

Appendix 1-C1

2008 Overall Quality Control Assessments

Appendix 1-C1a

May 2008 Overall Quality Control Assessment

1.1 Introduction and Executive Summary

The analytical data generated during the May 2008 Phase 1 RCRA Facility Investigation (RFI), Rhodia Silver Bow Plant, Corrective Action Order on Consent, Docket No. RCRA-08-2004-0001 by Columbia Analytical Services, Inc. (CAS), ACZ Laboratories, Inc. (ACZ) and DataChem Laboratories, Inc. (DataChem) were reviewed and validated in conformance with of the Quality Assurance Project Plan (QAPP, Barr, May 2008).

This Quality Control (QC) assessment is divided into two major sections following this introduction. Section 4.2 provides the QC assessment for the chemical analysis performed by the laboratories. Section 4.3 provides the QC assessment for the field sampling procedures.

The QC assessment of the analytical data collected for the May 2008 Phase 1 RFI, Rhodia Silver Bow Plant, demonstrate compliance with the data quality objectives in the QAPP. The analytical results have been validated and determined useable as qualified in the data summary tables and associated databases.

The QC assessment of the field sampling procedures and data demonstrate compliance with the data quality objectives in the QAPP and the Phase I RFI Workplan (Barr, 2008). The field sampling procedures were appropriate. No introduction of contamination or negative effects on sample representativeness was observed.

1.2 Laboratory Analyses

Columbia Analytical Services Inc. (CAS) located in Kelso, Washington conducted the physical preparation and chemical analyses of the analytical samples requiring volatile, semivolatile, metals, and general chemistry analyses. ACZ Laboratories, Inc. (ACZ) located in Steamboat Springs, Colorado conducted the radiological analyses, and DataChem Laboratories, Inc. (DataChem) located in Salt Lake City, Utah conducted the physical preparation and analysis of the analytical samples requiring elemental phosphorus analysis by modified EPA 7580 as set forth in the QAPP.

As set forth in Section B10.3.2 of the QAPP, 10% of the analytical data were validated in accordance with U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic and Inorganic Data Review, (2005/2004) (Guidelines). Areas evaluated during the data validation process include holding times, initial and continuing instrument calibrations, surrogate and internal standard recoveries, laboratory control samples (LCS), matrix spike sample (MS) and matrix spike duplicate sample (MSD) data, laboratory duplicate data, laboratory method blank data and an overall assessment of the data. For the remaining data not reported in full CLP deliverables, the areas evaluated during the data validation process were focused to holding times, initial and continuing calibration summary data (where available), surrogate standard recoveries, laboratory control samples, MS and MSD data, laboratory duplicate data, laboratory method blank data and an overall assessment of the data. In addition to the Guidelines, specific method criteria (SW-846) were also considered in the validation process as differences in some of the performance aspects exist between the Guidelines and the non-CLP methods used for the sample analysis. No Guidelines exist for the validation of radiological data, elemental phosphorus and general chemistry (fluoride, bicarbonate, carbonate, chloride, sulfate, ammonia as N, nitrate + nitrite as N, and total phosphorus); therefore, a data quality review was performed to evaluate general conformity with the performance aspects of the individual analytical methods. The laboratories evaluated sample results from the organics and elemental phosphorus data to method detection limit (MDL) as required by the United States Environmental Protection Agency (EPA). Data greater than the MDL and below the practical quantitation limit (PQL) are flagged with a “J” indicating an estimated concentration in the data summary reports located in Table 3.

1.2.1 Laboratory Report Data Validation Summaries

Results from the analysis of samples collected for the 2008 Phase 1 RCRA Facility Investigation, Rhodia Silver Bow Plant, Corrective Action Order on Consent, Docket No. RCRA-08-2004-0001 are included in the following laboratory reports:

Columbia Analytical Services, Inc. Data Packages				
K0804207	K0804324	K0804434	K0804545	K0804658
K0804724	K0804208	K0804349	K0804420	K0804655
K0804416	K0804414			
DataChem Laboratories, Inc. Data Packages				
08E-0369-01	08E-0374-01	08E-0381-01	08E-0383-01	08E-0387-01
08E-0394-01	08E-0403-01	08E-0408-01	08E-0425-01	08E-0427-01
08E-0449-01	08E-0388-01	08E-0393-01	08E-0404-01	08E-0407-01

* ACZ Laboratories, Inc. data is contained within Columbia Analytical Services, Inc. data packages.

The individual data evaluations for the laboratory reports listed above are provided in Appendix O-2. This assessment provides an overview of the overall quality control aspects of the project data. The data validation reports contain more specific details regarding the application of sample qualifiers assigned during the validation process. The laboratory data are considered to be usable as qualified in the data summary tables and databases.

1.2.2 Overview of Quality Control Assessment

The Data Quality Objectives of 95% completeness were achieved (Section A9.2.3 of the QAPP).

The following is a general summary of the QC assessment of the analytical results of project samples performed by CAS, ACZ and DataChem. Deviations in the quality control aspects discussed in detail below are limited to those QC issues considered to be significant. Individual data evaluations provide specific results of the validation and subsequent data qualification (provided in Appendix O-2).

The project samples were analyzed for one or more of the following parameter(s)/groups: volatile and semi-volatile organic compounds, polychlorinated biphenyl (PCB) Aroclors, metals, fluoride, bicarbonate as CaCO₃, carbonate as CaCO₃, chloride, sulfate, ammonia as N, nitrate + nitrite as N, total phosphorus, elemental (white) phosphorus and radiological compounds as described in Tables 1-2, 1-3 and 1-4 of the QAPP.

Alternate methods were selected by CAS (EPA Method 300.0 versus EPA Method 340.2) for fluoride analysis for the Phase I data set. Due to a miscommunication, ACZ selected alternative radionuclide methods for gross alpha, gross beta, radium 226, and radium 228 analyses for the groundwater and surface water samples for the Phase I data set. The QAPP specified EPA Method 9310 for gross alpha and beta, EPA Method 9315 for radium 226, and EPA Method 9320 for radium 228 analyses; however, the laboratory employed modified EPA Methods 900.0, 903.1 and 904.0, respectively. No adverse affects on the final data were determined based on these alternative method selections by the laboratories. No other deviations to the specified methodologies published in the QAPP occurred.

The laboratories met sample holding time requirements for extraction and analysis. With a few exceptions, the samples were received in acceptable condition and properly labeled. Labeling discrepancies were resolved prior to sample preparation and analysis. The samples were received at the laboratories within the acceptable sample temperature (0 to 6 degrees C).

Instrument initial and continuing calibration data generally met the acceptance criteria. Exceptions include one or more of the following analyses; elemental phosphorus analysis; selenium analysis; acrolein, bromomethane, carbon disulfide, iodomethane, naphthalene, 2-chloroethylvinylether, bromoform, and methylene chloride (volatile organic compounds (VOC) analysis; and PCB Aroclor analysis. These are qualified accordingly in the data summary tables located in Table 3. Specific details regarding initial and continuing calibration deviations are described in the individual data evaluations. During the data evaluation process of the initial calibration data for VOC analyses, it was noted that the relative response factors (RRFs) for acrolein, acrylonitrile and vinyl acetate met the laboratory specific acceptance limits but did not meet the limits specified in the Guidelines. Acrolein and acrylonitrile are documented as not being particularly stable in the analytical environment. A separate method has been developed for their analysis. Due to these considerations, no qualifiers were applied for poor RRFs observed for these parameters during the calibration of the instrument. Similarly, vinyl acetate is rapidly hydrolyzed to acetaldehyde and highly volatile. Due to degradation by hydrolysis and susceptibility to polymerization, no qualifiers were applied due to variability in the RRFs observed for this compound during the calibration of the instrument.

The laboratory control sample (LCS) analyses met the relevant acceptance criteria (Section A9.2.2 of the QAPP) with a few exceptions which are discussed in detail in the individual data evaluations. None of the deviations were considered significant or indicate systematic problems with the

analytical processes performed; however, following the request from EPA (via QAPP comments), LCS/LCSD percent recoveries ¹ <30% and >150% force results to be qualified “R” unusable. The percent recoveries of iodomethane in one or more LCS/LCSD samples exceeded the 150% criteria; therefore, the associated data were qualified “R” unusable. Additionally, the “R” qualifier was applied to one or more of the following SVOC compounds: Hexachloroethane; 2,4-dimethylphenol; benzoic acid; 4-chloroaniline; hexachlorocyclopentadiene; hexachlorobutadiene; and/or 3,3-dichlorobenzidine based on this <30% and >150% criterion. No other “R” qualifiers were applied due to LCS/LCSD results.

Matrix spike (MS) and matrix spike duplicate (MSD) samples were submitted at the frequency specified in the QAPP. Most of the MS/MSD sample results met acceptance criteria for percent recovery and associated relative percent difference (RPD) for each of the required analyses/target compound (VOC, SVOC, PCB Aroclors, fluoride, bicarbonate as CaCO₃, carbonate as CaCO₃, chloride, sulfate, ammonia as N, nitrate + nitrite as N, total phosphorus, elemental phosphorus and radiological compounds). In the few instances where deviations were observed in specific samples of these matrices, acceptable LCS and LCSD (accuracy and precision) results were achieved, indicating in-control analytical systems during sample analysis. Following the request from EPA (via QAPP comments), MS/MSD percent recoveries ² <30% and >150% force results to be qualified “R” unusable. The “R” qualifier was applied to surface water sample SW-1 for gross beta and to field blank sample MW-60-3 for gross alpha based on this <30% and >150% criterion. No other “R” qualifiers were applied due to MS/MSD results.

Laboratory duplicate data met the relevant acceptance criteria (Section A9.2.1 of the QAPP) for precision with a few exceptions which are discussed in detail in the individual data evaluations. None

¹ Percent recoveries include: laboratory control samples, matrix spike and matrix spike duplicates, surrogate standards, internal standards, interference check samples and initial and continuing calibration standards.

² Percent recoveries include: laboratory control samples, matrix spike and matrix spike duplicates, surrogate standards, internal standards, interference check samples and initial and continuing calibration standards.

of the deviations were considered significant or indicate systematic problems with the analytical processes performed.

Surrogate standards (for organic analyses) met the acceptance criteria (Section A9.2.2.2 of the QAPP), with a few exceptions. While no systematic problems were observed through the evaluation of the percent recoveries, some SVOC samples displayed surrogate percent recoveries which were below the EPA 30% criterion. The laboratory responded by re-extracting and re-analyzing the samples beyond the EPA recommended holding time, when possible. Many surrogate spike recoveries improved and met the 30% criteria during the reanalysis. Since the reanalysis confirmed the original matrix spike data, no qualification of the data was performed. In the cases where re-extraction and re-analysis was not possible, the associated data are “R” qualified (unusable) and are discussed further in the individual data evaluations in Appendix O-2.

For the metals ICP analysis, interference check sample (ICS) acceptance criterion of $\pm 20\%$ of the true value were met in a majority of cases. Minor deviations to the acceptance criterion for magnesium in the ICS were found; therefore, “R” qualifiers were applied to the associated sample data when the Guideline criterion was exceeded. Additional details regarding ICS deviations are described in the individual data evaluations.

For the metals ICP and ICP/MS analysis, the contract required quantitation limit check standard solution (CRI) percent recoveries for selenium, beryllium, copper, manganese, silver, barium and/or lead exceeded the applicable Guideline criterion; however, no data were qualified because the CRI is not required in Method 6010 and Method 6020 and they met the EPA 30-150% criterion.

The majority of the ICP and ICPMS serial dilution data met the applicable criteria with one exception; the percent difference for magnesium in sample MW-97-8 exceeded the laboratory acceptance limits and was qualified “J” estimated.

The 2-chloroethylvinyl ether results for the groundwater, surface water, field blank, and trip blank samples were qualified with an “R” indicating unusable data because of the known degradation of 2-chloroethylvinylether in the hydrochloric acid preservative used for VOC samples.

A minor deviation was made from the Guidelines relative to the affect of detected blank sample results on corresponding project sample results. In general, the Guidelines indicate that when sample concentrations are detected at or near the concentrations detected in the blank samples, the results should be presented as the CRQL/RL, with a corresponding “<” (less than) or U qualifier. However, the CRQLs are far greater than the final laboratory PQLs set forth in the QAPP. Therefore, when a

project sample result is less than 5 times the associated blank sample concentration, the project sample result is reported with a “<” or U (EPA 2005 Organic Guidelines) qualifier.

Many target compounds were detected at very low concentrations in the laboratory method blank samples, no significant-gross-system-contamination issues were identified over the course of the analytical events. Samples impacted by blank sample concentrations have been qualified and are detailed in the individual data evaluations provided in Appendix O-2.

The laboratory has identified a trace level butylated hydroxytoluene (BHT) contamination in the spike solution used for the VOC analysis that responded at the same peak retention time as 1,2,3-trichlorobenzene. This issue will be detailed in the individual data evaluations. Because of the extremely low levels detected, this contaminant is not considered to seriously impact overall data quality.

1.3 Field Sampling

1.3.1 Field Sampling Quality Control

Field sampling procedures were performed in accordance with the Phase 1 RFI Work Plan (Barr, 2008).

Field quality control procedures included the collection and analysis of field duplicate samples, trip blank and field blank samples to monitor the contamination introduced from improper field equipment decontamination, sample collection, sample transport, and laboratory analytical procedures. The results from the analysis of these samples demonstrate that the data are in compliance with the data quality objectives. Sample identification techniques described in Sections A9 and B2 of the QAPP (Barr, May 2008) required the field (rinse) blank samples be submitted to the laboratory as blind QC samples; therefore, the field blank samples were assigned a fictitious monitoring well or surface water location name at the time of collection and their true identities were documented in the Field Logbook records. Field blank samples were collected in the following manner: The groundwater and surface water sampling equipment (i.e. pump, hose, and/or tubing) was rinsed with analyte-free, deionized water. The rinse water was poured into the appropriate sample containers for analysis. The data is presented in the data summary tables (Appendix O-4) using the groundwater well and surface water locations they were collected from, along with the fictitious sample locations identified on the chain-of-custody forms.

Field sampling procedures and protocols were determined to be appropriate. As described in the QAPP, blank samples associated with groundwater and surface water sampling were analyzed for corresponding sample analysis (VOC, SVOC, PCB Aroclors, fluoride, bicarbonate as CaCO_3 , carbonate as CaCO_3 , chloride, sulfate, ammonia as N, nitrate + nitrite as N, total phosphorus, elemental phosphorus and radiological compounds). Although several trip blank and field blank samples had low levels of target analytes present below or near the PQL, no introduction of gross contamination or other adverse affects on sample representativeness were identified. The trip blank and field blank sample results are summarized in Appendix O-4b and are detailed within the individual data evaluations.

A total of six field duplicate samples were collected as specified in Section A9.3.2 of the QAPP. Precision (both field and analytical) was evaluated through a comparison of the duplicate data when both the native and duplicate sample had detected concentrations reported. The precision was evaluated by calculating the relative percent difference (RPD) for the data pairs as follows:

$$RPD = \frac{D_1 - D_2}{(D_1 + D_2)/2} \times 100$$

Where: D_1 = concentration of sample
 D_2 = concentration of duplicate sample

The RPD results for carbonate as CaCO_3 , fluoride, copper, lead, chloromethane, cumene, isopropylbenzene, 1,3,5-trimethylbenzene, sec-butylbenzene, tert-butylbenzene, toluene, bis(2-ethylhexyl)phthalate, and PCB Aroclor 1260 fell beyond the 30% criteria in one or more of the groundwater and surface water samples; however, RPD results are dependent on the heterogeneity of the samples. Higher RPDs are expected when results are at or near the PQL and do not always indicate poor precision. In only one case was a qualifier applied due RPD exceedences and are qualified accordingly in the data tables located in Appendix O-4a. The field duplicate sample results are discussed in detail within the individual data evaluations.

Appendix 1-C1b

September and December 2008 Overall Quality Control Assessment

1.1 Introduction and Executive Summary

The analytical data generated during the September and December 2008 Phase 1 RCRA Facility Investigation (RFI), Rhodia Silver Bow Plant, Corrective Action Order on Consent, Docket No. RCRA-08-2004-0001 by Columbia Analytical Services, Inc. (CAS), ACZ Laboratories, Inc. (ACZ) and DataChem Laboratories, Inc. (DataChem) were reviewed and validated in conformance with of the Quality Assurance Project Plan (QAPP, Barr, May 2008).

This Quality Control (QC) assessment is divided into two major sections following this introduction. Section 4.2 provides the QC assessment for the chemical analysis performed by the laboratories. Section 4.3 provides the QC assessment for the field sampling procedures.

The QC assessment of the groundwater, sediment and surface water sample analytical data collected for the 2008 Phase 1 RFI, Rhodia Silver Bow Plant, demonstrate compliance with the data quality objectives in the QAPP. The analytical results have been validated and determined useable as qualified in the data summary tables and associated databases.

The QC assessment of the field sampling procedures and data demonstrate compliance with the data quality objectives in the QAPP and the Phase I RFI Workplan (Barr, 2008). The field sampling procedures were appropriate.

1.2 Laboratory Analyses

Columbia Analytical Services Inc. (CAS) located in Kelso, Washington conducted the physical preparation and chemical analyses of the analytical samples requiring volatile, semivolatile, metals, and general chemistry analyses. ACZ Laboratories, Inc. (ACZ) located in Steamboat Springs, Colorado conducted the radiological analyses, and DataChem Laboratories, Inc. (DataChem) located in Salt Lake City, Utah conducted the physical preparation and analysis of the analytical samples requiring elemental phosphorus analysis by modified EPA 7580 as set forth in the QAPP.

As set forth in Section B10.3.2 of the QAPP, 10% of the analytical data were validated in accordance with U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic and Inorganic Data Review, (2005/2004) (Guidelines). Areas evaluated during the data validation process include holding times, initial and continuing instrument calibrations, surrogate and internal standard recoveries, laboratory control samples (LCS), matrix spike sample (MS) and matrix spike duplicate sample (MSD) data, laboratory duplicate sample data, laboratory method blank sample data and an overall assessment of the data. For the remaining data, the areas evaluated during the data validation process were focused to holding times, initial and continuing calibration summary data (where available), surrogate standard recoveries, LCS, MS and MSD data, laboratory duplicate sample data, laboratory method blank sample data and an overall assessment of the data. In addition to the Guidelines, specific method criteria (SW-846) were also considered in the validation process as differences in some of the performance aspects exist between the Guidelines and the non-CLP methods used for the sample analysis. No Guidelines exist for the validation of radiological data, elemental phosphorus and general chemistry (fluoride, bicarbonate, carbonate, chloride, sulfate, ammonia as N, nitrate + nitrite as N, and total phosphorus); therefore, a data quality review was performed to evaluate general conformity with the performance aspects of the individual analytical methods. As required by the United States Environmental Protection Agency (EPA), the laboratories evaluated the groundwater, surface water, and sediment sample results from the organics, fluoride, and elemental phosphorus analyses and the sediment sample results from the metals analyses to method detection limit (MDL). Organic analyses, fluoride (when applicable), metals, and elemental phosphorus data greater than the MDL and below the practical quantitation limit (PQL) are flagged with a "J" indicating an estimated concentration.

1.2.1 Laboratory Report Data Validation Summaries

Results from the analysis of groundwater, surface water and sediment samples collected for the 2008 Phase 1 RCRA Facility Investigation, Rhodia Silver Bow Plant, Corrective Action Order on Consent, Docket No. RCRA-08-2004-0001 are included in the following laboratory reports:

Columbia Analytical Services, Inc. Data Packages				
K0809092	K0809270	K0809408	K0812124	K0809090
K0809269	K0809406	K0809096	K0809091	K0809186
K0809275	K0809187			
DataChem Laboratories, Inc. Data Packages				
08E-0781	08E-0783	08E-0789	08E-0797	08E-0803
08E-0805	08E-0813	08E-0815	08E-0820	08E-0782
08E-0784	08E-0790	08E-0799	08E-0791	08E-0798
08E-1090	08E-1098			

* ACZ Laboratories, Inc. data is contained within Columbia Analytical Services, Inc. data packages.

The individual data evaluations for the laboratory reports listed above are provided in Appendix O-2. This assessment provides an overview of the overall quality control aspects of the project data. The data validation reports contain more specific details regarding the application of sample qualifiers assigned during the validation process. The laboratory data are considered to be usable as qualified in the data summary tables and databases.

1.2.2 Overview of Quality Control Assessment

The Data Quality Objectives of 95% completeness were achieved (Section A9.2.3 of the QAPP).

The following is a general summary of the QC assessment of the analytical results of project samples performed by CAS, ACZ and DataChem. Deviations in the quality control aspects discussed in detail below are limited to those QC issues considered to be significant. Individual data evaluations provide specific results of the validation and subsequent data qualification (provided in Appendix O-2).

The project samples were analyzed for one or more of the following parameter(s)/groups: volatile and semi-volatile organic compounds, polynuclear aromatic hydrocarbons by selective ion monitoring (PAH-SIM), polychlorinated biphenyl (PCB) aroclors, total and dissolved metals, bicarbonate as CaCO₃, carbonate as CaCO₃, chloride, fluoride, sulfate, ammonia as N, nitrate +

nitrite as N, total phosphorus, elemental (white) phosphorus and radiological compounds as described in Tables 1-1, 1-2, 1-3 and 1-4 of the QAPP.

Due to a miscommunication within the laboratory, the soil samples associated within data packages K0809186 and K0809275 were extracted using the Bellack distillation procedure (EPA Method 340.1 modified) and not the distilled (DI) water distillation procedure required for the project. The Bellack distillation yields much higher fluoride values than the DI water distillation method due to the aggressiveness of the extraction fluid used. The fluoride results from these data packages are presented on the data summary tables included in Table 3. While the data from the Bellack method met all quality assurance criteria, the use of this method is a deviation from the QAPP as it does not meet the data quality objectives. The results generated using this extraction method will be significantly higher than the method included in the QAPP. This difference needs to be considered when using the data as part of this project.

Alternate methods were selected by CAS (EPA Method 300.0 versus EPA Method 340.2) for fluoride analysis for groundwater and surface water data included in the Phase I data set. Due to a miscommunication, ACZ selected alternative radionuclide methods for gross alpha, gross beta, radium 226 and radium 228 analyses for the groundwater and surface water samples for the Phase I data set. The QAPP specified EPA Method 9310 for gross alpha and beta, EPA Method 9315 for radium 226 and EPA Method 9320 for radium 228 analyses; however, the laboratory employed modified EPA Methods 900.0, 903.1 and 904.0, respectively. While a deviation from the QAPP, it was determined that there were no adverse effects on the data based on these alternative method selections by the laboratories. No other deviations to the specified methodologies published in the QAPP occurred.

The laboratories met sample holding time requirements for extraction and analysis with the exception of the total solids analysis for the sediment samples. The associated data were “J” qualified and should be considered estimated. With a few exceptions, the samples were received in acceptable condition and properly labeled. The VOC and SVOC data for sample SD-1 (0-10) CM was “J” qualified (estimated) because the total solids content of the sample was 29.1%, which is below the 30% criteria stated in the Guidelines. Labeling discrepancies were resolved prior to sample preparation and analysis. The samples were received at the laboratories within the acceptable sample temperatures (0 to 6 degrees C).

Instrument initial and continuing calibration data generally met the acceptance criteria. Exceptions include one or more of the following analyses: elemental phosphorus; acrolein; bromomethane; 1,2-dibromo-3-chloro-propane; acrylonitrile, vinyl acetate; bromoform; dichlorodifluoromethane; trichlorofluoromethane; 2-chloroethylvinylether; 2,2-dichloropropane; iodomethane; naphthalene; methyl tert-butyl ether; chloroform; 1,1,1-trichloroethane; carbon tetrachloride; 1,1-dichloropropene; benzene, ethylbenzene; m,p and o-xylene; styrene; isopropylbenzene, n-propylbenzene; 2-chlorotoluene; 1,3,5-trimethyl-benzene, tert-butylbenzene; sec-butylbenzene; 4-isopropyltoluene; and acetone (volatile organic compounds, VOC) analysis; benzoic acid and benzidine (semivolatile organic compounds, SVOC) analysis; and indeno(1,2,3-cd)pyrene and dibenz(a,h)anthracene (PAH-SIM) analysis. These are qualified accordingly in the data summary tables. Specific details regarding initial and continuing calibration deviations are described in the individual data evaluations. During the data evaluation process of the initial calibration data for VOC analyses, it was noted that the relative response factors (RRFs) for acrolein, acrylonitrile, and vinyl acetate met the laboratory specific acceptance limits but did not meet the limits specified in the Guidelines. Acrolein and acrylonitrile are documented as not being particularly stable in the analytical environment. A separate method has been developed for their analysis. Due to these considerations, no qualifiers were applied for poor RRFs observed for these parameters during the calibration of the instrument. Similarly, vinyl acetate is rapidly hydrolyzed to acetaldehyde and highly volatile. Due to degradation by hydrolysis and susceptibility to polymerization, no qualifiers were applied due to variability in the RRFs observed for this compound during the calibration of the instrument.

The laboratory control sample (LCS) analyses met the relevant acceptance criteria (Section A9.2.2 of the QAPP) with a few exceptions which are discussed in detail in the individual data evaluations. None of the deviations were considered significant or indicate systematic problems with the analytical processes performed; however, following the request from EPA (via QAPP comments), LCS/LCSD percent recoveries ¹ <30% and >150% force results to be qualified “R” unusable. Additionally, the “R” qualifier was applied to one or more of the following VOC compounds: acrolein, bromomethane, and vinyl chloride; and to one or more of the following SVOC compounds: benzidine; pyridine; hexachloroethane; 2,4-dimethylphenol; 2,4-dinitrophenol; benzoic acid;

¹ Percent recoveries include: laboratory control samples, matrix spike and matrix spike duplicates, surrogate standards, internal standards, interference check samples and initial and continuing calibration standards.

pentachlorophenol; hexachlorocyclopentadiene; hexachlorobutadiene; and/or 2-methyl-4,6-dinitrophenol based on this <30% and >150% criterion. No other “R” qualifiers were applied due to LCS/LCSD results.

Due to a laboratory error in the preparative steps, the spike solution which contains the target analytes for SVOC batch KWG0810417 was not added; therefore the LCS, MS and MSD percent recoveries were below the applicable criteria. All associated field samples were re-extracted (after the EPA recommended holding time has expired) and the re-analysis yielded acceptable QA/QC results. The sample extracts from the original analysis were re-analyzed as well. Because the re-extracted samples displayed comparable results to the re-extracted/re-analyzed samples, no data were qualified. The data summary tables report the project sample results from the original (within holding time) analysis.

Due to a laboratory error in preparative steps, the spike solution which contains the target analytes for aqueous SVOC batch KWG810047 was not added; therefore the LCS, MS and MSD percent recoveries were below the applicable criteria. The data are reported as presented in the laboratory reports, because no further corrective action was possible due to the lack of additional sample volume for re-extraction. Since the associated samples were one field blank (sample SD-220 (0-10) CM) and one method blank sample, no data qualification was deemed necessary.

Matrix spike (MS) and matrix spike duplicate (MSD) samples were submitted at the frequency specified in the QAPP. Most of the MS/MSD sample results met acceptance criteria for percent recovery and associated relative percent difference (RPD) for each of the required analyses/target compound (VOC, SVOC, PAH-SIM, PCB Aroclors, fluoride, bicarbonate as CaCO₃, carbonate as CaCO₃, chloride, sulfate, ammonia as N, nitrate + nitrite as N, total phosphorus, elemental phosphorus and radiological compounds). In the few instances where deviations were observed in specific samples of these matrices, acceptable LCS and LCSD (accuracy and precision) results were achieved, indicating in-control analytical systems during sample analysis. Following the request from EPA (via QAPP comments), MS/MSD percent recoveries ² <30% and >150% force results to be

² Percent recoveries include: laboratory control samples, matrix spike and matrix spike duplicates, surrogate standards, internal standards, interference check samples and initial and continuing calibration standards.

qualified “R” unusable. Based upon this <30% and >150% recovery criterion, the “R” qualifier was applied to surface water sample SW-17 for 1,4-dichlorobenzene and 1,2,4-trichlorobenzene and to groundwater sample MW-06-8 for gross alpha analysis. No other “R” qualifiers were applied due to MS/MSD results.

Laboratory duplicate data met the relevant acceptance criteria (Section A9.2.1 of the QAPP) for precision with a few exceptions which are discussed in detail in the individual data evaluations. None of the deviations were considered significant or indicate systematic problems with the analytical processes performed.

Surrogate standards (for organic analyses) met the acceptance criteria (Section A9.2.2.2 of the QAPP), with a few exceptions. While no systematic problems were observed through the evaluation of the percent recoveries, some SVOC samples displayed surrogate percent recoveries which were below the EPA 30% criterion. This affected samples MW-97-4 and MW-97-11. The associated data are “R” qualified (unusable) and are discussed further in the individual data evaluations in Appendix O-2.

For the metals ICP analysis, interference check sample (ICS) acceptance criterion of $\pm 20\%$ of the true value were met.

For the metals ICP and ICP/MS analysis, the contract required quantitation limit check standard solution (CRI) percent recoveries for barium, beryllium, cadmium, copper, chromium, lead, silver, thallium, nickel, sodium, uranium, and/or vanadium exceeded the applicable Guideline criterion; however, no data were qualified because the CRI is not required in Method 6010 and Method 6020.

The majority of the ICP and ICPMS serial dilution data met the applicable criteria with two exceptions; the percent difference for magnesium in sample SW-11 and for arsenic, lead, thallium, and uranium for sample SD-20 (0-10) CM exceeded the laboratory acceptance limits and were qualified “J” estimated.

The ICPMS and mercury post-digestion spike data met the applicable criteria. A post-digestion spike for ICP analysis was not performed.

The 2-chloroethylvinyl ether results for the groundwater, surface water, field blank, and trip blank samples were qualified with an “R” indicating unusable data because of the known degradation of 2-chloroethylvinylether in the hydrochloric acid preservative used for VOC samples.

A minor deviation was made from the Guidelines relative to the affect of detected blank sample results on corresponding project sample results. In general, the Guidelines indicate that when sample concentrations are detected at or near the concentrations detected in the blank samples, the results should be presented as the CRQL/RL, with a corresponding “<” (less than) or U qualifier. However, the CRQLs are far greater than the final laboratory PQLs set forth in the QAPP. Therefore, when a project sample result is less than 5 times the associated blank sample concentration, the project sample result is reported with a “<” or U (EPA 2005 Organic Guidelines) qualifier.

Many target compounds were detected at very low concentrations in the laboratory method blank samples, no significant-gross-system-contamination issues were identified over the course of the analytical events. Samples impacted by blank sample concentrations have been qualified and are detailed in the individual data evaluations provided in Appendix O-2.

1.3 Field Sampling

1.3.1 Field Sampling Quality Control

Field sampling procedures were performed in accordance with the Phase 1 RFI Work Plan (Barr, 2008).

Field quality control procedures included the collection and analysis of field duplicate samples, trip blank and field blank samples to monitor the contamination introduced from improper field equipment decontamination, sample collection, sample transport, and laboratory analytical procedures. The results from the analysis of these samples demonstrate that the data are in compliance with the data quality objectives.

Sample identification techniques described in Sections A9 and B2 of the QAPP (Barr, May 2008) required the field (rinsate) blank samples be submitted to the laboratory as blind QC samples; therefore, the field blank samples were assigned a fictitious monitoring well, sediment, or surface water location name at the time of collection and their true identities were documented in the Field Logbook records. Field blank samples were collected in the following manner: The groundwater, sediment, and surface water sampling equipment (i.e. pump, hose, tubing, stainless-steel bowl, and/or spoon, etc.) were rinsed with analyte-free, deionized water. The rinse water was poured into the appropriate sample containers for analysis. The data is presented in the data summary tables using the groundwater well, sediment, and surface water locations they were collected from along with the fictitious sample locations identified on the chain-of-custody forms.

Field sampling procedures and protocols were determined to be appropriate. As described in the QAPP, blank samples associated with groundwater, sediment, and surface water sampling were analyzed for corresponding sample analysis (VOC, SVOC, PCB Aroclors, total and dissolved metals, fluoride, bicarbonate as CaCO_3 , carbonate as CaCO_3 , chloride, sulfate, ammonia as N, nitrate + nitrite as N, total phosphorus, elemental phosphorus and radiological compounds). Although several trip blank samples had low levels of target VOC analytes present below or near the MDL/PQL, no introduction of gross contamination or other adverse affects on sample representativeness were identified.

During the evaluation of the groundwater data from the September 2008 monitoring event, cross-contamination of elemental phosphorus was suspected for twenty-one groundwater samples,

including samples from an upgradient well, its' duplicate (i.e. MW-06-5) and a rinsate blank sample collected after MW-06-13 as detailed in the letter from Barr to Dan Bersanti on December 3, 2008.

A meeting was convened with the field staff, Tom Mattison, Karma Hughes and Andrea Nord of Barr and it was determined that the field staff followed the Barr's standard operating procedures for cleaning reusable sampling equipment. The decontamination procedures included in the Barr standard operating procedures were appropriate for cleaning the submersible pumps used at the site.

A new dual pumping system used for the September 2008 groundwater sample collection activities. The dual pumping system had a higher lift capacity than the single pump system previously used during the May 2008 sampling event. However, two of the new pumps failed during the September sampling event. One of the pumps failed during the sampling of MW-01-3 and a different pump was used to collect the sample at MW-01-3 and subsequent monitoring wells. The supplier was contacted and the pumps were replaced. The supplier reported that there was a defect in the two stage pumps. If the lower pump failed (as in this case), there was a potential that it did not allow for the lower cell of the pump to evacuate completely; thereby, allowing stagnant water to come in contact with each subsequent sample that was collected. The dual pump appeared to be operational because the upper chamber was still pumping.

Based upon the elemental phosphorus sample concentrations, the pump failure likely happened at or near groundwater well MW-01-3 which had an elemental phosphorus concentration of 290 ug/L. Each subsequent sample collected by the sampling team(s) who used that submersible dual pump had elemental phosphorus concentrations which decreased with each sample collected after well MW-01-3. The groundwater data were reviewed and certain wells' whose elemental phosphorus and metals concentrations were inconsistent with the May 2008 data set, were re-sampled to determine if cross-contamination occurred during the September 2008 sampling event.

Sampling procedures attempt to collect samples from the lowest to the highest concentrations across the Site. The sampling order during the September 2008 groundwater monitoring event was based upon arsenic, fluoride and sulfate concentrations from the May 2008 event. During the December 2008 collection activities, the sampling order was re-defined and sample MW-03-1 which had the highest elemental phosphorus concentration was sampled last. The re-sampling and re-analysis results (December 2008) confirmed that cross-contamination of elemental phosphorus likely occurred. Upon review of the other analytical parameters, (general chemistry, radiochemistry, metals, VOCs and SVOCs), a similar cross contamination trend was not observed. With the exception of

MW-03-1, the elemental phosphorus data from the September 2008 event were “R” qualified (unusable) and the data collected during the December 2008 sampling event is presented in the data summary tables located in Table 3.

As part of the investigation, samples MW-97-6, MW-06-15, MW-EPA-1, MW-06-14, MW-06-20, MW-97-12 and field blank sample (MW-60-11) were also re-sampled and re-analyzed for select target metals because 1) the September 2008 metals concentrations were inconsistent with the metals concentrations from the May 2008 monitoring event and/or 2) potential contamination as indicated in the associated field blank sample(s) results. Individual data evaluations provide specific results of the validation and subsequent qualification (provided in Appendix O-2.)

The trip blank and field blank sample results are summarized in Appendix O-4b and are detailed within the individual data evaluations.

A total of seven field duplicate samples were collected as specified in Section A9.3.2 of the QAPP. Precision (both field and analytical) was evaluated through a comparison of the duplicate data when both the native and duplicate sample had detected concentrations reported. The precision was evaluated by calculating the relative percent difference (RPD) for the data pairs as follows:

$$RPD = \frac{D_1 - D_2}{(D_1 + D_2)/2} \times 100$$

Where: D_1 = concentration of sample
 D_2 = concentration of duplicate sample

The RPD results for dissolved cobalt, diethylphthalate (SVOC), phenanthrene (PAH-SIM), gross alpha and beta, and radium 226 and 228, bicarbonate alkalinity as CaCO₃, iron, zinc, acetone, and toluene fell beyond the 30% criteria in one or more of the groundwater and surface water samples. The RPD results for fluoride and 4-isopropyltoluene (VOC) fell beyond the 40% criteria for one or more sediment samples. However, RPD results are dependent on the heterogeneity of the samples. Higher RPDs are expected when results are at or near the PQL and do not always indicate poor precision. Data qualifiers were applied due RPD exceedences in only two cases, and the data are qualified accordingly in the data summary tables. The field duplicate sample results are discussed in detail within the individual data evaluations located in Appendix O-2.

Appendix 1-C1c

December 2008 Overall Quality Control Assessment

1.1 Introduction and Executive Summary

The analytical data generated during the December 2008 Phase 1 RCRA Facility Investigation (RFI), Rhodia Silver Bow Plant, Corrective Action Order on Consent, Docket No. RCRA-08-2004-0001 by Columbia Analytical Services, Inc. (CAS), ACZ Laboratories, Inc. (ACZ) and DataChem Laboratories, Inc. (DataChem) were reviewed and validated in conformance with of the Quality Assurance Project Plan (QAPP, Barr, May 2008).

This Quality Control (QC) assessment is divided into two major sections following this introduction. Section 4.2 provides the QC assessment for the chemical analysis performed by the laboratories. Section 4.3 provides the QC assessment for the field sampling procedures.

