 | 556759.02 | 978.03 | Grab | BP | 0.0015 | J | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-12 Load Line 12 | L12mw-128 | Unconsolidated | FWGLL12mw-128C-074-GW | 10/16/2009 | 2368293.2 | 557371.54 | 976.21 | Grab | BP | 0.0245 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-12 Load Line 12 | L12mw-153 | Unconsolidated | FWGLL12mw-153C-075-GW | 10/16/2009 | 2368138.87 | 557823.23 | 975.34 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-12 Load Line 12 | L12mw-154 | Unconsolidated | FWGLL12mw-154C-076-GW | 10/16/2009 | 2368183.88 | 557754.56 | 977 | Grab | BP | 0.0041 | J | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-12 Load Line 12 | L12mw-182 | Unconsolidated | FWGLL12mw-182C-077-GW | 10/16/2009 | 2368853.2 | 555890.35 | 982.2 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-12 Load Line 12 | L12mw-188 | Unconsolidated | FWGLL12mw-188C-083-GW | 10/15/2009 | 2367908.82 | 558132.59 | 978.46 | Grab | BP | 0.0034 | J | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-12 Load Line 12 | L12mw-242 | Unconsolidated | FWGLL12mw-242C-085-GW | 10/15/2009 | 2368545.29 | 558020.51 | 980 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-12 Load Line 12 | L12mw-243 | Unconsolidated | FWGLL12mw-243C-086-GW | 10/16/2009 | 2368190.04 | 557376.32 | 978 | Grab | BP | 0.0178 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-12 Load Line 12 | L12mw-244 | Unconsolidated | FWGLL12mw-244C-087-GW | 10/16/2009 | 2368751.42 | 557377.17 | 980 | Grab | BP | 0.0595 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-12 Load Line 12 | L12mw-245 | Unconsolidated | FWGLL12mw-245C-088-GW | 10/16/2009 | 2368370.74 | 557044.55 | 978 | Grab | BP | 0.0118 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-12 Load Line 12 | L12mw-246 | Unconsolidated | FWGLL12mw-246C-089-GW | 10/16/2009 | 2369432.17 | 556658.89 | 982.96 | Grab | BP | 0.0023 | J | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-166 | Unconsolidated | FWGFBQmw-166C-133-GW | 10/22/2009 | 2349584.33 | 553123.86 | 1104.87 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-167 | Unconsolidated | FWGFBQmw-167C-134-GW | 10/22/2009 | 2349675.45 | 553556.12 | 1112.05 | Grab | BP | 0.0092 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-176 | Unconsolidated | FWGFBQmw-176C-143-GW | 10/22/2009 | 2350219.45 | 553273.33 | 1129.57 | Grab | BP | 0.0128 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-024 | Unconsolidated | FWGLNWmw-024C-145-GW | 10/20/2009 | 2358400 | 564828 | 1035.3 | Grab | BP | 0.0168 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-025 | Unconsolidated | FWGLNWmw-025C-146-GW | 10/20/2009 | 2358420 | 565070 | 1027.2 | Grab | BP | 0.0042 | J | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-026 | Unconsolidated | FWGLNWmw-026C-147-GW | 10/20/2009 | 2358950 | 564656 | 1025 | Grab | BP | 0.0025 | J | B | L | 0.005 | 0.0015 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOO | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Cobalt | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|--------|--------|------|--------|-------|--------|----|
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-027 | Unconsolidated | FWGLNWmw-027C-148-GW | 10/20/2009 | 2358630 | 564519 | 1024.4 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-001 | Unconsolidated | FWGMBSmw-001C-183-GW | 10/20/2009 | 2345323 | 550759.5 | 1079.68 | Grab | BP | 0.0015 | UJ | B | Cb,L | 0.005 | 0.0015 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-002 | Unconsolidated | FWGMBSmw-002C-184-GW | 10/20/2009 | 2345322.3 | 550886.2 | 1080.5 | Grab | BP | 0.0015 | UJ | B | Cb,L | 0.005 | 0.0015 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-003 | Unconsolidated | FWGMBSmw-003C-185-GW | 10/20/2009 | 2345172.4 | 550922.8 | 1082.45 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-004 | Unconsolidated | FWGMBSmw-004C-186-GW | 10/20/2009 | 2345134.2 | 550767.9 | 1079.55 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-005 | Unconsolidated | FWGMBSmw-005C-187-GW | 10/20/2009 | 2345354.1 | 550800.7 | 1080.5 | Grab | BP | 0.0034 | J | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-006 | Unconsolidated | FWGMBSmw-006C-188-GW | 10/20/2009 | 2345282.3 | 550726.1 | 1080.29 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-001 | Unconsolidated | FWGCPmw-001C-105-GW | 10/21/2009 | 2368948.852 | 560440.9741 | 975.2594 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-004 | Unconsolidated | FWGCPmw-004C-108-GW | 10/21/2009 | 2368674.21 | 561843.2791 | 981.198 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-006 | Unconsolidated | FWGCPmw-006C-110-GW | 10/21/2009 | 2367727.191 | 562830.039 | 965.13 | Grab | BP | 0.0271 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-001 | Unconsolidated | FWGLL6mw-001C-001-GW | 10/21/2009 | 2353153.227 | 554214.8365 | 1124.1607 | Grab | B | 0.0303 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-002 | Unconsolidated | FWGLL6mw-002C-002-GW | 10/21/2009 | 2353820.091 | 553589.8815 | 1129.3631 | Grab | B | 0.0474 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-107 | Unconsolidated | FWGNTAmw-107C-149-GW | 10/20/2009 | 2345432.73 | 551699.09 | 1077.65 | Grab | BP | 0.0056 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-108 | Unconsolidated | FWGNTAmw-108C-150-GW | 10/20/2009 | 2345782.17 | 551917.92 | 1083.22 | Grab | BP | 0.0035 | J | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-109 | Unconsolidated | FWGNTAmw-109C-151-GW | 10/20/2009 | 2345996.99 | 551291.19 | 1076.89 | Grab | BP | 0.0015 | UJ | B | Cb,L | 0.005 | 0.0015 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-110 | Unconsolidated | FWGNTAmw-110C-152-GW | 10/20/2009 | 2346436.82 | 551350.8 | 1080.03 | Grab | BP | 0.0015 | UJ | B | Cb,L | 0.005 | 0.0015 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-111 | Unconsolidated | FWGNTAmw-111C-153-GW | 10/20/2009 | 2346640.16 | 551538.99 | 1078.07 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-112 | Unconsolidated | FWGNTAmw-112C-154-GW | 10/20/2009 | 2346889.01 | 551708.76 | 1075.36 | Grab | BP | 0.0128 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-113 | Unconsolidated | FWGNTAmw-113C-155-GW | 10/20/2009 | 2347081.15 | 551487.86 | 1072.61 | Grab | BP | 0.0406 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-115 | Unconsolidated | FWGNTAmw-115C-157-GW | 10/20/2009 | 2347582.94 | 551793.39 | 1086.91 | Grab | BP | 0.002 | J | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-116 | Unconsolidated | FWGNTAmw-116C-158-GW | 10/20/2009 | 2348196.78 | 551749.39 | 1091.68 | Grab | BP | 0.0041 | J | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-117 | Unconsolidated | FWGNTAmw-117C-159-GW | 10/20/2009 | 2347994.79 | 551586.36 | 1091.67 | Grab | BP | 0.0015 | UJ | B | Cb,L | 0.005 | 0.0015 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-118 | Unconsolidated | FWGNTAmw-118C-160-GW | 10/20/2009 | 2347608.09 | 551333.89 | 1078.86 | Grab | BP | 0.0043 | J | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-003 | Unconsolidated | FWGLL5mw-003C-067-GW | 10/21/2009 | 2354962.47 | 554533.41 | 1124.7 | Grab | BP | 0.0227 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-001 | Unconsolidated | FWGLL8mw-001C-1436-GW | 10/13/2009 | 2351660 | 552609 | 1118.69 | Grab | BP | 0.0015 | UJ | B | Cb,L | 0.005 | 0.0015 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-002 | Unconsolidated | FWGLL8mw-002C-1437-GW | 10/13/2009 | 2351010 | 552410 | 1121.67 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-003 | Unconsolidated | FWGLL8mw-003C-1438-GW | 10/13/2009 | 2351360 | 552231 | 1116.3 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-004 | Unconsolidated | FWGLL8mw-004C-1439-GW | 10/13/2009 | 2351260 | 551808 | 1112.73 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-43 Load Line 10 | L10mw-006 | Unconsolidated | FWGLL10mw-006C-1454-GW | 10/14/2009 | 2355656.8 | 554997.25 | 1121.2 | Grab | BP | 0.002 | J | B | L,P | 0.005 | 0.0015 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-001 | Unconsolidated | FWGLL11mw-001C-1455-GW | 10/14/2009 | 2352778.81 | 557504.98 | 1100.16 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-006 | Unconsolidated | FWGLL11mw-006C-1459-GW | 10/14/2009 | 2352521.51 | 558263.51 | 1086.5 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-008 | Unconsolidated | FWGLL11mw-008C-1460-GW | 10/14/2009 | 2352388.57 | 557981.26 | 1087.74 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-009 | Unconsolidated | FWGLL11mw-009C-1461-GW | 10/14/2009 | 2352577.21 | 557901.2 | 1088.28 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-010 | Unconsolidated | FWGLL11mw-010C-1462-GW | 10/14/2009 | 2352038.91 | 557675.59 | 1082.68 | Grab | BP | 0.0021 | J | B | L,P | 0.005 | 0.0015 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-001 | Unconsolidated | FWGCBPmw-001C-097-GW | 10/21/2009 | 2367095.431 | 561616.171 | 975.8411 | Grab | BP | 0.0101 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-002 | Unconsolidated | FWGCBPmw-002C-098-GW | 10/21/2009 | 2367295.684 | 561865.9216 | 970.0359 | Grab | BP | 0.0137 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-003 | Unconsolidated | FWGCBPmw-003C-099-GW | 10/21/2009 | 2366768.739 | 561944.2018 | 974.6665 | Grab | BP | 0.0032 | J | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-004 | Unconsolidated | FWGCBPmw-004C-100-GW | 10/21/2009 | 2366978.819 | 562123.8244 | 971.1285 | Grab | BP | 0.0312 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-005 | Unconsolidated | FWGCBPmw-005C-101-GW | 10/21/2009 | 2366919.482 | 562311.8596 | 971.5897 | Grab | BP | 0.0134 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-006 | Unconsolidated | FWGCBPmw-006C-102-GW | 10/21/2009 | 2367243.659 | 562311.9449 | 967.6448 | Grab | BP | 0.0468 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-007 | Unconsolidated | FWGCBPmw-007C-103-GW | 10/21/2009 | 2366512.573 | 562006.343 | 976.3736 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-007 | Unconsolidated | FWGASYmw-007C-1469-GW | 10/15/2009 | 2366840 | 556820 | 981.4 | Grab | BP | 0.0015 | UJ | B | Cb,L | 0.005 | 0.0015 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-008 | Unconsolidated | FWGASYmw-008C-1470-GW | 10/15/2009 | 2367470 | 557086 | 976.2 | Grab | BP | 0.115 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-010 | Unconsolidated | FWGASYmw-010C-1472-GW | 10/15/2009 | 2366980 | 557273 | 978.2 | Grab | BP | 0.0044 | J | B | L | 0.005 | 0.0015 | 1 |
| Site-wide Background Areas | BKGmw-004 | Unconsolidated | FWGBKGmw-004C-007-GW | 10/21/2009 | 2368852.973 | 569464.763 | 965.16 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| Site-wide Background Areas | BKGmw-005 | Unconsolidated | FWGBKGmw-005C-008-GW | 10/22/2009 | 2340835.864 | 562288.445 | 1149.443 | Grab | BP | 0.0063 | | | | 0.005 | 0.0015 | 1 |
| Site-wide Background Areas | BKGmw-013 | Unconsolidated | FWGBKGmw-013C-013-GW | 10/21/2009 | 2361627.394 | 558269.158 | 986.588 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| Site-wide Background Areas | BKGmw-016 | Unconsolidated | FWGBKGmw-016C-015-GW | 10/22/2009 | 2342407.075 | 553983.501 | 1098.419 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| Site-wide Background Areas | BKGmw-017 | Unconsolidated | FWGBKGmw-017C-016-GW | 10/22/2009 | 2346115.351 | 562452.044 | 1132.799 | Grab | BP | 0.0042 | J | B | L | 0.005 | 0.0015 | 1 |
| Site-wide Background Areas | BKGmw-019 | Unconsolidated | FWGBKGmw-019C-018-GW | 10/22/2009 | 2349882.142 | 559864.549 | 1108.239 | Grab | BP | 0.0076 | | | | 0.005 | 0.0015 | 1 |
| Site-wide Background Areas | BKGmw-020 | Unconsolidated | FWGBKGmw-020C-019-GW | 10/21/2009 | 2357856.237 | 558756.241 | 1065.001 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |
| Site-wide Background Areas | BKGmw-021 | Unconsolidated | FWGBKGmw-021C-020-GW | 10/21/2009 | 2367622.953 | 571016.748 | 972.159 | Grab | BP | 0.0015 | U | U | | 0.005 | 0.0015 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Cobalt | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|-----------|--------|------|--------|-------|--------|----|
| RVAAP-01 Ramsdell Quarry Landfill | RQLmw-009 | Sharon | FWGRQLmw-009C-1487-GW | 10/14/2009 | 2376253.654 | 566351.1994 | 964 | Grab | BP | 0.005 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-078 | Sharon | FWGLL1mw-078-025-GW | 10/19/2009 | 2376275.854 | 564623.871 | 995.84 | Grab | BP | 0.0089 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-080 | Sharon | FWGLL1mw-080-027-GW | 10/19/2009 | 2376845.072 | 562479.728 | 996.27 | Grab | BP | 0.0186 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-082 | Sharon | FWGLL1mw-082-029-GW | 10/19/2009 | 2376977.379 | 562956.86 | 1006.45 | Grab | BP | 0.0122 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-060 | Sharon | FWGLL2mw-060C-034-GW | 10/19/2009 | 2375978 | 558022 | 958.13 | Grab | BP | 0.0015 U | | U | | 0.005 | 0.0015 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-263 | Sharon | FWGLL2mw-263-037-GW | 10/19/2009 | 2374290.29 | 561590.92 | 1009.42 | Grab | BP | 0.0054 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-264 | Sharon | FWGLL2mw-264-038-GW | 10/19/2009 | 2374532.76 | 561173.63 | 1010.1 | Grab | BP | 0.0055 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-267 | Sharon | FWGLL2mw-267C-051-GW | 10/19/2009 | 2373714.17 | 561393.73 | 1012.81 | Grab | BP | 0.0085 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-268 | Sharon | FWGLL2mw-268-042-GW | 10/19/2009 | 2374156.4 | 560831.44 | 1015.47 | Grab | BP | 0.0049 J | | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-269 | Sharon | FWGLL2mw-269-043-GW | 10/20/2009 | 2374756.74 | 559483.9 | 1009.49 | Grab | BP | 0.0015 U | | U | | 0.005 | 0.0015 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-270 | Sharon | FWGLL2mw-270-044-GW | 10/19/2009 | 2372858.94 | 562656.18 | 1009.93 | Grab | BP | 0.0045 J | | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-238 | Sharon | FWGLL3mw-238C-051-GW | 10/20/2009 | 2370624.55 | 559569.39 | 1006.91 | Grab | BP | 0.0048 J | | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-239 | Sharon | FWGLL3mw-239-052-GW | 10/20/2009 | 2370894.17 | 559101.84 | 1003.5 | Grab | BP | 0.0015 U | | U | | 0.005 | 0.0015 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-241 | Sharon | FWGLL3mw-241-054-GW | 10/20/2009 | 2370332.94 | 559299 | 994.65 | Grab | BP | 0.0022 J | | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-242 | Sharon | FWGLL3mw-242-055-GW | 10/21/2009 | 2371993.44 | 557035.28 | 999.32 | Grab | BP | 0.0066 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-243 | Sharon | FWGLL3mw-243C-056-GW | 10/21/2009 | 2371532.06 | 556688.5 | 991.16 | Grab | BP | 0.002 J | | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-12 Load Line 12 | L12mw-186 | Sharon | FWGLL12mw-186C-081-GW | 10/15/2009 | 2367912.39 | 559065.95 | 976.34 | Grab | BP | 0.0037 J | | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-12 Load Line 12 | L12mw-189 | Sharon | FWGLL12mw-189C-084-GW | 10/15/2009 | 2367945.92 | 558569.27 | 976.17 | Grab | BP | 0.0058 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-13 Building 1200 | B12mw-011 | Sharon | FWGB12mw-011C-091-GW | 10/21/2009 | 2371420 | 565690 | 1003.76 | Grab | BP | 0.0015 U | | U | | 0.005 | 0.0015 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-001 | Sharon | FWGASYmw-001C-1463-GW | 10/14/2009 | 2366262.85 | 558406.04 | 978.4 | Grab | BP | 0.0035 J | | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-002 | Sharon | FWGASYmw-002C-1464-GW | 10/15/2009 | 2366170 | 557890 | 982 | Grab | BP | 0.0015 U | | U | | 0.005 | 0.0015 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-003 | Sharon | FWGASYmw-003C-1465-GW | 10/15/2009 | 2366650 | 558014 | 979.7 | Grab | BP | 0.0015 U | | U | | 0.005 | 0.0015 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-005 | Sharon | FWGASYmw-005C-1467-GW | 10/15/2009 | 2367450 | 557785 | 977.6 | Grab | BP | 0.0069 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-006 | Sharon | FWGASYmw-006C-1468-GW | 10/15/2009 | 2366750 | 557256 | 980.2 | Grab | BP | 0.0061 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-009 | Sharon | FWGASYmw-009C-1471-GW | 10/15/2009 | 2366630 | 557606 | 979.9 | Grab | BP | 0.0015 UJ | | B | Cb,L | 0.005 | 0.0015 | 1 |
| Site-wide Background Areas | BKGmw-012 | Sharon | FWGBKGmw-012C-012-GW | 10/21/2009 | 2367795.226 | 563918.862 | 997.574 | Grab | BP | 0.0015 U | | U | | 0.005 | 0.0015 | 1 |
| Site-wide Background Areas | BKGmw-018 | Sharon | FWGBKGmw-018C-017-GW | 10/21/2009 | 2354993.909 | 570873.349 | 1043.06 | Grab | BP | 0.0015 U | | U | | 0.005 | 0.0015 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-001 | Homewood | FWGCBLmw-001C-093-GW | 10/21/2009 | 2343659.08 | 559405.12 | 1178.5 | Grab | BP | 0.0015 U | | U | | 0.005 | 0.0015 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-003 | Homewood | FWGCBLmw-003C-095-GW | 10/22/2009 | 2343967.67 | 559697.13 | 1172.22 | Grab | BP | 0.0015 U | | U | | 0.005 | 0.0015 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-004 | Homewood | FWGCBLmw-004C-096-GW | 10/22/2009 | 2343687.21 | 559950 | 1172.08 | Grab | BP | 0.0018 J | | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-171 | Homewood | FWGFBQmw-171C-138-GW | 10/22/2009 | 2350072.44 | 554230.93 | 1140.49 | Grab | BP | 0.0015 U | | U | | 0.005 | 0.0015 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-172 | Homewood | FWGFBQmw-172C-139-GW | 10/22/2009 | 2349907.37 | 554322.17 | 1145.71 | Grab | BP | 0.0047 J | | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-173 | Homewood | FWGFBQmw-173C-140-GW | 10/22/2009 | 2350449.01 | 554491.35 | 1162.43 | Grab | BP | 0.0015 U | | U | | 0.005 | 0.0015 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-174 | Homewood | FWGFBQmw-174C-141-GW | 10/22/2009 | 2350289.81 | 554142.44 | 1135.78 | Grab | BP | 0.0017 J | | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-175 | Homewood | FWGFBQmw-175C-142-GW | 10/22/2009 | 2350297.98 | 553989.24 | 1137.16 | Grab | BP | 0.0015 J | | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-177 | Homewood | FWGFBQmw-177C-144-GW | 10/22/2009 | 2350112.18 | 553321.94 | 1125.73 | Grab | BP | 0.0027 J | | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-003 | Homewood | FWGLL6mw-003C-003-GW | 10/21/2009 | 2353048.684 | 553544.3432 | 1125.3837 | Grab | BP | 0.0164 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-004 | Homewood | FWGLL6mw-004C-004-GW | 10/21/2009 | 2353368.787 | 553431.8182 | 1125.3851 | Grab | BP | 0.0015 U | | U | | 0.005 | 0.0015 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-001 | Homewood | FWGLL5mw-001C-065-GW | 10/21/2009 | 2354627.07 | 554321.25 | 1125 | Grab | BP | 0.0053 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-002 | Homewood | FWGLL5mw-002C-066-GW | 10/21/2009 | 2354573.52 | 554606 | 1125.8 | Grab | BP | 0.0232 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-004 | Homewood | FWGLL5mw-004C-068-GW | 10/21/2009 | 2355008.44 | 554071.73 | 1122.9 | Grab | BP | 0.0433 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-005 | Homewood | FWGLL5mw-005C-069-GW | 10/22/2009 | 2354424.02 | 554154.73 | 1126.5 | Grab | BP | 0.0076 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-006 | Homewood | FWGLL5mw-006C-070-GW | 10/21/2009 | 2354730 | 553981.82 | 1125.1 | Grab | BP | 0.0295 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-003 | Homewood | FWGLL7mw-003C-1432-GW | 10/12/2009 | 2352349.51 | 555414.33 | 1118.23 | Grab | BP | 0.0035 J | | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-004 | Homewood | FWGLL7mw-004C-1433-GW | 10/12/2009 | 2352036.23 | 555583.15 | 1123.3 | Grab | BP | 0.0076 | | | | 0.005 | 0.0015 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-005 | Homewood | FWGLL8mw-005C-1440-GW | 10/13/2009 | 2351750 | 551522 | 1112.51 | Grab | BP | 0.0054 | | | P | 0.005 | 0.0015 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-006 | Homewood | FWGLL8mw-006C-1441-GW | 10/13/2009 | 2351480 | 551295 | 1114.33 | Grab | BP | 0.0045 J | | B | L | 0.005 | 0.0015 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-001 | Homewood | FWGLL9mw-001C-1442-GW | 10/13/2009 | 2355817.04 | 556125.81 | 1134.62 | Grab | BP | 0.0015 U | | U | | 0.005 | 0.0015 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-002 | Homewood | FWGLL9mw-002C-1443-GW | 10/13/2009 | 2355907.76 | 556755.11 | 1127.3 | Grab | BP | 0.0015 U | | U | | 0.005 | 0.0015 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-003 | Homewood | FWGLL9mw-003C-1444-GW | 10/13/2009 | 2356635.21 | 556445.31 | 1135.76 | Grab | BP | 0.0015 U | | U | | 0.005 | 0.0015 | 1 |
| RVAAP-43 Load Line 10 | L10mw-001 | Homewood | FWGLL10mw-001C-1449-GW | 10/13/2009 | 2355272.22 | 555818.25 | 1130 | Grab | BP | 0.0015 U | | U | | 0.005 | 0.0015 | 1 |
| RVAAP-43 Load Line 10 | L10mw-002 | Homewood | FWGLL10mw-002C-1450-GW | 10/13/2009 | 2355712.51 | 555525.36 | 1124.4 | Grab | BP | 0.0015 U | | U | | 0.005 | 0.0015 | 1 |
| RVAAP-43 Load Line 10 | L10mw-003 | Homewood | FWGLL10mw-003C-1451-GW | 10/13/2009 | 2355387.92 | 555496.71 | 1127.4 | Grab | BP | 0.0015 U | | U | | 0.005 | 0.0015 | 1 |
| RVAAP-43 Load Line 10 | L10mw-004 | Homewood | FWGLL10mw-004C-1452-GW | 10/14/2009 | 2355440.2 | 555234.59 | 1119.6 | Grab | BP | 0.0015 U | | U | | 0.005 | 0.0015 | 1 |
| RVAAP-43 Load Line 10 | L10mw-005 | Homewood | FWGLL10mw-005C-1453-GW | 10/14/2009 | 2355941.55 | 555382.53 | 1122.9 | Grab | BP | 0.0015 U | | U | | 0.005 | 0.0015 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Copper | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|-----------------------|-------------|-------------|-------------|-----------|-------------|--------|--------|--------|------|--------|-------|--------|----|
| RVAAP-02 Erie Burning Grounds | EBGmw-123 | Unconsolidated | FWGEBGmw-123C-125-GW | 10/19/2009 | 2380049.21 | 571747.04 | 945.59 | Grab | BP | 0.0045 | J | B | L | 0.005 | 0.0044 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-124 | Unconsolidated | FWGEBGmw-124C-126-GW | 10/19/2009 | 2380030.24 | 571618.07 | 939.02 | Grab | BP | 0.0665 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-126 | Unconsolidated | FWGEBGmw-126C-128-GW | 10/19/2009 | 2380307.31 | 572348.81 | 938.2 | Grab | BP | 0.0052 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-127 | Unconsolidated | FWGEBGmw-127C-129-GW | 10/19/2009 | 2380172.16 | 571083.61 | 940.21 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-128 | Unconsolidated | FWGEBGmw-128C-130-GW | 10/19/2009 | 2379892.79 | 570970.32 | 942.47 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-129 | Unconsolidated | FWGEBGmw-129C-131-GW | 10/19/2009 | 2379240.52 | 572035.68 | 941.97 | Grab | BP | 0.0108 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-130 | Unconsolidated | FWGEBGmw-130C-132-GW | 10/19/2009 | 2379220.69 | 570695.61 | 941.18 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-104 | Unconsolidated | FWGDA2mw-104C-115-GW | 10/21/2009 | 2354773.248 | 561125.7023 | 1070.8244 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-107 | Unconsolidated | FWGDA2mw-107C-118-GW | 10/21/2009 | 2354923.231 | 560482.7171 | 1039.1815 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-108 | Unconsolidated | FWGDA2mw-108C-119-GW | 10/21/2009 | 2355602.421 | 560184.5864 | 1029.9156 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-109 | Unconsolidated | FWGDA2mw-109C-120-GW | 10/21/2009 | 2354796.85 | 559897.6695 | 1068.6588 | Grab | BP | 0.006 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-110 | Unconsolidated | FWGDA2mw-110C-121-GW | 10/21/2009 | 2355195.202 | 559922.3928 | 1061.3878 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-112 | Unconsolidated | FWGDA2mw-112C-123-GW | 10/21/2009 | 2355019.568 | 560374.5046 | 1034.8724 | Grab | BP | 0.0583 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-113 | Unconsolidated | FWGDA2mw-113C-124-GW | 10/21/2009 | 2355150.554 | 560392.8898 | 1034.5126 | Grab | BP | 0.0087 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-1 | Unconsolidated | FWGDETMw-001-111-GW | 10/21/2009 | 2354959.47 | 560820.03 | 1063.97 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-2 | Unconsolidated | FWGDETMw-002C-115-GW | 10/21/2009 | 2355360.33 | 560664.71 | 1062.69 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-3 | Unconsolidated | FWGDETMw-003C-1488-GW | 10/14/2009 | 2355204.94 | 560456.1 | 1035.56 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-006 | Unconsolidated | FWGWBGmw-006C-171-GW | 10/20/2009 | 2359087.79 | 563008.87 | 1010.38 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-007 | Unconsolidated | FWGWBGmw-007C-172-GW | 10/20/2009 | 2360420.44 | 562479.87 | 995.33 | Grab | BP | 0.0705 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-009 | Unconsolidated | FWGWBGmw-009C-174-GW | 10/20/2009 | 2357159.2 | 561603.54 | 1042 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-010 | Unconsolidated | FWGWBGmw-010C-175-GW | 10/20/2009 | 2356051.96 | 562893.2 | 1069.85 | Grab | BP | 0.0053 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-011 | Unconsolidated | FWGWBGmw-011C-176-GW | 10/20/2009 | 2356187.29 | 562609.18 | 1072.38 | Grab | BP | 0.0072 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-012 | Unconsolidated | FWGWBGmw-012C-177-GW | 10/20/2009 | 2354810.65 | 562240.9 | 1079.11 | Grab | BP | 0.0503 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-013 | Unconsolidated | FWGWBGmw-013C-178-GW | 10/20/2009 | 2355223.25 | 561518.27 | 1071.7 | Grab | BP | 0.0124 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-014 | Unconsolidated | FWGWBGmw-014C-179-GW | 10/20/2009 | 2360439.22 | 562061.26 | 996.78 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-015 | Unconsolidated | FWGWBGmw-015C-180-GW | 10/20/2009 | 2359182.41 | 562340.12 | 1011.6 | Grab | BP | 0.0044 | U | | Cb | 0.005 | 0.0044 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-016 | Unconsolidated | FWGWBGmw-016C-181-GW | 10/20/2009 | 2360645.88 | 562709.13 | 997.03 | Grab | BP | 0.0107 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-017 | Unconsolidated | FWGWBGmw-017C-182-GW | 10/20/2009 | 2359603.84 | 562913.24 | 1006.62 | Grab | BP | 0.0491 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-064 | Unconsolidated | FWGLL1mw-064-022-GW | 10/19/2009 | 2380286.973 | 563118.7363 | 932 | Grab | BP | 0.0059 | | | P | 0.005 | 0.0044 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-065 | Unconsolidated | FWGLL1mw-065-023-GW | 10/19/2009 | 2380452.003 | 560916.9225 | 940 | Grab | BP | 0.216 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-193 | Unconsolidated | FWGLL4mw-193-057-GW | 10/21/2009 | 2364236.52 | 554960.27 | 982.92 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-194 | Unconsolidated | FWGLL4mw-194C-058-GW | 10/16/2009 | 2364584.86 | 555089.22 | 983.76 | Grab | BP | 0.0147 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-196 | Unconsolidated | FWGLL4mw-196C-060-GW | 10/16/2009 | 2365297.1 | 555213.52 | 984.55 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-197 | Unconsolidated | FWGLL4mw-197C-061-GW | 10/16/2009 | 2365384.91 | 555397.05 | 985.46 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-198 | Unconsolidated | FWGLL4mw-198C-062-GW | 10/21/2009 | 2364991.19 | 555442.04 | 983.42 | Grab | BP | 0.0157 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-199 | Unconsolidated | FWGLL4mw-199C-063-GW | 10/16/2009 | 2365420.78 | 554621.62 | 977.28 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-200 | Unconsolidated | FWGLL4mw-200-064-GW | 10/21/2009 | 2365903.05 | 554580.15 | 987.93 | Grab | BP | 0.0061 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-12 Load Line 12 | L12mw-107 | Unconsolidated | FWGLL12mw-107C-072-GW | 10/16/2009 | 2368595.67 | 556759.02 | 978.03 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-12 Load Line 12 | L12mw-128 | Unconsolidated | FWGLL12mw-128C-074-GW | 10/16/2009 | 2368293.2 | 557371.54 | 976.21 | Grab | BP | 0.0379 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-12 Load Line 12 | L12mw-153 | Unconsolidated | FWGLL12mw-153C-075-GW | 10/16/2009 | 2368138.87 | 557823.23 | 975.34 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-12 Load Line 12 | L12mw-154 | Unconsolidated | FWGLL12mw-154C-076-GW | 10/16/2009 | 2368183.88 | 557754.56 | 977 | Grab | BP | 0.0079 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-12 Load Line 12 | L12mw-182 | Unconsolidated | FWGLL12mw-182C-077-GW | 10/16/2009 | 2368853.2 | 555890.35 | 982.2 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-12 Load Line 12 | L12mw-188 | Unconsolidated | FWGLL12mw-188C-083-GW | 10/15/2009 | 2367908.82 | 558132.59 | 978.46 | Grab | BP | 0.0044 | U | | Cb | 0.005 | 0.0044 | 1 |
| RVAAP-12 Load Line 12 | L12mw-242 | Unconsolidated | FWGLL12mw-242C-085-GW | 10/15/2009 | 2368545.29 | 558020.51 | 980 | Grab | BP | 0.0044 | U | | Cb | 0.005 | 0.0044 | 1 |
| RVAAP-12 Load Line 12 | L12mw-243 | Unconsolidated | FWGLL12mw-243C-086-GW | 10/16/2009 | 2368190.04 | 557376.32 | 978 | Grab | BP | 0.029 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-12 Load Line 12 | L12mw-244 | Unconsolidated | FWGLL12mw-244C-087-GW | 10/16/2009 | 2368751.42 | 557377.17 | 980 | Grab | BP | 0.103 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-12 Load Line 12 | L12mw-245 | Unconsolidated | FWGLL12mw-245C-088-GW | 10/16/2009 | 2368370.74 | 557044.55 | 978 | Grab | BP | 0.0173 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-12 Load Line 12 | L12mw-246 | Unconsolidated | FWGLL12mw-246C-089-GW | 10/16/2009 | 2369432.17 | 556658.89 | 982.96 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-166 | Unconsolidated | FWGFBQmw-166C-133-GW | 10/22/2009 | 2349584.33 | 553123.86 | 1104.87 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-167 | Unconsolidated | FWGFBQmw-167C-134-GW | 10/22/2009 | 2349675.45 | 553556.12 | 1112.05 | Grab | BP | 0.0387 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-176 | Unconsolidated | FWGFBQmw-176C-143-GW | 10/22/2009 | 2350219.45 | 553273.33 | 1129.57 | Grab | BP | 0.0209 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-024 | Unconsolidated | FWGLNWmw-024C-145-GW | 10/20/2009 | 2358400 | 564828 | 1035.3 | Grab | BP | 0.0317 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-025 | Unconsolidated | FWGLNWmw-025C-146-GW | 10/20/2009 | 2358420 | 565070 | 1027.2 | Grab | BP | 0.0044 | U | | Cb | 0.005 | 0.0044 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-026 | Unconsolidated | FWGLNWmw-026C-147-GW | 10/20/2009 | 2358950 | 564656 | 1025 | Grab | BP | 0.0044 | U | | Cb | 0.005 | 0.0044 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOO | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Copper | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|--------|--------|------|--------|-------|--------|----|
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-027 | Unconsolidated | FWGLNWmw-027C-148-GW | 10/20/2009 | 2358630 | 564519 | 1024.4 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-001 | Unconsolidated | FWGMBSmw-001C-183-GW | 10/20/2009 | 2345323 | 550759.5 | 1079.68 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-002 | Unconsolidated | FWGMBSmw-002C-184-GW | 10/20/2009 | 2345322.3 | 550886.2 | 1080.5 | Grab | BP | 0.0044 | U | | Cb | 0.005 | 0.0044 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-003 | Unconsolidated | FWGMBSmw-003C-185-GW | 10/20/2009 | 2345172.4 | 550922.8 | 1082.45 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-004 | Unconsolidated | FWGMBSmw-004C-186-GW | 10/20/2009 | 2345134.2 | 550767.9 | 1079.55 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-005 | Unconsolidated | FWGMBSmw-005C-187-GW | 10/20/2009 | 2345354.1 | 550800.7 | 1080.5 | Grab | BP | 0.0054 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-006 | Unconsolidated | FWGMBSmw-006C-188-GW | 10/20/2009 | 2345282.3 | 550726.1 | 1080.29 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-001 | Unconsolidated | FWGCPmw-001C-105-GW | 10/21/2009 | 2368948.852 | 560440.9741 | 975.2594 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-004 | Unconsolidated | FWGCPmw-004C-108-GW | 10/21/2009 | 2368674.21 | 561843.2791 | 981.198 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-006 | Unconsolidated | FWGCPmw-006C-110-GW | 10/21/2009 | 2367727.191 | 562830.039 | 965.13 | Grab | BP | 0.0392 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-001 | Unconsolidated | FWGLL6mw-001C-001-GW | 10/21/2009 | 2353153.227 | 554214.8365 | 1124.1607 | Grab | B | 0.0754 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-002 | Unconsolidated | FWGLL6mw-002C-002-GW | 10/21/2009 | 2353820.091 | 553589.8815 | 1129.3631 | Grab | B | 0.105 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-107 | Unconsolidated | FWGNTAmw-107C-149-GW | 10/20/2009 | 2345432.73 | 551699.09 | 1077.65 | Grab | BP | 0.0153 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-108 | Unconsolidated | FWGNTAmw-108C-150-GW | 10/20/2009 | 2345782.17 | 551917.92 | 1083.22 | Grab | BP | 0.0044 | U | | Cb | 0.005 | 0.0044 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-109 | Unconsolidated | FWGNTAmw-109C-151-GW | 10/20/2009 | 2345996.99 | 551291.19 | 1076.89 | Grab | BP | 0.0044 | UJ | B | Cb,L | 0.005 | 0.0044 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-110 | Unconsolidated | FWGNTAmw-110C-152-GW | 10/20/2009 | 2346436.82 | 551350.18 | 1080.03 | Grab | BP | 0.0044 | U | | Cb | 0.005 | 0.0044 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-111 | Unconsolidated | FWGNTAmw-111C-153-GW | 10/20/2009 | 2346640.16 | 551538.99 | 1078.07 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-112 | Unconsolidated | FWGNTAmw-112C-154-GW | 10/20/2009 | 2346889.01 | 551708.76 | 1075.36 | Grab | BP | 0.0281 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-113 | Unconsolidated | FWGNTAmw-113C-155-GW | 10/20/2009 | 2347081.15 | 551487.86 | 1072.61 | Grab | BP | 0.135 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-115 | Unconsolidated | FWGNTAmw-115C-157-GW | 10/20/2009 | 2347582.94 | 551793.39 | 1086.91 | Grab | BP | 0.0057 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-116 | Unconsolidated | FWGNTAmw-116C-158-GW | 10/20/2009 | 2348196.78 | 551749.39 | 1091.68 | Grab | BP | 0.0111 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-117 | Unconsolidated | FWGNTAmw-117C-159-GW | 10/20/2009 | 2347994.79 | 551586.36 | 1091.67 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-118 | Unconsolidated | FWGNTAmw-118C-160-GW | 10/20/2009 | 2347608.09 | 551333.89 | 1078.86 | Grab | BP | 0.0056 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-003 | Unconsolidated | FWGLL5mw-003C-067-GW | 10/21/2009 | 2354962.47 | 554533.41 | 1124.7 | Grab | BP | 0.0404 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-001 | Unconsolidated | FWGLL8mw-001C-1436-GW | 10/13/2009 | 2351660 | 552609 | 1118.69 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-002 | Unconsolidated | FWGLL8mw-002C-1437-GW | 10/13/2009 | 2351010 | 552410 | 1121.67 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-003 | Unconsolidated | FWGLL8mw-003C-1438-GW | 10/13/2009 | 2351360 | 552231 | 1116.3 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-004 | Unconsolidated | FWGLL8mw-004C-1439-GW | 10/13/2009 | 2351260 | 551808 | 1112.73 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-43 Load Line 10 | L10mw-006 | Unconsolidated | FWGLL10mw-006C-1454-GW | 10/14/2009 | 2355656.8 | 554997.25 | 1121.2 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-001 | Unconsolidated | FWGLL11mw-001C-1455-GW | 10/14/2009 | 2352778.81 | 557504.98 | 1100.16 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-006 | Unconsolidated | FWGLL11mw-006C-1459-GW | 10/14/2009 | 2352521.51 | 558263.51 | 1086.5 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-008 | Unconsolidated | FWGLL11mw-008C-1460-GW | 10/14/2009 | 2352388.57 | 557981.26 | 1087.74 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-009 | Unconsolidated | FWGLL11mw-009C-1461-GW | 10/14/2009 | 2352577.21 | 557901.2 | 1088.28 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-010 | Unconsolidated | FWGLL11mw-010C-1462-GW | 10/14/2009 | 2352038.91 | 557675.59 | 1082.68 | Grab | BP | 0.0059 | | | P | 0.005 | 0.0044 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-001 | Unconsolidated | FWGCBPmw-001C-097-GW | 10/21/2009 | 2367095.431 | 561616.171 | 975.8411 | Grab | BP | 0.018 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-002 | Unconsolidated | FWGCBPmw-002C-098-GW | 10/21/2009 | 2367295.684 | 561865.9216 | 970.0359 | Grab | BP | 0.0293 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-003 | Unconsolidated | FWGCBPmw-003C-099-GW | 10/21/2009 | 2366768.739 | 561944.2018 | 974.6665 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-004 | Unconsolidated | FWGCBPmw-004C-100-GW | 10/21/2009 | 2366978.819 | 562123.8244 | 971.1285 | Grab | BP | 0.042 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-005 | Unconsolidated | FWGCBPmw-005C-101-GW | 10/21/2009 | 2366919.482 | 562311.8596 | 971.5897 | Grab | BP | 0.0198 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-006 | Unconsolidated | FWGCBPmw-006C-102-GW | 10/21/2009 | 2367243.659 | 562311.9449 | 967.6448 | Grab | BP | 0.065 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-007 | Unconsolidated | FWGCBPmw-007C-103-GW | 10/21/2009 | 2366512.573 | 562006.343 | 976.3736 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-007 | Unconsolidated | FWGASYmw-007C-1469-GW | 10/15/2009 | 2366840 | 556820 | 981.4 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-008 | Unconsolidated | FWGASYmw-008C-1470-GW | 10/15/2009 | 2367470 | 557086 | 976.2 | Grab | BP | 0.225 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-010 | Unconsolidated | FWGASYmw-010C-1472-GW | 10/15/2009 | 2366980 | 557273 | 978.2 | Grab | BP | 0.0059 | B | J | F | 0.005 | 0.0044 | 1 |
| Site-wide Background Areas | BKGmw-004 | Unconsolidated | FWGBKGmw-004C-007-GW | 10/21/2009 | 2368852.973 | 569464.763 | 965.16 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| Site-wide Background Areas | BKGmw-005 | Unconsolidated | FWGBKGmw-005C-008-GW | 10/22/2009 | 2340835.864 | 562288.445 | 1149.443 | Grab | BP | 0.031 | | | | 0.005 | 0.0044 | 1 |
| Site-wide Background Areas | BKGmw-013 | Unconsolidated | FWGBKGmw-013C-013-GW | 10/21/2009 | 2361627.394 | 558269.158 | 986.588 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| Site-wide Background Areas | BKGmw-016 | Unconsolidated | FWGBKGmw-016C-015-GW | 10/22/2009 | 2342407.075 | 553983.501 | 1098.419 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| Site-wide Background Areas | BKGmw-017 | Unconsolidated | FWGBKGmw-017C-016-GW | 10/22/2009 | 2346115.351 | 562452.044 | 1132.799 | Grab | BP | 0.0044 | U | | Cb | 0.005 | 0.0044 | 1 |
| Site-wide Background Areas | BKGmw-019 | Unconsolidated | FWGBKGmw-019C-018-GW | 10/22/2009 | 2349882.142 | 559864.549 | 1108.239 | Grab | BP | 0.0151 | | | | 0.005 | 0.0044 | 1 |
| Site-wide Background Areas | BKGmw-020 | Unconsolidated | FWGBKGmw-020C-019-GW | 10/21/2009 | 2357856.237 | 558756.241 | 1065.001 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| Site-wide Background Areas | BKGmw-021 | Unconsolidated | FWGBKGmw-021C-020-GW | 10/21/2009 | 2367622.953 | 571016.748 | 972.159 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Copper | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|--------|--------|------|--------|-------|--------|----|
| RVAAP-01 Ramsdell Quarry Landfill | RQLmw-009 | Sharon | FWGRQLmw-009C-1487-GW | 10/14/2009 | 2376253.654 | 566351.1994 | 964 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-078 | Sharon | FWGLL1mw-078-025-GW | 10/19/2009 | 2376275.854 | 564623.871 | 995.84 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-080 | Sharon | FWGLL1mw-080-027-GW | 10/19/2009 | 2376845.072 | 562479.728 | 996.27 | Grab | BP | 0.0292 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-082 | Sharon | FWGLL1mw-082-029-GW | 10/19/2009 | 2376977.379 | 562956.86 | 1006.45 | Grab | BP | 0.0087 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-060 | Sharon | FWGLL2mw-060C-034-GW | 10/19/2009 | 2375978 | 558022 | 958.13 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-263 | Sharon | FWGLL2mw-263-037-GW | 10/19/2009 | 2374290.29 | 561590.92 | 1009.42 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-264 | Sharon | FWGLL2mw-264-038-GW | 10/19/2009 | 2374532.76 | 561173.63 | 1010.1 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-267 | Sharon | FWGLL2mw-267C-051-GW | 10/19/2009 | 2373714.17 | 561393.73 | 1012.81 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-268 | Sharon | FWGLL2mw-268-042-GW | 10/19/2009 | 2374156.4 | 560831.44 | 1015.47 | Grab | BP | 0.0063 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-269 | Sharon | FWGLL2mw-269-043-GW | 10/20/2009 | 2374756.74 | 559483.9 | 1009.49 | Grab | BP | 0.0044 | UJ | B | Cb,L | 0.005 | 0.0044 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-270 | Sharon | FWGLL2mw-270-044-GW | 10/19/2009 | 2372858.94 | 562656.18 | 1009.93 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-238 | Sharon | FWGLL3mw-238C-051-GW | 10/20/2009 | 2370624.55 | 559569.39 | 1006.91 | Grab | BP | 0.0107 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-239 | Sharon | FWGLL3mw-239-052-GW | 10/20/2009 | 2370894.17 | 559101.84 | 1003.5 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-241 | Sharon | FWGLL3mw-241-054-GW | 10/20/2009 | 2370332.94 | 559299 | 994.65 | Grab | BP | 0.0044 | UJ | B | Cb,L | 0.005 | 0.0044 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-242 | Sharon | FWGLL3mw-242-055-GW | 10/21/2009 | 2371993.44 | 557035.28 | 999.32 | Grab | BP | 0.0105 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-243 | Sharon | FWGLL3mw-243C-056-GW | 10/21/2009 | 2371532.06 | 556688.5 | 991.16 | Grab | BP | 0.0073 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-12 Load Line 12 | L12mw-186 | Sharon | FWGLL12mw-186C-081-GW | 10/15/2009 | 2367912.39 | 559065.95 | 976.34 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-12 Load Line 12 | L12mw-189 | Sharon | FWGLL12mw-189C-084-GW | 10/15/2009 | 2367945.92 | 558569.27 | 976.17 | Grab | BP | 0.0096 | B | J | F | 0.005 | 0.0044 | 1 |
| RVAAP-13 Building 1200 | B12mw-011 | Sharon | FWGB12mw-011C-091-GW | 10/21/2009 | 2371420 | 565690 | 1003.76 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-001 | Sharon | FWGASYmw-001C-1463-GW | 10/14/2009 | 2366262.85 | 558406.04 | 978.4 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-002 | Sharon | FWGASYmw-002C-1464-GW | 10/15/2009 | 2366170 | 557890 | 982 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-003 | Sharon | FWGASYmw-003C-1465-GW | 10/15/2009 | 2366650 | 558014 | 979.7 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-005 | Sharon | FWGASYmw-005C-1467-GW | 10/15/2009 | 2367450 | 557785 | 977.6 | Grab | BP | 0.0069 | B | J | F | 0.005 | 0.0044 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-006 | Sharon | FWGASYmw-006C-1468-GW | 10/15/2009 | 2366750 | 557256 | 980.2 | Grab | BP | 0.0136 | B | J | F | 0.005 | 0.0044 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-009 | Sharon | FWGASYmw-009C-1471-GW | 10/15/2009 | 2366630 | 557606 | 979.9 | Grab | BP | 0.0044 | U | | Cb | 0.005 | 0.0044 | 1 |
| Site-wide Background Areas | BKGmw-012 | Sharon | FWGBKGMw-012C-012-GW | 10/21/2009 | 2367795.226 | 563918.862 | 997.574 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| Site-wide Background Areas | BKGmw-018 | Sharon | FWGBKGMw-018C-017-GW | 10/21/2009 | 2354993.909 | 570873.349 | 1043.06 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-001 | Homewood | FWGCBLmw-001C-093-GW | 10/21/2009 | 2343659.08 | 559405.12 | 1178.5 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-003 | Homewood | FWGCBLmw-003C-095-GW | 10/22/2009 | 2343967.67 | 559697.13 | 1172.22 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-004 | Homewood | FWGCBLmw-004C-096-GW | 10/22/2009 | 2343687.21 | 559950 | 1172.08 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-171 | Homewood | FWGFBQmw-171C-138-GW | 10/22/2009 | 2350072.44 | 554230.93 | 1140.49 | Grab | BP | 0.0044 | UJ | B | Cb,L | 0.005 | 0.0044 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-172 | Homewood | FWGFBQmw-172C-139-GW | 10/22/2009 | 2349907.37 | 554322.17 | 1145.71 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-173 | Homewood | FWGFBQmw-173C-140-GW | 10/22/2009 | 2350449.01 | 554491.35 | 1162.43 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-174 | Homewood | FWGFBQmw-174C-141-GW | 10/22/2009 | 2350289.81 | 554142.44 | 1135.78 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-175 | Homewood | FWGFBQmw-175C-142-GW | 10/22/2009 | 2350297.98 | 553989.24 | 1137.16 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-177 | Homewood | FWGFBQmw-177C-144-GW | 10/22/2009 | 2350112.18 | 553321.94 | 1125.73 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-003 | Homewood | FWGLL6mw-003C-003-GW | 10/21/2009 | 2353048.684 | 553544.3432 | 1125.3837 | Grab | BP | 0.0214 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-004 | Homewood | FWGLL6mw-004C-004-GW | 10/21/2009 | 2353368.787 | 553431.8182 | 1125.3851 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-001 | Homewood | FWGLL5mw-001C-065-GW | 10/21/2009 | 2354627.07 | 554321.25 | 1125 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-002 | Homewood | FWGLL5mw-002C-066-GW | 10/21/2009 | 2354573.52 | 554606 | 1125.8 | Grab | BP | 0.0242 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-004 | Homewood | FWGLL5mw-004C-068-GW | 10/21/2009 | 2355008.44 | 554071.73 | 1122.9 | Grab | BP | 0.0568 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-005 | Homewood | FWGLL5mw-005C-069-GW | 10/22/2009 | 2354424.02 | 554154.73 | 1126.5 | Grab | BP | 0.0076 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-006 | Homewood | FWGLL5mw-006C-070-GW | 10/21/2009 | 2354730 | 553981.82 | 1125.1 | Grab | BP | 0.0362 | | | | 0.005 | 0.0044 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-003 | Homewood | FWGLL7mw-003C-1432-GW | 10/12/2009 | 2352349.51 | 555414.33 | 1118.23 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-004 | Homewood | FWGLL7mw-004C-1433-GW | 10/12/2009 | 2352036.23 | 555583.15 | 1123.3 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-005 | Homewood | FWGLL8mw-005C-1440-GW | 10/13/2009 | 2351750 | 551522 | 1112.51 | Grab | BP | 0.007 | | | P | 0.005 | 0.0044 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-006 | Homewood | FWGLL8mw-006C-1441-GW | 10/13/2009 | 2351480 | 551295 | 1114.33 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-001 | Homewood | FWGLL9mw-001C-1442-GW | 10/13/2009 | 2355817.04 | 556125.81 | 1134.62 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-002 | Homewood | FWGLL9mw-002C-1443-GW | 10/13/2009 | 2355907.76 | 556755.11 | 1127.3 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-003 | Homewood | FWGLL9mw-003C-1444-GW | 10/13/2009 | 2356635.21 | 556445.31 | 1135.76 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-43 Load Line 10 | L10mw-001 | Homewood | FWGLL10mw-001C-1449-GW | 10/13/2009 | 2355272.22 | 555818.25 | 1130 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-43 Load Line 10 | L10mw-002 | Homewood | FWGLL10mw-002C-1450-GW | 10/13/2009 | 2355712.51 | 555525.36 | 1124.4 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-43 Load Line 10 | L10mw-003 | Homewood | FWGLL10mw-003C-1451-GW | 10/13/2009 | 2355387.92 | 555496.71 | 1127.4 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-43 Load Line 10 | L10mw-004 | Homewood | FWGLL10mw-004C-1452-GW | 10/14/2009 | 2355440.2 | 555234.59 | 1119.6 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |
| RVAAP-43 Load Line 10 | L10mw-005 | Homewood | FWGLL10mw-005C-1453-GW | 10/14/2009 | 2355941.55 | 555382.53 | 1122.9 | Grab | BP | 0.0044 | U | U | | 0.005 | 0.0044 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Iron | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|-----------------------|-------------|-------------|-------------|-----------|-------------|--------|---------|--------|------|--------|------|-------|----|
| RVAAP-02 Erie Burning Grounds | EBGmw-123 | Unconsolidated | FWGEBGmw-123C-125-GW | 10/19/2009 | 2380049.21 | 571747.04 | 945.59 | Grab | BP | 12.3 | | | | 0.05 | 0.026 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-124 | Unconsolidated | FWGEBGmw-124C-126-GW | 10/19/2009 | 2380030.24 | 571618.07 | 939.02 | Grab | BP | 75.5 | | | | 0.05 | 0.026 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-126 | Unconsolidated | FWGEBGmw-126C-128-GW | 10/19/2009 | 2380307.31 | 572348.81 | 938.2 | Grab | BP | 14.6 | | | | 0.05 | 0.026 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-127 | Unconsolidated | FWGEBGmw-127C-129-GW | 10/19/2009 | 2380172.16 | 571083.61 | 940.21 | Grab | BP | 5.15 | | | | 0.05 | 0.026 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-128 | Unconsolidated | FWGEBGmw-128C-130-GW | 10/19/2009 | 2379892.79 | 570970.32 | 942.47 | Grab | BP | 2.17 | | | | 0.05 | 0.026 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-129 | Unconsolidated | FWGEBGmw-129C-131-GW | 10/19/2009 | 2379240.52 | 572035.68 | 941.97 | Grab | BP | 18.3 | | | | 0.05 | 0.026 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-130 | Unconsolidated | FWGEBGmw-130C-132-GW | 10/19/2009 | 2379220.69 | 570695.61 | 941.18 | Grab | BP | 9.46 | | | | 0.05 | 0.026 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-104 | Unconsolidated | FWGDA2mw-104C-115-GW | 10/21/2009 | 2354773.248 | 561125.7023 | 1070.8244 | Grab | BP | 4.61 | | | | 0.05 | 0.026 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-107 | Unconsolidated | FWGDA2mw-107C-118-GW | 10/21/2009 | 2354923.231 | 560482.7171 | 1039.1815 | Grab | BP | 6.8 | | | | 0.05 | 0.026 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-108 | Unconsolidated | FWGDA2mw-108C-119-GW | 10/21/2009 | 2355602.421 | 560184.5864 | 1029.9156 | Grab | BP | 26.8 | | | | 0.05 | 0.026 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-109 | Unconsolidated | FWGDA2mw-109C-120-GW | 10/21/2009 | 2354796.85 | 559897.6695 | 1068.6588 | Grab | BP | 9.55 | | | | 0.05 | 0.026 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-110 | Unconsolidated | FWGDA2mw-110C-121-GW | 10/21/2009 | 2355195.202 | 559922.3928 | 1061.3878 | Grab | BP | 0.684 | | | | 0.05 | 0.026 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-112 | Unconsolidated | FWGDA2mw-112C-123-GW | 10/21/2009 | 2355019.568 | 560374.5046 | 1034.8724 | Grab | BP | 45.9 | | | | 0.05 | 0.026 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-113 | Unconsolidated | FWGDA2mw-113C-124-GW | 10/21/2009 | 2355150.554 | 560392.8898 | 1034.5126 | Grab | BP | 22.1 | | | | 0.05 | 0.026 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-1 | Unconsolidated | FWGDETmw-001-111-GW | 10/21/2009 | 2354959.47 | 560820.03 | 1063.97 | Grab | BP | 1.43 | | | | 0.05 | 0.026 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-2 | Unconsolidated | FWGDETmw-002C-112-GW | 10/21/2009 | 2355360.33 | 560664.71 | 1062.69 | Grab | BP | 5.46 | | | | 0.05 | 0.026 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-3 | Unconsolidated | FWGDETmw-003C-1488-GW | 10/14/2009 | 2355204.94 | 560456.1 | 1035.56 | Grab | BP | 6.23 | | | | 0.05 | 0.026 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-006 | Unconsolidated | FWGWBGmw-006C-171-GW | 10/20/2009 | 2359087.79 | 563008.87 | 1010.38 | Grab | BP | 1.36 | | | | 0.05 | 0.026 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-007 | Unconsolidated | FWGWBGmw-007C-172-GW | 10/20/2009 | 2360420.44 | 562479.87 | 995.33 | Grab | BP | 93.7 | | | | 0.05 | 0.026 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-009 | Unconsolidated | FWGWBGmw-009C-174-GW | 10/20/2009 | 2357159.2 | 561603.54 | 1042 | Grab | BP | 1.31 J | | J | | 0.05 | 0.026 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-010 | Unconsolidated | FWGWBGmw-010C-175-GW | 10/20/2009 | 2356051.96 | 562893.2 | 1069.85 | Grab | BP | 2.44 J | | J | | 0.05 | 0.026 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-011 | Unconsolidated | FWGWBGmw-011C-176-GW | 10/20/2009 | 2356187.29 | 562609.18 | 1072.38 | Grab | BP | 7.63 | | | | 0.05 | 0.026 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-012 | Unconsolidated | FWGWBGmw-012C-177-GW | 10/20/2009 | 2354810.65 | 562240.9 | 1079.11 | Grab | BP | 41 | | | | 0.05 | 0.026 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-013 | Unconsolidated | FWGWBGmw-013C-178-GW | 10/20/2009 | 2355223.25 | 561518.27 | 1071.7 | Grab | BP | 8.95 J | | J | | 0.05 | 0.026 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-014 | Unconsolidated | FWGWBGmw-014C-179-GW | 10/20/2009 | 2360439.22 | 562061.26 | 996.78 | Grab | BP | 2.72 | | | | 0.05 | 0.026 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-015 | Unconsolidated | FWGWBGmw-015C-180-GW | 10/20/2009 | 2359182.41 | 562340.12 | 1011.6 | Grab | BP | 6.44 | | | | 0.05 | 0.026 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-016 | Unconsolidated | FWGWBGmw-016C-181-GW | 10/20/2009 | 2360645.88 | 562709.13 | 997.03 | Grab | BP | 9.37 | | | | 0.05 | 0.026 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-017 | Unconsolidated | FWGWBGmw-017C-182-GW | 10/20/2009 | 2359603.84 | 562913.24 | 1006.62 | Grab | BP | 48.5 | | | | 0.05 | 0.026 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-064 | Unconsolidated | FWGLL1mw-064-022-GW | 10/19/2009 | 2380286.973 | 563118.7363 | 932 | Grab | BP | 15.5 | | | P | 0.05 | 0.026 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-065 | Unconsolidated | FWGLL1mw-065-023-GW | 10/19/2009 | 2380452.003 | 560916.9225 | 940 | Grab | BP | 146 | | | | 0.05 | 0.026 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-193 | Unconsolidated | FWGLL4mw-193-057-GW | 10/21/2009 | 2364236.52 | 554960.27 | 982.92 | Grab | BP | 0.026 U | | U | | 0.05 | 0.026 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-194 | Unconsolidated | FWGLL4mw-194C-058-GW | 10/16/2009 | 2364584.86 | 555089.22 | 983.76 | Grab | BP | 19.6 J | | J | | 0.05 | 0.026 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-196 | Unconsolidated | FWGLL4mw-196C-060-GW | 10/16/2009 | 2365297.1 | 555213.52 | 984.55 | Grab | BP | 4.15 | | | | 0.05 | 0.026 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-197 | Unconsolidated | FWGLL4mw-197C-061-GW | 10/16/2009 | 2365384.91 | 555397.05 | 985.46 | Grab | BP | 2.32 | | | | 0.05 | 0.026 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-198 | Unconsolidated | FWGLL4mw-198C-062-GW | 10/21/2009 | 2364991.19 | 555442.04 | 983.42 | Grab | BP | 45 | | | | 0.05 | 0.026 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-199 | Unconsolidated | FWGLL4mw-199C-063-GW | 10/16/2009 | 2365420.78 | 554621.62 | 977.28 | Grab | BP | 51.9 | | E | | 0.05 | 0.026 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-200 | Unconsolidated | FWGLL4mw-200-064-GW | 10/21/2009 | 2365903.05 | 554580.15 | 987.93 | Grab | BP | 6.44 | | | | 0.05 | 0.026 | 1 |
| RVAAP-12 Load Line 12 | L12mw-107 | Unconsolidated | FWGLL12mw-107C-072-GW | 10/16/2009 | 2368595.67 | 556759.02 | 978.03 | Grab | BP | 24.1 J | | J | | 0.05 | 0.026 | 1 |
| RVAAP-12 Load Line 12 | L12mw-128 | Unconsolidated | FWGLL12mw-128C-074-GW | 10/16/2009 | 2368293.2 | 557371.54 | 976.21 | Grab | BP | 59.3 | | | | 0.05 | 0.026 | 1 |
| RVAAP-12 Load Line 12 | L12mw-153 | Unconsolidated | FWGLL12mw-153C-075-GW | 10/16/2009 | 2368138.87 | 557823.23 | 975.34 | Grab | BP | 4.97 J | | J | | 0.05 | 0.026 | 1 |
| RVAAP-12 Load Line 12 | L12mw-154 | Unconsolidated | FWGLL12mw-154C-076-GW | 10/16/2009 | 2368183.88 | 557754.56 | 977 | Grab | BP | 26.8 J | | J | | 0.05 | 0.026 | 1 |
| RVAAP-12 Load Line 12 | L12mw-182 | Unconsolidated | FWGLL12mw-182C-077-GW | 10/16/2009 | 2368853.2 | 555890.35 | 982.2 | Grab | BP | 14.4 J | | J | | 0.05 | 0.026 | 1 |
| RVAAP-12 Load Line 12 | L12mw-188 | Unconsolidated | FWGLL12mw-188C-083-GW | 10/15/2009 | 2367908.82 | 558132.59 | 978.46 | Grab | BP | 6.16 J | | J | | 0.05 | 0.026 | 1 |
| RVAAP-12 Load Line 12 | L12mw-242 | Unconsolidated | FWGLL12mw-242C-085-GW | 10/15/2009 | 2368545.29 | 558020.51 | 980 | Grab | BP | 4.9 J | | J | | 0.05 | 0.026 | 1 |
| RVAAP-12 Load Line 12 | L12mw-243 | Unconsolidated | FWGLL12mw-243C-086-GW | 10/16/2009 | 2368190.04 | 557376.32 | 978 | Grab | BP | 43.6 | | | | 0.05 | 0.026 | 1 |
| RVAAP-12 Load Line 12 | L12mw-244 | Unconsolidated | FWGLL12mw-244C-087-GW | 10/16/2009 | 2368751.42 | 557377.17 | 980 | Grab | BP | 142 | | | | 0.05 | 0.026 | 1 |