The QC assessment of the soil and tailings samples' analytical data collected in December 2008 to support the 2008 Phase 1 RFI, Rhodia Silver Bow Plant, demonstrate compliance with the data quality objectives in the QAPP. The analytical results have been validated and determined useable as qualified in the data summary tables and associated databases.

The QC assessment of the field sampling procedures and data demonstrate compliance with the data quality objectives in the QAPP and the Phase I RFI Workplan (Barr, 2008). The field sampling procedures were appropriate. No introduction of contamination or negative effects on sample representativeness was observed.

1.2 Laboratory Analyses

Columbia Analytical Services Inc. (CAS) located in Kelso, Washington conducted the physical preparation and chemical analyses of the analytical samples requiring metals, and general chemistry analyses. ACZ Laboratories, Inc. (ACZ) located in Steamboat Springs, Colorado conducted the radiological analyses, and DataChem Laboratories, Inc. (DataChem) located in Salt Lake City, Utah conducted the physical preparation and analysis of the analytical samples requiring elemental phosphorus analysis by modified EPA 7580 as set forth in the QAPP.

As set forth in Section B10.3.2 of the QAPP, 10% of the analytical data were validated in accordance with U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic and Inorganic Data Review, (2005/2004) (Guidelines). Areas evaluated during the data validation process include holding times, initial and continuing instrument calibrations, and internal standard recoveries, laboratory control samples (LCS), matrix spike sample (MS) and matrix spike duplicate sample (MSD) data, laboratory duplicate sample data, laboratory method blank sample data and an overall assessment of the data. For the remaining data, the areas evaluated during the data validation process were focused to holding times, initial and continuing calibration summary data (where available), LCS, MS and MSD data, laboratory duplicate sample data, laboratory method blank sample data and an overall assessment of the data. In addition to the Guidelines, specific method criteria (SW-846) were also considered in the validation process as differences in some of the performance aspects exist between the Guidelines and the non-CLP methods used for the sample analysis. No Guidelines exist for the validation of radiological data, elemental phosphorus and total solids analyses; therefore, a data quality review was performed to evaluate general conformity with the performance aspects of the individual analytical methods. As required by the United States Environmental Protection Agency (EPA), the laboratories evaluated the soil and tailings sample results from the elemental phosphorus and metals analyses to method detection limit (MDL). Elemental phosphorus and metals data greater than the MDL and below the practical quantitation limit (PQL) are flagged with a “J” indicating an estimated concentration.

1.2.1 Laboratory Report Data Validation Summaries

Results from the analysis of soil and tailings samples collected for the 2008 Phase 1 RCRA Facility Investigation, Rhodia Silver Bow Plant, Corrective Action Order on Consent, Docket No. RCRA-08-2004-0001 are included in the following laboratory reports:

Columbia Analytical Services, Inc. Data Packages			
K0812125	K0812197	K0812294	
DataChem Laboratories, Inc. Data Packages			
08E-1091-01	08E-1091-02	08E-1091-03	08E-1091-04

* ACZ Laboratories, Inc. data is contained within Columbia Analytical Services, Inc. data packages.

The individual data evaluations for the laboratory reports listed above are provided in Appendix O-2. This assessment provides an overview of the overall quality control aspects of the project data. The data validation reports contain more specific details regarding the application of sample qualifiers assigned during the validation process. The laboratory data are considered to be usable as qualified in the data summary tables and databases.

1.2.2 Overview of Quality Control Assessment

The Data Quality Objectives of 95% completeness were achieved (Section A9.2.3 of the QAPP).

The following is a general summary of the QC assessment of the analytical results of project samples performed by CAS, ACZ and DataChem. Deviations in the quality control aspects discussed in detail below are limited to those QC issues considered to be significant. Individual data evaluations provide specific results of the validation and subsequent data qualification (provided in Appendix O-2).

The project samples were analyzed for one or more of the following parameter(s)/groups: metals, elemental (white) phosphorus and radiological compounds as described in Tables 1-1, 1-2, 1-3, and 1-4 of the QAPP.

The laboratories met sample holding time requirements for extraction and analysis. With a few exceptions, the samples were received in acceptable condition and properly labeled. Labeling discrepancies were resolved prior to sample preparation and analysis. The samples were received at the laboratories within the acceptable sample temperatures (0 to 6 degrees C).

Instrument initial and continuing calibration data generally met the acceptance criteria. Exceptions include elemental phosphorus analysis. Specific details regarding initial and continuing calibration deviations are described in the individual data evaluations.

The laboratory control sample (LCS) analyses met the relevant QAPP and EPA acceptance criteria (Section A9.2.2 of the QAPP).

Matrix spike (MS) and matrix spike duplicate (MSD) samples were submitted at the frequency specified in the QAPP. Most of the MS/MSD sample results met acceptance criteria for percent recovery and associated relative percent difference (RPD) for each of the required analyses/target compound (metals, elemental phosphorus and radiological compounds). In the few instances where deviations were observed in specific samples of these matrices, acceptable LCS and LCSD (accuracy and precision) results were achieved, indicating in-control analytical systems during sample analysis.

Laboratory duplicate data met the relevant acceptance criteria (Section A9.2.1 of the QAPP) for precision with a few exceptions which are discussed in detail in the individual data evaluations. None of the deviations were considered significant or indicate systematic problems with the analytical processes performed.

For the metals ICP analysis, interference check sample (ICS) acceptance criterion of $\pm 20\%$ of the true value were met.

For the metals ICP and ICP/MS analysis, the contract required quantitation limit check standard solution (CRI) percent recoveries for iron and/or selenium exceeded the applicable Guideline criterion; however, no data were qualified because the CRI is not required in Method 6010 and Method 6020.

The majority of the ICP and ICPMS serial dilution data met the applicable criteria with three exceptions; the percent difference for magnesium in sample SB-08-3 (2-6); for barium, calcium, copper, manganese, sodium, thallium, and zinc in sample SB-08-3 (50-52); and for beryllium, cadmium, magnesium, nickel and zinc in sample SB-08-5 (28-36) exceeded the laboratory acceptance limits and were qualified “J” estimated.

The ICPMS and mercury post-digestion spike data met the applicable criteria. A post-digestion spike for ICP analysis was not performed.

A minor deviation was made from the Guidelines relative to the affect of detected blank sample results on corresponding project sample results. In general, the Guidelines indicate that when sample concentrations are detected at or near the concentrations detected in the blank samples, the results should be presented as the CRQL/RL, with a corresponding “<” (less than) or U qualifier. However,

the CRQLs are far greater than the final laboratory PQLs set forth in the QAPP. With the exception of the radiochemistry analyses, when a project sample result is less than 5 times the associated blank sample concentration, the project sample result is reported with a “<” or U (EPA 2005 Organic Guidelines) qualifier.

Trace concentrations of metals were detected in the laboratory method blank samples, no significant-gross-system-contamination issues were identified over the course of the analytical events; however, no data were qualified because the associated project soil sample concentrations were greater than five times the method blank sample concentrations and are detailed in the individual data evaluations provided in Appendix O-2.

1.3 Field Sampling

1.3.1 Field Sampling Quality Control

Field sampling procedures were performed in accordance with the Phase 1 RFI Work Plan (Barr, 2008).

Field quality control procedures included the collection and analysis of field duplicate samples and field blank samples to monitor the contamination introduced from improper field equipment decontamination, sample collection, sample transport, and laboratory analytical procedures. The results from the analysis of these samples demonstrate that the data are in compliance with the data quality objectives.

Sample identification techniques described in Sections A9 and B2 of the QAPP (Barr, May 2008) required the field (rinsate) blank samples be submitted to the laboratory as blind QC samples; therefore, the field blank samples were assigned fictitious soil and tailings sample names at the time of collection and their true identities were documented in the Field Logbook records. Field blank samples were collected in the following manner: The soil and tailings sampling equipment (i.e. stainless-steel bowl, and/or spoon, etc.) were rinsed with analyte-free, deionized water. The rinse water was poured into the appropriate sample containers for analysis. The data is presented in the data summary tables using the soil and tailings sample names from the locations they were collected from along with the fictitious sample names identified on the chain-of-custody forms.

Field sampling procedures and protocols were determined to be appropriate. As described in the QAPP, blank samples associated with soil and tailings sampling were analyzed for corresponding sample analysis (metals, elemental phosphorus and radiological compounds). No introduction of gross contamination or other adverse affects on sample representativeness were identified.

The field blank sample results are summarized in Appendix O-4b and are detailed within the individual data evaluations.

A total of two field duplicate samples were collected as specified in Section A9.3.2 of the QAPP. Precision (both field and analytical) was evaluated through a comparison of the duplicate data when both the native and duplicate sample had detected concentrations reported.

The precision was evaluated by calculating the relative percent difference (RPD) for the data pairs as follows:

$$RPD = \frac{D_1 - D_2}{(D_1 + D_2)/2} \times 100$$

Where: D_1 = concentration of sample
 D_2 = concentration of duplicate sample

The RPD results for elemental phosphorus, barium, cadmium, chromium, nickel, potassium, sodium, zinc, lead 210, radium 226, thorium 230, and uranium 235 and 238 fell beyond the 40% criteria in one or more of the field duplicate samples. However, RPD results are dependent on the heterogeneity of the samples. Higher RPDs are expected when results are at or near the PQL and do not always indicate poor precision. Data qualifiers were applied to the ICP and ICP/MS data due RPD exceedences, and the data are qualified accordingly in the data summary tables. The field duplicate sample results are discussed in detail within the individual data evaluations.

Appendix 1-C2

2008 Individual Data Assessments

Data Validation Report

DataChem Laboratory Report / Batch: 08E-0407-01

**Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001**

Date of Data Validation Report: June 20, 2008

The data validation of the DataChem Laboratories, Inc. (DataChem) laboratory data for the elemental (white) phosphorus analysis of the 2008 – Phase I RCRA Facility Investigation Work Plan samples contained in the aforementioned report is complete as detailed below.

The analytical data were reviewed in general accordance with the quality control aspects contained in the U.S. EPA Method 7580 and/or DataChem Laboratories, Inc. Laboratory Standard Operating Procedure as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008). In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Method blank analysis
- Laboratory control samples
- Matrix spike results
- Field blank samples

Five water sample results are also contained in this laboratory report. The samples are identified as follows:

SW-3 SW-1 SW-8 SW-20 SW-120 (Field Blank Sample)

The samples were analyzed for elemental phosphorus using U.S.EPA method 7580 as specified in the QAPP (Barr, 2008). During the data validation process, procedural deviations from the initial calibration procedures defined the U.S.EPA method were identified and are detailed below. While a deviation from the published procedures, this deviation is not considered to have a significant adverse affect on the final usability of the data; therefore, no qualification of the elemental phosphorus data was performed.

It is noted that, as required by the QAPP, elemental phosphorus concentrations were evaluated down to the laboratory's method detection limit (MDL). Any sample concentrations below the practical quantitation limit but above the method detection limit are qualified with a "J" indicating an estimated value. The non-detected concentrations are presented as "<MDL" in the data tables.

The data met the data quality objectives (DQOs) and are useable as reported and qualified.

Holding Times, Preservation and Storage

The EPA method 7580 defines the holding time as 5 calendar days from collection to extraction for water samples that are chilled to 4° C upon sample collection. Following extraction (iso-octane

**Data Validation Report
DataChem Laboratory Report / Batch: 08E-0407-01**

Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date Data Validation Report: June 20, 2008

procedure) the method recommends a maximum holding time of 30 calendar days until analysis. The project samples were collected on May 22nd and May 23rd, 2008, packed on ice and sent to the laboratory (DataChem, Utah) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 2° C upon receipt at the laboratory and were stored at 4° C until analysis. Subsequent holding times for extraction and analysis were met. No qualifiers were assigned due to holding times, preservation, or storage issues.

Initial Calibration and Initial Calibration Verification

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

Method 7580 requires an initial calibration (ICAL) to be performed every 12 hours and that it consist of (at a minimum) a 5-point calibration standard curve. Calibration factors (CFs) and associated standard deviation of those CFs are then calculated and must meet a relative standard deviation (RSD) of $\leq 15\%$. The laboratory SOP requires a minimum 6-point calibration standard (quadratic) curve and a coefficient of correlation of ≥ 0.99 .

Upon review of the initial calibration data for the elemental phosphorus analyses, the following EPA method and laboratory SOP deviations are noted.

The laboratory created the new “working stock solutions” on May 13th and 14th, 2008. The ICAL was performed on May 14th, 2008 and the project samples were analyzed on May 28th, 2008. This ICAL frequency exceeds the 12-hour requirement as defined in EPA Method 7580. While the published laboratory SOP does not specify a frequency of ICAL, it does indicate in Section 2.1 that, “no substantial modifications from the promulgated method have been made”. Since the laboratory considers the working standards to be very stable under appropriate storage conditions, no elemental phosphorus data were qualified.

Initial (opening) calibration verification standards (ICVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results at the beginning of the analytical process. The ICVs should be representative of the mid-point of the calibration curve. ICVs are required to be analyzed prior to the analysis of the method blank samples and project samples and must fall within $\pm 15\%$ of the known value. The ICVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ difference (% D) criterion (from the associated mid-level standard in the ICAL).

The laboratory used a flame-photometric detector (FPD) for elemental phosphorus analysis instead of the nitrogen-phosphorus detector (NPD) listed in Method 7580. According to the laboratory, the NPD cited in the Method had problems with long-term stability and the FPD did not have similar difficulty. Initial calibration verification standards (ICVs) and continuing calibration verification standards (CCVs) were analyzed at the beginning and end of each analytical sequence and after every ten samples to demonstrate continued acceptable calibration. No elemental phosphorus data were qualified based upon the use of the alternate analytical detector.

Continuing Calibration Verification

Ongoing calibration verification standards (CCVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results throughout the analytical process. The CCVs should be representative of the mid-point of the calibration curve. CCVs are required to be analyzed every 10 samples and must fall within $\pm 15\%$ of the known value. The CCVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ D criterion (from the associated mid-level standard in the ICAL).

Method Blank Analysis

The purpose of the method or laboratory blank sample is to evaluate the existence and magnitude of contamination problems resulting from laboratory extraction and analytical activities. Method blank samples were prepared and analyzed with every batch of 20 project samples (or less). One method blank sample was prepared and analyzed at the appropriate frequency and was non-detect for elemental phosphorus.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) are prepared and analyzed to provide information on the accuracy of the analytical procedures and the overall laboratory performance. LCSs are prepared and analyzed with every batch of 20 project samples (or less). The percent recoveries of the spike concentration in the LCS samples are required to fall between 75-125%. One LCS sample was prepared and analyzed at the appropriate frequency and met the acceptance limits of 75-125% for the elemental phosphorus analyses associated with this data package.

Matrix Spike Results

The purpose of matrix spike (MS) and matrix spike duplicate (MSD) samples is to evaluate precision and accuracy of the methodology on specific sample matrices by demonstrating acceptable percent recovery of the known spike concentrations. Matrix spike (MS) and/or matrix spike duplicate (MSD) samples are prepared and analyzed at the appropriate frequency (every batch of ≤ 20 samples) during the analytical events. Sample SW-3 served as the MS/MSD sample. The percent recoveries and associated RPDs met the criteria of 75-125% and $\leq 15\%$ RPD, respectively.

Field Blank Samples

The purpose of the collection and analysis of field (rinsate) blank sample is to monitor the contamination introduced from improper field equipment decontamination and sample transport procedures. One field blank sample (SW-120) was collected during the surface water monitoring event and was non-detect for elemental phosphorus.

Data Validation Report
DataChem Laboratory Report / Batch: 08E-0408-01

Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date of Data Validation Report: June 26, 2008

The data validation of the DataChem Laboratories, Inc. (DataChem) laboratory data for the elemental (white) phosphorus analysis of the 2008 – Phase I RCRA Facility Investigation Work Plan samples contained in the aforementioned report is complete as detailed below.

The analytical data were reviewed in general accordance with the quality control aspects contained in the U.S. EPA Method 7580 and/or DataChem Laboratories, Inc. Laboratory Standard Operating Procedure as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008). In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Method blank analysis
- Laboratory control samples
- Matrix spike results
- Field blank samples

Three water sample results are also contained in this laboratory report. The samples are identified as follows:

RP-W-1 RP-W-7 MW-60-2 (Field Blank Sample)

The groundwater samples were analyzed for elemental phosphorus using U.S.EPA method 7580 as specified in the QAPP (Barr, 2008). During the data validation process, procedural deviations from the initial calibration procedures defined the U.S.EPA method were identified and are detailed below. While a deviation from the published procedures, this deviation is not considered to have a significant adverse affect on the final usability of the data; therefore, no qualification of the elemental phosphorus data was performed.

It is noted that, as required by the QAPP, elemental phosphorus concentrations were evaluated down to the laboratory's method detection limit (MDL). Any sample concentrations below the practical quantitation limit but above the method detection limit are qualified with a "J" indicating an estimated value. The non-detected concentrations are presented as "<MDL" in the data tables.

The data met the data quality objectives (DQOs) and are useable as reported and qualified.

**Data Validation Report
DataChem Laboratory Report / Batch: 08E-0408-01**

Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date Data Validation Report: June 26, 2008

Holding Times, Preservation and Storage

The EPA method 7580 defines the holding time as 5 calendar days from collection to extraction for water samples that are chilled to 4° C upon sample collection. Following extraction (iso-octane procedure) the method recommends a maximum holding time of 30 calendar days until analysis. The project samples were collected on May 22nd, 2008, packed on ice and sent to the laboratory (DataChem, Utah) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 2° C upon receipt at the laboratory and were stored at 4° C until analysis. Subsequent holding times for extraction and analysis were met. No qualifiers were assigned due to holding times, preservation, or storage issues.

Initial Calibration and Initial Calibration Verification

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

Method 7580 requires an initial calibration (ICAL) to be performed every 12 hours and that it consist of (at a minimum) a 5-point calibration standard curve. Calibration factors (CFs) and associated standard deviation of those CFs are then calculated and must meet a relative standard deviation (RSD) of $\leq 15\%$. The laboratory SOP requires a minimum 6-point calibration standard (quadratic) curve and a coefficient of correlation of ≥ 0.99 .

Upon review of the initial calibration data for the elemental phosphorus analyses, the following EPA method and laboratory SOP deviations are noted.

The laboratory created the new “working stock solutions” on May 13th and 14th, 2008. The ICAL was performed on May 14th, 2008 and the project samples were analyzed on May 28th, 2008. This ICAL frequency exceeds the 12-hour requirement as defined in EPA Method 7580. While the published laboratory SOP does not specify a frequency of ICAL, it does indicate in Section 2.1 that, “no substantial modifications from the promulgated method have been made”. Since the laboratory considers the working standards to be very stable under appropriate storage conditions, no elemental phosphorus data were qualified.

Initial (opening) calibration verification standards (ICVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results at the beginning of the analytical process. The ICVs should be representative of the mid-point of the calibration curve. ICVs are required to be analyzed prior to the analysis of the method blank samples and project samples and must fall within $\pm 15\%$ of the known value. The ICVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ difference (% D) criterion (from the associated mid-level standard in the ICAL).

The laboratory used a flame-photometric detector (FPD) for elemental phosphorus analysis instead of the nitrogen-phosphorus detector (NPD) listed in Method 7580. According to the laboratory, the NPD cited in the Method had problems with long-term stability and the FPD did not have similar difficulty. Initial calibration verification standards (ICVs) and continuing calibration verification

**Data Validation Report
DataChem Laboratory Report / Batch: 08E-0408-01**

Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date Data Validation Report: June 26, 2008

standards (CCVs) were analyzed at the beginning and end of each analytical sequence and after every ten samples to demonstrate continued acceptable calibration. No elemental phosphorus data were qualified based upon the use of the alternate analytical detector.

Continuing Calibration Verification

Ongoing calibration verification standards (CCVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results throughout the analytical process. The CCVs should be representative of the mid-point of the calibration curve. CCVs are required to be analyzed every 10 samples and must fall within $\pm 15\%$ of the known value. The CCVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ D criterion (from the associated mid-level standard in the ICAL).

Method Blank Analysis

The purpose of the method or laboratory blank sample is to evaluate the existence and magnitude of contamination problems resulting from laboratory extraction and analytical activities. Method blank samples were prepared and analyzed with every batch of 20 project samples (or less). One method blank sample was prepared and analyzed at the appropriate frequency and was non-detect for elemental phosphorus.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) are prepared and analyzed to provide information on the accuracy of the analytical procedures and the overall laboratory performance. LCSs are prepared and analyzed with every batch of 20 project samples (or less). The percent recoveries of the spike concentration in the LCS samples are required to fall between 75-125%. One LCS sample was prepared and analyzed at the appropriate frequency and met the acceptance limits of 75-125% for the elemental phosphorus analyses associated with this data package.

Matrix Spike Results

The purpose of matrix spike (MS) and matrix spike duplicate (MSD) samples is to evaluate precision and accuracy of the methodology on specific sample matrices by demonstrating acceptable percent recovery of the known spike concentrations. Matrix spike (MS) and/or matrix spike duplicate (MSD) samples are prepared and analyzed at the appropriate frequency (every batch of ≤ 20 samples) during the analytical events. Sample RP-W-1 served as the MS/MSD sample. The MS/MSD percent recoveries were below the criteria of 75-125% (i.e. 68.1% and 50.0%, respectively) and their associated RPD was 31% which exceeds the $\leq 15\%$ RPD criteria designated in the QAPP. The associated elemental phosphorus data were qualified “J” based upon possible matrix effects.

Field Blank Samples

The purpose of the collection and analysis of field (rinsate) blank sample is to monitor the contamination introduced from improper field equipment decontamination and sample transport procedures. One field blank sample (MW-60-2) was collected during the surface water monitoring event and was non-detect for elemental phosphorus.

Data Validation Report
DataChem Laboratory Report / Batch: 08E-0425-01

Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date of Data Validation Report: June 23, 2008

The data validation of the DataChem Laboratories, Inc. (DataChem) laboratory data for the elemental (white) phosphorus analysis of the 2008 – Phase I RCRA Facility Investigation Work Plan samples contained in the aforementioned report is complete as detailed below.

The analytical data were reviewed in general accordance with the quality control aspects contained in the U.S. EPA Method 7580 and/or DataChem Laboratories, Inc. Laboratory Standard Operating Procedure as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008). In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Method blank analysis
- Laboratory control samples
- Matrix spike results

Eight water sample results are contained in this laboratory report. The samples are identified as follows:

MW-06-11	MW-97-3	RP-W-4	MW-06-6	PW-99-3	MW-06-7
MW-MT96-2	MW-BSB-4				

The groundwater samples were analyzed for elemental phosphorus using U.S.EPA method 7580 as specified in the QAPP (Barr, 2008). During the data validation process, procedural deviations from the initial calibration procedures defined the U.S.EPA method were identified and are detailed below. While a deviation from the published procedures, this deviation is not considered to have a significant adverse affect on the final usability of the data; therefore, no qualification of the elemental phosphorus data was performed.

It is noted that, as required by the QAPP, elemental phosphorus concentrations were evaluated down to the laboratory's method detection limit (MDL). Any sample concentrations below the practical quantitation limit but above the method detection limit are qualified with a "J" indicating an estimated value. The non-detected concentrations are presented as "<MDL" in the data tables.

The data met the data quality objectives (DQOs) and are useable as reported and qualified.

**Data Validation Report
DataChem Laboratory Report / Batch: 08E-0425-01**

Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date Data Validation Report: June 23, 2008

Holding Times, Preservation and Storage

The EPA method 7580 defines the holding time as 5 calendar days from collection to extraction for water samples that are chilled to 4° C upon sample collection. Following extraction (iso-octane procedure) the method recommends a maximum holding time of 30 calendar days until analysis. The project samples were collected on May 28th and May 29th, 2008, packed on ice and sent to the laboratory (DataChem, Utah) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 3° C upon receipt at the laboratory and were stored at 4° C until analysis. Subsequent holding times for extraction and analysis were met. No qualifiers were assigned due to holding times, preservation, or storage issues.

Initial Calibration and Initial Calibration Verification

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

Method 7580 requires an initial calibration (ICAL) to be performed every 12 hours and that it consist of (at a minimum) a 5-point calibration standard curve. Calibration factors (CFs) and associated standard deviation of those CFs are then calculated and must meet a relative standard deviation (RSD) of $\leq 15\%$. The laboratory SOP requires a minimum 6-point calibration standard (quadratic) curve and a coefficient of correlation of ≥ 0.99 .

Upon review of the initial calibration data for the elemental phosphorus analyses, the following EPA method and laboratory SOP deviations are noted.

The laboratory created the new “working stock solutions” on May 13th and 14th, 2008. The ICAL was performed on May 14th, 2008 and the project samples were analyzed on June 3rd, 2008. This ICAL frequency exceeds the 12-hour requirement as defined in EPA Method 7580. While the published laboratory SOP does not specify a frequency of ICAL, it does indicate in Section 2.1 that, “no substantial modifications from the promulgated method have been made”. Since the laboratory considers the working standards to be very stable under appropriate storage conditions, no elemental phosphorus data were qualified.

Initial (opening) calibration verification standards (ICVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results at the beginning of the analytical process. The ICVs should be representative of the mid-point of the calibration curve. ICVs are required to be analyzed prior to the analysis of the method blank samples and project samples and must fall within $\pm 15\%$ of the known value. The ICVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ difference (% D) criterion (from the associated mid-level standard in the ICAL).

The laboratory used a flame-photometric detector (FPD) for elemental phosphorus analysis instead of the nitrogen-phosphorus detector (NPD) listed in Method 7580. According to the laboratory, the NPD cited in the Method had problems with long-term stability and the FPD did not have similar difficulty. Initial calibration verification standards (ICVs) and continuing calibration verification

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Date Data Validation Report: June 23, 2008

standards (CCVs) were analyzed at the beginning and end of each analytical sequence and after every ten samples to demonstrate continued acceptable calibration. No elemental phosphorus data were qualified based upon the use of the alternate analytical detector.

Continuing Calibration Verification

Ongoing calibration verification standards (CCVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results throughout the analytical process. The CCVs should be representative of the mid-point of the calibration curve. CCVs are required to be analyzed every 10 samples and must fall within $\pm 15\%$ of the known value. The CCVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ D criterion (from the associated mid-level standard in the ICAL).

Method Blank Analysis

The purpose of the method or laboratory blank sample is to evaluate the existence and magnitude of contamination problems resulting from laboratory extraction and analytical activities. Method blank samples were prepared and analyzed with every batch of 20 project samples (or less). One method blank sample was prepared and analyzed at the appropriate frequency and was non-detect for elemental phosphorus.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) are prepared and analyzed to provide information on the accuracy of the analytical procedures and the overall laboratory performance. LCSs are prepared and analyzed with every batch of 20 project samples (or less). The percent recoveries of the spike concentration in the LCS samples are required to fall between 75-125%. One LCS sample was prepared and analyzed at the appropriate frequency and met the acceptance limits of 75-125% for the elemental phosphorus analyses associated with this data package.

Matrix Spike Results

The purpose of matrix spike (MS) and matrix spike duplicate (MSD) samples is to evaluate precision and accuracy of the methodology on specific sample matrices by demonstrating acceptable percent recovery of the known spike concentrations. Matrix spike (MS) and/or matrix spike duplicate (MSD) samples are prepared and analyzed at the appropriate frequency (every batch of ≤ 20 samples) during the analytical events. Sample RP-W-4 served as the MS/MSD sample. The percent recoveries and associated relative percent differences (RPDs) met the criteria of 75-125% and $\leq 15\%$ RPD, respectively.

Data Validation Report

DataChem Laboratory Report / Batch: 08E-0427-01

**Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001**

Date of Data Validation Report: June 23, 2008

The data validation of the DataChem Laboratories, Inc. (DataChem) laboratory data for the elemental (white) phosphorus analysis of the 2008 – Phase I RCRA Facility Investigation Work Plan samples contained in the aforementioned report is complete as detailed below.

The analytical data were reviewed in general accordance with the quality control aspects contained in the U.S. EPA Method 7580 and/or DataChem Laboratories, Inc. Laboratory Standard Operating Procedure as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008). In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Method blank analysis
- Laboratory control samples
- Matrix spike results
- Field duplicate samples
- Field blank samples

Seven water sample results are contained in this laboratory report. The samples are identified as follows:

MW-02-1	MW-02-1 DUP (MW-82-01 on COC)	RP-W-5	RP-W-6
PW-99-3	MW-60-4 (Field Blank Sample)	MW-60-5 (Field Blank Sample)	

The groundwater samples were analyzed for elemental phosphorus using U.S.EPA method 7580 as specified in the QAPP (Barr, 2008). During the data validation process, procedural deviations from the initial calibration procedures defined the U.S.EPA method were identified and are detailed below. While a deviation from the published procedures, this deviation is not considered to have a significant adverse affect on the final usability of the data; therefore, no qualification of the elemental phosphorus data was performed.

It is noted that, as required by the QAPP, elemental phosphorus concentrations were evaluated down to the laboratory's method detection limit (MDL). Any sample concentrations below the practical quantitation limit but above the method detection limit are qualified with a "J" indicating an estimated value. The non-detected concentrations are presented as "<MDL" in the data tables.

The data met the data quality objectives (DQOs) and are useable as reported and qualified.

**Data Validation Report
DataChem Laboratory Report / Batch: 08E-0427-01**

Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date Data Validation Report: June 23, 2008

Holding Times, Preservation and Storage

The EPA method 7580 defines the holding time as 5 calendar days from collection to extraction for water samples that are chilled to 4° C upon sample collection. Following extraction (iso-octane procedure) the method recommends a maximum holding time of 30 calendar days until analysis. The project samples were collected on May 29th and May 30th, 2008, packed on ice and sent to the laboratory (DataChem, Utah) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 6° C upon receipt at the laboratory and were stored at 4° C until analysis. Subsequent holding times for extraction and analysis were met. No qualifiers were assigned due to holding times, preservation, or storage issues.

Initial Calibration and Initial Calibration Verification

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

Method 7580 requires an initial calibration (ICAL) to be performed every 12 hours and that it consist of (at a minimum) a 5-point calibration standard curve. Calibration factors (CFs) and associated standard deviation of those CFs are then calculated and must meet a relative standard deviation (RSD) of $\leq 15\%$. The laboratory SOP requires a minimum 6-point calibration standard (quadratic) curve and a coefficient of correlation of ≥ 0.99 .

Upon review of the initial calibration data for the elemental phosphorus analyses, the following EPA method and laboratory SOP deviations are noted.

The laboratory created the new “working stock solutions” on May 13th and 14th, 2008. The ICAL was performed on May 14th, 2008 and the project samples were analyzed on June 3rd, 2008. This ICAL frequency exceeds the 12-hour requirement as defined in EPA Method 7580. While the published laboratory SOP does not specify a frequency of ICAL, it does indicate in Section 2.1 that, “no substantial modifications from the promulgated method have been made”. Since the laboratory considers the working standards to be very stable under appropriate storage conditions, no elemental phosphorus data were qualified.

Initial (opening) calibration verification standards (ICVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results at the beginning of the analytical process. The ICVs should be representative of the mid-point of the calibration curve. ICVs are required to be analyzed prior to the analysis of the method blank samples and project samples and must fall within $\pm 15\%$ of the known value. The ICVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ difference (% D) criterion (from the associated mid-level standard in the ICAL).

The laboratory used a flame-photometric detector (FPD) for elemental phosphorus analysis instead of the nitrogen-phosphorus detector (NPD) listed in Method 7580. According to the laboratory, the NPD cited in the Method had problems with long-term stability and the FPD did not have similar difficulty. Initial calibration verification standards (ICVs) and continuing calibration verification standards (CCVs) were analyzed at the beginning and end of each analytical sequence and after every

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Date Data Validation Report: June 23, 2008

ten samples to demonstrate continued acceptable calibration. No elemental phosphorus data were qualified based upon the use of the alternate analytical detector.

Continuing Calibration Verification

Ongoing calibration verification standards (CCVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results throughout the analytical process. The CCVs should be representative of the mid-point of the calibration curve. CCVs are required to be analyzed every 10 samples and must fall within $\pm 15\%$ of the known value. The CCVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ D criterion (from the associated mid-level standard in the ICAL).

Method Blank Analysis

The purpose of the method or laboratory blank sample is to evaluate the existence and magnitude of contamination problems resulting from laboratory extraction and analytical activities. Method blank samples were prepared and analyzed with every batch of 20 project samples (or less). One method blank sample was prepared and analyzed at the appropriate frequency and was non-detect for elemental phosphorus.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) are prepared and analyzed to provide information on the accuracy of the analytical procedures and the overall laboratory performance. LCSs are prepared and analyzed with every batch of 20 project samples (or less). The percent recoveries of the spike concentration in the LCS samples are required to fall between 75-125%. One LCS sample was prepared and analyzed at the appropriate frequency and met the acceptance limits of 75-125% for the elemental phosphorus analyses associated with this data package.

Matrix Spike Results

The purpose of matrix spike (MS) and matrix spike duplicate (MSD) samples is to evaluate precision and accuracy of the methodology on specific sample matrices by demonstrating acceptable percent recovery of the known spike concentrations. Matrix spike (MS) and/or matrix spike duplicate (MSD) samples are prepared and analyzed at the appropriate frequency (every batch of ≤ 20 samples) during the analytical events. Sample RP-W-6 served as the MS/MSD sample. The percent recoveries and associated relative percent differences (RPDs) met the criteria of 75-125% and $\leq 15\%$ RPD, respectively.

Field Duplicate Samples

Field duplicate samples were collected and analyzed to determine the precision of the combined sampling and analytical process. Precision was determined by calculating the RPD for the data pairs where both values were above the method detection limit. Sample MW-02-1 served as the field duplicate sample for this event and was non-detect; therefore, the RPD was not calculated. All data was accepted as reported.

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Docket No. RCRA-2006-08-2004-0001

Date Data Validation Report: June 23, 2008

Field Blank Samples

The purpose of the collection and analysis of field (rinsate) blank sample is to monitor the contamination introduced from improper field equipment decontamination and sample transport procedures. Two field blank samples (MW-60-4 and MW-60-5) were collected during the groundwater monitoring event and were non-detect for elemental phosphorus.

Data Validation Report
DataChem Laboratory Report / Batch: 08E-0449-01

Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date of Data Validation Report: June 27, 2008

The data validation of the DataChem Laboratories, Inc. (DataChem) laboratory data for the elemental (white) phosphorus analysis of the 2008 – Phase I RCRA Facility Investigation Work Plan samples contained in the aforementioned report is complete as detailed below.

The analytical data were reviewed in general accordance with the quality control aspects contained in the U.S. EPA Method 7580 and/or DataChem Laboratories, Inc. Laboratory Standard Operating Procedure as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008). In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Method blank analysis
- Laboratory control samples
- Matrix spike results
- Field blank samples

Six water sample results are contained in this laboratory report. The samples are identified as follows:

MW-06-17	MW-97-12	MW-06-14	MW-06-13
MW-06-13 DUP (MW-86-13 on COC)		MW-60-3 (Field Blank Sample)	

The groundwater samples were analyzed for elemental phosphorus using U.S.EPA method 7580 as specified in the QAPP (Barr, 2008). During the data validation process, procedural deviations from the initial calibration procedures defined the U.S.EPA method were identified and are detailed below. While a deviation from the published procedures, this deviation is not considered to have a significant adverse affect on the final usability of the data; therefore, no qualification of the elemental phosphorus data was performed.

It is noted that, as required by the QAPP, elemental phosphorus concentrations were evaluated down to the laboratory's method detection limit (MDL). Any sample concentrations below the practical quantitation limit but above the method detection limit are qualified with a "J" indicating an estimated value. The non-detected concentrations are presented as "<MDL" in the data tables.

The data met the data quality objectives (DQOs) and are useable as reported and qualified.

**Data Validation Report
DataChem Laboratory Report / Batch: 08E-0449-01**

Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date Data Validation Report: June 27, 2008

Holding Times, Preservation and Storage

The EPA method 7580 defines the holding time as 5 calendar days from collection to extraction for water samples that are chilled to 4° C upon sample collection. Following extraction (iso-octane procedure) the method recommends a maximum holding time of 30 calendar days until analysis. The project samples were collected June 9th, 2008, packed on ice and sent to the laboratory (DataChem, Utah) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 2° C upon receipt at the laboratory and were stored at 4° C until analysis. Subsequent holding times for extraction and analysis were met. No qualifiers were assigned due to holding times, sample preservation or storage issues.

Initial Calibration and Initial Calibration Verification

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

Method 7580 requires an initial calibration (ICAL) to be performed every 12 hours and that it consist of (at a minimum) a 5-point calibration standard curve. Calibration factors (CFs) and associated standard deviation of those CFs are then calculated and must meet a relative standard deviation (RSD) of $\leq 15\%$. The laboratory SOP requires a minimum 6-point calibration standard (quadratic) curve and a coefficient of correlation of ≥ 0.99 .

Upon review of the initial calibration data for the elemental phosphorus analyses, the following EPA method and laboratory SOP deviations are noted.

The laboratory created the new “working stock solutions” on May 13th and 14th, 2008. The ICAL was performed on May 14th, 2008 and the project samples were analyzed on June 17th, 2008. This ICAL frequency exceeds the 12-hour requirement as defined in EPA Method 7580. While the published laboratory SOP does not specify a frequency of ICAL, it does indicate in Section 2.1 that, “no substantial modifications from the promulgated method have been made”. Since the laboratory considers the working standards to be very stable under appropriate storage conditions, no elemental phosphorus data were qualified.

Initial (opening) calibration verification standards (ICVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results at the beginning of the analytical process. The ICVs should be representative of the mid-point of the calibration curve. ICVs are required to be analyzed prior to the analysis of the method blank samples and project samples and must fall within $\pm 15\%$ of the known value. The ICVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ difference (% D) criterion (from the associated mid-level standard in the ICAL).

The laboratory used a flame-photometric detector (FPD) for elemental phosphorus analysis instead of the nitrogen-phosphorus detector (NPD) listed in Method 7580. According to the laboratory, the NPD cited in the Method had problems with long-term stability and the FPD did not have similar difficulty. Initial calibration verification standards (ICVs) and continuing calibration verification standards (CCVs) were analyzed at the beginning and end of each analytical sequence and after every

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Docket No. RCRA-2006-08-2004-0001

Date Data Validation Report: June 27, 2008

ten samples to demonstrate continued acceptable calibration. No elemental phosphorus data were qualified based upon the use of the alternate analytical detector.

Continuing Calibration Verification

Ongoing calibration verification standards (CCVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results throughout the analytical process. The CCVs should be representative of the mid-point of the calibration curve. CCVs are required to be analyzed every 10 samples and must fall within $\pm 15\%$ of the known value. The CCVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ D criterion (from the associated mid-level standard in the ICAL).

Method Blank Analysis

The purpose of the method or laboratory blank sample is to evaluate the existence and magnitude of contamination problems resulting from laboratory extraction and analytical activities. Method blank samples were prepared and analyzed with every batch of 20 project samples (or less). One method blank sample was prepared and analyzed at the appropriate frequency and was non-detect for elemental phosphorus.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) are prepared and analyzed to provide information on the accuracy of the analytical procedures and the overall laboratory performance. LCSs are prepared and analyzed with every batch of 20 project samples (or less). The percent recoveries of the spike concentration in the LCS samples are required to fall between 75-125%. One LCS sample was prepared and analyzed at the appropriate frequency and met the acceptance limits of 75-125% for the elemental phosphorus analyses associated with this data package.

Matrix Spike Results

The purpose of matrix spike (MS) and matrix spike duplicate (MSD) samples is to evaluate precision and accuracy of the methodology on specific sample matrices by demonstrating acceptable percent recovery of the known spike concentrations. Matrix spike (MS) and/or matrix spike duplicate (MSD) samples are prepared and analyzed at the appropriate frequency (every batch of ≤ 20 samples) during the analytical events. Sample MW-06-17 served as the MS/MSD sample associated with this analytical batch. The percent recoveries and associated relative percent differences (RPDs) met the criteria of 75-125% and $\leq 15\%$ RPD, respectively.

Field Blank Samples

The purpose of the collection and analysis of field (rinsate) blank sample is to monitor the contamination introduced from improper field equipment decontamination and sample transport procedures. One field blank sample (MW-60-3) was collected during the groundwater monitoring event and was non-detect for elemental phosphorus.

Data Validation Report
DataChem Laboratory Report / Batch: SDG GW004 contains
08E-0781-01, 08E-0783-01, 08E-0789-01, 08E-0797-01, 08E-0803-01,
08E-0805-01, 08E-0813-01, 08E-0815-01 and 08E-0820-01.
SDG GW005 contains 08E-1090-01, 08E-1090-02.
SDG GW006 contains 08E-1098-01

Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date of Data Validation Report: April 1, 2009

The data validation of the DataChem Laboratories, Inc. (DataChem) laboratory data for the elemental (white) phosphorus analysis of the 2008 – Phase I RCRA Facility Investigation Work Plan samples contained in the aforementioned report is complete as detailed below.

The analytical data were reviewed in general accordance with the quality control aspects contained in the U.S. EPA Method 7580 and/or DataChem Laboratories, Inc. Laboratory Standard Operating Procedure as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008). In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Method blank analysis
- Laboratory control samples
- Matrix spike results
- Field duplicate samples
- Field blank samples

Sixty-one groundwater sample results are contained in this laboratory report. The samples are identified as follows:

GW-1	MW-06-1	MW-06-12
MW-GW-3	MW-06-2	MW-86-12 (MW-06-12
MW-01-1	MW-06-3	DUP)
MW-01-2 *	MW-06-4	MW-06-13 *
MW-01-3 *	MW-06-5 *	MW-06-14
MW-01-4	MW-86-5 (MW-06-5 DUP) *	MW-06-15
MW-01-5	MW-06-6	MW-06-16 *
MW-01-6	MW-06-7 *	MW-06-17 *
MW-02-1	MW-06-8	MW-06-18 *
MW-02-2 *	MW-06-9	MW-06-19
MW-02-3	MW-06-10	MW-06-20 *
MW-02-4	MW-06-11 *	MW-06-21

Data Validation Report
DataChem Laboratory Report / Batch: SDG GW004 contains
08E-0781-01, 08E-0783-01, 08E-0789-01, 08E-0797-01, 08E-0803-01,
08E-0805-01, 08E-0813-01, 08E-0815-01 and 08E-0820-01.
SDG GW005 contains 08E-1090-01 and 08E-1090-02.
SDG GW006 contains 08E-1098-01.

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Date Data Validation Report: April 1, 2009

MW-06-22 *	MW-97-6	RP-W-1
MW-06-23	MW-97-7 *	RP-W-4
MW-06-24	MW-97-8	RP-W-4X (RP-W-4 DUP)
MW-06-25	MW-97-9	RP-W-5
MW-97-1	MW-77-9 (MW-97-9 DUP)	RP-W-6
MW-97-10 *	MW-BSB-4	RP-W-7
MW-97-11	MW-EPA-1	MW-60-6 (Field Blank)
MW-97-12 *	MW-EPA-3	MW-60-7 (Field Blank)
MW-97-2	MW-EPA-4 *	MW-60-8 (Field Blank)
MW-97-3 *	MW-MT96-2	MW-60-9 (Field Blank)
MW-97-4 *	PW-99-1	MW-60-10 (Field Blank) *
MW-97-5	PW-99-3 *	MW-60-11 (Field Blank) *

* Denotes which samples were re-sampled and re-analyzed for select parameters during December 2008.

The surface water samples were analyzed for elemental phosphorus using U.S.EPA method 7580 as specified in the QAPP (Barr, 2008). During the data validation process, procedural deviations from the initial calibration procedures defined the U.S.EPA method were identified and are detailed below. While a deviation from the published procedures, this deviation is not considered to have a significant adverse affect on the final usability of the data and no qualifiers have been assigned due to these deviations.

As required by the QAPP, elemental phosphorus concentrations were evaluated down to the laboratory's method detection limit (MDL). Any sample concentrations below the practical quantitation limit but above the method detection limit are qualified with a "J" indicating an estimated value. The non-detected concentrations are presented as "<MDL" in the data tables.

During the evaluation of the groundwater data from the September 2008 monitoring event, cross-contamination of elemental phosphorus was suspected for twenty-one groundwater samples, including samples from an upgradient well, its duplicate (i.e. MW-06-5) and a rinsate blank sample collected after MW-06-13 as detailed in the letter from Barr to Dan Bersanti on December 3, 2008.

A meeting was convened with the field staff, Tom Mattison, Karma Hughes and Andrea Nord of Barr and it was determined that the field staff followed the Barr's standard operating procedures for cleaning reusable sampling equipment. The decontamination procedures included in the Barr standard operating procedures were appropriate for cleaning the submersible pumps used at the site.

A new dual pumping system was used for the September 2008 groundwater sample collection activities. The dual pump system had a higher lift capacity than the single pump system previously used during the May 2008 sampling event. However, two of the new pumps failed during the September sampling event. One of the pumps failed during the sampling of MW-01-3 and a different pump was used to collect the sample at MW-01-3 and subsequent monitoring wells. The supplier was contacted and the pumps were replaced. The supplier reported that there was a defect in the two stage

Data Validation Report
DataChem Laboratory Report / Batch: SDG GW004 contains
08E-0781-01, 08E-0783-01, 08E-0789-01, 08E-0797-01, 08E-0803-01,
08E-0805-01, 08E-0813-01, 08E-0815-01 and 08E-0820-01.
SDG GW005 contains 08E-1090-01 and 08E-1090-02.
SDG GW006 contains 08E-1098-01.

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Date Data Validation Report: April 1, 2009

pumps. If the lower pump failed (as in this case), there was a potential that it did not allow for the lower cell of the pump to evacuate completely; thereby, allowing stagnant water to come in contact with each subsequent sample that was collected. The dual pump appeared to be operational because the upper chamber was still pumping.

Based upon the elemental phosphorus sample concentrations, the pump failure likely happened at or near groundwater well MW-01-3 which had an elemental phosphorus concentration of 290 ug/L. Each subsequent sample collected by the sampling team(s) who used that submersible dual pump had elemental phosphorus concentrations which decreased with each sample collected after well MW-01-3. The groundwater data were reviewed and certain wells' whose elemental phosphorus and metals concentrations were inconsistent with the May 2008 data set, were re-sampled to determine if cross-contamination occurred during the September 2008 sampling event.

Sampling procedures attempt to collect samples from the lowest to the highest concentrations across the Site. The sampling order during the September 2008 groundwater monitoring event was based upon arsenic, fluoride and sulfate concentrations from the May 2008 event. During the December 2008 collection activities, the sampling order was re-defined and sample MW-03-1 which had the highest elemental phosphorus concentration was sampled last. The re-sampling and re-analysis results (December 2008) confirmed that cross-contamination of elemental phosphorus likely occurred. Upon review of the other analytical parameters, (general chemistry, radiochemistry, metals, VOCs and SVOCs), a similar cross contamination trend was not observed. With the exception of MW-03-1, the elemental phosphorus data from the September 2008 event were "R" qualified (unusable) and the data collected during the December 2008 sampling event is presented in the data summary tables.

As part of the investigation, samples MW-97-6, MW-06-15, MW-EPA-1, MW-06-14, MW-06-20, MW-97-12 and field blank sample (MW-60-11) were also re-sampled and re-analyzed for select target metals because 1) the September 2008 metals concentrations were inconsistent with the metals concentrations from the May 2008 monitoring event and/or 2) potential contamination as indicated in the associated field blank sample(s) results. The following table summarizes which target parameters were re-sampled and re-analyzed during December 2008 and which data set(s) were presented on the data summary tables for the samples associated with this data evaluation.

Table 1 Summary of Data Presented Within the Data Summary Tables						
Monitoring Well	Analytical Parameters Re-sampled in December 2008					
	Elemental Phosphorus	Cu	Fe	Zn	Pb	All Target Metals
MW-EPA-4	December	--	--	--	--	--
MW-06-16	December	--	--	--	--	--
MW-06-13	December	--	--	--	--	--

Data Validation Report
DataChem Laboratory Report / Batch: SDG GW004 contains
08E-0781-01, 08E-0783-01, 08E-0789-01, 08E-0797-01, 08E-0803-01,
08E-0805-01, 08E-0813-01, 08E-0815-01 and 08E-0820-01.
SDG GW005 contains 08E-1090-01 and 08E-1090-02.
SDG GW006 contains 08E-1098-01.

Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
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Docket No. RCRA-2006-08-2004-0001

Date Data Validation Report: April 1, 2009

Table 1 continued Summary of Data Presented Within the Data Summary Tables						
Monitoring Well	Analytical Parameters Re-sampled in December 2008					
	Elemental Phosphorus	Cu	Fe	Zn	Pb	All Target Metals
MW-60-10 (Field Blank at MW-06-13)	September and December	--	--	--	--	--
MW-06-20	December	--	December	--	--	--
MW-06-11	December	--	--	--	--	--
MW-06-17	December	--	--	--	--	--
MW-06-5	December	--	--	--	--	--
MW-86-5 (MW-06-5 DUP)	December	--	--	--	--	--
MW-97-10	December	--	--	--	--	--
MW-06-18	December	--	--	--	--	--
MW-97-4	December	--	--	--	--	--
MW-97-3	December	--	--	--	--	--
MW-97-7	December	--	--	--	--	--
MW-02-2	December	--	--	--	--	--
MW-06-22	December	--	--	--	--	--
MW-97-12	December	--	--	--	--	December
MW-60-11 (Field Blank at MW-97-12)	December	--	--	--	--	December
MW-06-7	December	--	--	--	--	--
PW-99-3	December	--	--	--	--	--
MW-01-2	December	--	--	--	--	--
MW-01-3	September and December	--	--	--	--	--

The data met the data quality objectives (DQOs) and are useable as reported and qualified.

Holding Times, Preservation and Storage

The EPA method 7580 defines the holding time as 5 calendar days from collection to extraction for water samples that are chilled to 4 °C upon sample collection. Following extraction (iso-octane procedure) the method recommends a maximum holding time of 30 calendar days until analysis. The project samples were collected September 16th through 26th, 2008 and December 12th through 18th,

Data Validation Report
DataChem Laboratory Report / Batch: SDG GW004 contains
08E-0781-01, 08E-0783-01, 08E-0789-01, 08E-0797-01, 08E-0803-01,
08E-0805-01, 08E-0813-01, 08E-0815-01 and 08E-0820-01.
SDG GW005 contains 08E-1090-01 and 08E-1090-02.
SDG GW006 contains 08E-1098-01.

Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date Data Validation Report: April 1, 2009

2008; packed on ice and sent to the laboratory (DataChem, Utah) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 2 °C to 8 °C upon receipt at the laboratory and were stored at 4 °C until analysis. Subsequent holding times for extraction and analysis were met. No qualifiers were assigned due to holding times, sample preservation or storage issues.

Initial Calibration and Initial Calibration Verification

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

Method 7580 requires an initial calibration (ICAL) to be performed every 12 hours and that it consist of (at a minimum) a 5-point calibration standard curve. Calibration factors (CFs) and associated standard deviation of those CFs are then calculated and must meet a relative standard deviation (RSD) of $\leq 15\%$. The laboratory SOP requires a minimum 6-point calibration standard (quadratic) curve and a coefficient of correlation of ≥ 0.99 . The ICAL performed on May 14th, 2008 met the laboratory's initial calibration criterion. The ICVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ difference (% D) criterion (from the associated mid-level standard in the ICAL).

Upon review of the initial calibration data for the elemental phosphorus analyses, the following EPA method and laboratory SOP deviations are noted below.

The laboratory created the new "working stock solutions" on May 13th and 14th, 2008. The ICAL was performed on May 14th, 2008 and the project samples were analyzed on September 19th through 30th, 2008. This ICAL frequency exceeds the 12-hour requirement as defined in EPA Method 7580. While the published laboratory SOP does not specify a frequency of ICAL, the laboratory considers the working standards to be very stable under appropriate storage conditions; therefore, no elemental phosphorus data were qualified.

The laboratory used a flame-photometric detector (FPD) for elemental phosphorus analysis instead of the nitrogen-phosphorus detector (NPD) listed in Method 7580. According to the laboratory, the NPD cited in the Method had problems with long-term stability and the FPD did not have similar difficulty. Initial calibration verification standards (ICVs) and continuing calibration verification standards (CCVs) were analyzed at the beginning and end of each analytical sequence and after every ten samples to demonstrate continued acceptable calibration. No elemental phosphorus data were qualified based upon the use of the alternate analytical detector.

Continuing Calibration Verification

Ongoing calibration verification standards (CCVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results throughout the analytical process. The CCVs should be representative of the mid-point of the calibration curve. CCVs are required to be analyzed every 10 samples and must fall within $\pm 15\%$ of the known value.

Data Validation Report
DataChem Laboratory Report / Batch: SDG GW004 contains
08E-0781-01, 08E-0783-01, 08E-0789-01, 08E-0797-01, 08E-0803-01,
08E-0805-01, 08E-0813-01, 08E-0815-01 and 08E-0820-01.
SDG GW005 contains 08E-1090-01 and 08E-1090-02.
SDG GW006 contains 08E-1098-01.

Rhodia Silver Bow Plant – Butte, Montana
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Docket No. RCRA-2006-08-2004-0001

Date Data Validation Report: April 1, 2009

The CCVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ D criterion (from the associated mid-level standard in the ICAL).

Method Blank Analysis

The purpose of the method or laboratory blank sample is to evaluate the existence and magnitude of contamination problems resulting from laboratory extraction and analytical activities. Method blank samples were prepared and analyzed with every batch of 20 project samples (or less). The method blank samples were prepared and analyzed at the appropriate frequency and were non-detect for elemental phosphorus.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) are prepared and analyzed to provide information on the accuracy of the analytical procedures and the overall laboratory performance. The LCSs were prepared and analyzed with every batch of 20 project samples (or less). The LCS samples were prepared and analyzed at the appropriate frequency and met the acceptance limits of 75-125% for the elemental phosphorus analyses associated with the data packages.

Matrix Spike Results

The purpose of matrix spike (MS) and matrix spike duplicate (MSD) samples is to evaluate precision and accuracy of the methodology on specific sample matrices by demonstrating acceptable percent recovery of the known spike concentrations. Matrix spike (MS) and/or matrix spike duplicate (MSD) samples are prepared and analyzed at the appropriate frequency (every batch of ≤ 20 samples) during the analytical events. Samples MW-01-4, SW-17, MW-01-6, MW-06-13, MW-06-18, MW-97-10, RP-W-5, MW-97-12 and non-project specific samples served as the MS/MSD samples associated with the analytical batches in the data packages. The percent recovery for one MSD was below the laboratory acceptance criteria of 75-125%; however, no data were qualified because the sample was not associated with this project. The RPD for MS/MSD sample MW-01-4 exceeded the acceptance criteria ($<15\%$) specified in the QAPP (Barr, 2008); however, no data were qualified because the associated percent recoveries were within the applicable acceptance criteria. The remaining MS and MSD percent recoveries and associated RPDs met the criteria of 75-125% and $\leq 15\%$ RPD, respectively.

Field Duplicate Samples

Field duplicate samples were collected and analyzed to determine the precision of the combined sampling and analytical process. Precision was determined by calculating the RPD for the data pairs where both values were above the method detection limit. Samples MW-86-5 (MW-06-5 DUP), MW-86-12 (MW-06-12 DUP) and RP-W-4X (RP-W-4 DUP) served as the field duplicate samples for this event and were non-detect; therefore, the RPDs were not calculated.

Data Validation Report
DataChem Laboratory Report / Batch: SDG GW004 contains
08E-0781-01, 08E-0783-01, 08E-0789-01, 08E-0797-01, 08E-0803-01,
08E-0805-01, 08E-0813-01, 08E-0815-01 and 08E-0820-01.
SDG GW005 contains 08E-1090-01 and 08E-1090-02.
SDG GW006 contains 08E-1098-01.

Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date Data Validation Report: April 1, 2009

Field Blank Samples

The purpose of the collection and analysis of field (rinsate) blank sample is to monitor the contamination introduced from improper field equipment decontamination, sample transport, and analytical procedures. Six field blank samples (MW-60-6, MW-60-7, MW-60-8, MW-60-9, MW-60-10 and MW-60-11) were collected during the groundwater investigation and were non-detect for elemental phosphorus with the exception of sample MW-60-8. Sample MW-60-8 collected on September 19th, 2008 had an elemental phosphorus concentration of 1.77 ug/L. As stated in Section B10.3.2 of the QAPP, when project sample concentrations are “<” (less than) five times the associated blank sample concentrations, thus suspected false positives, they are shown at the concentration reported in the sample, with a “<” qualifier. Therefore, the associated groundwater samples were qualified accordingly. This affected the September 2008 results for samples MW-06-13, MW-EPA-4, MW-06-16, MW-06-20 and MW-06-17 which were collected, packaged and shipped to the laboratory in the same sample shipment as sample MW-60-8. When these same samples were re-sampled and re-analyzed during December 2008, elemental phosphorus was not detected above the MDL in any of the samples and their associated field blank samples (MW-60-10 and MW-60-11). The data are presented as detailed on the Table 1 within this data evaluation.

Data Validation Report
DataChem Laboratory Report / Batch: SDG S001 contains
08E-1091-01, 08E-1091-02 and 08E-1091-03

Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date of Data Validation Report: March 25, 2009

The data validation of the DataChem Laboratories, Inc. (DataChem) laboratory data for the elemental (white) phosphorus analysis of the 2008 – Phase I RCRA Facility Investigation Work Plan samples contained in the aforementioned report is complete as detailed below.

The analytical data were reviewed in general accordance with the quality control aspects contained in the U.S. EPA Method 7580 and/or DataChem Laboratories, Inc. Laboratory Standard Operating Procedure as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008). In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Method blank analysis
- Laboratory control samples
- Matrix spike results
- Field duplicate samples
- Field blank samples

The results for eighteen native soil and tailings samples are contained in this laboratory report. The samples are identified as follows:

SB-08-1 (8-11)	SB-08-A (SB-08-2 (10-14) DUP)	SB-08-3 (50-52)
SB-08-1 (11-12)	SB-08-B (SB-08-2 (26-28) DUP)	SB-08-6 (9-12)
SB-08-1 (19-21)	SB-08-3 (2-6)	SB-08-6 (12-13)
SB-08-2 (10-14)	SB-08-3 (28-32)	SB-08-6 (20-22)
SB-08-2 (17.5-18.5)	SB-08-3 (36-40)	SB-08-C (Field Blank)
SB-08-2 (26-28)	SB-08-3 (42-43)	SB-08-D (Field Blank)

The soil and tailings samples were analyzed for elemental phosphorus using U.S.EPA method 7580 as specified in the QAPP (Barr, 2008). During the data validation process, procedural deviations from the initial calibration procedures defined the U.S.EPA method were identified and are detailed below. While a deviation from the published procedures, this deviation is not considered to have a significant adverse affect on the final usability of the data and no qualifiers have been assigned due to these deviations.

**Data Validation Report
DataChem Laboratory Report / Batch: SDG S001 contains
08E-1091-01, 08E-1091-02 and 08E-1091-03**

Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date Data Validation Report: March 25, 2009

As required by the QAPP, elemental phosphorus concentrations were evaluated down to the laboratory's method detection limit (MDL). Any sample concentrations below the practical quantitation limit but above the method detection limit are qualified with a "J" indicating an estimated value. The non-detected concentrations are presented as "<MDL" in the data tables.

The data met the data quality objectives (DQOs) and are useable as reported and qualified.

Holding Times, Preservation and Storage

The EPA method 7580 does not define a holding time for extraction and analysis for soil samples but states that the soil samples be stored at approximately 4° C, in the dark, and kept tightly sealed to prevent the loss of moisture. The EPA method 7580 defines the holding time as 5 calendar days from collection to extraction for water samples that are chilled to 4° C upon sample collection. Following extraction (iso-octane procedure) the method recommends a maximum holding time of 30 calendar days until analysis for both water and soil samples. The project samples were collected December 11th through 13th, 2008; packed on ice and sent to the laboratory (DataChem, Utah) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 4 °C to 6 °C upon receipt at the laboratory and were stored at 4 °C until analysis. Subsequent holding times for extraction and analysis were met. No qualifiers were assigned due to holding times, sample preservation or storage issues.

Initial Calibration and Initial Calibration Verification

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

Method 7580 requires an initial calibration (ICAL) to be performed every 12 hours and that it consist of (at a minimum) a 5-point calibration standard curve. Calibration factors (CFs) and associated standard deviation of those CFs are then calculated and must meet a relative standard deviation (RSD) of $\leq 15\%$. The laboratory SOP requires a minimum 6-point calibration standard (quadratic) curve and a coefficient of correlation of ≥ 0.99 . The ICAL performed on November 13th, 2008 met the laboratory's initial calibration criterion. The ICVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ difference (% D) criterion (from the associated mid-level standard in the ICAL).

Upon review of the initial calibration data for the elemental phosphorus analyses, the following method and laboratory SOP deviations are noted below.

The laboratory created the new "working stock solutions" on November 11th and 13th, 2008. The ICAL was performed on November 13th, 2008 and the project samples were analyzed on December 18th through 19th, 2008. This ICAL frequency exceeds the 12-hour requirement as defined in EPA Method 7580. While the published laboratory SOP does not specify a frequency of ICAL, the laboratory considers the working standards to be very stable under appropriate storage conditions; therefore, no elemental phosphorus data were qualified.

The laboratory used a flame-photometric detector (FPD) for elemental phosphorus analysis instead of the nitrogen-phosphorus detector (NPD) listed in Method 7580. According to the laboratory, the NPD cited in the Method had problems with long-term stability and the FPD did not have similar difficulty. Initial calibration verification standards (ICVs) and continuing calibration verification standards (CCVs) were analyzed at the beginning and end of each analytical sequence and after every ten samples to demonstrate continued acceptable calibration. No elemental phosphorus data were qualified based upon the use of the alternate analytical detector.

Continuing Calibration Verification

Ongoing calibration verification standards (CCVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results throughout the analytical process. The CCVs should be representative of the mid-point of the calibration curve. CCVs are required to be analyzed every 10 samples and must fall within $\pm 15\%$ of the known value. The CCVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ D criterion (from the associated mid-level standard in the ICAL).

Method Blank Analysis

The purpose of the method or laboratory blank sample is to evaluate the existence and magnitude of contamination problems resulting from laboratory extraction and analytical activities. Method blank samples were prepared and analyzed with every batch of 20 project samples (or less). Three method blank samples were prepared and analyzed at the appropriate frequency and were non-detect for elemental phosphorus.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) are prepared and analyzed to provide information on the accuracy of the analytical procedures and the overall laboratory performance. The LCSs were prepared and analyzed with every batch of 20 project samples (or less). The percent recoveries of the spike concentration in the LCS samples are required to fall between 75-125%. Three LCS samples were prepared and analyzed at the appropriate frequency and met the acceptance limits of 75-125% for the elemental phosphorus analyses associated with the data packages.

Matrix Spike Results

The purpose of matrix spike (MS) and matrix spike duplicate (MSD) samples is to evaluate precision and accuracy of the methodology on specific sample matrices by demonstrating acceptable percent recovery of the known spike concentrations. Matrix spike (MS) and/or matrix spike duplicate (MSD) samples are prepared and analyzed at the appropriate frequency (every batch of ≤ 20 samples) during the analytical events. Samples SB-08-3 (50-52), MW-97-10 and MW-06-18 served as the MS/MSD samples associated with the analytical batches. Except for one case, the percent recoveries and associated relative percent differences (RPDs) met the criteria of 75-125% and $\leq 15\%$ RPD, respectively. The MS and MSD percent recoveries and RPD for sample SB-08-3 (50-52) exceeded the applicable criteria specified in the QAPP; therefore, the associated sample results were “J” qualified indicating estimated concentrations.

Data Validation Report
DataChem Laboratory Report / Batch: SDG S001 contains
08E-1091-01, 08E-1091-02 and 08E-1091-03

Rhodia Silver Bow Plant – Butte, Montana
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U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date Data Validation Report: March 25, 2009

Field Duplicate Samples

Field duplicate samples were collected and analyzed to determine the precision of the combined sampling and analytical process. Precision was determined by calculating the RPD for the data pairs where both values were above the method detection limit. Samples SB-08-A (SB-08-2 (10-14) DUP) and SB-08-B (SB-08-2 (26-28) DUP) served as the field duplicate samples for this event. Sample SB-08-2 (26-28) and its associated field duplicate sample were non-detect; therefore, the RPD was not calculated. The RPD for sample SB-08-2 (26-28) and its associated field duplicate sample was 53.1% which exceeds the RPD criterion ($< 40\%$) specified in the QAPP. However, no data were qualified because the sample concentrations are near the method detection limit, thereby exaggerating the deviation of the RPD.

Field Blank Samples

The purpose of the collection and analysis of field (rinstate) blank sample is to monitor the contamination introduced from improper field equipment decontamination, sample transport, and analytical procedures. The field blank samples SB-08-C and SB-08-D were collected in the following manner: The sample equipment (i.e. stainless-steel bowl, ceramic bowl, etc.) was rinsed with analyte-free, deionized water and the rinse water was poured into the appropriate sample containers for analysis. Field blank sampling procedures and protocols were determined to be appropriate and were collected and analyzed at the required frequency as specified in the QAPP. No target analytes were present above the MDL for elemental phosphorus analysis of the field blank sample(s).

**Data Validation Report
DataChem Laboratory Report / Batch: SDG S002
contains 08E-1091-04**

**Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001**

Date of Data Validation Report: March 27, 2009

The data validation of the DataChem Laboratories, Inc. (DataChem) laboratory data for the elemental (white) phosphorus analysis of the 2008 – Phase I RCRA Facility Investigation Work Plan samples contained in the aforementioned report is complete as detailed below.

The analytical data were reviewed in general accordance with the quality control aspects contained in the U.S. EPA Method 7580 and/or DataChem Laboratories, Inc. Laboratory Standard Operating Procedure as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008). In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Method blank analysis
- Laboratory control samples
- Matrix spike results
- Field duplicate samples
- Field blank samples

The results for seven native soil and tailings samples are contained in this laboratory report. The samples are identified as follows:

SB-08-5 (46-47)

SB-08-4 (18-24)

SB-08-4 (50-52)

SB-08-5 (54-56)

SB-08-4 (32-38)

SB-08-4 (6-12)

SB-08-4 (40.5-41.5)

The soil and tailings samples were analyzed for elemental phosphorus using U.S.EPA method 7580 as specified in the QAPP (Barr, 2008). During the data validation process, procedural deviations from the initial calibration procedures defined the U.S.EPA method were identified and are detailed below. While a deviation from the published procedures, this deviation is not considered to have a significant adverse affect on the final usability of the data and no qualifiers have been assigned due to these deviations.

As required by the QAPP, elemental phosphorus concentrations were evaluated down to the laboratory's method detection limit (MDL). Any sample concentrations below the practical quantitation limit but above the method detection limit are qualified with a "J" indicating an estimated value. The non-detected concentrations are presented as "<MDL" in the data tables.

The data met the data quality objectives (DQOs) and are useable as reported and qualified.

**Data Validation Report
DataChem Laboratory Report / Batch: SDG S002
contains 08E-1091-04**

Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date Data Validation Report: March 27, 2009

Holding Times, Preservation and Storage

The EPA method 7580 does not define a holding time for extraction and analysis for soil samples but states that the soil samples be stored at approximately 4° C, in the dark, and kept tightly sealed to prevent the loss of moisture. The EPA method 7580 defines the holding time as 5 calendar days from collection to extraction for water samples that are chilled to 4° C upon sample collection. Following extraction (iso-octane procedure) the method recommends a maximum holding time of 30 calendar days until analysis for both water and soil samples. The project samples were collected December 17th through 18th, 2008; packed on ice and sent to the laboratory (DataChem, Utah) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 3 °C to 4 °C upon receipt at the laboratory and were stored at 4 °C until analysis. Subsequent holding times for extraction and analysis were met. No qualifiers were assigned due to holding times, sample preservation or storage issues.

Initial Calibration and Initial Calibration Verification

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

Method 7580 requires an initial calibration (ICAL) to be performed every 12 hours and that it consist of (at a minimum) a 5-point calibration standard curve. Calibration factors (CFs) and associated standard deviation of those CFs are then calculated and must meet a relative standard deviation (RSD) of $\leq 15\%$. The laboratory SOP requires a minimum 6-point calibration standard (quadratic) curve and a coefficient of correlation of ≥ 0.99 . The ICAL performed on November 13th, 2008 met the laboratory's initial calibration criterion. The ICVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ difference (% D) criterion (from the associated mid-level standard in the ICAL).

Upon review of the initial calibration data for the elemental phosphorus analyses, the following method and laboratory SOP deviations are noted below.

The laboratory created the new “working stock solutions” on November 11th and 13th, 2008. The ICAL was performed on November 13th, 2008 and the project samples were analyzed on December 23rd, 2008. This ICAL frequency exceeds the 12-hour requirement as defined in EPA Method 7580. While the published laboratory SOP does not specify a frequency of ICAL, the laboratory considers the working standards to be very stable under appropriate storage conditions; therefore, no elemental phosphorus data were qualified.

The laboratory used a flame-photometric detector (FPD) for elemental phosphorus analysis instead of the nitrogen-phosphorus detector (NPD) listed in Method 7580. According to the laboratory, the NPD cited in the Method had problems with long-term stability and the FPD did not have similar difficulty. Initial calibration verification standards (ICVs) and continuing calibration verification standards (CCVs) were analyzed at the beginning and end of each analytical sequence and after every ten samples to demonstrate continued acceptable calibration. No elemental phosphorus data were qualified based upon the use of the alternate analytical detector.

**Data Validation Report
DataChem Laboratory Report / Batch: SDG S002
contains 08E-1091-04**

Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date Data Validation Report: March 27, 2009

Continuing Calibration Verification

Ongoing calibration verification standards (CCVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results throughout the analytical process. The CCVs should be representative of the mid-point of the calibration curve. CCVs are required to be analyzed every 10 samples and must fall within $\pm 15\%$ of the known value. The CCVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ D criterion (from the associated mid-level standard in the ICAL).

Method Blank Analysis

The purpose of the method or laboratory blank sample is to evaluate the existence and magnitude of contamination problems resulting from laboratory extraction and analytical activities. Method blank samples were prepared and analyzed with every batch of 20 project samples (or less). One method blank sample was prepared and analyzed at the appropriate frequency and was non-detect for elemental phosphorus.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) are prepared and analyzed to provide information on the accuracy of the analytical procedures and the overall laboratory performance. The LCSs were prepared and analyzed with every batch of 20 project samples (or less). The percent recoveries of the spike concentration in the LCS samples are required to fall between 75-125%. One LCS sample was prepared and analyzed at the appropriate frequency and met the acceptance limits of 75-125% for the elemental phosphorus analyses associated with the data package.

Matrix Spike Results

The purpose of matrix spike (MS) and matrix spike duplicate (MSD) samples is to evaluate precision and accuracy of the methodology on specific sample matrices by demonstrating acceptable percent recovery of the known spike concentrations. Matrix spike (MS) and/or matrix spike duplicate (MSD) samples are prepared and analyzed at the appropriate frequency (every batch of ≤ 20 samples) during the analytical events. Sample SB-08-4 (50-52) served as the MS/MSD sample associated with the analytical batches. The percent recoveries and associated relative percent differences (RPDs) met the criteria of 75-125% and $\leq 15\%$ RPD, respectively.

Data Validation Report
DataChem Laboratory Report / Batch: SDG SD001 contains
08E-0791-01, 08E-0798-01 and 08E-0798-02

Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date of Data Validation Report: October 28, 2008

The data validation of the DataChem Laboratories, Inc. (DataChem) laboratory data for the elemental (white) phosphorus analysis of the 2008 – Phase I RCRA Facility Investigation Work Plan samples contained in the aforementioned report is complete as detailed below.

The analytical data were reviewed in general accordance with the quality control aspects contained in the U.S. EPA Method 7580 and/or DataChem Laboratories, Inc. Laboratory Standard Operating Procedure as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008). In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Method blank analysis
- Laboratory control samples
- Matrix spike results
- Field duplicate samples
- Field blank samples

Twelve sediment sample results are contained in this laboratory report. The samples are identified as follows:

SD-1 (0-10) CM	SD-6 (0-10) CM	SD-19 (0-10) CM
SD-2 (0-10) CM	SD-8 (0-10) CM	SD-20 (0-10) CM
SD-3 (0-10) CM	SD-9 (0-10) CM	SD-200 (0-10) CM (SD-13 DUP)
SD-4 (0-10) CM	SD-13 (0-10) CM	SD-220 (0-10) CM (Field Blank)
SD-5 (0-10) CM	SD-18 (0-10) CM	

The sediment samples were analyzed for elemental phosphorus using U.S.EPA method 7580 as specified in the QAPP (Barr, 2008). During the data validation process, procedural deviations from the initial calibration procedures defined the U.S.EPA method were identified and are detailed below. While a deviation from the published procedures, this deviation is not considered to have a significant adverse affect on the final usability of the data and no qualifier have been assigned due to these deviations.

Data Validation Report
DataChem Laboratory Report / Batch: SDG SD001 contains
08E-0791-01, 08E-0798-01 and 08E-0798-02

Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date Data Validation Report: October 28, 2008

As required by the QAPP, elemental phosphorus concentrations were evaluated down to the laboratory's method detection limit (MDL). Any sample concentrations below the practical quantitation limit but above the method detection limit are qualified with a "J" indicating an estimated value. The non-detected concentrations are presented as "<MDL" in the data tables.

The data met the data quality objectives (DQOs) and are useable as reported and qualified.

Holding Times, Preservation and Storage

The EPA method 7580 does not define a holding time for extraction and analysis for sediment samples but states that the sediment samples be stored at approximately 4 °C, in the dark, and kept tightly sealed to prevent the loss of moisture. The EPA method 7580 defines the holding time as five calendar days from collection to extraction for water samples that are chilled to 4 °C upon sample collection. Following extraction (iso-octane procedure) the method recommends a maximum holding time of 30 calendar days until analysis for both water and sediment samples. The project samples were collected September 18th through 21st, 2008; packed on ice and sent to the laboratory (DataChem, Utah) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 4 °C to 6 °C upon receipt at the laboratory and were stored at 4 °C until analysis. Subsequent holding times for extraction and analysis were met. No qualifiers were assigned due to holding times, sample preservation or storage issues.

Initial Calibration and Initial Calibration Verification

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

Method 7580 requires an initial calibration (ICAL) to be performed every 12 hours and that it consist of (at a minimum) a 5-point calibration standard curve. Calibration factors (CFs) and associated standard deviation of those CFs are then calculated and must meet a relative standard deviation (RSD) of $\leq 15\%$. The laboratory SOP requires a minimum 6-point calibration standard (quadratic) curve and a coefficient of correlation of ≥ 0.99 . The ICAL performed on May 14th, 2008 met the laboratory's initial calibration criterion. The ICVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ difference (% D) criterion (from the associated mid-level standard in the ICAL).