| RVAAP-12 Load Line 12 | L12mw-245 | Unconsolidated | FWGLL12mw-245C-088-GW | 10/16/2009 | 2368370.74 | 557044.55 | 978 | Grab | BP | 26.9 | | | | 0.05 | 0.026 | 1 |
| RVAAP-12 Load Line 12 | L12mw-246 | Unconsolidated | FWGLL12mw-246C-089-GW | 10/16/2009 | 2369432.17 | 556658.89 | 982.96 | Grab | BP | 14.9 J | | J | | 0.05 | 0.026 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-166 | Unconsolidated | FWGFBQmw-166C-133-GW | 10/22/2009 | 2349584.33 | 553123.86 | 1104.87 | Grab | BP | 1.18 J | | J | | 0.05 | 0.026 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-167 | Unconsolidated | FWGFBQmw-167C-134-GW | 10/22/2009 | 2349675.45 | 553556.12 | 1112.05 | Grab | BP | 28.1 | | | | 0.05 | 0.026 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-176 | Unconsolidated | FWGFBQmw-176C-143-GW | 10/22/2009 | 2350219.45 | 553273.33 | 1129.57 | Grab | BP | 32.9 | | | | 0.05 | 0.026 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-024 | Unconsolidated | FWGLNWmw-024C-145-GW | 10/20/2009 | 2358400 | 564828 | 1035.3 | Grab | BP | 27.6 | | | | 0.05 | 0.026 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-025 | Unconsolidated | FWGLNWmw-025C-146-GW | 10/20/2009 | 2358420 | 565070 | 1027.2 | Grab | BP | 10.6 | | | P | 0.05 | 0.026 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-026 | Unconsolidated | FWGLNWmw-026C-147-GW | 10/20/2009 | 2358950 | 564656 | 1025 | Grab | BP | 6.86 | | | | 0.05 | 0.026 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Iron | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|---------|--------|------|--------|------|-------|----|
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-027 | Unconsolidated | FWGLNWmw-027C-148-GW | 10/20/2009 | 2358630 | 564519 | 1024.4 | Grab | BP | 0.695 J | J | | | 0.05 | 0.026 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-001 | Unconsolidated | FWGMBSmw-001C-183-GW | 10/20/2009 | 2345323 | 550759.5 | 1079.68 | Grab | BP | 3.63 | | | | 0.05 | 0.026 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-002 | Unconsolidated | FWGMBSmw-002C-184-GW | 10/20/2009 | 2345322.3 | 550886.2 | 1080.5 | Grab | BP | 5.72 | | | | 0.05 | 0.026 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-003 | Unconsolidated | FWGMBSmw-003C-185-GW | 10/20/2009 | 2345172.4 | 550922.8 | 1082.45 | Grab | BP | 0.378 | | | | 0.05 | 0.026 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-004 | Unconsolidated | FWGMBSmw-004C-186-GW | 10/20/2009 | 2345134.2 | 550767.9 | 1079.55 | Grab | BP | 0.147 | | | | 0.05 | 0.026 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-005 | Unconsolidated | FWGMBSmw-005C-187-GW | 10/20/2009 | 2345354.1 | 550800.7 | 1080.5 | Grab | BP | 15.8 | | | | 0.05 | 0.026 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-006 | Unconsolidated | FWGMBSmw-006C-188-GW | 10/20/2009 | 2345282.3 | 550726.1 | 1080.29 | Grab | BP | 0.989 | | | | 0.05 | 0.026 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-001 | Unconsolidated | FWGCPmw-001C-105-GW | 10/21/2009 | 2368948.852 | 560440.9741 | 975.2594 | Grab | BP | 2.03 | | | | 0.05 | 0.026 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-004 | Unconsolidated | FWGCPmw-004C-108-GW | 10/21/2009 | 2368674.21 | 561843.2791 | 981.198 | Grab | BP | 2.27 | | | | 0.05 | 0.026 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-006 | Unconsolidated | FWGCPmw-006C-110-GW | 10/21/2009 | 2367727.191 | 562830.039 | 965.13 | Grab | BP | 53.1 | | | | 0.05 | 0.026 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-001 | Unconsolidated | FWGLL6mw-001C-001-GW | 10/21/2009 | 2353153.227 | 554214.8365 | 1124.1607 | Grab | B | 78.4 J | J | | | 0.05 | 0.026 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-002 | Unconsolidated | FWGLL6mw-002C-002-GW | 10/21/2009 | 2353820.091 | 553589.8815 | 1129.3631 | Grab | B | 128 | | | | 0.05 | 0.026 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-107 | Unconsolidated | FWGNTAmw-107C-149-GW | 10/20/2009 | 2345432.73 | 551699.09 | 1077.65 | Grab | BP | 15.3 | | | | 0.05 | 0.026 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-108 | Unconsolidated | FWGNTAmw-108C-150-GW | 10/20/2009 | 2345782.17 | 551917.92 | 1083.22 | Grab | BP | 8.4 | | | | 0.05 | 0.026 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-109 | Unconsolidated | FWGNTAmw-109C-151-GW | 10/20/2009 | 2345996.99 | 551291.19 | 1076.89 | Grab | BP | 4.61 | | | | 0.05 | 0.026 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-110 | Unconsolidated | FWGNTAmw-110C-152-GW | 10/20/2009 | 2346436.82 | 551350.8 | 1080.03 | Grab | BP | 5.29 | | | | 0.05 | 0.026 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-111 | Unconsolidated | FWGNTAmw-111C-153-GW | 10/20/2009 | 2346640.16 | 551538.99 | 1078.07 | Grab | BP | 0.245 | | | | 0.05 | 0.026 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-112 | Unconsolidated | FWGNTAmw-112C-154-GW | 10/20/2009 | 2346889.01 | 551708.76 | 1075.36 | Grab | BP | 30.1 | | | | 0.05 | 0.026 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-113 | Unconsolidated | FWGNTAmw-113C-155-GW | 10/20/2009 | 2347081.15 | 551487.86 | 1072.61 | Grab | BP | 94.2 | | | | 0.05 | 0.026 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-115 | Unconsolidated | FWGNTAmw-115C-157-GW | 10/20/2009 | 2347582.94 | 551793.39 | 1086.91 | Grab | BP | 3.95 J | J | | | 0.05 | 0.026 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-116 | Unconsolidated | FWGNTAmw-116C-158-GW | 10/20/2009 | 2348196.78 | 551749.39 | 1091.68 | Grab | BP | 10.2 | | | | 0.05 | 0.026 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-117 | Unconsolidated | FWGNTAmw-117C-159-GW | 10/20/2009 | 2347994.79 | 551586.36 | 1091.67 | Grab | BP | 1.04 | | | | 0.05 | 0.026 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-118 | Unconsolidated | FWGNTAmw-118C-160-GW | 10/20/2009 | 2347608.09 | 551333.89 | 1078.86 | Grab | BP | 6.03 J | J | | | 0.05 | 0.026 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-003 | Unconsolidated | FWGLL5mw-003C-067-GW | 10/21/2009 | 2354962.47 | 554533.41 | 1124.7 | Grab | BP | 53.1 | | | | 0.05 | 0.026 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-001 | Unconsolidated | FWGLL8mw-001C-1436-GW | 10/13/2009 | 2351660 | 552609 | 1118.69 | Grab | BP | 3.91 | | | | 0.05 | 0.026 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-002 | Unconsolidated | FWGLL8mw-002C-1437-GW | 10/13/2009 | 2351010 | 552410 | 1121.67 | Grab | BP | 4.77 | | | | 0.05 | 0.026 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-003 | Unconsolidated | FWGLL8mw-003C-1438-GW | 10/13/2009 | 2351360 | 552231 | 1116.3 | Grab | BP | 1.74 | | | | 0.05 | 0.026 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-004 | Unconsolidated | FWGLL8mw-004C-1439-GW | 10/13/2009 | 2351260 | 551808 | 1112.73 | Grab | BP | 0.482 | | | | 0.05 | 0.026 | 1 |
| RVAAP-43 Load Line 10 | L10mw-006 | Unconsolidated | FWGLL10mw-006C-1454-GW | 10/14/2009 | 2355656.8 | 554997.25 | 1121.2 | Grab | BP | 4.72 | | | P | 0.05 | 0.026 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-001 | Unconsolidated | FWGLL11mw-001C-1455-GW | 10/14/2009 | 2352778.81 | 557504.98 | 1100.16 | Grab | BP | 0.324 | | | | 0.05 | 0.026 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-006 | Unconsolidated | FWGLL11mw-006C-1459-GW | 10/14/2009 | 2352521.51 | 558263.51 | 1086.5 | Grab | BP | 2.63 J | | | Z | 0.05 | 0.026 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-008 | Unconsolidated | FWGLL11mw-008C-1460-GW | 10/14/2009 | 2352388.57 | 557981.26 | 1087.74 | Grab | BP | 1.22 J | | | Z | 0.05 | 0.026 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-009 | Unconsolidated | FWGLL11mw-009C-1461-GW | 10/14/2009 | 2352577.21 | 557901.2 | 1088.28 | Grab | BP | 1.27 J | | | Z | 0.05 | 0.026 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-010 | Unconsolidated | FWGLL11mw-010C-1462-GW | 10/14/2009 | 2352038.91 | 557675.59 | 1082.68 | Grab | BP | 12.1 J | | | Z,P | 0.05 | 0.026 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-001 | Unconsolidated | FWGCBPmw-001C-097-GW | 10/21/2009 | 2367095.431 | 561616.171 | 975.8411 | Grab | BP | 19.8 | | | | 0.05 | 0.026 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-002 | Unconsolidated | FWGCBPmw-002C-098-GW | 10/21/2009 | 2367295.684 | 561865.9216 | 970.0359 | Grab | BP | 34.3 | | | | 0.05 | 0.026 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-003 | Unconsolidated | FWGCBPmw-003C-099-GW | 10/21/2009 | 2366768.739 | 561944.2018 | 974.6665 | Grab | BP | 3.38 | | | | 0.05 | 0.026 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-004 | Unconsolidated | FWGCBPmw-004C-100-GW | 10/21/2009 | 2366978.819 | 562123.8244 | 971.1285 | Grab | BP | 83.7 | | | | 0.05 | 0.026 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-005 | Unconsolidated | FWGCBPmw-005C-101-GW | 10/21/2009 | 2366919.482 | 562311.8596 | 971.5897 | Grab | BP | 34.4 J | J | | | 0.05 | 0.026 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-006 | Unconsolidated | FWGCBPmw-006C-102-GW | 10/21/2009 | 2367243.659 | 562311.9449 | 967.6448 | Grab | BP | 96.3 | | | | 0.05 | 0.026 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-007 | Unconsolidated | FWGCBPmw-007C-103-GW | 10/21/2009 | 2366512.573 | 562006.343 | 976.3736 | Grab | BP | 2.18 J | J | | | 0.05 | 0.026 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-007 | Unconsolidated | FWGASYmw-007C-1469-GW | 10/15/2009 | 2366840 | 556820 | 981.4 | Grab | BP | 0.548 J | J | | | 0.05 | 0.026 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-008 | Unconsolidated | FWGASYmw-008C-1470-GW | 10/15/2009 | 2367470 | 557086 | 976.2 | Grab | BP | 281 J | J | | | 0.05 | 0.026 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-010 | Unconsolidated | FWGASYmw-010C-1472-GW | 10/15/2009 | 2366980 | 557273 | 978.2 | Grab | BP | 21.2 | | | | 0.05 | 0.026 | 1 |
| Site-wide Background Areas | BKGmw-004 | Unconsolidated | FWGBKGmw-004C-007-GW | 10/21/2009 | 2368852.973 | 569464.763 | 965.16 | Grab | BP | 2.44 | | | | 0.05 | 0.026 | 1 |
| Site-wide Background Areas | BKGmw-005 | Unconsolidated | FWGBKGmw-005C-008-GW | 10/22/2009 | 2340835.864 | 562288.445 | 1149.443 | Grab | BP | 14.3 | | | | 0.05 | 0.026 | 1 |
| Site-wide Background Areas | BKGmw-013 | Unconsolidated | FWGBKGmw-013C-013-GW | 10/21/2009 | 2361627.394 | 558269.158 | 986.588 | Grab | BP | 1.8 | | | | 0.05 | 0.026 | 1 |
| Site-wide Background Areas | BKGmw-016 | Unconsolidated | FWGBKGmw-016C-015-GW | 10/22/2009 | 2342407.075 | 553983.501 | 1098.419 | Grab | BP | 0.975 J | J | | | 0.05 | 0.026 | 1 |
| Site-wide Background Areas | BKGmw-017 | Unconsolidated | FWGBKGmw-017C-016-GW | 10/22/2009 | 2346115.351 | 562452.044 | 1132.799 | Grab | BP | 9.73 | | | | 0.05 | 0.026 | 1 |
| Site-wide Background Areas | BKGmw-019 | Unconsolidated | FWGBKGmw-019C-018-GW | 10/22/2009 | 2349882.142 | 559864.549 | 1108.239 | Grab | BP | 23.6 | | | | 0.05 | 0.026 | 1 |
| Site-wide Background Areas | BKGmw-020 | Unconsolidated | FWGBKGmw-020C-019-GW | 10/21/2009 | 2357856.237 | 558756.241 | 1065.001 | Grab | BP | 4.82 J | J | | | 0.05 | 0.026 | 1 |
| Site-wide Background Areas | BKGmw-021 | Unconsolidated | FWGBKGmw-021C-020-GW | 10/21/2009 | 2367622.953 | 571016.748 | 972.159 | Grab | BP | 1.21 | | | | 0.05 | 0.026 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Iron | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|---------|--------|------|--------|------|-------|----|
| RVAAP-01 Ramsdell Quarry Landfill | RQLmw-009 | Sharon | FWGRQLmw-009C-1487-GW | 10/14/2009 | 2376253.654 | 566351.1994 | 964 | Grab | BP | 16.8 J | | | Z | 0.05 | 0.026 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-078 | Sharon | FWGLL1mw-078-025-GW | 10/19/2009 | 2376275.854 | 564623.871 | 995.84 | Grab | BP | 5.1 | | | | 0.05 | 0.026 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-080 | Sharon | FWGLL1mw-080-027-GW | 10/19/2009 | 2376845.072 | 562479.728 | 996.27 | Grab | BP | 124 | | | | 0.05 | 0.026 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-082 | Sharon | FWGLL1mw-082-029-GW | 10/19/2009 | 2376977.379 | 562956.86 | 1006.45 | Grab | BP | 22.5 | | | | 0.05 | 0.026 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-060 | Sharon | FWGLL2mw-060C-034-GW | 10/19/2009 | 2375978 | 558022 | 958.13 | Grab | BP | 0.574 | | | | 0.05 | 0.026 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-263 | Sharon | FWGLL2mw-263-037-GW | 10/19/2009 | 2374290.29 | 561590.92 | 1009.42 | Grab | BP | 9 | | | | 0.05 | 0.026 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-264 | Sharon | FWGLL2mw-264-038-GW | 10/19/2009 | 2374532.76 | 561173.63 | 1010.1 | Grab | BP | 4.78 | | | | 0.05 | 0.026 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-267 | Sharon | FWGLL2mw-267C-041-GW | 10/19/2009 | 2373714.17 | 561393.73 | 1012.81 | Grab | BP | 9.05 | | | | 0.05 | 0.026 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-268 | Sharon | FWGLL2mw-268-042-GW | 10/19/2009 | 2374156.4 | 560831.44 | 1015.47 | Grab | BP | 15.7 | | | | 0.05 | 0.026 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-269 | Sharon | FWGLL2mw-269-043-GW | 10/20/2009 | 2374756.74 | 559483.9 | 1009.49 | Grab | BP | 28.4 | | | | 0.05 | 0.026 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-270 | Sharon | FWGLL2mw-270-044-GW | 10/19/2009 | 2372858.94 | 562656.18 | 1009.93 | Grab | BP | 5.16 | | | | 0.05 | 0.026 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-238 | Sharon | FWGLL3mw-238C-051-GW | 10/20/2009 | 2370624.55 | 559569.39 | 1006.91 | Grab | BP | 13.3 | | | | 0.05 | 0.026 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-239 | Sharon | FWGLL3mw-239-052-GW | 10/20/2009 | 2370894.17 | 559101.84 | 1003.5 | Grab | BP | 6.87 | | | | 0.05 | 0.026 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-241 | Sharon | FWGLL3mw-241-054-GW | 10/20/2009 | 2370332.94 | 559299 | 994.65 | Grab | BP | 8.54 | | | | 0.05 | 0.026 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-242 | Sharon | FWGLL3mw-242-055-GW | 10/21/2009 | 2371993.44 | 557035.28 | 999.32 | Grab | BP | 13.1 | | | | 0.05 | 0.026 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-243 | Sharon | FWGLL3mw-243C-056-GW | 10/21/2009 | 2371532.06 | 556688.5 | 991.16 | Grab | BP | 8.37 | | | | 0.05 | 0.026 | 1 |
| RVAAP-12 Load Line 12 | L12mw-186 | Sharon | FWGLL12mw-186C-081-GW | 10/15/2009 | 2367912.39 | 559065.95 | 976.34 | Grab | BP | 2.56 | | | | 0.05 | 0.026 | 1 |
| RVAAP-12 Load Line 12 | L12mw-189 | Sharon | FWGLL12mw-189C-084-GW | 10/15/2009 | 2367945.92 | 558569.27 | 976.17 | Grab | BP | 15.2 | | | | 0.05 | 0.026 | 1 |
| RVAAP-13 Building 1200 | B12mw-011 | Sharon | FWGB12mw-011C-091-GW | 10/21/2009 | 2371420 | 565690 | 1003.76 | Grab | BP | 1.21 | | | | 0.05 | 0.026 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-001 | Sharon | FWGASYmw-001C-1463-GW | 10/14/2009 | 2366262.85 | 558406.04 | 978.4 | Grab | BP | 5.36 J | | | Z | 0.05 | 0.026 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-002 | Sharon | FWGASYmw-002C-1464-GW | 10/15/2009 | 2366170 | 557890 | 982 | Grab | BP | 2.14 | | | | 0.05 | 0.026 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-003 | Sharon | FWGASYmw-003C-1465-GW | 10/15/2009 | 2366650 | 558014 | 979.7 | Grab | BP | 9.43 | | | | 0.05 | 0.026 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-005 | Sharon | FWGASYmw-005C-1467-GW | 10/15/2009 | 2367450 | 557785 | 977.6 | Grab | BP | 7.01 | | | | 0.05 | 0.026 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-006 | Sharon | FWGASYmw-006C-1468-GW | 10/15/2009 | 2366750 | 557256 | 980.2 | Grab | BP | 50.8 | | | | 0.05 | 0.026 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-009 | Sharon | FWGASYmw-009C-1471-GW | 10/15/2009 | 2366630 | 557606 | 979.9 | Grab | BP | 4.25 J | J | | | 0.05 | 0.026 | 1 |
| Site-wide Background Areas | BKGmw-012 | Sharon | FWGBKGMw-012C-012-GW | 10/21/2009 | 2367795.226 | 563918.862 | 997.574 | Grab | BP | 2.52 | | | | 0.05 | 0.026 | 1 |
| Site-wide Background Areas | BKGmw-018 | Sharon | FWGBKGMw-018C-017-GW | 10/21/2009 | 2354993.909 | 570873.349 | 1043.06 | Grab | BP | 0.245 | | | | 0.05 | 0.026 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-001 | Homewood | FWGCBLmw-001C-093-GW | 10/21/2009 | 2343659.08 | 559405.12 | 1178.5 | Grab | BP | 0.532 J | J | | | 0.05 | 0.026 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-003 | Homewood | FWGCBLmw-003C-095-GW | 10/22/2009 | 2343967.67 | 559697.13 | 1172.22 | Grab | BP | 0.243 | | | | 0.05 | 0.026 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-004 | Homewood | FWGCBLmw-004C-096-GW | 10/22/2009 | 2343687.21 | 559950 | 1172.08 | Grab | BP | 4.32 | | | | 0.05 | 0.026 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-171 | Homewood | FWGFBQmw-171C-138-GW | 10/22/2009 | 2350072.44 | 554230.93 | 1140.49 | Grab | BP | 2.96 J | J | | | 0.05 | 0.026 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-172 | Homewood | FWGFBQmw-172C-139-GW | 10/22/2009 | 2349907.37 | 554322.17 | 1145.71 | Grab | BP | 9.58 | | | | 0.05 | 0.026 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-173 | Homewood | FWGFBQmw-173C-140-GW | 10/22/2009 | 2350449.01 | 554491.35 | 1162.43 | Grab | BP | 10 J | J | | | 0.05 | 0.026 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-174 | Homewood | FWGFBQmw-174C-141-GW | 10/22/2009 | 2350289.81 | 554142.44 | 1135.78 | Grab | BP | 0.145 B | J | F | | 0.05 | 0.026 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-175 | Homewood | FWGFBQmw-175C-142-GW | 10/22/2009 | 2350297.98 | 553989.24 | 1137.16 | Grab | BP | 4.81 J | J | | | 0.05 | 0.026 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-177 | Homewood | FWGFBQmw-177C-144-GW | 10/22/2009 | 2350112.18 | 553321.94 | 1125.73 | Grab | BP | 4.26 J | J | | | 0.05 | 0.026 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-003 | Homewood | FWGLL6mw-003C-003-GW | 10/21/2009 | 2353048.684 | 553544.3432 | 1125.3837 | Grab | BP | 32.4 J | J | | | 0.05 | 0.026 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-004 | Homewood | FWGLL6mw-004C-004-GW | 10/21/2009 | 2353368.787 | 553431.8182 | 1125.3851 | Grab | BP | 2.38 J | J | | | 0.05 | 0.026 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-001 | Homewood | FWGLL5mw-001C-065-GW | 10/21/2009 | 2354627.07 | 554321.25 | 1125 | Grab | BP | 15.8 | | | | 0.05 | 0.026 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-002 | Homewood | FWGLL5mw-002C-066-GW | 10/21/2009 | 2354573.52 | 554606 | 1125.8 | Grab | BP | 32.9 | | | | 0.05 | 0.026 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-004 | Homewood | FWGLL5mw-004C-068-GW | 10/21/2009 | 2355008.44 | 554071.73 | 1122.9 | Grab | BP | 88 | | | | 0.05 | 0.026 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-005 | Homewood | FWGLL5mw-005C-069-GW | 10/22/2009 | 2354424.02 | 554154.73 | 1126.5 | Grab | BP | 24.4 J | J | | | 0.05 | 0.026 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-006 | Homewood | FWGLL5mw-006C-070-GW | 10/21/2009 | 2354730 | 553981.82 | 1125.1 | Grab | BP | 69.7 | | | | 0.05 | 0.026 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-003 | Homewood | FWGLL7mw-003C-1432-GW | 10/12/2009 | 2352349.51 | 555414.33 | 1118.23 | Grab | BP | 19.2 J | J | | | 0.05 | 0.026 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-004 | Homewood | FWGLL7mw-004C-1433-GW | 10/12/2009 | 2352036.23 | 555583.15 | 1123.3 | Grab | BP | 22.6 J | J | | | 0.05 | 0.026 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-005 | Homewood | FWGLL8mw-005C-1440-GW | 10/13/2009 | 2351750 | 551522 | 1112.51 | Grab | BP | 19.8 | | | P | 0.05 | 0.026 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-006 | Homewood | FWGLL8mw-006C-1441-GW | 10/13/2009 | 2351480 | 551295 | 1114.33 | Grab | BP | 4.3 | | | | 0.05 | 0.026 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-001 | Homewood | FWGLL9mw-001C-1442-GW | 10/13/2009 | 2355817.04 | 556125.81 | 1134.62 | Grab | BP | 2.27 | | | | 0.05 | 0.026 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-002 | Homewood | FWGLL9mw-002C-1443-GW | 10/13/2009 | 2355907.76 | 556755.11 | 1127.3 | Grab | BP | 0.749 | | | | 0.05 | 0.026 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-003 | Homewood | FWGLL9mw-003C-1444-GW | 10/13/2009 | 2356635.21 | 556445.31 | 1135.76 | Grab | BP | 4.27 | | | | 0.05 | 0.026 | 1 |
| RVAAP-43 Load Line 10 | L10mw-001 | Homewood | FWGLL10mw-001C-1449-GW | 10/13/2009 | 2355272.22 | 555818.25 | 1130 | Grab | BP | 2.01 | | | | 0.05 | 0.026 | 1 |
| RVAAP-43 Load Line 10 | L10mw-002 | Homewood | FWGLL10mw-002C-1450-GW | 10/13/2009 | 2355712.51 | 555525.36 | 1124.4 | Grab | BP | 0.159 | | | | 0.05 | 0.026 | 1 |
| RVAAP-43 Load Line 10 | L10mw-003 | Homewood | FWGLL10mw-003C-1451-GW | 10/13/2009 | 2355387.92 | 555496.71 | 1127.4 | Grab | BP | 0.102 | | | | 0.05 | 0.026 | 1 |
| RVAAP-43 Load Line 10 | L10mw-004 | Homewood | FWGLL10mw-004C-1452-GW | 10/14/2009 | 2355440.2 | 555234.59 | 1119.6 | Grab | BP | 0.0976 | | | | 0.05 | 0.026 | 1 |
| RVAAP-43 Load Line 10 | L10mw-005 | Homewood | FWGLL10mw-005C-1453-GW | 10/14/2009 | 2355941.55 | 555382.53 | 1122.9 | Grab | BP | 1.85 | | | | 0.05 | 0.026 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Lead | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|-----------------------|-------------|-------------|-------------|-----------|-------------|--------|--------|--------|------|--------|-------|--------|----|
| RVAAP-02 Erie Burning Grounds | EBGmw-123 | Unconsolidated | FWGEBGmw-123C-125-GW | 10/19/2009 | 2380049.21 | 571747.04 | 945.59 | Grab | BP | 0.0024 | J | B | L | 0.003 | 0.0017 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-124 | Unconsolidated | FWGEBGmw-124C-126-GW | 10/19/2009 | 2380030.24 | 571618.07 | 939.02 | Grab | BP | 0.0427 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-126 | Unconsolidated | FWGEBGmw-126C-128-GW | 10/19/2009 | 2380307.31 | 572348.81 | 938.2 | Grab | BP | 0.0025 | J | B | L | 0.003 | 0.0017 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-127 | Unconsolidated | FWGEBGmw-127C-129-GW | 10/19/2009 | 2380172.16 | 571083.61 | 940.21 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-128 | Unconsolidated | FWGEBGmw-128C-130-GW | 10/19/2009 | 2379892.79 | 570970.32 | 942.47 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-129 | Unconsolidated | FWGEBGmw-129C-131-GW | 10/19/2009 | 2379240.52 | 572035.68 | 941.97 | Grab | BP | 0.0124 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-130 | Unconsolidated | FWGEBGmw-130C-132-GW | 10/19/2009 | 2379220.69 | 570695.61 | 941.18 | Grab | BP | 0.0017 | J | B | L | 0.003 | 0.0017 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-104 | Unconsolidated | FWGDA2mw-104C-115-GW | 10/21/2009 | 2354773.248 | 561125.7023 | 1070.8244 | Grab | BP | 0.0026 | J | B | L | 0.003 | 0.0017 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-107 | Unconsolidated | FWGDA2mw-107C-118-GW | 10/21/2009 | 2354923.231 | 560482.7171 | 1039.1815 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-108 | Unconsolidated | FWGDA2mw-108C-119-GW | 10/21/2009 | 2355602.421 | 560184.5864 | 1029.9156 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-109 | Unconsolidated | FWGDA2mw-109C-120-GW | 10/21/2009 | 2354796.85 | 559897.6695 | 1068.6588 | Grab | BP | 0.0052 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-110 | Unconsolidated | FWGDA2mw-110C-121-GW | 10/21/2009 | 2355195.202 | 559922.3928 | 1061.3878 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-112 | Unconsolidated | FWGDA2mw-112C-123-GW | 10/21/2009 | 2355019.568 | 560374.5046 | 1034.8724 | Grab | BP | 0.0333 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-113 | Unconsolidated | FWGDA2mw-113C-124-GW | 10/21/2009 | 2355150.554 | 560392.8898 | 1034.5126 | Grab | BP | 0.0045 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-1 | Unconsolidated | FWGDETMw-001-111-GW | 10/21/2009 | 2354959.47 | 560820.03 | 1063.97 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-2 | Unconsolidated | FWGDETMw-002C-115-GW | 10/21/2009 | 2355360.33 | 560664.71 | 1062.69 | Grab | BP | 0.002 | J | B | L | 0.003 | 0.0017 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-3 | Unconsolidated | FWGDETMw-003C-1488-GW | 10/14/2009 | 2355204.94 | 560456.1 | 1035.56 | Grab | BP | 0.0024 | J | B | L | 0.003 | 0.0017 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-006 | Unconsolidated | FWGWBGmw-006C-171-GW | 10/20/2009 | 2359087.79 | 563008.87 | 1010.38 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-007 | Unconsolidated | FWGWBGmw-007C-172-GW | 10/20/2009 | 2360420.44 | 562479.87 | 995.33 | Grab | BP | 0.0393 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-009 | Unconsolidated | FWGWBGmw-009C-174-GW | 10/20/2009 | 2357159.2 | 561603.54 | 1042 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-010 | Unconsolidated | FWGWBGmw-010C-175-GW | 10/20/2009 | 2356051.96 | 562893.2 | 1069.85 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-011 | Unconsolidated | FWGWBGmw-011C-176-GW | 10/20/2009 | 2356187.29 | 562609.18 | 1072.38 | Grab | BP | 0.0073 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-012 | Unconsolidated | FWGWBGmw-012C-177-GW | 10/20/2009 | 2354810.65 | 562240.9 | 1079.11 | Grab | BP | 0.0231 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-013 | Unconsolidated | FWGWBGmw-013C-178-GW | 10/20/2009 | 2355223.25 | 561518.27 | 1071.7 | Grab | BP | 0.0068 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-014 | Unconsolidated | FWGWBGmw-014C-179-GW | 10/20/2009 | 2360439.22 | 562061.26 | 996.78 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-015 | Unconsolidated | FWGWBGmw-015C-180-GW | 10/20/2009 | 2359182.41 | 562340.12 | 1011.6 | Grab | BP | 0.0022 | J | B | L | 0.003 | 0.0017 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-016 | Unconsolidated | FWGWBGmw-016C-181-GW | 10/20/2009 | 2360645.88 | 562709.13 | 997.03 | Grab | BP | 0.007 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-017 | Unconsolidated | FWGWBGmw-017C-182-GW | 10/20/2009 | 2359603.84 | 562913.24 | 1006.62 | Grab | BP | 0.0257 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-064 | Unconsolidated | FWGLL1mw-064-022-GW | 10/19/2009 | 2380286.973 | 563118.7363 | 932 | Grab | BP | 0.0051 | | | P | 0.003 | 0.0017 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-065 | Unconsolidated | FWGLL1mw-065-023-GW | 10/19/2009 | 2380452.003 | 560916.9225 | 940 | Grab | BP | 0.0955 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-193 | Unconsolidated | FWGLL4mw-193-057-GW | 10/21/2009 | 2364236.52 | 554960.27 | 982.92 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-194 | Unconsolidated | FWGLL4mw-194C-058-GW | 10/16/2009 | 2364584.86 | 555089.22 | 983.76 | Grab | BP | 0.0092 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-196 | Unconsolidated | FWGLL4mw-196C-060-GW | 10/16/2009 | 2365297.1 | 555213.52 | 984.55 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-197 | Unconsolidated | FWGLL4mw-197C-061-GW | 10/16/2009 | 2365384.91 | 555397.05 | 985.46 | Grab | BP | 0.0019 | J | B | L | 0.003 | 0.0017 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-198 | Unconsolidated | FWGLL4mw-198C-062-GW | 10/21/2009 | 2364991.19 | 555442.04 | 983.42 | Grab | BP | 0.0115 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-199 | Unconsolidated | FWGLL4mw-199C-063-GW | 10/16/2009 | 2365420.78 | 554621.62 | 977.28 | Grab | BP | 0.0038 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-200 | Unconsolidated | FWGLL4mw-200-064-GW | 10/21/2009 | 2365903.05 | 554580.15 | 987.93 | Grab | BP | 0.0017 | U | | Cb | 0.003 | 0.0017 | 1 |
| RVAAP-12 Load Line 12 | L12mw-107 | Unconsolidated | FWGLL12mw-107C-072-GW | 10/16/2009 | 2368595.67 | 556759.02 | 978.03 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-12 Load Line 12 | L12mw-128 | Unconsolidated | FWGLL12mw-128C-074-GW | 10/16/2009 | 2368293.2 | 557371.54 | 976.21 | Grab | BP | 0.025 | | | Pj,P | 0.003 | 0.0017 | 1 |
| RVAAP-12 Load Line 12 | L12mw-153 | Unconsolidated | FWGLL12mw-153C-075-GW | 10/16/2009 | 2368138.87 | 557823.23 | 975.34 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-12 Load Line 12 | L12mw-154 | Unconsolidated | FWGLL12mw-154C-076-GW | 10/16/2009 | 2368183.88 | 557754.56 | 977 | Grab | BP | 0.0059 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-12 Load Line 12 | L12mw-182 | Unconsolidated | FWGLL12mw-182C-077-GW | 10/16/2009 | 2368853.2 | 555890.35 | 982.2 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-12 Load Line 12 | L12mw-188 | Unconsolidated | FWGLL12mw-188C-083-GW | 10/15/2009 | 2367908.82 | 558132.59 | 978.46 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-12 Load Line 12 | L12mw-242 | Unconsolidated | FWGLL12mw-242C-085-GW | 10/15/2009 | 2368545.29 | 558020.51 | 980 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-12 Load Line 12 | L12mw-243 | Unconsolidated | FWGLL12mw-243C-086-GW | 10/16/2009 | 2368190.04 | 557376.32 | 978 | Grab | BP | 0.0149 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-12 Load Line 12 | L12mw-244 | Unconsolidated | FWGLL12mw-244C-087-GW | 10/16/2009 | 2368751.42 | 557377.17 | 980 | Grab | BP | 0.0589 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-12 Load Line 12 | L12mw-245 | Unconsolidated | FWGLL12mw-245C-088-GW | 10/16/2009 | 2368370.74 | 557044.55 | 978 | Grab | BP | 0.0093 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-12 Load Line 12 | L12mw-246 | Unconsolidated | FWGLL12mw-246C-089-GW | 10/16/2009 | 2369432.17 | 556658.89 | 982.96 | Grab | BP | 0.0031 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-166 | Unconsolidated | FWGFBQmw-166C-133-GW | 10/22/2009 | 2349584.33 | 553123.86 | 1104.87 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-167 | Unconsolidated | FWGFBQmw-167C-134-GW | 10/22/2009 | 2349675.45 | 553556.12 | 1112.05 | Grab | BP | 0.0116 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-176 | Unconsolidated | FWGFBQmw-176C-143-GW | 10/22/2009 | 2350219.45 | 553273.33 | 1129.57 | Grab | BP | 0.0176 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-024 | Unconsolidated | FWGLNWmw-024C-145-GW | 10/20/2009 | 2358400 | 564828 | 1035.3 | Grab | BP | 0.0171 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-025 | Unconsolidated | FWGLNWmw-025C-146-GW | 10/20/2009 | 2358420 | 565070 | 1027.2 | Grab | BP | 0.0017 | U | | Cb | 0.003 | 0.0017 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-026 | Unconsolidated | FWGLNWmw-026C-147-GW | 10/20/2009 | 2358950 | 564656 | 1025 | Grab | BP | 0.0017 | U | | Cb | 0.003 | 0.0017 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Lead | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|--------|--------|------|--------|-------|--------|----|
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-027 | Unconsolidated | FWGLNWmw-027C-148-GW | 10/20/2009 | 2358630 | 564519 | 1024.4 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-001 | Unconsolidated | FWGMBSmw-001C-183-GW | 10/20/2009 | 2345323 | 550759.5 | 1079.68 | Grab | BP | 0.0017 | J | B | L | 0.003 | 0.0017 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-002 | Unconsolidated | FWGMBSmw-002C-184-GW | 10/20/2009 | 2345322.3 | 550886.2 | 1080.5 | Grab | BP | 0.003 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-003 | Unconsolidated | FWGMBSmw-003C-185-GW | 10/20/2009 | 2345172.4 | 550922.8 | 1082.45 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-004 | Unconsolidated | FWGMBSmw-004C-186-GW | 10/20/2009 | 2345134.2 | 550767.9 | 1079.55 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-005 | Unconsolidated | FWGMBSmw-005C-187-GW | 10/20/2009 | 2345354.1 | 550800.7 | 1080.5 | Grab | BP | 0.0037 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-006 | Unconsolidated | FWGMBSmw-006C-188-GW | 10/20/2009 | 2345282.3 | 550726.1 | 1080.29 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-001 | Unconsolidated | FWGCPmw-001C-105-GW | 10/21/2009 | 2368948.852 | 560440.9741 | 975.2594 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-004 | Unconsolidated | FWGCPmw-004C-108-GW | 10/21/2009 | 2368674.21 | 561843.2791 | 981.198 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-006 | Unconsolidated | FWGCPmw-006C-110-GW | 10/21/2009 | 2367727.191 | 562830.039 | 965.13 | Grab | BP | 0.0347 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-001 | Unconsolidated | FWGLL6mw-001C-001-GW | 10/21/2009 | 2353153.227 | 554214.8365 | 1124.1607 | Grab | B | 0.0422 | J | J | | 0.003 | 0.0017 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-002 | Unconsolidated | FWGLL6mw-002C-002-GW | 10/21/2009 | 2353820.091 | 553589.8815 | 1129.3631 | Grab | B | 0.0622 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-107 | Unconsolidated | FWGNTAmw-107C-149-GW | 10/20/2009 | 2345432.73 | 551699.09 | 1077.65 | Grab | BP | 0.0079 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-108 | Unconsolidated | FWGNTAmw-108C-150-GW | 10/20/2009 | 2345782.17 | 551917.92 | 1083.22 | Grab | BP | 0.0058 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-109 | Unconsolidated | FWGNTAmw-109C-151-GW | 10/20/2009 | 2345996.99 | 551291.19 | 1076.89 | Grab | BP | 0.0019 | J | B | L | 0.003 | 0.0017 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-110 | Unconsolidated | FWGNTAmw-110C-152-GW | 10/20/2009 | 2346436.82 | 551350.8 | 1080.03 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-111 | Unconsolidated | FWGNTAmw-111C-153-GW | 10/20/2009 | 2346640.16 | 551538.99 | 1078.07 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-112 | Unconsolidated | FWGNTAmw-112C-154-GW | 10/20/2009 | 2346889.01 | 551708.76 | 1075.36 | Grab | BP | 0.0232 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-113 | Unconsolidated | FWGNTAmw-113C-155-GW | 10/20/2009 | 2347081.15 | 551487.86 | 1072.61 | Grab | BP | 0.0623 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-115 | Unconsolidated | FWGNTAmw-115C-157-GW | 10/20/2009 | 2347582.94 | 551793.39 | 1086.91 | Grab | BP | 0.003 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-116 | Unconsolidated | FWGNTAmw-116C-158-GW | 10/20/2009 | 2348196.78 | 551749.39 | 1091.68 | Grab | BP | 0.0054 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-117 | Unconsolidated | FWGNTAmw-117C-159-GW | 10/20/2009 | 2347994.79 | 551586.36 | 1091.67 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-118 | Unconsolidated | FWGNTAmw-118C-160-GW | 10/20/2009 | 2347608.09 | 551333.89 | 1078.86 | Grab | BP | 0.0019 | J | B | L | 0.003 | 0.0017 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-003 | Unconsolidated | FWGLL5mw-003C-067-GW | 10/21/2009 | 2354962.47 | 554533.41 | 1124.7 | Grab | BP | 0.0377 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-001 | Unconsolidated | FWGLL8mw-001C-1436-GW | 10/13/2009 | 2351660 | 552609 | 1118.69 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-002 | Unconsolidated | FWGLL8mw-002C-1437-GW | 10/13/2009 | 2351010 | 552410 | 1121.67 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-003 | Unconsolidated | FWGLL8mw-003C-1438-GW | 10/13/2009 | 2351360 | 552231 | 1116.3 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-004 | Unconsolidated | FWGLL8mw-004C-1439-GW | 10/13/2009 | 2351260 | 551808 | 1112.73 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-43 Load Line 10 | L10mw-006 | Unconsolidated | FWGLL10mw-006C-1454-GW | 10/14/2009 | 2355656.8 | 554997.25 | 1121.2 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-001 | Unconsolidated | FWGLL11mw-001C-1455-GW | 10/14/2009 | 2352778.81 | 557504.98 | 1100.16 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-006 | Unconsolidated | FWGLL11mw-006C-1459-GW | 10/14/2009 | 2352521.51 | 558263.51 | 1086.5 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-008 | Unconsolidated | FWGLL11mw-008C-1460-GW | 10/14/2009 | 2352388.57 | 557981.26 | 1087.74 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-009 | Unconsolidated | FWGLL11mw-009C-1461-GW | 10/14/2009 | 2352577.21 | 557901.2 | 1088.28 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-010 | Unconsolidated | FWGLL11mw-010C-1462-GW | 10/14/2009 | 2352038.91 | 557675.59 | 1082.68 | Grab | BP | 0.0026 | J | B | L,P | 0.003 | 0.0017 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-001 | Unconsolidated | FWGCBPmw-001C-097-GW | 10/21/2009 | 2367095.431 | 561616.171 | 975.8411 | Grab | BP | 0.0057 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-002 | Unconsolidated | FWGCBPmw-002C-098-GW | 10/21/2009 | 2367295.684 | 561865.9216 | 970.0359 | Grab | BP | 0.011 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-003 | Unconsolidated | FWGCBPmw-003C-099-GW | 10/21/2009 | 2366768.739 | 561944.2018 | 974.6665 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-004 | Unconsolidated | FWGCBPmw-004C-100-GW | 10/21/2009 | 2366978.819 | 562123.8244 | 971.1285 | Grab | BP | 0.027 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-005 | Unconsolidated | FWGCBPmw-005C-101-GW | 10/21/2009 | 2366919.482 | 562311.8596 | 971.5897 | Grab | BP | 0.0119 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-006 | Unconsolidated | FWGCBPmw-006C-102-GW | 10/21/2009 | 2367243.659 | 562311.9449 | 967.6448 | Grab | BP | 0.046 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-007 | Unconsolidated | FWGCBPmw-007C-103-GW | 10/21/2009 | 2366512.573 | 562006.343 | 976.3736 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-007 | Unconsolidated | FWGASYmw-007C-1469-GW | 10/15/2009 | 2366840 | 556820 | 981.4 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-008 | Unconsolidated | FWGASYmw-008C-1470-GW | 10/15/2009 | 2367470 | 557086 | 976.2 | Grab | BP | 0.108 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-010 | Unconsolidated | FWGASYmw-010C-1472-GW | 10/15/2009 | 2366980 | 557273 | 978.2 | Grab | BP | 0.0072 | | | | 0.003 | 0.0017 | 1 |
| Site-wide Background Areas | BKGmw-004 | Unconsolidated | FWGBKGmw-004C-007-GW | 10/21/2009 | 2368852.973 | 569464.763 | 965.16 | Grab | BP | 0.0026 | J | B | L | 0.003 | 0.0017 | 1 |
| Site-wide Background Areas | BKGmw-005 | Unconsolidated | FWGBKGmw-005C-008-GW | 10/22/2009 | 2340835.864 | 562288.445 | 1149.443 | Grab | BP | 0.0123 | | | | 0.003 | 0.0017 | 1 |
| Site-wide Background Areas | BKGmw-013 | Unconsolidated | FWGBKGmw-013C-013-GW | 10/21/2009 | 2361627.394 | 558269.158 | 986.588 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| Site-wide Background Areas | BKGmw-016 | Unconsolidated | FWGBKGmw-016C-015-GW | 10/22/2009 | 2342407.075 | 553983.501 | 1098.419 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| Site-wide Background Areas | BKGmw-017 | Unconsolidated | FWGBKGmw-017C-016-GW | 10/22/2009 | 2346115.351 | 562452.044 | 1132.799 | Grab | BP | 0.0036 | | | | 0.003 | 0.0017 | 1 |
| Site-wide Background Areas | BKGmw-019 | Unconsolidated | FWGBKGmw-019C-018-GW | 10/22/2009 | 2349882.142 | 559864.549 | 1108.239 | Grab | BP | 0.0078 | | | | 0.003 | 0.0017 | 1 |
| Site-wide Background Areas | BKGmw-020 | Unconsolidated | FWGBKGmw-020C-019-GW | 10/21/2009 | 2357856.237 | 558756.241 | 1065.001 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |
| Site-wide Background Areas | BKGmw-021 | Unconsolidated | FWGBKGmw-021C-020-GW | 10/21/2009 | 2367622.953 | 571016.748 | 972.159 | Grab | BP | 0.0017 | U | U | | 0.003 | 0.0017 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Lead | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|------------|--------|------|--------|-------|--------|----|
| RVAAP-01 Ramsdell Quarry Landfill | RQLmw-009 | Sharon | FWGRQLmw-009C-1487-GW | 10/14/2009 | 2376253.654 | 566351.1994 | 964 | Grab | BP | 0.0042 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-078 | Sharon | FWGLL1mw-078-025-GW | 10/19/2009 | 2376275.854 | 564623.871 | 995.84 | Grab | BP | 0.0061 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-080 | Sharon | FWGLL1mw-080-027-GW | 10/19/2009 | 2376845.072 | 562479.728 | 996.27 | Grab | BP | 0.104 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-082 | Sharon | FWGLL1mw-082-029-GW | 10/19/2009 | 2376977.379 | 562956.86 | 1006.45 | Grab | BP | 0.0237 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-060 | Sharon | FWGLL2mw-060C-034-GW | 10/19/2009 | 2375978 | 558022 | 958.13 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-263 | Sharon | FWGLL2mw-263-037-GW | 10/19/2009 | 2374290.29 | 561590.92 | 1009.42 | Grab | BP | 0.0017 J | | B | L | 0.003 | 0.0017 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-264 | Sharon | FWGLL2mw-264-038-GW | 10/19/2009 | 2374532.76 | 561173.63 | 1010.1 | Grab | BP | 0.004 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-267 | Sharon | FWGLL2mw-267C-041-GW | 10/19/2009 | 2373714.17 | 561393.73 | 1012.81 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-268 | Sharon | FWGLL2mw-268-042-GW | 10/19/2009 | 2374156.4 | 560831.44 | 1015.47 | Grab | BP | 0.0044 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-269 | Sharon | FWGLL2mw-269-043-GW | 10/20/2009 | 2374756.74 | 559483.9 | 1009.49 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-270 | Sharon | FWGLL2mw-270-044-GW | 10/19/2009 | 2372858.94 | 562656.18 | 1009.93 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-238 | Sharon | FWGLL3mw-238C-051-GW | 10/20/2009 | 2370624.55 | 559569.39 | 1006.91 | Grab | BP | 0.0056 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-239 | Sharon | FWGLL3mw-239-052-GW | 10/20/2009 | 2370894.17 | 559101.84 | 1003.5 | Grab | BP | 0.0018 J | | B | L | 0.003 | 0.0017 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-241 | Sharon | FWGLL3mw-241-054-GW | 10/20/2009 | 2370332.94 | 559299 | 994.65 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-242 | Sharon | FWGLL3mw-242-055-GW | 10/21/2009 | 2371993.44 | 557035.28 | 999.32 | Grab | BP | 0.0078 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-243 | Sharon | FWGLL3mw-243C-056-GW | 10/21/2009 | 2371532.06 | 556688.5 | 991.16 | Grab | BP | 0.0017 U | | | Cb | 0.003 | 0.0017 | 1 |
| RVAAP-12 Load Line 12 | L12mw-186 | Sharon | FWGLL12mw-186C-081-GW | 10/15/2009 | 2367912.39 | 559065.95 | 976.34 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |
| RVAAP-12 Load Line 12 | L12mw-189 | Sharon | FWGLL12mw-189C-084-GW | 10/15/2009 | 2367945.92 | 558569.27 | 976.17 | Grab | BP | 0.004 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-13 Building 1200 | B12mw-011 | Sharon | FWGB12mw-011C-091-GW | 10/21/2009 | 2371420 | 565690 | 1003.76 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-001 | Sharon | FWGASYmw-001C-1463-GW | 10/14/2009 | 2366262.85 | 558406.04 | 978.4 | Grab | BP | 0.0027 J | | B | L | 0.003 | 0.0017 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-002 | Sharon | FWGASYmw-002C-1464-GW | 10/15/2009 | 2366170 | 557890 | 982 | Grab | BP | 0.0019 J | | B | L | 0.003 | 0.0017 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-003 | Sharon | FWGASYmw-003C-1465-GW | 10/15/2009 | 2366650 | 558014 | 979.7 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-005 | Sharon | FWGASYmw-005C-1467-GW | 10/15/2009 | 2367450 | 557785 | 977.6 | Grab | BP | 0.0035 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-006 | Sharon | FWGASYmw-006C-1468-GW | 10/15/2009 | 2366750 | 557256 | 980.2 | Grab | BP | 0.0104 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-009 | Sharon | FWGASYmw-009C-1471-GW | 10/15/2009 | 2366630 | 557606 | 979.9 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |
| Site-wide Background Areas | BKGmw-012 | Sharon | FWGBKGMw-012C-012-GW | 10/21/2009 | 2367795.226 | 563918.862 | 997.574 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |
| Site-wide Background Areas | BKGmw-018 | Sharon | FWGBKGMw-018C-017-GW | 10/21/2009 | 2354993.909 | 570873.349 | 1043.06 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-001 | Homewood | FWGCBLmw-001C-093-GW | 10/21/2009 | 2343659.08 | 559405.12 | 1178.5 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-003 | Homewood | FWGCBLmw-003C-095-GW | 10/22/2009 | 2343967.67 | 559697.13 | 1172.22 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-004 | Homewood | FWGCBLmw-004C-096-GW | 10/22/2009 | 2343687.21 | 559950 | 1172.08 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-171 | Homewood | FWGFBQmw-171C-138-GW | 10/22/2009 | 2350072.44 | 554230.93 | 1140.49 | Grab | BP | 0.0025 J | | B | L | 0.003 | 0.0017 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-172 | Homewood | FWGFBQmw-172C-139-GW | 10/22/2009 | 2349907.37 | 554322.17 | 1145.71 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-173 | Homewood | FWGFBQmw-173C-140-GW | 10/22/2009 | 2350449.01 | 554491.35 | 1162.43 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-174 | Homewood | FWGFBQmw-174C-141-GW | 10/22/2009 | 2350289.81 | 554142.44 | 1135.78 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-175 | Homewood | FWGFBQmw-175C-142-GW | 10/22/2009 | 2350297.98 | 553989.24 | 1137.16 | Grab | BP | 0.0017 UJB | | BJ | Cb,F,L | 0.003 | 0.0017 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-177 | Homewood | FWGFBQmw-177C-144-GW | 10/22/2009 | 2350112.18 | 553321.94 | 1125.73 | Grab | BP | 0.0017 UJB | | BJ | Cb,F,L | 0.003 | 0.0017 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-003 | Homewood | FWGLL6mw-003C-003-GW | 10/21/2009 | 2353048.684 | 553544.3432 | 1125.3837 | Grab | BP | 0.0113 J | | J | | 0.003 | 0.0017 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-004 | Homewood | FWGLL6mw-004C-004-GW | 10/21/2009 | 2353368.787 | 553431.8182 | 1125.3851 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-001 | Homewood | FWGLL5mw-001C-065-GW | 10/21/2009 | 2354627.07 | 554321.25 | 1125 | Grab | BP | 0.0053 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-002 | Homewood | FWGLL5mw-002C-066-GW | 10/21/2009 | 2354573.52 | 554606 | 1125.8 | Grab | BP | 0.017 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-004 | Homewood | FWGLL5mw-004C-068-GW | 10/21/2009 | 2355008.44 | 554071.73 | 1122.9 | Grab | BP | 0.0464 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-005 | Homewood | FWGLL5mw-005C-069-GW | 10/22/2009 | 2354424.02 | 554154.73 | 1126.5 | Grab | BP | 0.0017 UB | | J | Cb,F | 0.003 | 0.0017 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-006 | Homewood | FWGLL5mw-006C-070-GW | 10/21/2009 | 2354730 | 553981.82 | 1125.1 | Grab | BP | 0.0333 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-003 | Homewood | FWGLL7mw-003C-1432-GW | 10/12/2009 | 2352349.51 | 555414.33 | 1118.23 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-004 | Homewood | FWGLL7mw-004C-1433-GW | 10/12/2009 | 2352036.23 | 555583.15 | 1123.3 | Grab | BP | 0.0019 J | | B | L | 0.003 | 0.0017 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-005 | Homewood | FWGLL8mw-005C-1440-GW | 10/13/2009 | 2351750 | 551522 | 1112.51 | Grab | BP | 0.0064 | | | P | 0.003 | 0.0017 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-006 | Homewood | FWGLL8mw-006C-1441-GW | 10/13/2009 | 2351480 | 551295 | 1114.33 | Grab | BP | 0.0062 | | | | 0.003 | 0.0017 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-001 | Homewood | FWGLL9mw-001C-1442-GW | 10/13/2009 | 2355817.04 | 556125.81 | 1134.62 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-002 | Homewood | FWGLL9mw-002C-1443-GW | 10/13/2009 | 2355907.76 | 556755.11 | 1127.3 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-003 | Homewood | FWGLL9mw-003C-1444-GW | 10/13/2009 | 2356635.21 | 556445.31 | 1135.76 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |
| RVAAP-43 Load Line 10 | L10mw-001 | Homewood | FWGLL10mw-001C-1449-GW | 10/13/2009 | 2355272.22 | 555818.25 | 1130 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |
| RVAAP-43 Load Line 10 | L10mw-002 | Homewood | FWGLL10mw-002C-1450-GW | 10/13/2009 | 2355712.51 | 555525.36 | 1124.4 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |
| RVAAP-43 Load Line 10 | L10mw-003 | Homewood | FWGLL10mw-003C-1451-GW | 10/13/2009 | 2355387.92 | 555496.71 | 1127.4 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |
| RVAAP-43 Load Line 10 | L10mw-004 | Homewood | FWGLL10mw-004C-1452-GW | 10/14/2009 | 2355440.2 | 555234.59 | 1119.6 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |
| RVAAP-43 Load Line 10 | L10mw-005 | Homewood | FWGLL10mw-005C-1453-GW | 10/14/2009 | 2355941.55 | 555382.53 | 1122.9 | Grab | BP | 0.0017 U | | U | | 0.003 | 0.0017 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Magnesium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|-----------------------|-------------|-------------|-------------|-----------|-------------|--------|-----------|--------|------|--------|----|-------|----|
| RVAAP-02 Erie Burning Grounds | EBGmw-123 | Unconsolidated | FWGEBGmw-123C-125-GW | 10/19/2009 | 2380049.21 | 571747.04 | 945.59 | Grab | BP | 18 | | | | 1 | 0.122 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-124 | Unconsolidated | FWGEBGmw-124C-126-GW | 10/19/2009 | 2380030.24 | 571618.07 | 939.02 | Grab | BP | 33.6 | | | | 1 | 0.122 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-126 | Unconsolidated | FWGEBGmw-126C-128-GW | 10/19/2009 | 2380307.31 | 572348.81 | 938.2 | Grab | BP | 16.7 | | | | 1 | 0.122 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-127 | Unconsolidated | FWGEBGmw-127C-129-GW | 10/19/2009 | 2380172.16 | 571083.61 | 940.21 | Grab | BP | 17.4 | | | | 1 | 0.122 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-128 | Unconsolidated | FWGEBGmw-128C-130-GW | 10/19/2009 | 2379892.79 | 570970.32 | 942.47 | Grab | BP | 10.1 | | | | 1 | 0.122 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-129 | Unconsolidated | FWGEBGmw-129C-131-GW | 10/19/2009 | 2379240.52 | 572035.68 | 941.97 | Grab | BP | 14.2 | | | | 1 | 0.122 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-130 | Unconsolidated | FWGEBGmw-130C-132-GW | 10/19/2009 | 2379220.69 | 570695.61 | 941.18 | Grab | BP | 15.8 | | | | 1 | 0.122 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-104 | Unconsolidated | FWGDA2mw-104C-115-GW | 10/21/2009 | 2354773.248 | 561125.7023 | 1070.8244 | Grab | BP | 13 | | | | 1 | 0.122 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-107 | Unconsolidated | FWGDA2mw-107C-118-GW | 10/21/2009 | 2354923.231 | 560482.7171 | 1039.1815 | Grab | BP | 25.8 | | | | 1 | 0.122 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-108 | Unconsolidated | FWGDA2mw-108C-119-GW | 10/21/2009 | 2355602.421 | 560184.5864 | 1029.9156 | Grab | BP | 35.1 | | | | 1 | 0.122 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-109 | Unconsolidated | FWGDA2mw-109C-120-GW | 10/21/2009 | 2354796.85 | 559897.6695 | 1068.6588 | Grab | BP | 39 | | | | 1 | 0.122 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-110 | Unconsolidated | FWGDA2mw-110C-121-GW | 10/21/2009 | 2355195.202 | 559922.3928 | 1061.3878 | Grab | BP | 15.9 | | | | 1 | 0.122 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-112 | Unconsolidated | FWGDA2mw-112C-123-GW | 10/21/2009 | 2355019.568 | 560374.5046 | 1034.8724 | Grab | BP | 30.2 | | | | 1 | 0.122 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-113 | Unconsolidated | FWGDA2mw-113C-124-GW | 10/21/2009 | 2355150.554 | 560392.8898 | 1034.5126 | Grab | BP | 26.8 | | | | 1 | 0.122 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-1 | Unconsolidated | FWGDETMw-001-111-GW | 10/21/2009 | 2354959.47 | 560820.03 | 1063.97 | Grab | BP | 30.5 | | | | 1 | 0.122 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-2 | Unconsolidated | FWGDETMw-002C-115-GW | 10/21/2009 | 2355360.33 | 560664.71 | 1062.69 | Grab | BP | 30.5 | | | | 1 | 0.122 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-3 | Unconsolidated | FWGDETMw-003C-1488-GW | 10/14/2009 | 2355204.94 | 560456.1 | 1035.56 | Grab | BP | 32.5 | | | | 1 | 0.122 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-006 | Unconsolidated | FWGWBGmw-006C-171-GW | 10/20/2009 | 2359087.79 | 563008.87 | 1010.38 | Grab | BP | 23 | | | | 1 | 0.122 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-007 | Unconsolidated | FWGWBGmw-007C-172-GW | 10/20/2009 | 2360420.44 | 562479.87 | 995.33 | Grab | BP | 28.2 | | | | 1 | 0.122 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-009 | Unconsolidated | FWGWBGmw-009C-174-GW | 10/20/2009 | 2357159.2 | 561603.54 | 1042 | Grab | BP | 17.1 | | | | 1 | 0.122 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-010 | Unconsolidated | FWGWBGmw-010C-175-GW | 10/20/2009 | 2356051.96 | 562893.2 | 1069.85 | Grab | BP | 31.4 | | | | 1 | 0.122 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-011 | Unconsolidated | FWGWBGmw-011C-176-GW | 10/20/2009 | 2356187.29 | 562609.18 | 1072.38 | Grab | BP | 18.7 | | | | 1 | 0.122 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-012 | Unconsolidated | FWGWBGmw-012C-177-GW | 10/20/2009 | 2354810.65 | 562240.9 | 1079.11 | Grab | BP | 28.5 | | | | 1 | 0.122 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-013 | Unconsolidated | FWGWBGmw-013C-178-GW | 10/20/2009 | 2355223.25 | 561518.27 | 1071.7 | Grab | BP | 14.5 | | | | 1 | 0.122 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-014 | Unconsolidated | FWGWBGmw-014C-179-GW | 10/20/2009 | 2360439.22 | 562061.26 | 996.78 | Grab | BP | 17.7 | | | | 1 | 0.122 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-015 | Unconsolidated | FWGWBGmw-015C-180-GW | 10/20/2009 | 2359182.41 | 562340.12 | 1011.6 | Grab | BP | 24.2 | | | | 1 | 0.122 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-016 | Unconsolidated | FWGWBGmw-016C-181-GW | 10/20/2009 | 2360645.88 | 562709.13 | 997.03 | Grab | BP | 20.5 | | | | 1 | 0.122 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-017 | Unconsolidated | FWGWBGmw-017C-182-GW | 10/20/2009 | 2359603.84 | 562913.24 | 1006.62 | Grab | BP | 25.2 | | | | 1 | 0.122 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-064 | Unconsolidated | FWGLL1mw-064-022-GW | 10/19/2009 | 2380286.973 | 563118.7363 | 932 | Grab | BP | 10.9 | | | | 1 | 0.122 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-065 | Unconsolidated | FWGLL1mw-065-023-GW | 10/19/2009 | 2380452.003 | 560916.9225 | 940 | Grab | BP | 47.8 | | | | 1 | 0.122 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-193 | Unconsolidated | FWGLL4mw-193-057-GW | 10/21/2009 | 2364236.52 | 554960.27 | 982.92 | Grab | BP | 35 | | | | 1 | 0.122 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-194 | Unconsolidated | FWGLL4mw-194C-058-GW | 10/16/2009 | 2364584.86 | 555089.22 | 983.76 | Grab | BP | 34.5 | | | | 1 | 0.122 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-196 | Unconsolidated | FWGLL4mw-196C-060-GW | 10/16/2009 | 2365297.1 | 555213.52 | 984.55 | Grab | BP | 18 | | | | 1 | 0.122 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-197 | Unconsolidated | FWGLL4mw-197C-061-GW | 10/16/2009 | 2365384.91 | 555397.05 | 985.46 | Grab | BP | 17.9 | | | | 1 | 0.122 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-198 | Unconsolidated | FWGLL4mw-198C-062-GW | 10/21/2009 | 2364991.19 | 555442.04 | 983.42 | Grab | BP | 20.4 | | | | 1 | 0.122 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-199 | Unconsolidated | FWGLL4mw-199C-063-GW | 10/16/2009 | 2365420.78 | 554621.62 | 977.28 | Grab | BP | 24.8 | | | | 1 | 0.122 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-200 | Unconsolidated | FWGLL4mw-200-064-GW | 10/21/2009 | 2365903.05 | 554580.15 | 987.93 | Grab | BP | 50.2 | | | | 1 | 0.122 | 1 |
| RVAAP-12 Load Line 12 | L12mw-107 | Unconsolidated | FWGLL12mw-107C-072-GW | 10/16/2009 | 2368595.67 | 556759.02 | 978.03 | Grab | BP | 73.2 | | | | 1 | 0.122 | 1 |
| RVAAP-12 Load Line 12 | L12mw-128 | Unconsolidated | FWGLL12mw-128C-074-GW | 10/16/2009 | 2368293.2 | 557371.54 | 976.21 | Grab | BP | 125 | | | | 1 | 0.122 | 1 |
| RVAAP-12 Load Line 12 | L12mw-153 | Unconsolidated | FWGLL12mw-153C-075-GW | 10/16/2009 | 2368138.87 | 557823.23 | 975.34 | Grab | BP | 82.1 | | | | 1 | 0.122 | 1 |
| RVAAP-12 Load Line 12 | L12mw-154 | Unconsolidated | FWGLL12mw-154C-076-GW | 10/16/2009 | 2368183.88 | 557754.56 | 977 | Grab | BP | 70.2 | | | | 1 | 0.122 | 1 |
| RVAAP-12 Load Line 12 | L12mw-182 | Unconsolidated | FWGLL12mw-182C-077-GW | 10/16/2009 | 2368853.2 | 555890.35 | 982.2 | Grab | BP | 64.3 | | | | 1 | 0.122 | 1 |
| RVAAP-12 Load Line 12 | L12mw-188 | Unconsolidated | FWGLL12mw-188C-083-GW | 10/15/2009 | 2367908.82 | 558132.59 | 978.46 | Grab | BP | 109 | | | | 1 | 0.122 | 1 |
| RVAAP-12 Load Line 12 | L12mw-242 | Unconsolidated | FWGLL12mw-242C-085-GW | 10/15/2009 | 2368545.29 | 558020.51 | 980 | Grab | BP | 44.7 | | | | 1 | 0.122 | 1 |
| RVAAP-12 Load Line 12 | L12mw-243 | Unconsolidated | FWGLL12mw-243C-086-GW | 10/16/2009 | 2368190.04 | 557376.32 | 978 | Grab | BP | 81.9 | | | | 1 | 0.122 | 1 |