Upon review of the initial calibration data for the elemental phosphorus analyses, the following EPA method and laboratory SOP deviations are noted below.

The laboratory created the new "working stock solutions" on May 13th and 14th, 2008. The ICAL was performed on May 14th, 2008 and the project samples were analyzed on September 24th through October 1st, 2008. This ICAL frequency exceeds the 12-hour requirement as defined in EPA Method 7580. While the published laboratory SOP does not specify a frequency of ICAL, the laboratory considers the working standards to be very stable under appropriate storage conditions; therefore, no elemental phosphorus data were qualified.

Data Validation Report
DataChem Laboratory Report / Batch: SDG SD001 contains
08E-0791-01, 08E-0798-01 and 08E-0798-02

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The laboratory used a flame-photometric detector (FPD) for elemental phosphorus analysis instead of the nitrogen-phosphorus detector (NPD) listed in Method 7580. According to the laboratory, the NPD cited in the Method had problems with long-term stability and the FPD did not have similar difficulty. Initial calibration verification standards (ICVs) and continuing calibration verification standards (CCVs) were analyzed at the beginning and end of each analytical sequence and after every ten samples to demonstrate continued acceptable calibration. No elemental phosphorus data were qualified based upon the use of the alternate analytical detector.

Continuing Calibration Verification

Ongoing calibration verification standards (CCVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results throughout the analytical process. The CCVs should be representative of the mid-point of the calibration curve. CCVs are required to be analyzed every 10 samples and must fall within $\pm 15\%$ of the known value. The CCVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ D criterion (from the associated mid-level standard in the ICAL).

Method Blank Analysis

The purpose of the method or laboratory blank sample is to evaluate the existence and magnitude of contamination problems resulting from laboratory extraction and analytical activities. Method blank samples were prepared and analyzed with every batch of 20 project samples (or less). Three method blank samples were prepared and analyzed at the appropriate frequency and were non-detect for elemental phosphorus.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) are prepared and analyzed to provide information on the accuracy of the analytical procedures and the overall laboratory performance. The LCSs were prepared and analyzed with every batch of 20 project samples (or less). Three LCS samples were prepared and analyzed at the appropriate frequency and met the acceptance limits of 75-125% for the elemental phosphorus analyses associated with the data packages.

Matrix Spike Results

The purpose of matrix spike (MS) and matrix spike duplicate (MSD) samples is to evaluate precision and accuracy of the methodology on specific sample matrices by demonstrating acceptable percent recovery of the known spike concentrations. Matrix spike (MS) and/or matrix spike duplicate (MSD) samples are prepared and analyzed at the appropriate frequency (every batch of ≤ 20 samples) during the analytical events. Samples SD-20 (0-10) CM and MW-06-13 served as the MS/MSD samples associated with the analytical batches. The percent recoveries and associated relative percent differences (RPDs) met the criteria of 75-125% and $\leq 15\%$ RPD, respectively.

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DataChem Laboratory Report / Batch: SDG SD001 contains
08E-0791-01, 08E-0798-01 and 08E-0798-02

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Field Duplicate Samples

Field duplicate samples were collected and analyzed to determine the precision of the combined sampling and analytical process. Precision was determined by calculating the RPD for the data pairs where both values were above the method detection limit. Sample SD-200 (SW-13 DUP) served as the field duplicate sample for this event and was non-detect; therefore, the RPD was not calculated.

Field Blank Samples

The purpose of the collection and analysis of field (rinsate) blank sample is to monitor the contamination introduced from improper field equipment decontamination, sample transport, and analytical procedures. One field blank sample (SD-220 (0-10) CM) was collected during the sediment investigation and was non-detect for elemental phosphorus.

Data Validation Report
DataChem Laboratory Report / Batch: SDG SW002 contains
08E-0782-01, 08E-0784-01, 08E-0790-01 and 08E-0799-01

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Date of Data Validation Report: October 28, 2008

The data validation of the DataChem Laboratories, Inc. (DataChem) laboratory data for the elemental (white) phosphorus analysis of the 2008 – Phase I RCRA Facility Investigation Work Plan samples contained in the aforementioned report is complete as detailed below.

The analytical data were reviewed in general accordance with the quality control aspects contained in the U.S. EPA Method 7580 and/or DataChem Laboratories, Inc. Laboratory Standard Operating Procedure as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008). In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Method blank analysis
- Laboratory control samples
- Matrix spike results
- Field duplicate samples
- Field blank samples

Fifteen water sample results are contained in this laboratory report. The samples are identified as follows:

SW-1	SW-10	SW-16
SW-3	SW-11	SW-17
SW-4	SW-12	SW-20
SW-5	SW-13	SW-101 (SW-15 DUP)
SW-6	SW-14	SW-121 (Field Blank)
SW-8	SW-15	

The surface water samples were analyzed for elemental phosphorus using U.S.EPA method 7580 as specified in the QAPP (Barr, 2008). During the data validation process, procedural deviations from the initial calibration procedures defined the U.S.EPA method were identified and are detailed below. While a deviation from the published procedures, this deviation is not considered to have a significant adverse affect on the final usability of the data and no qualifiers have been assigned due to these deviations.

Data Validation Report
DataChem Laboratory Report / Batch: SDG SW002 contains
08E-0782-01, 08E-0784-01, 08E-0790-01 and 08E-0799-01

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As required by the QAPP, elemental phosphorus concentrations were evaluated down to the laboratory's method detection limit (MDL). Any sample concentrations below the practical quantitation limit but above the method detection limit are qualified with a "J" indicating an estimated value. The non-detected concentrations are presented as "<MDL" in the data tables.

The data met the data quality objectives (DQOs) and are useable as reported and qualified.

Holding Times, Preservation and Storage

The EPA method 7580 defines the holding time as 5 calendar days from collection to extraction for water samples that are chilled to 4° C upon sample collection. Following extraction (iso-octane procedure) the method recommends a maximum holding time of 30 calendar days until analysis. The project samples were collected September 16th through 21st, 2008; packed on ice and sent to the laboratory (DataChem, Utah) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 4° to 8° C upon receipt at the laboratory and were stored at 4° C until analysis. Subsequent holding times for extraction and analysis were met. No qualifiers were assigned due to holding times, sample preservation or storage issues.

Initial Calibration and Initial Calibration Verification

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

Method 7580 requires an initial calibration (ICAL) to be performed every 12 hours and that it consist of (at a minimum) a 5-point calibration standard curve. Calibration factors (CFs) and associated standard deviation of those CFs are then calculated and must meet a relative standard deviation (RSD) of $\leq 15\%$. The laboratory SOP requires a minimum 6-point calibration standard (quadratic) curve and a coefficient of correlation of ≥ 0.99 . The ICAL performed on May 14th, 2008 met the laboratory's initial calibration criterion. The ICVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ difference (% D) criterion (from the associated mid-level standard in the ICAL).

Upon review of the initial calibration data for the elemental phosphorus analyses, the following EPA method and laboratory SOP deviations are noted below.

The laboratory created the new "working stock solutions" on May 13th and 14th, 2008. The ICAL was performed on May 14th, 2008 and the project samples were analyzed on September 19th through 24th, 2008. This ICAL frequency exceeds the 12-hour requirement as defined in EPA Method 7580. While the published laboratory SOP does not specify a frequency of ICAL, since the laboratory considers the working standards to be very stable under appropriate storage conditions; therefore, no elemental phosphorus data were qualified.

The laboratory used a flame-photometric detector (FPD) for elemental phosphorus analysis instead of the nitrogen-phosphorus detector (NPD) listed in Method 7580. According to the laboratory, the NPD cited in the Method had problems with long-term stability and the FPD did not have similar difficulty. Initial calibration verification standards (ICVs) and continuing calibration verification standards (CCVs) were analyzed at the beginning and end of each analytical sequence and after every

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DataChem Laboratory Report / Batch: SDG SW002 contains
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ten samples to demonstrate continued acceptable calibration. No elemental phosphorus data were qualified based upon the use of the alternate analytical detector.

Continuing Calibration Verification

Ongoing calibration verification standards (CCVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results throughout the analytical process. The CCVs should be representative of the mid-point of the calibration curve. CCVs are required to be analyzed every 10 samples and must fall within $\pm 15\%$ of the known value. The CCVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ D criterion (from the associated mid-level standard in the ICAL).

Method Blank Analysis

The purpose of the method or laboratory blank sample is to evaluate the existence and magnitude of contamination problems resulting from laboratory extraction and analytical activities. Method blank samples were prepared and analyzed with every batch of 20 project samples (or less). Four method blank samples were prepared and analyzed at the appropriate frequency and were non-detect for elemental phosphorus.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) are prepared and analyzed to provide information on the accuracy of the analytical procedures and the overall laboratory performance. The LCSs were prepared and analyzed with every batch of 20 project samples (or less). Four LCS samples were prepared and analyzed at the appropriate frequency and met the acceptance limits of 75-125% for the elemental phosphorus analyses associated with the data packages.

Matrix Spike Results

The purpose of matrix spike (MS) and matrix spike duplicate (MSD) samples is to evaluate precision and accuracy of the methodology on specific sample matrices by demonstrating acceptable percent recovery of the known spike concentrations. Matrix spike (MS) and/or matrix spike duplicate (MSD) samples are prepared and analyzed at the appropriate frequency (every batch of ≤ 20 samples) during the analytical events. Samples SW-4, SW-6, SW-17 and MW-01-4 served as the MS/MSD samples associated with the analytical batches. The percent recovery for one MSD (SW-17) was below the laboratory acceptance criteria of 75-125%; however, no data were qualified because the deviation was minor ($<5\%$) and the associated MS and relative percent differences (RPDs) data were within the laboratory and EPA criteria. The RPD for MS/MSD sample MW-01-4 exceeded the acceptance criteria ($<15\%$) specified in the QAPP (Barr, 2008), however, no data were qualified because the associated percent recoveries were within the applicable acceptance criteria. The remaining MS and MSD percent recoveries and associated RPDs met the criteria of 75-125% and $\leq 15\%$ RPD, respectively.

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08E-0782-01, 08E-0784-01, 08E-0790-01 and 08E-0799-01

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Field Duplicate Samples

Field duplicate samples were collected and analyzed to determine the precision of the combined sampling and analytical process. Precision was determined by calculating the RPD for the data pairs where both values were above the method detection limit. Sample SW-101 (SW-15 DUP) served as the field duplicate sample for this event and was non-detect; therefore, the RPD was not calculated.

Field Blank Samples

The purpose of the collection and analysis of field (rinsate) blank sample is to monitor the contamination introduced from improper field equipment decontamination, sample transport, and analytical procedures. One field blank sample (SW-121) was collected during the surface water investigation and was non-detect for elemental phosphorus.

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Date of Data Validation Report: September 9, 2008

The validation of the Columbia Analytical Services, Inc. (CAS, Kelso, Washington) and ACZ Laboratories, Inc. (ACZ, Steamboat Springs, Colorado) laboratory data for the volatile, semivolatile, PCB, metals, general chemistry and radiochemistry analyses of the samples collected in 2008 to support the Phase 1 - RCRA Facility Investigation is complete as detailed below.

The analytical data were reviewed in accordance Barr's Data Validation SOPs which are based upon the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Organic and Inorganic Data Review (EPA 2005, 2004) and in general accordance with U.S. EPA Methods 300.0, 350.1, 353.2, 365.3, 900.0 modified, 903.1 modified, 904.0 modified and Standard Method 2320B as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008).

In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Summary calibration information
- Blank analysis
- Deuterated monitoring compounds (Surrogates)
- ICP/ICP/MS interference check samples (metals only)
- Laboratory control samples
- Matrix spike results
- Field duplicate samples
- Field blank samples
- Trip blank samples

The results for twenty-one groundwater samples are contained in this laboratory report. The samples are identified as follows:

MW-06-23	MW-06-24	MW-97-1
MW-97-2	MW-06-6	MW-EPA-1
MW-06-10	MW-06-3	MW-06-5
MW-06-4	MW-EPA-4	MW-02-3
MW-EPA-3	MW-02-4	MW-82-4 (MW-02-4 DUP)
MW-97-5	MW-06-1	MW-97-9
MW-01-1	MW-97-8	MW-01-4
MW-06-2	MW-60-1 (Field Blank)	MW-65-1 (Trip Blank)
MW-65-2 (Trip Blank)	MW-65-3 (Trip Blank)	

The samples were analyzed for volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), polychlorinated biphenyls (PCBs), total metals (ICP/ICP/MS/mercury), general chemistry parameters (bicarbonate as CaCO₃, carbonate as CaCO₃, chloride, sulfate, fluoride, ammonia as N, nitrate + nitrite as N, and total phosphorus as P) and radiochemistry parameters (gross alpha, gross

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beta, radium 226, and radium 228) as required using the methods detailed in the QAPP (Barr, May 2006).

Alternative methods other than those specified in the QAPP were used for the fluoride, gross alpha and beta, and radium 226 and 228 analyses. While a deviation from the QAPP, no adverse effects on data quality were determined.

Overall Assessment

The QAPP specified that 10% of the project data be reviewed using CLP NFG (Guidelines) and the remaining data be reviewed in accordance with Barr's Data Validation Standard Operating Procedures (SOPs). Because 90% of the data was correspondingly validated using non-CLP criteria, the laboratory criterion were used for consistency, except where outliers exceeded 30-150% EPA quality control criteria. In summary, because the Guidelines have limits which are often different than, and in certain cases are more stringent than, the limits specified by the analytical methods and the laboratory generated limits; therefore, the end result may be slightly different data qualification.

The 2-chloroethylvinylether VOC results from groundwater, field blank and trip blank samples were qualified with an "R" indicating unusable data because of the known degradation of 2-chloroethylvinylether in the hydrochloric acid sample preservative.

In accordance with the Guidelines, sample concentrations greater than the method detection limit (MDL) and below the practical quantitation limit for the organic analyses are "J" qualified indicating estimated concentrations. The non-detect concentrations are presented as "<MDL" in the data tables.

During the data validation process of the VOC data, a large peak was identified at 17.8 minutes in the chromatography for multiple VOC samples. Some of the raw data for the VOC analysis indicated this peak was 1,2,3-trichlorobenzene and some of the raw data did not identify or quantify this peak. The laboratory was contacted and after an investigation indicated that their surrogate spike solution used for the 8260 analysis had butylated hydroxytoluene (BHT) present as a contaminant. BHT has a similar retention time to 1,2,3-trichlorobenzene and the computer software had mistakenly identified BHT as the target VOC. The laboratory reviewed the chromatography against the reported results and verified that the correct analyte was reported and that the laboratory analysts properly followed Section 7.6 of Method 8260B and Section 11.3 of the laboratory Standard Operating Procedure (included in the QAPP). The data presented in the data summary tables represent the final VOC data. No VOC data were qualified based upon this occurrence and all data should be considered valid as presented.

The data are useable as reported and qualified and fulfill the data quality objectives (DQOs) for sensitivity, accuracy and precision as specified in the QAPP. The following sections provide specific validation details.

Holding Times, Preservation and Storage

The samples were collected May 13th through 16th, 2008, packed on ice and sent to the laboratories (CAS, located in Kelso, Washington and ACZ, located in Steamboat Springs, CO) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory

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acknowledgement receipt forms, the samples were received intact with a temperature of -0.5 to 12.4 °C upon receipt at the laboratories. The samples were stored at 4 °C until analysis. No qualifiers were assigned due to holding times, preservation, or storage issues.

Summary Calibration Information

The initial calibration (ICAL), continuing calibration (CCAL), initial calibration verification (ICV) and continuing calibration verifications (CCVs) are not QC elements for non-CLP data evaluation. Since the calibration data were provided in summary form within the laboratory report, the data, where available, were reviewed as part of the non-CLP data evaluation process but confirmation via raw data review was not performed.

During the data evaluation process of the initial calibration data for VOC analysis, it was noted that the relative response factors (RRFs) for acrolein, acrylonitrile and vinyl acetate met the laboratory specific acceptance limits but did not meet the limits specified in the Guidelines. Acrolein and acrylonitrile are documented as not being particularly stable in the analytical environment. A separate method has been developed for their analysis. Due to these considerations, no qualifiers were applied for poor RRFs observed for these parameters during the calibration of the instrument. Similarly, vinyl acetate is rapidly hydrolyzed to acetaldehyde and highly volatile. Due to degradation by hydrolysis and susceptibility to polymerization, no qualifiers were applied due to variability in the RRFs observed for this compound during the calibration of the instrument.

Because the laboratory VOC and SVOC ICAL percent relative standard deviation (%RSD) and RRF criteria differ from, and in some cases are less stringent than, the criterion published in the Guidelines, the data were evaluated by using the Guideline criterion for the system performance check compounds (SPCC). The remaining VOC and SVOC compounds were evaluated using the laboratory acceptance criterion during the ICAL data evaluation. The %RSD in VOC ICAL (CAL 7189) deviated from the laboratory and/or EPA acceptance limits for methylene chloride and bromoform. No qualifiers were assigned to methylene chloride because the %RSD met the requirements of the Guidelines. For bromoform, only concentrations above the method detection limit (MDL) would require a “J” qualifier based upon this deviation. Therefore, no data were qualified because bromoform was not detected above the MDL in the samples. The % Drift in one VOC CCAL did not meet the laboratory acceptance criteria for iodomethane; however, no additional qualification was applied to the associated project samples, because iodomethane was already “R” qualified (unusable) based upon LCS percent recoveries exceeding the EPA criteria (150%) as discussed in further detail below.

The SVOC ICAL data meets both the laboratory criteria and the criteria published in the Guidelines and the SVOC CCVs met the laboratory CCV criterion for % Drift and % Difference for linear and quadratic calibrations; therefore, no SVOC data require qualification based upon ICAL or CCAL results.

The PCB ICALs met the established laboratory acceptance criterion. The % Drift for Aroclor 1260 did not meet the laboratory acceptance criterion on the primary column during the analysis of two CCALs and did not meet the laboratory acceptance criterion on the secondary column for Aroclor 1016 during the analysis of one CCAL. However, no data were qualified because the % Drift

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exceedences were slight (<5%) and they failed on one (and not both) of the primary and secondary columns for each CCAL. All other CCALs met the established laboratory acceptance criterion.

The ICP, ICP/MS and cold vapor mercury ICVs and CCVs met the established laboratory acceptance criterion.

Blank Analysis

As stated in Section B10.3.2 of the QAPP, when project sample concentrations are “<” (less than) five times the associated blank sample concentrations, thus suspected false positives, they are shown at the concentration reported in the sample, with a “<” qualifier with the exception of the radiochemistry analyses detailed below.

No trace concentrations of ICP, ICP/MS, mercury, and PCBs were present in the laboratory method (or preparation) blank samples. Trace concentrations of 1,2,3-trichlorobenzene, and naphthalene (VOCs); and of benzoic acid, diethylphthalate, di-n-butylphthalate, fluoranthene, pyrene, butylbenzylphthalate, and benzo(b)fluoranthene (SVOCs) were present above the method detection limits in one or more laboratory method blank samples. Associated sample concentrations within five times the associated method blank sample concentrations were reported with a “<” or U (EPA 2005 Organic Guidelines) qualifier.

Although not part of the non-CLP data review, one or more of the following blank samples (initial calibration blank (ICB) and continuing calibration blank (CCBs) were evaluated when provided in summary form within the laboratory report but confirmation via raw data was not performed. No trace concentrations were detected above the practical quantitation limit in the blank samples for mercury, ICP, and ICP/MS analyses.

Deuterated Monitoring Compounds (DMC) (Surrogates)

The laboratory acceptance criteria for the DMC percent recoveries for the VOC and PCB analyses in the project samples were met. The percent recoveries for one or more SVOC DMCs were below the EPA criterion (30%) in multiple SVOC samples. The samples were re-prepared and reanalyzed (after the holding time had expired) and the surrogate percent recoveries from the reanalysis met the applicable criterion and confirmed the original SVOC data. Therefore, the data presented in the laboratory reports and data summary tables is the original analytical data obtained within EPA recommended holding time. No data were qualified based upon VOC, SVOC and PCB DMC data.

ICP/ICP/MS Interference Check Samples (Metals only)

The interference check sample (ICS) and contract required quantitation limit standard (CRI/CRA) data review is not a QC element for non-CLP evaluation but the ICS and CRI data were evaluated when provided in summary form within the laboratory report but confirmation via raw data review was not performed. The ICP, ICP/MS ICSs met the laboratory acceptance criteria for both solution A and solution AB. The CRI percent recovery for silver, barium and lead by ICP/MS did not meet the acceptance limits specified in the Guidelines in one or more CRI samples. Since Method 6020 does not require CRI analysis and the silver, barium and lead percent recoveries met the EPA 30-150% criteria, no data were qualified.

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Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) were prepared and analyzed at the appropriate frequency for the target compounds and met the relevant acceptance criteria for percent recovery of the spike concentrations, indicating in-control analytical systems with the exceptions noted below.

The VOC LCS percent recoveries met the laboratory acceptance criteria with the exception of iodomethane. Iodomethane exceeded the EPA criterion (150%) for percent recovery in two LCS samples. Therefore, the associated iodomethane data were “R” qualified (unusable).

In all but six cases, the SVOC LCS percent recoveries and relative percent differences (RPDs) that met the relevant criteria. The percent recoveries and/or RPDs for SVOCs 2,4-dimethylphenol, benzoic acid, hexachlorobutadiene, hexachlorocyclopentadiene, 2,4-dinitrophenol, and 3,3-dichlorobenzene did not meet the applicable laboratory or EPA acceptance limits for precision and accuracy; therefore, the associated project sample results are “R” qualified (unusable) due to the potential data bias.

The laboratory met the acceptance criteria for the ICP serial dilutions ($\leq 10\%$ D), between the undiluted and diluted results, where sample results are significantly greater than the MDL ($>50\times$) with the exception of magnesium. The serial dilution for magnesium for sample MW-97-8 exceeded the acceptance limits specified by the laboratory and the Guidelines and was “J” qualified (estimated). A post-digestion spike for magnesium for sample MW-97-8 was not performed. The ICP/MS and mercury serial dilutions and post-digestion spike percent recoveries met the applicable criteria.

Matrix Spike Results

As standard practice, the laboratory reported a shortened list of VOC, SVOC and PCB compounds for MS/MSD data. No qualification was performed based upon this occurrence.

For the VOC analyses, samples MW-EPA-1 and non-project specific samples were used for the MS/MSD. The MS/MSD data met the applicable laboratory and EPA criterion for percent recovery and RPD.

Non-project specific samples served as the MS/MSD sample for the SVOC and PCB analyses. The MS/MSD data met the applicable laboratory and EPA acceptance criteria for percent recovery and RPD.

Sample MW-06-23, MW-06-24, MW-01-1, and MW-97-8 served as the MS/MSD samples for the ICP, ICP/MS and mercury analyses. The MS/MSD data met the applicable laboratory and EPA acceptance criteria for percent recovery and RPD.

General Chemistry Analysis (bicarbonate as CaCO_3 , carbonate as CaCO_3 , chloride, sulfate, fluoride, ammonia as N, nitrate + nitrite as N, and total phosphorus as P)

The general chemistry data were reviewed in accordance with Barr's SOPs included in the QAPP. The ICV, CCV data indicated that the laboratory and method criteria were met for various general chemistry parameters (listed above). Samples MW-01-4, MW-06-23, MW-97-9, MW-06-24, MW-82-4 (MW-02-4 DUP), and non-project specific samples served as the MS/MSD sample for the

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general chemistry analyses. With the exception of ammonia as N, the LCS, MS/MSD data indicated that the laboratory and method criteria were met for all of the general chemistry analyses. The percent recoveries for ammonia for sample MW-01-4 were below the laboratory acceptance criteria but within the EPA 30-150% criteria; therefore, the data were “J” qualified (estimated). Samples MW-06-23, MW-97-2, MW-01-4, MW-97-9, MW-06-24, MW-82-4 (MW-02-4 DUP), and non-project specific samples served as the analytical batch duplicate sample for the general chemistry analyses. The analytical batch duplicate sample data indicated that the laboratory and method criteria were met for all of the general chemistry analyses. No method blank samples or continuing calibration blank samples had concentrations detected above the practical quantitation limit for any of the general chemistry analyses.

Radiochemistry Analysis (Gross alpha, Gross Beta, Radium 226 and Radium 228)

Results were reviewed in general accordance with the analytical methods 900.0, 903.1, and 904.0 selected by ACZ. Although these methods were not specified in the QAPP, the data were not qualified and should be deemed acceptable for the project. Samples MW-97-1, MW-97-8, MW-06-10, and non-project specific samples served as the MS/MSD sample for one or more of the radiochemistry methods. LCS and MS/MSDs met the laboratory acceptance criteria for precision and accuracy except where noted below. The percent recovery for one MS sample (MW-97-8) was below the laboratory acceptance limits for gross alpha analysis; therefore, the associated data was “J” qualified (estimated) because the percent recoveries were below the laboratory acceptance criteria but within the EPA 30-150% criteria. Samples MW-06-24, MW-02-3, MW-01-1, MW-06-5, and non-project specific samples served as the analytical batch duplicate samples for this data package. The gross alpha RPD for sample MW-02-3, the radium 226 and 228 RPDs for one or more non-project specific samples exceeded the laboratory acceptance limits for precision. However, no gross alpha and radium 226 and 228 data were qualified because the associated sample concentrations were near the practical quantitation limit which can exaggerate the deviation of the RPD. One or more method blank samples had detectable concentrations above the practical quantitation limit (i.e. lower limit of detection (LLD) for gross alpha and gross beta; however, per guidance from the laboratory (ACZ), method blank concentrations less than two times the practical quantitation limit are not controlled; therefore, no qualification of the data was deemed necessary.

Field Duplicate Samples

Field duplicate samples were collected and analyzed as required by the QAPP. Sample MW-82-4 (MW-02-4 DUP) served as the field duplicate sample for this data package. Field duplicate samples met the RPD criteria (<30% for aqueous matrices) as specified in the QAPP with the exception of gross alpha, radium 226 and 228, toluene (VOC), phenol, and di-n-butylphthalate (SVOC). Sample concentrations near the practical quantitation limit can exaggerate the deviation of the RPD. Since the gross alpha, radium 226 and 228 sample concentrations were within five times the practical quantitation limit, no qualifiers were applied to the data based upon the RPD of the field duplicate sample results. The toluene, phenol and di-n-butylphthalate data were not qualified because the associated sample concentrations were non-detect after the application of data qualifiers based upon the presence of toluene, phenol and di-n-butylphthalate in the associated blank sample(s).

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Laboratory Report / Batch: K0804207 and K0804208**

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Field Blank Samples

Field blank samples were collected and analyzed at the required frequency as specified in the QAPP. The field blank sample (MW-60-1) was collected in the following manner: The sample equipment (i.e. pump, tubing and/or hoses) were rinsed with analyte-free, deionized water and the rinse water was poured into the appropriate sample containers for analysis. Field blank sampling procedures and protocols were determined to be appropriate and were collected and analyzed at the required frequency as specified in the QAPP. No target analytes were present above the MDL for VOCs, SVOCs, and PCBs or above the practical quantitation limit (inorganics, radiochemistry, general chemistry) in the field blank sample associated with this data package except where noted below. The field blank sample also had detections of metals and radiochemistry parameters above the practical quantitation limit and trace concentrations of VOCs and SVOCs were present above the MDL. The field blank sample results are presented in Appendix O-4b. Associated sample concentrations within five times the associated field blank sample concentrations were reported with a “<” or U (EPA 2005 Organic and 2004 Inorganic Guidelines) qualifier with the exception of the radium 228 analysis. Due to the nature of the analyses, the radiochemistry field blank sample data were used to evaluate if any gross system contamination occurred. No qualifiers were applied to the samples based upon the field blank sample data for the radiochemistry analyses.

Trip Blank Samples

Trip blank samples were collected and analyzed at the required frequency as specified in the QAPP. Samples MW-65-1, MW-65-2, and MW-65-3 served as the trip blank samples collected and analyzed as part of this data package. Trace concentrations of carbon disulfide and toluene were detected above the method detection limit in trip blank sample MW-65-1. Associated sample concentrations within five times the associated trip blank sample concentrations were reported with a “<” or U (EPA 2005 Organic Guidelines) qualifier. No other target VOC compounds were present above the method detection limit in the trip blank samples.

Discussion

The laboratory reported difficulty in achieving adequate resolution of one or more Aroclors in multiple PCB samples due to sample matrix and the presence of non-target background components. Therefore, the method detection limit (MDL) was elevated for the corresponding Aroclors in the associated samples. This affected samples MW-97-9, MW-01-1, MW-97-8, MW-01-4, and one method blank sample in this data package. No data were qualified based upon this occurrence.

Data Validation Report

Laboratory Report / Batch: K0804324 and K0804349

Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date of Data Validation Report: September 17, 2008

The validation of the Columbia Analytical Services, Inc. (CAS, Kelso, Washington) and ACZ Laboratories, Inc. (ACZ, Steamboat Springs, Colorado) laboratory data for the volatile, semivolatile, polychlorinated biphenyls, metals, general chemistry and radiochemistry analyses of the samples collected in 2008 to support the Phase 1 - RCRA Facility Investigation is complete as detailed below.

The analytical data were reviewed in accordance Barr's Data Validation SOPs which are based upon the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Organic and Inorganic Data Review (EPA 2005, 2004) and in general accordance with U.S. EPA Methods 300.0, 350.1, 353.2, 365.3, 8082, 8260, 8270, 900.0 modified, 903.1 modified, and 904.0 modified, and Standard Method 2320B as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008).

In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Instrument performance checks - GC/MS and ICP/MS Tuning
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Blank analysis
- Deuterated monitoring compounds
- ICP/ICP/MS interference check samples
- Laboratory control samples
- Internal standards
- Matrix spike results
- Trip blank samples

The results for six groundwater samples are contained in this laboratory report. The samples are identified as follows:

MW-06-21	MW-01-5	MW-06-9
MW-97-6	MW-06-8	PW-99-1
MW-65-4 (Trip Blank)		

The samples were analyzed for volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), polychlorinated biphenyls (PCBs), total metals (ICP/ICP/MS/mercury), general chemistry parameters (bicarbonate as CaCO₃, carbonate as CaCO₃, chloride, sulfate, fluoride, ammonia as N, nitrate + nitrite as N, and total phosphorus as P), and radiochemistry parameters (gross alpha, gross beta, radium 226, and radium 228) as required using the methods detailed in the QAPP (Barr, May 2006).

**Data Validation Report
Laboratory Report / Batch: K0804324 and K0804349**

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Date Data Validation Report: September 17, 2008

Alternative methods other than those specified in the QAPP were used for the fluoride, gross alpha and beta, and radium 226 and 228 analyses. While a deviation from the QAPP, no adverse effects on data quality were determined.

Overall Assessment

The QAPP specified that 10% of the project data be reviewed using CLP NFG (Guidelines) and the remaining data be reviewed in accordance with Barr's Data Validation Standard Operating Procedures (SOPs). Because 90% of the data was correspondingly validated using non-CLP criteria, the laboratory criterion were used for consistency, except where outliers exceeded 30-150% EPA quality control criteria. In summary, because the Guidelines have limits which are often different than, and in certain cases are more stringent than, the limits specified by the analytical methods and the laboratory generated limits; therefore, the end result may be slightly different data qualification.

The 2-chloroethylvinylether VOC results from groundwater, field blank and trip blank samples were qualified with an "R" indicating unusable data because of the known degradation of 2-chloroethylvinylether in the hydrochloric acid sample preservative.

In accordance with the Guidelines, sample concentrations greater than the method detection limit (MDL) and below the practical quantitation limit for the organic analyses are "J" qualified indicating estimated concentrations. The non-detect concentrations are presented as "<MDL" in the data tables.

During the data validation process of the VOC data, a large peak was identified at 17.8 minutes in the chromatography for multiple VOC samples. Some of the raw data for the VOC analysis indicated this peak was 1,2,3-trichlorobenzene and some of the raw data did not identify or quantify this peak. The laboratory was contacted and after an investigation indicated that their surrogate spike solution used for the 8260 analysis had butylated hydroxytoluene (BHT) present as a contaminant. BHT has a similar retention time to 1,2,3-trichlorobenzene and the computer software had mistakenly identified BHT as the target VOC. The laboratory reviewed the chromatography against the reported results and verified that the correct analyte was reported and that the laboratory analysts properly followed Section 7.6 of Method 8260B and Section 11.3 of the laboratory Standard Operating Procedure (included in the QAPP). The data presented in the data summary tables represent the final VOC data. No VOC data were qualified based upon this occurrence and all data should be considered valid as presented.

The data are useable as reported and qualified and fulfill the data quality objectives (DQOs) for sensitivity, accuracy and precision as specified in the QAPP. The following sections provide specific validation details.

Holding Times, Preservation and Storage

The samples were collected May 17th through 18th, 2008, packed on ice and sent to the laboratories (CAS, located in Kelso, Washington and ACZ, located in Steamboat Springs, CO) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 0.0 to 7.1 °C

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Date Data Validation Report: September 17, 2008

upon receipt at the laboratories. The samples were stored at 4 °C until analysis. No qualifiers were assigned due to holding times, preservation, or storage issues.

Instrument Performance Checks – GC/MS & ICP/MS Tuning (VOC, SVOC and ICP/MS Metals)

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

The gas chromatography/mass spectrometry (GC/MS) tuning performed as part of the VOC and SVOC analyses met the applicable acceptance criteria for frequency, mass abundance, and mass ratios.

The tuning aspects of the inductively coupled plasma mass spectrometer (ICP/MS) met the applicable acceptance criteria for mass resolution and the percent relative standard deviation (%RSD) for the five consecutive replicates at <5%.

Initial Calibration and Initial Calibration Verification

During the data evaluation process of the initial calibration data for VOC analysis, it was noted that the relative response factors (RRFs) for acrolein, acrylonitrile and vinyl acetate met the laboratory specific acceptance limits but did not meet the limits specified in the Guidelines. Acrolein and acrylonitrile are documented as not being particularly stable in the analytical environment and a separate method has been developed for their analysis. Due to these considerations, no qualifiers were applied for poor RRFs observed for these parameters during the calibration of the instrument. Similarly, vinyl acetate is rapidly hydrolyzed to acetaldehyde and highly volatile. Due to degradation by hydrolysis and susceptibility to polymerization, no qualifiers were applied due to variability in the RRFs observed for this compound during the calibration of the instrument.

Because the laboratory VOC and SVOC ICAL percent relative standard deviation (%RSD) and RRF criteria differ from, and in some cases are less stringent than, the criterion published in the Guidelines, the data were evaluated by using the Guideline criterion for the system performance check compounds (SPCCs). The remaining VOC and SVOC compounds were evaluated using the laboratory acceptance criterion during the ICAL data evaluation. The VOC initial calibration (ICAL) events met relevant acceptance criteria including the RRFs and %RSD for the volatile target compounds including the associated deuterated monitoring compounds (DMCs or surrogates).

The SVOC initial calibration events met relevant acceptance criteria for individual and average RRFs for target SVOCs and DMCs, and the %RSD. The laboratory generated a combination of initial calibration curves including averaged and quadratic curves for the target SVOC compounds. Recalculation of final results were not verified when quadratic quantitation was employed.

The PCB ICALs and secondary source calibration verifications (SSCVs) met the established laboratory acceptance criterion.

The ICP and ICP/MS initial calibrations were performed at the appropriate frequency and run order, and met minimum percent recovery (%R) acceptance criteria for each of the target metals. Mean concentrations from 2 replicate exposures were reported for ICP and from 3 replicate exposures for

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ICP/MS as required. Initial calibration verification (ICV) criterion of $\pm 10\%$ (of true value) for the target analytes was met during the initial calibration events.

The cold vapor mercury initial calibration events met the acceptance criterion of a correlation coefficient > 0.995 using a minimum of at least four calibration standard solutions. The ICV criterion of 20% of the true value was also met for the cold vapor mercury analysis.

Continuing Calibration Verification

The continuing calibration verification samples (CCVs) associated with the VOC analysis and the associated DMCs met the criteria for frequency, the minimum RRF and the %D (as compared to the associated initial calibration standard (s)) with the exception of acrolein, vinyl acetate and 2-chloroethylvinylether as previously discussed. No qualification was applied to acrolein and vinyl acetate (see ICAL discussion for details). The % Difference in the VOC CCAL did not meet the laboratory acceptance criteria for 2-chloroethylvinylether. No additional qualification was applied to the associated project samples, because 2-chloroethylvinylether was already “R” qualified (unusable) due to the sample preservative. However, 2-chloroethylvinylether was “J” qualified (estimated) in the associated method blank sample based upon this deviation. Closing VOC CCV data was not provided by the laboratory as it is not a requirement of EPA Method 8260. While this is a deviation from the Guidelines, no significant deviations in opening CCVs were observed and this procedure meets method criteria.

The SVOC CCV was performed at the appropriate frequency and met relevant opening CCV acceptance criteria including minimum RRF for target SVOCs and DMCs, and the % Difference and % Drift (from the associated initial calibration standard(s)). Closing SVOC CCV data were not provided by the laboratory as it is not a requirement of EPA Method 8270. While this is a deviation from the Guidelines, no significant deviations in opening SVOC CCVs were observed and this procedure meets method criteria.

The CCVs for the analysis of PCBs were analyzed at the appropriate frequency and yielded acceptable percent differences of less than 20% for Aroclors 1016 and 1260, indicating the analysis was in control.

The CCVs for the ICP and ICP/MS analyses met data validation criteria for frequency, run order and acceptable percent recoveries were achieved within the analytes’ method detection limit and the documented upper linear range of the instrument. Mean concentrations from the 2 (for ICP) and 3 (for ICPMS) replicate exposures were reported as required.

The CCVs associated with the cold vapor mercury analyses met the established acceptance criteria for frequency and the calculated percent recovery of 20% of the true value.

The Contract Required Quantitation Limit (CRQL) Check Standard (CRI) sample data for ICP, ICP/MS, and mercury did not meet the data validation criteria for frequency, run order and/or percent recovery as dictated in the Guidelines. The CRI samples reported in the data packages were analyzed at the beginning of the analytical sequence(s). The percent recoveries for ICP and mercury met the percent recovery criterion established in the Guidelines. The CRI percent recovery for beryllium, lead, selenium, and silver by ICP/MS did not meet the acceptance limits specified in the Guidelines

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in one or more CRI samples. Since Methods 6010 and 6020 do not require CRI analysis, no data were qualified.

Blank Analysis

As stated in Section B10.3.2 of the QAPP, when project sample concentrations are “<” (less than) five times the associated blank sample concentrations, thus suspected false positives, they are shown at the concentration reported in the sample, with a “<” qualifier with the exception of the radiochemistry analyses detailed below.

One method (or preparation) blank sample was prepared during the analysis of VOC. Trace concentrations of 1,2,3-trichlorobenzene and naphthalene were present above the method detection limits in the laboratory method blank sample. However, no data were qualified because no 1,2,3-trichlorobenzene and naphthalene were detected above the method detection limit during the VOC analysis.

For the SVOC analysis, one method blank sample was prepared and analyzed as required. Trace concentrations of benzoic acid and di-n-butylphthalate were present above the method detection limits in the laboratory method blank sample. Associated sample concentrations within five times the associated method blank sample concentrations were assigned a “<” qualifier as described above. This affected samples MW-06-21, MW-01-5, MW-06-9, MW-97-6, MW-06-8, and PW-99-1.

The method blank samples associated with the PCB analysis were prepared and analyzed as required. No PCBs were present above the method detection limits in the method blank sample. Instrument blank samples were also analyzed at the appropriate frequency and no presence of target analytes was indicated in the instrument blank samples.

The ICP, ICP/MS and mercury analyses method blank samples, initial calibration blank (ICB) and continuing calibration blank samples (CCBs) were prepared and analyzed at the appropriate frequency and met acceptance criteria for proper run order. No target metal analytes were present in the method blanks, ICBs or CCBs above the laboratory practical quantitation limit for the ICP, ICP/MS, and mercury analysis.

Deuterated Monitoring Compounds (Surrogates)

The laboratory acceptance criteria for the deuterated monitoring compounds (DMCs) percent recoveries for the VOC, SVOC, and PCB analyses in the samples were met with the exceptions noted below. Two SVOC DMCs were below the EPA criterion (30%) in sample PW-99-1; therefore, the associated SVOC compounds were “R” qualified (unusable). No other data were qualified based upon VOC, SVOC and PCB DMC data.

ICP/ICP/MS Interference Check Samples (Metals only)

The ICP and ICP/MS interference check samples (ICS) were analyzed at the appropriate frequency and in the correct order during the analysis of the project samples. Acceptable results of $\pm 20\%$ of the true value were obtained for both solution A and solution AB.

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Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) were prepared and analyzed at the appropriate frequency for the target compounds and met the relevant acceptance criteria for percent recovery of the spike concentrations, indicating in-control analytical systems with the exceptions noted below.

In all but three cases, the SVOC LCS had percent recoveries and relative percent differences (RPDs) that met the relevant criteria. The percent recoveries and/or RPDs for SVOCs hexachlorobutadiene, hexachlorocyclopentadiene, and 3,3'-dichlorobenzidine did not meet the applicable laboratory and EPA acceptance limits for precision and accuracy; therefore, the associated project sample results are "R" qualified (unusable) due to the potential data bias.

The laboratory met the acceptance criteria for the ICP serial dilutions ($\leq 10\%$ D), between the undiluted and diluted results, where sample results are significantly greater than the MDL ($>50\times$). The ICP/MS and mercury serial dilutions and post-digestion spike percent recoveries met the applicable criteria.

Internal Standards (VOC, SVOC and ICP/MS Analyses Only)

The VOC and SVOC internal standard area count criteria of 50% to 200% and the retention time (RT) of ± 30 seconds from the associated ICAL or opening CCV 12-hour standards were met.

The ICP/MS internal standard data were acceptable. The ICP/MS internal standard data were acceptable. The internal standards displayed percent relative intensity (%RI) within the 60-125% range.

Matrix Spike Results

As standard practice, the laboratory reported a shortened list of VOC, SVOC and PCB compounds for MS/MSD data. No qualification was performed based upon this occurrence.

For the VOC, SVOC and PCB analyses, sample PW-99-1 served as the MS/MSD sample. The MS/MSD data met the applicable laboratory and EPA 30-150 % acceptance criteria for percent recovery and RPD ($<30\%$) with the exception of 2-chloroethylvinylether (VOC). The MS/MSD percent recoveries were 0% due to the hydrochloric acid sample preservative. No additional qualification was deemed necessary because the data were already "R" qualified (unusable) as previously discussed.

Sample PW-99-1 served as the MS/MSD sample for the ICP, ICP/MS and mercury analyses. The MS/MSD data met the applicable laboratory and EPA 30-150% acceptance criteria for percent recovery and RPD ($<20\%$). The MS percent recovery for manganese for sample PW-99-1 was not applicable because the associated sample concentration was greater than four times the spike concentration thereby preventing accurate evaluation of the spike recovery.

General Chemistry Analysis (bicarbonate as CaCO₃, carbonate as CaCO₃, chloride, sulfate, fluoride, ammonia as N, nitrate + nitrite as N, and total phosphorus as P)

No Guideline criteria exist for bicarbonate as CaCO₃, carbonate as CaCO₃, chloride, sulfate, fluoride, ammonia as N, nitrate + nitrite as N, and total phosphorus as P analysis. The general

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chemistry data were reviewed in accordance with Barr's SOPs included in the QAPP. The ICV and CCV data indicated that the laboratory and method criteria were met for the various general chemistry analyses. Sample PW-99-1 served as the MS/MSD and analytical batch duplicate sample for the general chemistry analyses. The LCS, MS/MSD, and analytical batch duplicate data indicated that the applicable laboratory and method criteria were met for all of the general chemistry analyses with the exception of ammonia. The ammonia for sample PW-99-1 was "J" qualified (estimated) because the MS and MSD percent recoveries were below the laboratory acceptance criteria. No other general chemistry data were qualified based upon MS/MSD data. No method blank and continuing calibration blank samples had concentrations detected above the practical quantitation limit for the general chemistry analyses.

Radiochemistry Analysis (Gross alpha, Gross Beta, Radium 226 and Radium 228)

Results were reviewed in general accordance with the analytical methods 900.0, 903.1, and 904.0 selected by ACZ. Although these methods were not specified in the QAPP, the data were not qualified and should be deemed acceptable for the project. Sample MW-06-21 and non-project specific samples served as the MS/MSD sample for one or more of the radiochemistry methods. LCS and MS/MSDs met the laboratory acceptance criteria for precision and accuracy except where noted below. The MS percent recovery gross alpha analysis for sample MW-06-21 was below the laboratory acceptance limits; therefore, the associated data were "J" qualified (estimated). Samples PW-99-1 and non-project specific samples served as the analytical batch duplicate samples for this data package. The gross alpha, gross beta and radium 226 RPDs for sample PW-99-1 and non-project specific samples exceeded the laboratory acceptance limits for precision. However, no gross alpha, gross beta, and radium 226 data were qualified because the associated sample concentrations were near the practical quantitation limit which can exaggerate the deviation of the RPD. The method blank samples had no detectable concentrations above the practical quantitation limit (i.e. lower limit of detection (LLD) for the target radiochemistry analytes.

Trip Blank Samples

Trip blank samples were collected and analyzed at the required frequency as specified in the QAPP. Sample MW-65-4 served as the trip blank sample collected and analyzed as part of this data package. Trace concentrations of dibromochloromethane and bromoform were detected above the method detection limit in trip blank sample MW-65-4. However, no data were qualified because no associated concentrations in the project samples were detected above the method detection limit during the VOC analysis. No other target VOC compounds were present above the method detection limit in the trip blank sample.

Discussion

The laboratory reported difficulty in achieving adequate resolution of one or more Aroclors in multiple PCB samples due to sample matrix and the presence of non-target background components. Therefore, the method detection limit (MDL) was elevated for the corresponding Aroclors in the associated samples. This affected samples MW-06-21, MW-01-5, MW-06-9, MW-97-6, and MW-06-8, and one method blank sample in this data package. No data were qualified based upon this occurrence.

Data Validation Report

Laboratory Report / Batch: K0804414 and K0804416

Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date of Data Validation Report: August 28, 2008

The validation of the Columbia Analytical Services, Inc. (CAS, Kelso, Washington) and ACZ Laboratories, Inc. (ACZ, Steamboat Springs, Colorado) laboratory data for the volatile, semivolatile, total and dissolved metals, general chemistry and radiochemistry analyses of the samples collected in 2008 to support the Phase 1 - RCRA Facility Investigation is complete as detailed below.

The analytical data were reviewed in accordance Barr's Data Validation SOPs which are based upon the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Inorganic Data Review (EPA 2004) and in general accordance with U.S. EPA Methods 300.0, 350.1, 353.2, 365.3, 900.0 modified, 903.1 modified, and 904.0 modified, and Standard Method 2320B as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008).

In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Summary calibration information
- Blank analysis
- Deuterated monitoring compounds (Surrogates)
- ICP/ICP/MS interference check samples (metals only)
- Laboratory control samples
- Matrix spike results
- Field duplicate samples
- Field blank samples
- Trip blank samples

The results for fifteen surface water samples are contained in this laboratory report. The samples are identified as follows:

SW-1	SW-3	SW-4
SW-5	SW-6	SW-8
SW-10	SW-11	SW-12
SW-13	SW-14	SW-15
SW-16	SW-17	SW-20
SW-100 (SW-4 DUP)	SW-120 (Field blank)	SW-140 (Trip blank)
SW-141 (Trip blank)	SW-142 (Trip blank)	SW-143 (Trip blank)
SW-144 (Trip blank)		

The samples were analyzed for volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), total and dissolved metals (ICP/ICP/MS/mercury), general chemistry parameters (bicarbonate as CaCO₃, carbonate as CaCO₃, chloride, sulfate, fluoride, ammonia as N, nitrate + nitrite as N, and total phosphorus as P) and radiochemistry parameters (gross alpha, gross beta, radium 226, and radium 228) as required using the methods detailed in the QAPP (Barr, May 2006).

**Data Validation Report
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Alternative methods other than those specified in the QAPP were used for the fluoride, gross alpha and beta, and radium 226 and 228 analyses. While a deviation from the QAPP, no adverse effects on data quality were determined.

Overall Assessment

The QAPP specified that 10% of the project data be reviewed using CLP NFG (Guidelines) and the remaining data be reviewed in accordance with Barr's Data Validation Standard Operating Procedures (SOPs). Because 90% of the data was correspondingly validated using non-CLP criteria, the laboratory criterion were used for consistency, except where outliers exceeded 30-150% EPA quality control criteria. In summary, because the Guidelines have limits which are often different than, and in certain cases are more stringent than, the limits specified by the analytical methods and the laboratory generated limits; therefore, the end result may be slightly different data qualification.

The 2-chloroethylvinylether VOC results from surface water, field blank and trip blank samples were qualified with an "R" indicating unusable data because of the known degradation of 2-chloroethylvinylether in the hydrochloric acid sample preservative.

In accordance with the Guidelines, sample concentrations greater than the method detection limit (MDL) and below the practical quantitation limit for the organic analyses are "J" qualified indicating estimated concentrations. The non-detect concentrations are presented as "<MDL" in the data tables.

During the data validation process of the VOC data, a large peak was identified at 17.8 minutes in the chromatography for multiple VOC samples. Some of the raw data for the VOC analysis indicated this peak was 1,2,3-trichlorobenzene and some of the raw data did not identify or quantify this peak. The laboratory was contacted and after an investigation indicated that their surrogate spike solution used for the 8260 analysis had butylated hydroxytoluene (BHT) present as a contaminant. BHT has a similar retention time to 1,2,3-trichlorobenzene and the computer software had mistakenly identified BHT as the target VOC. The laboratory reviewed the chromatography against the reported results and verified that the correct analyte was reported and that the laboratory analysts properly followed Section 7.6 of Method 8260B and Section 11.3 of the laboratory Standard Operating Procedure (included in the QAPP). The data presented in the data summary tables represent the final VOC data. No VOC data were qualified based upon this occurrence and all data should be considered valid as presented.

The data are useable as reported and qualified and fulfill the data quality objectives (DQOs) for sensitivity, accuracy and precision as specified in the QAPP. The following sections provide specific validation details.

Holding Times, Preservation and Storage

The samples were collected May 19th through 23rd, 2008, packed on ice and sent to the laboratories (CAS, located in Kelso, Washington and ACZ, located in Steamboat Springs, CO) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of -1.0 to 5.4

**Data Validation Report
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°C upon receipt at the laboratories. The samples were stored at 4 °C until analysis. No qualifiers were assigned due to holding times, preservation, or storage issues.

Summary Calibration Information

The initial calibration (ICAL), continuing calibration (CCAL), initial calibration verification (ICV) and continuing calibration verifications (CCVs) are not QC elements for non-CLP data evaluation. Since the calibration data were provided in summary form within the laboratory report, the data, where available, were reviewed as part of the non-CLP data evaluation process but confirmation via raw data review was not performed.

During the data evaluation process of the initial calibration data for VOC analysis, it was noted that the relative response factors (RRFs) for acrolein, acrylonitrile and vinyl acetate met the laboratory specific acceptance limits but did not meet the limits specified in the Guidelines. Acrolein and acrylonitrile are documented as not being particularly stable in the analytical environment and a separate method has been developed for their analysis. Due to these considerations, no qualifiers were applied for poor RRFs observed for these parameters during the calibration of the instrument. Similarly, vinyl acetate is rapidly hydrolyzed to acetaldehyde and highly volatile. Due to degradation by hydrolysis and susceptibility to polymerization, no qualifiers were applied due to the variability in the RRFs observed for this compound during the calibration of the instrument.

Because the laboratory ICAL percent relative standard deviation (%RSD) and RRF criteria differ from, and in some cases are less stringent than, the criterion published in the Guidelines, the data were evaluated by using the Guideline criterion for the (SPCC) compounds. The remaining VOC and SVOC compounds were evaluated using the laboratory acceptance criterion during the ICAL data evaluation. The % Difference in one VOC CCAL did not meet the laboratory acceptance criteria for 2-chloroethylvinylether. The associated method blank sample data were “J” estimated; however, the no additional qualification was applied to the associated project samples, because 2-chloroethylvinylether was already “R” qualified (unusable) based upon the hydrochloric acid sample preservative. The % Drift and % Difference for average and quadratic calibrations in a second VOC CCAL did not meet the laboratory acceptance criteria for carbon disulfide and bromomethane. The associated carbon disulfide and bromomethane sample results have been assigned the “J” qualifier.

The SVOC ICAL data meets both the laboratory criteria and the criteria published in the Guidelines and the SVOC CCVs met the laboratory CCV criterion for % Drift and % Difference for average and quadratic calibrations; therefore, no SVOC data require qualification based upon the ICAL or CCAL results.

The ICP, ICP/MS and cold vapor mercury ICVs and CCVs met the established laboratory acceptance criterion.

Blank Analysis

As stated in Section B10.3.2 of the QAPP, when project sample concentrations are “<” (less than) five times the associated blank sample concentrations, thus suspected false positives, they are shown

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at the concentration reported in the sample, with a “<” qualifier with the exception of the radiochemistry analysis detailed below.

No trace concentrations of ICP, ICP/MS, and mercury were present in the laboratory method (or preparation) blank samples. Trace concentrations of toluene, 1,2,3-trichlorobenzene, and naphthalene (VOCs) and of diethylphthalate, di-n-butylphthalate, fluoranthene, and butylbenzylphthalate (SVOCs) were present above the method detection limits in one or more laboratory method blank samples. Associated sample concentrations within five times the associated method blank sample concentrations were assigned a “<” qualifier as described above.

Although not part of the non-CLP data review, one or more of the following blank samples (initial calibration blank (ICB) and continuing calibration blank (CCBs) were evaluated when provided in summary form within the laboratory report but confirmation via raw data was not performed. No trace concentrations were detected above the practical quantitation limit in the blank samples for mercury, ICP, and ICP/MS analyses.

Deuterated Monitoring Compounds (DMC) (Surrogates)

The laboratory acceptance criteria for the DMC percent recoveries for the VOC analyses in the project samples were met. One SVOC DMC percent recovery fell below the EPA 30% criterion in sample SW-11; therefore, the associated SVOC compounds were “R” qualified (unusable). No other data were qualified based upon VOC and SVOC DMC data.

ICP/ICP/MS Interference Check Samples (Metals only)

The interference check sample (ICS) and contract required quantitation limit standard (CRI/CRA) data review is not a QC element for non-CLP evaluation but the ICS and CRI data were evaluated when provided in summary form within the laboratory report but confirmation via raw data review was not performed. The ICP, ICP/MS ICSs met the laboratory acceptance criteria for both solution A and solution AB. The CRI percent recovery for selenium by ICP/MS did not meet the acceptance limits specified in the Guidelines. Since Method 6020 does not require CRI analysis and the selenium percent recovery met the EPA 30-150% criteria, no data were qualified.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) were prepared and analyzed at the appropriate frequency for the target compounds and met the relevant acceptance criteria for percent recovery of the spike concentrations, indicating in-control analytical systems with the exceptions noted below.

In all but seven cases, the SVOC LCS percent recoveries and relative percent differences (RPDs) met the relevant criteria. The percent recoveries and/or RPDs for SVOCs hexachloroethane, 2,4-dimethylphenol, benzoic acid, 4-chloroaniline, hexachlorobutadiene, hexachlorocyclopentadiene, and 3,3'-dichlorobenzidine did not meet the applicable laboratory and EPA criterion for precision and accuracy. Therefore, the associated project sample results are “R” qualified (unusable) due to the potential data bias.

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The laboratory met the acceptance criteria for the ICP serial dilutions ($\leq 10\%$ D), between the undiluted and diluted results, where sample results are significantly greater than the method detection limit (MDL, $>50\times$). If the 10%D criterion is exceeded, a post-digestion spike is analyzed to evaluate whether any interferences exist. The ICP/MS and mercury serial dilutions and post-digestion spike percent recoveries met the applicable criteria.

Matrix Spike Results

As standard practice, the laboratory reported a shortened list of VOC and SVOC compounds for MS/MSD data. No qualification was performed based upon this occurrence.

For the VOC analyses, samples SW-13 and SW-10 were used for the MS/MSD. The MS/MSD data met the applicable laboratory and EPA criterion for percent recovery and relative percent difference (RPD).

Sample SW-13 and non-project specific samples served as the MS/MSD sample for the SVOC analyses. The MS/MSD data met the applicable laboratory and EPA acceptance criteria for percent recovery and RPD.

Sample SW-13 served as the MS/MSD sample for the ICP, ICP/MS and mercury analyses. The MS/MSD data met the applicable laboratory and EPA acceptance criteria for percent recovery and RPD.

General Chemistry Analysis (bicarbonate as CaCO_3 , carbonate as CaCO_3 , chloride, sulfate, fluoride, ammonia as N, nitrate + nitrite as N, and total phosphorus as P)

The general chemistry data were reviewed in accordance with Barr's SOPs included in the QAPP. The ICV, CCV data indicated that the laboratory and method criteria were met for various general chemistry analyses (listed above). Sample SW-13 served as the MS/MSD and the analytical batch duplicate sample for the general chemistry analyses. With the exception of chloride, the LCS, MS/MSD, and analytical batch duplicate sample data indicated that the laboratory and method criteria were met for all of the general chemistry analyses. The MS percent recovery for chloride for sample SW-13 exceeded the laboratory acceptance criteria but no data were qualified because the associated MSD, LCS and RPDs met the laboratory percent recovery criterion. Chloride was present above the practical quantitation limit in one method blank sample; however, no data were qualified because the associated project sample concentrations were greater than five times the method blank sample concentration. No other general chemistry parameters were present above the practical quantitation limit in the remaining method blank samples. No continuing calibration blank samples had concentrations detected above the practical quantitation limit for the general chemistry analyses.

Radiochemistry Analysis (Gross alpha, Gross Beta, Radium 226 and Radium 228)

Results were reviewed in general accordance with the analytical methods 900.0, 903.1, and 904.0 selected by ACZ. Although these methods were not specified in the QAPP, the data were not

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qualified and should be deemed acceptable for the project. Samples SW-1, SW-6, SW-13, and non-project specific samples served as the MS/MSD sample for one or more of the radiochemistry methods. LCS and MS/MSDs met the laboratory acceptance criteria for precision and accuracy except where noted below. The percent recoveries for one or more MS samples were below the laboratory and/or EPA acceptance limits for gross alpha, gross beta, and radium 228. The associated gross alpha results for SW-6 were “J” qualified (estimated) because the percent recoveries were below the laboratory acceptance criteria but were within the EPA 30-150% criteria. The associated gross beta results for SW-1 were “R” qualified (unusable) because the percent recoveries were below the laboratory and the EPA percent recovery criterion. One MS percent recovery exceeded the laboratory and the EPA criterion for radium 228. Since the sample was a non-project specific sample, no radium 228 data were qualified. Samples SW-3, SW-5, SW-13, SW-20 and non-project specific samples served as the analytical batch duplicate samples for this data package. The gross alpha RPDs for samples SW-3 and SW-5, the radium 226 RPD for sample SW-20, the radium 226 and 228 RPDs for sample SW-13, and the radium 228 RPD for a non-project specific sample exceeded the laboratory acceptance limits for precision. However, no gross alpha and radium 226 and 228 data were qualified because the associated sample concentrations were near the practical quantitation limit which can exaggerate the deviation of the RPD. The method blank samples had no detectable concentrations above the practical quantitation limit (i.e. lower limit of detection (LLD) for the target radiochemistry analytes.

Field Duplicate Samples

Field duplicate samples were collected and analyzed in accordance with the frequency and parameters specified in the QAPP. Sample SW-100 (SW-4 DUP) served as the field duplicate sample for this data package. Field duplicate water samples met the RPD criteria (30%) as specified in the QAPP with the exception of carbonate as CaCO₃, gross alpha and beta, and radium 226 and 228. Since the deviations were slight (<5%), no qualifiers were applied to the carbonate as CaCO₃ and gross beta data based upon field duplicate sample results. Additionally, sample concentrations near the practical quantitation limit can exaggerate the RPD. Therefore, no gross alpha and radium 226 and 228 data were qualified because the sample concentrations were within five times the practical quantitation limit.

Field Blank Samples

Field blank samples were collected and analyzed as required in the QAPP. The field blank sample (SW-120) was collected in the following manner: The sample equipment (i.e. tubing and/or hoses) was rinsed with analyte-free, deionized water and the rinse water was poured into the appropriate sample containers for analysis. Field blank sampling procedures and protocols were determined to be appropriate and were collected and analyzed at the required frequency as specified in the QAPP. No target analytes were present above the MDL for VOCs and SVOCs or above the practical quantitation limit (inorganics, radiochemistry and general chemistry) in the field blank sample associated with this data package except where noted below. The field blank sample had detections of total and dissolved metals and radiochemistry parameters present above the practical quantitation limit and trace concentrations of VOCs and SVOCs above the MDL. The field blank sample results are presented in Appendix O-4b. Associated sample concentrations within five times the associated field blank sample concentrations were assigned a “<” qualifier as described above with the exception of gross beta analysis. Due to the nature of the analyses, the radiochemistry field blank

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sample data were used to evaluate if any gross system contamination occurred. No qualifiers were applied to the samples based upon the field blank sample data for the radiochemistry analyses.

Trip Blank Samples

Five trip blank samples were collected and analyzed at the required frequency as specified in the QAPP. Samples SW-140, SW-141, SW-142, SW-143, and SW-144 served as the trip blank samples collected and analyzed as part of this data package. Trace concentrations of toluene, carbon disulfide, 1,2,3-trichlorobenzene, and chloromethane were detected above the method detection limit in one or more of the trip blank samples. Associated sample concentrations within five times the associated trip blank sample concentrations were assigned a “<” qualifier as described above. No other target VOC compounds were present above the method detection limit in the trip blank samples.

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The validation of the Columbia Analytical Services, Inc. (CAS, Kelso, Washington) and ACZ Laboratories, Inc. (ACZ, Steamboat Springs, Colorado) laboratory data for the volatile, semivolatile, PCB, metals, general chemistry and radiochemistry analyses of the samples collected in 2008 to support the Phase 1 - RCRA Facility Investigation is complete as detailed below.

The analytical data were reviewed in accordance Barr's Data Validation SOPs which are based upon the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Organic and Inorganic Data Review (EPA 2005, 2004) and in general accordance with U.S. EPA Methods 300.0, 350.1, 353.2, 365.3, 900.0 modified, 903.1 modified, 904.0 modified, and Standard Method 2320B as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008).

In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Summary calibration information
- Blank analysis
- Deuterated monitoring compounds (Surrogates)
- ICP/ICP/MS interference check samples (metals only)
- Laboratory control samples
- Matrix spike results
- Field duplicate samples
- Trip blank samples

The results for twenty groundwater samples are contained in this laboratory report. The samples are identified as follows:

MW-06-22	MW-06-18	MW-86-18 (MW-06-18 DUP)
MW-97-10	MW-97-11	MW-06-16
MW-06-15	RP-W-1	RP-W-7
MW-01-2	MW-02-2	MW-01-6
MW-01-3	MW-06-25	MW-97-7
MW-97-4	MW-06-12	GW-1
GW-3	MW-06-19	MW-06-20
MW-60-2 (Field blank)	MW-65-5 (Trip blank)	MW-65-6 (Trip blank)
MW-65-7 (Trip blank)	MW-65-8 (Trip blank)	

The samples were analyzed for volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), polychlorinated biphenyls (PCBs), total dissolved metals (ICP/ICP/MS/mercury), general chemistry parameters (bicarbonate as CaCO₃, carbonate as CaCO₃, chloride, sulfate, fluoride, ammonia as N, nitrate + nitrite as N, and total phosphorus as P) and radiochemistry parameters (gross alpha, gross beta, radium 226, and radium 228) as required using the methods detailed in the QAPP (Barr, May 2006).

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Alternative methods other than those specified in the QAPP were used for the fluoride, gross alpha and beta, and radium 226 and 228 analyses. While a deviation from the QAPP, no adverse effects on data quality were determined.

Overall Assessment

The QAPP specified that 10% of the project data be reviewed using CLP NFG (Guidelines) and the remaining data be reviewed in accordance with Barr's Data Validation Standard Operating Procedures (SOPs). Because 90% of the data was correspondingly validated using non-CLP criteria, the laboratory criterion were used for consistency, except where outliers exceeded 30-150% EPA quality control criteria. In summary, because the Guidelines have limits which are often different than, and in certain cases are more stringent than, the limits specified by the analytical methods and the laboratory generated limits; therefore, the end result may be slightly different data qualification.

The 2-chloroethylvinylether VOC results from groundwater, field blank and trip blank samples were qualified with an "R" indicating unusable data because of the known degradation of 2-chloroethylvinylether in the hydrochloric acid sample preservative.

In accordance with the Guidelines, sample concentrations greater than the method detection limit (MDL) and below the practical quantitation limit for the organic analyses are "J" qualified indicating estimated concentrations. The non-detect concentrations are presented as "<MDL" in the data tables.

During the data validation process of the VOC data, a large peak was identified at 17.8 minutes in the chromatography for multiple VOC samples. Some of the raw data for the VOC analysis indicated this peak was 1,2,3-trichlorobenzene and some of the raw data did not identify or quantify this peak. The laboratory was contacted and after an investigation indicated that their surrogate spike solution used for the 8260 analysis had butylated hydroxytoluene (BHT) present as a contaminant. BHT has a similar retention time to 1,2,3-trichlorobenzene and the computer software had mistakenly identified BHT as the target VOC. The laboratory reviewed the chromatography against the reported results and verified that the correct analyte was reported and that the laboratory analysts properly followed Section 7.6 of Method 8260B and Section 11.3 of the laboratory Standard Operating Procedure (included in the QAPP). The data presented in the data summary tables represent the final VOC data. No VOC data were qualified based upon this occurrence and the data should be considered valid as presented.

The data are useable as reported and qualified and fulfill the data quality objectives (DQOs) for sensitivity, accuracy and precision as specified in the QAPP. The following sections provide specific validation details.

Holding Times, Preservation and Storage

The samples were collected May 19th through 22nd, 2008, packed on ice and sent to the laboratories (CAS, located in Kelso, Washington and ACZ, located in Steamboat Springs, CO) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of -0.5 to 6.2 °C upon receipt at the laboratories. One cooler was delayed in transit and arrived at the laboratory

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with a temperature of 13.9 to 14.8 °C which is above ideal conditions for multiple analyses. The affected samples were recollected at a later date and are discussed in each subsequent data package. The samples were stored at 4 °C until analysis. No qualifiers were assigned due to holding times, preservation, or storage issues.

Summary Calibration Information

The initial calibration (ICAL), continuing calibration (CCAL), initial calibration verification (ICV) and continuing calibration verifications (CCVs) are not QC elements for non-CLP data evaluation. Since the calibration data were provided in summary form within the laboratory report, the data, where available, were reviewed as part of the non-CLP data evaluation process but confirmation via raw data review was not performed.

During the data evaluation process of the initial calibration data for VOC analysis, it was noted that the relative response factors (RRFs) for acrolein, acrylonitrile and vinyl acetate met the laboratory specific acceptance limits but did not meet the limits specified in the Guidelines. Acrolein and acrylonitrile are documented as not being particularly stable in the analytical environment and a separate method has been developed for their analysis. Due to these considerations, no qualifiers were applied for poor RRFs observed for these parameters during the calibration of the instrument. Similarly, vinyl acetate is rapidly hydrolyzed to acetaldehyde and highly volatile. Due to degradation by hydrolysis and susceptibility to polymerization, no qualifiers were applied due to the variability in the RRFs observed for this compound during the calibration of the instrument.

Because the laboratory ICAL percent relative standard deviation (%RSD) and RRF criteria differ from, and in some cases are less stringent than, the criterion published in the Guidelines, the data were evaluated by using the Guideline criterion for the system performance check compounds (SPCC). The remaining VOC and SVOC compounds were evaluated using the laboratory acceptance criterion during the ICAL data evaluation. The %RSD in VOC ICAL (CAL 7189) deviated from the laboratory and/or EPA acceptance limits for methylene chloride and bromoform. Because the methylene chloride %RSD met the requirements of the Guidelines, no qualifiers were assigned. The associated samples that had bromoform concentrations above the MDL were assigned the “J” qualifier (estimated) based upon the failing %RSD ICAL criterion for the SPCC compound. The % Difference for bromoform in two VOC CCALs exceeded the acceptance criterion established by the laboratory and the Guidelines. The associated samples’ bromoform data were assigned the “J” qualifier based upon this CCAL deviation.

The SVOC ICAL data meets both the laboratory criteria and the criteria published in the Guidelines and the SVOC CCVs met the laboratory CCV criterion for % Drift and % Difference for average and quadratic calibrations; therefore, no SVOC data required qualification based upon ICAL or CCAL results.

The ICP, ICP/MS and cold vapor mercury ICVs and CCVs met the established laboratory acceptance criterion.

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Blank Analysis

As stated in Section B10.3.2 of the QAPP, when project sample concentrations are “<” (less than) five times the associated blank sample concentrations, thus suspected false positives, they are shown at the concentration reported in the sample, with a “<” qualifier with the exception of the radiochemistry analyses detailed below.

No trace concentrations of ICP, ICP/MS, mercury, and PCBs were present in the laboratory method (or preparation) blank samples. Trace concentrations of carbon disulfide, n-propylbenzene, 2-chlorotoluene, 4-chlorotoluene, 1,2,4-trimethylbenzene, sec-butylbenzene, 1,3-dichlorobenzene, tert-butylbenzene, 4-isopropyltoluene, 1,4-dichlorobenzene, n-butylbenzene, 1,2-dichlorobenzene, 1,2,4-trichlorobenzene, 1,2,3-trichlorobenzene, naphthalene, and hexachlorobutadiene (VOCs); and of diethylphthalate, di-n-butylphthalate, fluoranthene, and butylbenzylphthalate (SVOCs) were present above the method detection limits in one or more laboratory method blank samples. Associated sample concentrations within five times the associated method blank sample concentrations were assigned a “<” qualifier as described above.

Although not part of the non-CLP data review, one or more of the following blank samples (initial calibration blank (ICB) and continuing calibration blank (CCBs) were evaluated when provided in summary form within the laboratory report but confirmation via raw data was not performed. No trace concentrations were detected above the practical quantitation limit in the blank samples for mercury, ICP, and ICP/MS analyses.

Deuterated Monitoring Compounds (DMC) (Surrogates)

The laboratory acceptance criteria for the DMC percent recoveries for the VOC and PCB analyses in the project samples were met. The percent recoveries for one or more SVOC DMCs were below the EPA criterion (30%) in samples MW-97-4 and MW-01-2. Sample MW-97-4 was re-prepared and reanalyzed (after the holding time had expired) and the surrogate percent recoveries from the reanalysis met the applicable criterion and confirmed the original SVOC data. Therefore, the data presented in the laboratory reports and data summary tables is the original analytical data obtained within the EPA recommended holding time for sample MW-97-4. The surrogate percent recovery for sample MW-01-2 was slightly (1%) below the EPA 30% criterion; therefore, no data were qualified based upon this deviation. No data were qualified based upon VOC, SVOC and PCB DMC data.

ICP/ICP/MS Interference Check Samples (Metals only)

The interference check sample (ICS) and contract required quantitation limit standard (CRI/CRA) data review is not a QC element for non-CLP evaluation but the ICS and CRI data were evaluated when provided in summary form within the laboratory report but confirmation via raw data review was not performed. The ICP, ICP/MS ICSs met the laboratory acceptance criteria for both solution A and solution AB with the exception of magnesium for two ICP ICS samples. The associated ICP magnesium data were “R” qualified (unusable), per the Guidelines, based upon the ICS percent recoveries. The CRI percent recovery for beryllium, calcium, copper, lead, manganese, selenium, and silver by ICP/ICP/MS did not meet the acceptance limits specified in the Guidelines in one or more CRI samples. Since Methods 6010 and 6020 do not require CRI analysis and the beryllium, calcium, lead, manganese, selenium, and silver percent recoveries met the EPA 30-150% criteria, no data were

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qualified. The associated copper data was “J” qualified (estimated) because the CRI percent recoveries exceeded the EPA (150%) criterion.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) were prepared and analyzed at the appropriate frequency for the target compounds and met the relevant acceptance criteria for percent recovery of the spike concentrations, indicating in-control analytical systems with the exceptions noted below.

The VOC LCS percent recoveries met the laboratory acceptance criteria with the exception of iodomethane. Iodomethane exceeded the EPA criterion (150%) for percent recovery in two LCS samples. Therefore, the associated iodomethane data were “R” qualified (unusable).

In all but seven cases, the SVOC LCS sample had percent recoveries and relative percent differences (RPDs) met relevant criteria. The percent recoveries and/or RPDs for hexachloroethane, 2,4-dimethylphenol, benzoic acid, 4-chloroaniline, hexachlorobutadiene, hexachlorocyclopentadiene, and 3,3'-dichlorobenzidine did not meet the applicable laboratory or EPA acceptance limits for accuracy and precision; therefore, the associated project sample results are “R” qualified (unusable) due to the potential data bias.

The laboratory met the acceptance criteria for the ICP serial dilutions ($\leq 10\%$ D), between the undiluted and diluted results, where sample results are significantly greater than the MDL ($>50x$). The ICP/MS and mercury serial dilutions and post-digestion spike percent recoveries met the applicable criteria.

Matrix Spike Results

As standard practice, the laboratory reported a shortened list of VOC, SVOC and PCB compounds for MS/MSD data. No qualification was performed based upon this occurrence.

For the VOC analyses, samples MW-02-2, MW-86-18 (MW-06-18 DUP), and RP-W-1 were used for the MS/MSD. The MS/MSD data met the applicable laboratory and EPA criterion for percent recovery and RPD.

Sample RP-W-1 and non-project specific samples served as the MS/MSD sample for the SVOC and PCB analyses. The MS/MSD data met the applicable laboratory and EPA acceptance criteria for percent recovery and RPD.

Samples MW-01-2, RP-W-1, and non-project specific samples served as the MS/MSD samples for the ICP, ICP/MS and mercury analyses. The MS/MSD data met the applicable laboratory and EPA acceptance criteria for percent recovery and RPD. The MS percent recovery for manganese and zinc for sample MW-01-2 was not applicable because the associated sample concentrations were greater than four times the spike concentration thereby preventing accurate evaluation of the spike recoveries.