| RVAAP-12 Load Line 12 | L12mw-244 | Unconsolidated | FWGLL12mw-244C-087-GW | 10/16/2009 | 2368751.42 | 557377.17 | 980 | Grab | BP | 69.2 | | | | 1 | 0.122 | 1 |
| RVAAP-12 Load Line 12 | L12mw-245 | Unconsolidated | FWGLL12mw-245C-088-GW | 10/16/2009 | 2368370.74 | 557044.55 | 978 | Grab | BP | 70.3 | | | | 1 | 0.122 | 1 |
| RVAAP-12 Load Line 12 | L12mw-246 | Unconsolidated | FWGLL12mw-246C-089-GW | 10/16/2009 | 2369432.17 | 556658.89 | 982.96 | Grab | BP | 49.6 | | | | 1 | 0.122 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-166 | Unconsolidated | FWGFBQmw-166C-133-GW | 10/22/2009 | 2349584.33 | 553123.86 | 1104.87 | Grab | BP | 32.5 | | | | 1 | 0.122 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-167 | Unconsolidated | FWGFBQmw-167C-134-GW | 10/22/2009 | 2349675.45 | 553556.12 | 1112.05 | Grab | BP | 12.4 | | | | 1 | 0.122 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-176 | Unconsolidated | FWGFBQmw-176C-143-GW | 10/22/2009 | 2350219.45 | 553273.33 | 1129.57 | Grab | BP | 5.72 | | | | 1 | 0.122 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-024 | Unconsolidated | FWGLNWmw-024C-145-GW | 10/20/2009 | 2358400 | 564828 | 1035.3 | Grab | BP | 36.6 | | | | 1 | 0.122 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-025 | Unconsolidated | FWGLNWmw-025C-146-GW | 10/20/2009 | 2358420 | 565070 | 1027.2 | Grab | BP | 11 | | | | 1 | 0.122 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-026 | Unconsolidated | FWGLNWmw-026C-147-GW | 10/20/2009 | 2358950 | 564656 | 1025 | Grab | BP | 11.2 | | | | 1 | 0.122 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOO | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Magnesium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|-----------|--------|------|--------|----|-------|----|
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-027 | Unconsolidated | FWGLNWmw-027C-148-GW | 10/20/2009 | 2358630 | 564519 | 1024.4 | Grab | BP | 19.4 | | | | 1 | 0.122 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-001 | Unconsolidated | FWGMBSmw-001C-183-GW | 10/20/2009 | 2345323 | 550759.5 | 1079.68 | Grab | BP | 20.9 | | | | 1 | 0.122 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-002 | Unconsolidated | FWGMBSmw-002C-184-GW | 10/20/2009 | 2345322.3 | 550886.2 | 1080.5 | Grab | BP | 18.9 | | | | 1 | 0.122 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-003 | Unconsolidated | FWGMBSmw-003C-185-GW | 10/20/2009 | 2345172.4 | 550922.8 | 1082.45 | Grab | BP | 26.4 | | | | 1 | 0.122 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-004 | Unconsolidated | FWGMBSmw-004C-186-GW | 10/20/2009 | 2345134.2 | 550767.9 | 1079.55 | Grab | BP | 22.8 | | | | 1 | 0.122 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-005 | Unconsolidated | FWGMBSmw-005C-187-GW | 10/20/2009 | 2345354.1 | 550800.7 | 1080.5 | Grab | BP | 26.9 | | | | 1 | 0.122 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-006 | Unconsolidated | FWGMBSmw-006C-188-GW | 10/20/2009 | 2345282.3 | 550726.1 | 1080.29 | Grab | BP | 19.6 | | | | 1 | 0.122 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-001 | Unconsolidated | FWGCPmw-001C-105-GW | 10/21/2009 | 2368948.852 | 560440.9741 | 975.2594 | Grab | BP | 16.1 | | | | 1 | 0.122 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-004 | Unconsolidated | FWGCPmw-004C-108-GW | 10/21/2009 | 2368674.21 | 561843.2791 | 981.198 | Grab | BP | 22.5 | | | | 1 | 0.122 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-006 | Unconsolidated | FWGCPmw-006C-110-GW | 10/21/2009 | 2367727.191 | 562830.039 | 965.13 | Grab | BP | 23.9 | | | | 1 | 0.122 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-001 | Unconsolidated | FWGLL6mw-001C-001-GW | 10/21/2009 | 2353153.227 | 554214.8365 | 1124.1607 | Grab | B | 50.5 | | | | 1 | 0.122 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-002 | Unconsolidated | FWGLL6mw-002C-002-GW | 10/21/2009 | 2353820.091 | 553589.8815 | 1129.3631 | Grab | B | 45.9 | | | | 1 | 0.122 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-107 | Unconsolidated | FWGNTAmw-107C-149-GW | 10/20/2009 | 2345432.73 | 551699.09 | 1077.65 | Grab | BP | 21.3 | | | | 1 | 0.122 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-108 | Unconsolidated | FWGNTAmw-108C-150-GW | 10/20/2009 | 2345782.17 | 551917.92 | 1083.22 | Grab | BP | 25.3 | | | | 1 | 0.122 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-109 | Unconsolidated | FWGNTAmw-109C-151-GW | 10/20/2009 | 2345996.99 | 551291.19 | 1076.89 | Grab | BP | 4 | | | | 1 | 0.122 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-110 | Unconsolidated | FWGNTAmw-110C-152-GW | 10/20/2009 | 2346436.82 | 551350.8 | 1080.03 | Grab | BP | 16.2 | | | | 1 | 0.122 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-111 | Unconsolidated | FWGNTAmw-111C-153-GW | 10/20/2009 | 2346640.16 | 551538.99 | 1078.07 | Grab | BP | 37.5 | | | | 1 | 0.122 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-112 | Unconsolidated | FWGNTAmw-112C-154-GW | 10/20/2009 | 2346889.01 | 551708.76 | 1075.36 | Grab | BP | 45.8 | | | | 1 | 0.122 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-113 | Unconsolidated | FWGNTAmw-113C-155-GW | 10/20/2009 | 2347081.15 | 551487.86 | 1072.61 | Grab | BP | 50.7 | | | | 1 | 0.122 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-115 | Unconsolidated | FWGNTAmw-115C-157-GW | 10/20/2009 | 2347582.94 | 551793.39 | 1086.91 | Grab | BP | 16.3 | | | | 1 | 0.122 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-116 | Unconsolidated | FWGNTAmw-116C-158-GW | 10/20/2009 | 2348196.78 | 551749.39 | 1091.68 | Grab | BP | 5.47 | | | | 1 | 0.122 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-117 | Unconsolidated | FWGNTAmw-117C-159-GW | 10/20/2009 | 2347994.79 | 551586.36 | 1091.67 | Grab | BP | 20.4 | | | | 1 | 0.122 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-118 | Unconsolidated | FWGNTAmw-118C-160-GW | 10/20/2009 | 2347608.09 | 551333.89 | 1078.86 | Grab | BP | 27.7 | | | | 1 | 0.122 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-003 | Unconsolidated | FWGLL5mw-003C-067-GW | 10/21/2009 | 2354962.47 | 554533.41 | 1124.7 | Grab | BP | 30.3 | | | | 1 | 0.122 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-001 | Unconsolidated | FWGLL8mw-001C-1436-GW | 10/13/2009 | 2351660 | 552609 | 1118.69 | Grab | BP | 40.2 | | | | 1 | 0.122 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-002 | Unconsolidated | FWGLL8mw-002C-1437-GW | 10/13/2009 | 2351010 | 552410 | 1121.67 | Grab | BP | 38.3 | | | | 1 | 0.122 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-003 | Unconsolidated | FWGLL8mw-003C-1438-GW | 10/13/2009 | 2351360 | 552231 | 1116.3 | Grab | BP | 44.2 | | | | 1 | 0.122 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-004 | Unconsolidated | FWGLL8mw-004C-1439-GW | 10/13/2009 | 2351260 | 551808 | 1112.73 | Grab | BP | 43.4 | | | | 1 | 0.122 | 1 |
| RVAAP-43 Load Line 10 | L10mw-006 | Unconsolidated | FWGLL10mw-006C-1454-GW | 10/14/2009 | 2355656.8 | 554997.25 | 1121.2 | Grab | BP | 7.45 | | | | 1 | 0.122 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-001 | Unconsolidated | FWGLL11mw-001C-1455-GW | 10/14/2009 | 2352778.81 | 557504.98 | 1100.16 | Grab | BP | 28.1 | | | | 1 | 0.122 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-006 | Unconsolidated | FWGLL11mw-006C-1459-GW | 10/14/2009 | 2352521.51 | 558263.51 | 1086.5 | Grab | BP | 18.2 | | | | 1 | 0.122 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-008 | Unconsolidated | FWGLL11mw-008C-1460-GW | 10/14/2009 | 2352388.57 | 557981.26 | 1087.74 | Grab | BP | 35.8 | | | | 1 | 0.122 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-009 | Unconsolidated | FWGLL11mw-009C-1461-GW | 10/14/2009 | 2352577.21 | 557901.2 | 1088.28 | Grab | BP | 28.4 | | | | 1 | 0.122 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-010 | Unconsolidated | FWGLL11mw-010C-1462-GW | 10/14/2009 | 2352038.91 | 557675.59 | 1082.68 | Grab | BP | 33.6 | | | | 1 | 0.122 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-001 | Unconsolidated | FWGCBPmw-001C-097-GW | 10/21/2009 | 2367095.431 | 561616.171 | 975.8411 | Grab | BP | 160 | | | | 1 | 0.122 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-002 | Unconsolidated | FWGCBPmw-002C-098-GW | 10/21/2009 | 2367295.684 | 561865.9216 | 970.0359 | Grab | BP | 109 | | | | 1 | 0.122 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-003 | Unconsolidated | FWGCBPmw-003C-099-GW | 10/21/2009 | 2366768.739 | 561944.2018 | 974.6665 | Grab | BP | 76.6 | | | | 1 | 0.122 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-004 | Unconsolidated | FWGCBPmw-004C-100-GW | 10/21/2009 | 2366978.819 | 562123.8244 | 971.1285 | Grab | BP | 52.2 | | | | 1 | 0.122 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-005 | Unconsolidated | FWGCBPmw-005C-101-GW | 10/21/2009 | 2366919.482 | 562311.8596 | 971.5897 | Grab | BP | 48.9 | | | | 1 | 0.122 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-006 | Unconsolidated | FWGCBPmw-006C-102-GW | 10/21/2009 | 2367243.659 | 562311.9449 | 967.6448 | Grab | BP | 45.1 | | | | 1 | 0.122 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-007 | Unconsolidated | FWGCBPmw-007C-103-GW | 10/21/2009 | 2366512.573 | 562006.343 | 976.3736 | Grab | BP | 78.1 | | | | 1 | 0.122 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-007 | Unconsolidated | FWGASYmw-007C-1469-GW | 10/15/2009 | 2366840 | 556820 | 981.4 | Grab | BP | 53.7 | | | | 1 | 0.122 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-008 | Unconsolidated | FWGASYmw-008C-1470-GW | 10/15/2009 | 2367470 | 557086 | 976.2 | Grab | BP | 158 | | | | 1 | 0.122 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-010 | Unconsolidated | FWGASYmw-010C-1472-GW | 10/15/2009 | 2366980 | 557273 | 978.2 | Grab | BP | 90.7 | | | | 1 | 0.122 | 1 |
| Site-wide Background Areas | BKGmw-004 | Unconsolidated | FWGBKGmw-004C-007-GW | 10/21/2009 | 2368852.973 | 569464.763 | 965.16 | Grab | BP | 5.43 | | | | 1 | 0.122 | 1 |
| Site-wide Background Areas | BKGmw-005 | Unconsolidated | FWGBKGmw-005C-008-GW | 10/22/2009 | 2340835.864 | 562288.445 | 1149.443 | Grab | BP | 20.3 | | | | 1 | 0.122 | 1 |
| Site-wide Background Areas | BKGmw-013 | Unconsolidated | FWGBKGmw-013C-013-GW | 10/21/2009 | 2361627.394 | 558269.158 | 986.588 | Grab | BP | 24.9 | | | | 1 | 0.122 | 1 |
| Site-wide Background Areas | BKGmw-016 | Unconsolidated | FWGBKGmw-016C-015-GW | 10/22/2009 | 2342407.075 | 553983.501 | 1098.419 | Grab | BP | 4.15 | | | | 1 | 0.122 | 1 |
| Site-wide Background Areas | BKGmw-017 | Unconsolidated | FWGBKGmw-017C-016-GW | 10/22/2009 | 2346115.351 | 562452.044 | 1132.799 | Grab | BP | 42.9 | | | | 1 | 0.122 | 1 |
| Site-wide Background Areas | BKGmw-019 | Unconsolidated | FWGBKGmw-019C-018-GW | 10/22/2009 | 2349882.142 | 559864.549 | 1108.239 | Grab | BP | 34 | | | | 1 | 0.122 | 1 |
| Site-wide Background Areas | BKGmw-020 | Unconsolidated | FWGBKGmw-020C-019-GW | 10/21/2009 | 2357856.237 | 558756.241 | 1065.001 | Grab | BP | 16 | | | | 1 | 0.122 | 1 |
| Site-wide Background Areas | BKGmw-021 | Unconsolidated | FWGBKGmw-021C-020-GW | 10/21/2009 | 2367622.953 | 571016.748 | 972.159 | Grab | BP | 29.6 | | | | 1 | 0.122 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Magnesium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|-----------|--------|------|--------|----|-------|----|
| RVAAP-01 Ramsdell Quarry Landfill | RQLmw-009 | Sharon | FWGRQLmw-009C-1487-GW | 10/14/2009 | 2376253.654 | 566351.1994 | 964 | Grab | BP | 18.8 | | | | 1 | 0.122 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-078 | Sharon | FWGLL1mw-078-025-GW | 10/19/2009 | 2376275.854 | 564623.871 | 995.84 | Grab | BP | 6.72 | | | | 1 | 0.122 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-080 | Sharon | FWGLL1mw-080-027-GW | 10/19/2009 | 2376845.072 | 562479.728 | 996.27 | Grab | BP | 19.1 | | | | 1 | 0.122 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-082 | Sharon | FWGLL1mw-082-029-GW | 10/19/2009 | 2376977.379 | 562956.86 | 1006.45 | Grab | BP | 12 | | | | 1 | 0.122 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-060 | Sharon | FWGLL2mw-060C-034-GW | 10/19/2009 | 2375978 | 558022 | 958.13 | Grab | BP | 8.42 | | | | 1 | 0.122 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-263 | Sharon | FWGLL2mw-263-037-GW | 10/19/2009 | 2374290.29 | 561590.92 | 1009.42 | Grab | BP | 16.5 | | | | 1 | 0.122 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-264 | Sharon | FWGLL2mw-264-038-GW | 10/19/2009 | 2374532.76 | 561173.63 | 1010.1 | Grab | BP | 16.1 | | | | 1 | 0.122 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-267 | Sharon | FWGLL2mw-267C-041-GW | 10/19/2009 | 2373714.17 | 561393.73 | 1012.81 | Grab | BP | 16.6 | | | | 1 | 0.122 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-268 | Sharon | FWGLL2mw-268-042-GW | 10/19/2009 | 2374156.4 | 560831.44 | 1015.47 | Grab | BP | 20.5 | | | | 1 | 0.122 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-269 | Sharon | FWGLL2mw-269-043-GW | 10/20/2009 | 2374756.74 | 559483.9 | 1009.49 | Grab | BP | 15.7 | | | | 1 | 0.122 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-270 | Sharon | FWGLL2mw-270-044-GW | 10/19/2009 | 2372858.94 | 562656.18 | 1009.93 | Grab | BP | 16 | | | | 1 | 0.122 | 1 |
| RVAAP-09 Load Line 3 | LL3mw-238 | Sharon | FWGLL3mw-238C-051-GW | 10/20/2009 | 2370624.55 | 559569.39 | 1006.91 | Grab | BP | 7.48 | | | | 1 | 0.122 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-239 | Sharon | FWGLL3mw-239-052-GW | 10/20/2009 | 2370894.17 | 559101.84 | 1003.5 | Grab | BP | 6.13 | | | | 1 | 0.122 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-241 | Sharon | FWGLL3mw-241-054-GW | 10/20/2009 | 2370332.94 | 559299 | 994.65 | Grab | BP | 8.61 | | | | 1 | 0.122 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-242 | Sharon | FWGLL3mw-242-055-GW | 10/21/2009 | 2371993.44 | 557035.28 | 999.32 | Grab | BP | 6.9 | | | | 1 | 0.122 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-243 | Sharon | FWGLL3mw-243C-056-GW | 10/21/2009 | 2371532.06 | 556688.5 | 991.16 | Grab | BP | 7.47 | | | | 1 | 0.122 | 1 |
| RVAAP-12 Load Line 12 | L12mw-186 | Sharon | FWGLL12mw-186C-081-GW | 10/15/2009 | 2367912.39 | 559065.95 | 976.34 | Grab | BP | 52.6 | | | | 1 | 0.122 | 1 |
| RVAAP-12 Load Line 12 | L12mw-189 | Sharon | FWGLL12mw-189C-084-GW | 10/15/2009 | 2367945.92 | 558569.27 | 976.17 | Grab | BP | 60.9 | | | | 1 | 0.122 | 1 |
| RVAAP-13 Building 1200 | B12mw-011 | Sharon | FWGB12mw-011C-091-GW | 10/21/2009 | 2371420 | 565690 | 1003.76 | Grab | BP | 11.5 | | | | 1 | 0.122 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-001 | Sharon | FWGASYmw-001C-1463-GW | 10/14/2009 | 2366262.85 | 558406.04 | 978.4 | Grab | BP | 46.7 | | | | 1 | 0.122 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-002 | Sharon | FWGASYmw-002C-1464-GW | 10/15/2009 | 2366170 | 557890 | 982 | Grab | BP | 18.2 | | | | 1 | 0.122 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-003 | Sharon | FWGASYmw-003C-1465-GW | 10/15/2009 | 2366650 | 558014 | 979.7 | Grab | BP | 65.1 | | | | 1 | 0.122 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-005 | Sharon | FWGASYmw-005C-1467-GW | 10/15/2009 | 2367450 | 557785 | 977.6 | Grab | BP | 42.8 | | | | 1 | 0.122 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-006 | Sharon | FWGASYmw-006C-1468-GW | 10/15/2009 | 2366750 | 557256 | 980.2 | Grab | BP | 70.2 | | | | 1 | 0.122 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-009 | Sharon | FWGASYmw-009C-1471-GW | 10/15/2009 | 2366630 | 557606 | 979.9 | Grab | BP | 68.6 | | | | 1 | 0.122 | 1 |
| Site-wide Background Areas | BKGmw-012 | Sharon | FWGBKGMw-012C-012-GW | 10/21/2009 | 2367795.226 | 563918.862 | 997.574 | Grab | BP | 9.78 | | | | 1 | 0.122 | 1 |
| Site-wide Background Areas | BKGmw-018 | Sharon | FWGBKGMw-018C-017-GW | 10/21/2009 | 2354993.909 | 570873.349 | 1043.06 | Grab | BP | 6.19 | | | | 1 | 0.122 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-001 | Homewood | FWGCBLmw-001C-093-GW | 10/21/2009 | 2343659.08 | 559405.12 | 1178.5 | Grab | BP | 1.97 | | | | 1 | 0.122 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-003 | Homewood | FWGCBLmw-003C-095-GW | 10/22/2009 | 2343967.67 | 559697.13 | 1172.22 | Grab | BP | 4.45 | | | | 1 | 0.122 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-004 | Homewood | FWGCBLmw-004C-096-GW | 10/22/2009 | 2343687.21 | 559950 | 1172.08 | Grab | BP | 2.83 | | | | 1 | 0.122 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-171 | Homewood | FWGFBQmw-171C-138-GW | 10/22/2009 | 2350072.44 | 554230.93 | 1140.49 | Grab | BP | 5.36 | | | | 1 | 0.122 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-172 | Homewood | FWGFBQmw-172C-139-GW | 10/22/2009 | 2349907.37 | 554322.17 | 1145.71 | Grab | BP | 35.2 | | | | 1 | 0.122 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-173 | Homewood | FWGFBQmw-173C-140-GW | 10/22/2009 | 2350449.01 | 554491.35 | 1162.43 | Grab | BP | 3.64 | | | | 1 | 0.122 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-174 | Homewood | FWGFBQmw-174C-141-GW | 10/22/2009 | 2350289.81 | 554142.44 | 1135.78 | Grab | BP | 2.57 | | | | 1 | 0.122 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-175 | Homewood | FWGFBQmw-175C-142-GW | 10/22/2009 | 2350297.98 | 553989.24 | 1137.16 | Grab | BP | 5.66 | | | | 1 | 0.122 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-177 | Homewood | FWGFBQmw-177C-144-GW | 10/22/2009 | 2350112.18 | 553321.94 | 1125.73 | Grab | BP | 10.6 | | | | 1 | 0.122 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-003 | Homewood | FWGLL6mw-003C-003-GW | 10/21/2009 | 2353048.684 | 553544.3432 | 1125.3837 | Grab | BP | 38 | | | | 1 | 0.122 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-004 | Homewood | FWGLL6mw-004C-004-GW | 10/21/2009 | 2353368.787 | 553431.8182 | 1125.3851 | Grab | BP | 40.7 | | | | 1 | 0.122 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-001 | Homewood | FWGLL5mw-001C-065-GW | 10/21/2009 | 2354627.07 | 554321.25 | 1125 | Grab | BP | 25.5 | | | | 1 | 0.122 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-002 | Homewood | FWGLL5mw-002C-066-GW | 10/21/2009 | 2354573.52 | 554606 | 1125.8 | Grab | BP | 23.2 | | | | 1 | 0.122 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-004 | Homewood | FWGLL5mw-004C-068-GW | 10/21/2009 | 2355008.44 | 554071.73 | 1122.9 | Grab | BP | 34.9 | | | | 1 | 0.122 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-005 | Homewood | FWGLL5mw-005C-069-GW | 10/22/2009 | 2354424.02 | 554154.73 | 1126.5 | Grab | BP | 28.5 | | | | 1 | 0.122 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-006 | Homewood | FWGLL5mw-006C-070-GW | 10/21/2009 | 2354730 | 553981.82 | 1125.1 | Grab | BP | 44.8 | | | | 1 | 0.122 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-003 | Homewood | FWGLL7mw-003C-1432-GW | 10/12/2009 | 2352349.51 | 555414.33 | 1118.23 | Grab | BP | 5.62 | | | | 1 | 0.122 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-004 | Homewood | FWGLL7mw-004C-1433-GW | 10/12/2009 | 2352036.23 | 555583.15 | 1123.3 | Grab | BP | 6.94 | | | | 1 | 0.122 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-005 | Homewood | FWGLL8mw-005C-1440-GW | 10/13/2009 | 2351750 | 551522 | 1112.51 | Grab | BP | 21.7 | | | | 1 | 0.122 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-006 | Homewood | FWGLL8mw-006C-1441-GW | 10/13/2009 | 2351480 | 551295 | 1114.33 | Grab | BP | 27.7 | | | | 1 | 0.122 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-001 | Homewood | FWGLL9mw-001C-1442-GW | 10/13/2009 | 2355817.04 | 556125.81 | 1134.62 | Grab | BP | 11.8 | | | | 1 | 0.122 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-002 | Homewood | FWGLL9mw-002C-1443-GW | 10/13/2009 | 2355907.76 | 556755.11 | 1127.3 | Grab | BP | 7.42 | | | | 1 | 0.122 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-003 | Homewood | FWGLL9mw-003C-1444-GW | 10/13/2009 | 2356635.21 | 556445.31 | 1135.76 | Grab | BP | 5.29 | | | | 1 | 0.122 | 1 |
| RVAAP-43 Load Line 10 | L10mw-001 | Homewood | FWGLL10mw-001C-1449-GW | 10/13/2009 | 2355272.22 | 555818.25 | 1130 | Grab | BP | 23.5 | | | | 1 | 0.122 | 1 |
| RVAAP-43 Load Line 10 | L10mw-002 | Homewood | FWGLL10mw-002C-1450-GW | 10/13/2009 | 2355712.51 | 555525.36 | 1124.4 | Grab | BP | 10.9 | | | | 1 | 0.122 | 1 |
| RVAAP-43 Load Line 10 | L10mw-003 | Homewood | FWGLL10mw-003C-1451-GW | 10/13/2009 | 2355387.92 | 555496.71 | 1127.4 | Grab | BP | 13.9 | | | | 1 | 0.122 | 1 |
| RVAAP-43 Load Line 10 | L10mw-004 | Homewood | FWGLL10mw-004C-1452-GW | 10/14/2009 | 2355440.2 | 555234.59 | 1119.6 | Grab | BP | 19.7 | | | | 1 | 0.122 | 1 |
| RVAAP-43 Load Line 10 | L10mw-005 | Homewood | FWGLL10mw-005C-1453-GW | 10/14/2009 | 2355941.55 | 555382.53 | 1122.9 | Grab | BP | 14.7 | | | | 1 | 0.122 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Manganese | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|-----------------------|-------------|-------------|-------------|-----------|-------------|--------|-----------|--------|------|--------|------|--------|----|
| RVAAP-02 Erie Burning Grounds | EBGmw-123 | Unconsolidated | FWGEBGmw-123C-125-GW | 10/19/2009 | 2380049.21 | 571747.04 | 945.59 | Grab | BP | 0.133 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-124 | Unconsolidated | FWGEBGmw-124C-126-GW | 10/19/2009 | 2380030.24 | 571618.07 | 939.02 | Grab | BP | 0.956 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-126 | Unconsolidated | FWGEBGmw-126C-128-GW | 10/19/2009 | 2380307.31 | 572348.81 | 938.2 | Grab | BP | 0.268 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-127 | Unconsolidated | FWGEBGmw-127C-129-GW | 10/19/2009 | 2380172.16 | 571083.61 | 940.21 | Grab | BP | 0.0704 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-128 | Unconsolidated | FWGEBGmw-128C-130-GW | 10/19/2009 | 2379892.79 | 570970.32 | 942.47 | Grab | BP | 0.25 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-129 | Unconsolidated | FWGEBGmw-129C-131-GW | 10/19/2009 | 2379240.52 | 572035.68 | 941.97 | Grab | BP | 0.712 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-130 | Unconsolidated | FWGEBGmw-130C-132-GW | 10/19/2009 | 2379220.69 | 570695.61 | 941.18 | Grab | BP | 0.528 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-104 | Unconsolidated | FWGDA2mw-104C-115-GW | 10/21/2009 | 2354773.248 | 561125.7023 | 1070.8244 | Grab | BP | 0.0695 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-107 | Unconsolidated | FWGDA2mw-107C-118-GW | 10/21/2009 | 2354923.231 | 560482.7171 | 1039.1815 | Grab | BP | 1.34 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-108 | Unconsolidated | FWGDA2mw-108C-119-GW | 10/21/2009 | 2355602.421 | 560184.5864 | 1029.9156 | Grab | BP | 0.327 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-109 | Unconsolidated | FWGDA2mw-109C-120-GW | 10/21/2009 | 2354796.85 | 559897.6695 | 1068.6588 | Grab | BP | 0.359 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-110 | Unconsolidated | FWGDA2mw-110C-121-GW | 10/21/2009 | 2355195.202 | 559922.3928 | 1061.3878 | Grab | BP | 0.254 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-112 | Unconsolidated | FWGDA2mw-112C-123-GW | 10/21/2009 | 2355019.568 | 560374.5046 | 1034.8724 | Grab | BP | 0.832 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-113 | Unconsolidated | FWGDA2mw-113C-124-GW | 10/21/2009 | 2355150.554 | 560392.8898 | 1034.5126 | Grab | BP | 0.364 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-1 | Unconsolidated | FWGDETMw-001-111-GW | 10/21/2009 | 2354959.47 | 560820.03 | 1063.97 | Grab | BP | 0.54 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-2 | Unconsolidated | FWGDETMw-002C-115-GW | 10/21/2009 | 2355360.33 | 560664.71 | 1062.69 | Grab | BP | 0.179 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-3 | Unconsolidated | FWGDETMw-003C-1488-GW | 10/14/2009 | 2355204.94 | 560456.1 | 1035.56 | Grab | BP | 0.3 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-006 | Unconsolidated | FWGWBGmw-006C-171-GW | 10/20/2009 | 2359087.79 | 563008.87 | 1010.38 | Grab | BP | 0.474 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-007 | Unconsolidated | FWGWBGmw-007C-172-GW | 10/20/2009 | 2360420.44 | 562479.87 | 995.33 | Grab | BP | 1.21 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-009 | Unconsolidated | FWGWBGmw-009C-174-GW | 10/20/2009 | 2357159.2 | 561603.54 | 1042 | Grab | BP | 0.458 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-010 | Unconsolidated | FWGWBGmw-010C-175-GW | 10/20/2009 | 2356051.96 | 562893.2 | 1069.85 | Grab | BP | 0.199 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-011 | Unconsolidated | FWGWBGmw-011C-176-GW | 10/20/2009 | 2356187.29 | 562609.18 | 1072.38 | Grab | BP | 0.535 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-012 | Unconsolidated | FWGWBGmw-012C-177-GW | 10/20/2009 | 2354810.65 | 562240.9 | 1079.11 | Grab | BP | 0.502 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-013 | Unconsolidated | FWGWBGmw-013C-178-GW | 10/20/2009 | 2355223.25 | 561518.27 | 1071.7 | Grab | BP | 0.27 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-014 | Unconsolidated | FWGWBGmw-014C-179-GW | 10/20/2009 | 2360439.22 | 562061.26 | 996.78 | Grab | BP | 0.407 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-015 | Unconsolidated | FWGWBGmw-015C-180-GW | 10/20/2009 | 2359182.41 | 562340.12 | 1011.6 | Grab | BP | 0.728 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-016 | Unconsolidated | FWGWBGmw-016C-181-GW | 10/20/2009 | 2360645.88 | 562709.13 | 997.03 | Grab | BP | 0.697 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-017 | Unconsolidated | FWGWBGmw-017C-182-GW | 10/20/2009 | 2359603.84 | 562913.24 | 1006.62 | Grab | BP | 0.883 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-064 | Unconsolidated | FWGLL1mw-064-022-GW | 10/19/2009 | 2380286.973 | 563118.7363 | 932 | Grab | BP | 0.225 | | P | | 0.01 | 0.0018 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-065 | Unconsolidated | FWGLL1mw-065-023-GW | 10/19/2009 | 2380452.003 | 560916.9225 | 940 | Grab | BP | 3.29 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-193 | Unconsolidated | FWGLL4mw-193-057-GW | 10/21/2009 | 2364236.52 | 554960.27 | 982.92 | Grab | BP | 0.338 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-194 | Unconsolidated | FWGLL4mw-194C-058-GW | 10/16/2009 | 2364584.86 | 555089.22 | 983.76 | Grab | BP | 0.706 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-196 | Unconsolidated | FWGLL4mw-196C-060-GW | 10/16/2009 | 2365297.1 | 555213.52 | 984.55 | Grab | BP | 0.185 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-197 | Unconsolidated | FWGLL4mw-197C-061-GW | 10/16/2009 | 2365384.91 | 555397.05 | 985.46 | Grab | BP | 0.216 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-198 | Unconsolidated | FWGLL4mw-198C-062-GW | 10/21/2009 | 2364991.19 | 555442.04 | 983.42 | Grab | BP | 1.65 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-199 | Unconsolidated | FWGLL4mw-199C-063-GW | 10/16/2009 | 2365420.78 | 554621.62 | 977.28 | Grab | BP | 2.1 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-200 | Unconsolidated | FWGLL4mw-200-064-GW | 10/21/2009 | 2365903.05 | 554580.15 | 987.93 | Grab | BP | 0.144 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-12 Load Line 12 | L12mw-107 | Unconsolidated | FWGLL12mw-107C-072-GW | 10/16/2009 | 2368595.67 | 556759.02 | 978.03 | Grab | BP | 0.2 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-12 Load Line 12 | L12mw-128 | Unconsolidated | FWGLL12mw-128C-074-GW | 10/16/2009 | 2368293.2 | 557371.54 | 976.21 | Grab | BP | 0.893 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-12 Load Line 12 | L12mw-153 | Unconsolidated | FWGLL12mw-153C-075-GW | 10/16/2009 | 2368138.87 | 557823.23 | 975.34 | Grab | BP | 0.215 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-12 Load Line 12 | L12mw-154 | Unconsolidated | FWGLL12mw-154C-076-GW | 10/16/2009 | 2368183.88 | 557754.56 | 977 | Grab | BP | 0.199 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-12 Load Line 12 | L12mw-182 | Unconsolidated | FWGLL12mw-182C-077-GW | 10/16/2009 | 2368853.2 | 555890.35 | 982.2 | Grab | BP | 0.0681 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-12 Load Line 12 | L12mw-188 | Unconsolidated | FWGLL12mw-188C-083-GW | 10/15/2009 | 2367908.82 | 558132.59 | 978.46 | Grab | BP | 0.626 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-12 Load Line 12 | L12mw-242 | Unconsolidated | FWGLL12mw-242C-085-GW | 10/15/2009 | 2368545.29 | 558020.51 | 980 | Grab | BP | 0.0939 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-12 Load Line 12 | L12mw-243 | Unconsolidated | FWGLL12mw-243C-086-GW | 10/16/2009 | 2368190.04 | 557376.32 | 978 | Grab | BP | 1.09 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-12 Load Line 12 | L12mw-244 | Unconsolidated | FWGLL12mw-244C-087-GW | 10/16/2009 | 2368751.42 | 557377.17 | 980 | Grab | BP | 2.62 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-12 Load Line 12 | L12mw-245 | Unconsolidated | FWGLL12mw-245C-088-GW | 10/16/2009 | 2368370.74 | 557044.55 | 978 | Grab | BP | 0.468 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-12 Load Line 12 | L12mw-246 | Unconsolidated | FWGLL12mw-246C-089-GW | 10/16/2009 | 2369432.17 | 556658.89 | 982.96 | Grab | BP | 0.173 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-166 | Unconsolidated | FWGFBQmw-166C-133-GW | 10/22/2009 | 2349584.33 | 553123.86 | 1104.87 | Grab | BP | 0.0718 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-167 | Unconsolidated | FWGFBQmw-167C-134-GW | 10/22/2009 | 2349675.45 | 553556.12 | 1112.05 | Grab | BP | 1.5 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-176 | Unconsolidated | FWGFBQmw-176C-143-GW | 10/22/2009 | 2350219.45 | 553273.33 | 1129.57 | Grab | BP | 1.66 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-024 | Unconsolidated | FWGLNWmw-024C-145-GW | 10/20/2009 | 2358400 | 564828 | 1035.3 | Grab | BP | 2.09 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-025 | Unconsolidated | FWGLNWmw-025C-146-GW | 10/20/2009 | 2358420 | 565070 | 1027.2 | Grab | BP | 0.429 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-026 | Unconsolidated | FWGLNWmw-026C-147-GW | 10/20/2009 | 2358950 | 564656 | 1025 | Grab | BP | 0.178 | | | | 0.01 | 0.0018 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOO | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Manganese | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|-----------|--------|------|--------|------|--------|----|
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-027 | Unconsolidated | FWGLNWmw-027C-148-GW | 10/20/2009 | 2358630 | 564519 | 1024.4 | Grab | BP | 1.27 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-001 | Unconsolidated | FWGMBSmw-001C-183-GW | 10/20/2009 | 2345323 | 550759.5 | 1079.68 | Grab | BP | 0.373 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-002 | Unconsolidated | FWGMBSmw-002C-184-GW | 10/20/2009 | 2345322.3 | 550886.2 | 1080.5 | Grab | BP | 0.282 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-003 | Unconsolidated | FWGMBSmw-003C-185-GW | 10/20/2009 | 2345172.4 | 550922.8 | 1082.45 | Grab | BP | 0.0314 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-004 | Unconsolidated | FWGMBSmw-004C-186-GW | 10/20/2009 | 2345134.2 | 550767.9 | 1079.55 | Grab | BP | 0.288 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-005 | Unconsolidated | FWGMBSmw-005C-187-GW | 10/20/2009 | 2345354.1 | 550800.7 | 1080.5 | Grab | BP | 0.842 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-006 | Unconsolidated | FWGMBSmw-006C-188-GW | 10/20/2009 | 2345282.3 | 550726.1 | 1080.29 | Grab | BP | 0.334 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-001 | Unconsolidated | FWGCPmw-001C-105-GW | 10/21/2009 | 2368948.852 | 560440.9741 | 975.2594 | Grab | BP | 0.157 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-004 | Unconsolidated | FWGCPmw-004C-108-GW | 10/21/2009 | 2368674.21 | 561843.2791 | 981.198 | Grab | BP | 0.16 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-006 | Unconsolidated | FWGCPmw-006C-110-GW | 10/21/2009 | 2367727.191 | 562830.039 | 965.13 | Grab | BP | 3.83 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-001 | Unconsolidated | FWGLL6mw-001C-001-GW | 10/21/2009 | 2353153.227 | 554214.8365 | 1124.1607 | Grab | B | 1.6 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-002 | Unconsolidated | FWGLL6mw-002C-002-GW | 10/21/2009 | 2353820.091 | 553589.8815 | 1129.3631 | Grab | B | 2.45 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-107 | Unconsolidated | FWGNTAmw-107C-149-GW | 10/20/2009 | 2345432.73 | 551699.09 | 1077.65 | Grab | BP | 0.432 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-108 | Unconsolidated | FWGNTAmw-108C-150-GW | 10/20/2009 | 2345782.17 | 551917.92 | 1083.22 | Grab | BP | 0.222 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-109 | Unconsolidated | FWGNTAmw-109C-151-GW | 10/20/2009 | 2345996.99 | 551291.19 | 1076.89 | Grab | BP | 0.0684 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-110 | Unconsolidated | FWGNTAmw-110C-152-GW | 10/20/2009 | 2346436.82 | 551350.8 | 1080.03 | Grab | BP | 0.315 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-111 | Unconsolidated | FWGNTAmw-111C-153-GW | 10/20/2009 | 2346640.16 | 551538.99 | 1078.07 | Grab | BP | 0.165 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-112 | Unconsolidated | FWGNTAmw-112C-154-GW | 10/20/2009 | 2346889.01 | 551708.76 | 1075.36 | Grab | BP | 1.33 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-113 | Unconsolidated | FWGNTAmw-113C-155-GW | 10/20/2009 | 2347081.15 | 551487.86 | 1072.61 | Grab | BP | 1.59 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-115 | Unconsolidated | FWGNTAmw-115C-157-GW | 10/20/2009 | 2347582.94 | 551793.39 | 1086.91 | Grab | BP | 0.645 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-116 | Unconsolidated | FWGNTAmw-116C-158-GW | 10/20/2009 | 2348196.78 | 551749.39 | 1091.68 | Grab | BP | 0.267 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-117 | Unconsolidated | FWGNTAmw-117C-159-GW | 10/20/2009 | 2347994.79 | 551586.36 | 1091.67 | Grab | BP | 0.627 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-118 | Unconsolidated | FWGNTAmw-118C-160-GW | 10/20/2009 | 2347608.09 | 551333.89 | 1078.86 | Grab | BP | 3.24 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-003 | Unconsolidated | FWGLL5mw-003C-067-GW | 10/21/2009 | 2354962.47 | 554533.41 | 1124.7 | Grab | BP | 1.19 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-001 | Unconsolidated | FWGLL8mw-001C-1436-GW | 10/13/2009 | 2351660 | 552609 | 1118.69 | Grab | BP | 0.162 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-002 | Unconsolidated | FWGLL8mw-002C-1437-GW | 10/13/2009 | 2351010 | 552410 | 1121.67 | Grab | BP | 0.352 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-003 | Unconsolidated | FWGLL8mw-003C-1438-GW | 10/13/2009 | 2351360 | 552231 | 1116.3 | Grab | BP | 0.685 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-004 | Unconsolidated | FWGLL8mw-004C-1439-GW | 10/13/2009 | 2351260 | 551808 | 1112.73 | Grab | BP | 0.0446 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-43 Load Line 10 | L10mw-006 | Unconsolidated | FWGLL10mw-006C-1454-GW | 10/14/2009 | 2355656.8 | 554997.25 | 1121.2 | Grab | BP | 0.0528 | | P | | 0.01 | 0.0018 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-001 | Unconsolidated | FWGLL11mw-001C-1455-GW | 10/14/2009 | 2352778.81 | 557504.98 | 1100.16 | Grab | BP | 0.932 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-006 | Unconsolidated | FWGLL11mw-006C-1459-GW | 10/14/2009 | 2352521.51 | 558263.51 | 1086.5 | Grab | BP | 0.0387 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-008 | Unconsolidated | FWGLL11mw-008C-1460-GW | 10/14/2009 | 2352388.57 | 557981.26 | 1087.74 | Grab | BP | 0.0575 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-009 | Unconsolidated | FWGLL11mw-009C-1461-GW | 10/14/2009 | 2352577.21 | 557901.2 | 1088.28 | Grab | BP | 0.718 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-010 | Unconsolidated | FWGLL11mw-010C-1462-GW | 10/14/2009 | 2352038.91 | 557675.59 | 1082.68 | Grab | BP | 0.549 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-001 | Unconsolidated | FWGCBPmw-001C-097-GW | 10/21/2009 | 2367095.431 | 561616.171 | 975.8411 | Grab | BP | 0.367 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-002 | Unconsolidated | FWGCBPmw-002C-098-GW | 10/21/2009 | 2367295.684 | 561865.9216 | 970.0359 | Grab | BP | 0.647 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-003 | Unconsolidated | FWGCBPmw-003C-099-GW | 10/21/2009 | 2366768.739 | 561944.2018 | 974.6665 | Grab | BP | 0.252 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-004 | Unconsolidated | FWGCBPmw-004C-100-GW | 10/21/2009 | 2366978.819 | 562123.8244 | 971.1285 | Grab | BP | 1.03 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-005 | Unconsolidated | FWGCBPmw-005C-101-GW | 10/21/2009 | 2366919.482 | 562311.8596 | 971.5897 | Grab | BP | 0.43 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-006 | Unconsolidated | FWGCBPmw-006C-102-GW | 10/21/2009 | 2367243.659 | 562311.9449 | 967.6448 | Grab | BP | 1.29 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-007 | Unconsolidated | FWGCBPmw-007C-103-GW | 10/21/2009 | 2366512.573 | 562006.343 | 976.3736 | Grab | BP | 0.287 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-007 | Unconsolidated | FWGASYmw-007C-1469-GW | 10/15/2009 | 2366840 | 556820 | 981.4 | Grab | BP | 0.327 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-008 | Unconsolidated | FWGASYmw-008C-1470-GW | 10/15/2009 | 2367470 | 557086 | 976.2 | Grab | BP | 4.31 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-010 | Unconsolidated | FWGASYmw-010C-1472-GW | 10/15/2009 | 2366980 | 557273 | 978.2 | Grab | BP | 0.277 | | | | 0.01 | 0.0018 | 1 |
| Site-wide Background Areas | BKGmw-004 | Unconsolidated | FWGBKGmw-004C-007-GW | 10/21/2009 | 2368852.973 | 569464.763 | 965.16 | Grab | BP | 0.0217 | | | | 0.01 | 0.0018 | 1 |
| Site-wide Background Areas | BKGmw-005 | Unconsolidated | FWGBKGmw-005C-008-GW | 10/22/2009 | 2340835.864 | 562288.445 | 1149.443 | Grab | BP | 1.15 | | | | 0.01 | 0.0018 | 1 |
| Site-wide Background Areas | BKGmw-013 | Unconsolidated | FWGBKGmw-013C-013-GW | 10/21/2009 | 2361627.394 | 558269.158 | 986.588 | Grab | BP | 0.426 | | | | 0.01 | 0.0018 | 1 |
| Site-wide Background Areas | BKGmw-016 | Unconsolidated | FWGBKGmw-016C-015-GW | 10/22/2009 | 2342407.075 | 553983.501 | 1098.419 | Grab | BP | 0.014 | | | | 0.01 | 0.0018 | 1 |
| Site-wide Background Areas | BKGmw-017 | Unconsolidated | FWGBKGmw-017C-016-GW | 10/22/2009 | 2346115.351 | 562452.044 | 1132.799 | Grab | BP | 0.277 | | | | 0.01 | 0.0018 | 1 |
| Site-wide Background Areas | BKGmw-019 | Unconsolidated | FWGBKGmw-019C-018-GW | 10/22/2009 | 2349882.142 | 559864.549 | 1108.239 | Grab | BP | 0.931 | | | | 0.01 | 0.0018 | 1 |
| Site-wide Background Areas | BKGmw-020 | Unconsolidated | FWGBKGmw-020C-019-GW | 10/21/2009 | 2357856.237 | 558756.241 | 1065.001 | Grab | BP | 0.781 | | | | 0.01 | 0.0018 | 1 |
| Site-wide Background Areas | BKGmw-021 | Unconsolidated | FWGBKGmw-021C-020-GW | 10/21/2009 | 2367622.953 | 571016.748 | 972.159 | Grab | BP | 0.0248 | | | | 0.01 | 0.0018 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Manganese | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|-----------|--------|------|--------|------|--------|----|
| RVAAP-01 Ramsdell Quarry Landfill | RQLmw-009 | Sharon | FWGRQLmw-009C-1487-GW | 10/14/2009 | 2376253.654 | 566351.1994 | 964 | Grab | BP | 1.18 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-078 | Sharon | FWGLL1mw-078-025-GW | 10/19/2009 | 2376275.854 | 564623.871 | 995.84 | Grab | BP | 0.159 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-080 | Sharon | FWGLL1mw-080-027-GW | 10/19/2009 | 2376845.072 | 562479.728 | 996.27 | Grab | BP | 4.26 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-082 | Sharon | FWGLL1mw-082-029-GW | 10/19/2009 | 2376977.379 | 562956.86 | 1006.45 | Grab | BP | 1 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-060 | Sharon | FWGLL2mw-060C-034-GW | 10/19/2009 | 2375978 | 558022 | 958.13 | Grab | BP | 0.048 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-263 | Sharon | FWGLL2mw-263-037-GW | 10/19/2009 | 2374290.29 | 561590.92 | 1009.42 | Grab | BP | 2.1 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-264 | Sharon | FWGLL2mw-264-038-GW | 10/19/2009 | 2374532.76 | 561173.63 | 1010.1 | Grab | BP | 0.922 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-267 | Sharon | FWGLL2mw-267C-041-GW | 10/19/2009 | 2373714.17 | 561393.73 | 1012.81 | Grab | BP | 0.673 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-268 | Sharon | FWGLL2mw-268-042-GW | 10/19/2009 | 2374156.4 | 560831.44 | 1015.47 | Grab | BP | 0.437 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-269 | Sharon | FWGLL2mw-269-043-GW | 10/20/2009 | 2374756.74 | 559483.9 | 1009.49 | Grab | BP | 1.75 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-270 | Sharon | FWGLL2mw-270-044-GW | 10/19/2009 | 2372858.94 | 562656.18 | 1009.93 | Grab | BP | 0.302 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-238 | Sharon | FWGLL3mw-238C-051-GW | 10/20/2009 | 2370624.55 | 559569.39 | 1006.91 | Grab | BP | 0.279 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-239 | Sharon | FWGLL3mw-239-052-GW | 10/20/2009 | 2370894.17 | 559101.84 | 1003.5 | Grab | BP | 0.125 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-241 | Sharon | FWGLL3mw-241-054-GW | 10/20/2009 | 2370332.94 | 559299 | 994.65 | Grab | BP | 0.289 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-242 | Sharon | FWGLL3mw-242-055-GW | 10/21/2009 | 2371993.44 | 557035.28 | 999.32 | Grab | BP | 2.17 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-243 | Sharon | FWGLL3mw-243C-056-GW | 10/21/2009 | 2371532.06 | 556688.5 | 991.16 | Grab | BP | 0.115 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-12 Load Line 12 | L12mw-186 | Sharon | FWGLL12mw-186C-081-GW | 10/15/2009 | 2367912.39 | 559065.95 | 976.34 | Grab | BP | 0.556 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-12 Load Line 12 | L12mw-189 | Sharon | FWGLL12mw-189C-084-GW | 10/15/2009 | 2367945.92 | 558569.27 | 976.17 | Grab | BP | 0.38 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-13 Building 1200 | B12mw-011 | Sharon | FWGB12mw-011C-091-GW | 10/21/2009 | 2371420 | 565690 | 1003.76 | Grab | BP | 0.0266 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-001 | Sharon | FWGASYmw-001C-1463-GW | 10/14/2009 | 2366262.85 | 558406.04 | 978.4 | Grab | BP | 1.84 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-002 | Sharon | FWGASYmw-002C-1464-GW | 10/15/2009 | 2366170 | 557890 | 982 | Grab | BP | 0.0732 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-003 | Sharon | FWGASYmw-003C-1465-GW | 10/15/2009 | 2366650 | 558014 | 979.7 | Grab | BP | 0.76 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-005 | Sharon | FWGASYmw-005C-1467-GW | 10/15/2009 | 2367450 | 557785 | 977.6 | Grab | BP | 0.868 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-006 | Sharon | FWGASYmw-006C-1468-GW | 10/15/2009 | 2366750 | 557256 | 980.2 | Grab | BP | 0.402 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-009 | Sharon | FWGASYmw-009C-1471-GW | 10/15/2009 | 2366630 | 557606 | 979.9 | Grab | BP | 0.683 | | | | 0.01 | 0.0018 | 1 |
| Site-wide Background Areas | BKGmw-012 | Sharon | FWGBKGmw-012C-012-GW | 10/21/2009 | 2367795.226 | 563918.862 | 997.574 | Grab | BP | 0.051 | | | | 0.01 | 0.0018 | 1 |
| Site-wide Background Areas | BKGmw-018 | Sharon | FWGBKGmw-018C-017-GW | 10/21/2009 | 2354993.909 | 570873.349 | 1043.06 | Grab | BP | 0.0228 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-001 | Homewood | FWGCBLmw-001C-093-GW | 10/21/2009 | 2343659.08 | 559405.12 | 1178.5 | Grab | BP | 0.0145 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-003 | Homewood | FWGCBLmw-003C-095-GW | 10/22/2009 | 2343967.67 | 559697.13 | 1172.22 | Grab | BP | 0.0053 | J | B | L | 0.01 | 0.0018 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-004 | Homewood | FWGCBLmw-004C-096-GW | 10/22/2009 | 2343687.21 | 559950 | 1172.08 | Grab | BP | 0.0662 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-171 | Homewood | FWGFBQmw-171C-138-GW | 10/22/2009 | 2350072.44 | 554230.93 | 1140.49 | Grab | BP | 0.0669 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-172 | Homewood | FWGFBQmw-172C-139-GW | 10/22/2009 | 2349907.37 | 554322.17 | 1145.71 | Grab | BP | 1.86 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-173 | Homewood | FWGFBQmw-173C-140-GW | 10/22/2009 | 2350449.01 | 554491.35 | 1162.43 | Grab | BP | 1.01 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-174 | Homewood | FWGFBQmw-174C-141-GW | 10/22/2009 | 2350289.81 | 554142.44 | 1135.78 | Grab | BP | 0.0372 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-175 | Homewood | FWGFBQmw-175C-142-GW | 10/22/2009 | 2350297.98 | 553989.24 | 1137.16 | Grab | BP | 0.0415 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-177 | Homewood | FWGFBQmw-177C-144-GW | 10/22/2009 | 2350112.18 | 553321.94 | 1125.73 | Grab | BP | 1.09 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-003 | Homewood | FWGLL6mw-003C-003-GW | 10/21/2009 | 2353048.684 | 553544.3432 | 1125.3837 | Grab | BP | 1.16 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-004 | Homewood | FWGLL6mw-004C-004-GW | 10/21/2009 | 2353368.787 | 553431.8182 | 1125.3851 | Grab | BP | 0.0275 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-001 | Homewood | FWGLL5mw-001C-065-GW | 10/21/2009 | 2354627.07 | 554321.25 | 1125 | Grab | BP | 0.377 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-002 | Homewood | FWGLL5mw-002C-066-GW | 10/21/2009 | 2354573.52 | 554606 | 1125.8 | Grab | BP | 0.829 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-004 | Homewood | FWGLL5mw-004C-068-GW | 10/21/2009 | 2355008.44 | 554071.73 | 1122.9 | Grab | BP | 2.04 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-005 | Homewood | FWGLL5mw-005C-069-GW | 10/22/2009 | 2354424.02 | 554154.73 | 1126.5 | Grab | BP | 1.24 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-006 | Homewood | FWGLL5mw-006C-070-GW | 10/21/2009 | 2354730 | 553981.82 | 1125.1 | Grab | BP | 1.46 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-003 | Homewood | FWGLL7mw-003C-1432-GW | 10/12/2009 | 2352349.51 | 555414.33 | 1118.23 | Grab | BP | 1.33 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-004 | Homewood | FWGLL7mw-004C-1433-GW | 10/12/2009 | 2352036.23 | 555583.15 | 1123.3 | Grab | BP | 1.24 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-005 | Homewood | FWGLL8mw-005C-1440-GW | 10/13/2009 | 2351750 | 551522 | 1112.51 | Grab | BP | 2.91 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-006 | Homewood | FWGLL8mw-006C-1441-GW | 10/13/2009 | 2351480 | 551295 | 1114.33 | Grab | BP | 0.21 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-001 | Homewood | FWGLL9mw-001C-1442-GW | 10/13/2009 | 2355817.04 | 556125.81 | 1134.62 | Grab | BP | 0.0556 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-002 | Homewood | FWGLL9mw-002C-1443-GW | 10/13/2009 | 2355907.76 | 556755.11 | 1127.3 | Grab | BP | 0.0178 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-003 | Homewood | FWGLL9mw-003C-1444-GW | 10/13/2009 | 2356635.21 | 556445.31 | 1135.76 | Grab | BP | 0.355 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-43 Load Line 10 | L10mw-001 | Homewood | FWGLL10mw-001C-1449-GW | 10/13/2009 | 2355272.22 | 555818.25 | 1130 | Grab | BP | 0.0267 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-43 Load Line 10 | L10mw-002 | Homewood | FWGLL10mw-002C-1450-GW | 10/13/2009 | 2355712.51 | 555525.36 | 1124.4 | Grab | BP | 0.0045 | J | B | L | 0.01 | 0.0018 | 1 |
| RVAAP-43 Load Line 10 | L10mw-003 | Homewood | FWGLL10mw-003C-1451-GW | 10/13/2009 | 2355387.92 | 555496.71 | 1127.4 | Grab | BP | 0.002 | J | B | L | 0.01 | 0.0018 | 1 |
| RVAAP-43 Load Line 10 | L10mw-004 | Homewood | FWGLL10mw-004C-1452-GW | 10/14/2009 | 2355440.2 | 555234.59 | 1119.6 | Grab | BP | 0.0873 | | | | 0.01 | 0.0018 | 1 |
| RVAAP-43 Load Line 10 | L10mw-005 | Homewood | FWGLL10mw-005C-1453-GW | 10/14/2009 | 2355941.55 | 555382.53 | 1122.9 | Grab | BP | 2.11 | | | | 0.01 | 0.0018 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Mercury | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|-----------------------|-------------|-------------|-------------|-----------|-------------|--------|---------|--------|------|--------|--------|---------|----|
| RVAAP-02 Erie Burning Grounds | EBGmw-123 | Unconsolidated | FWGEBGmw-123C-125-GW | 10/19/2009 | 2380049.21 | 571747.04 | 945.59 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-124 | Unconsolidated | FWGEBGmw-124C-126-GW | 10/19/2009 | 2380030.24 | 571618.07 | 939.02 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-126 | Unconsolidated | FWGEBGmw-126C-128-GW | 10/19/2009 | 2380307.31 | 572348.81 | 938.2 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-127 | Unconsolidated | FWGEBGmw-127C-129-GW | 10/19/2009 | 2380172.16 | 571083.61 | 940.21 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-128 | Unconsolidated | FWGEBGmw-128C-130-GW | 10/19/2009 | 2379892.79 | 570970.32 | 942.47 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-129 | Unconsolidated | FWGEBGmw-129C-131-GW | 10/19/2009 | 2379240.52 | 572035.68 | 941.97 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-130 | Unconsolidated | FWGEBGmw-130C-132-GW | 10/19/2009 | 2379220.69 | 570695.61 | 941.18 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-104 | Unconsolidated | FWGDA2mw-104C-115-GW | 10/21/2009 | 2354773.248 | 561125.7023 | 1070.8244 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-107 | Unconsolidated | FWGDA2mw-107C-118-GW | 10/21/2009 | 2354923.231 | 560482.7171 | 1039.1815 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-108 | Unconsolidated | FWGDA2mw-108C-119-GW | 10/21/2009 | 2355602.421 | 560184.5864 | 1029.9156 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-109 | Unconsolidated | FWGDA2mw-109C-120-GW | 10/21/2009 | 2354796.85 | 559897.6695 | 1068.6588 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-110 | Unconsolidated | FWGDA2mw-110C-121-GW | 10/21/2009 | 2355195.202 | 559922.3928 | 1061.3878 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-112 | Unconsolidated | FWGDA2mw-112C-123-GW | 10/21/2009 | 2355019.568 | 560374.5046 | 1034.8724 | Grab | BP | 0.00019 | J | B | L | 0.0002 | 0.00016 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-113 | Unconsolidated | FWGDA2mw-113C-124-GW | 10/21/2009 | 2355150.554 | 560392.8898 | 1034.5126 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-1 | Unconsolidated | FWGDETMw-001-111-GW | 10/21/2009 | 2354959.47 | 560820.03 | 1063.97 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-2 | Unconsolidated | FWGDETMw-002C-115-GW | 10/21/2009 | 2355360.33 | 560664.71 | 1062.69 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-3 | Unconsolidated | FWGDETMw-003C-1488-GW | 10/14/2009 | 2355204.94 | 560456.1 | 1035.56 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-006 | Unconsolidated | FWGWBGmw-006C-171-GW | 10/20/2009 | 2359087.79 | 563008.87 | 1010.38 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-007 | Unconsolidated | FWGWBGmw-007C-172-GW | 10/20/2009 | 2360420.44 | 562479.87 | 995.33 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-009 | Unconsolidated | FWGWBGmw-009C-174-GW | 10/20/2009 | 2357159.2 | 561603.54 | 1042 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-010 | Unconsolidated | FWGWBGmw-010C-175-GW | 10/20/2009 | 2356051.96 | 562893.2 | 1069.85 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-011 | Unconsolidated | FWGWBGmw-011C-176-GW | 10/20/2009 | 2356187.29 | 562609.18 | 1072.38 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-012 | Unconsolidated | FWGWBGmw-012C-177-GW | 10/20/2009 | 2354810.65 | 562240.9 | 1079.11 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-013 | Unconsolidated | FWGWBGmw-013C-178-GW | 10/20/2009 | 2355223.25 | 561518.27 | 1071.7 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-014 | Unconsolidated | FWGWBGmw-014C-179-GW | 10/20/2009 | 2360439.22 | 562061.26 | 996.78 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-015 | Unconsolidated | FWGWBGmw-015C-180-GW | 10/20/2009 | 2359182.41 | 562340.12 | 1011.6 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-016 | Unconsolidated | FWGWBGmw-016C-181-GW | 10/20/2009 | 2360645.88 | 562709.13 | 997.03 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-017 | Unconsolidated | FWGWBGmw-017C-182-GW | 10/20/2009 | 2359603.84 | 562913.24 | 1006.62 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-064 | Unconsolidated | FWGLL1mw-064-022-GW | 10/19/2009 | 2380286.973 | 563118.7363 | 932 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-065 | Unconsolidated | FWGLL1mw-065-023-GW | 10/19/2009 | 2380452.003 | 560916.9225 | 940 | Grab | BP | 0.00038 | | | | 0.0002 | 0.00016 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-193 | Unconsolidated | FWGLL4mw-193-057-GW | 10/21/2009 | 2364236.52 | 554960.27 | 982.92 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-194 | Unconsolidated | FWGLL4mw-194C-058-GW | 10/16/2009 | 2364584.86 | 555089.22 | 983.76 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-196 | Unconsolidated | FWGLL4mw-196C-060-GW | 10/16/2009 | 2365297.1 | 555213.52 | 984.55 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-197 | Unconsolidated | FWGLL4mw-197C-061-GW | 10/16/2009 | 2365384.91 | 555397.05 | 985.46 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-198 | Unconsolidated | FWGLL4mw-198C-062-GW | 10/21/2009 | 2364991.19 | 555442.04 | 983.42 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-199 | Unconsolidated | FWGLL4mw-199C-063-GW | 10/16/2009 | 2365420.78 | 554621.62 | 977.28 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-200 | Unconsolidated | FWGLL4mw-200-064-GW | 10/21/2009 | 2365903.05 | 554580.15 | 987.93 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-12 Load Line 12 | L12mw-107 | Unconsolidated | FWGLL12mw-107C-072-GW | 10/16/2009 | 2368595.67 | 556759.02 | 978.03 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-12 Load Line 12 | L12mw-128 | Unconsolidated | FWGLL12mw-128C-074-GW | 10/16/2009 | 2368293.2 | 557371.54 | 976.21 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-12 Load Line 12 | L12mw-153 | Unconsolidated | FWGLL12mw-153C-075-GW | 10/16/2009 | 2368138.87 | 557823.23 | 975.34 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-12 Load Line 12 | L12mw-154 | Unconsolidated | FWGLL12mw-154C-076-GW | 10/16/2009 | 2368183.88 | 557754.56 | 977 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-12 Load Line 12 | L12mw-182 | Unconsolidated | FWGLL12mw-182C-077-GW | 10/16/2009 | 2368853.2 | 555890.35 | 982.2 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-12 Load Line 12 | L12mw-188 | Unconsolidated | FWGLL12mw-188C-083-GW | 10/15/2009 | 2367908.82 | 558132.59 | 978.46 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-12 Load Line 12 | L12mw-242 | Unconsolidated | FWGLL12mw-242C-085-GW | 10/15/2009 | 2368545.29 | 558020.51 | 980 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-12 Load Line 12 | L12mw-243 | Unconsolidated | FWGLL12mw-243C-086-GW | 10/16/2009 | 2368190.04 | 557376.32 | 978 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-12 Load Line 12 | L12mw-244 | Unconsolidated | FWGLL12mw-244C-087-GW | 10/16/2009 | 2368751.42 | 557377.17 | 980 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-12 Load Line 12 | L12mw-245 | Unconsolidated | FWGLL12mw-245C-088-GW | 10/16/2009 | 2368370.74 | 557044.55 | 978 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-12 Load Line 12 | L12mw-246 | Unconsolidated | FWGLL12mw-246C-089-GW | 10/16/2009 | 2369432.17 | 556658.89 | 982.96 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-166 | Unconsolidated | FWGFBQmw-166C-133-GW | 10/22/2009 | 2349584.33 | 553123.86 | 1104.87 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-167 | Unconsolidated | FWGFBQmw-167C-134-GW | 10/22/2009 | 2349675.45 | 553556.12 | 1112.05 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-176 | Unconsolidated | FWGFBQmw-176C-143-GW | 10/22/2009 | 2350219.45 | 553273.33 | 1129.57 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-024 | Unconsolidated | FWGLNWmw-024C-145-GW | 10/20/2009 | 2358400 | 564828 | 1035.3 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-025 | Unconsolidated | FWGLNWmw-025C-146-GW | 10/20/2009 | 2358420 | 565070 | 1027.2 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-026 | Unconsolidated | FWGLNWmw-026C-147-GW | 10/20/2009 | 2358950 | 564656 | 1025 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOO | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Mercury | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|---------|--------|------|--------|--------|---------|----|
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-027 | Unconsolidated | FWGLNWmw-027C-148-GW | 10/20/2009 | 2358630 | 564519 | 1024.4 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-001 | Unconsolidated | FWGMBSmw-001C-183-GW | 10/20/2009 | 2345323 | 550759.5 | 1079.68 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-002 | Unconsolidated | FWGMBSmw-002C-184-GW | 10/20/2009 | 2345322.3 | 550886.2 | 1080.5 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-003 | Unconsolidated | FWGMBSmw-003C-185-GW | 10/20/2009 | 2345172.4 | 550922.8 | 1082.45 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-004 | Unconsolidated | FWGMBSmw-004C-186-GW | 10/20/2009 | 2345134.2 | 550767.9 | 1079.55 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-005 | Unconsolidated | FWGMBSmw-005C-187-GW | 10/20/2009 | 2345354.1 | 550800.7 | 1080.5 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-006 | Unconsolidated | FWGMBSmw-006C-188-GW | 10/20/2009 | 2345282.3 | 550726.1 | 1080.29 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-001 | Unconsolidated | FWGCPmw-001C-105-GW | 10/21/2009 | 2368948.852 | 560440.9741 | 975.2594 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-004 | Unconsolidated | FWGCPmw-004C-108-GW | 10/21/2009 | 2368674.21 | 561843.2791 | 981.198 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-006 | Unconsolidated | FWGCPmw-006C-110-GW | 10/21/2009 | 2367727.191 | 562830.039 | 965.13 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-001 | Unconsolidated | FWGLL6mw-001C-001-GW | 10/21/2009 | 2353153.227 | 554214.8365 | 1124.1607 | Grab | B | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-002 | Unconsolidated | FWGLL6mw-002C-002-GW | 10/21/2009 | 2353820.091 | 553589.8815 | 1129.3631 | Grab | B | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-107 | Unconsolidated | FWGNTAmw-107C-149-GW | 10/20/2009 | 2345432.73 | 551699.09 | 1077.65 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-108 | Unconsolidated | FWGNTAmw-108C-150-GW | 10/20/2009 | 2345782.17 | 551917.92 | 1083.22 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-109 | Unconsolidated | FWGNTAmw-109C-151-GW | 10/20/2009 | 2345996.99 | 551291.19 | 1076.89 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-110 | Unconsolidated | FWGNTAmw-110C-152-GW | 10/20/2009 | 2346436.82 | 551350.8 | 1080.03 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-111 | Unconsolidated | FWGNTAmw-111C-153-GW | 10/20/2009 | 2346640.16 | 551538.99 | 1078.07 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-112 | Unconsolidated | FWGNTAmw-112C-154-GW | 10/20/2009 | 2346889.01 | 551708.76 | 1075.36 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-113 | Unconsolidated | FWGNTAmw-113C-155-GW | 10/20/2009 | 2347081.15 | 551487.86 | 1072.61 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-115 | Unconsolidated | FWGNTAmw-115C-157-GW | 10/20/2009 | 2347582.94 | 551793.39 | 1086.91 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-116 | Unconsolidated | FWGNTAmw-116C-158-GW | 10/20/2009 | 2348196.78 | 551749.39 | 1091.68 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-117 | Unconsolidated | FWGNTAmw-117C-159-GW | 10/20/2009 | 2347994.79 | 551586.36 | 1091.67 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-118 | Unconsolidated | FWGNTAmw-118C-160-GW | 10/20/2009 | 2347608.09 | 551333.89 | 1078.86 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-003 | Unconsolidated | FWGLL5mw-003C-067-GW | 10/21/2009 | 2354962.47 | 554533.41 | 1124.7 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-001 | Unconsolidated | FWGLL8mw-001C-1436-GW | 10/13/2009 | 2351660 | 552609 | 1118.69 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-002 | Unconsolidated | FWGLL8mw-002C-1437-GW | 10/13/2009 | 2351010 | 552410 | 1121.67 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-003 | Unconsolidated | FWGLL8mw-003C-1438-GW | 10/13/2009 | 2351360 | 552231 | 1116.3 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-004 | Unconsolidated | FWGLL8mw-004C-1439-GW | 10/13/2009 | 2351260 | 551808 | 1112.73 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-43 Load Line 10 | L10mw-006 | Unconsolidated | FWGLL10mw-006C-1454-GW | 10/14/2009 | 2355656.8 | 554997.25 | 1121.2 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-001 | Unconsolidated | FWGLL11mw-001C-1455-GW | 10/14/2009 | 2352778.81 | 557504.98 | 1100.16 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-006 | Unconsolidated | FWGLL11mw-006C-1459-GW | 10/14/2009 | 2352521.51 | 558263.51 | 1086.5 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-008 | Unconsolidated | FWGLL11mw-008C-1460-GW | 10/14/2009 | 2352388.57 | 557981.26 | 1087.74 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-009 | Unconsolidated | FWGLL11mw-009C-1461-GW | 10/14/2009 | 2352577.21 | 557901.2 | 1088.28 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-010 | Unconsolidated | FWGLL11mw-010C-1462-GW | 10/14/2009 | 2352038.91 | 557675.59 | 1082.68 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-001 | Unconsolidated | FWGCBPmw-001C-097-GW | 10/21/2009 | 2367095.431 | 561616.171 | 975.8411 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-002 | Unconsolidated | FWGCBPmw-002C-098-GW | 10/21/2009 | 2367295.684 | 561865.9216 | 970.0359 | Grab | BP | 0.00016 | U | U | P | 0.0002 | 0.00016 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-003 | Unconsolidated | FWGCBPmw-003C-099-GW | 10/21/2009 | 2366768.739 | 561944.2018 | 974.6665 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-004 | Unconsolidated | FWGCBPmw-004C-100-GW | 10/21/2009 | 2366978.819 | 562123.8244 | 971.1285 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-005 | Unconsolidated | FWGCBPmw-005C-101-GW | 10/21/2009 | 2366919.482 | 562311.8596 | 971.5897 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-006 | Unconsolidated | FWGCBPmw-006C-102-GW | 10/21/2009 | 2367243.659 | 562311.9449 | 967.6448 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-007 | Unconsolidated | FWGCBPmw-007C-103-GW | 10/21/2009 | 2366512.573 | 562006.343 | 976.3736 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-007 | Unconsolidated | FWGASYmw-007C-1469-GW | 10/15/2009 | 2366840 | 556820 | 981.4 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-008 | Unconsolidated | FWGASYmw-008C-1470-GW | 10/15/2009 | 2367470 | 557086 | 976.2 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-010 | Unconsolidated | FWGASYmw-010C-1472-GW | 10/15/2009 | 2366980 | 557273 | 978.2 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| Site-wide Background Areas | BKGmw-004 | Unconsolidated | FWGBKGmw-004C-007-GW | 10/21/2009 | 2368852.973 | 569464.763 | 965.16 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| Site-wide Background Areas | BKGmw-005 | Unconsolidated | FWGBKGmw-005C-008-GW | 10/22/2009 | 2340835.864 | 562288.445 | 1149.443 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| Site-wide Background Areas | BKGmw-013 | Unconsolidated | FWGBKGmw-013C-013-GW | 10/21/2009 | 2361627.394 | 558269.158 | 986.588 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| Site-wide Background Areas | BKGmw-016 | Unconsolidated | FWGBKGmw-016C-015-GW | 10/22/2009 | 2342407.075 | 553983.501 | 1098.419 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| Site-wide Background Areas | BKGmw-017 | Unconsolidated | FWGBKGmw-017C-016-GW | 10/22/2009 | 2346115.351 | 562452.044 | 1132.799 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| Site-wide Background Areas | BKGmw-019 | Unconsolidated | FWGBKGmw-019C-018-GW | 10/22/2009 | 2349882.142 | 559864.549 | 1108.239 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| Site-wide Background Areas | BKGmw-020 | Unconsolidated | FWGBKGmw-020C-019-GW | 10/21/2009 | 2357856.237 | 558756.241 | 1065.001 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| Site-wide Background Areas | BKGmw-021 | Unconsolidated | FWGBKGmw-021C-020-GW | 10/21/2009 | 2367622.953 | 571016.748 | 972.159 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Mercury | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|---------|--------|------|--------|--------|---------|----|
| RVAAP-01 Ramsdell Quarry Landfill | RQLmw-009 | Sharon | FWGRQLmw-009C-1487-GW | 10/14/2009 | 2376253.654 | 566351.1994 | 964 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-078 | Sharon | FWGLL1mw-078-025-GW | 10/19/2009 | 2376275.854 | 564623.871 | 995.84 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-080 | Sharon | FWGLL1mw-080-027-GW | 10/19/2009 | 2376845.072 | 562479.728 | 996.27 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-082 | Sharon | FWGLL1mw-082-029-GW | 10/19/2009 | 2376977.379 | 562956.86 | 1006.45 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-060 | Sharon | FWGLL2mw-060C-034-GW | 10/19/2009 | 2375978 | 558022 | 958.13 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-263 | Sharon | FWGLL2mw-263-037-GW | 10/19/2009 | 2374290.29 | 561590.92 | 1009.42 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-264 | Sharon | FWGLL2mw-264-038-GW | 10/19/2009 | 2374532.76 | 561173.63 | 1010.1 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-267 | Sharon | FWGLL2mw-267C-041-GW | 10/19/2009 | 2373714.17 | 561393.73 | 1012.81 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-268 | Sharon | FWGLL2mw-268-042-GW | 10/19/2009 | 2374156.4 | 560831.44 | 1015.47 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-269 | Sharon | FWGLL2mw-269-043-GW | 10/20/2009 | 2374756.74 | 559483.9 | 1009.49 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-270 | Sharon | FWGLL2mw-270-044-GW | 10/19/2009 | 2372858.94 | 562656.18 | 1009.93 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-238 | Sharon | FWGLL3mw-238C-051-GW | 10/20/2009 | 2370624.55 | 559569.39 | 1006.91 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-239 | Sharon | FWGLL3mw-239-052-GW | 10/20/2009 | 2370894.17 | 559101.84 | 1003.5 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-241 | Sharon | FWGLL3mw-241-054-GW | 10/20/2009 | 2370332.94 | 559299 | 994.65 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-242 | Sharon | FWGLL3mw-242-055-GW | 10/21/2009 | 2371993.44 | 557035.28 | 999.32 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-243 | Sharon | FWGLL3mw-243C-056-GW | 10/21/2009 | 2371532.06 | 556688.5 | 991.16 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-12 Load Line 12 | L12mw-186 | Sharon | FWGLL12mw-186C-081-GW | 10/15/2009 | 2367912.39 | 559065.95 | 976.34 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-12 Load Line 12 | L12mw-189 | Sharon | FWGLL12mw-189C-084-GW | 10/15/2009 | 2367945.92 | 558569.27 | 976.17 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-13 Building 1200 | B12mw-011 | Sharon | FWGB12mw-011C-091-GW | 10/21/2009 | 2371420 | 565690 | 1003.76 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-001 | Sharon | FWGASYmw-001C-1463-GW | 10/14/2009 | 2366262.85 | 558406.04 | 978.4 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-002 | Sharon | FWGASYmw-002C-1464-GW | 10/15/2009 | 2366170 | 557890 | 982 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-003 | Sharon | FWGASYmw-003C-1465-GW | 10/15/2009 | 2366650 | 558014 | 979.7 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-005 | Sharon | FWGASYmw-005C-1467-GW | 10/15/2009 | 2367450 | 557785 | 977.6 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-006 | Sharon | FWGASYmw-006C-1468-GW | 10/15/2009 | 2366750 | 557256 | 980.2 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-009 | Sharon | FWGASYmw-009C-1471-GW | 10/15/2009 | 2366630 | 557606 | 979.9 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| Site-wide Background Areas | BKGmw-012 | Sharon | FWGBKGMw-012C-012-GW | 10/21/2009 | 2367795.226 | 563918.862 | 997.574 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| Site-wide Background Areas | BKGmw-018 | Sharon | FWGBKGMw-018C-017-GW | 10/21/2009 | 2354993.909 | 570873.349 | 1043.06 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-001 | Homewood | FWGCBLmw-001C-093-GW | 10/21/2009 | 2343659.08 | 559405.12 | 1178.5 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-003 | Homewood | FWGCBLmw-003C-095-GW | 10/22/2009 | 2343967.67 | 559697.13 | 1172.22 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-004 | Homewood | FWGCBLmw-004C-096-GW | 10/22/2009 | 2343687.21 | 559950 | 1172.08 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-171 | Homewood | FWGFBQmw-171C-138-GW | 10/22/2009 | 2350072.44 | 554230.93 | 1140.49 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-172 | Homewood | FWGFBQmw-172C-139-GW | 10/22/2009 | 2349907.37 | 554322.17 | 1145.71 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-173 | Homewood | FWGFBQmw-173C-140-GW | 10/22/2009 | 2350449.01 | 554491.35 | 1162.43 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-174 | Homewood | FWGFBQmw-174C-141-GW | 10/22/2009 | 2350289.81 | 554142.44 | 1135.78 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-175 | Homewood | FWGFBQmw-175C-142-GW | 10/22/2009 | 2350297.98 | 553989.24 | 1137.16 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-177 | Homewood | FWGFBQmw-177C-144-GW | 10/22/2009 | 2350112.18 | 553321.94 | 1125.73 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-003 | Homewood | FWGLL6mw-003C-003-GW | 10/21/2009 | 2353048.684 | 553544.3432 | 1125.3837 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-004 | Homewood | FWGLL6mw-004C-004-GW | 10/21/2009 | 2353368.787 | 553431.8182 | 1125.3851 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-001 | Homewood | FWGLL5mw-001C-065-GW | 10/21/2009 | 2354627.07 | 554321.25 | 1125 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-002 | Homewood | FWGLL5mw-002C-066-GW | 10/21/2009 | 2354573.52 | 554606 | 1125.8 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-004 | Homewood | FWGLL5mw-004C-068-GW | 10/21/2009 | 2355008.44 | 554071.73 | 1122.9 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-005 | Homewood | FWGLL5mw-005C-069-GW | 10/22/2009 | 2354424.02 | 554154.73 | 1126.5 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-006 | Homewood | FWGLL5mw-006C-070-GW | 10/21/2009 | 2354730 | 553981.82 | 1125.1 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-003 | Homewood | FWGLL7mw-003C-1432-GW | 10/12/2009 | 2352349.51 | 555414.33 | 1118.23 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-004 | Homewood | FWGLL7mw-004C-1433-GW | 10/12/2009 | 2352036.23 | 555583.15 | 1123.3 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-005 | Homewood | FWGLL8mw-005C-1440-GW | 10/13/2009 | 2351750 | 551522 | 1112.51 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-006 | Homewood | FWGLL8mw-006C-1441-GW | 10/13/2009 | 2351480 | 551295 | 1114.33 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-001 | Homewood | FWGLL9mw-001C-1442-GW | 10/13/2009 | 2355817.04 | 556125.81 | 1134.62 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-002 | Homewood | FWGLL9mw-002C-1443-GW | 10/13/2009 | 2355907.76 | 556755.11 | 1127.3 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-003 | Homewood | FWGLL9mw-003C-1444-GW | 10/13/2009 | 2356635.21 | 556445.31 | 1135.76 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-43 Load Line 10 | L10mw-001 | Homewood | FWGLL10mw-001C-1449-GW | 10/13/2009 | 2355272.22 | 555818.25 | 1130 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-43 Load Line 10 | L10mw-002 | Homewood | FWGLL10mw-002C-1450-GW | 10/13/2009 | 2355712.51 | 555525.36 | 1124.4 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-43 Load Line 10 | L10mw-003 | Homewood | FWGLL10mw-003C-1451-GW | 10/13/2009 | 2355387.92 | 555496.71 | 1127.4 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-43 Load Line 10 | L10mw-004 | Homewood | FWGLL10mw-004C-1452-GW | 10/14/2009 | 2355440.2 | 555234.59 | 1119.6 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |
| RVAAP-43 Load Line 10 | L10mw-005 | Homewood | FWGLL10mw-005C-1453-GW | 10/14/2009 | 2355941.55 | 555382.53 | 1122.9 | Grab | BP | 0.00016 | U | U | | 0.0002 | 0.00016 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Nickel | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|-----------------------|-------------|-------------|-------------|-----------|-------------|--------|------------|--------|-----------|--------|------|--------|----|
| RVAAP-02 Erie Burning Grounds | EBGmw-123 | Unconsolidated | FWGEBGmw-123C-125-GW | 10/19/2009 | 2380049.21 | 571747.04 | 945.59 | Grab | BP | 0.0045 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-124 | Unconsolidated | FWGEBGmw-124C-126-GW | 10/19/2009 | 2380030.24 | 571618.07 | 939.02 | Grab | BP | 0.0766 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-126 | Unconsolidated | FWGEBGmw-126C-128-GW | 10/19/2009 | 2380307.31 | 572348.81 | 938.2 | Grab | BP | 0.0065 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-127 | Unconsolidated | FWGEBGmw-127C-129-GW | 10/19/2009 | 2380172.16 | 571083.61 | 940.21 | Grab | BP | 0.0036 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-128 | Unconsolidated | FWGEBGmw-128C-130-GW | 10/19/2009 | 2379892.79 | 570970.32 | 942.47 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-129 | Unconsolidated | FWGEBGmw-129C-131-GW | 10/19/2009 | 2379240.52 | 572035.68 | 941.97 | Grab | BP | 0.0087 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-130 | Unconsolidated | FWGEBGmw-130C-132-GW | 10/19/2009 | 2379220.69 | 570695.61 | 941.18 | Grab | BP | 0.0036 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-104 | Unconsolidated | FWGDA2mw-104C-115-GW | 10/21/2009 | 2354773.248 | 561125.7023 | 1070.8244 | Grab | BP | 0.0048 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-107 | Unconsolidated | FWGDA2mw-107C-118-GW | 10/21/2009 | 2354923.231 | 560482.7171 | 1039.1815 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-108 | Unconsolidated | FWGDA2mw-108C-119-GW | 10/21/2009 | 2355602.421 | 560184.5864 | 1029.9156 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-109 | Unconsolidated | FWGDA2mw-109C-120-GW | 10/21/2009 | 2354796.85 | 559897.6695 | 1068.6588 | Grab | BP | 0.0118 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-110 | Unconsolidated | FWGDA2mw-110C-121-GW | 10/21/2009 | 2355195.202 | 559922.3928 | 1061.3878 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-112 | Unconsolidated | FWGDA2mw-112C-123-GW | 10/21/2009 | 2355019.568 | 560374.5046 | 1034.8724 | Grab | BP | 0.0362 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-113 | Unconsolidated | FWGDA2mw-113C-124-GW | 10/21/2009 | 2355150.554 | 560392.8898 | 1034.5126 | Grab | BP | 0.0056 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-1 | Unconsolidated | FWGDETMw-001-111-GW | 10/21/2009 | 2354959.47 | 560820.03 | 1063.97 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-2 | Unconsolidated | FWGDETMw-002C-115-GW | 10/21/2009 | 2355360.33 | 560664.71 | 1062.69 | Grab | BP | 0.0056 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-3 | Unconsolidated | FWGDETMw-003C-1488-GW | 10/14/2009 | 2355204.94 | 560456.1 | 1035.56 | Grab | BP | 0.0022 UJ | B | Cb,L | | 0.01 | 0.0022 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-006 | Unconsolidated | FWGWBGmw-006C-171-GW | 10/20/2009 | 2359087.79 | 563008.87 | 1010.38 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-007 | Unconsolidated | FWGWBGmw-007C-172-GW | 10/20/2009 | 2360420.44 | 562479.87 | 995.33 | Grab | BP | 0.104 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-009 | Unconsolidated | FWGWBGmw-009C-174-GW | 10/20/2009 | 2357159.2 | 561603.54 | 1042 | Grab | BP | 0.0034 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-010 | Unconsolidated | FWGWBGmw-010C-175-GW | 10/20/2009 | 2356051.96 | 562893.2 | 1069.85 | Grab | BP | 0.0034 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-011 | Unconsolidated | FWGWBGmw-011C-176-GW | 10/20/2009 | 2356187.29 | 562609.18 | 1072.38 | Grab | BP | 0.0083 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-012 | Unconsolidated | FWGWBGmw-012C-177-GW | 10/20/2009 | 2354810.65 | 562240.9 | 1079.11 | Grab | BP | 0.0375 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-013 | Unconsolidated | FWGWBGmw-013C-178-GW | 10/20/2009 | 2355223.25 | 561518.27 | 1071.7 | Grab | BP | 0.0101 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-014 | Unconsolidated | FWGWBGmw-014C-179-GW | 10/20/2009 | 2360439.22 | 562061.26 | 996.78 | Grab | BP | 0.0054 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-015 | Unconsolidated | FWGWBGmw-015C-180-GW | 10/20/2009 | 2359182.41 | 562340.12 | 1011.6 | Grab | BP | 0.0066 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-016 | Unconsolidated | FWGWBGmw-016C-181-GW | 10/20/2009 | 2360645.88 | 562709.13 | 997.03 | Grab | BP | 0.0121 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-017 | Unconsolidated | FWGWBGmw-017C-182-GW | 10/20/2009 | 2359603.84 | 562913.24 | 1006.62 | Grab | BP | 0.0441 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-064 | Unconsolidated | FWGLL1mw-064-022-GW | 10/19/2009 | 2380286.973 | 563118.7363 | 932 | Grab | BP | 0.0022 U | U | P | | 0.01 | 0.0022 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-065 | Unconsolidated | FWGLL1mw-065-023-GW | 10/19/2009 | 2380452.003 | 560916.9225 | 940 | Grab | BP | 0.151 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-193 | Unconsolidated | FWGLL4mw-193-057-GW | 10/21/2009 | 2364236.52 | 554960.27 | 982.92 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-194 | Unconsolidated | FWGLL4mw-194C-058-GW | 10/16/2009 | 2364584.86 | 555089.22 | 983.76 | Grab | BP | 0.0162 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-196 | Unconsolidated | FWGLL4mw-196C-060-GW | 10/16/2009 | 2365297.1 | 555213.52 | 984.55 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-197 | Unconsolidated | FWGLL4mw-197C-061-GW | 10/16/2009 | 2365384.91 | 555397.05 | 985.46 | Grab | BP | 0.0022 UJ | B | Cb,L | | 0.01 | 0.0022 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-198 | Unconsolidated | FWGLL4mw-198C-062-GW | 10/21/2009 | 2364991.19 | 555442.04 | 983.42 | Grab | BP | 0.0295 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-199 | Unconsolidated | FWGLL4mw-199C-063-GW | 10/16/2009 | 2365420.78 | 554621.62 | 977.28 | Grab | BP | 0.0022 UJ | B | Cb,L | | 0.01 | 0.0022 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-200 | Unconsolidated | FWGLL4mw-200-064-GW | 10/21/2009 | 2365903.05 | 554580.15 | 987.93 | Grab | BP | 0.0042 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-12 Load Line 12 | L12mw-107 | Unconsolidated | FWGLL12mw-107C-072-GW | 10/16/2009 | 2368595.67 | 556759.02 | 978.03 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-12 Load Line 12 | L12mw-128 | Unconsolidated | FWGLL12mw-128C-074-GW | 10/16/2009 | 2368293.2 | 557371.54 | 976.21 | Grab | BP | 0.06 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-12 Load Line 12 | L12mw-153 | Unconsolidated | FWGLL12mw-153C-075-GW | 10/16/2009 | 2368138.87 | 557823.23 | 975.34 | Grab | BP | 0.0035 JB | BJ | Pj,F,L,Cb | | 0.01 | 0.0022 | 1 |
| RVAAP-12 Load Line 12 | L12mw-154 | Unconsolidated | FWGLL12mw-154C-076-GW | 10/16/2009 | 2368183.88 | 557754.56 | 977 | Grab | BP | 0.0108 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-12 Load Line 12 | L12mw-182 | Unconsolidated | FWGLL12mw-182C-077-GW | 10/16/2009 | 2368853.2 | 555890.35 | 982.2 | Grab | BP | 0.0022 UJ | B | Cb,L | | 0.01 | 0.0022 | 1 |
| RVAAP-12 Load Line 12 | L12mw-188 | Unconsolidated | FWGLL12mw-188C-083-GW | 10/15/2009 | 2367908.82 | 558132.59 | 978.46 | Grab | BP | 0.0076 JB | BJ | L,F | | 0.01 | 0.0022 | 1 |
| RVAAP-12 Load Line 12 | L12mw-242 | Unconsolidated | FWGLL12mw-242C-085-GW | 10/15/2009 | 2368545.29 | 558020.51 | 980 | Grab | BP | 0.0022 UJB | BJ | Cb,F,L | | 0.01 | 0.0022 | 1 |
| RVAAP-12 Load Line 12 | L12mw-243 | Unconsolidated | FWGLL12mw-243C-086-GW | 10/16/2009 | 2368190.04 | 557376.32 | 978 | Grab | BP | 0.0433 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-12 Load Line 12 | L12mw-244 | Unconsolidated | FWGLL12mw-244C-087-GW | 10/16/2009 | 2368751.42 | 557377.17 | 980 | Grab | BP | 0.148 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-12 Load Line 12 | L12mw-245 | Unconsolidated | FWGLL12mw-245C-088-GW | 10/16/2009 | 2368370.74 | 557044.55 | 978 | Grab | BP | 0.0355 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-12 Load Line 12 | L12mw-246 | Unconsolidated | FWGLL12mw-246C-089-GW | 10/16/2009 | 2369432.17 | 556658.89 | 982.96 | Grab | BP | 0.0022 UJ | B | Cb,L | | 0.01 | 0.0022 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-166 | Unconsolidated | FWGFBQmw-166C-133-GW | 10/22/2009 | 2349584.33 | 553123.86 | 1104.87 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-167 | Unconsolidated | FWGFBQmw-167C-134-GW | 10/22/2009 | 2349675.45 | 553556.12 | 1112.05 | Grab | BP | 0.0183 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-176 | Unconsolidated | FWGFBQmw-176C-143-GW | 10/22/2009 | 2350219.45 | 553273.33 | 1129.57 | Grab | BP | 0.0221 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-024 | Unconsolidated | FWGLNWmw-024C-145-GW | 10/20/2009 | 2358400 | 564828 | 1035.3 | Grab | BP | 0.0417 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-025 | Unconsolidated | FWGLNWmw-025C-146-GW | 10/20/2009 | 2358420 | 565070 | 1027.2 | Grab | BP | 0.0067 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-026 | Unconsolidated | FWGLNWmw-026C-147-GW | 10/20/2009 | 2358950 | 564656 | 1025 | Grab | BP | 0.0074 J | B | L | | 0.01 | 0.0022 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Nickel | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|------------|--------|--------|--------|------|--------|----|
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-027 | Unconsolidated | FWGLNWmw-027C-148-GW | 10/20/2009 | 2358630 | 564519 | 1024.4 | Grab | BP | 0.0055 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-001 | Unconsolidated | FWGMBSmw-001C-183-GW | 10/20/2009 | 2345323 | 550759.5 | 1079.68 | Grab | BP | 0.0028 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-002 | Unconsolidated | FWGMBSmw-002C-184-GW | 10/20/2009 | 2345322.3 | 550886.2 | 1080.5 | Grab | BP | 0.0061 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-003 | Unconsolidated | FWGMBSmw-003C-185-GW | 10/20/2009 | 2345172.4 | 550922.8 | 1082.45 | Grab | BP | 0.0027 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-004 | Unconsolidated | FWGMBSmw-004C-186-GW | 10/20/2009 | 2345134.2 | 550767.9 | 1079.55 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-005 | Unconsolidated | FWGMBSmw-005C-187-GW | 10/20/2009 | 2345354.1 | 550800.7 | 1080.5 | Grab | BP | 0.0069 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-006 | Unconsolidated | FWGMBSmw-006C-188-GW | 10/20/2009 | 2345282.3 | 550726.1 | 1080.29 | Grab | BP | 0.0037 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-001 | Unconsolidated | FWGCPmw-001C-105-GW | 10/21/2009 | 2368948.852 | 560440.9741 | 975.2594 | Grab | BP | 0.0022 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-004 | Unconsolidated | FWGCPmw-004C-108-GW | 10/21/2009 | 2368674.21 | 561843.2791 | 981.198 | Grab | BP | 0.0045 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-006 | Unconsolidated | FWGCPmw-006C-110-GW | 10/21/2009 | 2367727.191 | 562830.039 | 965.13 | Grab | BP | 0.0978 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-001 | Unconsolidated | FWGLL6mw-001C-001-GW | 10/21/2009 | 2353153.227 | 554214.8365 | 1124.1607 | Grab | B | 0.0729 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-002 | Unconsolidated | FWGLL6mw-002C-002-GW | 10/21/2009 | 2353820.091 | 553589.8815 | 1129.3631 | Grab | B | 0.11 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-107 | Unconsolidated | FWGNTAmw-107C-149-GW | 10/20/2009 | 2345432.73 | 551699.09 | 1077.65 | Grab | BP | 0.0157 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-108 | Unconsolidated | FWGNTAmw-108C-150-GW | 10/20/2009 | 2345782.17 | 551917.92 | 1083.22 | Grab | BP | 0.0099 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-109 | Unconsolidated | FWGNTAmw-109C-151-GW | 10/20/2009 | 2345996.99 | 551291.19 | 1076.89 | Grab | BP | 0.0041 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-110 | Unconsolidated | FWGNTAmw-110C-152-GW | 10/20/2009 | 2346436.82 | 551350.8 | 1080.03 | Grab | BP | 0.0049 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-111 | Unconsolidated | FWGNTAmw-111C-153-GW | 10/20/2009 | 2346640.16 | 551538.99 | 1078.07 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-112 | Unconsolidated | FWGNTAmw-112C-154-GW | 10/20/2009 | 2346889.01 | 551708.76 | 1075.36 | Grab | BP | 0.0281 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-113 | Unconsolidated | FWGNTAmw-113C-155-GW | 10/20/2009 | 2347081.15 | 551487.86 | 1072.61 | Grab | BP | 0.0968 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-115 | Unconsolidated | FWGNTAmw-115C-157-GW | 10/20/2009 | 2347582.94 | 551793.39 | 1086.91 | Grab | BP | 0.0082 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-116 | Unconsolidated | FWGNTAmw-116C-158-GW | 10/20/2009 | 2348196.78 | 551749.39 | 1091.68 | Grab | BP | 0.0106 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-117 | Unconsolidated | FWGNTAmw-117C-159-GW | 10/20/2009 | 2347994.79 | 551586.36 | 1091.67 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-118 | Unconsolidated | FWGNTAmw-118C-160-GW | 10/20/2009 | 2347608.09 | 551333.89 | 1078.86 | Grab | BP | 0.0079 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-003 | Unconsolidated | FWGLL5mw-003C-067-GW | 10/21/2009 | 2354962.47 | 554533.41 | 1124.7 | Grab | BP | 0.0522 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-001 | Unconsolidated | FWGLL8mw-001C-1436-GW | 10/13/2009 | 2351660 | 552609 | 1118.69 | Grab | BP | 0.0043 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-002 | Unconsolidated | FWGLL8mw-002C-1437-GW | 10/13/2009 | 2351010 | 552410 | 1121.67 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-003 | Unconsolidated | FWGLL8mw-003C-1438-GW | 10/13/2009 | 2351360 | 552231 | 1116.3 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-004 | Unconsolidated | FWGLL8mw-004C-1439-GW | 10/13/2009 | 2351260 | 551808 | 1112.73 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-43 Load Line 10 | L10mw-006 | Unconsolidated | FWGLL10mw-006C-1454-GW | 10/14/2009 | 2355656.8 | 554997.25 | 1121.2 | Grab | BP | 0.0044 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-001 | Unconsolidated | FWGLL11mw-001C-1455-GW | 10/14/2009 | 2352778.81 | 557504.98 | 1100.16 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-006 | Unconsolidated | FWGLL11mw-006C-1459-GW | 10/14/2009 | 2352521.51 | 558263.51 | 1086.5 | Grab | BP | 0.0028 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-008 | Unconsolidated | FWGLL11mw-008C-1460-GW | 10/14/2009 | 2352388.57 | 557981.26 | 1087.74 | Grab | BP | 0.0031 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-009 | Unconsolidated | FWGLL11mw-009C-1461-GW | 10/14/2009 | 2352577.21 | 557901.2 | 1088.28 | Grab | BP | 0.0025 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-010 | Unconsolidated | FWGLL11mw-010C-1462-GW | 10/14/2009 | 2352038.91 | 557675.59 | 1082.68 | Grab | BP | 0.0022 UJ | B | Cb,P,L | | 0.01 | 0.0022 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-001 | Unconsolidated | FWGCBPmw-001C-097-GW | 10/21/2009 | 2367095.431 | 561616.171 | 975.8411 | Grab | BP | 0.0215 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-002 | Unconsolidated | FWGCBPmw-002C-098-GW | 10/21/2009 | 2367295.684 | 561865.9216 | 970.0359 | Grab | BP | 0.0281 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-003 | Unconsolidated | FWGCBPmw-003C-099-GW | 10/21/2009 | 2366768.739 | 561944.2018 | 974.6665 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-004 | Unconsolidated | FWGCBPmw-004C-100-GW | 10/21/2009 | 2366978.819 | 562123.8244 | 971.1285 | Grab | BP | 0.0695 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-005 | Unconsolidated | FWGCBPmw-005C-101-GW | 10/21/2009 | 2366919.482 | 562311.8596 | 971.5897 | Grab | BP | 0.0314 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-006 | Unconsolidated | FWGCBPmw-006C-102-GW | 10/21/2009 | 2367243.659 | 562311.9449 | 967.6448 | Grab | BP | 0.097 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-007 | Unconsolidated | FWGCBPmw-007C-103-GW | 10/21/2009 | 2366512.573 | 562006.343 | 976.3736 | Grab | BP | 0.0022 UJ | B | Cb,L | | 0.01 | 0.0022 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-007 | Unconsolidated | FWGASYmw-007C-1469-GW | 10/15/2009 | 2366840 | 556820 | 981.4 | Grab | BP | 0.0022 UJB | BJ | Cb,F,L | | 0.01 | 0.0022 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-008 | Unconsolidated | FWGASYmw-008C-1470-GW | 10/15/2009 | 2367470 | 557086 | 976.2 | Grab | BP | 0.238 J | J | | | 0.01 | 0.0022 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-010 | Unconsolidated | FWGASYmw-010C-1472-GW | 10/15/2009 | 2366980 | 557273 | 978.2 | Grab | BP | 0.0121 | | | | 0.01 | 0.0022 | 1 |
| Site-wide Background Areas | BKGmw-004 | Unconsolidated | FWGBKGmw-004C-007-GW | 10/21/2009 | 2368852.973 | 569464.763 | 965.16 | Grab | BP | 0.0032 J | B | L | | 0.01 | 0.0022 | 1 |
| Site-wide Background Areas | BKGmw-005 | Unconsolidated | FWGBKGmw-005C-008-GW | 10/22/2009 | 2340835.864 | 562288.445 | 1149.443 | Grab | BP | 0.0211 | | | | 0.01 | 0.0022 | 1 |
| Site-wide Background Areas | BKGmw-013 | Unconsolidated | FWGBKGmw-013C-013-GW | 10/21/2009 | 2361627.394 | 558269.158 | 986.588 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| Site-wide Background Areas | BKGmw-016 | Unconsolidated | FWGBKGmw-016C-015-GW | 10/22/2009 | 2342407.075 | 553983.501 | 1098.419 | Grab | BP | 0.0037 J | B | L | | 0.01 | 0.0022 | 1 |
| Site-wide Background Areas | BKGmw-017 | Unconsolidated | FWGBKGmw-017C-016-GW | 10/22/2009 | 2346115.351 | 562452.044 | 1132.799 | Grab | BP | 0.0077 J | B | L,P | | 0.01 | 0.0022 | 1 |
| Site-wide Background Areas | BKGmw-019 | Unconsolidated | FWGBKGmw-019C-018-GW | 10/22/2009 | 2349882.142 | 559864.549 | 1108.239 | Grab | BP | 0.0099 J | B | L | | 0.01 | 0.0022 | 1 |
| Site-wide Background Areas | BKGmw-020 | Unconsolidated | FWGBKGmw-020C-019-GW | 10/21/2009 | 2357856.237 | 558756.241 | 1065.001 | Grab | BP | 0.0023 J | B | L | | 0.01 | 0.0022 | 1 |
| Site-wide Background Areas | BKGmw-021 | Unconsolidated | FWGBKGmw-021C-020-GW | 10/21/2009 | 2367622.953 | 571016.748 | 972.159 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Nickel | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|------------|--------|--------|--------|------|--------|----|
| RVAAP-01 Ramsdell Quarry Landfill | RQLmw-009 | Sharon | FWGRQLmw-009C-1487-GW | 10/14/2009 | 2376253.654 | 566351.1994 | 964 | Grab | BP | 0.0022 UJ | B | Cb,L | | 0.01 | 0.0022 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-078 | Sharon | FWGLL1mw-078-025-GW | 10/19/2009 | 2376275.854 | 564623.871 | 995.84 | Grab | BP | 0.0059 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-080 | Sharon | FWGLL1mw-080-027-GW | 10/19/2009 | 2376845.072 | 562479.728 | 996.27 | Grab | BP | 0.0355 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-082 | Sharon | FWGLL1mw-082-029-GW | 10/19/2009 | 2376977.379 | 562956.86 | 1006.45 | Grab | BP | 0.0291 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-060 | Sharon | FWGLL2mw-060C-034-GW | 10/19/2009 | 2375978 | 558022 | 958.13 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-263 | Sharon | FWGLL2mw-263-037-GW | 10/19/2009 | 2374290.29 | 561590.92 | 1009.42 | Grab | BP | 0.0115 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-264 | Sharon | FWGLL2mw-264-038-GW | 10/19/2009 | 2374532.76 | 561173.63 | 1010.1 | Grab | BP | 0.0065 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-267 | Sharon | FWGLL2mw-267C-041-GW | 10/19/2009 | 2373714.17 | 561393.73 | 1012.81 | Grab | BP | 0.004 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-268 | Sharon | FWGLL2mw-268-042-GW | 10/19/2009 | 2374156.4 | 560831.44 | 1015.47 | Grab | BP | 0.0133 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-269 | Sharon | FWGLL2mw-269-043-GW | 10/20/2009 | 2374756.74 | 559483.9 | 1009.49 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-270 | Sharon | FWGLL2mw-270-044-GW | 10/19/2009 | 2372858.94 | 562656.18 | 1009.93 | Grab | BP | 0.0074 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-238 | Sharon | FWGLL3mw-238C-051-GW | 10/20/2009 | 2370624.55 | 559569.39 | 1006.91 | Grab | BP | 0.0162 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-239 | Sharon | FWGLL3mw-239-052-GW | 10/20/2009 | 2370894.17 | 559101.84 | 1003.5 | Grab | BP | 0.008 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-241 | Sharon | FWGLL3mw-241-054-GW | 10/20/2009 | 2370332.94 | 559299 | 994.65 | Grab | BP | 0.009 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-242 | Sharon | FWGLL3mw-242-055-GW | 10/21/2009 | 2371993.44 | 557035.28 | 999.32 | Grab | BP | 0.0468 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-243 | Sharon | FWGLL3mw-243C-056-GW | 10/21/2009 | 2371532.06 | 556688.5 | 991.16 | Grab | BP | 0.0121 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-12 Load Line 12 | L12mw-186 | Sharon | FWGLL12mw-186C-081-GW | 10/15/2009 | 2367912.39 | 559065.95 | 976.34 | Grab | BP | 0.0042 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-12 Load Line 12 | L12mw-189 | Sharon | FWGLL12mw-189C-084-GW | 10/15/2009 | 2367945.92 | 558569.27 | 976.17 | Grab | BP | 0.0149 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-13 Building 1200 | B12mw-011 | Sharon | FWGB12mw-011C-091-GW | 10/21/2009 | 2371420 | 565690 | 1003.76 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-001 | Sharon | FWGASYmw-001C-1463-GW | 10/14/2009 | 2366262.85 | 558406.04 | 978.4 | Grab | BP | 0.0081 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-002 | Sharon | FWGASYmw-002C-1464-GW | 10/15/2009 | 2366170 | 557890 | 982 | Grab | BP | 0.0032 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-003 | Sharon | FWGASYmw-003C-1465-GW | 10/15/2009 | 2366650 | 558014 | 979.7 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-005 | Sharon | FWGASYmw-005C-1467-GW | 10/15/2009 | 2367450 | 557785 | 977.6 | Grab | BP | 0.0096 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-006 | Sharon | FWGASYmw-006C-1468-GW | 10/15/2009 | 2366750 | 557256 | 980.2 | Grab | BP | 0.0135 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-009 | Sharon | FWGASYmw-009C-1471-GW | 10/15/2009 | 2366630 | 557606 | 979.9 | Grab | BP | 0.0022 UJB | BJ | Cb,F,L | | 0.01 | 0.0022 | 1 |
| Site-wide Background Areas | BKGmw-012 | Sharon | FWGBKGmw-012C-012-GW | 10/21/2009 | 2367795.226 | 563918.862 | 997.574 | Grab | BP | 0.0059 J | B | L | | 0.01 | 0.0022 | 1 |
| Site-wide Background Areas | BKGmw-018 | Sharon | FWGBKGmw-018C-017-GW | 10/21/2009 | 2354993.909 | 570873.349 | 1043.06 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-001 | Homewood | FWGCBLmw-001C-093-GW | 10/21/2009 | 2343659.08 | 559405.12 | 1178.5 | Grab | BP | 0.0058 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-003 | Homewood | FWGCBLmw-003C-095-GW | 10/22/2009 | 2343967.67 | 559697.13 | 1172.22 | Grab | BP | 0.0022 UJ | B | Cb,L | | 0.01 | 0.0022 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-004 | Homewood | FWGCBLmw-004C-096-GW | 10/22/2009 | 2343687.21 | 559950 | 1172.08 | Grab | BP | 0.0022 UJ | B | Cb,L | | 0.01 | 0.0022 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-171 | Homewood | FWGFBQmw-171C-138-GW | 10/22/2009 | 2350072.44 | 554230.93 | 1140.49 | Grab | BP | 0.0051 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-172 | Homewood | FWGFBQmw-172C-139-GW | 10/22/2009 | 2349907.37 | 554322.17 | 1145.71 | Grab | BP | 0.0043 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-173 | Homewood | FWGFBQmw-173C-140-GW | 10/22/2009 | 2350449.01 | 554491.35 | 1162.43 | Grab | BP | 0.0048 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-174 | Homewood | FWGFBQmw-174C-141-GW | 10/22/2009 | 2350289.81 | 554142.44 | 1135.78 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-175 | Homewood | FWGFBQmw-175C-142-GW | 10/22/2009 | 2350297.98 | 553989.24 | 1137.16 | Grab | BP | 0.0106 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-177 | Homewood | FWGFBQmw-177C-144-GW | 10/22/2009 | 2350112.18 | 553321.94 | 1125.73 | Grab | BP | 0.0053 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-003 | Homewood | FWGLL6mw-003C-003-GW | 10/21/2009 | 2353048.684 | 553544.3432 | 1125.3837 | Grab | BP | 0.0312 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-004 | Homewood | FWGLL6mw-004C-004-GW | 10/21/2009 | 2353368.787 | 553431.8182 | 1125.3851 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-001 | Homewood | FWGLL5mw-001C-065-GW | 10/21/2009 | 2354627.07 | 554321.25 | 1125 | Grab | BP | 0.0105 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-002 | Homewood | FWGLL5mw-002C-066-GW | 10/21/2009 | 2354573.52 | 554606 | 1125.8 | Grab | BP | 0.0469 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-004 | Homewood | FWGLL5mw-004C-068-GW | 10/21/2009 | 2355008.44 | 554071.73 | 1122.9 | Grab | BP | 0.0818 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-005 | Homewood | FWGLL5mw-005C-069-GW | 10/22/2009 | 2354424.02 | 554154.73 | 1126.5 | Grab | BP | 0.0144 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-006 | Homewood | FWGLL5mw-006C-070-GW | 10/21/2009 | 2354730 | 553981.82 | 1125.1 | Grab | BP | 0.0619 | | | | 0.01 | 0.0022 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-003 | Homewood | FWGLL7mw-003C-1432-GW | 10/12/2009 | 2352349.51 | 555414.33 | 1118.23 | Grab | BP | 0.0051 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-004 | Homewood | FWGLL7mw-004C-1433-GW | 10/12/2009 | 2352036.23 | 555583.15 | 1123.3 | Grab | BP | 0.0099 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-005 | Homewood | FWGLL8mw-005C-1440-GW | 10/13/2009 | 2351750 | 551522 | 1112.51 | Grab | BP | 0.0134 | | P | | 0.01 | 0.0022 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-006 | Homewood | FWGLL8mw-006C-1441-GW | 10/13/2009 | 2351480 | 551295 | 1114.33 | Grab | BP | 0.007 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-001 | Homewood | FWGLL9mw-001C-1442-GW | 10/13/2009 | 2355817.04 | 556125.81 | 1134.62 | Grab | BP | 0.0023 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-002 | Homewood | FWGLL9mw-002C-1443-GW | 10/13/2009 | 2355907.76 | 556755.11 | 1127.3 | Grab | BP | 0.0076 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-003 | Homewood | FWGLL9mw-003C-1444-GW | 10/13/2009 | 2356635.21 | 556445.31 | 1135.76 | Grab | BP | 0.0063 J | B | L | | 0.01 | 0.0022 | 1 |
| RVAAP-43 Load Line 10 | L10mw-001 | Homewood | FWGLL10mw-001C-1449-GW | 10/13/2009 | 2355272.22 | 555818.25 | 1130 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-43 Load Line 10 | L10mw-002 | Homewood | FWGLL10mw-002C-1450-GW | 10/13/2009 | 2355712.51 | 555525.36 | 1124.4 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-43 Load Line 10 | L10mw-003 | Homewood | FWGLL10mw-003C-1451-GW | 10/13/2009 | 2355387.92 | 555496.71 | 1127.4 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-43 Load Line 10 | L10mw-004 | Homewood | FWGLL10mw-004C-1452-GW | 10/14/2009 | 2355440.2 | 555234.59 | 1119.6 | Grab | BP | 0.0022 U | U | | | 0.01 | 0.0022 | 1 |
| RVAAP-43 Load Line 10 | L10mw-005 | Homewood | FWGLL10mw-005C-1453-GW | 10/14/2009 | 2355941.55 | 555382.53 | 1122.9 | Grab | BP | 0.005 J | B | L | | 0.01 | 0.0022 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Potassium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|-----------------------|-------------|-------------|-------------|-----------|-------------|--------|-----------|--------|------|--------|----|-----|----|
| RVAAP-02 Erie Burning Grounds | EBGmw-123 | Unconsolidated | FWGEBGmw-123C-125-GW | 10/19/2009 | 2380049.21 | 571747.04 | 945.59 | Grab | BP | 1.53 | | | | 1 | 0.3 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-124 | Unconsolidated | FWGEBGmw-124C-126-GW | 10/19/2009 | 2380030.24 | 571618.07 | 939.02 | Grab | BP | 10.7 | | | | 1 | 0.3 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-126 | Unconsolidated | FWGEBGmw-126C-128-GW | 10/19/2009 | 2380307.31 | 572348.81 | 938.2 | Grab | BP | 2.25 | | | | 1 | 0.3 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-127 | Unconsolidated | FWGEBGmw-127C-129-GW | 10/19/2009 | 2380172.16 | 571083.61 | 940.21 | Grab | BP | 1.95 | | | | 1 | 0.3 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-128 | Unconsolidated | FWGEBGmw-128C-130-GW | 10/19/2009 | 2379892.79 | 570970.32 | 942.47 | Grab | BP | 0.94 J | | B | L | 1 | 0.3 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-129 | Unconsolidated | FWGEBGmw-129C-131-GW | 10/19/2009 | 2379240.52 | 572035.68 | 941.97 | Grab | BP | 3.88 | | | | 1 | 0.3 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-130 | Unconsolidated | FWGEBGmw-130C-132-GW | 10/19/2009 | 2379220.69 | 570695.61 | 941.18 | Grab | BP | 3 | | | | 1 | 0.3 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-104 | Unconsolidated | FWGDA2mw-104C-115-GW | 10/21/2009 | 2354773.248 | 561125.7023 | 1070.8244 | Grab | BP | 1.47 | | | | 1 | 0.3 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-107 | Unconsolidated | FWGDA2mw-107C-118-GW | 10/21/2009 | 2354923.231 | 560482.7171 | 1039.1815 | Grab | BP | 1.68 | | E | | 1 | 0.3 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-108 | Unconsolidated | FWGDA2mw-108C-119-GW | 10/21/2009 | 2355602.421 | 560184.5864 | 1029.9156 | Grab | BP | 3.13 | | | | 1 | 0.3 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-109 | Unconsolidated | FWGDA2mw-109C-120-GW | 10/21/2009 | 2354796.85 | 559897.6695 | 1068.6588 | Grab | BP | 2.95 | | | | 1 | 0.3 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-110 | Unconsolidated | FWGDA2mw-110C-121-GW | 10/21/2009 | 2355195.202 | 559922.3928 | 1061.3878 | Grab | BP | 0.99 J | | B | L | 1 | 0.3 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-112 | Unconsolidated | FWGDA2mw-112C-123-GW | 10/21/2009 | 2355019.568 | 560374.5046 | 1034.8724 | Grab | BP | 6.99 | | | | 1 | 0.3 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-113 | Unconsolidated | FWGDA2mw-113C-124-GW | 10/21/2009 | 2355150.554 | 560392.8898 | 1034.5126 | Grab | BP | 3.43 | | | | 1 | 0.3 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-1 | Unconsolidated | FWGDETMw-001-111-GW | 10/21/2009 | 2354959.47 | 560820.03 | 1063.97 | Grab | BP | 1.78 | | | | 1 | 0.3 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-2 | Unconsolidated | FWGDETMw-002C-112-GW | 10/21/2009 | 2355360.33 | 560664.71 | 1062.69 | Grab | BP | 6.16 | | | | 1 | 0.3 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-3 | Unconsolidated | FWGDETMw-003C-1488-GW | 10/14/2009 | 2355204.94 | 560456.1 | 1035.56 | Grab | BP | 2.03 | | | | 1 | 0.3 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-006 | Unconsolidated | FWGWBGmw-006C-171-GW | 10/20/2009 | 2359087.79 | 563008.87 | 1010.38 | Grab | BP | 0.94 J | | B | L | 1 | 0.3 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-007 | Unconsolidated | FWGWBGmw-007C-172-GW | 10/20/2009 | 2360420.44 | 562479.87 | 995.33 | Grab | BP | 11.7 | | | | 1 | 0.3 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-009 | Unconsolidated | FWGWBGmw-009C-174-GW | 10/20/2009 | 2357159.2 | 561603.54 | 1042 | Grab | BP | 0.923 J | | B | L | 1 | 0.3 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-010 | Unconsolidated | FWGWBGmw-010C-175-GW | 10/20/2009 | 2356051.96 | 562893.2 | 1069.85 | Grab | BP | 1.01 | | | | 1 | 0.3 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-011 | Unconsolidated | FWGWBGmw-011C-176-GW | 10/20/2009 | 2356187.29 | 562609.18 | 1072.38 | Grab | BP | 5.42 | | | | 1 | 0.3 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-012 | Unconsolidated | FWGWBGmw-012C-177-GW | 10/20/2009 | 2354810.65 | 562240.9 | 1079.11 | Grab | BP | 6.25 | | | | 1 | 0.3 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-013 | Unconsolidated | FWGWBGmw-013C-178-GW | 10/20/2009 | 2355223.25 | 561518.27 | 1071.7 | Grab | BP | 2.26 | | | Cb | 1 | 0.3 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-014 | Unconsolidated | FWGWBGmw-014C-179-GW | 10/20/2009 | 2360439.22 | 562061.26 | 996.78 | Grab | BP | 2 | | | | 1 | 0.3 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-015 | Unconsolidated | FWGWBGmw-015C-180-GW | 10/20/2009 | 2359182.41 | 562340.12 | 1011.6 | Grab | BP | 2.29 | | | | 1 | 0.3 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-016 | Unconsolidated | FWGWBGmw-016C-181-GW | 10/20/2009 | 2360645.88 | 562709.13 | 997.03 | Grab | BP | 2.52 | | | | 1 | 0.3 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-017 | Unconsolidated | FWGWBGmw-017C-182-GW | 10/20/2009 | 2359603.84 | 562913.24 | 1006.62 | Grab | BP | 7.67 | | | | 1 | 0.3 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-064 | Unconsolidated | FWGLL1mw-064-022-GW | 10/19/2009 | 2380286.973 | 563118.7363 | 932 | Grab | BP | 2.32 | | | | 1 | 0.3 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-065 | Unconsolidated | FWGLL1mw-065-023-GW | 10/19/2009 | 2380452.003 | 560916.9225 | 940 | Grab | BP | 18.7 | | | | 1 | 0.3 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-193 | Unconsolidated | FWGLL4mw-193-057-GW | 10/21/2009 | 2364236.52 | 554960.27 | 982.92 | Grab | BP | 1.14 | | | | 1 | 0.3 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-194 | Unconsolidated | FWGLL4mw-194C-058-GW | 10/16/2009 | 2364584.86 | 555089.22 | 983.76 | Grab | BP | 4.29 | | | | 1 | 0.3 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-196 | Unconsolidated | FWGLL4mw-196C-060-GW | 10/16/2009 | 2365297.1 | 555213.52 | 984.55 | Grab | BP | 0.951 J | | B | L | 1 | 0.3 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-197 | Unconsolidated | FWGLL4mw-197C-061-GW | 10/16/2009 | 2365384.91 | 555397.05 | 985.46 | Grab | BP | 1.37 | | | | 1 | 0.3 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-198 | Unconsolidated | FWGLL4mw-198C-062-GW | 10/21/2009 | 2364991.19 | 555442.04 | 983.42 | Grab | BP | 4 | | | | 1 | 0.3 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-199 | Unconsolidated | FWGLL4mw-199C-063-GW | 10/16/2009 | 2365420.78 | 554621.62 | 977.28 | Grab | BP | 2.74 | | E | | 1 | 0.3 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-200 | Unconsolidated | FWGLL4mw-200-064-GW | 10/21/2009 | 2365903.05 | 554580.15 | 987.93 | Grab | BP | 1.3 | | | | 1 | 0.3 | 1 |
| RVAAP-12 Load Line 12 | L12mw-107 | Unconsolidated | FWGLL12mw-107C-072-GW | 10/16/2009 | 2368595.67 | 556759.02 | 978.03 | Grab | BP | 2.43 | | | | 1 | 0.3 | 1 |
| RVAAP-12 Load Line 12 | L12mw-128 | Unconsolidated | FWGLL12mw-128C-074-GW | 10/16/2009 | 2368293.2 | 557371.54 | 976.21 | Grab | BP | 7.04 | | | | 1 | 0.3 | 1 |
| RVAAP-12 Load Line 12 | L12mw-153 | Unconsolidated | FWGLL12mw-153C-075-GW | 10/16/2009 | 2368138.87 | 557823.23 | 975.34 | Grab | BP | 2.36 | | | | 1 | 0.3 | 1 |
| RVAAP-12 Load Line 12 | L12mw-154 | Unconsolidated | FWGLL12mw-154C-076-GW | 10/16/2009 | 2368183.88 | 557754.56 | 977 | Grab | BP | 3.36 | | | | 1 | 0.3 | 1 |
| RVAAP-12 Load Line 12 | L12mw-182 | Unconsolidated | FWGLL12mw-182C-077-GW | 10/16/2009 | 2368853.2 | 555890.35 | 982.2 | Grab | BP | 3.94 | | | | 1 | 0.3 | 1 |
| RVAAP-12 Load Line 12 | L12mw-188 | Unconsolidated | FWGLL12mw-188C-083-GW | 10/15/2009 | 2367908.82 | 558132.59 | 978.46 | Grab | BP | 2.95 | | | | 1 | 0.3 | 1 |
| RVAAP-12 Load Line 12 | L12mw-242 | Unconsolidated | FWGLL12mw-242C-085-GW | 10/15/2009 | 2368545.29 | 558020.51 | 980 | Grab | BP | 2.31 | | | | 1 | 0.3 | 1 |
| RVAAP-12 Load Line 12 | L12mw-243 | Unconsolidated | FWGLL12mw-243C-086-GW | 10/16/2009 | 2368190.04 | 557376.32 | 978 | Grab | BP | 6.4 | | | | 1 | 0.3 | 1 |
| RVAAP-12 Load Line 12 | L12mw-244 | Unconsolidated | FWGLL12mw-244C-087-GW | 10/16/2009 | 2368751.42 | 557377.17 | 980 | Grab | BP | 12.3 | | | | 1 | 0.3 | 1 |
| RVAAP-12 Load Line 12 | L12mw-245 | Unconsolidated | FWGLL12mw-245C-088-GW | 10/16/2009 | 2368370.74 | 557044.55 | 978 | Grab | BP | 6.3 | | | | 1 | 0.3 | 1 |
| RVAAP-12 Load Line 12 | L12mw-246 | Unconsolidated | FWGLL12mw-246C-089-GW | 10/16/2009 | 2369432.17 | 556658.89 | 982.96 | Grab | BP | 9.07 | | | | 1 | 0.3 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-166 | Unconsolidated | FWGFBQmw-166C-133-GW | 10/22/2009 | 2349584.33 | 553123.86 | 1104.87 | Grab | BP | 1.29 | | | | 1 | 0.3 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-167 | Unconsolidated | FWGFBQmw-167C-134-GW | 10/22/2009 | 2349675.45 | 553556.12 | 1112.05 | Grab | BP | 3.59 | | | | 1 | 0.3 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-176 | Unconsolidated | FWGFBQmw-176C-143-GW | 10/22/2009 | 2350219.45 | 553273.33 | 1129.57 | Grab | BP | 5.58 | | E | | 1 | 0.3 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-024 | Unconsolidated | FWGLNWmw-024C-145-GW | 10/20/2009 | 2358400 | 564828 | 1035.3 | Grab | BP | 5.6 | | | | 1 | 0.3 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-025 | Unconsolidated | FWGLNWmw-025C-146-GW | 10/20/2009 | 2358420 | 565070 | 1027.2 | Grab | BP | 2.22 | | | | 1 | 0.3 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-026 | Unconsolidated | FWGLNWmw-026C-147-GW | 10/20/2009 | 2358950 | 564656 | 1025 | Grab | BP | 2.19 | | | | 1 | 0.3 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOO | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Potassium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|-----------|--------|------|--------|----|-----|----|
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-027 | Unconsolidated | FWGLNWmw-027C-148-GW | 10/20/2009 | 2358630 | 564519 | 1024.4 | Grab | BP | 1.7 | | E | | 1 | 0.3 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-001 | Unconsolidated | FWGMBSmw-001C-183-GW | 10/20/2009 | 2345323 | 550759.5 | 1079.68 | Grab | BP | 1.76 | | | | 1 | 0.3 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-002 | Unconsolidated | FWGMBSmw-002C-184-GW | 10/20/2009 | 2345322.3 | 550886.2 | 1080.5 | Grab | BP | 2.45 | | | | 1 | 0.3 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-003 | Unconsolidated | FWGMBSmw-003C-185-GW | 10/20/2009 | 2345172.4 | 550922.8 | 1082.45 | Grab | BP | 2.09 | | | | 1 | 0.3 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-004 | Unconsolidated | FWGMBSmw-004C-186-GW | 10/20/2009 | 2345134.2 | 550767.9 | 1079.55 | Grab | BP | 1.28 | | | | 1 | 0.3 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-005 | Unconsolidated | FWGMBSmw-005C-187-GW | 10/20/2009 | 2345354.1 | 550800.7 | 1080.5 | Grab | BP | 2.63 | | | | 1 | 0.3 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-006 | Unconsolidated | FWGMBSmw-006C-188-GW | 10/20/2009 | 2345282.3 | 550726.1 | 1080.29 | Grab | BP | 3.23 | | | | 1 | 0.3 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-001 | Unconsolidated | FWGCPmw-001C-105-GW | 10/21/2009 | 2368948.852 | 560440.9741 | 975.2594 | Grab | BP | 1.18 | | | | 1 | 0.3 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-004 | Unconsolidated | FWGCPmw-004C-108-GW | 10/21/2009 | 2368674.21 | 561843.2791 | 981.198 | Grab | BP | 1.52 | | | | 1 | 0.3 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-006 | Unconsolidated | FWGCPmw-006C-110-GW | 10/21/2009 | 2367727.191 | 562830.039 | 965.13 | Grab | BP | 12.9 | | | | 1 | 0.3 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-001 | Unconsolidated | FWGLL6mw-001C-001-GW | 10/21/2009 | 2353153.227 | 554214.8365 | 1124.1607 | Grab | B | 10.1 | | | | 1 | 0.3 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-002 | Unconsolidated | FWGLL6mw-002C-002-GW | 10/21/2009 | 2353820.091 | 553589.8815 | 1129.3631 | Grab | B | 11 | | | | 1 | 0.3 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-107 | Unconsolidated | FWGNTAmw-107C-149-GW | 10/20/2009 | 2345432.73 | 551699.09 | 1077.65 | Grab | BP | 4.54 | | | | 1 | 0.3 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-108 | Unconsolidated | FWGNTAmw-108C-150-GW | 10/20/2009 | 2345782.17 | 551917.92 | 1083.22 | Grab | BP | 2.9 | | | | 1 | 0.3 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-109 | Unconsolidated | FWGNTAmw-109C-151-GW | 10/20/2009 | 2345996.99 | 551291.19 | 1076.89 | Grab | BP | 1.45 | | | | 1 | 0.3 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-110 | Unconsolidated | FWGNTAmw-110C-152-GW | 10/20/2009 | 2346436.82 | 551350.8 | 1080.03 | Grab | BP | 2.49 | | E | | 1 | 0.3 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-111 | Unconsolidated | FWGNTAmw-111C-153-GW | 10/20/2009 | 2346640.16 | 551538.99 | 1078.07 | Grab | BP | 1.15 | | | | 1 | 0.3 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-112 | Unconsolidated | FWGNTAmw-112C-154-GW | 10/20/2009 | 2346889.01 | 551708.76 | 1075.36 | Grab | BP | 6.17 | | | | 1 | 0.3 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-113 | Unconsolidated | FWGNTAmw-113C-155-GW | 10/20/2009 | 2347081.15 | 551487.86 | 1072.61 | Grab | BP | 13.2 | | | | 1 | 0.3 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-115 | Unconsolidated | FWGNTAmw-115C-157-GW | 10/20/2009 | 2347582.94 | 551793.39 | 1086.91 | Grab | BP | 3.56 | | | | 1 | 0.3 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-116 | Unconsolidated | FWGNTAmw-116C-158-GW | 10/20/2009 | 2348196.78 | 551749.39 | 1091.68 | Grab | BP | 3.44 | | | | 1 | 0.3 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-117 | Unconsolidated | FWGNTAmw-117C-159-GW | 10/20/2009 | 2347994.79 | 551586.36 | 1091.67 | Grab | BP | 1.13 | | | | 1 | 0.3 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-118 | Unconsolidated | FWGNTAmw-118C-160-GW | 10/20/2009 | 2347608.09 | 551333.89 | 1078.86 | Grab | BP | 2.62 | | | | 1 | 0.3 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-003 | Unconsolidated | FWGLL5mw-003C-067-GW | 10/21/2009 | 2354962.47 | 554533.41 | 1124.7 | Grab | BP | 7.12 | | | | 1 | 0.3 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-001 | Unconsolidated | FWGLL8mw-001C-1436-GW | 10/13/2009 | 2351660 | 552609 | 1118.69 | Grab | BP | 2.02 | | | | 1 | 0.3 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-002 | Unconsolidated | FWGLL8mw-002C-1437-GW | 10/13/2009 | 2351010 | 552410 | 1121.67 | Grab | BP | 2.19 | | E | | 1 | 0.3 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-003 | Unconsolidated | FWGLL8mw-003C-1438-GW | 10/13/2009 | 2351360 | 552231 | 1116.3 | Grab | BP | 2.57 | | | | 1 | 0.3 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-004 | Unconsolidated | FWGLL8mw-004C-1439-GW | 10/13/2009 | 2351260 | 551808 | 1112.73 | Grab | BP | 1.37 | | | | 1 | 0.3 | 1 |