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General Chemistry Analysis (bicarbonate as CaCO₃, carbonate as CaCO₃, chloride, sulfate, fluoride, ammonia as N, nitrate + nitrite as N, and total phosphorus as P)

The general chemistry data were reviewed in accordance with Barr's SOPs included in the QAPP. The ICV, CCV data indicated that the laboratory and method criteria were met for the various general chemistry analyses (listed above). Sample MW-01-2 and non-project specific samples served as the MS/MSD samples for the general chemistry analyses. The LCS, MS/MSD data indicated that the applicable laboratory and method criteria were met for the general chemistry analyses. The MS/MSD percent recoveries for total phosphorus for sample MW-01-2 were not applicable because the sample concentrations were greater than four times the spike concentration thereby preventing accurate evaluation of the spike recoveries. Samples MW-01-3, MW-06-22, MW-01-2, and non-project specific samples served as the analytical batch duplicate sample for the general chemistry analyses. The analytical batch duplicate sample data indicated that the laboratory and method criteria were met for the general chemistry analyses. No method blank samples or CCBs had concentrations detected above the practical quantitation limit for any of the general chemistry analyses.

Radiochemistry Analysis (Gross alpha, Gross Beta, Radium 226 and Radium 228)

Results were reviewed in general accordance with the analytical methods 900.0, 903.1, and 904.0 selected by ACZ. Although these methods were not specified in the QAPP, the data were not qualified and should be deemed acceptable for the project. Samples MW-06-15, MW-06-22, GW-1, GW-3, RP-W-1, and non-project specific samples served as the MS/MSD sample for one or more of the radiochemistry methods. LCS and MS/MSDs met the laboratory acceptance criteria for precision and accuracy except where noted below. The percent recoveries for one or more MS samples did not meet the laboratory and/or EPA acceptance limits for gross alpha and radium 228. The associated gross alpha results for MW-06-22 were "J" qualified (estimated) because the percent recoveries were below the laboratory acceptance criteria but were within the EPA 30-150% criteria. No other qualifiers were applied for the other gross alpha and radium 228 MS percent recovery deviations because the MS samples were not associated with this project. Samples MW-06-25, MW-01-6, MW-97-4, MW-06-15 and non-project specific samples served as the analytical batch duplicate samples for this data packages. The gross alpha and gross beta RPDs for sample MW-06-25, the gross alpha for sample MW-01-6 and non-project specific samples, and the radium 226 RPD for MW-97-4 exceeded the laboratory acceptance limits for precision. However, no gross alpha, gross beta, and radium 226 data were qualified because the associated sample concentrations were near the practical quantitation limit which can exaggerate the deviation of the RPD. The method blank samples had no detectable concentrations above the practical quantitation limit (i.e. lower limit of detection (LLD)) for the target radiochemistry analytes.

Field Duplicate Samples

Field duplicate samples were collected and analyzed in accordance with the frequency and parameters specified in the QAPP. Sample MW-86-18 (MW-06-18 DUP) served as the field duplicate sample for this data package. Field duplicate water samples met the RPD criteria (30%) as specified in the QAPP with the exception of radium 226, copper, and lead. Sample concentrations near the practical quantitation limit can exaggerate the RPD. Copper was "J" qualified (estimated)

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based upon the RPD deviation for sample MW-06-18 and its corresponding field duplicate sample (MW-86-18). However, since the field duplicate sample concentrations for radium 226 and lead were within five times the practical quantitation limit, no qualifiers were deemed necessary.

Trip Blank Samples

Trip blank samples were collected and analyzed as required in the QAPP. Samples MW-65-5, MW-65-6, MW-65-7, and MW-65-8 served as the trip blank samples collected and analyzed as part of the data packages. Trace concentrations of carbon disulfide, toluene, 1,2,3-trichlorobenzene and/or naphthalene were detected above the method detection limit in trip blank samples MW-65-5 and MW-65-6. Associated sample concentrations within five times the associated trip blank sample concentrations were assigned a “<” qualifier as described above. No other target VOC compounds were present above the method detection limit in the trip blank samples.

Discussion

The laboratory reported difficulty in achieving adequate resolution of one or more Aroclors in multiple PCB samples due to sample matrix and the presence of non-target background components. Therefore, the method detection limit (MDL) was elevated for the corresponding Aroclors in the associated samples. This affected samples MW-02-2, MW-01-6, MW-01-3, MW-97-7, MW-06-12, MW-06-20, MW-06-18, MW-86-18 (MW-06-18 DUP), and MW-97-11 in this data package. No data were qualified based upon this occurrence. The PCB ICALs and CCALs met the established laboratory acceptance criterion.

The practical quantitation limit for fluoride analysis is elevated for samples MW-06-19, MW-06-20, MW-06-18, MW-06-16, MW-86-18 (MW-06-18 DUP), and MW-01-6 due to interferences which include sulfate and/or inorganic acids which prevented adequate resolution of fluoride at the practical quantitation limit. No fluoride data were qualified based upon this occurrence.

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The validation of the Columbia Analytical Services, Inc. (CAS, Kelso, Washington) and ACZ Laboratories, Inc. (ACZ, Steamboat Springs, Colorado) laboratory data for the volatile, semivolatile, PCB, metals, general chemistry and radiochemistry analyses of the samples collected in 2008 to support the Phase 1 - RCRA Facility Investigation is complete as detailed below.

The analytical data were reviewed in accordance Barr's Data Validation SOPs which are based upon the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Organic and Inorganic Data Review (EPA 2005, 2004) and in general accordance with U.S. EPA Methods 300.0, 350.1, 353.2, 365.3, 900.0 modified, 903.1 modified, 904.0 modified, and Standard Method 2320B as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008).

In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Summary calibration information
- Blank analysis
- Deuterated monitoring compounds (Surrogates)
- ICP/ICP/MS interference check samples (metals only)
- Laboratory control samples
- Matrix spike results
- Field duplicate samples
- Field blank samples
- Trip blank samples

The results for seventeen groundwater samples are contained in this laboratory report. The samples are identified as follows:

MW-06-17	MW-97-12	MW-06-14
MW-06-13	MW-86-13 (MW-06-13 DUP)	MW-06-11
MW-97-3	RP-W-4	MW-06-6
PW-99-3	MW-06-7	MW-MT96-2
MW-BSB-4	MW-65-9 (Trip Blank)	MW-65-10 (Trip Blank)
MW-60-3 (Field Blank)	PW-99-1*	MW-02-1*
MW-82-1 (MW-02-1 DUP)*	RP-W-5*	RP-W-6*
RP-W-1*	MW-60-4 (Field Blank)*	MW-60-5 (Field Blank)*

* Denotes the samples whose radiochemistry data are discussed in this data evaluation. The associated VOC, SVOC, PCB, total metals and general chemistry data are discussed in the data evaluation for laboratory report K0804724 (under separate cover).

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The samples were analyzed for volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), polychlorinated biphenyls (PCBs), total metals (ICP/ICP/MS/mercury), general chemistry parameters (bicarbonate as CaCO₃, carbonate as CaCO₃, chloride, sulfate, fluoride, ammonia as N, nitrate + nitrite as N, and total phosphorus as P) and radiochemistry parameters (gross alpha, gross beta, radium 226, and radium 228) as required using the methods detailed in the QAPP (Barr, May 2006).

Alternative methods other than those specified in the QAPP were used for the fluoride, gross alpha and beta, and radium 226 and 228 analyses. While a deviation from the QAPP, no adverse effects on data quality were determined.

Overall Assessment

The QAPP specified that 10% of the project data be reviewed using CLP NFG (Guidelines) and the remaining data be reviewed in accordance with Barr's Data Validation Standard Operating Procedures (SOPs). Because 90% of the data was correspondingly validated using non-CLP criteria, the laboratory criterion were used for consistency, except where outliers exceeded 30-150% EPA quality control criteria. In summary, because the Guidelines have limits which are often different than, and in certain cases are more stringent than, the limits specified by the analytical methods and the laboratory generated limits; therefore, the end result may be slightly different data qualification.

The 2-chloroethylvinylether VOC results from groundwater, field blank and trip blank samples were qualified with an "R" indicating unusable data because of the known degradation of 2-chloroethylvinylether in the hydrochloric acid sample preservative.

In accordance with the Guidelines, sample concentrations greater than the method detection limit (MDL) and below the practical quantitation limit for the organic analyses are "J" qualified indicating estimated concentrations. The non-detect concentrations are presented as "<MDL" in the data tables.

During the data validation process of the VOC data, a large peak was identified at 17.8 minutes in the chromatography for multiple VOC samples. Some of the raw data for the VOC analysis indicated this peak was 1,2,3-trichlorobenzene and some of the raw data did not identify or quantify this peak. The laboratory was contacted and after an investigation indicated that their surrogate spike solution used for the 8260 analysis had butylated hydroxytoluene (BHT) present as a contaminant. BHT has a similar retention time to 1,2,3-trichlorobenzene and the computer software had mistakenly identified BHT as the target VOC. The laboratory reviewed the chromatography against the reported results and verified that the correct analyte was reported and that the laboratory analysts properly followed Section 7.6 of Method 8260B and Section 11.3 of the laboratory Standard Operating Procedure (included in the QAPP). The data presented in the data summary tables represent the final VOC data. No VOC data were qualified based upon this occurrence and the data should be considered valid as presented.

The data are useable as reported and qualified and fulfill the data quality objectives (DQOs) for sensitivity, accuracy and precision as specified in the QAPP. The following sections provide specific validation details.

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Holding Times, Preservation and Storage

The samples were collected May 27th through 29th, 2008, packed on ice and sent to the laboratories (CAS, located in Kelso, Washington and ACZ, located in Steamboat Springs, CO) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 0.2 to 5.1 °C upon receipt at the laboratories. The samples were stored at 4 °C until analysis. No qualifiers were assigned due to holding times, preservation, or storage issues.

Summary Calibration Information

The initial calibration (ICAL), continuing calibration (CCAL), initial calibration verification (ICV) and continuing calibration verifications (CCVs) are not QC elements for non-CLP data evaluation. Since the calibration data were provided in summary form within the laboratory report, the data, where available, were reviewed as part of the non-CLP data evaluation process but confirmation via raw data review was not performed.

During the data evaluation process of the initial calibration data for VOC analysis, it was noted that the relative response factors (RRFs) for acrolein, acrylonitrile and vinyl acetate met the laboratory specific acceptance limits but did not meet the limits specified in the Guidelines. Acrolein and acrylonitrile are documented as not being particularly stable in the analytical environment and a separate method has been developed for their analysis. Due to these considerations, no qualifiers were applied for poor RRFs observed for these parameters during the calibration of the instrument. Similarly, vinyl acetate is rapidly hydrolyzed to acetaldehyde and highly volatile. Due to degradation by hydrolysis and susceptibility to polymerization, no qualifiers were applied due to variability in the RRFs observed for this compound during the calibration of the instrument.

Because the laboratory ICAL percent relative standard deviation (%RSD) and RRF criteria differ from, and in some cases are less stringent than, the criterion published in the Guidelines, the data were evaluated by using the Guideline criterion for the system performance check compounds (SPCC) compounds. The remaining VOC and SVOC compounds were evaluated using the laboratory acceptance criterion during the ICAL data evaluation. The %RSD in VOC ICAL (CAL 7189) deviated from the laboratory and/or EPA acceptance limits for methylene chloride and bromoform. Because the methylene chloride %RSD met the requirements of the Guidelines, no qualifiers were assigned. For bromoform, only concentrations above the method detection limit (MDL) would require a “J” qualifier based on this deviation. However, no data were qualified because bromoform was not detected above the MDL in the samples. The laboratory established CCAL % Drift and % Difference criteria differ from and in some cases are less stringent than the criterion published in the Guidelines, the data were evaluated by using the Guideline criterion for the SPCC compounds, and the remaining VOC compounds were evaluated using the laboratory acceptance criterion during the CCAL data evaluation. The % Drift and % Difference for average and quadratic calibrations in one VOC CCAL did not meet the laboratory acceptance criteria for bromomethane and naphthalene. The associated bromomethane and naphthalene sample results have been assigned the “J” qualifier.

The SVOC ICAL data meets both the laboratory criteria and the criteria published in the Guidelines and the SVOC CCVs met the laboratory CCV criterion for % Drift and % Difference for average and

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quadratic calibrations; therefore, no SVOC data require qualification based on ICAL or CCAL results.

The PCB ICAL and CCALs met the established laboratory acceptance criterion.

The ICP, ICP/MS and cold vapor mercury ICVs and CCVs met the established laboratory acceptance criterion.

Blank Analysis

As stated in Section B10.3.2 of the QAPP, when project sample concentrations are “<” (less than) five times the associated blank sample concentrations, thus suspected false positives, they are shown at the concentration reported in the sample, with a “<” qualifier with the exception of the radiochemistry analyses detailed below.

No trace concentrations of ICP, ICP/MS, mercury, and PCBs were present in the laboratory method (or preparation) blank samples. Trace concentrations of 1,2,3-trichlorobenzene, toluene, and naphthalene (VOCs); and of diethylphthalate, di-n-butylphthalate, and butylbenzylphthalate (SVOCs) were present above the method detection limits in one or more laboratory method blank samples. Associated sample concentrations within five times the associated method blank sample concentrations were reported with a “<” or U (EPA 2005 Organic Guidelines) qualifier.

Although not part of the non-CLP data review, one or more of the following blank samples (initial calibration blank (ICB) and continuing calibration blank (CCBs) were evaluated when provided in summary form within the laboratory report but confirmation via raw data was not performed. No trace concentrations were detected above the practical quantitation limit in the blank samples for mercury, ICP, and ICP/MS analyses.

Deuterated Monitoring Compounds (DMC) (Surrogates)

The laboratory acceptance criteria for the DMC percent recoveries for the VOC, SVOC, and PCB analyses in the project samples were met.

ICP/ICP/MS Interference Check Samples (Metals only)

The interference check sample (ICS) and contract required quantitation limit standard (CRI/CRA) data review is not a QC element for non-CLP evaluation but the ICS and CRI data were evaluated when provided in summary form within the laboratory report but confirmation via raw data review was not performed. The ICP, ICP/MS ICSs met the laboratory acceptance criteria for both solution A and solution AB. The CRI percent recovery for beryllium, copper, silver, manganese, and lead by ICP/MS did not meet the acceptance limits specified in the Guidelines in one or more CRI samples. Since Methods 6010 and 6020 do not require CRI analysis and the beryllium, silver, manganese, and lead percent recoveries met the EPA 30-150% criteria, no data were qualified. The copper data was not qualified based upon the CRI data because the associated sample concentrations were non-detect after the application of data qualifiers based upon the presence of copper in the associated field blank sample.

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Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) were prepared and analyzed at the appropriate frequency for the target compounds and met the relevant acceptance criteria for percent recovery of the spike concentrations, indicating in-control analytical systems with the exceptions noted below.

The VOC LCS percent recoveries met the laboratory acceptance criteria with the exception of sec-butylbenzene. The percent recovery for sec-butylbenzene was below the laboratory acceptance criteria but within the EPA (30-150%) criteria for one LCS sample; therefore, the associated data were “J” qualified (estimated).

In all but three cases, the SVOC LCS sample had percent recoveries and relative percent differences (RPDs) met the relevant criteria. The percent recoveries and/or RPDs for SVOCs 2,4-dimethylphenol, benzoic acid, and hexachlorocyclopentadiene did not meet the applicable laboratory or EPA acceptance limits for precision and accuracy; therefore, the associated project sample results are “R” qualified (unusable) due to the potential data bias.

The laboratory met the acceptance criteria for the ICP serial dilutions ($\leq 10\%$ D), between the undiluted and diluted results, where sample results are significantly greater than the MDL ($> 50\times$). The ICP/MS and mercury serial dilutions and post-digestion spike percent recoveries met the applicable criteria.

Matrix Spike Results

As standard practice, the laboratory reported a shortened list of VOC, SVOC and PCB compounds for MS/MSD data. No qualification was performed based upon this occurrence.

Sample RP-W-4 served as the MS/MSD samples for the VOC, PCB, ICP, ICP/MS and mercury analyses. The MS/MSD data met the applicable laboratory and EPA acceptance criteria for percent recovery and RPD.

Sample RP-W-4 also served as the MS/MSD sample for the SVOC analyses. The MS/MSD data met the applicable laboratory and EPA acceptance criteria for percent recovery and RPD with the exception of 1,4-dichlorobenzene and 1,2,4-trichlorobenzene. The percent recoveries for 1,4-dichlorobenzene and 1,2,4-trichlorobenzene in the MSD for sample RP-W-4 were below the laboratory and the EPA (30%) criterion; however, no data were qualified because the associated MS, LCS and RPD data were within the laboratory and EPA acceptance criterion.

General Chemistry Analysis (bicarbonate as CaCO_3 , carbonate as CaCO_3 , chloride, sulfate, fluoride, ammonia as N, nitrate + nitrite as N, and total phosphorus as P)

The general chemistry data were reviewed in accordance with Barr's SOPs included in the QAPP. The ICV, CCV data indicated that the laboratory and method criteria were met for various general chemical analyses (listed above). Sample RP-W-4 served as the MS/MSD and analytical batch duplicate sample for the general chemistry analyses. The LCS, MS/MSD, and analytical batch duplicate sample data indicated that the laboratory and method criteria were met for the general chemistry analyses. No method blank samples or CCBs had concentrations detected above the practical quantitation limit for any of the general chemistry analyses.

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Radiochemistry Analysis (Gross alpha, Gross Beta, Radium 226 and Radium 228)

Results were reviewed in general accordance with the analytical methods 900.0, 903.1, and 904.0 selected by ACZ. Although these methods were not specified in the QAPP, the data were not qualified and should be deemed acceptable for the project. Samples RP-W-4, MW-60-4 (FB), RP-W-6, PW-99-3, and non-project specific samples served as the MS/MSD sample for one or more of the radiochemistry methods. LCS and MS/MSDs met the laboratory acceptance criteria for precision and accuracy except where noted below. The percent recoveries for one or more MS samples were below the laboratory and/or EPA acceptance limits for gross alpha analysis. The associated gross alpha results for RP-W-4 were “R” qualified (unusable) because the percent recoveries were below both the laboratory acceptance criteria and the EPA 30-150% criteria. Samples PW-99-1, MW-06-17, RP-W-4, RP-W-6, MW-06-14, and non-project specific samples served as the analytical batch duplicate samples for this data package. The RPDs exceeded the laboratory acceptance limits for precision for the gross alpha analysis (PW-99-1, MW-06-17, and RP-W-4), the gross beta analysis (MW-06-17); the radium 226 analysis (RP-W-4, RP-W-6, and non-project specific samples); and the radium 228 analysis (RP-W-4 and MW-06-14). However, no radiochemistry data were qualified based upon the RPD data because the associated sample concentrations were near the practical quantitation limit which can exaggerate the deviation of the RPD. Two method blank samples had detectable concentrations above the practical quantitation limit (i.e. lower limit of detection (LLD) for radium 228 analysis; however, per guidance from the laboratory (ACZ), method blank sample concentrations less than two times the practical quantitation limit are not controlled; therefore, no qualification of the data was deemed necessary.

Field Duplicate Samples

Field duplicate samples were collected and analyzed as required in the QAPP. Samples MW-82-1 (MW-02-1 DUP) and MW-86-13 (MW-06-13 DUP) served as the field duplicate samples for this data package. Field duplicate samples met the RPD criteria (30%) as specified in the QAPP with the exception of gross alpha and radium 226 for sample MW-02-1 and of radium 226, fluoride, chloromethane (VOC), and Aroclor 1260 for sample MW-06-13. Sample concentrations near the practical quantitation limit can exaggerate the deviation of the RPD. Since the gross alpha and radium 226 were within five times the practical quantitation limit and the fluoride, chloromethane, and Aroclor 1260 sample concentrations were within five times the MDL, no qualifiers were applied to the data based upon RPD of the field duplicate sample results.

Field Blank Samples

Field blank samples were collected and analyzed at the required frequency as specified in the QAPP. The field blank samples (MW-60-3, MW-60-4, and MW-06-5) were collected in the following manner: The sample equipment (i.e. pump, tubing and/or hoses) were rinsed with analyte-free, deionized water and the rinse water was poured into the appropriate sample containers for analysis. Field blank sampling procedures and protocols were determined to be appropriate and were collected and analyzed at the required frequency as specified in the QAPP. No target analytes were present above the MDL for VOCs, SVOCs, and PCBs or above the practical quantitation limit (inorganics, radiochemistry, and general chemistry) in the field blank sample associated with this data package except where noted below. The field blank sample also had detections of metals and radiochemistry

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parameters were present above the practical quantitation limit and trace concentrations of VOCs and SVOCs above the MDL. The field blank results are presented on Appendix O-4b. Associated sample concentrations within five times the associated field blank sample concentrations were reported with a “<” or U (EPA 2005 Organic and 2004 Inorganic Guidelines) qualifier with the exception of the radium 228 analysis. Due to the nature of the analyses, the radiochemistry field blank sample data were used to evaluate if any gross system contamination occurred. No qualifiers were applied to the samples based upon the field blank sample data for the radiochemistry analyses.

Trip Blank Samples

Trip blank samples were collected and analyzed at the required frequency as specified in the QAPP. Samples MW-65-9 and MW-65-10 served as the trip blank samples collected and analyzed as part of this data package. No target VOC compounds were present above the method detection limit in the trip blank samples.

Discussion

The laboratory reported difficulty in achieving adequate resolution of one or more Aroclors in PCB sample MW-06-11 due to sample matrix and the presence of non-target background components. Therefore, the method detection limit (MDL) was elevated for the corresponding Aroclors for sample MW-06-11 in this data package.

The practical quantitation limit is elevated for fluoride analysis in samples MW-06-11, RP-W-4, and MW-06-7 due to the presence of sulfide which prevented adequate resolution of the target compound at the practical quantitation limit in the samples. No data were qualified based upon this occurrence.

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Date of Data Validation Report: October 13, 2008

The validation of the Columbia Analytical Services, Inc. (CAS, Kelso, Washington) laboratory data for the volatile, semivolatile, PCB, metals, and general chemistry analyses of the samples collected in 2008 to support the Phase 1 - RCRA Facility Investigation is complete as detailed below.

The analytical data were reviewed in accordance Barr's Data Validation SOPs which are based upon the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Organic and Inorganic Data Review (EPA 2005, 2004) and in general accordance with U.S. EPA Methods 300.0, 350.1, 353.2, 365.3, 9310, 9315 and 9320 and Standard Method 2320B as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008).

In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Instrument performance checks - GC/MS and ICP/MS Tuning
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Blank analysis
- Deuterated monitoring compounds
- ICP/ICP/MS interference check samples
- Laboratory control samples
- Internal standards
- Matrix spike results
- Field duplicate samples
- Field blank samples
- Trip blank samples

The results for five groundwater samples are contained in this laboratory report. The samples are identified as follows:

PW-99-1	MW-02-1	MW-82-01 (MW-02-1 DUP)
RP-W-5	RP-W-6	RP-W-1
MW-65-11 (Trip Blank)	MW-60-4 (Field Blank)	MW-60-5 (Field Blank)

The samples were analyzed for volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), polychlorinated biphenyls (PCBs), total metals (ICP/ICP/MS/mercury), general chemistry parameters (bicarbonate as CaCO₃, carbonate as CaCO₃, chloride, sulfate, fluoride, ammonia as N, nitrate + nitrite as N, and total phosphorus as P) and radiochemistry parameters (gross alpha, gross beta, radium 226, and radium 228) as required using the methods detailed in the QAPP (Barr, May 2006). The radiochemistry data evaluation for the samples listed above is included in the data evaluation for laboratory report K0804655 (under separate cover).

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Alternative methods other than those specified in the QAPP were used for the fluoride analyses. While a deviation from the QAPP, no adverse effects on data quality were determined.

Overall Assessment

The QAPP specified that 10% of the project data be reviewed using CLP NFG (Guidelines) and the remaining data be reviewed in accordance with Barr's Data Validation Standard Operating Procedures (SOPs). Because 90% of the data was correspondingly validated using non-CLP criteria, the laboratory criterion were used for consistency, except where outliers exceeded 30-150% EPA quality control criteria. In summary, because the Guidelines have limits which are often different than, and in certain cases are more stringent than, the limits specified by the analytical methods and the laboratory generated limits; therefore, the end result may be slightly different data qualification.

The 2-chloroethylvinylether VOC results from groundwater, field blank and trip blank samples were qualified with an "R" indicating unusable data because of the known degradation of 2-chloroethylvinylether in the hydrochloric acid sample preservative.

In accordance with the Guidelines, sample concentrations greater than the method detection limit (MDL) and below the practical quantitation limit for the organic analyses are "J" qualified indicating estimated concentrations. The non-detect concentrations are presented as "<MDL" in the data tables.

During the data validation process of the VOC data, a large peak was identified at 17.8 minutes in the chromatography for multiple VOC samples. Some of the raw data for the VOC analysis indicated this peak was 1,2,3-trichlorobenzene and some of the raw data did not identify or quantify this peak. The laboratory was contacted and after an investigation indicated that their surrogate spike solution used for the 8260 analysis had butylated hydroxytoluene (BHT) present as a contaminant. BHT has a similar retention time to 1,2,3-trichlorobenzene and the computer software had mistakenly identified BHT as the target VOC. The laboratory reviewed the chromatography against the reported results and verified that the correct analyte was reported and that the laboratory analysts properly followed Section 7.6 of Method 8260B and Section 11.3 of the laboratory Standard Operating Procedure (included in the QAPP). The data presented in the data summary tables represent the final VOC data. No VOC data were qualified based upon this occurrence and the data should be considered valid as presented.

The data are useable as reported and qualified and fulfill the data quality objectives (DQOs) for sensitivity, accuracy and precision as specified in the QAPP. The following sections provide specific validation details.

Holding Times, Preservation and Storage

The samples were collected May 29th through 30th, 2008, packed on ice and sent to the laboratory (CAS, located in Kelso, Washington) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 0.3 to 3.3 °C upon receipt at the laboratories. The samples were stored at 4 °C until analysis. No qualifiers were assigned due to holding times, preservation, or storage issues.

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Instrument Performance Checks – GC/MS & ICP/MS Tuning (VOC, SVOC and ICP/MS Metals)

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

The gas chromatography/mass spectrometry (GC/MS) tuning performed as part of the VOC and SVOC analyses met the relevant acceptance criteria for frequency, mass abundance, and mass ratios.

The tuning aspects of the inductively coupled plasma mass spectrometer (ICP/MS) met the relevant acceptance criteria for mass resolution and the percent relative standard deviation (%RSD) for the five consecutive replicates at <5%.

Initial Calibration and Initial Calibration Verification

During the data evaluation process of the initial calibration data for VOC analysis, it was noted that the relative response factors (RRFs) for acrolein, acrylonitrile and vinyl acetate met the laboratory specific acceptance limits but did not meet the limits specified in the Guidelines. Acrolein and acrylonitrile are documented as not being particularly stable in the analytical environment and a separate method has been developed for their analysis. Due to these considerations, no qualifiers were applied for poor RRFs observed for these parameters during the calibration of the instrument. Similarly, vinyl acetate is rapidly hydrolyzed to acetaldehyde and highly volatile. Due to degradation by hydrolysis and susceptibility to polymerization, no qualifiers were applied due to variability in the RRFs observed for this compound during the calibration of the instrument.

Because the laboratory VOC and SVOC ICAL percent relative standard deviation (%RSD) and RRF criteria differ from, and in some cases are less stringent than, the criterion published in the Guidelines, the data were evaluated by using the Guideline criterion for the system performance check compounds (SPCCs). The remaining VOC and SVOC compounds were evaluated using the laboratory acceptance criterion during the ICAL data evaluation. The VOC ICAL events met relevant acceptance criteria including the RRFs and %RSD for the volatile target compounds including the associated deuterated monitoring compounds (DMCs or surrogates) with the exception of acrolein. The %RSD for acrolein exceeded the laboratory acceptance limits in one ICAL (CAL7433); therefore, the associated acrolein data were qualified “J” (estimated).

The SVOC initial calibration met relevant acceptance criteria for individual and average RRFs for target SVOCs and DMCs, and the %RSD. The laboratory generated a combination of initial calibration curves including averaged and quadratic curves for the target SVOC compounds. Recalculation of final results were not verified when quadratic quantitation was employed.

The PCB initial calibration were performed at the appropriate frequency and run order and met the relevant acceptance criteria including the %RSD (<20%) for the PCB analysis. The opening CCV was found to meet acceptance criteria. While an instrument blank was not run immediately after the initial calibration sequence, instrument blanks were analyzed prior to the analysis of samples.

The ICP and ICP/MS initial calibrations were performed at the appropriate frequency and run order, and met minimum percent recovery (%R) acceptance criteria for each of the target metals. Mean concentrations from 2 replicate exposures were reported for ICP and from 3 replicate exposures for

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ICP/MS as required. Initial calibration verification (ICV) criterion of $\pm 10\%$ (of true value) for the target analytes was met during the initial calibration events.

The cold vapor mercury initial calibration events met the acceptance criterion of a correlation coefficient > 0.995 using a minimum of at least four calibration standard solutions. The ICV criterion of 20% of the true value was also met for the cold vapor mercury analysis.

Continuing Calibration Verification

The continuing calibration verification samples (CCVs) associated with the VOC analysis and the associated DMCs met the criteria for frequency, the minimum RRF and the %D (as compared to the associated initial calibration standard (s)) with the exception of acrolein. No additional qualification was applied to acrolein because the associated data are already “J” qualified as discussed previously. Closing VOC CCV data was not provided by the laboratory as it is not a requirement of EPA Method 8260. While this is a deviation from the Guidelines, no significant deviations in opening CCVs were observed and this procedure meets method criteria.

The SVOC CCV was performed at the appropriate frequency and met relevant opening CCV acceptance criteria including minimum RRF for target SVOCs and DMCs, and the % Difference and % Drift. Closing SVOC CCV data were not provided by the laboratory as it is not a requirement of EPA Method 8270. While this is a deviation from the Guidelines, no significant deviations in opening SVOC CCVs were observed and this procedure meets method criteria.

The CCVs for the analysis of PCBs were analyzed at the appropriate frequency and yielded acceptable percent differences for both the opening CCV and the closing CCV. All acceptance criteria were met for the analysis of PCB CCVs.

The CCVs for ICP and ICP/MS analyses met data validation criteria for frequency, run order and acceptable percent recoveries were achieved within the analytes' method detection limit and the documented upper linear range of the instrument. Mean concentrations from the 2 (for ICP) and 3 (for ICPMS) replicate exposures were reported as required.

The CCVs associated with the cold vapor mercury analyses met the established acceptance criteria for frequency and the calculated percent recovery of 20% of the true value.

The Contract Required Quantitation Limit (CRQL) Check Standard (CRI) sample data for ICP, ICP/MS, and mercury did not meet the data validation criteria for frequency, run order and/or percent recovery as dictated in the Guidelines. The CRI samples reported in the data packages were analyzed at the beginning of the analytical sequence(s). The percent recoveries for ICP and mercury met the percent recovery criterion established in the Guidelines. The CRI percent recovery for copper, manganese, and silver by ICP/MS did not meet the acceptance limits specified in the Guidelines in one or more CRI samples. Since Methods 6010 and 6020 do not require CRI analysis and the manganese, and silver percent recoveries met the EPA 30-150% criteria, no data were qualified. The copper data was not qualified based upon the CRI data because the associated sample concentrations were non-detect after the application of data qualifiers based upon the presence of copper in the associated field blank sample.

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Blank Analysis

As stated in Section B10.3.2 of the QAPP, when project sample concentrations are “<” (less than) five times the associated blank sample concentrations, thus suspected false positives, they are shown at the concentration reported in the sample, with a “<” qualifier.

Two method (or preparation) blank samples were prepared during the analysis of VOC. Trace concentrations of 1,2,3-trichlorobenzene and naphthalene were present above the method detection limits in one or more laboratory method blank samples. Associated sample concentrations within five times the associated method blank sample concentrations were assigned a “<” qualifier as described above. This affected samples MW-02-1 and MW-82-1 (MW-02-1 DUP).

For the SVOC analysis, one method blank sample was prepared and analyzed as required. Trace concentrations of di-n-butylphthalate were present above the method detection limit in the laboratory method blank sample. Associated sample concentrations within five times the associated method blank sample concentrations were assigned a “<” qualifier as described above. This affected samples PW-99-1, RP-W-5, and RP-W-6.

The method blank samples associated with the PCB analysis were prepared and analyzed as required. Instrument blank samples were analyzed at the beginning of the analytical sequences, after every ten samples, and at the end of the analytical sequence. No PCBs were present above the method detection limits in the method blank and instrument blank samples.

The ICP, ICPMS and mercury analyses method blank samples, initial calibration blank (ICB) and continuing calibration blanks (CCBs) were prepared and analyzed at the appropriate frequency and met acceptance criteria for proper run order. No target metal analytes were present in the method blanks, ICBs or CCBs above the laboratory practical quantitation limit for the ICP, ICPMS, and mercury analysis.

Deuterated Monitoring Compounds (Surrogates)

The laboratory acceptance criteria for the deuterated monitoring compounds (DMCs) percent recoveries for the VOC, SVOC, and PCB analyses in the samples were met with the following exceptions. The SVOC DMC data for sample MW-82-1 (MW-02-1 DUP) were not applicable due to the presence of non-target background components that required the sample to be analyzed at a dilution which prevented accurate quantitation of the SVOC DMC data. No data were qualified based upon VOC, SVOC and PCB DMC data.

ICP/ICP/MS Interference Check Samples (Metals only)

The ICP and ICP/MS interference check samples (ICS) were analyzed at the appropriate frequency and in the correct order during the analysis of the project samples. Acceptable results of $\pm 20\%$ of the true value were obtained for both solution A and solution AB.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) were prepared and analyzed at the appropriate frequency for the target compounds and met the relevant acceptance criteria for percent recovery of the spike concentrations, indicating in-control analytical systems with the exceptions noted below.

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In all but five cases, the SVOC LCS sample had percent recoveries and relative percent differences (RPDs) met the relevant criteria. The percent recoveries and RPDs for hexachloroethane, 2,4-dimethylphenol, benzoic acid, hexachlorobutadiene, and hexachlorocyclopentadiene did not meet the applicable laboratory or EPA acceptance limits for precision and accuracy; therefore, the associated project samples are “R” qualified (unusable) due the potential bias.

The laboratory met the acceptance criteria for the ICP serial dilutions ($\leq 10\%$ D), between the undiluted and diluted results, where sample results are significantly greater than the MDL ($> 50\times$). The ICP/MS and mercury serial dilutions and post-digestion spike percent recoveries met the applicable criteria.

Internal Standards (VOC, SVOC and ICP/MS Analyses Only)

The VOC and SVOC internal standard area count criteria of 50% to 200% and the retention time (RT) of ± 30 seconds from the associated ICAL or opening CCV 12-hour standards were met.

The ICP/MS internal standard data were acceptable. The internal standards displayed percent relative intensity (%RI) within the 60-125% range.

Matrix Spike Results

As standard practice, the laboratory reported a shortened list of VOC, SVOC and PCB compounds for MS/MSD data. No qualification was performed based upon this occurrence.

For the VOC, SVOC and PCB analyses, sample RP-W-6 served as the MS/MSD sample. The MS/MSD data met the applicable laboratory and EPA 30-150 % acceptance criteria for percent recovery and RPD ($< 30\%$) with the exception of 1,4-dichlorobenzene (SVOC). The MSD percent recovery for 1,4-dichlorobenzene was within the laboratory acceptance limits, but below the EPA (30%) criteria; however, no data were qualified because the associated MS and LCS percent recoveries and %RPD met the laboratory and EPA criterion.

Sample RP-W-6 served as the MS/MSD sample for the ICP, ICP/MS and mercury analyses. The MS/MSD data met the applicable laboratory and EPA 30-150% acceptance criteria for percent recovery and RPD ($< 20\%$). The MS percent recovery for manganese for sample RP-W-6 was not applicable because the associated sample concentration was greater than four times the spike concentration thereby preventing accurate evaluation of the spike recovery.

General Chemistry Analysis (bicarbonate as CaCO_3 , carbonate as CaCO_3 , chloride, sulfate, fluoride, ammonia as N, nitrate + nitrite as N, and total phosphorus as P)

No Guideline criteria exist for bicarbonate as CaCO_3 , carbonate as CaCO_3 , chloride, sulfate, fluoride, ammonia as N, nitrate + nitrite as N, and total phosphorus as P analysis. The general chemistry data were reviewed in accordance with Barr's SOPs included in the QAPP. The ICV and CCV data indicated that the laboratory and method criteria were met for various general chemistry analyses (listed above). Samples RP-W-1 and RP-W-6 served as the MS/MSD and analytical batch duplicate samples for the general chemistry analyses. The LCS, MS/MSD, and analytical batch duplicate data indicated that the applicable laboratory and method criteria were met for the general chemistry analyses with the exception of total phosphorus analysis. The MS and MSD RPD exceeded

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the laboratory acceptance criteria for total phosphorus, but no data were qualified because the associated MS/MSD and LCS percent recoveries were within the laboratory criteria for accuracy. No method blank samples or CCBs had concentrations detected above the practical quantitation limit for any of the general chemistry analyses.

Field Duplicate Samples

Field duplicate samples were collected and analyzed as required in the QAPP. Sample MW-02-1 (MW-82-1 DUP) served as the field duplicate sample for this data package. Field duplicate samples met the RPD criteria (30%) as specified in the QAPP with the exception of isopropylbenzene, n-propylbenzene, 1,3,5-trimethylbenzene, sec-butylbenzene, tert-butylbenzene, (VOC), bis-2-ethylhexylphthalate (SVOC). Sample concentrations near the practical quantitation limit can exaggerate the deviation of the RPD. Since the isopropylbenzene, n-propylbenzene, 1,3,5-trimethylbenzene, sec-butylbenzene, tert-butylbenzene, and bis-2-ethylhexylphthalate sample concentrations were within five times the MDL, no qualifiers were applied to the data based upon the RPD of the field duplicate sample results.