| RVAAP-43 Load Line 10 | L10mw-006 | Unconsolidated | FWGLL10mw-006C-1454-GW | 10/14/2009 | 2355656.8 | 554997.25 | 1121.2 | Grab | BP | 1.59 | | | | 1 | 0.3 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-001 | Unconsolidated | FWGLL11mw-001C-1455-GW | 10/14/2009 | 2352778.81 | 557504.98 | 1100.16 | Grab | BP | 1.01 | | | | 1 | 0.3 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-006 | Unconsolidated | FWGLL11mw-006C-1459-GW | 10/14/2009 | 2352521.51 | 558263.51 | 1086.5 | Grab | BP | 1.25 | | | | 1 | 0.3 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-008 | Unconsolidated | FWGLL11mw-008C-1460-GW | 10/14/2009 | 2352388.57 | 557981.26 | 1087.74 | Grab | BP | 1.38 | | | | 1 | 0.3 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-009 | Unconsolidated | FWGLL11mw-009C-1461-GW | 10/14/2009 | 2352577.21 | 557901.2 | 1088.28 | Grab | BP | 1.17 | | | | 1 | 0.3 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-010 | Unconsolidated | FWGLL11mw-010C-1462-GW | 10/14/2009 | 2352038.91 | 557675.59 | 1082.68 | Grab | BP | 2.23 | | | P | 1 | 0.3 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-001 | Unconsolidated | FWGCBPmw-001C-097-GW | 10/21/2009 | 2367095.431 | 561616.171 | 975.8411 | Grab | BP | 7.28 | | | | 1 | 0.3 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-002 | Unconsolidated | FWGCBPmw-002C-098-GW | 10/21/2009 | 2367295.684 | 561865.9216 | 970.0359 | Grab | BP | 6.4 | | | | 1 | 0.3 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-003 | Unconsolidated | FWGCBPmw-003C-099-GW | 10/21/2009 | 2366768.739 | 561944.2018 | 974.6665 | Grab | BP | 3.87 | | | | 1 | 0.3 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-004 | Unconsolidated | FWGCBPmw-004C-100-GW | 10/21/2009 | 2366978.819 | 562123.8244 | 971.1285 | Grab | BP | 10.5 | | | | 1 | 0.3 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-005 | Unconsolidated | FWGCBPmw-005C-101-GW | 10/21/2009 | 2366919.482 | 562311.8596 | 971.5897 | Grab | BP | 7.38 | | | | 1 | 0.3 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-006 | Unconsolidated | FWGCBPmw-006C-102-GW | 10/21/2009 | 2367243.659 | 562311.9449 | 967.6448 | Grab | BP | 12.9 | | | | 1 | 0.3 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-007 | Unconsolidated | FWGCBPmw-007C-103-GW | 10/21/2009 | 2366512.573 | 562006.343 | 976.3736 | Grab | BP | 4.13 | | | | 1 | 0.3 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-007 | Unconsolidated | FWGASYmw-007C-1469-GW | 10/15/2009 | 2366840 | 556820 | 981.4 | Grab | BP | 1.54 | | | | 1 | 0.3 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-008 | Unconsolidated | FWGASYmw-008C-1470-GW | 10/15/2009 | 2367470 | 557086 | 976.2 | Grab | BP | 18.3 | | | | 1 | 0.3 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-010 | Unconsolidated | FWGASYmw-010C-1472-GW | 10/15/2009 | 2366980 | 557273 | 978.2 | Grab | BP | 4.72 | | | | 1 | 0.3 | 1 |
| Site-wide Background Areas | BKGmw-004 | Unconsolidated | FWGBKGmw-004C-007-GW | 10/21/2009 | 2368852.973 | 569464.763 | 965.16 | Grab | BP | 0.929 J | | B | L | 1 | 0.3 | 1 |
| Site-wide Background Areas | BKGmw-005 | Unconsolidated | FWGBKGmw-005C-008-GW | 10/22/2009 | 2340835.864 | 562288.445 | 1149.443 | Grab | BP | 2.81 | | | | 1 | 0.3 | 1 |
| Site-wide Background Areas | BKGmw-013 | Unconsolidated | FWGBKGmw-013C-013-GW | 10/21/2009 | 2361627.394 | 558269.158 | 986.588 | Grab | BP | 1.66 | | | | 1 | 0.3 | 1 |
| Site-wide Background Areas | BKGmw-016 | Unconsolidated | FWGBKGmw-016C-015-GW | 10/22/2009 | 2342407.075 | 553983.501 | 1098.419 | Grab | BP | 0.3 UJ | | B | Cb,L | 1 | 0.3 | 1 |
| Site-wide Background Areas | BKGmw-017 | Unconsolidated | FWGBKGmw-017C-016-GW | 10/22/2009 | 2346115.351 | 562452.044 | 1132.799 | Grab | BP | 3.11 | | | | 1 | 0.3 | 1 |
| Site-wide Background Areas | BKGmw-019 | Unconsolidated | FWGBKGmw-019C-018-GW | 10/22/2009 | 2349882.142 | 559864.549 | 1108.239 | Grab | BP | 2.46 | | | | 1 | 0.3 | 1 |
| Site-wide Background Areas | BKGmw-020 | Unconsolidated | FWGBKGmw-020C-019-GW | 10/21/2009 | 2357856.237 | 558756.241 | 1065.001 | Grab | BP | 3.21 | | | | 1 | 0.3 | 1 |
| Site-wide Background Areas | BKGmw-021 | Unconsolidated | FWGBKGmw-021C-020-GW | 10/21/2009 | 2367622.953 | 571016.748 | 972.159 | Grab | BP | 1.17 | | | | 1 | 0.3 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Potassium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|-----------|--------|------|--------|----|-----|----|
| RVAAP-01 Ramsdell Quarry Landfill | RQLmw-009 | Sharon | FWGRQLmw-009C-1487-GW | 10/14/2009 | 2376253.654 | 566351.1994 | 964 | Grab | BP | 4.08 | | | | 1 | 0.3 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-078 | Sharon | FWGLL1mw-078-025-GW | 10/19/2009 | 2376275.854 | 564623.871 | 995.84 | Grab | BP | 3.01 | | | | 1 | 0.3 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-080 | Sharon | FWGLL1mw-080-027-GW | 10/19/2009 | 2376845.072 | 562479.728 | 996.27 | Grab | BP | 5.53 | | | | 1 | 0.3 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-082 | Sharon | FWGLL1mw-082-029-GW | 10/19/2009 | 2376977.379 | 562956.86 | 1006.45 | Grab | BP | 3.3 | | | | 1 | 0.3 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-060 | Sharon | FWGLL2mw-060C-034-GW | 10/19/2009 | 2375978 | 558022 | 958.13 | Grab | BP | 0.551 J | | B | L | 1 | 0.3 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-263 | Sharon | FWGLL2mw-263-037-GW | 10/19/2009 | 2374290.29 | 561590.92 | 1009.42 | Grab | BP | 1.44 | | | | 1 | 0.3 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-264 | Sharon | FWGLL2mw-264-038-GW | 10/19/2009 | 2374532.76 | 561173.63 | 1010.1 | Grab | BP | 0.3 UJ | | B | Cb,L | 1 | 0.3 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-267 | Sharon | FWGLL2mw-267C-041-GW | 10/19/2009 | 2373714.17 | 561393.73 | 1012.81 | Grab | BP | 0.893 J | | B | L | 1 | 0.3 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-268 | Sharon | FWGLL2mw-268-042-GW | 10/19/2009 | 2374156.4 | 560831.44 | 1015.47 | Grab | BP | 2.91 | | | | 1 | 0.3 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-269 | Sharon | FWGLL2mw-269-043-GW | 10/20/2009 | 2374756.74 | 559483.9 | 1009.49 | Grab | BP | 3.18 | | | | 1 | 0.3 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-270 | Sharon | FWGLL2mw-270-044-GW | 10/19/2009 | 2372858.94 | 562656.18 | 1009.93 | Grab | BP | 1.04 | | | | 1 | 0.3 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-238 | Sharon | FWGLL3mw-238C-051-GW | 10/20/2009 | 2370624.55 | 559569.39 | 1006.91 | Grab | BP | 4.12 | | | | 1 | 0.3 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-239 | Sharon | FWGLL3mw-239-052-GW | 10/20/2009 | 2370894.17 | 559101.84 | 1003.5 | Grab | BP | 1.83 | | | | 1 | 0.3 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-241 | Sharon | FWGLL3mw-241-054-GW | 10/20/2009 | 2370332.94 | 559299 | 994.65 | Grab | BP | 1.61 | | | | 1 | 0.3 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-242 | Sharon | FWGLL3mw-242-055-GW | 10/21/2009 | 2371993.44 | 557035.28 | 999.32 | Grab | BP | 2.69 | | | | 1 | 0.3 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-243 | Sharon | FWGLL3mw-243C-056-GW | 10/21/2009 | 2371532.06 | 556688.5 | 991.16 | Grab | BP | 2.48 | | | | 1 | 0.3 | 1 |
| RVAAP-12 Load Line 12 | L12mw-186 | Sharon | FWGLL12mw-186C-081-GW | 10/15/2009 | 2367912.39 | 559065.95 | 976.34 | Grab | BP | 1.16 | | | | 1 | 0.3 | 1 |
| RVAAP-12 Load Line 12 | L12mw-189 | Sharon | FWGLL12mw-189C-084-GW | 10/15/2009 | 2367945.92 | 558569.27 | 976.17 | Grab | BP | 3.4 | | | | 1 | 0.3 | 1 |
| RVAAP-13 Building 1200 | B12mw-011 | Sharon | FWGB12mw-011C-091-GW | 10/21/2009 | 2371420 | 565690 | 1003.76 | Grab | BP | 1.67 | | | | 1 | 0.3 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-001 | Sharon | FWGASYmw-001C-1463-GW | 10/14/2009 | 2366262.85 | 558406.04 | 978.4 | Grab | BP | 2.01 | | | | 1 | 0.3 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-002 | Sharon | FWGASYmw-002C-1464-GW | 10/15/2009 | 2366170 | 557890 | 982 | Grab | BP | 0.971 J | | B | L | 1 | 0.3 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-003 | Sharon | FWGASYmw-003C-1465-GW | 10/15/2009 | 2366650 | 558014 | 979.7 | Grab | BP | 1.74 | | | | 1 | 0.3 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-005 | Sharon | FWGASYmw-005C-1467-GW | 10/15/2009 | 2367450 | 557785 | 977.6 | Grab | BP | 3.71 | | | | 1 | 0.3 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-006 | Sharon | FWGASYmw-006C-1468-GW | 10/15/2009 | 2366750 | 557256 | 980.2 | Grab | BP | 4.92 | | | | 1 | 0.3 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-009 | Sharon | FWGASYmw-009C-1471-GW | 10/15/2009 | 2366630 | 557606 | 979.9 | Grab | BP | 2.42 | | | | 1 | 0.3 | 1 |
| Site-wide Background Areas | BKGmw-012 | Sharon | FWGBKmw-012C-012-GW | 10/21/2009 | 2367795.226 | 563918.862 | 997.574 | Grab | BP | 9.32 | | | | 1 | 0.3 | 1 |
| Site-wide Background Areas | BKGmw-018 | Sharon | FWGBKmw-018C-017-GW | 10/21/2009 | 2354993.909 | 570873.349 | 1043.06 | Grab | BP | 1.06 | | | | 1 | 0.3 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-001 | Homewood | FWGCBLmw-001C-093-GW | 10/21/2009 | 2343659.08 | 559405.12 | 1178.5 | Grab | BP | 0.923 J | | B | L | 1 | 0.3 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-003 | Homewood | FWGCBLmw-003C-095-GW | 10/22/2009 | 2343967.67 | 559697.13 | 1172.22 | Grab | BP | 1.07 | | E | | 1 | 0.3 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-004 | Homewood | FWGCBLmw-004C-096-GW | 10/22/2009 | 2343687.21 | 559950 | 1172.08 | Grab | BP | 1.7 | | | | 1 | 0.3 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-171 | Homewood | FWGFBQmw-171C-138-GW | 10/22/2009 | 2350072.44 | 554230.93 | 1140.49 | Grab | BP | 1.34 | | | | 1 | 0.3 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-172 | Homewood | FWGFBQmw-172C-139-GW | 10/22/2009 | 2349907.37 | 554322.17 | 1145.71 | Grab | BP | 0.3 UJ | | B | Cb,L | 1 | 0.3 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-173 | Homewood | FWGFBQmw-173C-140-GW | 10/22/2009 | 2350449.01 | 554491.35 | 1162.43 | Grab | BP | 1.29 | | | | 1 | 0.3 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-174 | Homewood | FWGFBQmw-174C-141-GW | 10/22/2009 | 2350289.81 | 554142.44 | 1135.78 | Grab | BP | 0.98 J | | B | L | 1 | 0.3 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-175 | Homewood | FWGFBQmw-175C-142-GW | 10/22/2009 | 2350297.98 | 553989.24 | 1137.16 | Grab | BP | 1.29 | | | | 1 | 0.3 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-177 | Homewood | FWGFBQmw-177C-144-GW | 10/22/2009 | 2350112.18 | 553321.94 | 1125.73 | Grab | BP | 2.05 | | | | 1 | 0.3 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-003 | Homewood | FWGLL6mw-003C-003-GW | 10/21/2009 | 2353048.684 | 553544.3432 | 1125.3837 | Grab | BP | 6.27 | | | | 1 | 0.3 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-004 | Homewood | FWGLL6mw-004C-004-GW | 10/21/2009 | 2353368.787 | 553431.8182 | 1125.3851 | Grab | BP | 1.22 | | | | 1 | 0.3 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-001 | Homewood | FWGLL5mw-001C-065-GW | 10/21/2009 | 2354627.07 | 554321.25 | 1125 | Grab | BP | 3.23 | | | | 1 | 0.3 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-002 | Homewood | FWGLL5mw-002C-066-GW | 10/21/2009 | 2354573.52 | 554606 | 1125.8 | Grab | BP | 8.08 | | | | 1 | 0.3 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-004 | Homewood | FWGLL5mw-004C-068-GW | 10/21/2009 | 2355008.44 | 554071.73 | 1122.9 | Grab | BP | 8.3 | | | | 1 | 0.3 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-005 | Homewood | FWGLL5mw-005C-069-GW | 10/22/2009 | 2354424.02 | 554154.73 | 1126.5 | Grab | BP | 3.77 | | | | 1 | 0.3 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-006 | Homewood | FWGLL5mw-006C-070-GW | 10/21/2009 | 2354730 | 553981.82 | 1125.1 | Grab | BP | 7.36 | | | | 1 | 0.3 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-003 | Homewood | FWGLL7mw-003C-1432-GW | 10/12/2009 | 2352349.51 | 555414.33 | 1118.23 | Grab | BP | 1.19 | | E | | 1 | 0.3 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-004 | Homewood | FWGLL7mw-004C-1433-GW | 10/12/2009 | 2352036.23 | 555583.15 | 1123.3 | Grab | BP | 1.75 | | | | 1 | 0.3 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-005 | Homewood | FWGLL8mw-005C-1440-GW | 10/13/2009 | 2351750 | 551522 | 1112.51 | Grab | BP | 2.78 | | | P | 1 | 0.3 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-006 | Homewood | FWGLL8mw-006C-1441-GW | 10/13/2009 | 2351480 | 551295 | 1114.33 | Grab | BP | 2.93 | | | | 1 | 0.3 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-001 | Homewood | FWGLL9mw-001C-1442-GW | 10/13/2009 | 2355817.04 | 556125.81 | 1134.62 | Grab | BP | 1.17 | | | | 1 | 0.3 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-002 | Homewood | FWGLL9mw-002C-1443-GW | 10/13/2009 | 2355907.76 | 556755.11 | 1127.3 | Grab | BP | 1.41 | | | | 1 | 0.3 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-003 | Homewood | FWGLL9mw-003C-1444-GW | 10/13/2009 | 2356635.21 | 556445.31 | 1135.76 | Grab | BP | 2.28 | | E | | 1 | 0.3 | 1 |
| RVAAP-43 Load Line 10 | L10mw-001 | Homewood | FWGLL10mw-001C-1449-GW | 10/13/2009 | 2355272.22 | 555818.25 | 1130 | Grab | BP | 1.28 | | | | 1 | 0.3 | 1 |
| RVAAP-43 Load Line 10 | L10mw-002 | Homewood | FWGLL10mw-002C-1450-GW | 10/13/2009 | 2355712.51 | 555525.36 | 1124.4 | Grab | BP | 0.926 J | | B | L | 1 | 0.3 | 1 |
| RVAAP-43 Load Line 10 | L10mw-003 | Homewood | FWGLL10mw-003C-1451-GW | 10/13/2009 | 2355387.92 | 555496.71 | 1127.4 | Grab | BP | 0.3 UJ | | B | Cb,L | 1 | 0.3 | 1 |
| RVAAP-43 Load Line 10 | L10mw-004 | Homewood | FWGLL10mw-004C-1452-GW | 10/14/2009 | 2355440.2 | 555234.59 | 1119.6 | Grab | BP | 0.3 UJ | | B | Cb,L | 1 | 0.3 | 1 |
| RVAAP-43 Load Line 10 | L10mw-005 | Homewood | FWGLL10mw-005C-1453-GW | 10/14/2009 | 2355941.55 | 555382.53 | 1122.9 | Grab | BP | 1.02 | | | | 1 | 0.3 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Selenium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|-----------------------|-------------|-------------|-------------|-----------|-------------|--------|----------|--------|------|--------|-------|-------|----|
| RVAAP-02 Erie Burning Grounds | EBGmw-123 | Unconsolidated | FWGEBGmw-123C-125-GW | 10/19/2009 | 2380049.21 | 571747.04 | 945.59 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-124 | Unconsolidated | FWGEBGmw-124C-126-GW | 10/19/2009 | 2380030.24 | 571618.07 | 939.02 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-126 | Unconsolidated | FWGEBGmw-126C-128-GW | 10/19/2009 | 2380307.31 | 572348.81 | 938.2 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-127 | Unconsolidated | FWGEBGmw-127C-129-GW | 10/19/2009 | 2380172.16 | 571083.61 | 940.21 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-128 | Unconsolidated | FWGEBGmw-128C-130-GW | 10/19/2009 | 2379892.79 | 570970.32 | 942.47 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-129 | Unconsolidated | FWGEBGmw-129C-131-GW | 10/19/2009 | 2379240.52 | 572035.68 | 941.97 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-130 | Unconsolidated | FWGEBGmw-130C-132-GW | 10/19/2009 | 2379220.69 | 570695.61 | 941.18 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-104 | Unconsolidated | FWGDA2mw-104C-115-GW | 10/21/2009 | 2354773.248 | 561125.7023 | 1070.8244 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-107 | Unconsolidated | FWGDA2mw-107C-118-GW | 10/21/2009 | 2354923.231 | 560482.7171 | 1039.1815 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-108 | Unconsolidated | FWGDA2mw-108C-119-GW | 10/21/2009 | 2355602.421 | 560184.5864 | 1029.9156 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-109 | Unconsolidated | FWGDA2mw-109C-120-GW | 10/21/2009 | 2354796.85 | 559897.6695 | 1068.6588 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-110 | Unconsolidated | FWGDA2mw-110C-121-GW | 10/21/2009 | 2355195.202 | 559922.3928 | 1061.3878 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-112 | Unconsolidated | FWGDA2mw-112C-123-GW | 10/21/2009 | 2355019.568 | 560374.5046 | 1034.8724 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-113 | Unconsolidated | FWGDA2mw-113C-124-GW | 10/21/2009 | 2355150.554 | 560392.8898 | 1034.5126 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-1 | Unconsolidated | FWGDETMw-001-111-GW | 10/21/2009 | 2354959.47 | 560820.03 | 1063.97 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-2 | Unconsolidated | FWGDETMw-002C-115-GW | 10/21/2009 | 2355360.33 | 560664.71 | 1062.69 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-3 | Unconsolidated | FWGDETMw-003C-1488-GW | 10/14/2009 | 2355204.94 | 560456.1 | 1035.56 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-006 | Unconsolidated | FWGWBGmw-006C-171-GW | 10/20/2009 | 2359087.79 | 563008.87 | 1010.38 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-007 | Unconsolidated | FWGWBGmw-007C-172-GW | 10/20/2009 | 2360420.44 | 562479.87 | 995.33 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-009 | Unconsolidated | FWGWBGmw-009C-174-GW | 10/20/2009 | 2357159.2 | 561603.54 | 1042 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-010 | Unconsolidated | FWGWBGmw-010C-175-GW | 10/20/2009 | 2356051.96 | 562893.2 | 1069.85 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-011 | Unconsolidated | FWGWBGmw-011C-176-GW | 10/20/2009 | 2356187.29 | 562609.18 | 1072.38 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-012 | Unconsolidated | FWGWBGmw-012C-177-GW | 10/20/2009 | 2354810.65 | 562240.9 | 1079.11 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-013 | Unconsolidated | FWGWBGmw-013C-178-GW | 10/20/2009 | 2355223.25 | 561518.27 | 1071.7 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-014 | Unconsolidated | FWGWBGmw-014C-179-GW | 10/20/2009 | 2360439.22 | 562061.26 | 996.78 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-015 | Unconsolidated | FWGWBGmw-015C-180-GW | 10/20/2009 | 2359182.41 | 562340.12 | 1011.6 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-016 | Unconsolidated | FWGWBGmw-016C-181-GW | 10/20/2009 | 2360645.88 | 562709.13 | 997.03 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-017 | Unconsolidated | FWGWBGmw-017C-182-GW | 10/20/2009 | 2359603.84 | 562913.24 | 1006.62 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-064 | Unconsolidated | FWGLL1mw-064-022-GW | 10/19/2009 | 2380286.973 | 563118.7363 | 932 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-065 | Unconsolidated | FWGLL1mw-065-023-GW | 10/19/2009 | 2380452.003 | 560916.9225 | 940 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-193 | Unconsolidated | FWGLL4mw-193-057-GW | 10/21/2009 | 2364236.52 | 554960.27 | 982.92 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-194 | Unconsolidated | FWGLL4mw-194C-058-GW | 10/16/2009 | 2364584.86 | 555089.22 | 983.76 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-196 | Unconsolidated | FWGLL4mw-196C-060-GW | 10/16/2009 | 2365297.1 | 555213.52 | 984.55 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-197 | Unconsolidated | FWGLL4mw-197C-061-GW | 10/16/2009 | 2365384.91 | 555397.05 | 985.46 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-198 | Unconsolidated | FWGLL4mw-198C-062-GW | 10/21/2009 | 2364991.19 | 555442.04 | 983.42 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-199 | Unconsolidated | FWGLL4mw-199C-063-GW | 10/16/2009 | 2365420.78 | 554621.62 | 977.28 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-200 | Unconsolidated | FWGLL4mw-200-064-GW | 10/21/2009 | 2365903.05 | 554580.15 | 987.93 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-12 Load Line 12 | L12mw-107 | Unconsolidated | FWGLL12mw-107C-072-GW | 10/16/2009 | 2368595.67 | 556759.02 | 978.03 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-12 Load Line 12 | L12mw-128 | Unconsolidated | FWGLL12mw-128C-074-GW | 10/16/2009 | 2368293.2 | 557371.54 | 976.21 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-12 Load Line 12 | L12mw-153 | Unconsolidated | FWGLL12mw-153C-075-GW | 10/16/2009 | 2368138.87 | 557823.23 | 975.34 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-12 Load Line 12 | L12mw-154 | Unconsolidated | FWGLL12mw-154C-076-GW | 10/16/2009 | 2368183.88 | 557754.56 | 977 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-12 Load Line 12 | L12mw-182 | Unconsolidated | FWGLL12mw-182C-077-GW | 10/16/2009 | 2368853.2 | 555890.35 | 982.2 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-12 Load Line 12 | L12mw-188 | Unconsolidated | FWGLL12mw-188C-083-GW | 10/15/2009 | 2367908.82 | 558132.59 | 978.46 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-12 Load Line 12 | L12mw-242 | Unconsolidated | FWGLL12mw-242C-085-GW | 10/15/2009 | 2368545.29 | 558020.51 | 980 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-12 Load Line 12 | L12mw-243 | Unconsolidated | FWGLL12mw-243C-086-GW | 10/16/2009 | 2368190.04 | 557376.32 | 978 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-12 Load Line 12 | L12mw-244 | Unconsolidated | FWGLL12mw-244C-087-GW | 10/16/2009 | 2368751.42 | 557377.17 | 980 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-12 Load Line 12 | L12mw-245 | Unconsolidated | FWGLL12mw-245C-088-GW | 10/16/2009 | 2368370.74 | 557044.55 | 978 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-12 Load Line 12 | L12mw-246 | Unconsolidated | FWGLL12mw-246C-089-GW | 10/16/2009 | 2369432.17 | 556658.89 | 982.96 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-166 | Unconsolidated | FWGFBQmw-166C-133-GW | 10/22/2009 | 2349584.33 | 553123.86 | 1104.87 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-167 | Unconsolidated | FWGFBQmw-167C-134-GW | 10/22/2009 | 2349675.45 | 553556.12 | 1112.05 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-176 | Unconsolidated | FWGFBQmw-176C-143-GW | 10/22/2009 | 2350219.45 | 553273.33 | 1129.57 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-024 | Unconsolidated | FWGLNWmw-024C-145-GW | 10/20/2009 | 2358400 | 564828 | 1035.3 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-025 | Unconsolidated | FWGLNWmw-025C-146-GW | 10/20/2009 | 2358420 | 565070 | 1027.2 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-026 | Unconsolidated | FWGLNWmw-026C-147-GW | 10/20/2009 | 2358950 | 564656 | 1025 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Selenium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|----------|--------|------|--------|-------|-------|----|
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-027 | Unconsolidated | FWGLNWmw-027C-148-GW | 10/20/2009 | 2358630 | 564519 | 1024.4 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-001 | Unconsolidated | FWGMBSmw-001C-183-GW | 10/20/2009 | 2345323 | 550759.5 | 1079.68 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-002 | Unconsolidated | FWGMBSmw-002C-184-GW | 10/20/2009 | 2345322.3 | 550886.2 | 1080.5 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-003 | Unconsolidated | FWGMBSmw-003C-185-GW | 10/20/2009 | 2345172.4 | 550922.8 | 1082.45 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-004 | Unconsolidated | FWGMBSmw-004C-186-GW | 10/20/2009 | 2345134.2 | 550767.9 | 1079.55 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-005 | Unconsolidated | FWGMBSmw-005C-187-GW | 10/20/2009 | 2345354.1 | 550800.7 | 1080.5 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-006 | Unconsolidated | FWGMBSmw-006C-188-GW | 10/20/2009 | 2345282.3 | 550726.1 | 1080.29 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-001 | Unconsolidated | FWGCPmw-001C-105-GW | 10/21/2009 | 2368948.852 | 560440.9741 | 975.2594 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-004 | Unconsolidated | FWGCPmw-004C-108-GW | 10/21/2009 | 2368674.21 | 561843.2791 | 981.198 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-006 | Unconsolidated | FWGCPmw-006C-110-GW | 10/21/2009 | 2367727.191 | 562830.039 | 965.13 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-001 | Unconsolidated | FWGLL6mw-001C-001-GW | 10/21/2009 | 2353153.227 | 554214.8365 | 1124.1607 | Grab | B | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-002 | Unconsolidated | FWGLL6mw-002C-002-GW | 10/21/2009 | 2353820.091 | 553589.8815 | 1129.3631 | Grab | B | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-107 | Unconsolidated | FWGNTAmw-107C-149-GW | 10/20/2009 | 2345432.73 | 551699.09 | 1077.65 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-108 | Unconsolidated | FWGNTAmw-108C-150-GW | 10/20/2009 | 2345782.17 | 551917.92 | 1083.22 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-109 | Unconsolidated | FWGNTAmw-109C-151-GW | 10/20/2009 | 2345996.99 | 551291.19 | 1076.89 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-110 | Unconsolidated | FWGNTAmw-110C-152-GW | 10/20/2009 | 2346436.82 | 551350.8 | 1080.03 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-111 | Unconsolidated | FWGNTAmw-111C-153-GW | 10/20/2009 | 2346640.16 | 551538.99 | 1078.07 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-112 | Unconsolidated | FWGNTAmw-112C-154-GW | 10/20/2009 | 2346889.01 | 551708.76 | 1075.36 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-113 | Unconsolidated | FWGNTAmw-113C-155-GW | 10/20/2009 | 2347081.15 | 551487.86 | 1072.61 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-115 | Unconsolidated | FWGNTAmw-115C-157-GW | 10/20/2009 | 2347582.94 | 551793.39 | 1086.91 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-116 | Unconsolidated | FWGNTAmw-116C-158-GW | 10/20/2009 | 2348196.78 | 551749.39 | 1091.68 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-117 | Unconsolidated | FWGNTAmw-117C-159-GW | 10/20/2009 | 2347994.79 | 551586.36 | 1091.67 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-118 | Unconsolidated | FWGNTAmw-118C-160-GW | 10/20/2009 | 2347608.09 | 551333.89 | 1078.86 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-003 | Unconsolidated | FWGLL5mw-003C-067-GW | 10/21/2009 | 2354962.47 | 554533.41 | 1124.7 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-001 | Unconsolidated | FWGLL8mw-001C-1436-GW | 10/13/2009 | 2351660 | 552609 | 1118.69 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-002 | Unconsolidated | FWGLL8mw-002C-1437-GW | 10/13/2009 | 2351010 | 552410 | 1121.67 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-003 | Unconsolidated | FWGLL8mw-003C-1438-GW | 10/13/2009 | 2351360 | 552231 | 1116.3 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-004 | Unconsolidated | FWGLL8mw-004C-1439-GW | 10/13/2009 | 2351260 | 551808 | 1112.73 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-43 Load Line 10 | L10mw-006 | Unconsolidated | FWGLL10mw-006C-1454-GW | 10/14/2009 | 2355656.8 | 554997.25 | 1121.2 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-001 | Unconsolidated | FWGLL11mw-001C-1455-GW | 10/14/2009 | 2352778.81 | 557504.98 | 1100.16 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-006 | Unconsolidated | FWGLL11mw-006C-1459-GW | 10/14/2009 | 2352521.51 | 558263.51 | 1086.5 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-008 | Unconsolidated | FWGLL11mw-008C-1460-GW | 10/14/2009 | 2352388.57 | 557981.26 | 1087.74 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-009 | Unconsolidated | FWGLL11mw-009C-1461-GW | 10/14/2009 | 2352577.21 | 557901.2 | 1088.28 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-010 | Unconsolidated | FWGLL11mw-010C-1462-GW | 10/14/2009 | 2352038.91 | 557675.59 | 1082.68 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-001 | Unconsolidated | FWGCBPmw-001C-097-GW | 10/21/2009 | 2367095.431 | 561616.171 | 975.8411 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-002 | Unconsolidated | FWGCBPmw-002C-098-GW | 10/21/2009 | 2367295.684 | 561865.9216 | 970.0359 | Grab | BP | 0.0047 | J | B | L,P | 0.005 | 0.004 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-003 | Unconsolidated | FWGCBPmw-003C-099-GW | 10/21/2009 | 2366768.739 | 561944.2018 | 974.6665 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-004 | Unconsolidated | FWGCBPmw-004C-100-GW | 10/21/2009 | 2366978.819 | 562123.8244 | 971.1285 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-005 | Unconsolidated | FWGCBPmw-005C-101-GW | 10/21/2009 | 2366919.482 | 562311.8596 | 971.5897 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-006 | Unconsolidated | FWGCBPmw-006C-102-GW | 10/21/2009 | 2367243.659 | 562311.9449 | 967.6448 | Grab | BP | 0.0068 | | | | 0.005 | 0.004 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-007 | Unconsolidated | FWGCBPmw-007C-103-GW | 10/21/2009 | 2366512.573 | 562006.343 | 976.3736 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-007 | Unconsolidated | FWGASYmw-007C-1469-GW | 10/15/2009 | 2366840 | 556820 | 981.4 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-008 | Unconsolidated | FWGASYmw-008C-1470-GW | 10/15/2009 | 2367470 | 557086 | 976.2 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-010 | Unconsolidated | FWGASYmw-010C-1472-GW | 10/15/2009 | 2366980 | 557273 | 978.2 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| Site-wide Background Areas | BKGmw-004 | Unconsolidated | FWGBKGmw-004C-007-GW | 10/21/2009 | 2368852.973 | 569464.763 | 965.16 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| Site-wide Background Areas | BKGmw-005 | Unconsolidated | FWGBKGmw-005C-008-GW | 10/22/2009 | 2340835.864 | 562288.445 | 1149.443 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| Site-wide Background Areas | BKGmw-013 | Unconsolidated | FWGBKGmw-013C-013-GW | 10/21/2009 | 2361627.394 | 558269.158 | 986.588 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| Site-wide Background Areas | BKGmw-016 | Unconsolidated | FWGBKGmw-016C-015-GW | 10/22/2009 | 2342407.075 | 553983.501 | 1098.419 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| Site-wide Background Areas | BKGmw-017 | Unconsolidated | FWGBKGmw-017C-016-GW | 10/22/2009 | 2346115.351 | 562452.044 | 1132.799 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| Site-wide Background Areas | BKGmw-019 | Unconsolidated | FWGBKGmw-019C-018-GW | 10/22/2009 | 2349882.142 | 559864.549 | 1108.239 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| Site-wide Background Areas | BKGmw-020 | Unconsolidated | FWGBKGmw-020C-019-GW | 10/21/2009 | 2357856.237 | 558756.241 | 1065.001 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |
| Site-wide Background Areas | BKGmw-021 | Unconsolidated | FWGBKGmw-021C-020-GW | 10/21/2009 | 2367622.953 | 571016.748 | 972.159 | Grab | BP | 0.004 | U | U | | 0.005 | 0.004 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Selenium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|----------|--------|------|--------|-------|-------|----|
| RVAAP-01 Ramsdell Quarry Landfill | RQLmw-009 | Sharon | FWGRQLmw-009C-1487-GW | 10/14/2009 | 2376253.654 | 566351.1994 | 964 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-078 | Sharon | FWGLL1mw-078-025-GW | 10/19/2009 | 2376275.854 | 564623.871 | 995.84 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-080 | Sharon | FWGLL1mw-080-027-GW | 10/19/2009 | 2376845.072 | 562479.728 | 996.27 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-082 | Sharon | FWGLL1mw-082-029-GW | 10/19/2009 | 2376977.379 | 562956.86 | 1006.45 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-060 | Sharon | FWGLL2mw-060C-034-GW | 10/19/2009 | 2375978 | 558022 | 958.13 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-263 | Sharon | FWGLL2mw-263-037-GW | 10/19/2009 | 2374290.29 | 561590.92 | 1009.42 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-264 | Sharon | FWGLL2mw-264-038-GW | 10/19/2009 | 2374532.76 | 561173.63 | 1010.1 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-267 | Sharon | FWGLL2mw-267C-051-GW | 10/19/2009 | 2373714.17 | 561393.73 | 1012.81 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-268 | Sharon | FWGLL2mw-268-042-GW | 10/19/2009 | 2374156.4 | 560831.44 | 1015.47 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-269 | Sharon | FWGLL2mw-269-043-GW | 10/20/2009 | 2374756.74 | 559483.9 | 1009.49 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-270 | Sharon | FWGLL2mw-270-044-GW | 10/19/2009 | 2372858.94 | 562656.18 | 1009.93 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-238 | Sharon | FWGLL3mw-238C-051-GW | 10/20/2009 | 2370624.55 | 559569.39 | 1006.91 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-239 | Sharon | FWGLL3mw-239-052-GW | 10/20/2009 | 2370894.17 | 559101.84 | 1003.5 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-241 | Sharon | FWGLL3mw-241-054-GW | 10/20/2009 | 2370332.94 | 559299 | 994.65 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-242 | Sharon | FWGLL3mw-242-055-GW | 10/21/2009 | 2371993.44 | 557035.28 | 999.32 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-243 | Sharon | FWGLL3mw-243C-056-GW | 10/21/2009 | 2371532.06 | 556688.5 | 991.16 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-12 Load Line 12 | L12mw-186 | Sharon | FWGLL12mw-186C-081-GW | 10/15/2009 | 2367912.39 | 559065.95 | 976.34 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-12 Load Line 12 | L12mw-189 | Sharon | FWGLL12mw-189C-084-GW | 10/15/2009 | 2367945.92 | 558569.27 | 976.17 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-13 Building 1200 | B12mw-011 | Sharon | FWGB12mw-011C-091-GW | 10/21/2009 | 2371420 | 565690 | 1003.76 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-001 | Sharon | FWGASYmw-001C-1463-GW | 10/14/2009 | 2366262.85 | 558406.04 | 978.4 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-002 | Sharon | FWGASYmw-002C-1464-GW | 10/15/2009 | 2366170 | 557890 | 982 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-003 | Sharon | FWGASYmw-003C-1465-GW | 10/15/2009 | 2366650 | 558014 | 979.7 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-005 | Sharon | FWGASYmw-005C-1467-GW | 10/15/2009 | 2367450 | 557785 | 977.6 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-006 | Sharon | FWGASYmw-006C-1468-GW | 10/15/2009 | 2366750 | 557256 | 980.2 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-009 | Sharon | FWGASYmw-009C-1471-GW | 10/15/2009 | 2366630 | 557606 | 979.9 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| Site-wide Background Areas | BKGmw-012 | Sharon | FWGBKGMw-012C-012-GW | 10/21/2009 | 2367795.226 | 563918.862 | 997.574 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| Site-wide Background Areas | BKGmw-018 | Sharon | FWGBKGMw-018C-017-GW | 10/21/2009 | 2354993.909 | 570873.349 | 1043.06 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-001 | Homewood | FWGCBLmw-001C-093-GW | 10/21/2009 | 2343659.08 | 559405.12 | 1178.5 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-003 | Homewood | FWGCBLmw-003C-095-GW | 10/22/2009 | 2343967.67 | 559697.13 | 1172.22 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-004 | Homewood | FWGCBLmw-004C-096-GW | 10/22/2009 | 2343687.21 | 559950 | 1172.08 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-171 | Homewood | FWGFBQmw-171C-138-GW | 10/22/2009 | 2350072.44 | 554230.93 | 1140.49 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-172 | Homewood | FWGFBQmw-172C-139-GW | 10/22/2009 | 2349907.37 | 554322.17 | 1145.71 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-173 | Homewood | FWGFBQmw-173C-140-GW | 10/22/2009 | 2350449.01 | 554491.35 | 1162.43 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-174 | Homewood | FWGFBQmw-174C-141-GW | 10/22/2009 | 2350289.81 | 554142.44 | 1135.78 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-175 | Homewood | FWGFBQmw-175C-142-GW | 10/22/2009 | 2350297.98 | 553989.24 | 1137.16 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-177 | Homewood | FWGFBQmw-177C-144-GW | 10/22/2009 | 2350112.18 | 553321.94 | 1125.73 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-003 | Homewood | FWGLL6mw-003C-003-GW | 10/21/2009 | 2353048.684 | 553544.3432 | 1125.3837 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-004 | Homewood | FWGLL6mw-004C-004-GW | 10/21/2009 | 2353368.787 | 553431.8182 | 1125.3851 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-001 | Homewood | FWGLL5mw-001C-065-GW | 10/21/2009 | 2354627.07 | 554321.25 | 1125 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-002 | Homewood | FWGLL5mw-002C-066-GW | 10/21/2009 | 2354573.52 | 554606 | 1125.8 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-004 | Homewood | FWGLL5mw-004C-068-GW | 10/21/2009 | 2355008.44 | 554071.73 | 1122.9 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-005 | Homewood | FWGLL5mw-005C-069-GW | 10/22/2009 | 2354424.02 | 554154.73 | 1126.5 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-006 | Homewood | FWGLL5mw-006C-070-GW | 10/21/2009 | 2354730 | 553981.82 | 1125.1 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-003 | Homewood | FWGLL7mw-003C-1432-GW | 10/12/2009 | 2352349.51 | 555414.33 | 1118.23 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-004 | Homewood | FWGLL7mw-004C-1433-GW | 10/12/2009 | 2352036.23 | 555583.15 | 1123.3 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-005 | Homewood | FWGLL8mw-005C-1440-GW | 10/13/2009 | 2351750 | 551522 | 1112.51 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-006 | Homewood | FWGLL8mw-006C-1441-GW | 10/13/2009 | 2351480 | 551295 | 1114.33 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-001 | Homewood | FWGLL9mw-001C-1442-GW | 10/13/2009 | 2355817.04 | 556125.81 | 1134.62 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-002 | Homewood | FWGLL9mw-002C-1443-GW | 10/13/2009 | 2355907.76 | 556755.11 | 1127.3 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-003 | Homewood | FWGLL9mw-003C-1444-GW | 10/13/2009 | 2356635.21 | 556445.31 | 1135.76 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-43 Load Line 10 | L10mw-001 | Homewood | FWGLL10mw-001C-1449-GW | 10/13/2009 | 2355272.22 | 555818.25 | 1130 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-43 Load Line 10 | L10mw-002 | Homewood | FWGLL10mw-002C-1450-GW | 10/13/2009 | 2355712.51 | 555525.36 | 1124.4 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-43 Load Line 10 | L10mw-003 | Homewood | FWGLL10mw-003C-1451-GW | 10/13/2009 | 2355387.92 | 555496.71 | 1127.4 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-43 Load Line 10 | L10mw-004 | Homewood | FWGLL10mw-004C-1452-GW | 10/14/2009 | 2355440.2 | 555234.59 | 1119.6 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |
| RVAAP-43 Load Line 10 | L10mw-005 | Homewood | FWGLL10mw-005C-1453-GW | 10/14/2009 | 2355941.55 | 555382.53 | 1122.9 | Grab | BP | 0.004 U | U | | | 0.005 | 0.004 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Silver | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|-----------------------|-------------|-------------|-------------|-----------|-------------|--------|--------|--------|------|--------|-------|--------|----|
| RVAAP-02 Erie Burning Grounds | EBGmw-123 | Unconsolidated | FWGEBGmw-123C-125-GW | 10/19/2009 | 2380049.21 | 571747.04 | 945.59 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-124 | Unconsolidated | FWGEBGmw-124C-126-GW | 10/19/2009 | 2380030.24 | 571618.07 | 939.02 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-126 | Unconsolidated | FWGEBGmw-126C-128-GW | 10/19/2009 | 2380307.31 | 572348.81 | 938.2 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-127 | Unconsolidated | FWGEBGmw-127C-129-GW | 10/19/2009 | 2380172.16 | 571083.61 | 940.21 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-128 | Unconsolidated | FWGEBGmw-128C-130-GW | 10/19/2009 | 2379892.79 | 570970.32 | 942.47 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-129 | Unconsolidated | FWGEBGmw-129C-131-GW | 10/19/2009 | 2379240.52 | 572035.68 | 941.97 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-130 | Unconsolidated | FWGEBGmw-130C-132-GW | 10/19/2009 | 2379220.69 | 570695.61 | 941.18 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-104 | Unconsolidated | FWGDA2mw-104C-115-GW | 10/21/2009 | 2354773.248 | 561125.7023 | 1070.8244 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-107 | Unconsolidated | FWGDA2mw-107C-118-GW | 10/21/2009 | 2354923.231 | 560482.7171 | 1039.1815 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-108 | Unconsolidated | FWGDA2mw-108C-119-GW | 10/21/2009 | 2355602.421 | 560184.5864 | 1029.9156 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-109 | Unconsolidated | FWGDA2mw-109C-120-GW | 10/21/2009 | 2354796.85 | 559897.6695 | 1068.6588 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-110 | Unconsolidated | FWGDA2mw-110C-121-GW | 10/21/2009 | 2355195.202 | 559922.3928 | 1061.3878 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-112 | Unconsolidated | FWGDA2mw-112C-123-GW | 10/21/2009 | 2355019.568 | 560374.5046 | 1034.8724 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-113 | Unconsolidated | FWGDA2mw-113C-124-GW | 10/21/2009 | 2355150.554 | 560392.8898 | 1034.5126 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-1 | Unconsolidated | FWGDETmw-001-111-GW | 10/21/2009 | 2354959.47 | 560820.03 | 1063.97 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-2 | Unconsolidated | FWGDETmw-002C-115-GW | 10/21/2009 | 2355360.33 | 560664.71 | 1062.69 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-3 | Unconsolidated | FWGDETmw-003C-1488-GW | 10/14/2009 | 2355204.94 | 560456.1 | 1035.56 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-006 | Unconsolidated | FWGWBGmw-006C-171-GW | 10/20/2009 | 2359087.79 | 563008.87 | 1010.38 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-007 | Unconsolidated | FWGWBGmw-007C-172-GW | 10/20/2009 | 2360420.44 | 562479.87 | 995.33 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-009 | Unconsolidated | FWGWBGmw-009C-174-GW | 10/20/2009 | 2357159.2 | 561603.54 | 1042 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-010 | Unconsolidated | FWGWBGmw-010C-175-GW | 10/20/2009 | 2356051.96 | 562893.2 | 1069.85 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-011 | Unconsolidated | FWGWBGmw-011C-176-GW | 10/20/2009 | 2356187.29 | 562609.18 | 1072.38 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-012 | Unconsolidated | FWGWBGmw-012C-177-GW | 10/20/2009 | 2354810.65 | 562240.9 | 1079.11 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-013 | Unconsolidated | FWGWBGmw-013C-178-GW | 10/20/2009 | 2355223.25 | 561518.27 | 1071.7 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-014 | Unconsolidated | FWGWBGmw-014C-179-GW | 10/20/2009 | 2360439.22 | 562061.26 | 996.78 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-015 | Unconsolidated | FWGWBGmw-015C-180-GW | 10/20/2009 | 2359182.41 | 562340.12 | 1011.6 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-016 | Unconsolidated | FWGWBGmw-016C-181-GW | 10/20/2009 | 2360645.88 | 562709.13 | 997.03 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-017 | Unconsolidated | FWGWBGmw-017C-182-GW | 10/20/2009 | 2359603.84 | 562913.24 | 1006.62 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-064 | Unconsolidated | FWGLL1mw-064-022-GW | 10/19/2009 | 2380286.973 | 563118.7363 | 932 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-065 | Unconsolidated | FWGLL1mw-065-023-GW | 10/19/2009 | 2380452.003 | 560916.9225 | 940 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-193 | Unconsolidated | FWGLL4mw-193-057-GW | 10/21/2009 | 2364236.52 | 554960.27 | 982.92 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-194 | Unconsolidated | FWGLL4mw-194C-058-GW | 10/16/2009 | 2364584.86 | 555089.22 | 983.76 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-196 | Unconsolidated | FWGLL4mw-196C-060-GW | 10/16/2009 | 2365297.1 | 555213.52 | 984.55 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-197 | Unconsolidated | FWGLL4mw-197C-061-GW | 10/16/2009 | 2365384.91 | 555397.05 | 985.46 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-198 | Unconsolidated | FWGLL4mw-198C-062-GW | 10/21/2009 | 2364991.19 | 555442.04 | 983.42 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-199 | Unconsolidated | FWGLL4mw-199C-063-GW | 10/16/2009 | 2365420.78 | 554621.62 | 977.28 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-200 | Unconsolidated | FWGLL4mw-200-064-GW | 10/21/2009 | 2365903.05 | 554580.15 | 987.93 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-12 Load Line 12 | L12mw-107 | Unconsolidated | FWGLL12mw-107C-072-GW | 10/16/2009 | 2368595.67 | 556759.02 | 978.03 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-12 Load Line 12 | L12mw-128 | Unconsolidated | FWGLL12mw-128C-074-GW | 10/16/2009 | 2368293.2 | 557371.54 | 976.21 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-12 Load Line 12 | L12mw-153 | Unconsolidated | FWGLL12mw-153C-075-GW | 10/16/2009 | 2368138.87 | 557823.23 | 975.34 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-12 Load Line 12 | L12mw-154 | Unconsolidated | FWGLL12mw-154C-076-GW | 10/16/2009 | 2368183.88 | 557754.56 | 977 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-12 Load Line 12 | L12mw-182 | Unconsolidated | FWGLL12mw-182C-077-GW | 10/16/2009 | 2368853.2 | 555890.35 | 982.2 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-12 Load Line 12 | L12mw-188 | Unconsolidated | FWGLL12mw-188C-083-GW | 10/15/2009 | 2367908.82 | 558132.59 | 978.46 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-12 Load Line 12 | L12mw-242 | Unconsolidated | FWGLL12mw-242C-085-GW | 10/15/2009 | 2368545.29 | 558020.51 | 980 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-12 Load Line 12 | L12mw-243 | Unconsolidated | FWGLL12mw-243C-086-GW | 10/16/2009 | 2368190.04 | 557376.32 | 978 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-12 Load Line 12 | L12mw-244 | Unconsolidated | FWGLL12mw-244C-087-GW | 10/16/2009 | 2368751.42 | 557377.17 | 980 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-12 Load Line 12 | L12mw-245 | Unconsolidated | FWGLL12mw-245C-088-GW | 10/16/2009 | 2368370.74 | 557044.55 | 978 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-12 Load Line 12 | L12mw-246 | Unconsolidated | FWGLL12mw-246C-089-GW | 10/16/2009 | 2369432.17 | 556658.89 | 982.96 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-166 | Unconsolidated | FWGFBQmw-166C-133-GW | 10/22/2009 | 2349584.33 | 553123.86 | 1104.87 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-167 | Unconsolidated | FWGFBQmw-167C-134-GW | 10/22/2009 | 2349675.45 | 553556.12 | 1112.05 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-176 | Unconsolidated | FWGFBQmw-176C-143-GW | 10/22/2009 | 2350219.45 | 553273.33 | 1129.57 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-024 | Unconsolidated | FWGLNWmw-024C-145-GW | 10/20/2009 | 2358400 | 564828 | 1035.3 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-025 | Unconsolidated | FWGLNWmw-025C-146-GW | 10/20/2009 | 2358420 | 565070 | 1027.2 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-026 | Unconsolidated | FWGLNWmw-026C-147-GW | 10/20/2009 | 2358950 | 564656 | 1025 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Silver | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|--------|--------|------|--------|-------|--------|----|
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-027 | Unconsolidated | FWGLNWmw-027C-148-GW | 10/20/2009 | 2358630 | 564519 | 1024.4 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-001 | Unconsolidated | FWGMBSmw-001C-183-GW | 10/20/2009 | 2345323 | 550759.5 | 1079.68 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-002 | Unconsolidated | FWGMBSmw-002C-184-GW | 10/20/2009 | 2345322.3 | 550886.2 | 1080.5 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-003 | Unconsolidated | FWGMBSmw-003C-185-GW | 10/20/2009 | 2345172.4 | 550922.8 | 1082.45 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-004 | Unconsolidated | FWGMBSmw-004C-186-GW | 10/20/2009 | 2345134.2 | 550767.9 | 1079.55 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-005 | Unconsolidated | FWGMBSmw-005C-187-GW | 10/20/2009 | 2345354.1 | 550800.7 | 1080.5 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-006 | Unconsolidated | FWGMBSmw-006C-188-GW | 10/20/2009 | 2345282.3 | 550726.1 | 1080.29 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-001 | Unconsolidated | FWGCPmw-001C-105-GW | 10/21/2009 | 2368948.852 | 560440.9741 | 975.2594 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-004 | Unconsolidated | FWGCPmw-004C-108-GW | 10/21/2009 | 2368674.21 | 561843.2791 | 981.198 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-006 | Unconsolidated | FWGCPmw-006C-110-GW | 10/21/2009 | 2367727.191 | 562830.039 | 965.13 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-001 | Unconsolidated | FWGLL6mw-001C-001-GW | 10/21/2009 | 2353153.227 | 554214.8365 | 1124.1607 | Grab | B | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-002 | Unconsolidated | FWGLL6mw-002C-002-GW | 10/21/2009 | 2353820.091 | 553589.8815 | 1129.3631 | Grab | B | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-107 | Unconsolidated | FWGNTAmw-107C-149-GW | 10/20/2009 | 2345432.73 | 551699.09 | 1077.65 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-108 | Unconsolidated | FWGNTAmw-108C-150-GW | 10/20/2009 | 2345782.17 | 551917.92 | 1083.22 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-109 | Unconsolidated | FWGNTAmw-109C-151-GW | 10/20/2009 | 2345996.99 | 551291.19 | 1076.89 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-110 | Unconsolidated | FWGNTAmw-110C-152-GW | 10/20/2009 | 2346436.82 | 551350.8 | 1080.03 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-111 | Unconsolidated | FWGNTAmw-111C-153-GW | 10/20/2009 | 2346640.16 | 551538.99 | 1078.07 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-112 | Unconsolidated | FWGNTAmw-112C-154-GW | 10/20/2009 | 2346889.01 | 551708.76 | 1075.36 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-113 | Unconsolidated | FWGNTAmw-113C-155-GW | 10/20/2009 | 2347081.15 | 551487.86 | 1072.61 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-115 | Unconsolidated | FWGNTAmw-115C-157-GW | 10/20/2009 | 2347582.94 | 551793.39 | 1086.91 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-116 | Unconsolidated | FWGNTAmw-116C-158-GW | 10/20/2009 | 2348196.78 | 551749.39 | 1091.68 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-117 | Unconsolidated | FWGNTAmw-117C-159-GW | 10/20/2009 | 2347994.79 | 551586.36 | 1091.67 | Grab | BP | 0.0029 | J | B | L | 0.005 | 0.0017 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-118 | Unconsolidated | FWGNTAmw-118C-160-GW | 10/20/2009 | 2347608.09 | 551333.89 | 1078.86 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-003 | Unconsolidated | FWGLL5mw-003C-067-GW | 10/21/2009 | 2354962.47 | 554533.41 | 1124.7 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-001 | Unconsolidated | FWGLL8mw-001C-1436-GW | 10/13/2009 | 2351660 | 552609 | 1118.69 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-002 | Unconsolidated | FWGLL8mw-002C-1437-GW | 10/13/2009 | 2351010 | 552410 | 1121.67 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-003 | Unconsolidated | FWGLL8mw-003C-1438-GW | 10/13/2009 | 2351360 | 552231 | 1116.3 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-004 | Unconsolidated | FWGLL8mw-004C-1439-GW | 10/13/2009 | 2351260 | 551808 | 1112.73 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-43 Load Line 10 | L10mw-006 | Unconsolidated | FWGLL10mw-006C-1454-GW | 10/14/2009 | 2355656.8 | 554997.25 | 1121.2 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-001 | Unconsolidated | FWGLL11mw-001C-1455-GW | 10/14/2009 | 2352778.81 | 557504.98 | 1100.16 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-006 | Unconsolidated | FWGLL11mw-006C-1459-GW | 10/14/2009 | 2352521.51 | 558263.51 | 1086.5 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-008 | Unconsolidated | FWGLL11mw-008C-1460-GW | 10/14/2009 | 2352388.57 | 557981.26 | 1087.74 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-009 | Unconsolidated | FWGLL11mw-009C-1461-GW | 10/14/2009 | 2352577.21 | 557901.2 | 1088.28 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-010 | Unconsolidated | FWGLL11mw-010C-1462-GW | 10/14/2009 | 2352038.91 | 557675.59 | 1082.68 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-001 | Unconsolidated | FWGCBPmw-001C-097-GW | 10/21/2009 | 2367095.431 | 561616.171 | 975.8411 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-002 | Unconsolidated | FWGCBPmw-002C-098-GW | 10/21/2009 | 2367295.684 | 561865.9216 | 970.0359 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-003 | Unconsolidated | FWGCBPmw-003C-099-GW | 10/21/2009 | 2366768.739 | 561944.2018 | 974.6665 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-004 | Unconsolidated | FWGCBPmw-004C-100-GW | 10/21/2009 | 2366978.819 | 562123.8244 | 971.1285 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-005 | Unconsolidated | FWGCBPmw-005C-101-GW | 10/21/2009 | 2366919.482 | 562311.8596 | 971.5897 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-006 | Unconsolidated | FWGCBPmw-006C-102-GW | 10/21/2009 | 2367243.659 | 562311.9449 | 967.6448 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-007 | Unconsolidated | FWGCBPmw-007C-103-GW | 10/21/2009 | 2366512.573 | 562006.343 | 976.3736 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-007 | Unconsolidated | FWGASYmw-007C-1469-GW | 10/15/2009 | 2366840 | 556820 | 981.4 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-008 | Unconsolidated | FWGASYmw-008C-1470-GW | 10/15/2009 | 2367470 | 557086 | 976.2 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-010 | Unconsolidated | FWGASYmw-010C-1472-GW | 10/15/2009 | 2366980 | 557273 | 978.2 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| Site-wide Background Areas | BKGmw-004 | Unconsolidated | FWGBKGmw-004C-007-GW | 10/21/2009 | 2368852.973 | 569464.763 | 965.16 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| Site-wide Background Areas | BKGmw-005 | Unconsolidated | FWGBKGmw-005C-008-GW | 10/22/2009 | 2340835.864 | 562288.445 | 1149.443 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| Site-wide Background Areas | BKGmw-013 | Unconsolidated | FWGBKGmw-013C-013-GW | 10/21/2009 | 2361627.394 | 558269.158 | 986.588 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| Site-wide Background Areas | BKGmw-016 | Unconsolidated | FWGBKGmw-016C-015-GW | 10/22/2009 | 2342407.075 | 553983.501 | 1098.419 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| Site-wide Background Areas | BKGmw-017 | Unconsolidated | FWGBKGmw-017C-016-GW | 10/22/2009 | 2346115.351 | 562452.044 | 1132.799 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| Site-wide Background Areas | BKGmw-019 | Unconsolidated | FWGBKGmw-019C-018-GW | 10/22/2009 | 2349882.142 | 559864.549 | 1108.239 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| Site-wide Background Areas | BKGmw-020 | Unconsolidated | FWGBKGmw-020C-019-GW | 10/21/2009 | 2357856.237 | 558756.241 | 1065.001 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| Site-wide Background Areas | BKGmw-021 | Unconsolidated | FWGBKGmw-021C-020-GW | 10/21/2009 | 2367622.953 | 571016.748 | 972.159 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Silver | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|--------|--------|------|--------|-------|--------|----|
| RVAAP-01 Ramsdell Quarry Landfill | RQLmw-009 | Sharon | FWGRQLmw-009C-1487-GW | 10/14/2009 | 2376253.654 | 566351.1994 | 964 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-078 | Sharon | FWGLL1mw-078-025-GW | 10/19/2009 | 2376275.854 | 564623.871 | 995.84 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-080 | Sharon | FWGLL1mw-080-027-GW | 10/19/2009 | 2376845.072 | 562479.728 | 996.27 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-082 | Sharon | FWGLL1mw-082-029-GW | 10/19/2009 | 2376977.379 | 562956.86 | 1006.45 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-060 | Sharon | FWGLL2mw-060C-034-GW | 10/19/2009 | 2375978 | 558022 | 958.13 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-263 | Sharon | FWGLL2mw-263-037-GW | 10/19/2009 | 2374290.29 | 561590.92 | 1009.42 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-264 | Sharon | FWGLL2mw-264-038-GW | 10/19/2009 | 2374532.76 | 561173.63 | 1010.1 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-267 | Sharon | FWGLL2mw-267C-041-GW | 10/19/2009 | 2373714.17 | 561393.73 | 1012.81 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-268 | Sharon | FWGLL2mw-268-042-GW | 10/19/2009 | 2374156.4 | 560831.44 | 1015.47 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-269 | Sharon | FWGLL2mw-269-043-GW | 10/20/2009 | 2374756.74 | 559483.9 | 1009.49 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-270 | Sharon | FWGLL2mw-270-044-GW | 10/19/2009 | 2372858.94 | 562656.18 | 1009.93 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-238 | Sharon | FWGLL3mw-238C-051-GW | 10/20/2009 | 2370624.55 | 559569.39 | 1006.91 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-239 | Sharon | FWGLL3mw-239-052-GW | 10/20/2009 | 2370894.17 | 559101.84 | 1003.5 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-241 | Sharon | FWGLL3mw-241-054-GW | 10/20/2009 | 2370332.94 | 559299 | 994.65 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-242 | Sharon | FWGLL3mw-242-055-GW | 10/21/2009 | 2371993.44 | 557035.28 | 999.32 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-243 | Sharon | FWGLL3mw-243C-056-GW | 10/21/2009 | 2371532.06 | 556688.5 | 991.16 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-12 Load Line 12 | L12mw-186 | Sharon | FWGLL12mw-186C-081-GW | 10/15/2009 | 2367912.39 | 559065.95 | 976.34 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-12 Load Line 12 | L12mw-189 | Sharon | FWGLL12mw-189C-084-GW | 10/15/2009 | 2367945.92 | 558569.27 | 976.17 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-13 Building 1200 | B12mw-011 | Sharon | FWGB12mw-011C-091-GW | 10/21/2009 | 2371420 | 565690 | 1003.76 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-001 | Sharon | FWGASYmw-001C-1463-GW | 10/14/2009 | 2366262.85 | 558406.04 | 978.4 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-002 | Sharon | FWGASYmw-002C-1464-GW | 10/15/2009 | 2366170 | 557890 | 982 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-003 | Sharon | FWGASYmw-003C-1465-GW | 10/15/2009 | 2366650 | 558014 | 979.7 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-005 | Sharon | FWGASYmw-005C-1467-GW | 10/15/2009 | 2367450 | 557785 | 977.6 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-006 | Sharon | FWGASYmw-006C-1468-GW | 10/15/2009 | 2366750 | 557256 | 980.2 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-009 | Sharon | FWGASYmw-009C-1471-GW | 10/15/2009 | 2366630 | 557606 | 979.9 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| Site-wide Background Areas | BKGmw-012 | Sharon | FWGBKGMw-012C-012-GW | 10/21/2009 | 2367795.226 | 563918.862 | 997.574 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| Site-wide Background Areas | BKGmw-018 | Sharon | FWGBKGMw-018C-017-GW | 10/21/2009 | 2354993.909 | 570873.349 | 1043.06 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-001 | Homewood | FWGCBLmw-001C-093-GW | 10/21/2009 | 2343659.08 | 559405.12 | 1178.5 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-003 | Homewood | FWGCBLmw-003C-095-GW | 10/22/2009 | 2343967.67 | 559697.13 | 1172.22 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-004 | Homewood | FWGCBLmw-004C-096-GW | 10/22/2009 | 2343687.21 | 559950 | 1172.08 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-171 | Homewood | FWGFBQmw-171C-138-GW | 10/22/2009 | 2350072.44 | 554230.93 | 1140.49 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-172 | Homewood | FWGFBQmw-172C-139-GW | 10/22/2009 | 2349907.37 | 554322.17 | 1145.71 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-173 | Homewood | FWGFBQmw-173C-140-GW | 10/22/2009 | 2350449.01 | 554491.35 | 1162.43 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-174 | Homewood | FWGFBQmw-174C-141-GW | 10/22/2009 | 2350289.81 | 554142.44 | 1135.78 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-175 | Homewood | FWGFBQmw-175C-142-GW | 10/22/2009 | 2350297.98 | 553989.24 | 1137.16 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-177 | Homewood | FWGFBQmw-177C-144-GW | 10/22/2009 | 2350112.18 | 553321.94 | 1125.73 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-003 | Homewood | FWGLL6mw-003C-003-GW | 10/21/2009 | 2353048.684 | 553544.3432 | 1125.3837 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-004 | Homewood | FWGLL6mw-004C-004-GW | 10/21/2009 | 2353368.787 | 553431.8182 | 1125.3851 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-001 | Homewood | FWGLL5mw-001C-065-GW | 10/21/2009 | 2354627.07 | 554321.25 | 1125 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-002 | Homewood | FWGLL5mw-002C-066-GW | 10/21/2009 | 2354573.52 | 554606 | 1125.8 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-004 | Homewood | FWGLL5mw-004C-068-GW | 10/21/2009 | 2355008.44 | 554071.73 | 1122.9 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-005 | Homewood | FWGLL5mw-005C-069-GW | 10/22/2009 | 2354424.02 | 554154.73 | 1126.5 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-006 | Homewood | FWGLL5mw-006C-070-GW | 10/21/2009 | 2354730 | 553981.82 | 1125.1 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-003 | Homewood | FWGLL7mw-003C-1432-GW | 10/12/2009 | 2352349.51 | 555414.33 | 1118.23 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-004 | Homewood | FWGLL7mw-004C-1433-GW | 10/12/2009 | 2352036.23 | 555583.15 | 1123.3 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-005 | Homewood | FWGLL8mw-005C-1440-GW | 10/13/2009 | 2351750 | 551522 | 1112.51 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-006 | Homewood | FWGLL8mw-006C-1441-GW | 10/13/2009 | 2351480 | 551295 | 1114.33 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-001 | Homewood | FWGLL9mw-001C-1442-GW | 10/13/2009 | 2355817.04 | 556125.81 | 1134.62 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-002 | Homewood | FWGLL9mw-002C-1443-GW | 10/13/2009 | 2355907.76 | 556755.11 | 1127.3 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-003 | Homewood | FWGLL9mw-003C-1444-GW | 10/13/2009 | 2356635.21 | 556445.31 | 1135.76 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-43 Load Line 10 | L10mw-001 | Homewood | FWGLL10mw-001C-1449-GW | 10/13/2009 | 2355272.22 | 555818.25 | 1130 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-43 Load Line 10 | L10mw-002 | Homewood | FWGLL10mw-002C-1450-GW | 10/13/2009 | 2355712.51 | 555525.36 | 1124.4 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-43 Load Line 10 | L10mw-003 | Homewood | FWGLL10mw-003C-1451-GW | 10/13/2009 | 2355387.92 | 555496.71 | 1127.4 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-43 Load Line 10 | L10mw-004 | Homewood | FWGLL10mw-004C-1452-GW | 10/14/2009 | 2355440.2 | 555234.59 | 1119.6 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |
| RVAAP-43 Load Line 10 | L10mw-005 | Homewood | FWGLL10mw-005C-1453-GW | 10/14/2009 | 2355941.55 | 555382.53 | 1122.9 | Grab | BP | 0.0017 | U | U | | 0.005 | 0.0017 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Sodium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|-----------------------|-------------|-------------|-------------|-----------|-------------|--------|--------|--------|------|--------|----|-------|----|
| RVAAP-02 Erie Burning Grounds | EBGmw-123 | Unconsolidated | FWGEBGmw-123C-125-GW | 10/19/2009 | 2380049.21 | 571747.04 | 945.59 | Grab | BP | 7.92 | | | | 1 | 0.972 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-124 | Unconsolidated | FWGEBGmw-124C-126-GW | 10/19/2009 | 2380030.24 | 571618.07 | 939.02 | Grab | BP | 17.9 | | | | 1 | 0.972 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-126 | Unconsolidated | FWGEBGmw-126C-128-GW | 10/19/2009 | 2380307.31 | 572348.81 | 938.2 | Grab | BP | 7.01 | | | | 1 | 0.972 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-127 | Unconsolidated | FWGEBGmw-127C-129-GW | 10/19/2009 | 2380172.16 | 571083.61 | 940.21 | Grab | BP | 4.02 | | | | 1 | 0.972 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-128 | Unconsolidated | FWGEBGmw-128C-130-GW | 10/19/2009 | 2379892.79 | 570970.32 | 942.47 | Grab | BP | 4.79 | | | | 1 | 0.972 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-129 | Unconsolidated | FWGEBGmw-129C-131-GW | 10/19/2009 | 2379240.52 | 572035.68 | 941.97 | Grab | BP | 3.75 | | | | 1 | 0.972 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-130 | Unconsolidated | FWGEBGmw-130C-132-GW | 10/19/2009 | 2379220.69 | 570695.61 | 941.18 | Grab | BP | 4.85 | | | | 1 | 0.972 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-104 | Unconsolidated | FWGDA2mw-104C-115-GW | 10/21/2009 | 2354773.248 | 561125.7023 | 1070.8244 | Grab | BP | 3.49 | | | | 1 | 0.972 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-107 | Unconsolidated | FWGDA2mw-107C-118-GW | 10/21/2009 | 2354923.231 | 560482.7171 | 1039.1815 | Grab | BP | 9 | | | | 1 | 0.972 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-108 | Unconsolidated | FWGDA2mw-108C-119-GW | 10/21/2009 | 2355602.421 | 560184.5864 | 1029.9156 | Grab | BP | 10.6 | | | | 1 | 0.972 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-109 | Unconsolidated | FWGDA2mw-109C-120-GW | 10/21/2009 | 2354796.85 | 559897.6695 | 1068.6588 | Grab | BP | 7.8 | | | | 1 | 0.972 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-110 | Unconsolidated | FWGDA2mw-110C-121-GW | 10/21/2009 | 2355195.202 | 559922.3928 | 1061.3878 | Grab | BP | 4.66 | | | | 1 | 0.972 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-112 | Unconsolidated | FWGDA2mw-112C-123-GW | 10/21/2009 | 2355019.568 | 560374.5046 | 1034.8724 | Grab | BP | 9.19 | | | | 1 | 0.972 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-113 | Unconsolidated | FWGDA2mw-113C-124-GW | 10/21/2009 | 2355150.554 | 560392.8898 | 1034.5126 | Grab | BP | 9.85 | | | | 1 | 0.972 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-1 | Unconsolidated | FWGDETMw-001-111-GW | 10/21/2009 | 2354959.47 | 560820.03 | 1063.97 | Grab | BP | 9.23 | | | | 1 | 0.972 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-2 | Unconsolidated | FWGDETMw-002C-112-GW | 10/21/2009 | 2355360.33 | 560664.71 | 1062.69 | Grab | BP | 24.6 | | | | 1 | 0.972 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-3 | Unconsolidated | FWGDETMw-003C-1488-GW | 10/14/2009 | 2355204.94 | 560456.1 | 1035.56 | Grab | BP | 11.8 | | | | 1 | 0.972 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-006 | Unconsolidated | FWGWBGmw-006C-171-GW | 10/20/2009 | 2359087.79 | 563008.87 | 1010.38 | Grab | BP | 6.51 | | | | 1 | 0.972 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-007 | Unconsolidated | FWGWBGmw-007C-172-GW | 10/20/2009 | 2360420.44 | 562479.87 | 995.33 | Grab | BP | 5.22 | | | | 1 | 0.972 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-009 | Unconsolidated | FWGWBGmw-009C-174-GW | 10/20/2009 | 2357159.2 | 561603.54 | 1042 | Grab | BP | 4.28 | | | | 1 | 0.972 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-010 | Unconsolidated | FWGWBGmw-010C-175-GW | 10/20/2009 | 2356051.96 | 562893.2 | 1069.85 | Grab | BP | 16.7 | | | | 1 | 0.972 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-011 | Unconsolidated | FWGWBGmw-011C-176-GW | 10/20/2009 | 2356187.29 | 562609.18 | 1072.38 | Grab | BP | 5.36 | | | | 1 | 0.972 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-012 | Unconsolidated | FWGWBGmw-012C-177-GW | 10/20/2009 | 2354810.65 | 562240.9 | 1079.11 | Grab | BP | 4.13 | | | | 1 | 0.972 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-013 | Unconsolidated | FWGWBGmw-013C-178-GW | 10/20/2009 | 2355223.25 | 561518.27 | 1071.7 | Grab | BP | 2.74 | | | | 1 | 0.972 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-014 | Unconsolidated | FWGWBGmw-014C-179-GW | 10/20/2009 | 2360439.22 | 562061.26 | 996.78 | Grab | BP | 5.38 | | | | 1 | 0.972 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-015 | Unconsolidated | FWGWBGmw-015C-180-GW | 10/20/2009 | 2359182.41 | 562340.12 | 1011.6 | Grab | BP | 10 | | | | 1 | 0.972 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-016 | Unconsolidated | FWGWBGmw-016C-181-GW | 10/20/2009 | 2360645.88 | 562709.13 | 997.03 | Grab | BP | 5.12 | | | | 1 | 0.972 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-017 | Unconsolidated | FWGWBGmw-017C-182-GW | 10/20/2009 | 2359603.84 | 562913.24 | 1006.62 | Grab | BP | 5.44 | | | | 1 | 0.972 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-064 | Unconsolidated | FWGLL1mw-064-022-GW | 10/19/2009 | 2380286.973 | 563118.7363 | 932 | Grab | BP | 4.82 | | | | 1 | 0.972 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-065 | Unconsolidated | FWGLL1mw-065-023-GW | 10/19/2009 | 2380452.003 | 560916.9225 | 940 | Grab | BP | 10.1 | | | | 1 | 0.972 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-193 | Unconsolidated | FWGLL4mw-193-057-GW | 10/21/2009 | 2364236.52 | 554960.27 | 982.92 | Grab | BP | 11.5 | | | | 1 | 0.972 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-194 | Unconsolidated | FWGLL4mw-194C-058-GW | 10/16/2009 | 2364584.86 | 555089.22 | 983.76 | Grab | BP | 6.8 | | | | 1 | 0.972 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-196 | Unconsolidated | FWGLL4mw-196C-060-GW | 10/16/2009 | 2365297.1 | 555213.52 | 984.55 | Grab | BP | 1.33 | | | | 1 | 0.972 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-197 | Unconsolidated | FWGLL4mw-197C-061-GW | 10/16/2009 | 2365384.91 | 555397.05 | 985.46 | Grab | BP | 1.34 | | | | 1 | 0.972 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-198 | Unconsolidated | FWGLL4mw-198C-062-GW | 10/21/2009 | 2364991.19 | 555442.04 | 983.42 | Grab | BP | 8.79 | | | | 1 | 0.972 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-199 | Unconsolidated | FWGLL4mw-199C-063-GW | 10/16/2009 | 2365420.78 | 554621.62 | 977.28 | Grab | BP | 6.68 | | | | 1 | 0.972 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-200 | Unconsolidated | FWGLL4mw-200-064-GW | 10/21/2009 | 2365903.05 | 554580.15 | 987.93 | Grab | BP | 7.59 | | | | 1 | 0.972 | 1 |
| RVAAP-12 Load Line 12 | L12mw-107 | Unconsolidated | FWGLL12mw-107C-072-GW | 10/16/2009 | 2368595.67 | 556759.02 | 978.03 | Grab | BP | 18.9 | | | | 1 | 0.972 | 1 |
| RVAAP-12 Load Line 12 | L12mw-128 | Unconsolidated | FWGLL12mw-128C-074-GW | 10/16/2009 | 2368293.2 | 557371.54 | 976.21 | Grab | BP | 21.5 | | | | 1 | 0.972 | 1 |
| RVAAP-12 Load Line 12 | L12mw-153 | Unconsolidated | FWGLL12mw-153C-075-GW | 10/16/2009 | 2368138.87 | 557823.23 | 975.34 | Grab | BP | 25.1 | | | | 1 | 0.972 | 1 |
| RVAAP-12 Load Line 12 | L12mw-154 | Unconsolidated | FWGLL12mw-154C-076-GW | 10/16/2009 | 2368183.88 | 557754.56 | 977 | Grab | BP | 24.4 | | | | 1 | 0.972 | 1 |
| RVAAP-12 Load Line 12 | L12mw-182 | Unconsolidated | FWGLL12mw-182C-077-GW | 10/16/2009 | 2368853.2 | 555890.35 | 982.2 | Grab | BP | 26.2 | | | | 1 | 0.972 | 1 |
| RVAAP-12 Load Line 12 | L12mw-188 | Unconsolidated | FWGLL12mw-188C-083-GW | 10/15/2009 | 2367908.82 | 558132.59 | 978.46 | Grab | BP | 31.5 | | | | 1 | 0.972 | 1 |
| RVAAP-12 Load Line 12 | L12mw-242 | Unconsolidated | FWGLL12mw-242C-085-GW | 10/15/2009 | 2368545.29 | 558020.51 | 980 | Grab | BP | 46.2 | | | | 1 | 0.972 | 1 |
| RVAAP-12 Load Line 12 | L12mw-243 | Unconsolidated | FWGLL12mw-243C-086-GW | 10/16/2009 | 2368190.04 | 557376.32 | 978 | Grab | BP | 21 | | | | 1 | 0.972 | 1 |
| RVAAP-12 Load Line 12 | L12mw-244 | Unconsolidated | FWGLL12mw-244C-087-GW | 10/16/2009 | 2368751.42 | 557377.17 | 980 | Grab | BP | 9.69 | | | | 1 | 0.972 | 1 |
| RVAAP-12 Load Line 12 | L12mw-245 | Unconsolidated | FWGLL12mw-245C-088-GW | 10/16/2009 | 2368370.74 | 557044.55 | 978 | Grab | BP | 22.6 | | | | 1 | 0.972 | 1 |
| RVAAP-12 Load Line 12 | L12mw-246 | Unconsolidated | FWGLL12mw-246C-089-GW | 10/16/2009 | 2369432.17 | 556658.89 | 982.96 | Grab | BP | 22.7 | | | | 1 | 0.972 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-166 | Unconsolidated | FWGFBQmw-166C-133-GW | 10/22/2009 | 2349584.33 | 553123.86 | 1104.87 | Grab | BP | 14.5 | | | | 1 | 0.972 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-167 | Unconsolidated | FWGFBQmw-167C-134-GW | 10/22/2009 | 2349675.45 | 553556.12 | 1112.05 | Grab | BP | 29.6 | | | | 1 | 0.972 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-176 | Unconsolidated | FWGFBQmw-176C-143-GW | 10/22/2009 | 2350219.45 | 553273.33 | 1129.57 | Grab | BP | 2.01 | | | | 1 | 0.972 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-024 | Unconsolidated | FWGLNWmw-024C-145-GW | 10/20/2009 | 2358400 | 564828 | 1035.3 | Grab | BP | 11 | | | | 1 | 0.972 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-025 | Unconsolidated | FWGLNWmw-025C-146-GW | 10/20/2009 | 2358420 | 565070 | 1027.2 | Grab | BP | 6.83 | | | | 1 | 0.972 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-026 | Unconsolidated | FWGLNWmw-026C-147-GW | 10/20/2009 | 2358950 | 564656 | 1025 | Grab | BP | 11.4 | | | | 1 | 0.972 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Sodium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|--------|--------|------|--------|----|-------|----|
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-027 | Unconsolidated | FWGLNWmw-027C-148-GW | 10/20/2009 | 2358630 | 564519 | 1024.4 | Grab | BP | 7.23 | | | | 1 | 0.972 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-001 | Unconsolidated | FWGMBSmw-001C-183-GW | 10/20/2009 | 2345323 | 550759.5 | 1079.68 | Grab | BP | 11.7 | | | | 1 | 0.972 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-002 | Unconsolidated | FWGMBSmw-002C-184-GW | 10/20/2009 | 2345322.3 | 550886.2 | 1080.5 | Grab | BP | 6.81 | | | | 1 | 0.972 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-003 | Unconsolidated | FWGMBSmw-003C-185-GW | 10/20/2009 | 2345172.4 | 550922.8 | 1082.45 | Grab | BP | 7.19 | | | | 1 | 0.972 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-004 | Unconsolidated | FWGMBSmw-004C-186-GW | 10/20/2009 | 2345134.2 | 550767.9 | 1079.55 | Grab | BP | 7.26 | | | | 1 | 0.972 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-005 | Unconsolidated | FWGMBSmw-005C-187-GW | 10/20/2009 | 2345354.1 | 550800.7 | 1080.5 | Grab | BP | 21.3 | | | | 1 | 0.972 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-006 | Unconsolidated | FWGMBSmw-006C-188-GW | 10/20/2009 | 2345282.3 | 550726.1 | 1080.29 | Grab | BP | 10.2 | | | | 1 | 0.972 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-001 | Unconsolidated | FWGCPmw-001C-105-GW | 10/21/2009 | 2368948.852 | 560440.9741 | 975.2594 | Grab | BP | 6.09 | | | | 1 | 0.972 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-004 | Unconsolidated | FWGCPmw-004C-108-GW | 10/21/2009 | 2368674.21 | 561843.2791 | 981.198 | Grab | BP | 9.55 | | | | 1 | 0.972 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-006 | Unconsolidated | FWGCPmw-006C-110-GW | 10/21/2009 | 2367727.191 | 562830.039 | 965.13 | Grab | BP | 18.3 | | | | 1 | 0.972 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-001 | Unconsolidated | FWGLL6mw-001C-001-GW | 10/21/2009 | 2353153.227 | 554214.8365 | 1124.1607 | Grab | B | 7.23 | | | | 1 | 0.972 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-002 | Unconsolidated | FWGLL6mw-002C-002-GW | 10/21/2009 | 2353820.091 | 553589.8815 | 1129.3631 | Grab | B | 2.99 | | | | 1 | 0.972 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-107 | Unconsolidated | FWGNTAmw-107C-149-GW | 10/20/2009 | 2345432.73 | 551699.09 | 1077.65 | Grab | BP | 13.3 | | | | 1 | 0.972 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-108 | Unconsolidated | FWGNTAmw-108C-150-GW | 10/20/2009 | 2345782.17 | 551917.92 | 1083.22 | Grab | BP | 10.1 | | | | 1 | 0.972 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-109 | Unconsolidated | FWGNTAmw-109C-151-GW | 10/20/2009 | 2345996.99 | 551291.19 | 1076.89 | Grab | BP | 1.33 | | | | 1 | 0.972 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-110 | Unconsolidated | FWGNTAmw-110C-152-GW | 10/20/2009 | 2346436.82 | 551350.8 | 1080.03 | Grab | BP | 15.8 | | | | 1 | 0.972 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-111 | Unconsolidated | FWGNTAmw-111C-153-GW | 10/20/2009 | 2346640.16 | 551538.99 | 1078.07 | Grab | BP | 12.9 | | | | 1 | 0.972 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-112 | Unconsolidated | FWGNTAmw-112C-154-GW | 10/20/2009 | 2346889.01 | 551708.76 | 1075.36 | Grab | BP | 18.1 | | | | 1 | 0.972 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-113 | Unconsolidated | FWGNTAmw-113C-155-GW | 10/20/2009 | 2347081.15 | 551487.86 | 1072.61 | Grab | BP | 14.7 | | | | 1 | 0.972 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-115 | Unconsolidated | FWGNTAmw-115C-157-GW | 10/20/2009 | 2347582.94 | 551793.39 | 1086.91 | Grab | BP | 11.4 | | | | 1 | 0.972 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-116 | Unconsolidated | FWGNTAmw-116C-158-GW | 10/20/2009 | 2348196.78 | 551749.39 | 1091.68 | Grab | BP | 1.89 | | | | 1 | 0.972 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-117 | Unconsolidated | FWGNTAmw-117C-159-GW | 10/20/2009 | 2347994.79 | 551586.36 | 1091.67 | Grab | BP | 18.3 | | | | 1 | 0.972 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-118 | Unconsolidated | FWGNTAmw-118C-160-GW | 10/20/2009 | 2347608.09 | 551333.89 | 1078.86 | Grab | BP | 10.1 | | | | 1 | 0.972 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-003 | Unconsolidated | FWGLL5mw-003C-067-GW | 10/21/2009 | 2354962.47 | 554533.41 | 1124.7 | Grab | BP | 3.95 | | | | 1 | 0.972 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-001 | Unconsolidated | FWGLL8mw-001C-1436-GW | 10/13/2009 | 2351660 | 552609 | 1118.69 | Grab | BP | 25.7 | | | | 1 | 0.972 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-002 | Unconsolidated | FWGLL8mw-002C-1437-GW | 10/13/2009 | 2351010 | 552410 | 1121.67 | Grab | BP | 29.3 | | | | 1 | 0.972 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-003 | Unconsolidated | FWGLL8mw-003C-1438-GW | 10/13/2009 | 2351360 | 552231 | 1116.3 | Grab | BP | 44.1 | | | | 1 | 0.972 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-004 | Unconsolidated | FWGLL8mw-004C-1439-GW | 10/13/2009 | 2351260 | 551808 | 1112.73 | Grab | BP | 22.9 | | | | 1 | 0.972 | 1 |
| RVAAP-43 Load Line 10 | L10mw-006 | Unconsolidated | FWGLL10mw-006C-1454-GW | 10/14/2009 | 2355656.8 | 554997.25 | 1121.2 | Grab | BP | 2.89 | | | | 1 | 0.972 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-001 | Unconsolidated | FWGLL11mw-001C-1455-GW | 10/14/2009 | 2352778.81 | 557504.98 | 1100.16 | Grab | BP | 12.6 | | | | 1 | 0.972 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-006 | Unconsolidated | FWGLL11mw-006C-1459-GW | 10/14/2009 | 2352521.51 | 558263.51 | 1086.5 | Grab | BP | 9.19 | | | | 1 | 0.972 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-008 | Unconsolidated | FWGLL11mw-008C-1460-GW | 10/14/2009 | 2352388.57 | 557981.26 | 1087.74 | Grab | BP | 5.27 | | | | 1 | 0.972 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-009 | Unconsolidated | FWGLL11mw-009C-1461-GW | 10/14/2009 | 2352577.21 | 557901.2 | 1088.28 | Grab | BP | 12.4 | | | | 1 | 0.972 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-010 | Unconsolidated | FWGLL11mw-010C-1462-GW | 10/14/2009 | 2352038.91 | 557675.59 | 1082.68 | Grab | BP | 26.8 | | | | 1 | 0.972 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-001 | Unconsolidated | FWGCBPmw-001C-097-GW | 10/21/2009 | 2367095.431 | 561616.171 | 975.8411 | Grab | BP | 57.3 | | | | 1 | 0.972 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-002 | Unconsolidated | FWGCBPmw-002C-098-GW | 10/21/2009 | 2367295.684 | 561865.9216 | 970.0359 | Grab | BP | 52.3 | | | | 1 | 0.972 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-003 | Unconsolidated | FWGCBPmw-003C-099-GW | 10/21/2009 | 2366768.739 | 561944.2018 | 974.6665 | Grab | BP | 104 | | | | 1 | 0.972 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-004 | Unconsolidated | FWGCBPmw-004C-100-GW | 10/21/2009 | 2366978.819 | 562123.8244 | 971.1285 | Grab | BP | 23 | | | | 1 | 0.972 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-005 | Unconsolidated | FWGCBPmw-005C-101-GW | 10/21/2009 | 2366919.482 | 562311.8596 | 971.5897 | Grab | BP | 32.7 | | | | 1 | 0.972 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-006 | Unconsolidated | FWGCBPmw-006C-102-GW | 10/21/2009 | 2367243.659 | 562311.9449 | 967.6448 | Grab | BP | 13.7 | | | | 1 | 0.972 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-007 | Unconsolidated | FWGCBPmw-007C-103-GW | 10/21/2009 | 2366512.573 | 562006.343 | 976.3736 | Grab | BP | 136 | | | | 1 | 0.972 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-007 | Unconsolidated | FWGASYmw-007C-1469-GW | 10/15/2009 | 2366840 | 556820 | 981.4 | Grab | BP | 35.6 | | | | 1 | 0.972 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-008 | Unconsolidated | FWGASYmw-008C-1470-GW | 10/15/2009 | 2367470 | 557086 | 976.2 | Grab | BP | 33.3 | | | | 1 | 0.972 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-010 | Unconsolidated | FWGASYmw-010C-1472-GW | 10/15/2009 | 2366980 | 557273 | 978.2 | Grab | BP | 48.2 | | | | 1 | 0.972 | 1 |
| Site-wide Background Areas | BKGmw-004 | Unconsolidated | FWGBKGmw-004C-007-GW | 10/21/2009 | 2368852.973 | 569464.763 | 965.16 | Grab | BP | 7.88 | | | | 1 | 0.972 | 1 |
| Site-wide Background Areas | BKGmw-005 | Unconsolidated | FWGBKGmw-005C-008-GW | 10/22/2009 | 2340835.864 | 562288.445 | 1149.443 | Grab | BP | 6.64 | | | | 1 | 0.972 | 1 |
| Site-wide Background Areas | BKGmw-013 | Unconsolidated | FWGBKGmw-013C-013-GW | 10/21/2009 | 2361627.394 | 558269.158 | 986.588 | Grab | BP | 11.8 | | | | 1 | 0.972 | 1 |
| Site-wide Background Areas | BKGmw-016 | Unconsolidated | FWGBKGmw-016C-015-GW | 10/22/2009 | 2342407.075 | 553983.501 | 1098.419 | Grab | BP | 3.1 | | | | 1 | 0.972 | 1 |
| Site-wide Background Areas | BKGmw-017 | Unconsolidated | FWGBKGmw-017C-016-GW | 10/22/2009 | 2346115.351 | 562452.044 | 1132.799 | Grab | BP | 20.7 | | | | 1 | 0.972 | 1 |
| Site-wide Background Areas | BKGmw-019 | Unconsolidated | FWGBKGmw-019C-018-GW | 10/22/2009 | 2349882.142 | 559864.549 | 1108.239 | Grab | BP | 10.4 | | | | 1 | 0.972 | 1 |
| Site-wide Background Areas | BKGmw-020 | Unconsolidated | FWGBKGmw-020C-019-GW | 10/21/2009 | 2357856.237 | 558756.241 | 1065.001 | Grab | BP | 8.73 | | | | 1 | 0.972 | 1 |
| Site-wide Background Areas | BKGmw-021 | Unconsolidated | FWGBKGmw-021C-020-GW | 10/21/2009 | 2367622.953 | 571016.748 | 972.159 | Grab | BP | 5.3 | | | | 1 | 0.972 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Sodium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|---------|--------|------|--------|----|-------|----|
| RVAAP-01 Ramsdell Quarry Landfill | RQLmw-009 | Sharon | FWGRQLmw-009C-1487-GW | 10/14/2009 | 2376253.654 | 566351.1994 | 964 | Grab | BP | 1.96 | | | | 1 | 0.972 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-078 | Sharon | FWGLL1mw-078-025-GW | 10/19/2009 | 2376275.854 | 564623.871 | 995.84 | Grab | BP | 4.47 | | | | 1 | 0.972 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-080 | Sharon | FWGLL1mw-080-027-GW | 10/19/2009 | 2376845.072 | 562479.728 | 996.27 | Grab | BP | 2.09 | | | | 1 | 0.972 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-082 | Sharon | FWGLL1mw-082-029-GW | 10/19/2009 | 2376977.379 | 562956.86 | 1006.45 | Grab | BP | 1.01 | | | | 1 | 0.972 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-060 | Sharon | FWGLL2mw-060C-034-GW | 10/19/2009 | 2375978 | 558022 | 958.13 | Grab | BP | 2.33 | | | | 1 | 0.972 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-263 | Sharon | FWGLL2mw-263-037-GW | 10/19/2009 | 2374290.29 | 561590.92 | 1009.42 | Grab | BP | 3.73 | | | | 1 | 0.972 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-264 | Sharon | FWGLL2mw-264-038-GW | 10/19/2009 | 2374532.76 | 561173.63 | 1010.1 | Grab | BP | 6.67 | | | | 1 | 0.972 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-267 | Sharon | FWGLL2mw-267C-041-GW | 10/19/2009 | 2373714.17 | 561393.73 | 1012.81 | Grab | BP | 14.3 | | | | 1 | 0.972 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-268 | Sharon | FWGLL2mw-268-042-GW | 10/19/2009 | 2374156.4 | 560831.44 | 1015.47 | Grab | BP | 7.72 | | | | 1 | 0.972 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-269 | Sharon | FWGLL2mw-269-043-GW | 10/20/2009 | 2374756.74 | 559483.9 | 1009.49 | Grab | BP | 6.21 | | | | 1 | 0.972 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-270 | Sharon | FWGLL2mw-270-044-GW | 10/19/2009 | 2372858.94 | 562656.18 | 1009.93 | Grab | BP | 2.29 | | | | 1 | 0.972 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-238 | Sharon | FWGLL3mw-238C-051-GW | 10/20/2009 | 2370624.55 | 559569.39 | 1006.91 | Grab | BP | 5.98 | | | | 1 | 0.972 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-239 | Sharon | FWGLL3mw-239-052-GW | 10/20/2009 | 2370894.17 | 559101.84 | 1003.5 | Grab | BP | 18.5 | | | | 1 | 0.972 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-241 | Sharon | FWGLL3mw-241-054-GW | 10/20/2009 | 2370332.94 | 559299 | 994.65 | Grab | BP | 4.79 | | | | 1 | 0.972 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-242 | Sharon | FWGLL3mw-242-055-GW | 10/21/2009 | 2371993.44 | 557035.28 | 999.32 | Grab | BP | 12 | | | | 1 | 0.972 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-243 | Sharon | FWGLL3mw-243C-056-GW | 10/21/2009 | 2371532.06 | 556688.5 | 991.16 | Grab | BP | 3.79 | | | | 1 | 0.972 | 1 |
| RVAAP-12 Load Line 12 | L12mw-186 | Sharon | FWGLL12mw-186C-081-GW | 10/15/2009 | 2367912.39 | 559065.95 | 976.34 | Grab | BP | 12.9 | | | | 1 | 0.972 | 1 |
| RVAAP-12 Load Line 12 | L12mw-189 | Sharon | FWGLL12mw-189C-084-GW | 10/15/2009 | 2367945.92 | 558569.27 | 976.17 | Grab | BP | 46.4 | | | | 1 | 0.972 | 1 |
| RVAAP-13 Building 1200 | B12mw-011 | Sharon | FWGB12mw-011C-091-GW | 10/21/2009 | 2371420 | 565690 | 1003.76 | Grab | BP | 5.72 | | | | 1 | 0.972 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-001 | Sharon | FWGASYmw-001C-1463-GW | 10/14/2009 | 2366262.85 | 558406.04 | 978.4 | Grab | BP | 6.31 | | | | 1 | 0.972 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-002 | Sharon | FWGASYmw-002C-1464-GW | 10/15/2009 | 2366170 | 557890 | 982 | Grab | BP | 2.15 | | | | 1 | 0.972 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-003 | Sharon | FWGASYmw-003C-1465-GW | 10/15/2009 | 2366650 | 558014 | 979.7 | Grab | BP | 20.3 | | | | 1 | 0.972 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-005 | Sharon | FWGASYmw-005C-1467-GW | 10/15/2009 | 2367450 | 557785 | 977.6 | Grab | BP | 37.7 | | | | 1 | 0.972 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-006 | Sharon | FWGASYmw-006C-1468-GW | 10/15/2009 | 2366750 | 557256 | 980.2 | Grab | BP | 35.6 | | | | 1 | 0.972 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-009 | Sharon | FWGASYmw-009C-1471-GW | 10/15/2009 | 2366630 | 557606 | 979.9 | Grab | BP | 22.1 | | | | 1 | 0.972 | 1 |
| Site-wide Background Areas | BKGmw-012 | Sharon | FWGBKmw-012C-012-GW | 10/21/2009 | 2367795.226 | 563918.862 | 997.574 | Grab | BP | 30.3 | | | | 1 | 0.972 | 1 |
| Site-wide Background Areas | BKGmw-018 | Sharon | FWGBKmw-018C-017-GW | 10/21/2009 | 2354993.909 | 570873.349 | 1043.06 | Grab | BP | 1.91 | | | | 1 | 0.972 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-001 | Homewood | FWGCBLmw-001C-093-GW | 10/21/2009 | 2343659.08 | 559405.12 | 1178.5 | Grab | BP | 0.972 U | | U | | 1 | 0.972 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-003 | Homewood | FWGCBLmw-003C-095-GW | 10/22/2009 | 2343967.67 | 559697.13 | 1172.22 | Grab | BP | 1.33 | | | | 1 | 0.972 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-004 | Homewood | FWGCBLmw-004C-096-GW | 10/22/2009 | 2343687.21 | 559950 | 1172.08 | Grab | BP | 1.41 | | | | 1 | 0.972 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-171 | Homewood | FWGFBQmw-171C-138-GW | 10/22/2009 | 2350072.44 | 554230.93 | 1140.49 | Grab | BP | 0.972 U | | U | | 1 | 0.972 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-172 | Homewood | FWGFBQmw-172C-139-GW | 10/22/2009 | 2349907.37 | 554322.17 | 1145.71 | Grab | BP | 6.55 | | | | 1 | 0.972 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-173 | Homewood | FWGFBQmw-173C-140-GW | 10/22/2009 | 2350449.01 | 554491.35 | 1162.43 | Grab | BP | 1.67 | | | | 1 | 0.972 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-174 | Homewood | FWGFBQmw-174C-141-GW | 10/22/2009 | 2350289.81 | 554142.44 | 1135.78 | Grab | BP | 0.972 U | | U | | 1 | 0.972 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-175 | Homewood | FWGFBQmw-175C-142-GW | 10/22/2009 | 2350297.98 | 553989.24 | 1137.16 | Grab | BP | 2.09 | | | | 1 | 0.972 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-177 | Homewood | FWGFBQmw-177C-144-GW | 10/22/2009 | 2350112.18 | 553321.94 | 1125.73 | Grab | BP | 2.52 | | | | 1 | 0.972 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-003 | Homewood | FWGLL6mw-003C-003-GW | 10/21/2009 | 2353048.684 | 553544.3432 | 1125.3837 | Grab | BP | 11.6 | | | | 1 | 0.972 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-004 | Homewood | FWGLL6mw-004C-004-GW | 10/21/2009 | 2353368.787 | 553431.8182 | 1125.3851 | Grab | BP | 12 | | | | 1 | 0.972 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-001 | Homewood | FWGLL5mw-001C-065-GW | 10/21/2009 | 2354627.07 | 554321.25 | 1125 | Grab | BP | 5.14 | | | | 1 | 0.972 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-002 | Homewood | FWGLL5mw-002C-066-GW | 10/21/2009 | 2354573.52 | 554606 | 1125.8 | Grab | BP | 5.07 | | | | 1 | 0.972 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-004 | Homewood | FWGLL5mw-004C-068-GW | 10/21/2009 | 2355008.44 | 554071.73 | 1122.9 | Grab | BP | 3.71 | | | | 1 | 0.972 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-005 | Homewood | FWGLL5mw-005C-069-GW | 10/22/2009 | 2354424.02 | 554154.73 | 1126.5 | Grab | BP | 7.55 | | | | 1 | 0.972 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-006 | Homewood | FWGLL5mw-006C-070-GW | 10/21/2009 | 2354730 | 553981.82 | 1125.1 | Grab | BP | 6.91 | | | | 1 | 0.972 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-003 | Homewood | FWGLL7mw-003C-1432-GW | 10/12/2009 | 2352349.51 | 555414.33 | 1118.23 | Grab | BP | 5.26 | | | | 1 | 0.972 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-004 | Homewood | FWGLL7mw-004C-1433-GW | 10/12/2009 | 2352036.23 | 555583.15 | 1123.3 | Grab | BP | 15.5 | | | | 1 | 0.972 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-005 | Homewood | FWGLL8mw-005C-1440-GW | 10/13/2009 | 2351750 | 551522 | 1112.51 | Grab | BP | 11.3 | | | | 1 | 0.972 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-006 | Homewood | FWGLL8mw-006C-1441-GW | 10/13/2009 | 2351480 | 551295 | 1114.33 | Grab | BP | 4.46 | | | | 1 | 0.972 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-001 | Homewood | FWGLL9mw-001C-1442-GW | 10/13/2009 | 2355817.04 | 556125.81 | 1134.62 | Grab | BP | 2.94 | | | | 1 | 0.972 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-002 | Homewood | FWGLL9mw-002C-1443-GW | 10/13/2009 | 2355907.76 | 556755.11 | 1127.3 | Grab | BP | 1.91 | | | | 1 | 0.972 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-003 | Homewood | FWGLL9mw-003C-1444-GW | 10/13/2009 | 2356635.21 | 556445.31 | 1135.76 | Grab | BP | 2.58 | | | | 1 | 0.972 | 1 |
| RVAAP-43 Load Line 10 | L10mw-001 | Homewood | FWGLL10mw-001C-1449-GW | 10/13/2009 | 2355272.22 | 555818.25 | 1130 | Grab | BP | 8.45 | | | | 1 | 0.972 | 1 |
| RVAAP-43 Load Line 10 | L10mw-002 | Homewood | FWGLL10mw-002C-1450-GW | 10/13/2009 | 2355712.51 | 555525.36 | 1124.4 | Grab | BP | 6.59 | | | | 1 | 0.972 | 1 |
| RVAAP-43 Load Line 10 | L10mw-003 | Homewood | FWGLL10mw-003C-1451-GW | 10/13/2009 | 2355387.92 | 555496.71 | 1127.4 | Grab | BP | 9.86 | | | | 1 | 0.972 | 1 |
| RVAAP-43 Load Line 10 | L10mw-004 | Homewood | FWGLL10mw-004C-1452-GW | 10/14/2009 | 2355440.2 | 555234.59 | 1119.6 | Grab | BP | 4.01 | | | | 1 | 0.972 | 1 |
| RVAAP-43 Load Line 10 | L10mw-005 | Homewood | FWGLL10mw-005C-1453-GW | 10/14/2009 | 2355941.55 | 555382.53 | 1122.9 | Grab | BP | 3.7 | | | | 1 | 0.972 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Thallium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|-----------------------|-------------|-------------|-------------|-----------|-------------|--------|----------|--------|------|----------|-------|---------|----|
| RVAAP-02 Erie Burning Grounds | EBGmw-123 | Unconsolidated | FWGEBGmw-123C-125-GW | 10/19/2009 | 2380049.21 | 571747.04 | 945.59 | Grab | BP | 0.00014 | UJB | BJ | Cb,N,F,L | 0.001 | 0.00014 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-124 | Unconsolidated | FWGEBGmw-124C-126-GW | 10/19/2009 | 2380030.24 | 571618.07 | 939.02 | Grab | BP | 0.00014 | UJB | BJ | Cb,N,F,L | 0.001 | 0.00014 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-126 | Unconsolidated | FWGEBGmw-126C-128-GW | 10/19/2009 | 2380307.31 | 572348.81 | 938.2 | Grab | BP | 0.00014 | UJB | BJ | Cb,N,F,L | 0.001 | 0.00014 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-127 | Unconsolidated | FWGEBGmw-127C-129-GW | 10/19/2009 | 2380172.16 | 571083.61 | 940.21 | Grab | BP | 0.00014 | UJB | BJ | Cb,N,F,L | 0.001 | 0.00014 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-128 | Unconsolidated | FWGEBGmw-128C-130-GW | 10/19/2009 | 2379892.79 | 570970.32 | 942.47 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-129 | Unconsolidated | FWGEBGmw-129C-131-GW | 10/19/2009 | 2379240.52 | 572035.68 | 941.97 | Grab | BP | 0.00014 | UJB | BJ | Cb,N,F,L | 0.001 | 0.00014 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-130 | Unconsolidated | FWGEBGmw-130C-132-GW | 10/19/2009 | 2379220.69 | 570695.61 | 941.18 | Grab | BP | 0.00014 | UJB | BJ | Cb,N,F,L | 0.001 | 0.00014 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-104 | Unconsolidated | FWGDA2mw-104C-115-GW | 10/21/2009 | 2354773.248 | 561125.7023 | 1070.8244 | Grab | BP | 0.00026 | JB | BJ | L,N,F | 0.001 | 0.00014 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-107 | Unconsolidated | FWGDA2mw-107C-118-GW | 10/21/2009 | 2354923.231 | 560482.7171 | 1039.1815 | Grab | BP | 0.00014 | UJ | BJ | Cb,N,F,L | 0.001 | 0.00014 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-108 | Unconsolidated | FWGDA2mw-108C-119-GW | 10/21/2009 | 2355602.421 | 560184.5864 | 1029.9156 | Grab | BP | 0.00014 | UJB | BJ | Cb,N,F,L | 0.001 | 0.00014 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-109 | Unconsolidated | FWGDA2mw-109C-120-GW | 10/21/2009 | 2354796.85 | 559897.6695 | 1068.6588 | Grab | BP | 0.00014 | UJB | BJ | Cb,N,F,L | 0.001 | 0.00014 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-110 | Unconsolidated | FWGDA2mw-110C-121-GW | 10/21/2009 | 2355195.202 | 559922.3928 | 1061.3878 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-112 | Unconsolidated | FWGDA2mw-112C-123-GW | 10/21/2009 | 2355019.568 | 560374.5046 | 1034.8724 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-113 | Unconsolidated | FWGDA2mw-113C-124-GW | 10/21/2009 | 2355150.554 | 560392.8898 | 1034.5126 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-1 | Unconsolidated | FWGDETMw-001-111-GW | 10/21/2009 | 2354959.47 | 560820.03 | 1063.97 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-2 | Unconsolidated | FWGDETMw-002C-115-GW | 10/21/2009 | 2355360.33 | 560664.71 | 1062.69 | Grab | BP | 0.00014 | UJ | BJ | Cb,N,F,L | 0.001 | 0.00014 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-3 | Unconsolidated | FWGDETMw-003C-1488-GW | 10/14/2009 | 2355204.94 | 560456.1 | 1035.56 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-006 | Unconsolidated | FWGWBGmw-006C-171-GW | 10/20/2009 | 2359087.79 | 563008.87 | 1010.38 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-007 | Unconsolidated | FWGWBGmw-007C-172-GW | 10/20/2009 | 2360420.44 | 562479.87 | 995.33 | Grab | BP | 0.00014 | UJB | BJ | Cb,N,F,L | 0.001 | 0.00014 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-009 | Unconsolidated | FWGWBGmw-009C-174-GW | 10/20/2009 | 2357159.2 | 561603.54 | 1042 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-010 | Unconsolidated | FWGWBGmw-010C-175-GW | 10/20/2009 | 2356051.96 | 562893.2 | 1069.85 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-011 | Unconsolidated | FWGWBGmw-011C-176-GW | 10/20/2009 | 2356187.29 | 562609.18 | 1072.38 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-012 | Unconsolidated | FWGWBGmw-012C-177-GW | 10/20/2009 | 2354810.65 | 562240.9 | 1079.11 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-013 | Unconsolidated | FWGWBGmw-013C-178-GW | 10/20/2009 | 2355223.25 | 561518.27 | 1071.7 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-014 | Unconsolidated | FWGWBGmw-014C-179-GW | 10/20/2009 | 2360439.22 | 562061.26 | 996.78 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-015 | Unconsolidated | FWGWBGmw-015C-180-GW | 10/20/2009 | 2359182.41 | 562340.12 | 1011.6 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-016 | Unconsolidated | FWGWBGmw-016C-181-GW | 10/20/2009 | 2360645.88 | 562709.13 | 997.03 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-017 | Unconsolidated | FWGWBGmw-017C-182-GW | 10/20/2009 | 2359603.84 | 562913.24 | 1006.62 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-064 | Unconsolidated | FWGLL1mw-064-022-GW | 10/19/2009 | 2380286.973 | 563118.7363 | 932 | Grab | BP | 0.00014 | UJB | BJ | Cb,N,F,L | 0.001 | 0.00014 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-065 | Unconsolidated | FWGLL1mw-065-023-GW | 10/19/2009 | 2380452.003 | 560916.9225 | 940 | Grab | BP | 0.0021 | J | J | | 0.001 | 0.00014 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-193 | Unconsolidated | FWGLL4mw-193-057-GW | 10/21/2009 | 2364236.52 | 554960.27 | 982.92 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-194 | Unconsolidated | FWGLL4mw-194C-058-GW | 10/16/2009 | 2364584.86 | 555089.22 | 983.76 | Grab | BP | 0.00014 | UJB | BJ | Cb,F,L | 0.001 | 0.00014 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-196 | Unconsolidated | FWGLL4mw-196C-060-GW | 10/16/2009 | 2365297.1 | 555213.52 | 984.55 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-197 | Unconsolidated | FWGLL4mw-197C-061-GW | 10/16/2009 | 2365384.91 | 555397.05 | 985.46 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-198 | Unconsolidated | FWGLL4mw-198C-062-GW | 10/21/2009 | 2364991.19 | 555442.04 | 983.42 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-199 | Unconsolidated | FWGLL4mw-199C-063-GW | 10/16/2009 | 2365420.78 | 554621.62 | 977.28 | Grab | BP | 0.00014 | UJ | B | Cb,L | 0.001 | 0.00014 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-200 | Unconsolidated | FWGLL4mw-200-064-GW | 10/21/2009 | 2365903.05 | 554580.15 | 987.93 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-12 Load Line 12 | L12mw-107 | Unconsolidated | FWGLL12mw-107C-072-GW | 10/16/2009 | 2368595.67 | 556759.02 | 978.03 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-12 Load Line 12 | L12mw-128 | Unconsolidated | FWGLL12mw-128C-074-GW | 10/16/2009 | 2368293.2 | 557371.54 | 976.21 | Grab | BP | 0.00014 | UJ | B | Cb,L | 0.001 | 0.00014 | 1 |
| RVAAP-12 Load Line 12 | L12mw-153 | Unconsolidated | FWGLL12mw-153C-075-GW | 10/16/2009 | 2368138.87 | 557823.23 | 975.34 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-12 Load Line 12 | L12mw-154 | Unconsolidated | FWGLL12mw-154C-076-GW | 10/16/2009 | 2368183.88 | 557754.56 | 977 | Grab | BP | 0.00014 | UJB | BJ | Cb,F,L | 0.001 | 0.00014 | 1 |
| RVAAP-12 Load Line 12 | L12mw-182 | Unconsolidated | FWGLL12mw-182C-077-GW | 10/16/2009 | 2368853.2 | 555890.35 | 982.2 | Grab | BP | 0.00014 | UJB | BJ | Cb,F,L | 0.001 | 0.00014 | 1 |
| RVAAP-12 Load Line 12 | L12mw-188 | Unconsolidated | FWGLL12mw-188C-083-GW | 10/15/2009 | 2367908.82 | 558132.59 | 978.46 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-12 Load Line 12 | L12mw-242 | Unconsolidated | FWGLL12mw-242C-085-GW | 10/15/2009 | 2368545.29 | 558020.51 | 980 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-12 Load Line 12 | L12mw-243 | Unconsolidated | FWGLL12mw-243C-086-GW | 10/16/2009 | 2368190.04 | 557376.32 | 978 | Grab | BP | 0.00014 | UJ | B | Cb,L | 0.001 | 0.00014 | 1 |
| RVAAP-12 Load Line 12 | L12mw-244 | Unconsolidated | FWGLL12mw-244C-087-GW | 10/16/2009 | 2368751.42 | 557377.17 | 980 | Grab | BP | 0.00014 | UJ | B | Cb,L | 0.001 | 0.00014 | 1 |
| RVAAP-12 Load Line 12 | L12mw-245 | Unconsolidated | FWGLL12mw-245C-088-GW | 10/16/2009 | 2368370.74 | 557044.55 | 978 | Grab | BP | 0.00014 | UJ | B | Cb,L | 0.001 | 0.00014 | 1 |
| RVAAP-12 Load Line 12 | L12mw-246 | Unconsolidated | FWGLL12mw-246C-089-GW | 10/16/2009 | 2369432.17 | 556658.89 | 982.96 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-166 | Unconsolidated | FWGFBQmw-166C-133-GW | 10/22/2009 | 2349584.33 | 553123.86 | 1104.87 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-167 | Unconsolidated | FWGFBQmw-167C-134-GW | 10/22/2009 | 2349675.45 | 553556.12 | 1112.05 | Grab | BP | 0.00014 | UJ | B | Cb,L | 0.001 | 0.00014 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-176 | Unconsolidated | FWGFBQmw-176C-143-GW | 10/22/2009 | 2350219.45 | 553273.33 | 1129.57 | Grab | BP | 0.00014 | UJ | B | Cb,L | 0.001 | 0.00014 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-024 | Unconsolidated | FWGLNWmw-024C-145-GW | 10/20/2009 | 2358400 | 564828 | 1035.3 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-025 | Unconsolidated | FWGLNWmw-025C-146-GW | 10/20/2009 | 2358420 | 565070 | 1027.2 | Grab | BP | 0.00014 | UJB | BJ | Cb,N,F,L | 0.001 | 0.00014 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-026 | Unconsolidated | FWGLNWmw-026C-147-GW | 10/20/2009 | 2358950 | 564656 | 1025 | Grab | BP | 0.00014 | UJB | BJ | Cb,N,F,L | 0.001 | 0.00014 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Thallium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|----------|--------|------|----------|-------|---------|----|
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-027 | Unconsolidated | FWGLNWmw-027C-148-GW | 10/20/2009 | 2358630 | 564519 | 1024.4 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-001 | Unconsolidated | FWGMBSmw-001C-183-GW | 10/20/2009 | 2345323 | 550759.5 | 1079.68 | Grab | BP | 0.00014 | UJB | BJ | Cb,N,F,L | 0.001 | 0.00014 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-002 | Unconsolidated | FWGMBSmw-002C-184-GW | 10/20/2009 | 2345322.3 | 550886.2 | 1080.5 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-003 | Unconsolidated | FWGMBSmw-003C-185-GW | 10/20/2009 | 2345172.4 | 550922.8 | 1082.45 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-004 | Unconsolidated | FWGMBSmw-004C-186-GW | 10/20/2009 | 2345134.2 | 550767.9 | 1079.55 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-005 | Unconsolidated | FWGMBSmw-005C-187-GW | 10/20/2009 | 2345354.1 | 550800.7 | 1080.5 | Grab | BP | 0.00014 | UJB | BJ | Cb,N,F,L | 0.001 | 0.00014 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-006 | Unconsolidated | FWGMBSmw-006C-188-GW | 10/20/2009 | 2345282.3 | 550726.1 | 1080.29 | Grab | BP | 0.00014 | UJB | BJ | Cb,N,F,L | 0.001 | 0.00014 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-001 | Unconsolidated | FWGCPmw-001C-105-GW | 10/21/2009 | 2368948.852 | 560440.9741 | 975.2594 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-004 | Unconsolidated | FWGCPmw-004C-108-GW | 10/21/2009 | 2368674.21 | 561843.2791 | 981.198 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-006 | Unconsolidated | FWGCPmw-006C-110-GW | 10/21/2009 | 2367727.191 | 562830.039 | 965.13 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-001 | Unconsolidated | FWGLL6mw-001C-001-GW | 10/21/2009 | 2353153.227 | 554214.8365 | 1124.1607 | Grab | B | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-002 | Unconsolidated | FWGLL6mw-002C-002-GW | 10/21/2009 | 2353820.091 | 553589.8815 | 1129.3631 | Grab | B | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-107 | Unconsolidated | FWGNTAmw-107C-149-GW | 10/20/2009 | 2345432.73 | 551699.09 | 1077.65 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-108 | Unconsolidated | FWGNTAmw-108C-150-GW | 10/20/2009 | 2345782.17 | 551917.92 | 1083.22 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-109 | Unconsolidated | FWGNTAmw-109C-151-GW | 10/20/2009 | 2345996.99 | 551291.19 | 1076.89 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-110 | Unconsolidated | FWGNTAmw-110C-152-GW | 10/20/2009 | 2346436.82 | 551350.8 | 1080.03 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-111 | Unconsolidated | FWGNTAmw-111C-153-GW | 10/20/2009 | 2346640.16 | 551538.99 | 1078.07 | Grab | BP | 0.00014 | UJB | B | Cb,N,P,L | 0.001 | 0.00014 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-112 | Unconsolidated | FWGNTAmw-112C-154-GW | 10/20/2009 | 2346889.01 | 551708.76 | 1075.36 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-113 | Unconsolidated | FWGNTAmw-113C-155-GW | 10/20/2009 | 2347081.15 | 551487.86 | 1072.61 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-115 | Unconsolidated | FWGNTAmw-115C-157-GW | 10/20/2009 | 2347582.94 | 551793.39 | 1086.91 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-116 | Unconsolidated | FWGNTAmw-116C-158-GW | 10/20/2009 | 2348196.78 | 551749.39 | 1091.68 | Grab | BP | 0.00014 | UJB | BJ | Cb,N,F,L | 0.001 | 0.00014 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-117 | Unconsolidated | FWGNTAmw-117C-159-GW | 10/20/2009 | 2347994.79 | 551586.36 | 1091.67 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-118 | Unconsolidated | FWGNTAmw-118C-160-GW | 10/20/2009 | 2347608.09 | 551333.89 | 1078.86 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-003 | Unconsolidated | FWGLL5mw-003C-067-GW | 10/21/2009 | 2354962.47 | 554533.41 | 1124.7 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-001 | Unconsolidated | FWGLL8mw-001C-1436-GW | 10/13/2009 | 2351660 | 552609 | 1118.69 | Grab | BP | 0.00041 | J | B | L | 0.001 | 0.00014 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-002 | Unconsolidated | FWGLL8mw-002C-1437-GW | 10/13/2009 | 2351010 | 552410 | 1121.67 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-003 | Unconsolidated | FWGLL8mw-003C-1438-GW | 10/13/2009 | 2351360 | 552231 | 1116.3 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-004 | Unconsolidated | FWGLL8mw-004C-1439-GW | 10/13/2009 | 2351260 | 551808 | 1112.73 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-43 Load Line 10 | L10mw-006 | Unconsolidated | FWGLL10mw-006C-1454-GW | 10/14/2009 | 2355656.8 | 554997.25 | 1121.2 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-001 | Unconsolidated | FWGLL11mw-001C-1455-GW | 10/14/2009 | 2352778.81 | 557504.98 | 1100.16 | Grab | BP | 0.00014 | UJ | B | Cb,L | 0.001 | 0.00014 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-006 | Unconsolidated | FWGLL11mw-006C-1459-GW | 10/14/2009 | 2352521.51 | 558263.51 | 1086.5 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-008 | Unconsolidated | FWGLL11mw-008C-1460-GW | 10/14/2009 | 2352388.57 | 557981.26 | 1087.74 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-009 | Unconsolidated | FWGLL11mw-009C-1461-GW | 10/14/2009 | 2352577.21 | 557901.2 | 1088.28 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-010 | Unconsolidated | FWGLL11mw-010C-1462-GW | 10/14/2009 | 2352038.91 | 557675.59 | 1082.68 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-001 | Unconsolidated | FWGCBPmw-001C-097-GW | 10/21/2009 | 2367095.431 | 561616.171 | 975.8411 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-002 | Unconsolidated | FWGCBPmw-002C-098-GW | 10/21/2009 | 2367295.684 | 561865.9216 | 970.0359 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-003 | Unconsolidated | FWGCBPmw-003C-099-GW | 10/21/2009 | 2366768.739 | 561944.2018 | 974.6665 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-004 | Unconsolidated | FWGCBPmw-004C-100-GW | 10/21/2009 | 2366978.819 | 562123.8244 | 971.1285 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-005 | Unconsolidated | FWGCBPmw-005C-101-GW | 10/21/2009 | 2366919.482 | 562311.8596 | 971.5897 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-006 | Unconsolidated | FWGCBPmw-006C-102-GW | 10/21/2009 | 2367243.659 | 562311.9449 | 967.6448 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-007 | Unconsolidated | FWGCBPmw-007C-103-GW | 10/21/2009 | 2366512.573 | 562006.343 | 976.3736 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-007 | Unconsolidated | FWGASYmw-007C-1469-GW | 10/15/2009 | 2366840 | 556820 | 981.4 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-008 | Unconsolidated | FWGASYmw-008C-1470-GW | 10/15/2009 | 2367470 | 557086 | 976.2 | Grab | BP | 0.00014 | U | | Cb | 0.001 | 0.00014 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-010 | Unconsolidated | FWGASYmw-010C-1472-GW | 10/15/2009 | 2366980 | 557273 | 978.2 | Grab | BP | 0.00014 | UJ | B | Cb,L | 0.001 | 0.00014 | 1 |
| Site-wide Background Areas | BKGmw-004 | Unconsolidated | FWGBKGmw-004C-007-GW | 10/21/2009 | 2368852.973 | 569464.763 | 965.16 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| Site-wide Background Areas | BKGmw-005 | Unconsolidated | FWGBKGmw-005C-008-GW | 10/22/2009 | 2340835.864 | 562288.445 | 1149.443 | Grab | BP | 0.00014 | UJ | B | Cb,L | 0.001 | 0.00014 | 1 |
| Site-wide Background Areas | BKGmw-013 | Unconsolidated | FWGBKGmw-013C-013-GW | 10/21/2009 | 2361627.394 | 558269.158 | 986.588 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| Site-wide Background Areas | BKGmw-016 | Unconsolidated | FWGBKGmw-016C-015-GW | 10/22/2009 | 2342407.075 | 553983.501 | 1098.419 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| Site-wide Background Areas | BKGmw-017 | Unconsolidated | FWGBKGmw-017C-016-GW | 10/22/2009 | 2346115.351 | 562452.044 | 1132.799 | Grab | BP | 0.00014 | UJ | B | Cb,L | 0.001 | 0.00014 | 1 |
| Site-wide Background Areas | BKGmw-019 | Unconsolidated | FWGBKGmw-019C-018-GW | 10/22/2009 | 2349882.142 | 559864.549 | 1108.239 | Grab | BP | 0.00014 | UJ | B | Cb,L | 0.001 | 0.00014 | 1 |
| Site-wide Background Areas | BKGmw-020 | Unconsolidated | FWGBKGmw-020C-019-GW | 10/21/2009 | 2357856.237 | 558756.241 | 1065.001 | Grab | BP | 0.00014 | U | U | Cb | 0.001 | 0.00014 | 1 |
| Site-wide Background Areas | BKGmw-021 | Unconsolidated | FWGBKGmw-021C-020-GW | 10/21/2009 | 2367622.953 | 571016.748 | 972.159 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Thallium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|----------|--------|------|----------|-------|---------|----|