Field Blank Samples

Field blank samples were collected and analyzed at the required frequency as specified in the QAPP. The field blank samples (MW-60-4 and MW-60-5) were collected in the following manner: The sample equipment (i.e. pump, tubing and/or hoses) were rinsed with analyte-free, deionized water and the rinse water was poured into the appropriate sample containers for analysis. Field blank sampling procedures and protocols were determined to be appropriate and were collected and analyzed at the required frequency as specified in the QAPP. No target analytes were present above the MDL for VOCs, SVOCs, and PCBs and above the practical quantitation limit (inorganics, radiochemistry, and general chemistry) in the field blank samples associated with this data package except where noted below. The field blank sample also had detections of sulfate and metals above the practical quantitation limit and trace concentrations of VOCs and SVOCs above the MDL. The field blank sample results are presented in Appendix O-4b. Associated sample concentrations within five times the associated field blank sample concentrations were reported with a “<” or U (EPA 2005 Organic and 2004 Inorganic Guidelines) qualifier.

Trip Blank Samples

Trip blank samples were collected and analyzed at the required frequency as specified in the QAPP. Sample MW-65-11 served as the trip blank sample collected and analyzed as part of this data package. No target VOC compounds were present above the method detection limit in the trip blank sample.

Discussion

The SVOC reporting limits for samples MW-02-1 and MW-82-1 (MW-02-1 DUP) are elevated due to relatively high levels of non-target background components. The sample extracts were diluted prior to instrumental analysis due to the relatively high levels of non-target background components. Clean-up of the extracts was performed within the scope of Method 8270C but did not eliminate

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enough of the back-ground components to prevent analytical dilutions. No SVOC data were qualified because the sample practical quantitation limits are subsequently elevated due to these interferences.

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The validation of the Columbia Analytical Services, Inc. (CAS, Kelso, Washington) and ACZ Laboratories, Inc. (ACZ, Steamboat Springs, Colorado) laboratory data for the volatile, semivolatile, metals, general chemistry and radiochemistry analyses of the samples collected in 2008 to support the Phase 1 - RCRA Facility Investigation is complete as detailed below.

The analytical data were reviewed in accordance Barr's Data Validation Standard Operating procedures (SOPs) which are based upon the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Organic and Inorganic Data Review (EPA 2005, 2004) and in general accordance with U.S. EPA Methods 300.0, 350.1, 353.2, 365.3, 900.0 modified, 903.1 modified, 904.0 modified and Standard Method 2320B as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008).

In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Summary calibration information
- Blank analysis
- Deuterated monitoring compounds (Surrogates)
- ICP/ICP/MS interference check samples (metals only)
- Laboratory control samples
- Matrix spike results
- Field duplicate samples
- Field blank samples
- Trip blank samples

The results for twenty-seven groundwater samples are contained in this laboratory report. The samples are identified as follows:

MW-01-4	MW-60-6 (Field Blank)	MW-06-10
MW-97-6 *	GW-3	MW-06-1
MW-06-24	MW-01-1	MW-06-4
MW-01-5	MW-97-1	MW-06-3
MW-06-23	MW-97-5	MW-60-7 (Field Blank)
MW-EPA-3	MW-06-14 *	MW-01-3
GW-1	MW-97-2	MW-65-14 (Trip blank)
MW-06-15 *	MW-06-19	MW-MT96-2
MW-EPA-1 *	MW-65-13 (Trip Blank)	MW-BSB-4
MW-65-12 (Trip Blank)	MW-01-6	MW-06-5
MW-97-12	MW-06-6	MW-86-5 (MW-06-5 Dup)

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* Denotes which samples were re-sampled and re-analyzed for select parameters during December 2008. The results of the December 2008 re-sampling event are contained in report K0812124.

The samples were analyzed for volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), polynuclear aromatic hydrocarbon selective ion monitoring (PAH-SIM), metals (ICP/ICP/MS/mercury), general chemistry parameters (bicarbonate as CaCO₃, carbonate as CaCO₃, chloride, sulfate, fluoride, ammonia as N, nitrate + nitrite as N, and total phosphorus as P) and radiochemistry parameters (gross alpha, gross beta, radium 226, and radium 228) as required using the methods detailed in the QAPP (Barr, May 2008).

Alternative methods other than those specified in the QAPP were used for the fluoride, gross alpha and beta and radium 226 and 228 analyses. While a deviation from the QAPP, it was determined that there were no adverse effects on data quality.

Overall Assessment

The QAPP specified that 10% of the project data be reviewed using CLP NFG (Guidelines) and the remaining data be reviewed in accordance with Barr's Data Validation SOPs. Because 90% of the data was correspondingly validated using non-CLP criteria, the laboratory criterion were used for consistency, except where outliers exceeded 30-150% EPA quality control criteria. In summary, because the Guidelines have limits which are often different than, and in certain cases are more stringent than, the limits specified by the analytical methods and the laboratory generated limits; therefore, the end result may be slightly different data qualification.

The 2-chloroethylvinylether VOC results from groundwater, field blank and trip blank samples were qualified with an "R" indicating unusable data because of the known degradation of 2-chloroethylvinylether in the hydrochloric acid sample preservative.

In accordance with the Guidelines, sample concentrations greater than the method detection limit (MDL) and below the practical quantitation limit for the fluoride, VOC, SVOC and PAH-SIM analysis are "J" qualified indicating an estimated concentration. The non-detect concentrations are presented as "<MDL" in the data tables.

During the evaluation of the groundwater data from the September 2008 monitoring event, cross-contamination of elemental phosphorus was suspected for twenty-one groundwater samples, including samples from an upgradient well, its duplicate (i.e. MW-06-5) and a rinsate blank sample collected after MW-06-13 as detailed in the letter from Barr to Dan Bersanti on December 3, 2008.

A meeting was convened with the field staff, Tom Mattison, Karma Hughes and Andrea Nord of Barr and it was determined that the field staff followed the Barr's standard operating procedures for cleaning reusable sampling equipment. The decontamination procedures included in the Barr standard operating procedures were appropriate for cleaning the submersible pumps used at the site.

A new dual pumping system was used for the September 2008 groundwater sample collection activities. The dual pumping system had a higher lift capacity than the single pump system previously used during the May 2008 sampling event. However, two of the new pumps failed during the September sampling event. One of the pumps failed during the sampling of MW-01-3 and a different pump was used to collect the sample at MW-01-3 and subsequent monitoring wells. The supplier was contacted and the pumps were replaced. The supplier reported that there was a defect in

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the two stage pumps. If the lower pump failed (as in this case), there was a potential that it did not allow for the lower cell of the pump to evacuate completely; thereby, allowing stagnant water to come in contact with each subsequent sample that was collected. The dual pump appeared to be operational because the upper chamber was still pumping.

Based upon the elemental phosphorus sample concentrations, the pump failure likely happened at or near groundwater well MW-01-3 which had an elemental phosphorus concentration of 290 ug/L. Each subsequent sample collected by the sampling team(s) who used that submersible dual pump had elemental phosphorus concentrations which decreased with each sample collected after well MW-01-3. The groundwater data were reviewed and certain wells' whose elemental phosphorus and metals concentrations were inconsistent with the May 2008 data set, were re-sampled to determine if cross-contamination occurred during the September 2008 sampling event.

Sampling procedures attempt to collect samples from the lowest to the highest concentrations across the Site. The sampling order during the September 2008 groundwater monitoring event was based upon arsenic, fluoride and sulfate concentrations from the May 2008 event. During the December 2008 collection activities, the sampling order was re-defined and sample MW-03-1 which had the highest elemental phosphorus concentration was sampled last. The re-sampling and re-analysis results (December 2008) confirmed that cross-contamination of elemental phosphorus likely occurred. Upon review of the other analytical parameters, (general chemistry, radiochemistry, metals, VOCs and SVOCs), a similar cross contamination trend was not observed. With the exception of MW-03-1, the elemental phosphorus data from the September 2008 event were "R" qualified (unusable) and the data collected during the December 2008 sampling event is presented in the data summary tables.

As part of the investigation, samples MW-97-6, MW-06-15, MW-EPA-1, MW-06-14, MW-06-20, MW-97-12 and field blank sample (MW-60-11) were also re-sampled and re-analyzed for select target metals because 1) the September 2008 metals concentrations were inconsistent with the metals concentrations from the May 2008 monitoring event and/or 2) potential contamination as indicated in the associated field blank sample(s) results. The following table summarizes which target parameters were re-sampled and re-analyzed during December 2008 and which data set(s) were presented on the data summary tables for the samples associated with this data evaluation.

Table 1 Summary of Data Presented Within the Data Summary Tables					
Monitoring Well	Analytical Parameters Re-sampled in December 2008				
	Cu	Fe	Zn	Pb	All Target Metals
MW-97-6	--	December	--	--	--
MW-06-15	December	December	December	--	--
MW-EPA-1	December	December	December	December	--
MW-06-14	--	December	--	--	--

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The data are useable as reported and qualified and fulfill the data quality objectives (DQOs) for sensitivity, accuracy and precision as specified in the QAPP. The following sections provide specific validation details.

Holding Times, Preservation and Storage

The samples were collected September 16th through 19th, 2008 and December 11th, 2008, packed on ice and sent to the laboratories (CAS, located in Kelso, Washington and ACZ, located in Steamboat Springs, CO) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of -0.5 °C to 5.0 °C upon receipt at the laboratories. The samples were stored at 4 °C until analysis. No qualifiers were assigned due to holding times, preservation, or storage issues.

Summary Calibration Information

The initial calibration (ICAL), continuing calibration (CCAL), initial calibration verification (ICV) and continuing calibration verifications (CCVs) are not QC elements for non-CLP data evaluation. Since the calibration data were provided in summary form within the laboratory report, the data, where available, were reviewed as part of the non-CLP data evaluation process but confirmation via raw data review was not performed.

During the data evaluation process of the initial calibration data for VOC analysis, it was noted that the relative response factors (RRFs) for acrolein, acrylonitrile and vinyl acetate met the laboratory specific acceptance limits but did not meet the limits specified in the Guidelines. Acrolein and acrylonitrile are documented as not being particularly stable in the analytical environment. A separate method has been developed for their analysis. Due to these considerations, no qualifiers were applied for poor RRFs observed for these parameters during the calibration of the instrument. Similarly, vinyl acetate is rapidly hydrolyzed to acetaldehyde and highly volatile. Due to degradation by hydrolysis and susceptibility to polymerization, no qualifiers were applied due to variability in the RRFs observed for this compound during the calibration of the instrument.

Because the laboratory VOC and SVOC ICAL percent relative standard deviation (%RSD) and RRF criteria differ from, and in some cases are less stringent than, the criterion published in the Guidelines, the data were evaluated by using the Guideline criterion for the system performance check compounds (SPCC). The remaining VOC and SVOC compounds were evaluated using the laboratory acceptance criterion during the ICAL data evaluation.

The %RSD for dichlorodifluoromethane and trichlorofluoromethane in VOC ICAL (CAL 7782) and for acrolein and iodomethane in VOC ICAL (CAL 7747) deviated from the laboratory and/or Guideline acceptance limits. No qualifiers were assigned to dichlorodifluoromethane, trichlorofluoromethane and iodomethane because the %RSD met the requirements of the Guidelines. For acrolein, only concentrations above the method detection limit (MDL) would require a “J” qualifier based upon this deviation but the acrolein data was already “R” qualified (unusable) due to failing LCS percent recoveries (detailed below); therefore, no additional qualification was necessary. The % Difference in one or more VOC CCALs did not meet the applicable laboratory acceptance limits for acrolein, bromomethane, 1,2-dibromo-3-chloropropane and the applicable Guideline criteria for bromoform. No additional qualification was deemed necessary for acrolein and

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bromomethane because they were already “R” qualified (unusable) based upon LCS percent recoveries exceeding the EPA criteria (150%) as discussed in further detail below. The associated project sample results for 1,2-dibromo-3-chloropropane and bromoform are “J” qualified (estimated) based upon the CCAL deviation(s).

The SVOC ICAL data meets both the laboratory criteria and the criteria published in the Guidelines and the SVOC CCVs met the laboratory CCV criterion for % Drift and % Difference for linear and quadratic calibrations; therefore, no SVOC data require qualification based upon ICAL or CCAL results.

The PAH-SIM ICAL data meets both the laboratory criteria and the criteria published in the Guidelines and the PAH-SIM CCVs met the laboratory CCV criterion for % Difference for linear calibrations; therefore, no PAH-SIM data require qualification based upon ICAL or CCAL results.

The ICP, ICP/MS and cold vapor mercury ICVs and CCVs met the established laboratory acceptance criterion.

Blank Analysis

As stated in Section B10.3.2 of the QAPP, when project sample concentrations are “<” (less than) five times the associated blank sample concentrations, thus suspected false positives, they are shown at the concentration reported in the sample, with a “<” qualifier with the exception of the radiochemistry analyses detailed below.

No trace concentrations of ICP, ICP/MS, mercury, VOCs and PAH-SIM were present in the laboratory method (or preparation) blank samples. Trace concentrations of phenol, naphthalene, 2-methylnaphthalene, diethylphthalate, di-n-butylphthalate, butylbenzylphthalate (SVOCs) were present above the MDL and/or practical quantitation limits in one or more laboratory method blank samples. Associated sample concentrations within five times the associated method blank sample concentrations were reported with a “<” or U (EPA 2005 Organic Guidelines) qualifier.

Although not part of the non-CLP data review, one or more of the following blank samples (initial calibration blank (ICB) and continuing calibration blank (CCBs) were evaluated when provided in summary form within the laboratory report but confirmation via raw data was not performed. No trace concentrations were detected above the practical quantitation limit in the blank samples for mercury, ICP, and ICP/MS analyses.

Deuterated Monitoring Compounds (DMC) (Surrogates)

The laboratory and EPA specified acceptance criterion for the DMC percent recoveries for the VOC, SVOC and PAH-SIM analyses in the project samples were met.

ICP/ICP/MS Interference Check Samples (Metals only)

The interference check sample (ICS) and contract required quantitation limit standard (CRI/CRA) data review is not a QC element for non-CLP evaluation but the ICS and CRI data were evaluated when provided in summary form within the laboratory report but confirmation via raw data review was not performed. The ICP, ICP/MS ICSs met the laboratory acceptance criteria for both solution A and solution AB. The CRI percent recovery for barium and copper by ICP/MS did not meet the

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acceptance limits specified in the Guidelines in one or more CRI samples. Since Method 6020 does not require CRI analysis, no data were qualified.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) were prepared and analyzed at the appropriate frequency for the target compounds and met the relevant acceptance criteria for percent recovery of the spike concentrations, indicating in-control analytical systems with the exceptions noted below.

In all but one case, the VOC LCS percent recoveries and relative percent differences (RPDs) met the relevant criteria. The percent recoveries for VOCs acrolein and bromomethane exceeded the applicable laboratory or EPA acceptance limits for accuracy; therefore the associated data were “R” qualified (unusable).

In all but eight cases, the SVOC LCS percent recoveries and RPDs that met the relevant criteria. The LCS/LCSD percent recoveries and/or RPDs for SVOCs pyridine, hexachloroethane, benzoic acid, hexachlorobutadiene, hexachlorocyclopentadiene, 2,4-dinitrophenol, pentachlorophenol and 2-methyl-4,6-dinitrophenol did not meet the applicable laboratory or EPA acceptance limits for precision and accuracy; therefore, the associated project sample results are “R” qualified (unusable) due to the potential data bias.

The ICP, ICP/MS, and mercury LCS percent recoveries met the laboratory acceptance criterion with the exception of beryllium. Beryllium exceeded the laboratory criterion (120%) for percent recovery in one LCS sample. However, no data were qualified because the deviation was minor (<1%) and the percent recovery met the EPA (30-150%) criteria.

The laboratory met the acceptance criteria for the ICP serial dilutions ($\leq 10\%$ D), between the undiluted and diluted results, where sample results are significantly greater than the MDL ($>50\times$). A post-digestion spike for ICP analyses was not performed. The ICP/MS and mercury serial dilutions and post-digestion spike percent recoveries met the applicable criteria.

Matrix Spike Results

As standard practice, the laboratory reported a shortened list of VOC and SVOC compounds for MS/MSD data. No qualification was performed based upon this occurrence.

For the VOC and PAH-SIM analyses, samples SW-17 and non-project specific samples were used for the MS/MSD. The MS/MSD data met the applicable laboratory and EPA criterion for percent recovery and RPD.

Sample SW-17 served as the MS/MSD sample for the SVOC analysis. With the exception of 1,4-dichlorobenzene and 1,2,4-trichlorobenzene, the MS/MSD data met the applicable laboratory and EPA acceptance criteria for percent recovery and RPD. The 1,4-dichlorobenzene and 1,2,4-trichlorobenzene MS percent recoveries were below the EPA (30%) criteria for accuracy and the RPDs exceeded the laboratory acceptance limits; therefore, the associated project sample data were “R” qualified (unusable) based upon these deviations.

Samples MW-01-4, MW-06-24, MW-06-1, MW-06-3, MW-97-6, MW-EPA-1, MW-06-20, MW-97-12 and non-project specific samples served as the MS/MSD samples for the ICP, ICP/MS and mercury analyses. The MS/MSD data met the applicable laboratory and EPA acceptance criteria

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for percent recovery and RPD. The MS percent recovery for barium for sample MW-01-4 was not applicable because the associated sample concentration was greater than four times the spike concentration thereby preventing accurate evaluation of the spike recovery.

General Chemistry Analysis (bicarbonate as CaCO₃, carbonate as CaCO₃, chloride, sulfate, fluoride, ammonia as N, nitrate + nitrite as N, and total phosphorus as P)

The general chemistry data were reviewed in accordance with Barr's SOPs included in the QAPP. The ICV, CCV data indicated that the laboratory and method criteria were met for various general chemistry parameters (listed above). Samples MW-01-4, MW-06-4, MW-01-6, EPA-1, MW-97-6, MW-97-2, MW-06-24 and SW-10 served as the MS/MSD sample for the general chemistry analyses. The LCS, MS/MSD data indicated that the laboratory and method criteria were met for all of the general chemistry analyses. Samples MW-01-4, MW-06-4, MW-97-5, EPA-1, MW-01-6, MW-97-6, MW-97-2, MW-06-24 and SW-10 served as the analytical batch duplicate sample for the general chemistry analyses. The analytical batch duplicate sample data indicated that the laboratory and method criteria were met for all of the general chemistry analyses. No method blank samples or continuing calibration blank samples had concentrations detected above the method detection limit (fluoride) and practical quantitation limit for the general chemistry analyses.

Radiochemistry Analysis (Gross alpha, Gross Beta, Radium 226 and Radium 228)

Results were reviewed in general accordance with the analytical methods 900.0, 903.1 and 904.0 selected by ACZ. Although these methods were not specified in the QAPP, the data were not qualified and should be deemed acceptable for the project. Samples EPA-1, MW-06-5, MW-01-5, MW-06-4, MW-97-2, and non-project specific samples served as the MS samples for one or more of the radiochemistry methods. The LCS and MS samples met the laboratory acceptance criteria for accuracy. Samples MW-06-15, MW-06-24, MW-06-1, MW-BSB-4, SD-220 (0-10) cm, GW-1, MW-60-6, SW-15, MW-06-23 and non-project specific samples served as the analytical batch duplicate samples for this data package. The gross alpha, gross beta and radium 226 and 228 RPDs for one or more laboratory duplicate samples exceeded the laboratory acceptance limits for precision. However, no data were qualified because the associated sample concentrations were near the practical quantitation limit which can exaggerate the deviation of the RPD. One or more method blank samples had detectable concentrations above the practical quantitation limit (i.e. lower limit of detection (LLD) for gross alpha, gross beta and radium 228; however, per guidance from the laboratory (ACZ), method blank concentrations less than two times the practical quantitation limit are not controlled; therefore, no qualification of the data was deemed necessary.

Field Duplicate Samples

Field duplicate samples were collected and analyzed as required by the QAPP. Sample MW-86-5 (MW-06-5 DUP) served as the field duplicate sample for this data package. Field duplicate samples met the RPD criteria (<30% for aqueous matrices) as specified in the QAPP with the exception of gross beta and radium 226. Sample concentrations near the practical quantitation limit can exaggerate the deviation of the RPD. Since the gross beta and radium 226 sample concentrations were within

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five times the practical quantitation limit, no qualifiers were applied to the data based upon the RPD of the field duplicate sample results.

Field Blank Samples

Field blank samples were collected and analyzed at the required frequency as specified in the QAPP. The field blank samples identified within this sample delivery group may apply to samples contained within other sample delivery groups. The field blank samples were collected in the following manner: the sample equipment (i.e. pump, tubing and/or hoses) were rinsed with analyte-free, deionized water and the rinse water was poured into the appropriate sample containers for analysis. No target analytes were present above the MDL for VOCs, SVOCs, PAH-SIM and fluoride or above the practical quantitation limit (inorganics, radiochemistry, general chemistry) in the field blank samples associated with this data package except where noted below. One or more of the field blank samples had detections of chloride, sulfate, metals and radiochemistry parameters above the practical quantitation limit and trace concentrations of VOCs, SVOCs and PAH-SIM were present above the MDL and/or practical quantitation limit. The field blank sample results are presented in Appendix O-4b. Associated sample concentrations within five times the associated field blank sample concentrations were reported with a “<” or U (EPA 2005 Organic and 2004 Inorganic Guidelines) qualifier with the exception of the gross alpha and gross beta analysis. Due to the nature of the analyses, the radiochemistry field blank sample data were used to evaluate if any gross system contamination occurred. No qualifiers were applied to the samples based upon the field blank sample data for the radiochemistry analyses.

Trip Blank Samples

Trip blank samples were collected and analyzed at the required frequency as specified in the QAPP. Samples MW-65-12, MW-65-13 and MW-65-14 served as the trip blank samples collected and analyzed as part of this data package. Trace concentrations of chloromethane (MW-65-12) and acetone (MW-65-13 and MW-65-14) were detected above the method detection limit and below the practical quantitation limit. Associated sample concentrations within five times the associated trip blank sample concentrations were reported with a “<” or U (EPA 2005 Organic Guidelines) qualifier. No other target VOC compounds were present above the method detection limit in the trip blank samples.

Discussion

The analytical batch duplicate sample RPDs met the applicable laboratory criteria with the exception of beryllium and chromium (ICP/MS) for sample MW-06-1. No metals data were qualified because the sample concentrations were near the practical quantitation limit which can exaggerate the deviation of the RPD.

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Date of Data Validation Report: March 12, 2009

The validation of the Columbia Analytical Services, Inc. (CAS, Kelso, Washington) and ACZ Laboratories, Inc. (ACZ, Steamboat Springs, Colorado) laboratory data for the volatile, semivolatile, metals, general chemistry, and radiochemistry analyses of the samples collected in 2008 to support the Phase 1 - RCRA Facility Investigation is complete as detailed below.

The analytical data were reviewed in accordance Barr's Data Validation Standard Operating Procedures (SOPs) which are based upon the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Organic and Inorganic Data Review (EPA 2005, 2004) and in general accordance with U.S. EPA Methods 300.0, 350.1, 353.2, 365.3, 900.0 modified, 903.1 modified, 904.0 modified, and Standard Method 2320B as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008).

In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Summary calibration information
- Blank analysis
- Deuterated monitoring compounds (Surrogates)
- ICP/ICP/MS interference check samples (metals only)
- Laboratory control samples
- Matrix spike results
- Field duplicate samples
- Field blank samples
- Trip blank samples

The results for fifteen surface water samples are contained in this laboratory report. The samples are identified as follows:

SW-15	SW-121 (Field Blank)	SW-147 (Trip Blank)
SW-16	SW-146 (Trip Blank)	SW-4
SW-101 (SW-15 DUP)	SW-6	SW-3
SW-145 (Trip Blank)	SW-5	SW-1
SW-17	SW-10	SW-8
SW-14	SW-11	SW-20
SW-13	SW-12	SW-148 (Trip Blank)

The samples were analyzed for volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), polynuclear aromatic hydrocarbon by selective ion monitoring (PAH-SIM), total and dissolved metals (ICP/ICP/MS/mercury), general chemistry parameters (bicarbonate as CaCO₃, carbonate as CaCO₃, chloride, sulfate, fluoride, ammonia as N, nitrate + nitrite as N, total

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phosphorus as P); and radiochemistry parameters (gross alpha, gross beta, radium 226, and radium 228) as required using the methods detailed in the QAPP (Barr, May 2008).

Alternative methods other than those specified in the QAPP were used for the fluoride, gross alpha and beta, and radium 226 and 228 analyses. While a deviation from the QAPP, it was determined that there were no adverse effects on data quality.

Overall Assessment

The QAPP specified that 10% of the project data be reviewed using CLP NFG (Guidelines) and the remaining data be reviewed in accordance with Barr's Data Validation SOPs. Because 90% of the data was correspondingly validated using non-CLP criteria, the laboratory criterion were used for consistency, except where outliers exceeded 30-150% EPA quality control criteria. In summary, because the Guidelines have limits which are often different than, and in certain cases are more stringent than, the limits specified by the analytical methods and the laboratory generated limits; therefore, the end result may be slightly different data qualification.

The 2-chloroethylvinylether VOC results from groundwater, field blank, and trip blank samples were qualified with an "R" indicating unusable data because of the known degradation of 2-chloroethylvinylether in the hydrochloric acid sample preservative.

In accordance with the Guidelines, sample concentrations greater than the method detection limit (MDL) and below the practical quantitation limit for the fluoride, VOC, SVOC, and PAH-SIM analysis are "J" qualified indicating an estimated concentration. The non-detect concentrations are presented as "<MDL" in the data tables.

The data are useable as reported and qualified and fulfill the data quality objectives (DQOs) for sensitivity, accuracy and precision as specified in the QAPP. The following sections provide specific validation details.

Holding Times, Preservation and Storage

The samples were collected September 16th through 21st, 2008, packed on ice and sent to the laboratories (CAS, located in Kelso, Washington and ACZ, located in Steamboat Springs, CO) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of -0.3 °C to 5.6 °C upon receipt at the laboratories. The samples were stored at 4 °C until analysis. No qualifiers were assigned due to holding times, preservation, or storage issues.

Summary Calibration Information

The initial calibration (ICAL), continuing calibration (CCAL), initial calibration verification (ICV), and continuing calibration verifications (CCVs) are not QC elements for non-CLP data evaluation. Since the calibration data were provided in summary form within the laboratory report, the data, where available, were reviewed as part of the non-CLP data evaluation process but confirmation via raw data review was not performed.

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During the data evaluation process of the initial calibration data for VOC analysis, it was noted that the relative response factors (RRFs) for acrolein, acrylonitrile, and vinyl acetate met the laboratory specific acceptance limits but did not meet the limits specified in the Guidelines. Acrolein and acrylonitrile are documented as not being particularly stable in the analytical environment. A separate method has been developed for their analysis. Due to these considerations, no qualifiers were applied for poor RRFs observed for these parameters during the calibration of the instrument. Similarly, vinyl acetate is rapidly hydrolyzed to acetaldehyde and highly volatile. Due to degradation by hydrolysis and susceptibility to polymerization, no qualifiers were applied due to variability in the RRFs observed for this compound during the calibration of the instrument.

Because the laboratory VOC and SVOC ICAL percent relative standard deviation (%RSD) and RRF criteria differ from, and in some cases are less stringent than, the criterion published in the Guidelines, the data were evaluated by using the Guideline criterion for the system performance check compounds (SPCC). The remaining VOC and SVOC compounds were evaluated using the laboratory acceptance criterion during the ICAL data evaluation.

The %RSD for dichlorodifluoromethane and trichlorofluoromethane in VOC ICAL (CAL 7782) deviated from the laboratory and/or Guideline acceptance limits. No qualifiers were assigned to dichlorodifluoromethane and trichlorofluoromethane because the %RSD met the requirements of the Guidelines. The % Difference and minimum response factor criterion for one or more VOC CCALs did not meet the applicable laboratory acceptance limits for 1,2-dibromo-3-chloropropane and the applicable Guideline criteria for bromoform; therefore, the associated project sample results are “J” qualified (estimated) based upon the VOC CCAL deviation(s).

The SVOC ICAL data associated with the samples contained in this SDG meets both the laboratory criteria and the criteria published in the Guidelines. The % Drift and % Difference for average and quadratic calibrations in one SVOC CCAL did not meet the laboratory acceptance criteria for benzoic acid. The Guidelines specify that the data be “J” qualified (estimated) based upon this SVOC ICAL deviation; however, no additional qualification was applied to the associated samples because they are already “R” qualified (unusable) due to the LCS/LCSD percent recoveries deviation(s) which is detailed in the LCS section of this evaluation.

The PAH-SIM ICALs met relevant acceptance criteria including the average RRFs and %RSD for target PAHs and DMC. The PAH-SIM CCVs met the laboratory CCV criterion for % Difference for linear calibrations; therefore, no PAH-SIM data require qualification based upon ICAL and CCAL results.

The ICP, ICP/MS, and cold vapor mercury ICVs and CCVs met the established laboratory acceptance criterion.

Blank Analysis

As stated in Section B10.3.2 of the QAPP, when project sample concentrations are “<” (less than) five times the associated blank sample concentrations, thus suspected false positives, they are shown at the concentration reported in the sample, with a “<” qualifier with the exception of the radiochemistry analyses detailed below.

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No trace concentrations of total and dissolved ICP, ICP/MS, mercury, VOCs, and PAH-SIM compounds were present in the laboratory method (or preparation) blank samples. Trace concentrations of phenol, naphthalene, 2-methylnaphthalene, diethylphthalate, di-n-butylphthalate and butylbenzylphthalate (SVOCs) were present above the method detection limits in one or more laboratory method blank samples. Associated sample concentrations within five times the associated method blank sample concentrations were reported with a “<” or U (EPA 2005 Organic Guidelines) qualifier.

Although not part of the non-CLP data review, one or more of the following blank samples (initial calibration blank (ICB) and continuing calibration blank (CCBs) were evaluated when provided in summary form within the laboratory report but confirmation via raw data was not performed. No trace concentrations were detected above the practical quantitation limit in the blank samples for total and dissolved mercury, ICP, and ICP/MS analyses.

Deuterated Monitoring Compounds (DMC) (Surrogates)

The laboratory and EPA specified acceptance criterion for the DMC percent recoveries for the VOC, SVOC and PAH-SIM analyses in the project samples were met.

ICP/ICP/MS Interference Check Samples (Metals only)

The interference check sample (ICS) and contract required quantitation limit standard (CRI/CRA) data review is not a QC element for non-CLP evaluation but the ICS and CRI data were evaluated when provided in summary form within the laboratory report but confirmation via raw data review was not performed. The ICP, ICP/MS ICSs met the laboratory acceptance criteria for both solution A and solution AB. The CRI percent recoveries for chromium, lead, silver, and nickel by ICP/MS, sodium by ICP and mercury did not meet the acceptance limits specified in the Guidelines. Since Methods 6010, 6020, and 7470 by CVAA do not require CRI analysis, qualifiers were not applied to lead, silver, nickel, sodium, and mercury data. The chromium data was not qualified based upon the CRI data because the associated sample concentrations were non-detect after the application of data qualifiers based upon the presence of chromium in the associated field blank sample.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) were prepared and analyzed at the appropriate frequency for the target compounds and met the relevant acceptance criteria for percent recovery of the spike concentrations, indicating in-control analytical systems with the exceptions noted below.

In all but eight cases, the SVOC LCS percent recoveries and RPDs met the relevant criteria. The LCS/LCSD percent recoveries and/or RPDs for SVOCs pyridine, hexachloroethane, benzoic acid, hexachlorobutadiene, hexachlorocyclopentadiene, 2,4-dinitrophenol, 2-methyl-4,6-dinitrophenol, and pentachlorophenol did not meet the applicable laboratory or EPA acceptance limits for precision and accuracy. The associated project sample results are “R” qualified (unusable) due to the potential data bias.

The laboratory met the acceptance criteria for the ICP serial dilutions ($\leq 10\%$ D), between the undiluted and diluted results, where sample results are significantly greater than the MDL ($>50\times$) with the exception of magnesium. The serial dilution for total and dissolved magnesium for sample

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SW-11 exceeded the acceptance limits specified by the laboratory and the Guidelines and was “J” qualified (estimated). A post-digestion spike for ICP analyses was not performed. The ICP/MS and mercury serial dilutions and post-digestion spike percent recoveries met the applicable criteria.

Matrix Spike Results

As standard practice, the laboratory reported a shortened list of VOC and SVOC compounds for MS/MSD data. No qualification was performed based upon this occurrence.

For the VOC and PAH-SIM analyses, samples SW-17 and non-project specific samples were used for the MS/MSD. The MS/MSD data met the applicable laboratory and EPA criterion for percent recovery and RPD.

Sample SW-17 served as the MS/MSD sample for the SVOC analysis. The percent recoveries for 1,4-dichlorobenzene and 1,2,4-trichlorobenzene were below the EPA 30% lower acceptance criteria and the RPDs exceeded the laboratory acceptance criteria; therefore, the associated data were “R” qualified (unusable).

Samples SW-11, SW-17, SW-101, and non-project specific samples served as the MS/MSD samples for the ICP, ICP/MS and mercury analyses. The MS/MSD data met the applicable laboratory and EPA acceptance criteria for percent recovery and RPD. The MS percent recovery for manganese for sample SW-11 and for copper, manganese and zinc for sample SW-17 and were not applicable because the associated sample concentrations were greater than four times the spike concentration thereby preventing accurate evaluation of the spike recovery.

General Chemistry Analysis (bicarbonate as CaCO₃, carbonate as CaCO₃, chloride, sulfate, fluoride, ammonia as N, nitrate + nitrite as N, and total phosphorus as P)

The general chemistry data were reviewed in accordance with Barr’s SOPs included in the QAPP. The ICV, CCV data indicated that the laboratory and method criteria were met for various general chemistry parameters (listed above). Samples SW-10, SW-15, SW-16 and SW-17 served as the MS/MSD samples for the general chemistry analyses. The LCS, MS/MSD data indicated that the laboratory and method criteria were met for all of the general chemistry analyses. Samples SW-10, SW-14, SW-15, SW-16, and SW-17 served as the analytical batch duplicate samples for the general chemistry analyses. The analytical batch duplicate sample data indicated that the laboratory and method criteria were met for all of the general chemistry analyses. No method blank samples or continuing calibration blank samples had concentrations detected above the method detection limit (fluoride) and practical quantitation limit for the general chemistry analyses.

Radiochemistry Analysis (Gross alpha, Gross Beta, Radium 226 and Radium 228)

Results were reviewed in general accordance with the analytical methods 900.0, 903.1, and 904.0 selected by ACZ. Although these methods were not specified in the QAPP, the data were not qualified and should be deemed acceptable for the project. Samples MW-06-5, SW-121, MW-60-8, MW-06-18, and non-project specific samples served as the MS samples for one or more of the radiochemistry methods. The LCS and MS samples met the laboratory acceptance criteria for

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accuracy. Samples BSB-4, SD-220 (0-10)cm, SW-14, MW-06-13, SW-15, SW-17, MW-06-18, and non-project specific samples served as the analytical batch duplicate samples for this data package. The gross alpha, gross beta, and radium 226 and 228 RPDs for one or more laboratory duplicate samples exceeded the laboratory acceptance limits for precision. However, no data were qualified because the associated sample concentrations were near the practical quantitation limit which can exaggerate the deviation of the RPD. The method blank samples had no detectable concentrations above the practical quantitation limit (i.e. lower limit of detection (LLD) for the target radiochemistry analytes.

Field Duplicate Samples

Field duplicate samples were collected and analyzed as required by the QAPP. Sample SW-101 (SW-15 DUP) served as the field duplicate samples for this data package. Field duplicate samples met the RPD criteria (<30% for aqueous matrices) as specified in the QAPP with the exception of gross alpha, radium 226, dissolved cobalt, diethylphthalate (SVOC), and phenanthrene (PAH-SIM). Sample concentrations near the practical quantitation limit can exaggerate the deviation of the RPD. Since the gross alpha and radium 226 sample concentrations were within five times the practical quantitation limit and the diethylphthalate and phenanthrene sample concentrations were within five times the MDL, no qualification was deemed necessary. The dissolved cobalt results for sample SW-15 and its associated field duplicate sample SW-101 were “J” qualified (estimated) based upon the deviation of the RPD.

Field Blank Samples

Field blank samples were collected and analyzed at the required frequency as specified in the QAPP. Sample SW-121 served as the field blank sample associated with this sample delivery group. The field blank sample was collected in the following manner: the sample equipment (i.e. pump, tubing and/or hoses) were rinsed with analyte-free, deionized water and the rinse water was poured into the appropriate sample containers for analysis. Field blank sampling procedures and protocols were determined to be appropriate and were collected and analyzed at the required frequency as specified in the QAPP. No target analytes were present above the MDL for VOCs, SVOCs, and PAH-SIM or above the practical quantitation limit (inorganics, radiochemistry, general chemistry) in the field blank samples associated with this data package except where noted below. One or more of the field blank samples had detections of total phosphorus, total metals, and dissolved metals above the practical quantitation limit and trace concentrations of VOCs, SVOCs, and PAH-SIM were present above the MDL. The field blank sample results are presented in Appendix O-4b. Associated sample concentrations within five times the associated field blank sample concentrations were reported with a “<” or U (EPA 2005 Organic and 2004 Inorganic Guidelines) qualifier.