| RVAAP-01 Ramsdell Quarry Landfill | RQLmw-009 | Sharon | FWGRQLmw-009C-1487-GW | 10/14/2009 | 2376253.654 | 566351.1994 | 964 | Grab | BP | 0.00014 | UJ | B | Cb,L | 0.001 | 0.00014 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-078 | Sharon | FWGLL1mw-078-025-GW | 10/19/2009 | 2376275.854 | 564623.871 | 995.84 | Grab | BP | 0.00014 | UJB | BJ | Cb,N,F,L | 0.001 | 0.00014 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-080 | Sharon | FWGLL1mw-080-027-GW | 10/19/2009 | 2376845.072 | 562479.728 | 996.27 | Grab | BP | 0.00014 | U | | Cb | 0.001 | 0.00014 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-082 | Sharon | FWGLL1mw-082-029-GW | 10/19/2009 | 2376977.379 | 562956.86 | 1006.45 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-060 | Sharon | FWGLL2mw-060C-034-GW | 10/19/2009 | 2375978 | 558022 | 958.13 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-263 | Sharon | FWGLL2mw-263-037-GW | 10/19/2009 | 2374290.29 | 561590.92 | 1009.42 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-264 | Sharon | FWGLL2mw-264-038-GW | 10/19/2009 | 2374532.76 | 561173.63 | 1010.1 | Grab | BP | 0.00014 | UJB | BJ | Cb,N,F,L | 0.001 | 0.00014 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-267 | Sharon | FWGLL2mw-267C-041-GW | 10/19/2009 | 2373714.17 | 561393.73 | 1012.81 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-268 | Sharon | FWGLL2mw-268-042-GW | 10/19/2009 | 2374156.4 | 560831.44 | 1015.47 | Grab | BP | 0.00014 | UJB | BJ | Cb,N,F,L | 0.001 | 0.00014 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-269 | Sharon | FWGLL2mw-269-043-GW | 10/20/2009 | 2374756.74 | 559483.9 | 1009.49 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-270 | Sharon | FWGLL2mw-270-044-GW | 10/19/2009 | 2372858.94 | 562656.18 | 1009.93 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-238 | Sharon | FWGLL3mw-238C-051-GW | 10/20/2009 | 2370624.55 | 559569.39 | 1006.91 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-239 | Sharon | FWGLL3mw-239-052-GW | 10/20/2009 | 2370894.17 | 559101.84 | 1003.5 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-241 | Sharon | FWGLL3mw-241-054-GW | 10/20/2009 | 2370332.94 | 559299 | 994.65 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-242 | Sharon | FWGLL3mw-242-055-GW | 10/21/2009 | 2371993.44 | 557035.28 | 999.32 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-243 | Sharon | FWGLL3mw-243C-056-GW | 10/21/2009 | 2371532.06 | 556688.5 | 991.16 | Grab | BP | 0.00014 | UJ | B | Cb,L | 0.001 | 0.00014 | 1 |
| RVAAP-12 Load Line 12 | L12mw-186 | Sharon | FWGLL12mw-186C-081-GW | 10/15/2009 | 2367912.39 | 559065.95 | 976.34 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-12 Load Line 12 | L12mw-189 | Sharon | FWGLL12mw-189C-084-GW | 10/15/2009 | 2367945.92 | 558569.27 | 976.17 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-13 Building 1200 | B12mw-011 | Sharon | FWGB12mw-011C-091-GW | 10/21/2009 | 2371420 | 565690 | 1003.76 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-001 | Sharon | FWGASYmw-001C-1463-GW | 10/14/2009 | 2366262.85 | 558406.04 | 978.4 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-002 | Sharon | FWGASYmw-002C-1464-GW | 10/15/2009 | 2366170 | 557890 | 982 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-003 | Sharon | FWGASYmw-003C-1465-GW | 10/15/2009 | 2366650 | 558014 | 979.7 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-005 | Sharon | FWGASYmw-005C-1467-GW | 10/15/2009 | 2367450 | 557785 | 977.6 | Grab | BP | 0.00014 | UJ | B | Cb,L | 0.001 | 0.00014 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-006 | Sharon | FWGASYmw-006C-1468-GW | 10/15/2009 | 2366750 | 557256 | 980.2 | Grab | BP | 0.00014 | UJ | B | Cb,L | 0.001 | 0.00014 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-009 | Sharon | FWGASYmw-009C-1471-GW | 10/15/2009 | 2366630 | 557606 | 979.9 | Grab | BP | 0.00014 | UJ | B | Cb,L | 0.001 | 0.00014 | 1 |
| Site-wide Background Areas | BKGmw-012 | Sharon | FWGBKGmw-012C-012-GW | 10/21/2009 | 2367795.226 | 563918.862 | 997.574 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| Site-wide Background Areas | BKGmw-018 | Sharon | FWGBKGmw-018C-017-GW | 10/21/2009 | 2354993.909 | 570873.349 | 1043.06 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-001 | Homewood | FWGCBLmw-001C-093-GW | 10/21/2009 | 2343659.08 | 559405.12 | 1178.5 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-003 | Homewood | FWGCBLmw-003C-095-GW | 10/22/2009 | 2343967.67 | 559697.13 | 1172.22 | Grab | BP | 0.00014 | U | U | Cb | 0.001 | 0.00014 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-004 | Homewood | FWGCBLmw-004C-096-GW | 10/22/2009 | 2343687.21 | 559950 | 1172.08 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-171 | Homewood | FWGFBQmw-171C-138-GW | 10/22/2009 | 2350072.44 | 554230.93 | 1140.49 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-172 | Homewood | FWGFBQmw-172C-139-GW | 10/22/2009 | 2349907.37 | 554322.17 | 1145.71 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-173 | Homewood | FWGFBQmw-173C-140-GW | 10/22/2009 | 2350449.01 | 554491.35 | 1162.43 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-174 | Homewood | FWGFBQmw-174C-141-GW | 10/22/2009 | 2350289.81 | 554142.44 | 1135.78 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-175 | Homewood | FWGFBQmw-175C-142-GW | 10/22/2009 | 2350297.98 | 553989.24 | 1137.16 | Grab | BP | 0.00014 | UJ | B | Cb,L | 0.001 | 0.00014 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-177 | Homewood | FWGFBQmw-177C-144-GW | 10/22/2009 | 2350112.18 | 553321.94 | 1125.73 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-003 | Homewood | FWGLL6mw-003C-003-GW | 10/21/2009 | 2353048.684 | 553544.3432 | 1125.3837 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-004 | Homewood | FWGLL6mw-004C-004-GW | 10/21/2009 | 2353368.787 | 553431.8182 | 1125.3851 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-001 | Homewood | FWGLL5mw-001C-065-GW | 10/21/2009 | 2354627.07 | 554321.25 | 1125 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-002 | Homewood | FWGLL5mw-002C-066-GW | 10/21/2009 | 2354573.52 | 554606 | 1125.8 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-004 | Homewood | FWGLL5mw-004C-068-GW | 10/21/2009 | 2355008.44 | 554071.73 | 1122.9 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-005 | Homewood | FWGLL5mw-005C-069-GW | 10/22/2009 | 2354424.02 | 554154.73 | 1126.5 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-006 | Homewood | FWGLL5mw-006C-070-GW | 10/21/2009 | 2354730 | 553981.82 | 1125.1 | Grab | BP | 0.00014 | UJB | B | Cb,N,L | 0.001 | 0.00014 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-003 | Homewood | FWGLL7mw-003C-1432-GW | 10/12/2009 | 2352349.51 | 555414.33 | 1118.23 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-004 | Homewood | FWGLL7mw-004C-1433-GW | 10/12/2009 | 2352036.23 | 555583.15 | 1123.3 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-005 | Homewood | FWGLL8mw-005C-1440-GW | 10/13/2009 | 2351750 | 551522 | 1112.51 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-006 | Homewood | FWGLL8mw-006C-1441-GW | 10/13/2009 | 2351480 | 551295 | 1114.33 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-001 | Homewood | FWGLL9mw-001C-1442-GW | 10/13/2009 | 2355817.04 | 556125.81 | 1134.62 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-002 | Homewood | FWGLL9mw-002C-1443-GW | 10/13/2009 | 2355907.76 | 556755.11 | 1127.3 | Grab | BP | 0.00014 | UJ | B | Cb,L | 0.001 | 0.00014 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-003 | Homewood | FWGLL9mw-003C-1444-GW | 10/13/2009 | 2356635.21 | 556445.31 | 1135.76 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-43 Load Line 10 | L10mw-001 | Homewood | FWGLL10mw-001C-1449-GW | 10/13/2009 | 2355272.22 | 555818.25 | 1130 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-43 Load Line 10 | L10mw-002 | Homewood | FWGLL10mw-002C-1450-GW | 10/13/2009 | 2355712.51 | 555525.36 | 1124.4 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-43 Load Line 10 | L10mw-003 | Homewood | FWGLL10mw-003C-1451-GW | 10/13/2009 | 2355387.92 | 555496.71 | 1127.4 | Grab | BP | 0.00014 | U | U | | 0.001 | 0.00014 | 1 |
| RVAAP-43 Load Line 10 | L10mw-004 | Homewood | FWGLL10mw-004C-1452-GW | 10/14/2009 | 2355440.2 | 555234.59 | 1119.6 | Grab | BP | 0.00014 | UJ | B | Cb,L | 0.001 | 0.00014 | 1 |
| RVAAP-43 Load Line 10 | L10mw-005 | Homewood | FWGLL10mw-005C-1453-GW | 10/14/2009 | 2355941.55 | 555382.53 | 1122.9 | Grab | BP | 0.00014 | UJ | B | Cb,L | 0.001 | 0.00014 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Vanadium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|-----------------------|-------------|-------------|-------------|-----------|-------------|--------|----------|--------|------|--------|------|--------|----|
| RVAAP-02 Erie Burning Grounds | EBGmw-123 | Unconsolidated | FWGEBGmw-123C-125-GW | 10/19/2009 | 2380049.21 | 571747.04 | 945.59 | Grab | BP | 0.0057 J | | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-124 | Unconsolidated | FWGEBGmw-124C-126-GW | 10/19/2009 | 2380030.24 | 571618.07 | 939.02 | Grab | BP | 0.072 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-126 | Unconsolidated | FWGEBGmw-126C-128-GW | 10/19/2009 | 2380307.31 | 572348.81 | 938.2 | Grab | BP | 0.007 J | | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-127 | Unconsolidated | FWGEBGmw-127C-129-GW | 10/19/2009 | 2380172.16 | 571083.61 | 940.21 | Grab | BP | 0.0039 J | | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-128 | Unconsolidated | FWGEBGmw-128C-130-GW | 10/19/2009 | 2379892.79 | 570970.32 | 942.47 | Grab | BP | 0.0013 U | | U | | 0.01 | 0.0013 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-129 | Unconsolidated | FWGEBGmw-129C-131-GW | 10/19/2009 | 2379240.52 | 572035.68 | 941.97 | Grab | BP | 0.0185 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-130 | Unconsolidated | FWGEBGmw-130C-132-GW | 10/19/2009 | 2379220.69 | 570695.61 | 941.18 | Grab | BP | 0.0039 J | | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-104 | Unconsolidated | FWGDA2mw-104C-115-GW | 10/21/2009 | 2354773.248 | 561125.7023 | 1070.8244 | Grab | BP | 0.0046 J | | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-107 | Unconsolidated | FWGDA2mw-107C-118-GW | 10/21/2009 | 2354923.231 | 560482.7171 | 1039.1815 | Grab | BP | 0.0013 U | | U | | 0.01 | 0.0013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-108 | Unconsolidated | FWGDA2mw-108C-119-GW | 10/21/2009 | 2355602.421 | 560184.5864 | 1029.9156 | Grab | BP | 0.0013 U | | U | | 0.01 | 0.0013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-109 | Unconsolidated | FWGDA2mw-109C-120-GW | 10/21/2009 | 2354796.85 | 559897.6695 | 1068.6588 | Grab | BP | 0.0095 J | | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-110 | Unconsolidated | FWGDA2mw-110C-121-GW | 10/21/2009 | 2355195.202 | 559922.3928 | 1061.3878 | Grab | BP | 0.0013 U | | U | | 0.01 | 0.0013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-112 | Unconsolidated | FWGDA2mw-112C-123-GW | 10/21/2009 | 2355019.568 | 560374.5046 | 1034.8724 | Grab | BP | 0.038 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-113 | Unconsolidated | FWGDA2mw-113C-124-GW | 10/21/2009 | 2355150.554 | 560392.8898 | 1034.5126 | Grab | BP | 0.009 J | | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-1 | Unconsolidated | FWGDETMw-001-111-GW | 10/21/2009 | 2354959.47 | 560820.03 | 1063.97 | Grab | BP | 0.0013 U | | U | | 0.01 | 0.0013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-2 | Unconsolidated | FWGDETMw-002C-115-GW | 10/21/2009 | 2355360.33 | 560664.71 | 1062.69 | Grab | BP | 0.0054 J | | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-3 | Unconsolidated | FWGDETMw-003C-1488-GW | 10/14/2009 | 2355204.94 | 560456.1 | 1035.56 | Grab | BP | 0.0014 J | | B | L,W | 0.01 | 0.0013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-006 | Unconsolidated | FWGWBGmw-006C-171-GW | 10/20/2009 | 2359087.79 | 563008.87 | 1010.38 | Grab | BP | 0.0013 U | | U | | 0.01 | 0.0013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-007 | Unconsolidated | FWGWBGmw-007C-172-GW | 10/20/2009 | 2360420.44 | 562479.87 | 995.33 | Grab | BP | 0.0687 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-009 | Unconsolidated | FWGWBGmw-009C-174-GW | 10/20/2009 | 2357159.22 | 561603.54 | 1042 | Grab | BP | 0.0015 J | | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-010 | Unconsolidated | FWGWBGmw-010C-175-GW | 10/20/2009 | 2356051.96 | 562893.2 | 1069.85 | Grab | BP | 0.0013 U | | U | | 0.01 | 0.0013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-011 | Unconsolidated | FWGWBGmw-011C-176-GW | 10/20/2009 | 2356187.29 | 562609.18 | 1072.38 | Grab | BP | 0.0082 J | | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-012 | Unconsolidated | FWGWBGmw-012C-177-GW | 10/20/2009 | 2354810.65 | 562240.9 | 1079.11 | Grab | BP | 0.0332 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-013 | Unconsolidated | FWGWBGmw-013C-178-GW | 10/20/2009 | 2355223.25 | 561518.27 | 1071.7 | Grab | BP | 0.0093 J | | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-014 | Unconsolidated | FWGWBGmw-014C-179-GW | 10/20/2009 | 2360439.22 | 562061.26 | 996.78 | Grab | BP | 0.0046 J | | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-015 | Unconsolidated | FWGWBGmw-015C-180-GW | 10/20/2009 | 2359182.41 | 562340.12 | 1011.6 | Grab | BP | 0.0049 J | | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-016 | Unconsolidated | FWGWBGmw-016C-181-GW | 10/20/2009 | 2360645.88 | 562709.13 | 997.03 | Grab | BP | 0.0091 J | | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-017 | Unconsolidated | FWGWBGmw-017C-182-GW | 10/20/2009 | 2359603.84 | 562913.24 | 1006.62 | Grab | BP | 0.042 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-064 | Unconsolidated | FWGLL1mw-064-022-GW | 10/19/2009 | 2380286.973 | 563118.7363 | 932 | Grab | BP | 0.0099 J | | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-065 | Unconsolidated | FWGLL1mw-065-023-GW | 10/19/2009 | 2380452.003 | 560916.9225 | 940 | Grab | BP | 0.137 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-193 | Unconsolidated | FWGLL4mw-193-057-GW | 10/21/2009 | 2364236.52 | 554960.27 | 982.92 | Grab | BP | 0.0013 U | | U | | 0.01 | 0.0013 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-194 | Unconsolidated | FWGLL4mw-194C-058-GW | 10/16/2009 | 2364584.86 | 555089.22 | 983.76 | Grab | BP | 0.0184 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-196 | Unconsolidated | FWGLL4mw-196C-060-GW | 10/16/2009 | 2365297.1 | 555213.52 | 984.55 | Grab | BP | 0.0013 U | | U | | 0.01 | 0.0013 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-197 | Unconsolidated | FWGLL4mw-197C-061-GW | 10/16/2009 | 2365384.91 | 555397.05 | 985.46 | Grab | BP | 0.0013 U | | U | | 0.01 | 0.0013 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-198 | Unconsolidated | FWGLL4mw-198C-062-GW | 10/21/2009 | 2364991.19 | 555442.04 | 983.42 | Grab | BP | 0.0178 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-199 | Unconsolidated | FWGLL4mw-199C-063-GW | 10/16/2009 | 2365420.78 | 554621.62 | 977.28 | Grab | BP | 0.003 J | | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-200 | Unconsolidated | FWGLL4mw-200-064-GW | 10/21/2009 | 2365903.05 | 554580.15 | 987.93 | Grab | BP | 0.0031 J | | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-107 | Unconsolidated | FWGLL12mw-107C-072-GW | 10/16/2009 | 2368595.67 | 556759.02 | 978.03 | Grab | BP | 0.0013 U | | U | | 0.01 | 0.0013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-128 | Unconsolidated | FWGLL12mw-128C-074-GW | 10/16/2009 | 2368293.2 | 557371.54 | 976.21 | Grab | BP | 0.038 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-153 | Unconsolidated | FWGLL12mw-153C-075-GW | 10/16/2009 | 2368138.87 | 557823.23 | 975.34 | Grab | BP | 0.0013 U | | U | | 0.01 | 0.0013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-154 | Unconsolidated | FWGLL12mw-154C-076-GW | 10/16/2009 | 2368183.88 | 557754.56 | 977 | Grab | BP | 0.0072 J | | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-182 | Unconsolidated | FWGLL12mw-182C-077-GW | 10/16/2009 | 2368853.2 | 555890.35 | 982.2 | Grab | BP | 0.0013 U | | U | | 0.01 | 0.0013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-188 | Unconsolidated | FWGLL12mw-188C-083-GW | 10/15/2009 | 2367908.82 | 558132.59 | 978.46 | Grab | BP | 0.0031 J | | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-242 | Unconsolidated | FWGLL12mw-242C-085-GW | 10/15/2009 | 2368545.29 | 558020.51 | 980 | Grab | BP | 0.0021 J | | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-243 | Unconsolidated | FWGLL12mw-243C-086-GW | 10/16/2009 | 2368190.04 | 557376.32 | 978 | Grab | BP | 0.0272 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-244 | Unconsolidated | FWGLL12mw-244C-087-GW | 10/16/2009 | 2368751.42 | 557377.17 | 980 | Grab | BP | 0.0853 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-245 | Unconsolidated | FWGLL12mw-245C-088-GW | 10/16/2009 | 2368370.74 | 557044.55 | 978 | Grab | BP | 0.0186 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-246 | Unconsolidated | FWGLL12mw-246C-089-GW | 10/16/2009 | 2369432.17 | 556658.89 | 982.96 | Grab | BP | 0.0033 J | | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-166 | Unconsolidated | FWGFBQmw-166C-133-GW | 10/22/2009 | 2349584.33 | 553123.86 | 1104.87 | Grab | BP | 0.0013 U | | U | | 0.01 | 0.0013 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-167 | Unconsolidated | FWGFBQmw-167C-134-GW | 10/22/2009 | 2349675.45 | 553556.12 | 1112.05 | Grab | BP | 0.0135 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-176 | Unconsolidated | FWGFBQmw-176C-143-GW | 10/22/2009 | 2350219.45 | 553273.33 | 1129.57 | Grab | BP | 0.0282 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-024 | Unconsolidated | FWGLNWmw-024C-145-GW | 10/20/2009 | 2358400 | 564828 | 1035.3 | Grab | BP | 0.0294 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-025 | Unconsolidated | FWGLNWmw-025C-146-GW | 10/20/2009 | 2358420 | 565070 | 1027.2 | Grab | BP | 0.0075 J | | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-026 | Unconsolidated | FWGLNWmw-026C-147-GW | 10/20/2009 | 2358950 | 564656 | 1025 | Grab | BP | 0.0073 J | | B | L | 0.01 | 0.0013 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Vanadium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|----------|--------|------|--------|------|--------|----|
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-027 | Unconsolidated | FWGLNWmw-027C-148-GW | 10/20/2009 | 2358630 | 564519 | 1024.4 | Grab | BP | 0.0013 | U | U | | 0.01 | 0.0013 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-001 | Unconsolidated | FWGMBSmw-001C-183-GW | 10/20/2009 | 2345323 | 550759.5 | 1079.68 | Grab | BP | 0.0038 | J | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-002 | Unconsolidated | FWGMBSmw-002C-184-GW | 10/20/2009 | 2345322.3 | 550886.2 | 1080.5 | Grab | BP | 0.0077 | J | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-003 | Unconsolidated | FWGMBSmw-003C-185-GW | 10/20/2009 | 2345172.4 | 550922.8 | 1082.45 | Grab | BP | 0.0013 | U | U | | 0.01 | 0.0013 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-004 | Unconsolidated | FWGMBSmw-004C-186-GW | 10/20/2009 | 2345134.2 | 550767.9 | 1079.55 | Grab | BP | 0.0013 | U | U | | 0.01 | 0.0013 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-005 | Unconsolidated | FWGMBSmw-005C-187-GW | 10/20/2009 | 2345354.1 | 550800.7 | 1080.5 | Grab | BP | 0.0082 | J | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-006 | Unconsolidated | FWGMBSmw-006C-188-GW | 10/20/2009 | 2345282.3 | 550726.1 | 1080.29 | Grab | BP | 0.0013 | J | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-001 | Unconsolidated | FWGCPmw-001C-105-GW | 10/21/2009 | 2368948.852 | 560440.9741 | 975.2594 | Grab | BP | 0.0021 | J | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-004 | Unconsolidated | FWGCPmw-004C-108-GW | 10/21/2009 | 2368674.21 | 561843.2791 | 981.198 | Grab | BP | 0.002 | J | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-006 | Unconsolidated | FWGCPmw-006C-110-GW | 10/21/2009 | 2367727.191 | 562830.039 | 965.13 | Grab | BP | 0.0586 | | E | | 0.01 | 0.0013 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-001 | Unconsolidated | FWGLL6mw-001C-001-GW | 10/21/2009 | 2353153.227 | 554214.8365 | 1124.1607 | Grab | B | 0.0699 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-002 | Unconsolidated | FWGLL6mw-002C-002-GW | 10/21/2009 | 2353820.091 | 553589.8815 | 1129.3631 | Grab | B | 0.0846 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-107 | Unconsolidated | FWGNTAmw-107C-149-GW | 10/20/2009 | 2345432.73 | 551699.09 | 1077.65 | Grab | BP | 0.0181 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-108 | Unconsolidated | FWGNTAmw-108C-150-GW | 10/20/2009 | 2345782.17 | 551917.92 | 1083.22 | Grab | BP | 0.0106 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-109 | Unconsolidated | FWGNTAmw-109C-151-GW | 10/20/2009 | 2345996.99 | 551291.19 | 1076.89 | Grab | BP | 0.0013 | UJ | B | Cb,L | 0.01 | 0.0013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-110 | Unconsolidated | FWGNTAmw-110C-152-GW | 10/20/2009 | 2346436.82 | 551350.8 | 1080.03 | Grab | BP | 0.0084 | J | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-111 | Unconsolidated | FWGNTAmw-111C-153-GW | 10/20/2009 | 2346640.16 | 551538.99 | 1078.07 | Grab | BP | 0.0013 | U | U | | 0.01 | 0.0013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-112 | Unconsolidated | FWGNTAmw-112C-154-GW | 10/20/2009 | 2346889.01 | 551708.76 | 1075.36 | Grab | BP | 0.0299 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-113 | Unconsolidated | FWGNTAmw-113C-155-GW | 10/20/2009 | 2347081.15 | 551487.86 | 1072.61 | Grab | BP | 0.0853 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-115 | Unconsolidated | FWGNTAmw-115C-157-GW | 10/20/2009 | 2347582.94 | 551793.39 | 1086.91 | Grab | BP | 0.0044 | J | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-116 | Unconsolidated | FWGNTAmw-116C-158-GW | 10/20/2009 | 2348196.78 | 551749.39 | 1091.68 | Grab | BP | 0.0169 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-117 | Unconsolidated | FWGNTAmw-117C-159-GW | 10/20/2009 | 2347994.79 | 551586.36 | 1091.67 | Grab | BP | 0.0023 | J | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-118 | Unconsolidated | FWGNTAmw-118C-160-GW | 10/20/2009 | 2347608.09 | 551333.89 | 1078.86 | Grab | BP | 0.0076 | J | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-003 | Unconsolidated | FWGLL5mw-003C-067-GW | 10/21/2009 | 2354962.47 | 554533.41 | 1124.7 | Grab | BP | 0.0429 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-001 | Unconsolidated | FWGLL8mw-001C-1436-GW | 10/13/2009 | 2351660 | 552609 | 1118.69 | Grab | BP | 0.0028 | J | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-002 | Unconsolidated | FWGLL8mw-002C-1437-GW | 10/13/2009 | 2351010 | 552410 | 1121.67 | Grab | BP | 0.0013 | U | U | | 0.01 | 0.0013 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-003 | Unconsolidated | FWGLL8mw-003C-1438-GW | 10/13/2009 | 2351360 | 552231 | 1116.3 | Grab | BP | 0.0013 | U | U | | 0.01 | 0.0013 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-004 | Unconsolidated | FWGLL8mw-004C-1439-GW | 10/13/2009 | 2351260 | 551808 | 1112.73 | Grab | BP | 0.0013 | U | U | | 0.01 | 0.0013 | 1 |
| RVAAP-43 Load Line 10 | L10mw-006 | Unconsolidated | FWGLL10mw-006C-1454-GW | 10/14/2009 | 2355656.8 | 554997.25 | 1121.2 | Grab | BP | 0.0036 | J | B | L,P | 0.01 | 0.0013 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-001 | Unconsolidated | FWGLL11mw-001C-1455-GW | 10/14/2009 | 2352778.81 | 557504.98 | 1100.16 | Grab | BP | 0.0013 | U | U | | 0.01 | 0.0013 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-006 | Unconsolidated | FWGLL11mw-006C-1459-GW | 10/14/2009 | 2352521.51 | 558263.51 | 1086.5 | Grab | BP | 0.0026 | J | B | L | 0.01 | 0.0013 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-008 | Unconsolidated | FWGLL11mw-008C-1460-GW | 10/14/2009 | 2352388.57 | 557981.26 | 1087.74 | Grab | BP | 0.0013 | U | U | | 0.01 | 0.0013 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-009 | Unconsolidated | FWGLL11mw-009C-1461-GW | 10/14/2009 | 2352577.21 | 557901.2 | 1088.28 | Grab | BP | 0.0013 | U | U | | 0.01 | 0.0013 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-010 | Unconsolidated | FWGLL11mw-010C-1462-GW | 10/14/2009 | 2352038.91 | 557675.59 | 1082.68 | Grab | BP | 0.0046 | J | B | L,P | 0.01 | 0.0013 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-001 | Unconsolidated | FWGCBPmw-001C-097-GW | 10/21/2009 | 2367095.431 | 561616.171 | 975.8411 | Grab | BP | 0.0132 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-002 | Unconsolidated | FWGCBPmw-002C-098-GW | 10/21/2009 | 2367295.684 | 561865.9216 | 970.0359 | Grab | BP | 0.024 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-003 | Unconsolidated | FWGCBPmw-003C-099-GW | 10/21/2009 | 2366768.739 | 561944.2018 | 974.6665 | Grab | BP | 0.0013 | U | U | | 0.01 | 0.0013 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-004 | Unconsolidated | FWGCBPmw-004C-100-GW | 10/21/2009 | 2366978.819 | 562123.8244 | 971.1285 | Grab | BP | 0.0582 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-005 | Unconsolidated | FWGCBPmw-005C-101-GW | 10/21/2009 | 2366919.482 | 562311.8596 | 971.5897 | Grab | BP | 0.0296 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-006 | Unconsolidated | FWGCBPmw-006C-102-GW | 10/21/2009 | 2367243.659 | 562311.9449 | 967.6448 | Grab | BP | 0.0771 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-007 | Unconsolidated | FWGCBPmw-007C-103-GW | 10/21/2009 | 2366512.573 | 562006.343 | 976.3736 | Grab | BP | 0.0013 | U | U | | 0.01 | 0.0013 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-007 | Unconsolidated | FWGASYmw-007C-1469-GW | 10/15/2009 | 2366840 | 556820 | 981.4 | Grab | BP | 0.0013 | U | U | | 0.01 | 0.0013 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-008 | Unconsolidated | FWGASYmw-008C-1470-GW | 10/15/2009 | 2367470 | 557086 | 976.2 | Grab | BP | 0.15 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-010 | Unconsolidated | FWGASYmw-010C-1472-GW | 10/15/2009 | 2366980 | 557273 | 978.2 | Grab | BP | 0.0104 | | | | 0.01 | 0.0013 | 1 |
| Site-wide Background Areas | BKGmw-004 | Unconsolidated | FWGBKGmw-004C-007-GW | 10/21/2009 | 2368852.973 | 569464.763 | 965.16 | Grab | BP | 0.0026 | J | B | L | 0.01 | 0.0013 | 1 |
| Site-wide Background Areas | BKGmw-005 | Unconsolidated | FWGBKGmw-005C-008-GW | 10/22/2009 | 2340835.864 | 562288.445 | 1149.443 | Grab | BP | 0.0116 | | | | 0.01 | 0.0013 | 1 |
| Site-wide Background Areas | BKGmw-013 | Unconsolidated | FWGBKGmw-013C-013-GW | 10/21/2009 | 2361627.394 | 558269.158 | 986.588 | Grab | BP | 0.0013 | U | U | | 0.01 | 0.0013 | 1 |
| Site-wide Background Areas | BKGmw-016 | Unconsolidated | FWGBKGmw-016C-015-GW | 10/22/2009 | 2342407.075 | 553983.501 | 1098.419 | Grab | BP | 0.0013 | U | U | | 0.01 | 0.0013 | 1 |
| Site-wide Background Areas | BKGmw-017 | Unconsolidated | FWGBKGmw-017C-016-GW | 10/22/2009 | 2346115.351 | 562452.044 | 1132.799 | Grab | BP | 0.0054 | J | B | L | 0.01 | 0.0013 | 1 |
| Site-wide Background Areas | BKGmw-019 | Unconsolidated | FWGBKGmw-019C-018-GW | 10/22/2009 | 2349882.142 | 559864.549 | 1108.239 | Grab | BP | 0.0091 | J | B | L | 0.01 | 0.0013 | 1 |
| Site-wide Background Areas | BKGmw-020 | Unconsolidated | FWGBKGmw-020C-019-GW | 10/21/2009 | 2357856.237 | 558756.241 | 1065.001 | Grab | BP | 0.0013 | U | U | | 0.01 | 0.0013 | 1 |
| Site-wide Background Areas | BKGmw-021 | Unconsolidated | FWGBKGmw-021C-020-GW | 10/21/2009 | 2367622.953 | 571016.748 | 972.159 | Grab | BP | 0.0013 | U | U | | 0.01 | 0.0013 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Vanadium | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|-----------|--------|------|--------|------|--------|----|
| RVAAP-01 Ramsdell Quarry Landfill | RQLmw-009 | Sharon | FWGRQLmw-009C-1487-GW | 10/14/2009 | 2376253.654 | 566351.1994 | 964 | Grab | BP | 0.0018 J | B | L | | 0.01 | 0.0013 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-078 | Sharon | FWGLL1mw-078-025-GW | 10/19/2009 | 2376275.854 | 564623.871 | 995.84 | Grab | BP | 0.0056 J | B | L | | 0.01 | 0.0013 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-080 | Sharon | FWGLL1mw-080-027-GW | 10/19/2009 | 2376845.072 | 562479.728 | 996.27 | Grab | BP | 0.0137 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-082 | Sharon | FWGLL1mw-082-029-GW | 10/19/2009 | 2376977.379 | 562956.86 | 1006.45 | Grab | BP | 0.0096 J | B | L | | 0.01 | 0.0013 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-060 | Sharon | FWGLL2mw-060C-034-GW | 10/19/2009 | 2375978 | 558022 | 958.13 | Grab | BP | 0.0013 U | U | | | 0.01 | 0.0013 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-263 | Sharon | FWGLL2mw-263-037-GW | 10/19/2009 | 2374290.29 | 561590.92 | 1009.42 | Grab | BP | 0.0036 J | B | L | | 0.01 | 0.0013 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-264 | Sharon | FWGLL2mw-264-038-GW | 10/19/2009 | 2374532.76 | 561173.63 | 1010.1 | Grab | BP | 0.002 J | B | L | | 0.01 | 0.0013 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-267 | Sharon | FWGLL2mw-267C-041-GW | 10/19/2009 | 2373714.17 | 561393.73 | 1012.81 | Grab | BP | 0.0013 U | U | | | 0.01 | 0.0013 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-268 | Sharon | FWGLL2mw-268-042-GW | 10/19/2009 | 2374156.4 | 560831.44 | 1015.47 | Grab | BP | 0.0094 J | B | L | | 0.01 | 0.0013 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-269 | Sharon | FWGLL2mw-269-043-GW | 10/20/2009 | 2374756.74 | 559483.9 | 1009.49 | Grab | BP | 0.0013 U | U | | | 0.01 | 0.0013 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-270 | Sharon | FWGLL2mw-270-044-GW | 10/19/2009 | 2372858.94 | 562656.18 | 1009.93 | Grab | BP | 0.0013 U | U | | | 0.01 | 0.0013 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-238 | Sharon | FWGLL3mw-238C-051-GW | 10/20/2009 | 2370624.55 | 559569.39 | 1006.91 | Grab | BP | 0.0106 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-239 | Sharon | FWGLL3mw-239-052-GW | 10/20/2009 | 2370894.17 | 559101.84 | 1003.5 | Grab | BP | 0.0042 J | B | L | | 0.01 | 0.0013 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-241 | Sharon | FWGLL3mw-241-054-GW | 10/20/2009 | 2370332.94 | 559299 | 994.65 | Grab | BP | 0.0028 J | B | L | | 0.01 | 0.0013 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-242 | Sharon | FWGLL3mw-242-055-GW | 10/21/2009 | 2371993.44 | 557035.28 | 999.32 | Grab | BP | 0.0121 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-243 | Sharon | FWGLL3mw-243C-056-GW | 10/21/2009 | 2371532.06 | 556688.5 | 991.16 | Grab | BP | 0.0094 J | B | L | | 0.01 | 0.0013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-186 | Sharon | FWGLL12mw-186C-081-GW | 10/15/2009 | 2367912.39 | 559065.95 | 976.34 | Grab | BP | 0.0013 U | U | | | 0.01 | 0.0013 | 1 |
| RVAAP-12 Load Line 12 | L12mw-189 | Sharon | FWGLL12mw-189C-084-GW | 10/15/2009 | 2367945.92 | 558569.27 | 976.17 | Grab | BP | 0.0105 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-13 Building 1200 | B12mw-011 | Sharon | FWGB12mw-011C-091-GW | 10/21/2009 | 2371420 | 565690 | 1003.76 | Grab | BP | 0.0013 U | U | | | 0.01 | 0.0013 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-001 | Sharon | FWGASYmw-001C-1463-GW | 10/14/2009 | 2366262.85 | 558406.04 | 978.4 | Grab | BP | 0.0041 J | B | L | | 0.01 | 0.0013 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-002 | Sharon | FWGASYmw-002C-1464-GW | 10/15/2009 | 2366170 | 557890 | 982 | Grab | BP | 0.0019 J | B | L | | 0.01 | 0.0013 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-003 | Sharon | FWGASYmw-003C-1465-GW | 10/15/2009 | 2366650 | 558014 | 979.7 | Grab | BP | 0.0013 U | U | | | 0.01 | 0.0013 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-005 | Sharon | FWGASYmw-005C-1467-GW | 10/15/2009 | 2367450 | 557785 | 977.6 | Grab | BP | 0.0054 J | B | L | | 0.01 | 0.0013 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-006 | Sharon | FWGASYmw-006C-1468-GW | 10/15/2009 | 2366750 | 557256 | 980.2 | Grab | BP | 0.0109 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-009 | Sharon | FWGASYmw-009C-1471-GW | 10/15/2009 | 2366630 | 557606 | 979.9 | Grab | BP | 0.0045 J | B | L | | 0.01 | 0.0013 | 1 |
| Site-wide Background Areas | BKGmw-012 | Sharon | FWGBKGMw-012C-012-GW | 10/21/2009 | 2367795.226 | 563918.862 | 997.574 | Grab | BP | 0.0037 J | B | L | | 0.01 | 0.0013 | 1 |
| Site-wide Background Areas | BKGmw-018 | Sharon | FWGBKGMw-018C-017-GW | 10/21/2009 | 2354993.909 | 570873.349 | 1043.06 | Grab | BP | 0.0014 J | B | L | | 0.01 | 0.0013 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-001 | Homewood | FWGCBLmw-001C-093-GW | 10/21/2009 | 2343659.08 | 559405.12 | 1178.5 | Grab | BP | 0.0013 U | U | | | 0.01 | 0.0013 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-003 | Homewood | FWGCBLmw-003C-095-GW | 10/22/2009 | 2343967.67 | 559697.13 | 1172.22 | Grab | BP | 0.0013 U | U | | | 0.01 | 0.0013 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-004 | Homewood | FWGCBLmw-004C-096-GW | 10/22/2009 | 2343687.21 | 559950 | 1172.08 | Grab | BP | 0.0035 J | B | L | | 0.01 | 0.0013 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-171 | Homewood | FWGFBQmw-171C-138-GW | 10/22/2009 | 2350072.44 | 554230.93 | 1140.49 | Grab | BP | 0.0013 UJ | B | Cb,L | | 0.01 | 0.0013 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-172 | Homewood | FWGFBQmw-172C-139-GW | 10/22/2009 | 2349907.37 | 554322.17 | 1145.71 | Grab | BP | 0.0013 U | U | | | 0.01 | 0.0013 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-173 | Homewood | FWGFBQmw-173C-140-GW | 10/22/2009 | 2350449.01 | 554491.35 | 1162.43 | Grab | BP | 0.0013 U | U | | | 0.01 | 0.0013 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-174 | Homewood | FWGFBQmw-174C-141-GW | 10/22/2009 | 2350289.81 | 554142.44 | 1135.78 | Grab | BP | 0.0013 U | U | | | 0.01 | 0.0013 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-175 | Homewood | FWGFBQmw-175C-142-GW | 10/22/2009 | 2350297.98 | 553989.24 | 1137.16 | Grab | BP | 0.0026 J | B | L | | 0.01 | 0.0013 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-177 | Homewood | FWGFBQmw-177C-144-GW | 10/22/2009 | 2350112.18 | 553321.94 | 1125.73 | Grab | BP | 0.0046 J | B | L | | 0.01 | 0.0013 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-003 | Homewood | FWGLL6mw-003C-003-GW | 10/21/2009 | 2353048.684 | 553544.3432 | 1125.3837 | Grab | BP | 0.0268 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-004 | Homewood | FWGLL6mw-004C-004-GW | 10/21/2009 | 2353368.787 | 553431.8182 | 1125.3851 | Grab | BP | 0.0013 U | U | | | 0.01 | 0.0013 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-001 | Homewood | FWGLL5mw-001C-065-GW | 10/21/2009 | 2354627.07 | 554321.25 | 1125 | Grab | BP | 0.0107 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-002 | Homewood | FWGLL5mw-002C-066-GW | 10/21/2009 | 2354573.52 | 554606 | 1125.8 | Grab | BP | 0.0393 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-004 | Homewood | FWGLL5mw-004C-068-GW | 10/21/2009 | 2355008.44 | 554071.73 | 1122.9 | Grab | BP | 0.0558 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-005 | Homewood | FWGLL5mw-005C-069-GW | 10/22/2009 | 2354424.02 | 554154.73 | 1126.5 | Grab | BP | 0.013 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-006 | Homewood | FWGLL5mw-006C-070-GW | 10/21/2009 | 2354730 | 553981.82 | 1125.1 | Grab | BP | 0.0433 | | | | 0.01 | 0.0013 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-003 | Homewood | FWGLL7mw-003C-1432-GW | 10/12/2009 | 2352349.51 | 555414.33 | 1118.23 | Grab | BP | 0.0013 U | U | | | 0.01 | 0.0013 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-004 | Homewood | FWGLL7mw-004C-1433-GW | 10/12/2009 | 2352036.23 | 555583.15 | 1123.3 | Grab | BP | 0.0013 UJ | B | Cb,L | | 0.01 | 0.0013 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-005 | Homewood | FWGLL8mw-005C-1440-GW | 10/13/2009 | 2351750 | 551522 | 1112.51 | Grab | BP | 0.0125 J | | Z,P | | 0.01 | 0.0013 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-006 | Homewood | FWGLL8mw-006C-1441-GW | 10/13/2009 | 2351480 | 551295 | 1114.33 | Grab | BP | 0.0055 J | B | L | | 0.01 | 0.0013 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-001 | Homewood | FWGLL9mw-001C-1442-GW | 10/13/2009 | 2355817.04 | 556125.81 | 1134.62 | Grab | BP | 0.0024 J | B | L | | 0.01 | 0.0013 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-002 | Homewood | FWGLL9mw-002C-1443-GW | 10/13/2009 | 2355907.76 | 556755.11 | 1127.3 | Grab | BP | 0.0013 U | U | | | 0.01 | 0.0013 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-003 | Homewood | FWGLL9mw-003C-1444-GW | 10/13/2009 | 2356635.21 | 556445.31 | 1135.76 | Grab | BP | 0.0017 J | B | L | | 0.01 | 0.0013 | 1 |
| RVAAP-43 Load Line 10 | L10mw-001 | Homewood | FWGLL10mw-001C-1449-GW | 10/13/2009 | 2355272.22 | 555818.25 | 1130 | Grab | BP | 0.0027 J | B | L | | 0.01 | 0.0013 | 1 |
| RVAAP-43 Load Line 10 | L10mw-002 | Homewood | FWGLL10mw-002C-1450-GW | 10/13/2009 | 2355712.51 | 555525.36 | 1124.4 | Grab | BP | 0.0013 U | U | | | 0.01 | 0.0013 | 1 |
| RVAAP-43 Load Line 10 | L10mw-003 | Homewood | FWGLL10mw-003C-1451-GW | 10/13/2009 | 2355387.92 | 555496.71 | 1127.4 | Grab | BP | 0.0013 U | U | | | 0.01 | 0.0013 | 1 |
| RVAAP-43 Load Line 10 | L10mw-004 | Homewood | FWGLL10mw-004C-1452-GW | 10/14/2009 | 2355440.2 | 555234.59 | 1119.6 | Grab | BP | 0.0013 U | U | | | 0.01 | 0.0013 | 1 |
| RVAAP-43 Load Line 10 | L10mw-005 | Homewood | FWGLL10mw-005C-1453-GW | 10/14/2009 | 2355941.55 | 555382.53 | 1122.9 | Grab | BP | 0.0022 J | B | L | | 0.01 | 0.0013 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Zinc | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|-----------------------|-------------|-------------|-------------|-----------|-------------|--------|-----------|--------|------|--------|------|--------|----|
| RVAAP-02 Erie Burning Grounds | EBGmw-123 | Unconsolidated | FWGEBGmw-123C-125-GW | 10/19/2009 | 2380049.21 | 571747.04 | 945.59 | Grab | BP | 0.0141 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-124 | Unconsolidated | FWGEBGmw-124C-126-GW | 10/19/2009 | 2380030.24 | 571618.07 | 939.02 | Grab | BP | 0.216 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-126 | Unconsolidated | FWGEBGmw-126C-128-GW | 10/19/2009 | 2380307.31 | 572348.81 | 938.2 | Grab | BP | 0.0462 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-127 | Unconsolidated | FWGEBGmw-127C-129-GW | 10/19/2009 | 2380172.16 | 571083.61 | 940.21 | Grab | BP | 0.0125 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-128 | Unconsolidated | FWGEBGmw-128C-130-GW | 10/19/2009 | 2379892.79 | 570970.32 | 942.47 | Grab | BP | 0.0042 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-129 | Unconsolidated | FWGEBGmw-129C-131-GW | 10/19/2009 | 2379240.52 | 572035.68 | 941.97 | Grab | BP | 0.0305 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-02 Erie Burning Grounds | EBGmw-130 | Unconsolidated | FWGEBGmw-130C-132-GW | 10/19/2009 | 2379220.69 | 570695.61 | 941.18 | Grab | BP | 0.0176 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-104 | Unconsolidated | FWGDA2mw-104C-115-GW | 10/21/2009 | 2354773.248 | 561125.7023 | 1070.8244 | Grab | BP | 0.0261 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-107 | Unconsolidated | FWGDA2mw-107C-118-GW | 10/21/2009 | 2354923.231 | 560482.7171 | 1039.1815 | Grab | BP | 0.0099 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-108 | Unconsolidated | FWGDA2mw-108C-119-GW | 10/21/2009 | 2355602.421 | 560184.5864 | 1029.9156 | Grab | BP | 0.0057 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-109 | Unconsolidated | FWGDA2mw-109C-120-GW | 10/21/2009 | 2354796.85 | 559897.6695 | 1068.6588 | Grab | BP | 0.031 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-110 | Unconsolidated | FWGDA2mw-110C-121-GW | 10/21/2009 | 2355195.202 | 559922.3928 | 1061.3878 | Grab | BP | 0.006 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-112 | Unconsolidated | FWGDA2mw-112C-123-GW | 10/21/2009 | 2355019.568 | 560374.5046 | 1034.8724 | Grab | BP | 0.123 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-04 Open Demolition Area #2 | DA2mw-113 | Unconsolidated | FWGDA2mw-113C-124-GW | 10/21/2009 | 2355150.554 | 560392.8898 | 1034.5126 | Grab | BP | 0.0211 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-1 | Unconsolidated | FWGDETMw-001-111-GW | 10/21/2009 | 2354959.47 | 560820.03 | 1063.97 | Grab | BP | 0.0049 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-2 | Unconsolidated | FWGDETMw-002C-112-GW | 10/21/2009 | 2355360.33 | 560664.71 | 1062.69 | Grab | BP | 0.0219 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-04 Open Demolition Area #2 | DET-3 | Unconsolidated | FWGDETMw-003C-1488-GW | 10/14/2009 | 2355204.94 | 560456.1 | 1035.56 | Grab | BP | 0.0112 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-006 | Unconsolidated | FWGWBGmw-006C-171-GW | 10/20/2009 | 2359087.79 | 563008.87 | 1010.38 | Grab | BP | 0.0035 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-007 | Unconsolidated | FWGWBGmw-007C-172-GW | 10/20/2009 | 2360420.44 | 562479.87 | 995.33 | Grab | BP | 0.316 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-009 | Unconsolidated | FWGWBGmw-009C-174-GW | 10/20/2009 | 2357159.2 | 561603.54 | 1042 | Grab | BP | 0.0105 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-010 | Unconsolidated | FWGWBGmw-010C-175-GW | 10/20/2009 | 2356051.96 | 562893.2 | 1069.85 | Grab | BP | 0.0131 JB | J | H,F | | 0.01 | 0.0023 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-011 | Unconsolidated | FWGWBGmw-011C-176-GW | 10/20/2009 | 2356187.29 | 562609.18 | 1072.38 | Grab | BP | 0.0501 J | J | H | | 0.01 | 0.0023 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-012 | Unconsolidated | FWGWBGmw-012C-177-GW | 10/20/2009 | 2354810.65 | 562240.9 | 1079.11 | Grab | BP | 0.134 J | J | H | | 0.01 | 0.0023 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-013 | Unconsolidated | FWGWBGmw-013C-178-GW | 10/20/2009 | 2355223.25 | 561518.27 | 1071.7 | Grab | BP | 0.0456 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-014 | Unconsolidated | FWGWBGmw-014C-179-GW | 10/20/2009 | 2360439.22 | 562061.26 | 996.78 | Grab | BP | 0.0177 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-015 | Unconsolidated | FWGWBGmw-015C-180-GW | 10/20/2009 | 2359182.41 | 562340.12 | 1011.6 | Grab | BP | 0.0199 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-016 | Unconsolidated | FWGWBGmw-016C-181-GW | 10/20/2009 | 2360645.88 | 562709.13 | 997.03 | Grab | BP | 0.0642 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-05 Winklepeck Burning Grounds | WBGmw-017 | Unconsolidated | FWGWBGmw-017C-182-GW | 10/20/2009 | 2359603.84 | 562913.24 | 1006.62 | Grab | BP | 0.128 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-064 | Unconsolidated | FWGLL1mw-064-022-GW | 10/19/2009 | 2380286.973 | 563118.7363 | 932 | Grab | BP | 0.0237 J | J | P | | 0.01 | 0.0023 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-065 | Unconsolidated | FWGLL1mw-065-023-GW | 10/19/2009 | 2380452.003 | 560916.9225 | 940 | Grab | BP | 0.484 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-193 | Unconsolidated | FWGLL4mw-193-057-GW | 10/21/2009 | 2364236.52 | 554960.27 | 982.92 | Grab | BP | 0.0023 UJ | U | H | | 0.01 | 0.0023 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-194 | Unconsolidated | FWGLL4mw-194C-058-GW | 10/16/2009 | 2364584.86 | 555089.22 | 983.76 | Grab | BP | 0.041 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-196 | Unconsolidated | FWGLL4mw-196C-060-GW | 10/16/2009 | 2365297.1 | 555213.52 | 984.55 | Grab | BP | 0.008 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-197 | Unconsolidated | FWGLL4mw-197C-061-GW | 10/16/2009 | 2365384.91 | 555397.05 | 985.46 | Grab | BP | 0.0157 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-198 | Unconsolidated | FWGLL4mw-198C-062-GW | 10/21/2009 | 2364991.19 | 555442.04 | 983.42 | Grab | BP | 0.0757 J | J | H | | 0.01 | 0.0023 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-199 | Unconsolidated | FWGLL4mw-199C-063-GW | 10/16/2009 | 2365420.78 | 554621.62 | 977.28 | Grab | BP | 0.0173 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-11 Load Line 4 | LL4mw-200 | Unconsolidated | FWGLL4mw-200-064-GW | 10/21/2009 | 2365903.05 | 554580.15 | 987.93 | Grab | BP | 0.0268 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-12 Load Line 12 | L12mw-107 | Unconsolidated | FWGLL12mw-107C-072-GW | 10/16/2009 | 2368595.67 | 556759.02 | 978.03 | Grab | BP | 0.0048 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-12 Load Line 12 | L12mw-128 | Unconsolidated | FWGLL12mw-128C-074-GW | 10/16/2009 | 2368293.2 | 557371.54 | 976.21 | Grab | BP | 0.116 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-12 Load Line 12 | L12mw-153 | Unconsolidated | FWGLL12mw-153C-075-GW | 10/16/2009 | 2368138.87 | 557823.23 | 975.34 | Grab | BP | 0.0119 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-12 Load Line 12 | L12mw-154 | Unconsolidated | FWGLL12mw-154C-076-GW | 10/16/2009 | 2368183.88 | 557754.56 | 977 | Grab | BP | 0.0461 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-12 Load Line 12 | L12mw-182 | Unconsolidated | FWGLL12mw-182C-077-GW | 10/16/2009 | 2368853.2 | 555890.35 | 982.2 | Grab | BP | 0.0039 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-12 Load Line 12 | L12mw-188 | Unconsolidated | FWGLL12mw-188C-083-GW | 10/15/2009 | 2367908.82 | 558132.59 | 978.46 | Grab | BP | 0.0207 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-12 Load Line 12 | L12mw-242 | Unconsolidated | FWGLL12mw-242C-085-GW | 10/15/2009 | 2368545.29 | 558020.51 | 980 | Grab | BP | 0.0162 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-12 Load Line 12 | L12mw-243 | Unconsolidated | FWGLL12mw-243C-086-GW | 10/16/2009 | 2368190.04 | 557376.32 | 978 | Grab | BP | 0.0907 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-12 Load Line 12 | L12mw-244 | Unconsolidated | FWGLL12mw-244C-087-GW | 10/16/2009 | 2368751.42 | 557377.17 | 980 | Grab | BP | 0.298 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-12 Load Line 12 | L12mw-245 | Unconsolidated | FWGLL12mw-245C-088-GW | 10/16/2009 | 2368370.74 | 557044.55 | 978 | Grab | BP | 0.0625 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-12 Load Line 12 | L12mw-246 | Unconsolidated | FWGLL12mw-246C-089-GW | 10/16/2009 | 2369432.17 | 556658.89 | 982.96 | Grab | BP | 0.0187 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-166 | Unconsolidated | FWGFBQmw-166C-133-GW | 10/22/2009 | 2349584.33 | 553123.86 | 1104.87 | Grab | BP | 0.0229 J | J | H | | 0.01 | 0.0023 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-167 | Unconsolidated | FWGFBQmw-167C-134-GW | 10/22/2009 | 2349675.45 | 553556.12 | 1112.05 | Grab | BP | 0.0938 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-176 | Unconsolidated | FWGFBQmw-176C-143-GW | 10/22/2009 | 2350219.45 | 553273.33 | 1129.57 | Grab | BP | 0.0647 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-024 | Unconsolidated | FWGLNWmw-024C-145-GW | 10/20/2009 | 2358400 | 564828 | 1035.3 | Grab | BP | 0.0965 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-025 | Unconsolidated | FWGLNWmw-025C-146-GW | 10/20/2009 | 2358420 | 565070 | 1027.2 | Grab | BP | 0.0208 J | J | P | | 0.01 | 0.0023 | 1 |
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-026 | Unconsolidated | FWGLNWmw-026C-147-GW | 10/20/2009 | 2358950 | 564656 | 1025 | Grab | BP | 0.0737 J | J | | | 0.01 | 0.0023 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Zinc | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|-----------|--------|-------|--------|------|--------|----|
| RVAAP-19 Landfill North of Winklepeck Burning Grou | LNWmw-027 | Unconsolidated | FWGLNWmw-027C-148-GW | 10/20/2009 | 2358630 | 564519 | 1024.4 | Grab | BP | 0.0039 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-001 | Unconsolidated | FWGMBSmw-001C-183-GW | 10/20/2009 | 2345323 | 550759.5 | 1079.68 | Grab | BP | 0.0126 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-002 | Unconsolidated | FWGMBSmw-002C-184-GW | 10/20/2009 | 2345322.3 | 550886.2 | 1080.5 | Grab | BP | 0.0303 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-003 | Unconsolidated | FWGMBSmw-003C-185-GW | 10/20/2009 | 2345172.4 | 550922.8 | 1082.45 | Grab | BP | 0.0046 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-004 | Unconsolidated | FWGMBSmw-004C-186-GW | 10/20/2009 | 2345134.2 | 550767.9 | 1079.55 | Grab | BP | 0.0023 U | U | | | 0.01 | 0.0023 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-005 | Unconsolidated | FWGMBSmw-005C-187-GW | 10/20/2009 | 2345354.1 | 550800.7 | 1080.5 | Grab | BP | 0.0195 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-28 Mustard Agent Burial Site | MBSmw-006 | Unconsolidated | FWGMBSmw-006C-188-GW | 10/20/2009 | 2345282.3 | 550726.1 | 1080.29 | Grab | BP | 0.009 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-001 | Unconsolidated | FWGCPmw-001C-105-GW | 10/21/2009 | 2368948.852 | 560440.9741 | 975.2594 | Grab | BP | 0.0074 JB | BJ | L,F,H | | 0.01 | 0.0023 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-004 | Unconsolidated | FWGCPmw-004C-108-GW | 10/21/2009 | 2368674.21 | 561843.2791 | 981.198 | Grab | BP | 0.0101 JB | J | F,Z | | 0.01 | 0.0023 | 1 |
| RVAAP-29 Upper and Lower Cobbs Ponds | ULCPmw-006 | Unconsolidated | FWGCPmw-006C-110-GW | 10/21/2009 | 2367727.191 | 562830.039 | 965.13 | Grab | BP | 0.15 J | J | Z | | 0.01 | 0.0023 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-001 | Unconsolidated | FWGLL6mw-001C-001-GW | 10/21/2009 | 2353153.227 | 554214.8365 | 1124.1607 | Grab | B | 0.224 J | J | H | | 0.01 | 0.0023 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-002 | Unconsolidated | FWGLL6mw-002C-002-GW | 10/21/2009 | 2353820.091 | 553589.8815 | 1129.3631 | Grab | B | 0.365 J | J | Z | | 0.01 | 0.0023 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-107 | Unconsolidated | FWGNTAmw-107C-149-GW | 10/20/2009 | 2345432.73 | 551699.09 | 1077.65 | Grab | BP | 0.0375 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-108 | Unconsolidated | FWGNTAmw-108C-150-GW | 10/20/2009 | 2345782.17 | 551917.92 | 1083.22 | Grab | BP | 0.0286 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-109 | Unconsolidated | FWGNTAmw-109C-151-GW | 10/20/2009 | 2345996.99 | 551291.19 | 1076.89 | Grab | BP | 0.0142 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-110 | Unconsolidated | FWGNTAmw-110C-152-GW | 10/20/2009 | 2346436.82 | 551350.8 | 1080.03 | Grab | BP | 0.0452 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-111 | Unconsolidated | FWGNTAmw-111C-153-GW | 10/20/2009 | 2346640.16 | 551538.99 | 1078.07 | Grab | BP | 0.0023 U | U | P | | 0.01 | 0.0023 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-112 | Unconsolidated | FWGNTAmw-112C-154-GW | 10/20/2009 | 2346889.01 | 551708.76 | 1075.36 | Grab | BP | 0.0742 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-113 | Unconsolidated | FWGNTAmw-113C-155-GW | 10/20/2009 | 2347081.15 | 551487.86 | 1072.61 | Grab | BP | 0.312 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-115 | Unconsolidated | FWGNTAmw-115C-157-GW | 10/20/2009 | 2347582.94 | 551793.39 | 1086.91 | Grab | BP | 0.0268 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-116 | Unconsolidated | FWGNTAmw-116C-158-GW | 10/20/2009 | 2348196.78 | 551749.39 | 1091.68 | Grab | BP | 0.0319 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-117 | Unconsolidated | FWGNTAmw-117C-159-GW | 10/20/2009 | 2347994.79 | 551586.36 | 1091.67 | Grab | BP | 0.0043 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-38 NACA Test Area | NTAmw-118 | Unconsolidated | FWGNTAmw-118C-160-GW | 10/20/2009 | 2347608.09 | 551333.89 | 1078.86 | Grab | BP | 0.0194 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-003 | Unconsolidated | FWGLL5mw-003C-067-GW | 10/21/2009 | 2354962.47 | 554533.41 | 1124.7 | Grab | BP | 0.191 J | J | H | | 0.01 | 0.0023 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-001 | Unconsolidated | FWGLL8mw-001C-1436-GW | 10/13/2009 | 2351660 | 552609 | 1118.69 | Grab | BP | 0.0111 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-002 | Unconsolidated | FWGLL8mw-002C-1437-GW | 10/13/2009 | 2351010 | 552410 | 1121.67 | Grab | BP | 0.0036 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-003 | Unconsolidated | FWGLL8mw-003C-1438-GW | 10/13/2009 | 2351360 | 552231 | 1116.3 | Grab | BP | 0.0051 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-004 | Unconsolidated | FWGLL8mw-004C-1439-GW | 10/13/2009 | 2351260 | 551808 | 1112.73 | Grab | BP | 0.0028 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-43 Load Line 10 | L10mw-006 | Unconsolidated | FWGLL10mw-006C-1454-GW | 10/14/2009 | 2355656.8 | 554997.25 | 1121.2 | Grab | BP | 0.0189 B | J | F,P | | 0.01 | 0.0023 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-001 | Unconsolidated | FWGLL11mw-001C-1455-GW | 10/14/2009 | 2352778.81 | 557504.98 | 1100.16 | Grab | BP | 0.0026 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-006 | Unconsolidated | FWGLL11mw-006C-1459-GW | 10/14/2009 | 2352521.51 | 558263.51 | 1086.5 | Grab | BP | 0.0129 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-008 | Unconsolidated | FWGLL11mw-008C-1460-GW | 10/14/2009 | 2352388.57 | 557981.26 | 1087.74 | Grab | BP | 0.0175 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-009 | Unconsolidated | FWGLL11mw-009C-1461-GW | 10/14/2009 | 2352577.21 | 557901.2 | 1088.28 | Grab | BP | 0.0058 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-44 Load Line 11 | LL11mw-010 | Unconsolidated | FWGLL11mw-010C-1462-GW | 10/14/2009 | 2352038.91 | 557675.59 | 1082.68 | Grab | BP | 0.0288 J | J | P | | 0.01 | 0.0023 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-001 | Unconsolidated | FWGCBPmw-001C-097-GW | 10/21/2009 | 2367095.431 | 561616.171 | 975.8411 | Grab | BP | 0.0473 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-002 | Unconsolidated | FWGCBPmw-002C-098-GW | 10/21/2009 | 2367295.684 | 561865.9216 | 970.0359 | Grab | BP | 0.0737 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-003 | Unconsolidated | FWGCBPmw-003C-099-GW | 10/21/2009 | 2366768.739 | 561944.2018 | 974.6665 | Grab | BP | 0.0029 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-004 | Unconsolidated | FWGCBPmw-004C-100-GW | 10/21/2009 | 2366978.819 | 562123.8244 | 971.1285 | Grab | BP | 0.145 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-005 | Unconsolidated | FWGCBPmw-005C-101-GW | 10/21/2009 | 2366919.482 | 562311.8596 | 971.5897 | Grab | BP | 0.06 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-006 | Unconsolidated | FWGCBPmw-006C-102-GW | 10/21/2009 | 2367243.659 | 562311.9449 | 967.6448 | Grab | BP | 0.192 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-49 Central Burn Pits | CBPmw-007 | Unconsolidated | FWGCBPmw-007C-103-GW | 10/21/2009 | 2366512.573 | 562006.343 | 976.3736 | Grab | BP | 0.0041 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-007 | Unconsolidated | FWGASYmw-007C-1469-GW | 10/15/2009 | 2366840 | 556820 | 981.4 | Grab | BP | 0.0036 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-008 | Unconsolidated | FWGASYmw-008C-1470-GW | 10/15/2009 | 2367470 | 557086 | 976.2 | Grab | BP | 0.548 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-010 | Unconsolidated | FWGASYmw-010C-1472-GW | 10/15/2009 | 2366980 | 557273 | 978.2 | Grab | BP | 0.0321 B | J | F | | 0.01 | 0.0023 | 1 |
| Site-wide Background Areas | BKGmw-004 | Unconsolidated | FWGBKGmw-004C-007-GW | 10/21/2009 | 2368852.973 | 569464.763 | 965.16 | Grab | BP | 0.0172 J | J | | | 0.01 | 0.0023 | 1 |
| Site-wide Background Areas | BKGmw-005 | Unconsolidated | FWGBKGmw-005C-008-GW | 10/22/2009 | 2340835.864 | 562288.445 | 1149.443 | Grab | BP | 0.0556 J | J | | | 0.01 | 0.0023 | 1 |
| Site-wide Background Areas | BKGmw-013 | Unconsolidated | FWGBKGmw-013C-013-GW | 10/21/2009 | 2361627.394 | 558269.158 | 986.588 | Grab | BP | 0.0035 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| Site-wide Background Areas | BKGmw-016 | Unconsolidated | FWGBKGmw-016C-015-GW | 10/22/2009 | 2342407.075 | 553983.501 | 1098.419 | Grab | BP | 0.0056 JB | BJ | L,F,H | | 0.01 | 0.0023 | 1 |
| Site-wide Background Areas | BKGmw-017 | Unconsolidated | FWGBKGmw-017C-016-GW | 10/22/2009 | 2346115.351 | 562452.044 | 1132.799 | Grab | BP | 0.0277 | J | P | | 0.01 | 0.0023 | 1 |
| Site-wide Background Areas | BKGmw-019 | Unconsolidated | FWGBKGmw-019C-018-GW | 10/22/2009 | 2349882.142 | 559864.549 | 1108.239 | Grab | BP | 0.05 J | J | | | 0.01 | 0.0023 | 1 |
| Site-wide Background Areas | BKGmw-020 | Unconsolidated | FWGBKGmw-020C-019-GW | 10/21/2009 | 2357856.237 | 558756.241 | 1065.001 | Grab | BP | 0.005 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| Site-wide Background Areas | BKGmw-021 | Unconsolidated | FWGBKGmw-021C-020-GW | 10/21/2009 | 2367622.953 | 571016.748 | 972.159 | Grab | BP | 0.0086 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |

**Screened Unfiltered Background Data
(concentrations in mg/L)**

| AOC | Station Name | Zone | Sample Number | Sample Date | EASTING | NORTHING | ELEVATION | Sample Type | Method | Zinc | L Qual | Qual | V Qual | RL | MDL | DF |
|--|--------------|----------|------------------------|-------------|-------------|-------------|-----------|-------------|--------|-----------|--------|-------|--------|------|--------|----|
| RVAAP-01 Ramsdell Quarry Landfill | RQLmw-009 | Sharon | FWGRQLmw-009C-1487-GW | 10/14/2009 | 2376253.654 | 566351.1994 | 964 | Grab | BP | 0.0225 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-078 | Sharon | FWGLL1mw-078-025-GW | 10/19/2009 | 2376275.854 | 564623.871 | 995.84 | Grab | BP | 0.0299 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-080 | Sharon | FWGLL1mw-080-027-GW | 10/19/2009 | 2376845.072 | 562479.728 | 996.27 | Grab | BP | 0.0824 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-08 Load Line 1 | LL1mw-082 | Sharon | FWGLL1mw-082-029-GW | 10/19/2009 | 2376977.379 | 562956.86 | 1006.45 | Grab | BP | 0.123 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-060 | Sharon | FWGLL2mw-060C-034-GW | 10/19/2009 | 2375978 | 558022 | 958.13 | Grab | BP | 0.0075 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-263 | Sharon | FWGLL2mw-263-037-GW | 10/19/2009 | 2374290.29 | 561590.92 | 1009.42 | Grab | BP | 0.0134 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-264 | Sharon | FWGLL2mw-264-038-GW | 10/19/2009 | 2374532.76 | 561173.63 | 1010.1 | Grab | BP | 0.0086 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-267 | Sharon | FWGLL2mw-267C-041-GW | 10/19/2009 | 2373714.17 | 561393.73 | 1012.81 | Grab | BP | 0.0064 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-268 | Sharon | FWGLL2mw-268-042-GW | 10/19/2009 | 2374156.4 | 560831.44 | 1015.47 | Grab | BP | 0.0235 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-269 | Sharon | FWGLL2mw-269-043-GW | 10/20/2009 | 2374756.74 | 559483.9 | 1009.49 | Grab | BP | 0.0092 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-09 Load Line 2 | LL2mw-270 | Sharon | FWGLL2mw-270-044-GW | 10/19/2009 | 2372858.94 | 562656.18 | 1009.93 | Grab | BP | 0.0118 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-238 | Sharon | FWGLL3mw-238C-051-GW | 10/20/2009 | 2370624.55 | 559569.39 | 1006.91 | Grab | BP | 0.0265 | | | | 0.01 | 0.0023 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-239 | Sharon | FWGLL3mw-239-052-GW | 10/20/2009 | 2370894.17 | 559101.84 | 1003.5 | Grab | BP | 0.0084 J | B | L | | 0.01 | 0.0023 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-241 | Sharon | FWGLL3mw-241-054-GW | 10/20/2009 | 2370332.94 | 559299 | 994.65 | Grab | BP | 0.0118 | | | | 0.01 | 0.0023 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-242 | Sharon | FWGLL3mw-242-055-GW | 10/21/2009 | 2371993.44 | 557035.28 | 999.32 | Grab | BP | 0.0552 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-10 Load Line 3 | LL3mw-243 | Sharon | FWGLL3mw-243C-056-GW | 10/21/2009 | 2371532.06 | 556688.5 | 991.16 | Grab | BP | 0.0353 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-12 Load Line 12 | L12mw-186 | Sharon | FWGLL12mw-186C-081-GW | 10/15/2009 | 2367912.39 | 559065.95 | 976.34 | Grab | BP | 0.0116 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-12 Load Line 12 | L12mw-189 | Sharon | FWGLL12mw-189C-084-GW | 10/15/2009 | 2367945.92 | 558569.27 | 976.17 | Grab | BP | 0.0297 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-13 Building 1200 | B12mw-011 | Sharon | FWGB12mw-011C-091-GW | 10/21/2009 | 2371420 | 565690 | 1003.76 | Grab | BP | 0.0028 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-001 | Sharon | FWGASYmw-001C-1463-GW | 10/14/2009 | 2366262.85 | 558406.04 | 978.4 | Grab | BP | 0.0418 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-002 | Sharon | FWGASYmw-002C-1464-GW | 10/15/2009 | 2366170 | 557890 | 982 | Grab | BP | 0.0086 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-003 | Sharon | FWGASYmw-003C-1465-GW | 10/15/2009 | 2366650 | 558014 | 979.7 | Grab | BP | 0.0044 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-005 | Sharon | FWGASYmw-005C-1467-GW | 10/15/2009 | 2367450 | 557785 | 977.6 | Grab | BP | 0.0199 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-006 | Sharon | FWGASYmw-006C-1468-GW | 10/15/2009 | 2366750 | 557256 | 980.2 | Grab | BP | 0.0447 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-50 Atlas Scrap Yard | ASYmw-009 | Sharon | FWGASYmw-009C-1471-GW | 10/15/2009 | 2366630 | 557606 | 979.9 | Grab | BP | 0.0195 B | J | F | | 0.01 | 0.0023 | 1 |
| Site-wide Background Areas | BKGmw-012 | Sharon | FWGBKGMw-012C-012-GW | 10/21/2009 | 2367795.226 | 563918.862 | 997.574 | Grab | BP | 0.0118 JB | J | F,Z | | 0.01 | 0.0023 | 1 |
| Site-wide Background Areas | BKGmw-018 | Sharon | FWGBKGMw-018C-017-GW | 10/21/2009 | 2354993.909 | 570873.349 | 1043.06 | Grab | BP | 0.0027 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-001 | Homewood | FWGCBLmw-001C-093-GW | 10/21/2009 | 2343659.08 | 559405.12 | 1178.5 | Grab | BP | 0.0153 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-003 | Homewood | FWGCBLmw-003C-095-GW | 10/22/2009 | 2343967.67 | 559697.13 | 1172.22 | Grab | BP | 0.0113 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-06 C Block Quarry | CBLmw-004 | Homewood | FWGCBLmw-004C-096-GW | 10/22/2009 | 2343687.21 | 559950 | 1172.08 | Grab | BP | 0.018 | | | | 0.01 | 0.0023 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-171 | Homewood | FWGFBQmw-171C-138-GW | 10/22/2009 | 2350072.44 | 554230.93 | 1140.49 | Grab | BP | 0.0213 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-172 | Homewood | FWGFBQmw-172C-139-GW | 10/22/2009 | 2349907.37 | 554322.17 | 1145.71 | Grab | BP | 0.0111 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-173 | Homewood | FWGFBQmw-173C-140-GW | 10/22/2009 | 2350449.01 | 554491.35 | 1162.43 | Grab | BP | 0.007 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-174 | Homewood | FWGFBQmw-174C-141-GW | 10/22/2009 | 2350289.81 | 554142.44 | 1135.78 | Grab | BP | 0.0043 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-175 | Homewood | FWGFBQmw-175C-142-GW | 10/22/2009 | 2350297.98 | 553989.24 | 1137.16 | Grab | BP | 0.0258 J | J | H | | 0.01 | 0.0023 | 1 |
| RVAAP-16 Fuze and Booster Quarry Landfill/Pond | FBQmw-177 | Homewood | FWGFBQmw-177C-144-GW | 10/22/2009 | 2350112.18 | 553321.94 | 1125.73 | Grab | BP | 0.0301 J | J | H | | 0.01 | 0.0023 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-003 | Homewood | FWGLL6mw-003C-003-GW | 10/21/2009 | 2353048.684 | 553544.3432 | 1125.3837 | Grab | BP | 0.0811 J | J | H | | 0.01 | 0.0023 | 1 |
| RVAAP-33 Load Line 6 | LL6mw-004 | Homewood | FWGLL6mw-004C-004-GW | 10/21/2009 | 2353368.787 | 553431.8182 | 1125.3851 | Grab | BP | 0.0034 JB | BJ | L,F,H | | 0.01 | 0.0023 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-001 | Homewood | FWGLL5mw-001C-065-GW | 10/21/2009 | 2354627.07 | 554321.25 | 1125 | Grab | BP | 0.0394 J | J | H | | 0.01 | 0.0023 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-002 | Homewood | FWGLL5mw-002C-066-GW | 10/21/2009 | 2354573.52 | 554606 | 1125.8 | Grab | BP | 0.101 J | J | H | | 0.01 | 0.0023 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-004 | Homewood | FWGLL5mw-004C-068-GW | 10/21/2009 | 2355008.44 | 554071.73 | 1122.9 | Grab | BP | 0.294 J | J | H | | 0.01 | 0.0023 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-005 | Homewood | FWGLL5mw-005C-069-GW | 10/22/2009 | 2354424.02 | 554154.73 | 1126.5 | Grab | BP | 0.0998 J | J | H,P | | 0.01 | 0.0023 | 1 |
| RVAAP-39 Load Line 5 | LL5mw-006 | Homewood | FWGLL5mw-006C-070-GW | 10/21/2009 | 2354730 | 553981.82 | 1125.1 | Grab | BP | 0.241 J | J | H | | 0.01 | 0.0023 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-003 | Homewood | FWGLL7mw-003C-1432-GW | 10/12/2009 | 2352349.51 | 555414.33 | 1118.23 | Grab | BP | 0.0143 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-40 Load Line 7 | LL7mw-004 | Homewood | FWGLL7mw-004C-1433-GW | 10/12/2009 | 2352036.23 | 555583.15 | 1123.3 | Grab | BP | 0.0276 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-005 | Homewood | FWGLL8mw-005C-1440-GW | 10/13/2009 | 2351750 | 551522 | 1112.51 | Grab | BP | 0.029 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-41 Load Line 8 | LL8mw-006 | Homewood | FWGLL8mw-006C-1441-GW | 10/13/2009 | 2351480 | 551295 | 1114.33 | Grab | BP | 0.0262 J | J | | | 0.01 | 0.0023 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-001 | Homewood | FWGLL9mw-001C-1442-GW | 10/13/2009 | 2355817.04 | 556125.81 | 1134.62 | Grab | BP | 0.0077 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-002 | Homewood | FWGLL9mw-002C-1443-GW | 10/13/2009 | 2355907.76 | 556755.11 | 1127.3 | Grab | BP | 0.0073 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-42 Load Line 9 | LL9mw-003 | Homewood | FWGLL9mw-003C-1444-GW | 10/13/2009 | 2356635.21 | 556445.31 | 1135.76 | Grab | BP | 0.016 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-43 Load Line 10 | L10mw-001 | Homewood | FWGLL10mw-001C-1449-GW | 10/13/2009 | 2355272.22 | 555818.25 | 1130 | Grab | BP | 0.011 B | J | F | | 0.01 | 0.0023 | 1 |
| RVAAP-43 Load Line 10 | L10mw-002 | Homewood | FWGLL10mw-002C-1450-GW | 10/13/2009 | 2355712.51 | 555525.36 | 1124.4 | Grab | BP | 0.0023 U | U | | | 0.01 | 0.0023 | 1 |
| RVAAP-43 Load Line 10 | L10mw-003 | Homewood | FWGLL10mw-003C-1451-GW | 10/13/2009 | 2355387.92 | 555496.71 | 1127.4 | Grab | BP | 0.0023 U | U | | | 0.01 | 0.0023 | 1 |
| RVAAP-43 Load Line 10 | L10mw-004 | Homewood | FWGLL10mw-004C-1452-GW | 10/14/2009 | 2355440.2 | 555234.59 | 1119.6 | Grab | BP | 0.0039 JB | BJ | L,F | | 0.01 | 0.0023 | 1 |
| RVAAP-43 Load Line 10 | L10mw-005 | Homewood | FWGLL10mw-005C-1453-GW | 10/14/2009 | 2355941.55 | 555382.53 | 1122.9 | Grab | BP | 0.0108 B | J | F | | 0.01 | 0.0023 | 1 |

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Appendix D
Responses to Comments

Comment Response Table

RVAAP

Report: Draft, Geochemical Evaluation of Metals in Groundwater, Dated August 2, 2010

Reviewers: Ohio EPA: Conni McCambridge, Tim Christman, and Vicki Deppisch

(December 10, 2010)

| No. | Location | Reviewer Comment | Reviewer Recommendation | Response |
|-----|--------------------------------|---|--|--|
| 1. | General | The screening results identified some metals as potential contaminants. Metals with elemental ratios reflecting natural processes were eliminated. Some of the eliminated metals have MCLs and SMCLs and concentrations above their corresponding MCLs and SMCLs from various wells/areas. The Guard has indicated they plan on using the groundwater for potable use. There is no reference to or discussion/integration of MCLs or SMCLs in the draft report. There is also no discussion regarding CUGs. | Please discuss. | Text has been added to the Executive Summary that "Comparisons of concentrations to MCLs or SMCLs not were not considered as part of evaluation. If the groundwater was to be used by a receptor in the future it would need to be addressed in a risk management decision at that time. |
| 2. | Page 2-1, Section 2.0, Line 3 | Section 2.0 indicates that data was obtained from 234 monitoring wells. However, the January 2010 Geochemical Work Plan indicates that "237" monitoring wells were to be sampled during the evaluation (Section 2.0, pg. 2-1). | Please provide clarification on the total number of monitoring wells that were sampled during the October 2009 event, the wells that were not sampled, and the rationale for excluding them. | Three of the wells that were included in the Work Plan (RQLmw-017, LL1mw-063, and L3mw-235) did not yield a sufficient quantity of water for sample collection. |
| 3. | Page 2-1, Section 2.0, Line 12 | Section 2.0 discusses the review of data from each individual well with respect to potential current and/or historical impacts. It is unclear whether the October 2009 | Please provide a brief explanation if and how the October 2009 concentrations compare to historical concentrations | A historical review of the existing groundwater data is beyond the scope of this study because filtered and unfiltered pairs of samples are required for the method. Sample events in 2000 |

COMMENT RESPONSE TABLE

RVAAP

REPORT: DRAFT, GEOCHEMICAL EVALUATION OF METALS IN GROUNDWATER, DATED AUGUST 2, 2010

REVIEWERS: OHIO EPA: CONNI MCCAMBRIDGE, TIM CHRISTMAN, AND VICKI DEPPISCH

(SEPTEMBER 16, 2010)

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| No. | Location | Reviewer Comment | Reviewer Recommendation | Response |
|-----|-----------------------|--|---|--|
| | | data from each well was compared to its historic range(s) for that metal as a part of the overall geochemical evaluation. | reported from the same well. | through 2008 only analyzed filtered samples, and the events before those only analyzed a limited number of unfiltered samples (a 1999 sampling event analyzed unfiltered samples from 36 wells, and a sampling event in 1998 analyzed unfiltered samples from 21 wells). Analyses of filtered samples alone cannot be used in a geochemical evaluation, so the decision was made to collect one complete round of filtered and unfiltered pairs of samples from as many wells as possible in October, 2009 specifically for this evaluation. |
| 4. | General | The work plan stated, "The approach is based on screening and evaluating Army-provided laboratory analytical results from previously conducted comprehensive site-wide groundwater sampling events involving at least 237 wells." The Geochem analysis is based on only one sampling event conducted Oct 2009. | Please discuss and provide rationale for using data from only one sampling event. | Please see response to Comment #3. |
| 5. | Page 3-1, Section 3.1 | Duplicates: It is unclear how the duplicate samples compared to the original samples. | Please discuss. | Duplicate samples are obtained for quality assurance purposes. We received validated data, so an |

COMMENT RESPONSE TABLE

RVAAP

REPORT: DRAFT, GEOCHEMICAL EVALUATION OF METALS IN GROUNDWATER, DATED AUGUST 2, 2010

REVIEWERS: OHIO EPA: CONNI MCCAMBRIDGE, TIM CHRISTMAN, AND VICKI DEPPISCH

(SEPTEMBER 16, 2010)

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| No. | Location | Reviewer Comment | Reviewer Recommendation | Response |
|-----|------------------------------------|--|---|---|
| | | | | <p>evaluation of the data quality was not part of the scope of this task. Analyses of the duplicate samples were not used in the calculation of summary statistics to avoid bias in the results. Twenty-four duplicate samples were obtained. Average relative standard deviations of the primary-duplicate sample pairs (neglecting nondetect and estimated results) range from $\pm 3.9\%$ to $\pm 29\%$ with an average of $\pm 15\%$ for the 19 elements that have at least some detectable concentrations in the primary-duplicate pairs.</p> |
| 6. | Page 3-2, Lines 1-14 | It is unclear how "J" values were evaluated and all other lab qualifiers. | Please discuss and clarify. | The method detection limits were used as a surrogate value for non-detections (U-flagged results) as discussed in Section 3.2. A statement has been added to Section 3.2 that the J-flagged results were used as reported. |
| 7. | Page 6-1, Section 6.1 | The report states the pH of 0.09 was rejected. EQM indicated this pH should be 7.09. | Please incorporate in the report. | Thank you for pointing this out. The report will be corrected. |
| 8. | Page 6-1, Sections 6.1.1 and 6.1.2 | The report indicates 234 wells were field measured for pH and 233 wells for redox conditions, but 231 were used in the report. | Please discuss and clarify the basis for these numbers. | Three of the wells (LL6mw-001, LL6mw-002, and Detmw-004) had low water levels with very slow recharge, so a pump and flow-through cell could not be used to obtain field parameters. |

COMMENT RESPONSE TABLE

RVAAP

REPORT: DRAFT, GEOCHEMICAL EVALUATION OF METALS IN GROUNDWATER, DATED AUGUST 2, 2010

REVIEWERS: OHIO EPA: CONNI MCCAMBRIDGE, TIM CHRISTMAN, AND VICKI DEPPISCH

(SEPTEMBER 16, 2010)

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| No. | Location | Reviewer Comment | Reviewer Recommendation | Response |
|-----|--|--|--|---|
| 9. | Pages 6-2 and 6-3 and Page 6-7, Line 21-25 (arsenic) | Regarding reducing conditions: report attributes reducing conditions from coal seams (Winslow and White, 1966). There does not appear to be any comparison to site well logs or well construction details. | Please discuss and compare. | A review and comparison of the site well logs is beyond the scope of the geochemical evaluation. However, the general stratigraphy (bedrock) underlying the facility includes Pennsylvanian age rocks. The Mercer Unit, which is present under the western portion of the facility, is described as containing thin beds of coal. In addition, the shale unit overlying the Sharon Conglomerate unit is also described by Winslow and White (1966) as containing thin layers of pyrite-bearing coal. Five RVAAP bedrock wells (LL9mw-007, LL10mw-002, SCFmw-002, SCFmw-003, SCFmw-004) also noted coal seams in the well logs, and many of the bedrock wells encountered black shales described as "containing trace pyrite accumulations throughout." The presence of coal, organic carbon-rich shale, and pyrite will create local reducing conditions in portions of the aquifer that are in contact with these materials. |
| 10. | Page 6-6, Section 6.2.2, | Reference EPRI, 1984 could not be located or ordered. | Please provide a copy of this reference. | The EPRI report is a ~250 page copyrighted book. Requests for copies |

COMMENT RESPONSE TABLE

RVAAP

REPORT: DRAFT, GEOCHEMICAL EVALUATION OF METALS IN GROUNDWATER, DATED AUGUST 2, 2010

REVIEWERS: OHIO EPA: CONNI MCCAMBRIDGE, TIM CHRISTMAN, AND VICKI DEPPISCH

(SEPTEMBER 16, 2010)

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| No. | Location | Reviewer Comment | Reviewer Recommendation | Response |
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| | Line 7. | | | should be directed to Research Reports Center, Box 50490, Palo Alto, CA 94303, or call (415) 965-4081. There is no charge for reports requested by US government agencies (federal, state or local) with which EPRI has an information exchange agreement. |
| 11. | Page 6-7, Line 3 and other areas | Reference to "unity" in multiple places. "Unity" is not defined. | As this report is a public document, please define "unity." | The first occurrence of the term "unity" will be defined as 1.0 (last paragraph of Section 4.1). |
| 12. | Page 6-7, Lines 18-20 referring to arsenic herbicide. | Referring to arsenic herbicide: Several pesticides have been detected in the groundwater above the MCL. Do any of the detected pesticides contain arsenic? Could any of the elevated levels of arsenic be associated with pesticides? | Please discuss. | The reference to arsenic-based herbicides has been deleted. The reference was simply meant as an example of how the geochemical fingerprint of an arsenic-contaminated sample would appear on the figures. None of the compounds on the standard pesticide analyte suite contain arsenic. |
| 13. | Page 6-13, Line 24 and 25 | Reference Thorbjornsen and Myers, 2007. | Please provide a copy of this reference to Ohio EPA. | A hard-copy of the reference will be provided. |
| 14. | Page 6-17, Section 6.2.22 Vanadium | Report states, "These four samples have been removed from the candidate background data set." | Please clarify and indicate if the data suggests possible contamination. | It is explained in the methodology section that samples exhibiting anomalously high trace/major element ratios are considered suspect and are eliminated from the candidate |

COMMENT RESPONSE TABLE

RVAAP

REPORT: DRAFT, GEOCHEMICAL EVALUATION OF METALS IN GROUNDWATER, DATED AUGUST 2, 2010

REVIEWERS: OHIO EPA: CONNI MCCAMBRIDGE, TIM CHRISTMAN, AND VICKI DEPPISCH

(SEPTEMBER 16, 2010)

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| | | | | background data set. They are not necessarily contaminated, but their anomalous ratios suggest that contamination is a possibility so they are removed from the background data set as a precaution. |
| 15. | Page 6-17, Section 6.2.23 Zinc | Reports states, "These 52 samples have been removed from the candidate background data set." | Please clarify and indicate if the data suggests possible contamination. | Please see response to comment # 14. |
| 16. | Section 7.4, Line Page 7-5, 23 | Section 7.4 discusses remedial alternatives based on the geochemical evaluation. Was this suppose to be included as part of the Geochemical evaluation? | Please provide a brief explanation concerning the inclusion of the "remedial alternatives" in this submittal or delete. | Shaw's scope of work required a brief description of possible groundwater remedial alternatives based on the geochemical findings so it was included in text. The following text has been added to Section 7.4: "A discussion of remedial alternatives is provided here as generally available technologies to address potential metals impacts. No remedies have been selected, and any formal remedy selections will be based on site specific information and in accordance with applicable regulatory requirements." |
| 17. | Figures | (1) All lines on all graphs should be labeled. (2) Some of the metals do not show a clear, concise trend as some of the | (1) Please label. (2) Please discuss. (3) Please clarify. (4) Please verify. (5) Please | (1) The horizontal dashed lines are defined as the reporting limit in Section 6.2.1 of the text for aluminum where it is first referenced. The vertical dashed |

COMMENT RESPONSE TABLE

RVAAP

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| | | <p>others, which questions the interpretation of the data, especially cadmium (3) Barium graphs, pre-screen and post screen—should these state “unfiltered” aluminum? “Unfiltered” was not indicated. (4) Chromium-was total chromium quantified? (5) Not all metals were evaluated the same. Many metals were evaluated with a metal ratio (i.e., Sb/Fe, Al/Fe, Cr/Al, etc.), but some were evaluated between their filtered/unfiltered ratio, such as Arsenic, which was compared to (a) Al Pre Screen, (b) filtered/unfiltered ration (c) Al Post Screen, which is confusing.</p> | <p>summarize and discuss in more detail all the figures/graphs for each metal, ratios used, and rationale/justification for the different approaches-.</p> | <p>lines indicate threshold ratios, and are discussed in the text individually for each element. This was done to simplify the layout of the 66 figures and avoid unnecessarily large legends.</p> <p>(2) Strong (clear, concise) trends should not be expected for many element pairs. There are many reasons for this, several of which are already discussed in the methodology section. The following text will be added to Section 4.1: <i>“It should be noted that the strengths of the correlations between trace/major element pairs vary for each element. For instance, at most sites with oxic groundwater, arsenic and vanadium usually show very strong correlations with a major element such as iron or aluminum in unimpacted samples. Other elements such as mercury, silver, and thallium often show poor correlations with iron or aluminum. There are several reasons for this. Elements such as arsenic and vanadium preferentially adsorb on only one type of suspended particulate (clay</i></p> |

COMMENT RESPONSE TABLE

RVAAP

REPORT: DRAFT, GEOCHEMICAL EVALUATION OF METALS IN GROUNDWATER, DATED AUGUST 2, 2010

REVIEWERS: OHIO EPA: CONNI MCCAMBRIDGE, TIM CHRISTMAN, AND VICKI DEPPISCH

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| | | | | <p><i>or oxide, depending on local site conditions), so the correlation with iron or aluminum is very strong. Other trace elements are distributed on several types of particulates (including suspended organic material) so the correlation with any single reference element is not as strong. In addition, the presence of a large proportion of estimated (J-flagged) results adds scatter to the correlation plots because of larger uncertainties in the true concentrations. A higher degree of scatter is observed on correlation plots for samples from reducing groundwaters.”</i></p> <p>(3) Those axes refer to analyses of unfiltered samples. “Unfiltered” has been added to those figures.</p> <p>(4) A sentence has been added to the chromium results section (6.2.8) stating “The samples were analyzed for “total” chromium (Cr), which is the sum of trivalent and hexavalent Cr.”</p> <p>(5) The evaluation methodology differs</p> |

COMMENT RESPONSE TABLE

RVAAP

REPORT: DRAFT, GEOCHEMICAL EVALUATION OF METALS IN GROUNDWATER, DATED AUGUST 2, 2010

REVIEWERS: OHIO EPA: CONNI MCCAMBRIDGE, TIM CHRISTMAN, AND VICKI DEPPISCH

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| | | | | for each element due to their unique geochemical behaviors, as discussed in the narratives for each element (Section 6.2). Figures were only provided if they were used in the evaluation, so different types of figures (correlation, ratio, filtered/unfiltered ratio) were used for different elements. |
| 18. | Table 7-3 | Ohio EPA noted that some metals had high levels of non-detects and, therefore, the interpretation was based on a few numbers of detects, such as Selenium, which had a 98.8% nondetect percentage with 3 detects, two of which were "J" values. | Response not requested. | Comment noted. Antimony, silver and thallium also have high proportions (>90%) of nondetects. This is common in groundwater with low total dissolved solids. |
| 19. | Statistics | Comments, including a graph, are attached. | Please clarify. | Responses to statistics comments are provided within the comments received as indented and italicized paragraphs on the attached pages. This way they can be addressed on an individualized basis. Please let us know if further discussions are needed on the responses provided. |

**Draft, Geochemical Evaluation of Metals in Groundwater, August 2, 2010
RVAAP**

**Ohio EPA Statistics Comments
Tim Christman, Ohio EPA, DERR/CO
(September 16, 2010)**

The geochemical analysis relies on a process of comparing concentrations of lower concentration elements, like copper or beryllium, with major concentration elements like aluminum or iron. The principle of this analysis is that the major and minor elements should generally follow a correlation, especially if they are sorbed on particulates. A major deviation of the minor element from the overall ratio of minor to major element probably indicates contamination or an outlier. Ohio EPA has no technical objection to this process, even though it may wrongly exclude a few high values. The end result of this procedure is to eliminate the higher values from the background set, reducing the background value. From a regulatory standpoint, that approach is protective of the environment.

However, the process for determining the natural ratios of major and minor elements is unclear. Consider the comparisons for chromium and aluminum (see Figures 6-26 to 6-28 in the report). How was the natural Cr/Al ratio determined and what was the cutoff ratio for excluding a Cr value? It would be helpful to include the background ratio line on any plot of major/minor element values (like Figure 6-26). It would also be helpful to include the cutoff value line on the same plot. That would be the line above which the minor element is excluded. Again, both lines should have a statistically sound basis explained. For example, how was the value for the red dashed line in Figure 6-27 developed?

The methodology used to evaluate the data is based on geochemistry rather than statistics. The identification of anomalously high ratios was developed on an element-by-element basis; the expected geochemical behavior of the element in the site specific environment and indicators of redox conditions at each location were important considerations, along with the proportion of nondetects and proportion of estimated (J-flagged) results. This approach cannot be reduced to a statistical pass-fail test because of the unique and multi-dimensional nature of trace element behavior, especially at a site with a naturally wide range of redox conditions. Vertical lines are provided on all of the elemental ratio plots (trace element vs. trace/major element ratio) and these lines separate samples with anomalously high ratios from those with ratios reflective of a natural source. Similar lines have been added to all of the pre-screening correlation plots on the next draft of the report.

For some elements, such as cadmium, there appears to be no basis for a background correlation line (see figure 6-20). That plot shows no obvious background trend. Thus, the basis for the exclusion ratio for cadmium is not clear. In the same manner, the plots for antimony, arsenic, barium, cobalt, and iron are also unclear as to the natural background ratios

and the cutoff ratios. All of the plots should be amended with lines for natural ratios and critical values for exclusion.

Figure 6-20 (Cadmium vs Aluminum - Pre-Screen) shows a poor correlation because seven out of the 50 samples with detectable Cd concentrations that are shown had anomalously high Cd/Al ratios and were considered to be not representative of background. In addition, 35 of the 50 samples are J-flagged, so their positions on the plot are uncertain. The presence of a large proportion of J-flagged results contributes to the scatter of the points. It should also be noted that the strengths of the correlations between trace/major element pairs vary for each element. For instance, at most sites with oxic groundwater, arsenic and vanadium show very strong correlation with a major element such as iron or aluminum in unimpacted samples. Other elements such as mercury, silver, and thallium often show poor correlations with iron or aluminum. There are several reasons for this. Elements such as arsenic and vanadium preferentially adsorb on only one type of suspended particulate (clay or oxide, depending on local site conditions), so the correlation with iron or aluminum is very strong. Other trace elements such as mercury are distributed on several types of particulates (including suspended organic material) so the correlation with any single reference element is not as strong. These natural differences in element behavior need to be considered in a geochemical evaluation.

Ohio EPA also has a major concern with the statistical analysis that follows this screening process. Section 3.2 states that nondetect values were replaced with values equal to the method detection limit. Ohio EPA suggests that there are better methods for dealing with nondetects. One of the most acceptable methods is that of regression-on-statistics (ROS). That method works on the simple principle that if the data above the detection limit show a clear statistical trend, then that trend can be extended below the detection limit. Data points below the detection limit are assigned the values they would have if the trend of the higher valued points continued into the nondetect range.

Sections 3.2 and 3.6 explain that the UCLs and UTLs for data sets containing between 1 and 15 percent nondetects were calculated using the nonparametric Kaplan-Meier percentile bootstrap method; and the UCLs and UTLs for data sets with greater than 15 percent nondetects were calculated using the Kaplan-Meier procedure combined with the bootstrap-t method. The Kaplan-Meier survival function is superior to the regression-on-order statistics (ROS) method because it does not require an assumption of normality or lognormality.

To test the applicability of the ROS method to these data, Ohio EPA re-evaluated the data for four elements – arsenic, chromium, nickel, and vanadium – that all had about 30 percent nondetects. In all four cases, these data sets were originally judged to follow nonparametric statistical distribution, using the method detection limit as the nondetect value (see Table 7-3). However, when the ROS method is used to generate the nondetect values, all four follow excellent lognormal distributions.

There's a bit of circular reasoning here. If it is assumed that all of the data are lognormally distributed, then the ROS method will, by definition, assign values for the nondetects according to a lognormal distribution. Such results do not support the original assumption of lognormality, they are instead a consequence of the assumption.

The figure below shows a plot of the arsenic data on log-probability axes (the vertical axis is the natural log of the value and the horizontal axis is the number of standard deviations from the mean). Data from a lognormal distribution should plot as a straight line on these axes. The values above the detection limit are shown as blue points while the ROS generated values for points below the detection limit are given in red (Ohio EPA used ProUCL to develop this plot).

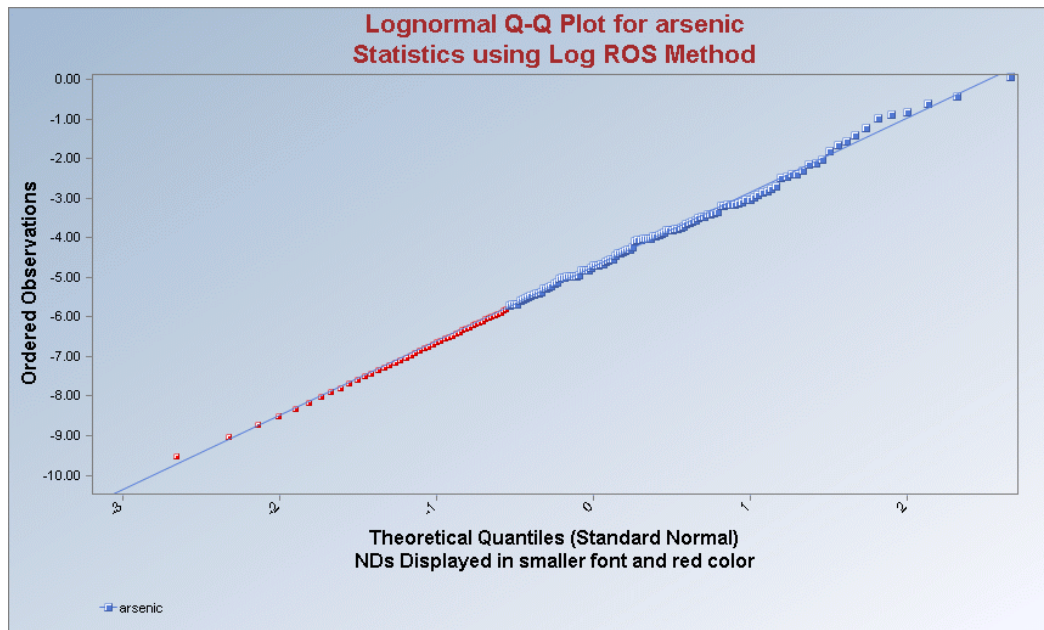


FIGURE 1. LOG-PROBABILITY PLOT OF ARSENIC DATA WITH ROS VALUES FOR NONDETECTS.

The plot shows that values above the detection limit clearly follow a lognormal distribution. Thus, it is reasonable to assume that values below the detection limit also follow the same distribution.

There is no geochemical basis for the assumption of a lognormal distribution in the censored region.

Ohio EPA ran an analyses for arsenic, chromium, nickel, and vanadium using ROS generated values for the nondetect samples. The resulting values for 95 percent UTL and 95 percent UCL are essentially the same as when the method detection limit was used for the nondetect values. That is because these sample distributions followed very wide lognormal distributions. The values of the nondetect specimens are very low compared with the rest of the distributions regardless of the method used to assign their values. Thus, the choice of ROS values or an arbitrary value (MDL) had little impact on the mean and UTL of the distribution. Ohio EPA repeated the same process with cobalt and lead, both of which have nondetect rates of about 50 percent, and got similar results. Ohio EPA would caution that other samples collected at Ravenna might not have such wide distributions and that the effects of substituting the detection limit for ROS generated values might be greater. Thus, in the future, Ohio EPA suggests using ROS generated values for a proper comparison with analyses based on using the detection limit for nondetect values.

You are actually comparing Regression on Order Statistics (ROS) results with the Kaplan-Meier (KM) results presented in the report rather than comparing ROS with simple MDL substitution. To address the comment, an analysis was performed comparing the UTLs and UCL calculated with the KM method versus the ROS method.

The KM method was used in the report to calculate UCLs and UTLs for data sets that had one or more nondetect result, as explained in Sections 3.2 and 3.6. Specifically, data sets containing between 1 and 15 percent nondetects were calculated using the KM percentile bootstrap method, and data sets with greater than 15 percent nondetects were calculated using the KM bootstrap-t method, as implemented in ProUCL (ver 4.00.04). These results, shown in the table below, are compared to ROS results (specifically the log ROS percentile bootstrap method). Results for calcium, magnesium, and manganese are not provided in the table because the concentrations of those elements are fully detectable so the KM and ROS methods could not be used. Mercury,

selenium and silver are also not shown because of a very high proportion (99 percent) of the results were nondetectable.

Differences in the KM and ROS results are expressed in the table as KM/ROS ratios, where a ratio greater than 1.0 indicate a higher KM result, a ratio less than 1.0 indicate a lower KM result, and a ratio of 1.0 indicate an identical result. Most of the UCL results agree within a few percent of unity (1.0) with the exceptions of antimony, cadmium, and thallium, which have significantly higher KM UCL results relative to the ROS results. These three elements have between 87 and 98 percent nondetects, so the mean and the 95th UCL of the mean fall well within the censored region, and cannot be accurately defined by any method.

Comparison of the UTLs calculated with the two methods show perfect agreement for all of the elements except for copper (KM lower) and thallium (KM higher). Copper has 61 percent nondetects, so disagreement is expected for this element as well.

The ROS and KM methods both attempt to eliminate bias due to the presence of nondetects, but the nonparametric KM approach is favored over the ROS because the ROS requires an assumption of normality or lognormality, which cannot be accurately verified when the proportion of nondetects is high, whereas the KM approach is valid for any distributional shape.

Table Comparing UCLs and UTLs Calculated Using Kaplan-Meier (KM) versus Regression on Order Statistics (ROS) Methods

| Element | Percent Nondetects | 95th UCL of the Mean | | | 95th UTL | | |
|-----------|--------------------|----------------------|---------|--------|----------|---------|--------|
| | | KM | ROS | KM/ROS | KM | ROS | KM/ROS |
| Aluminum | 0.6 | 9.05 | 9.21 | 0.98 | 43.0 | 43.0 | 1.00 |
| Antimony | 93.8 | 0.00028 | 0.00007 | 3.92 | 0.00038 | 0.00038 | 1.00 |
| Arsenic | 29.2 | 0.070 | 0.0622 | 1.13 | 0.42 | 0.417 | 1.00 |
| Barium | 1.2 | 0.0954 | 0.0956 | 1.00 | 0.330 | 0.33 | 1.00 |
| Beryllium | 72.7 | 0.00065 | 0.00056 | 1.16 | 0.00269 | 0.00269 | 1.00 |
| Cadmium | 87.0 | 0.00046 | 0.00017 | 2.70 | 0.00043 | 0.00043 | 1.00 |
| Chromium | 29.2 | 0.0161 | 0.0154 | 1.05 | 0.0820 | 0.082 | 1.00 |
| Cobalt | 43.5 | 0.0105 | 0.0096 | 1.09 | 0.0466 | 0.0466 | 1.00 |
| Copper | 60.9 | 0.0213 | 0.0183 | 1.16 | 0.073 | 0.102 | 0.71 |
| Iron | 0.6 | 24.7 | 24.6 | 1.00 | 123 | 123 | 1.00 |
| Lead | 47.2 | 0.0123 | 0.0111 | 1.11 | 0.0614 | 0.0614 | 1.00 |
| Nickel | 28.0 | 0.0228 | 0.0219 | 1.04 | 0.104 | 0.104 | 1.00 |
| Potassium | 3.1 | 3.93 | 3.93 | 1.00 | 12.87 | 12.9 | 1.00 |
| Sodium | 1.9 | 15.5 | 15.6 | 1.00 | 48.1 | 48.1 | 1.00 |
| Thallium | 98.1 | 0.00037 | 0.00004 | 8.51 | 0.00054 | 0.00004 | 14.3 |
| Vanadium | 32.3 | 0.0169 | 0.0162 | 1.04 | 0.084 | 0.084 | 1.00 |
| Zinc | 3.1 | 0.0615 | 0.0612 | 1.00 | 0.311 | 0.311 | 1.00 |

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**Comment Response Table
Ravenna Army Ammunition Plant**

Review of Draft Geochemical Evaluation of Metals in Groundwater Report (2 August 2010)

USGS Reviewers: Ralph Haefner, Supervisory Hydrologist, U.S. Geological Survey, Columbus, OH.

Received: 9 February 2011

| Original Comment Number | Location | Reviewer Comment | Reviewer Recommendation | Response |
|-------------------------|----------|---|-------------------------|----------------|
| | Global | <p>In response to your (USACE) request that the USGS put in writing the notes/comments from the conference call held on February 3, 2011, we offer the following comments regarding whether Shaw had achieved the intended goals of the geochemical evaluation. These comments are a compilation of three reviews by USGS hydrologists with extensive experience in geochemistry of natural and contaminated waters.</p> <p>For the purposes of this response, the objective and goals are listed below along with our review comments.</p> <p><i>"The objective of this project is to perform a geochemical evaluation of metals in groundwater at the RVAAP facility. The intended goals of the geochemical evaluation are; to establish a baseline or range of naturally occurring background concentrations of inorganic materials at the site, and to determine if elevated concentrations of metals in groundwater are naturally occurring or COCs. The Contractor shall also identify geologic, hydrogeologic, and geochemical processes that control the distributions of naturally occurring minerals and inorganic compounds in groundwater at the facility."</i></p> | | None required. |

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| | | The three specific goals will be addressed individually. | | |
| 1a | Sec. 6.1 | <p><i>Goal: Establish a baseline or range of naturally occurring background concentrations of inorganic materials at the site.</i> To satisfy this goal, the authors present Table 7-3. The table summarizes results from a statistical screening process and geochemical evaluation to define the baseline and range of concentrations of elements.</p> <p>Baseline and range of concentrations were established using <u>unfiltered</u> samples. The presence of so much turbidity in unfiltered samples indicates that the wells likely were not well developed and thus do not produce fairly clear water that would be more representative of groundwater. One way to deal with the excess turbidity would be to look only at filtered concentrations. But, when background is defined as the range of unfiltered trace-element concentrations (e.g. table 7-3), then the artificially-produced turbidity (which results in high trace-element concentrations) produces a substantial high bias in the range of concentrations. We doubt that background groundwater has concentrations anywhere near the high values reported in table 7-3.</p> | | <p>It is true that trace element concentrations can be strongly influenced by sampling methods; however, samples were obtained and analyzed for the report using the same standard sampling and analysis methods that have been used at the facility for many years, and these methods will probably continue to be used at the facility. The approach was to obtain element concentrations using the standard methods used at the facility, so that the results of the evaluation could be applied to the existing and future site data. It is important to have a background data set that is consistent with the site data set, so that “apples to apples” comparisons can be made during site-to-background comparisons. Site samples usually cannot be ignored or deleted from data sets on the basis of high turbidity.</p> <p>One thing that could be done would be to add statistical descriptions of the distributions of concentrations in the filtered splits. These would be presented as a table similar to Table 7-3. A question that needs to be resolved, however, is whether the regulators are interested in having background established using filtered samples. Background summary statistics and background screening values for filtered groundwater data would be relevant if filtered site samples are accepted by the regulatory agency for comparison to maximum contaminant levels and other regulatory screening levels.</p> |

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| 2a | | <p><i>Goal: Determine if elevated concentrations of metals in groundwater are naturally occurring or COCs. Determination of elevated trace-element concentrations as being natural or a COC depends on how natural concentrations are defined (goal 1 above). The authors address this goal with the following statement in the Executive summary...</i></p> <p><i>“Antimony, arsenic, calcium, iron, magnesium, manganese, mercury, selenium, silver, sodium, and thallium have concentrations and elemental ratios reflecting natural processes in all of the samples. There is no evidence of contamination by these 11 elements in any of the 258 samples that were evaluated in this report. The remaining 12 elements have between 2 and 52 instances of anomalously high trace/major element ratios in the 258 samples. These elements include aluminum, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, potassium, vanadium, and zinc. Concentrations of these elements in some samples cannot be explained by natural processes, and may thus be due to contamination.”</i></p> <p>No verification of approach is presented. The approach relies on statistical screening and geochemical evaluation. There is no attempt to independently verify that any of the proposed geochemistry is actually happening. Examples include statements that data plotting away from the major trend are for reduced samples. Why don't the authors co-plot the dissolved-oxygen data on these graphs, for instance, to demonstrate the alleged trends for reduced or oxic samples? We disagree that dissolved-oxygen measurements are qualitative. When done carefully and correctly, dissolved-oxygen measurements are critical towards understanding reduction/oxidation (redox) conditions. (ORP measurements, on the other hand, are generally only</p> | | <p>Most of the conclusions regarding the source (natural or anthropogenic) of the metals are based on independent lines of evidence such as trace/major element correlations, filtered/unfiltered ratios, and evidence for natural reducing conditions, as discussed in the narratives for each element in Section 6.2.</p> <p>Dissolved oxygen measurements can be relatively accurate under some highly controlled circumstances, but many years of experience evaluating field parameter results indicate that accurate dissolved oxygen (DO) measurements are uncommon in practice. Section 6.1.2 explains that the lack of an even qualitative agreement between the DO and ORP measurements or other redox indicators makes the DO results suspect. Unfortunately, the data used in the report were collected by another contractor, so it cannot be determined if the lack of agreement is due to the sampling technique or the measurement itself.</p> <p>Fortunately, there are better methods than DO or ORP to estimate redox conditions in each sample. The Fe/Al (or Al/Fe) ratios discussed in Section 6.2 are based on the known chemical behavior of iron and aluminum. Iron is redox active, whereas aluminum is not. For water in the circumneutral pH range – which describes the majority of sample locations in the RVAAP background groundwater data set – this critical difference in redox sensitivity determines the Fe/Al ratio at a given location. In brief, low-redox groundwaters exhibit higher Fe/Al ratios (greater than</p> |
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| | | <p>a crude indicator of redox conditions and should not be put in the same category as dissolved oxygen.) The authors also could demonstrate which samples are reduced or oxic by looking at the entire chemistry of samples (i.e., perhaps by graphing or tabulating redox-indicative data such as dissolved oxygen, filtered nitrate, iron, manganese, arsenic, and (or) sulfate).</p> | | <p>unity, to varying magnitudes depending on how reducing the conditions actually are), and oxidizing groundwaters exhibit Fe/Al ratios that are closer to unity.</p> <p>Shaw E&I's evaluations of filtered/unfiltered ratios of iron, manganese, and arsenic on dozens of projects across the U.S. confirms that this method provides superior redox estimates relative to DO or ORP measurements. As explained in Chapter 4.0 of the report, if a trace element is mostly present in particulate form, then some reduction in concentration is observed after filtration, even if some fraction of the suspended particulates remain in the sample, whereas elements in solution show similar concentrations in both the filtered and unfiltered splits. These effects are seen in Figure 6-12 of the report, which shows the filtered/unfiltered ratios for arsenic in the pre-screened data set. Samples that fall on the trend with the negative slope are from oxic groundwater because most of the detectable arsenic is removed after filtration, where as the samples that fall above the trend are from more reducing groundwater because a larger fraction of the arsenic is present in solution. These conclusions are independently confirmed by similar trends that are shown for iron in the same samples on Figure 6-36. The filtered/unfiltered ratios for manganese (Figure 6-45) reveal a larger number of samples in which the manganese is in solution, which is expected because manganese will solubilize at a higher redox potential than iron. Please note that all of the filtered samples were filtered in the same manner, using 0.45-micron pore size</p> |
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| | | | | <p>filters. The consistency in sampling approach reduces the uncertainty surrounding these conclusions.</p> <p>The presence of reducing conditions in some samples was independently verified by evaluation of Fe/Al ratios in unfiltered samples and As/Fe ratios in unfiltered samples, as discussed in the report. These redox indicators are far more reliable than DO or ORP measurements. Although DO measurements can be accurate under carefully controlled conditions, the unfortunate fact is that flawed DO readings are regularly encountered by environmental practitioners. Other means of characterizing redox conditions are usually required, preferably by using the data already at hand.</p> |
| 3a | | <p><i>Goal: Identify geologic, hydrogeologic, and geochemical processes that control the distributions of naturally occurring minerals and inorganic compounds in groundwater at the facility.</i> As the authors note in section 4.0, there are many controls of trace-element concentrations in groundwater that include pH, redox, complexing ligands (including sulfate and carbonate), the presence of suspended particulates, and the presence of organic contaminants. For this study, they cite adsorption on clay and iron oxides and redox as being the dominant processes.</p> <p>The effects of pH, complexing ligands, and presence of organic contaminants on trace-element concentrations are essentially ignored. We agree that adsorption and redox are important, but, the influences of pH, complexing ligands (including</p> | | <p>We agree, as noted in Section 4.0, that there are many processes that can control trace element concentrations in groundwater. The data evaluation process for each of the 23 elements includes the preparation of many exploratory plots to determine if element concentrations are controlled by pH, redox, turbidity, adsorption on the surfaces of specific suspended particulates (clays, iron oxides, or manganese oxides), the presence of organic contaminants, or direct contamination. The results of these evaluations indicate that natural redox gradients and adsorption on suspended particulates are the dominant processes controlling trace element concentrations at this facility.</p> <p>These processes were not ignored. The evaluation of each element considered</p> |

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| | | alkalinity), and organic contaminants are not evaluated or described. - Could site contamination affect pH or redox of the affected aquifer? That is, could contamination by solvents or other organic compounds influence pH or redox, which in turn, influence solubility of metals? | | <p>these processes and concluded that adsorption and redox effects are the dominant processes controlling trace element concentrations. Organic contaminants were mostly restricted to a small number of detections of low concentrations of explosives, which did not appear to have an effect on local redox conditions. The degradation of solvents or hydrocarbon fuel compounds would have greater impact on groundwater metals concentrations than low concentrations of explosives would have (Section 4.2 describes the effects of reductive dissolution). Please note that historical groundwater data indicate that most of the sampled background locations did not contain solvent or fuel contamination.</p> <p>The reducing conditions noted in many of the shallow samples are due to proximity to wetlands, and the reducing conditions in deeper samples are due to the presence of pyrite-bearing coal and organic-rich shale units. Section 6.1.2 discusses this in greater detail.</p> |
| 3b | | The authors identified redox conditions by using concentrations of redox sensitive elements in unfiltered samples. At sites where metals contamination is present, previous research has shown that concentrations of dissolved oxygen, nitrate, manganese, iron, sulfate, and methane in filtered samples provide much more useful results (and, if available, analyses/speciation of redox pairs such as Fe ²⁺ /Fe ³⁺ , Mn ²⁺ /Mn ³⁺ , As ⁻³ /As ⁺⁵ , etc. would help even more). They incorrectly assume that high unfiltered Fe and Mn concentrations are indicative of reducing conditions. | | <p>The report estimates the redox conditions based on evaluation of Fe/Al ratios in unfiltered samples, As/Fe ratios in unfiltered samples, filtered/unfiltered ratios of iron concentrations, filtered/unfiltered ratios of arsenic concentrations, and filtered/unfiltered ratios of manganese concentrations.</p> <p>The McMahon and Chapelle (2009) approach to which Comment 3b might be referring compares DO measurements and</p> |

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| | | | <p>the concentrations of nitrate, sulfate, iron, and manganese in filtered samples to specific threshold values, and is based on the assumption that particulates do not pass through the filter and that the DO measurements are reliable and accurate.</p> <p>The DO measurements in the available RVAAP data set are unreliable; and unfortunately, the samples were not analyzed for nitrate, sulfate or specific redox couples. Evaluations of the filtered/unfiltered ratios of iron, manganese, and arsenic, as discussed in the response to Comment 2a, are superior to the McMahon and Chapelle (2009) method of comparing concentrations in filtered samples to (arbitrary) threshold values. This statement is based on over 15 years of application at hundreds of investigation sites across the U.S., representing a wide variety of geochemical and hydrogeological conditions, and the fact that consistent results are observed at these various sites. These observations, while empirical, were so consistent and pervasive that they warranted publication (Thorbjornsen and Myers, 2007 and 2008). All environmental practitioners encounter spurious DO measurements and many environmental investigations do not acquire (often for budgetary reasons) the data that the McMahon and Chapelle (2009) method requires.</p> <p>The figures in the RVAAP report clearly show that the filtered/unfiltered ratio approach can distinguish between elements present primarily in solution versus elements associated with suspended</p> |
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| | | | <p>particulates, even if some particulates do pass through the filter. When this method is applied to redox-sensitive elements such as arsenic, iron, and manganese in a set of samples, then inferences regarding the redox state of each sample can be made. A further advantage of this approach is that it is based on standard EPA-approved sampling and analytical methods for the Target Analyte List of elements in filtered and unfiltered sample splits. No special sampling methods, additional analytes, or use of non-approved analytical methods (such as specific redox couples) are required.</p> <p>The report does not assume or state that high unfiltered concentrations of iron or manganese indicate reducing conditions. Samples from low-redox waters are identified by filtered/unfiltered ratios of iron concentrations close to 1.0, filtered/unfiltered ratios of manganese close to 1.0, and filtered/unfiltered ratios of arsenic close to 1.0 as shown in Figures 6-12, 6-36, and 6-45. An additional independent line of evidence for reducing conditions is elevated iron/aluminum ratios in unfiltered samples, as shown on Figure 6-35. This approach is very effective in distinguishing between oxic versus reducing samples. These four methods provide independent lines of evidence that are more reliable than field measurements of DO.</p> <p>References Cited in the Response to Comment 3b:</p> <p>McMahon and Chapelle, 2009, "Redox Conditions in Selected Principal Aquifers of</p> |
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| | | | | <p>the United States," U.S. Geological Survey Fact Sheet 2009-3041.</p> <p>Thorbjornsen, K. and Myers, J., 2007, "Identifying Metals Contamination in Groundwater Using Geochemical Correlation Evaluation," <i>Environmental Forensics</i>, Vol. 8, Nos. 1-2, pp. 25-35.</p> <p>Thorbjornsen, K. and Myers, J., 2008, "Geochemical Evaluation of Metals in Groundwater at Long-Term Monitoring Sites and Active Remediation Sites," <i>Remediation</i>, Vol. 18, Issue 2, pp. 99-114.</p> |
| | General | Based on the three goals listed above, we feel that the authors addressed the first two goals, but only partially addressed the third. That being said, we have technical concerns regarding how the goals were achieved and do not necessarily agree with all aspects of the approach. | | |

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Environmental
Protection Agency

John R. Kasich, Governor

Mary Taylor, Lt. Governor

Scott J. Nally, Director

January 19, 2011

RE: # 267000859036,
RAVENNA ARMY AMMUNITION
PLANT, PORTAGE/TRUMBULL
COUNTIES, FWGWMP, DRAFT,
REVISED, RESPONSE TO
COMMENTS, GEOCHEMICAL
EVALUATION OF METALS IN
GROUNDWATER, AUG. 2, 2010
REPORT (CRT DATED DEC. 15, 2010)

Mr. Mark Patterson
Installation Manager
Ravenna Army Ammunition Plant
8451 State Route 5
Ravenna, OH 44266

CERTIFIED MAIL
7008 3230 0003 5419 9536

Dear Mr. Patterson:

The Ohio Environmental Protection Agency (Ohio EPA) has received and reviewed the "Revised Response to Comments Incorporated for Draft, Geochemical Evaluation of Metals in Groundwater at the Ravenna Army Ammunition Plant" document. The document was received at Ohio EPA, Northeast District Office (NEDO), Division of Emergency and Remedial response (DERR), on December 15, 2010, and is dated December 14, 2010. The document was prepared for the U.S. Army Corps of Engineers (USACE) – Louisville District, by Shaw Environmental & Infrastructure, Inc., under contract no. W912QR-08-D-0013. This document was reviewed by Ohio EPA personnel in NEDO, DERR; Central Office (CO), DERR; and NEDO's Division of Drinking and Ground Waters (DDAGW).

On September 16, 2010, USACE submitted to Ohio EPA Response to Comments for the above document. During the review by Ohio EPA, it was noted that a number of issues remained or additional clarification was needed to adequately address the initial comments. A conference call with USACE, Shaw, and Ohio EPA took place on November 17, 2010, to discuss the matter. It was determined that Shaw would revise the CRT to incorporate the issues discussed during the conference call.

Ohio EPA concurs with response to comments for Nos. 1, 2, 5, 6, 8, 10, 11, 12, 14, 15, 16, 17, and 18. Enclosed are Ohio EPA's comments regarding Nos. 3, 4, 7, 9, 13, and 19.

It is the understanding of Ohio EPA that the intended application of the geochemical evaluation has not been decided by the Ravenna team as yet, but will be in the near future. This issue needs to be resolved. As agreed up by Ohio EPA and USACE, the response to these comments may be put on hold until the intended use is determined by the team.

Northeast District Office
2110 East Aurora Road
Twinsburg, OH 44087-1924

330 | 963 1200
330 | 487 0769 (fax)
www.epa.ohio.gov

MR. MARK PATTERSON
RAVENNA ARMY AMMUNITION PLANT
PAGE 2
JANUARY 19, 2011

If you have any questions, please call me at (330) 963-1207.

Sincerely,

Vicki Deppisch
Project Coordinator
Division of Emergency and Remedial Response

VD/kss

enclosure

cc: Eileen Mohr, Ohio EPA, DERR, NEDO
Katie Tait, OHARNG RTLS
Maj. Ed Meade, OHARNG RTLS
Glen Beckham, USACE Louisville
Mark Nichter, USACE Louisville
Mark Krivansky, AEC
Conni McCambridge, Ohio EPA, DDAGW, NEDO
Tim Christman, Ohio EPA, DERR, CO
David Cobb, Shaw Environmental

ec: Mike Eberle, Ohio EPA, DERR, NEDO
Todd Fisher, Ohio EPA, DERR, NEDO

**Comment Response Table
Ravenna Army Ammunition Plant**

Revised CRT based on Ohio EPA Letter Dated 19 Jan 2011 for Review of Draft Geochemical Evaluation of Metals in Groundwater (2 August 2010)

Ohio EPA Reviewers: Conni McCambridge, Tim Christman, and Vicki Deppisch

| Original Comment Number | Location | Reviewer Comment | Reviewer Recommendation | Response |
|-------------------------|-----------------------|---|--|--|
| 3 & 4 | General and Sec 2.0 | Re: Using only one sampling event, filtered and unfiltered. Ohio EPA continues to have concerns that one sampling event is not enough data. There is no accounting for seasonal changes and variations that may influence concentration levels. | This issue may require a conference call to resolve. | The issue has been discussed between all parties (USACE, Ohio EPA, USGS, and Shaw) and at present there are no plans to use additional data sets because of the unavailability of additional analyses of unfiltered samples. The collection and analysis of such samples is currently outside the scope of Shaw's contract. Given that it is likely that this geochemical evaluation will not be used at the site at the present time, no additional sampling and analysis will be done unless there is an agreed upon change in the path forward. At that time, stakeholders will evaluate outstanding technical issues and determine what tasks will need to be completed. |
| 7 | Sec. 6.1 | Re: Reject pH of 0.09, which is really 7.09 pH. Response did not indicate if a recalculated would be conducted using this corrected number. | Please clarify. | The error in the pH measurement has been corrected and the statistics recalculated. |
| 9 | Pgs 6-2, 6-3, and 6-7 | Re: Reducing conditions and coal seams. Oxidizing and reducing mobility must be related to site specific stratigraphy (including locations, well | Please provide a solid defense to compare to site- | Evaluation of the 258 well logs is beyond the scope of this investigation. However, five |

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| | | logs, elevation, and reason why). | specific conditions. | RVAAP bedrock wells (LL9mw-007, LL10mw-002, SCFmw-002, SCFmw-003, SCFmw-004) noted coal seams in the well logs. Samples from the LL9mw-007 and LL10mw-002 wells have reducing conditions, as evidenced by Fe/Al ratios of 280 and 7, respectively. These Fe/Al ratios are much higher than oxic samples which have ratios in the range of 1 to 3. In addition, these two samples have iron filtered/unfiltered ratios of 1.0 and 0.3, respectively, which independently indicates reducing conditions (oxic wells have Fil/Unfil ratios that are an order of magnitude lower). Samples from the three SCF wells are not in the October, 2009 data set. Given that it is likely that this geochemical evaluation will not be used at the site at the present time, no additional data evaluation will be done unless there is an agreed upon change in the path forward. At that time, stakeholders will evaluate outstanding technical issues and determine what tasks will need to be completed. |
| 13 | Pg 6-13 | Re: Reference Thorbjornsen and Myers, 2007. Response states "a hard-copy of the reference will be provided." | Please include a hard copy in the final document and indicate this in the response column. | A hard copy of the document will be included in the final version of the report. |
| 19 | Statistics | Refer back to previous comments and discussions which recommended that several methods be used to evaluate nondetect data. The literature on statistical methods shows different opinions on the best approach for treating nondetects, with some | Please evaluate nondetect data with the different recommended methods. | The response to comments on the Draft version of the Report provided a detailed comparison of the UCLs and UTLs calculated using the ROS and KM methods. |

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| | | <p>authors favoring the approaches used by Shaw, while others advocate the methods previously recommended. ProUCL is certainly an excellent software package for data processing; however, its recommendations for specific analytical methods reflect the thinking of that package's developers and are not necessarily more reliable than those of other researchers in the statistics field.</p> <p>While the data from the 2009 sampling event yield similar results, regardless of the method used for handling nondetects, future data sets may not. Since all of these methods are a standard feature in the ProUCL software, they would require only minimal time to perform, once the basic files are set up in ProUCL. Ohio EPA requests that data sets with nondetect values should be analyzed using several methods and the results subsequently compared and evaluated. Having confirmatory results would validate the initial results.</p> | | <p>This comparison concluded that the results were practically identical, except for a few elements with very high percentages of nondetect results. The previous RTCs also provided several reasons why the KM approach used in the report is a more defensible than the ROS method.</p> <p>Given that it is likely that this geochemical evaluation will not be used at the site at the present time, no additional evaluation of the data beyond what has been completed to date will be done unless there is an agreed upon change in the path forward. At that time, stakeholders will evaluate outstanding technical issues and determine what tasks will need to be completed.</p> |
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Appendix E
Ohio EPA Approval Letter

Note: This is a placeholder page. Shaw will supply a signed authorization page to be inserted into the final hard copy document as soon as it becomes available. Replacement CDs that include the signed authorization page will also be supplied.

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