Trip Blank Samples

Trip blank samples were collected and analyzed at the required frequency as specified in the QAPP. Samples SW-145, SW-146, SW-147, and SW-148 served as the trip blank samples collected and analyzed as part of this data package. Trace concentrations of carbon disulfide, acetone, and toluene were detected above the method detection limit in one or more of the trip blank samples. Associated sample concentrations within five times the associated trip blank sample concentrations were

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reported with a “<” or U (EPA 2005 Organic Guidelines) qualifier. No other target VOC compounds were present above the method detection limit in the trip blank samples.

Discussion

The analytical batch duplicate sample RPDs met the applicable laboratory criteria with the exception of silver (ICP/MS) for sample SW-17; however, no qualification was deemed necessary because the sample concentrations were close to the practical quantitation limit thereby exaggerating the deviation of the RPD.

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Laboratory Report / Batch: K0809186

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U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date of Data Validation Report: March 16, 2009

The validation of the Columbia Analytical Services, Inc. (CAS, Kelso, Washington) laboratory data for the volatile, semivolatile, metals, and general chemistry analyses of the samples collected in 2008 to support the Phase 1 - RCRA Facility Investigation is complete as detailed below.

The analytical data were reviewed in accordance Barr's Data Validation Standard Operating Procedures (SOPs) which are based upon the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Organic and Inorganic Data Review (EPA 2005, 2004) and in general accordance with U.S. EPA Methods 160.3, 300.0, 340.2 modified, 350.1 modified and 353.2 modified as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008).

In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Instrument performance checks - GC/MS and ICP/MS Tuning
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Blank analysis
- Deuterated monitoring compounds
- ICP/ICP/MS interference check samples
- Laboratory control samples
- Internal standards
- Matrix spike results
- Field duplicate samples
- Field blank samples
- Trip blank samples

The results for three sediment samples are contained in this laboratory report. The samples are identified as follows:

SD-13 (0-10) cm
SD-6 (0-10) cm
SD-5 (0-10) cm

SD-200 (0-10) cm (SD-13 (0-10) cm DUP)
SD-240 (Trip Blank)

The samples were analyzed for volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), metals (ICP/ICP/MS/mercury), general chemistry parameters (total solids, chloride, sulfate, fluoride, ammonia as N, and nitrate + nitrite as N) and radiochemistry parameters (gross alpha, gross beta, radium 226 and radium 228) as required using the methods detailed in the QAPP (Barr, May 2008). The radiochemistry data evaluation for the samples listed above is included in the data evaluation for laboratory report K0809275 (under separate cover).

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Overall Assessment

The QAPP specified that 10% of the project data be reviewed using CLP NFG (Guidelines) and the remaining data be reviewed in accordance with Barr's Data Validation SOPs. Because 90% of the data was correspondingly validated using non-CLP criteria, the laboratory criterion were used for consistency, except where outliers exceeded 30-150% EPA quality control criteria. In summary, because the Guidelines have limits which are often different than, and in certain cases are more stringent than, the limits specified by the analytical methods and the laboratory generated limits; therefore, the end result may be slightly different data qualification.

In accordance with the Guidelines, sample concentrations greater than the method detection limit (MDL) and below the practical quantitation limit for the VOC, SVOC and metals analyses are "J" qualified indicating estimated concentrations. The non-detect concentrations are presented as "<MDL" in the data tables.

Due to a miscommunication within the laboratory, the soil samples associated within this data package were extracted using the Bellack distillation procedure (EPA Method 340.1 modified) and not the distilled (DI) water distillation procedure required for the project. The Bellack distillation yields much higher fluoride values than the DI water distillation method due to the aggressiveness of the extraction fluid used. The fluoride results from this data package are presented on the data summary tables included in Table 3. While the data from the Bellack method met all quality assurance criteria, the use of this method is a deviation from the QAPP as it does not meet the data quality objectives. The results generated using this extraction method will be significantly higher than the method included in the QAPP. This difference needs to be considered when using the data as part of this project.

The data are useable as reported and qualified and fulfill the data quality objectives (DQOs) for sensitivity, accuracy and precision as specified in the QAPP. The following sections provide specific validation details.

Holding Times, Preservation and Storage

The samples were collected September 18th through 21st, 2008, packed on ice and sent to CAS, located in Kelso, Washington with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 0.4 °C to 3.1 °C upon receipt at the laboratories. The samples were stored at 4 °C until analysis. The total solids analysis was conducted after the 7 day recommended holding time had expired; therefore, the total solids results were "J" qualified (estimated) based upon this deviation. No qualifiers were assigned due to preservation or storage issues.

Instrument Performance Checks – GC/MS & ICP/MS Tuning (VOC, SVOC and ICP/MS Metals)

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

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The gas chromatography/mass spectrometry (GC/MS) tuning performed as part of the VOC and SVOC analyses met the relevant acceptance criteria for frequency, mass abundance, and mass ratios.

The tuning aspects of the inductively coupled plasma mass spectrometer (ICP/MS) met the relevant acceptance criteria for mass resolution and the percent relative standard deviation (%RSD) for the five consecutive replicates at <5%.

Initial Calibration and Initial Calibration Verification

During the data evaluation process of the initial calibration data for VOC analysis, it was noted that the relative response factors (RRFs) for acrolein, acrylonitrile and vinyl acetate met the laboratory specific acceptance limits but did not meet the limits specified in the Guidelines. Acrolein and acrylonitrile are documented as not being particularly stable in the analytical environment and a separate method has been developed for their analysis. Due to these considerations, no qualifiers were applied for poor RRFs observed for these parameters during the calibration of the instrument. Similarly, vinyl acetate is rapidly hydrolyzed to acetaldehyde and highly volatile. Due to degradation by hydrolysis and susceptibility to polymerization, no qualifiers were applied due to variability in the RRFs observed for this compound during the calibration of the instrument.

Because the laboratory VOC and SVOC ICAL percent relative standard deviation (%RSD) and RRF criteria differ from, and in some cases are less stringent than, the criterion published in the Guidelines, the data were evaluated by using the Guideline criterion for the system performance check compounds (SPCCs). The remaining VOC and SVOC compounds were evaluated using the laboratory acceptance criterion during the ICAL data evaluation. The VOC ICAL events met relevant acceptance criteria including the RRFs and %RSD for the volatile target compounds including the associated deuterated monitoring compounds (DMCs or surrogates) with the exception of acrolein, bromomethane and acetone. The %RSD for acrolein, bromomethane and acetone exceeded the laboratory acceptance limits in one ICAL (CAL7784). For acrolein and bromomethane, only concentrations above the MDL would require a “J” qualifier based upon this deviation, but the associated samples had no detectable acrolein and bromomethane above the MDL, therefore, no data were qualified based upon this VOC ICAL deviation. Additionally, no qualification was deemed necessary for acetone, because the %RSD met the ICAL criteria defined in the Guidelines.

The SVOC initial calibration met relevant acceptance criteria for individual and average RRFs for target SVOCs and DMCs, and the %RSD. The laboratory generated a combination of initial calibration curves including averaged and quadratic curves for the target SVOC compounds. Recalculation of final results were not verified when quadratic quantitation was employed. The % difference for the secondary source calibration verification sample exceeded the applicable laboratory acceptance criteria for benzidine. The Guidelines specify that the data be “J” qualified (estimated) based upon this SVOC CCAL deviation; however, no additional qualification was applied to the associated samples because they are already “R” qualified (unusable) due to the low LCS/LCSD percent recoveries deviation(s) which is detailed in the LCS section of this evaluation.

The ICP and ICP/MS initial calibrations were performed at the appropriate frequency and run order, and met minimum percent recovery (%R) acceptance criteria for each of the target metals. Mean concentrations from 2 replicate exposures were reported for ICP and from 3 replicate exposures for ICP/MS as required. Initial calibration verification (ICV) criterion of $\pm 10\%$ (of true value) for the target analytes was met during the initial calibration events.

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The cold vapor mercury initial calibration events met the acceptance criterion of a correlation coefficient >0.995 using a minimum of at least four calibration standard solutions. The ICV criterion of 20% of the true value was also met for the cold vapor mercury analysis.

Continuing Calibration Verification

The continuing calibration verification samples (CCVs) associated with the VOC analysis and the associated DMCs met the criteria for frequency, the minimum RRF and the %D (as compared to the associated initial calibration standard (s) with the exception of 2-chloroethylvinylether and naphthalene. The % difference for one CCV sample exceeded the applicable acceptance criteria for 2-chloroethylvinylether and naphthalene; therefore, the associated data were “J” qualified based upon the CCV deviation. Closing VOC CCV data was not provided by the laboratory as it is not a requirement of EPA Method 8260. While this is a deviation from the Guidelines, no significant deviations in opening CCVs were observed and this procedure meets method criteria.

The SVOC CCV was performed at the appropriate frequency and met relevant opening CCV acceptance criteria including minimum RRF for target SVOCs and DMCs, and the % Difference and % Drift with the exception of benzidine. The % difference for benzidine exceeded the applicable laboratory criteria for one CCV. No additional qualification was deemed necessary, because the associated data were already “R” qualified based upon failing LCS/LCSD percent recoveries detailed in the LCS section of this evaluation. Closing SVOC CCV data were not provided by the laboratory as it is not a requirement of EPA Method 8270. While this is a deviation from the Guidelines, no significant deviations in opening SVOC CCVs were observed and this procedure meets method criteria.

The CCVs for ICP and ICP/MS analyses met data validation criteria for frequency, run order and acceptable percent recoveries were achieved within the analytes’ method detection limit and the documented upper linear range of the instrument. Mean concentrations from the 2 (for ICP) and 3 (for ICP/MS) replicate exposures were reported as required.

The CCVs associated with the cold vapor mercury analyses met the established acceptance criteria for frequency and the calculated percent recovery of 20% of the true value.

The Contract Required Quantitation Limit (CRQL) Check Standard (CRI) sample data for ICP, ICP/MS, and mercury did not meet the data validation criteria for frequency, run order and/or percent recovery as dictated in the Guidelines. The CRI samples reported in the data packages were analyzed at the beginning of the analytical sequence(s). The percent recoveries for mercury met the percent recovery criterion established in the Guidelines. The CRI percent recovery for sodium and vanadium by ICP, and for barium by ICP/MS did not meet the acceptance limits specified in the Guidelines in one or more CRI samples. Since Methods 6010 and 6020 do not require CRI analysis, no data were qualified.

Blank Analysis

As stated in Section B10.3.2 of the QAPP, when project sample concentrations are “<” (less than) five times the associated blank sample concentrations, thus suspected false positives, they are shown at the concentration reported in the sample, with a “<” qualifier..

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Two method (or preparation) blank samples were prepared during the VOC analysis. Trace concentrations of VOCs were present above the method detection limit and below the practical quantitation limit in one or more of the laboratory method blank samples. Method blank sample results are presented in Appendices O-4b and O-4c. Sample concentrations within five times the associated method blank sample concentrations were assigned a “<” or “U” (EPA 2005 Organic Guidelines) qualifier.

For the SVOC analysis, one method blank sample was prepared and analyzed as required. No SVOCs were present above the method detection limits in the method blank sample.

The ICP, ICP/MS and mercury analyses method blank samples, initial calibration blank (ICB) and continuing calibration blanks (CCBs) were prepared and analyzed at the appropriate frequency and met acceptance criteria for proper run order. One method blank sample had thallium present above the MDL and below the practical quantitation limit. No thallium data were qualified because the associated sample concentrations were greater than five times the method blank sample concentration. Trace concentrations of thallium, barium and calcium were detected above the MDL and below the practical quantitation limit in one or more ICB and CCB samples for the ICP and ICP/MS analysis. Once these ICB and CCB concentrations undergo unit conversions (for comparison to mg/kg sediment results) they are very low and are unlikely to adversely affect final sample results, therefore, no data qualifier were applied. No positive concentrations of mercury were present above the method detection limit in the method blank, ICB or CCB samples.

Deuterated Monitoring Compounds (Surrogates)

The laboratory acceptance criteria for the deuterated monitoring compounds (DMCs) percent recoveries for the VOC and SVOC analyses in the samples were met.

ICP/ICP/MS Interference Check Samples (Metals only)

The ICP and ICP/MS interference check samples (ICS) were analyzed at the appropriate frequency and in the correct order during the analysis of the project samples. Acceptable results of $\pm 20\%$ of the true value were obtained for both solution A and solution AB.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) were prepared and analyzed at the appropriate frequency for the target compounds and met the relevant acceptance criteria for percent recovery of the spike concentrations, indicating in-control analytical systems with the exceptions noted below.

In all but one case, the VOC LCS and LCSD samples percent recoveries and relative percent differences (RPDs) met the relevant criteria. The percent recoveries for vinyl chloride exceeded the laboratory and EPA (150%) upper acceptance criterion; therefore, the associated vinyl chloride data were “R” qualified (unusable) due to the potential bias.

In all but one case, the SVOC LCS sample percent recoveries and RPDs met the relevant criteria. The percent recoveries for benzidine did not meet the applicable laboratory and EPA acceptance limits for accuracy; therefore, the associated project samples are “R” qualified (unusable) due the potential bias.

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The laboratory met the acceptance criteria for the ICP and ICP/MS serial dilutions ($\leq 10\%$ D), between the undiluted and diluted results, where sample results are significantly greater than the MDL ($>50\times$) with the following exceptions. The serial dilution for arsenic, lead, thallium and uranium for sample SD-20 (0-10) cm exceeded the acceptance limits specified by the laboratory and the Guidelines and were “J” qualified (estimated). A post-digestion spike for ICP analyses was not performed. The mercury serial dilutions and the ICP/MS and mercury post-digestion spike percent recoveries met the applicable criteria.

Internal Standards (VOC, SVOC and ICP/MS Analyses Only)

The VOC and SVOC internal standard area count criteria of 50% to 200% and the retention time (RT) of ± 30 seconds from the associated ICAL or opening CCV 12-hour standards were met.

The ICP/MS internal standard data were acceptable. The internal standards displayed percent relative intensity (%RI) within the 60-125% range.

Matrix Spike Results

As standard practice, the laboratory reported a shortened list of SVOC compounds for MS/MSD data. No qualification was performed based upon this occurrence.

For the SVOC analyses, sample SD-20 (0-10) cm served as the MS/MSD sample. The MS/MSD data met the applicable laboratory and EPA 30-150 % acceptance criteria for percent recovery and RPD ($<30\%$).

Sample SD-20 (0-10) cm served as the MS sample for the ICP, ICP/MS and mercury analyses. The MS data met the applicable laboratory and EPA 30-150% acceptance criteria for percent recovery with the exception of antimony. The MS percent recovery for antimony was within the laboratory and EPA 30-150% criteria, but below the method criteria; therefore, the associated sample data were “J” qualified (estimated). This affected sample SD-20 (0-10) cm. The MS percent recovery for iron for sample SD-20 (0-10) cm was not applicable because the associated sample concentration was greater than four times the spike concentration thereby preventing accurate evaluation of the spike recovery.

General Chemistry Analysis (total solids, chloride, sulfate, fluoride, ammonia as N and nitrate + nitrite as N)

No Guideline criteria exist for total solids, chloride, sulfate, fluoride, ammonia as N, and nitrate + nitrite as N analysis. The general chemistry data were reviewed in accordance with Barr’s SOPs included in the QAPP. The ICV and CCV data indicated that the laboratory and method criteria were met for various general chemistry analyses (listed above). Samples SD-13 (0-10) cm, SD-200 (0-10) cm and non-project specific samples served as the MS/MSD and analytical batch duplicate samples for the general chemistry analyses. The LCS, MS/MSD, and analytical batch duplicate data indicated that the applicable laboratory and method criteria were met for the general chemistry analyses with the exception of fluoride and nitrate + nitrite as N analysis. The LCS percent recoveries exceeded the applicable laboratory and method acceptance criteria; therefore, the associated fluoride data were “J” qualified (estimated). The LCS and MS percent recoveries were below the applicable acceptance criteria for nitrate + nitrite as N; therefore, the associated data were “J” qualified (estimated). No

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method blank samples or CCBs had concentrations detected above the practical quantitation limit for any of the general chemistry analyses. Results for total solids were accepted as reported.

Field Duplicate Samples

Field duplicate samples were collected and analyzed as required in the QAPP. Sample SD-200 (0-10)cm (SD-13 (0-10) cm DUP) served as the field duplicate sample for this data package. Field duplicate samples met the RPD criteria (< 40%) as specified in the QAPP with the exception of fluoride and 4-isopropyltoluene (VOC). Sample concentrations near the practical quantitation limit can exaggerate the deviation of the RPD. Since the 4-isopropyltoluene sample concentrations were within five times the MDL, no qualifiers were applied to the data based upon the RPD of the field duplicate sample results. No additional qualification was performed based upon the field duplicate sample RPD for the fluoride analysis, because the samples were already “J” qualified based upon failing LCS percent recoveries.

Field Blank Samples

Field blank samples were collected and analyzed at the required frequency as specified in the QAPP. The field blank sample SD-220 (0-10) cm was collected in the following manner: The sample equipment (i.e. piston core sampler) was rinsed with analyte-free, deionized water and the rinse water was poured into the appropriate sample containers for analysis. Field blank sampling procedures and protocols were determined to be appropriate and were collected and analyzed at the required frequency as specified in the QAPP. The field blank sample results are presented in Appendix O-4b. No target analytes were present above the MDL for VOCs and SVOCs and above the practical quantitation limit (inorganics, radiochemistry, and general chemistry) in the field blank samples associated with this data package except where noted below. Trace concentrations of metals, VOCs and SVOCs were present above the MDL and below the practical quantitation limit in the field blank samples. Associated sample concentrations within five times the associated field blank sample concentrations were reported with a “<” or U (EPA 2005 Organic and 2004 Inorganic Guidelines) qualifier.

Trip Blank Samples

Trip blank samples were collected and analyzed at the required frequency as specified in the QAPP. Sample SD-240 (0-10) cm served as the trip blank sample collected and analyzed as part of this data package. Methylene chloride was present above the MDL but below the practical quantitation limit in the trip blank sample. Associated sample concentrations within five times the associated trip blank sample concentration were reported with a “<” or U (EPA 2005 Organic Guidelines) qualifier.

Discussion

Sample SD-20 (0-10) cm served as the laboratory duplicate sample for this data package. The laboratory duplicate samples met the applicable laboratory RPD criteria with the following exceptions. The RPD exceeded the laboratory criteria (< 20%) for silver and uranium for sample SD-20 (0-10) cm; therefore, the associated data were “J” qualified (estimated) due to the deviation in precision.

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The validation of the Columbia Analytical Services, Inc. (CAS, Kelso, Washington) and ACZ Laboratories, Inc. (ACZ, Steamboat Springs, Colorado) laboratory data for the volatile, semivolatile, polychlorinated biphenyls, metals, general chemistry and radiochemistry analyses of the samples collected in 2008 to support the Phase 1 - RCRA Facility Investigation is complete as detailed below.

The analytical data were reviewed in accordance Barr's Data Validation Standard Operating Procedures (SOPs) which are based upon the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Organic and Inorganic Data Review (EPA 2005, 2004) and in general accordance with U.S. EPA Methods 300.0, 350.1, 353.2, 365.3, 900.0 modified, 903.1 modified, 904.0 modified, and Standard Method 2320B as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008).

In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Instrument performance checks - GC/MS and ICP/MS Tuning
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Blank analysis
- Deuterated monitoring compounds
- ICP/ICP/MS interference check samples
- Laboratory control samples
- Internal standards
- Matrix spike results
- Field blank samples
- Trip blank samples

The results for seventeen groundwater samples are contained in this laboratory report. The samples are identified as follows:

MW-06-13	MW-97-4	MW-97-10
MW-60-8 (Field Blank)	MW-02-2	MW-06-2
MW-EPA-4	PW-99-3	MW-97-12 *
MW-06-16	MW-65-16 (Trip Blank)	MW-02-4
MW-06-20 *	MW-06-7	MW-65-17 (Trip Blank)
MW-06-17	MW-97-3	MW-60-11 (Field Blank)*
MW-65-15 (Trip Blank)	MW-06-11	
MW-01-2	MW-02-3	

* Denotes which samples were re-sampled and re-analyzed for select parameters during December 2008. The results for the December re-sampling event are contained within SDG K0812124.

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The samples were analyzed for volatile organic compounds (VOC), semivolatile organic compounds (SVOC), polynuclear aromatic hydrocarbon selective ion monitoring (PAH-SIM), polychlorinated biphenyls (PCBs), metals (ICP/ICP/MS/mercury), general chemistry parameters (bicarbonate as CaCO₃, carbonate as CaCO₃, chloride, sulfate, fluoride, ammonia as N, nitrate + nitrite as N, and total phosphorus as P), and radiochemistry parameters (gross alpha, gross beta, radium 226, and radium 228) as required using the methods detailed in the QAPP (Barr, May 2008).

Alternative methods other than those specified in the QAPP were used for the fluoride, gross alpha, gross beta and radium 226 and 228 analyses. While a deviation from the QAPP, it was determined that there were no adverse effects on data quality.

Overall Assessment

The QAPP specified that 10% of the project data be reviewed using CLP NFG (Guidelines) and the remaining data be reviewed in accordance with Barr's Data Validation SOPs. Because 90% of the data was correspondingly validated using non-CLP criteria, the laboratory criterion were used for consistency, except where outliers exceeded 30-150% EPA quality control criteria. In summary, because the Guidelines have limits which are often different than, and in certain cases are more stringent than, the limits specified by the analytical methods and the laboratory generated limits; therefore, the end result may be slightly different data qualification.

The 2-chloroethylvinylether VOC results from groundwater, field blank and trip blank samples were qualified with an "R" indicating unusable data because of the known degradation of 2-chloroethylvinylether in the hydrochloric acid sample preservative.

In accordance with the Guidelines, sample concentrations greater than the method detection limit (MDL) and below the practical quantitation limit for the VOC, SVOC, PAH-SIM and PCB analysis are "J" qualified indicating an estimated concentration. The non-detect concentrations are presented as "<MDL" in the data tables.

During the evaluation of the groundwater data from the September 2008 monitoring event, cross-contamination of elemental phosphorus was suspected for twenty-one groundwater samples, including samples from an upgradient well, its duplicate (i.e. MW-06-5) and a rinsate blank sample collected after MW-06-13 as detailed in the letter from Barr to Dan Bersanti on December 3, 2008.

A meeting was convened with the field staff, Tom Mattison, Karma Hughes and Andrea Nord of Barr and it was determined that the field staff followed the Barr's standard operating procedures for cleaning reusable sampling equipment. The decontamination procedures included in the Barr standard operating procedures were appropriate for cleaning the submersible pumps used at the site.

A new dual pumping system was used for the September 2008 groundwater sample collection activities. The dual pumping system had a higher lift capacity than the single pump system previously used during the May 2008 sampling event. However, two of the new pumps failed during the September sampling event. One of the pumps failed during the sampling of MW-01-3 and a different pump was used to collect the sample at MW-01-3 and subsequent monitoring wells. The supplier was contacted and the pumps were replaced. The supplier reported that there was a defect in the two stage pumps. If the lower pump failed (as in this case), there was a potential that it did not allow for the lower cell of the pump to evacuate completely; thereby, allowing stagnant water to

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come in contact with each subsequent sample that was collected. The dual pump appeared to be operational because the upper chamber was still pumping.

Based upon the elemental phosphorus sample concentrations, the pump failure likely happened at or near groundwater well MW-01-3 which had an elemental phosphorus concentration of 290 ug/L. Each subsequent sample collected by the sampling team(s) who used that submersible dual pump had elemental phosphorus concentrations which decreased with each sample collected after well MW-01-3. The groundwater data were reviewed and certain wells' whose elemental phosphorus and metals concentrations were inconsistent with the May 2008 data set, were re-sampled to determine if cross-contamination occurred during the September 2008 sampling event.

Sampling procedures attempt to collect samples from the lowest to the highest concentrations across the Site. The sampling order during the September 2008 groundwater monitoring event was based upon arsenic, fluoride and sulfate concentrations from the May 2008 event. During the December 2008 collection activities, the sampling order was re-defined and sample MW-03-1 which had the highest elemental phosphorus concentration was sampled last. The re-sampling and re-analysis results (December 2008) confirmed that cross-contamination of elemental phosphorus likely occurred. Upon review of the other analytical parameters, (general chemistry, radiochemistry, metals, VOCs and SVOCs), a similar cross contamination trend was not observed. With the exception of MW-03-1, the elemental phosphorus data from the September 2008 event were "R" qualified (unusable) and the data collected during the December 2008 sampling event is presented in the data summary tables.

As part of the investigation, samples MW-97-6, MW-06-15, MW-EPA-1, MW-06-14, MW-06-20, MW-97-12 and field blank sample (MW-60-11) were also re-sampled and re-analyzed for select target metals because 1) the September 2008 metals concentrations were inconsistent with the metals concentrations from the May 2008 monitoring event and/or 2) potential contamination as indicated in the associated field blank sample(s) results. The following table summarizes which target parameters were re-sampled and re-analyzed during December 2008 and which data set(s) were presented on the data summary tables for the samples associated with this data evaluation.

Table 1 Summary of Data Presented Within the Data Summary Tables						
Monitoring Well	Analytical Parameters Re-sampled in December 2008					
	Elemental Phosphorus	Cu	Fe	Zn	Pb	All Target Metals
MW-06-20	December	--	December	--	--	--
MW-97-12	December	--	--	--	--	December
MW-60-11 (Field Blank at MW-97-12)	December	--	--	--	--	December

The data are useable as reported and qualified and fulfill the data quality objectives (DQOs) for sensitivity, accuracy and precision as specified in the QAPP. The following sections provide specific validation details.

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Holding Times, Preservation and Storage

The samples were collected September 19th through 23rd, 2008 and December 12th and 15, 2008, packed on ice and sent to the laboratories (CAS, located in Kelso, Washington and ACZ, located in Steamboat Springs, CO) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of -0.5 °C to 5.4 °C upon receipt at the laboratories. The samples were stored at 4 °C until analysis. No qualifiers were assigned due to holding times, preservation, or storage issues.

Instrument Performance Checks – GC/MS & ICP/MS Tuning (VOC, SVOC, PAH-SIM and ICP/MS Metals)

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

The gas chromatography/mass spectrometry (GC/MS) tuning performed as part of the VOC, SVOC and PAH-SIM analyses met the applicable acceptance criteria for frequency, mass abundance, and mass ratios.

The tuning aspects of the inductively coupled plasma mass spectrometer (ICP/MS) met the applicable acceptance criteria for mass resolution and the percent relative standard deviation (%RSD) for the five consecutive replicates at <5%.

Initial Calibration and Initial Calibration Verification

During the data evaluation process of the initial calibration data for VOC analysis, it was noted that the relative response factors (RRFs) for acrolein, acrylonitrile and vinyl acetate met the laboratory specific acceptance limits but did not meet the limits specified in the Guidelines. Acrolein and acrylonitrile are documented as not being particularly stable in the analytical environment and a separate method has been developed for their analysis. Due to these considerations, no qualifiers were applied for poor RRFs observed for these parameters during the calibration of the instrument. Similarly, vinyl acetate is rapidly hydrolyzed to acetaldehyde and highly volatile. Due to degradation by hydrolysis and susceptibility to polymerization, no qualifiers were applied due to variability in the RRFs observed for this compound during the calibration of the instrument.

Because the laboratory VOC, SVOC and PAH-SIM initial calibration (ICAL) %RSD and RRF criteria differ from, and in some cases are less stringent than, the criterion published in the Guidelines, the data were evaluated by using the Guideline criterion for the system performance check compounds (SPCCs). The remaining VOC, SVOC and PAH-SIM compounds were evaluated using the laboratory acceptance criterion during the ICAL data evaluation.

The VOC ICAL events met relevant acceptance criteria including the RRFs and %RSD for the volatile target compounds including the associated deuterated monitoring compounds (DMCs or surrogates) except where detailed as follows. The %RSD for dichlorodifluoromethane and trichlorofluoromethane in VOC ICAL (CAL 7782) deviated from the laboratory acceptance limits. No qualifiers were assigned to dichlorodifluoromethane and trichlorofluoromethane because the %RSD met the requirements of the Guidelines.

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The SVOC ICAL events met relevant acceptance criteria for individual and average RRFs for target SVOCs and DMCs, and the %RSD. The laboratory generated a combination of initial calibration curves including averaged and quadratic curves for the target SVOC compounds. Recalculation of final results were not verified when quadratic quantitation was employed.

The PAH-SIM ICALs met relevant acceptance criteria including the average RRFs and %RSD for target PAHs and DMCs except where detailed as follows. The %RSD for indeno(1,2,3-cd)pyrene and dibenz(a,h)anthracene in PAH-SIM ICAL (CAL 7814) deviated from the laboratory and/or Guideline acceptance limits. The associated samples that had indeno(1,2,3-cd)pyrene and dibenz(a,h)anthracene concentrations above the MDL were assigned the “J” qualifier (estimated) based upon the failing %RSD ICAL criterion. This affected the method blank sample associated with PAH-SIM ICAL CAL 7814.

The PCB ICALs and secondary source calibration verifications (SSCVs) met the established laboratory acceptance criterion.

The ICP and ICP/MS initial calibrations were performed at the appropriate frequency and run order, and met minimum percent recovery (%R) acceptance criteria for each of the target metals. Mean concentrations from 2 replicate exposures were reported for ICP and from 3 replicate exposures for ICP/MS as required. Initial calibration verification (ICV) criterion of $\pm 10\%$ (of true value) for the target analytes was met during the initial calibration events.

The cold vapor mercury initial calibration events met the acceptance criterion of a correlation coefficient >0.995 using a minimum of at least four calibration standard solutions. The ICV criterion of $\pm 20\%$ of the true value was also met for the cold vapor mercury analysis.

Continuing Calibration Verification

The continuing calibration verification samples (CCVs) associated with the VOC analysis and the associated DMCs met the criteria for frequency, the minimum RRF and the %Difference (as compared to the associated initial calibration standard (s) with the exception of acrolein and vinyl acetate as previously discussed. No qualification was applied to acrolein and vinyl acetate (see ICAL discussion for details). The % Difference in three VOC CCALs did not meet the laboratory acceptance criteria for bromoform and 1,2-dibromo-3-chloropropane; therefore, the associated data were “J” qualified (estimated) based upon this deviation. Closing VOC CCV data was not provided by the laboratory as it is not a requirement of EPA Method 8260. While this is a deviation from the Guidelines, no significant deviations in opening CCVs were observed and this procedure meets method criteria.

The SVOC CCVs were performed at the appropriate frequency and met relevant opening CCV acceptance criteria including minimum RRF for target SVOCs and DMCs, and the % Difference and % Drift (from the associated initial calibration standard(s) except where detailed below. The % Drift and % Difference for average and quadratic calibrations in one SVOC CCAL did not meet the laboratory acceptance criteria for benzoic acid. The associated benzoic acid sample results have been assigned the “J” qualifier. Closing SVOC CCV data were not provided by the laboratory as it is not a requirement of EPA Method 8270. While this is a deviation from the Guidelines, no significant deviations in opening SVOC CCVs were observed and this procedure meets method criteria.

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The PAH-SIM CCVs were performed at the appropriate frequency and met relevant opening CCV acceptance criteria including minimum RRF for target PAHs and DMCs, and the % Difference (from the associated initial calibration standard(s)). Closing PAH CCV data were not provided by the laboratory as it is not a requirement of EPA Method 8270. While this is a deviation from the Guidelines, no significant deviations in opening PAH-SIM CCVs were observed and this procedure meets method criteria.

The CCVs for the analysis of PCBs were analyzed at the appropriate frequency and yielded acceptable percent differences of less than 20% for Aroclors 1016 and 1260, indicating the analysis was in control.

The CCVs for the ICP and ICP/MS analyses met data validation criteria for frequency, run order and acceptable percent recoveries were achieved within the analytes' method detection limit and the documented upper linear range of the instrument. Mean concentrations from the 2 (for ICP) and 3 (for ICP/MS) replicate exposures were reported as required.

The CCVs associated with the cold vapor mercury analyses met the established acceptance criteria for frequency and the calculated percent recovery of 20% of the true value.

The Contract Required Quantitation Limit (CRQL) Check Standard (CRI) sample data for ICP, ICP/MS, and mercury did not meet the data validation criteria for frequency, run order and/or percent recovery as dictated in the Guidelines. The CRI samples reported in the data packages were analyzed at the beginning of the analytical sequence(s). The percent recoveries for ICP and mercury met the percent recovery criterion established in the Guidelines. The CRI percent recovery for barium, beryllium, cadmium, copper, nickel, silver, and uranium by ICP/MS did not meet the acceptance limits specified in the Guidelines in one or more CRI samples. Since Method 6020 does not require CRI analysis, no data were qualified.

Blank Analysis

As stated in Section B10.3.2 of the QAPP, when project sample concentrations are "<" (less than) five times the associated blank sample concentrations, thus suspected false positives, they are shown at the concentration reported in the sample, with a "<" qualifier with the exception of the radiochemistry analyses detailed below.

Three method (or preparation) blank samples were prepared during the analysis of VOC. Trace concentrations of isopropylbenzene and 1,2,4-trimethylbenzene were present above the method detection limit and below the practical quantitation limit in one or more laboratory method blank samples. Associated sample concentrations within five times the associated method blank sample concentrations were reported with a "<" or U (EPA 2005 Organic Guidelines) qualifier.

For the SVOC analyses, two method blank samples were prepared and analyzed as required. Trace concentrations of SVOCs were present above the method detection limits and below the practical quantitation limit in the laboratory method blank samples. Method blank sample results are presented in Appendices O-4b and O-4c. Associated sample concentrations within five times the associated method blank sample concentrations were assigned a "<" qualifier as described above. This affected samples MW-06-13, MW-06-16, MW-06-20, MW-06-17, MW-01-2, MW-97-4, MW-02-2, MW-97-3, MW-06-11 and MW-97-10.

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Two method blank samples were prepared during the analysis of PAH-SIM. Trace concentrations of indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene, benzo(g,h,i)perylene were present above the method detection limit and below the practical quantitation limit in one method blank sample associated with the PAH-SIM analysis. Associated sample concentrations within five times the associated method blank sample concentrations were assigned a “<” qualifier as described above. This affected sample MW-97-10.

The method blank samples associated with the PCB analysis were prepared and analyzed as required. No PCBs were present above the method detection limits in the method blank sample. Instrument blank samples were also analyzed at the appropriate frequency and no presence of target analytes was indicated in the instrument blank samples.

The ICP, ICP/MS and mercury analyses method blank samples, initial calibration blank (ICB) and continuing calibration blank samples (CCBs) were prepared and analyzed at the appropriate frequency and met acceptance criteria for proper run order. No target metal analytes were present in the method blanks, ICBs or CCBs above the laboratory practical quantitation limit for the ICP, ICP/MS, and mercury analysis.

Deuterated Monitoring Compounds (Surrogates)

The laboratory acceptance criteria for the deuterated monitoring compounds (DMCs) percent recoveries for the VOC, SVOC, PAH-SIM and PCB analyses in the samples were met with the exceptions noted below. Two SVOC DMCs were below the EPA criterion (30%) in sample MW-97-4; therefore, the associated SVOC compounds were “R” qualified (unusable). No other data were qualified based upon VOC, SVOC, PAH-SIM and PCB DMC data.

ICP/ICP/MS Interference Check Samples (Metals only)

The ICP and ICP/MS interference check samples (ICS) were analyzed at the appropriate frequency and in the correct order during the analysis of the project samples. Acceptable results of $\pm 20\%$ of the true value were obtained for both solution A and solution AB.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) were prepared and analyzed at the appropriate frequency for the target compounds and met the relevant acceptance criteria for percent recovery of the spike concentrations, indicating in-control analytical systems with the exceptions noted below.

In all but five cases, the SVOC LCS had percent recoveries and relative percent differences (RPDs) that met the relevant criteria. The percent recoveries and/or RPDs for SVOCs pyridine, benzoic acid, hexachlorocyclopentadiene, and 2,4-dinitrophenol did not meet the applicable laboratory and EPA acceptance limits for precision and accuracy; therefore, the associated project sample results are “R” qualified (unusable) due to the potential data bias. Due to a laboratory error in the preparative steps, the spike solution containing the target analytes for one LCS sample (batch KWG0810417) was not added. All associated field samples were re-extracted (after the EPA recommended holding time had expired) and the re-analysis yielded acceptable QA/QC results. The sample extracts from the original analysis were analyzed as well. Because the re-extracted samples displayed comparable results to the

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re-extracted/re-analyzed samples, no data were qualified. The data summary tables report the project sample results from the original (within holding time) analysis.

The laboratory met the acceptance criteria for the ICP and ICP/MS serial dilutions ($\leq 10\%$ D), between the undiluted and diluted results, where sample results are significantly greater than the MDL ($>50\times$). The ICP/MS and mercury post-digestion spike percent recoveries met the applicable criteria.

Internal Standards (VOC, SVOC, PAH-SIM and ICP/MS Analyses Only)

The VOC, SVOC and PAH-SIM internal standard area count criteria of 50% to 200% and the retention time (RT) of ± 30 seconds from the associated ICAL or opening CCV 12-hour standards were met.

The ICP/MS internal standard data were acceptable. The internal standards displayed percent relative intensity (%RI) within the 60-125% range.

Matrix Spike Results

As standard practice, the laboratory reported a shortened list of VOC, SVOC and PCB compounds for MS/MSD data. No qualification was performed based upon this occurrence.

For the VOC and PAH-SIM analyses, samples MW-06-13 and MW-97-10 served as the MS/MSD samples. The MS/MSD data met the applicable laboratory and EPA 30-150 % acceptance criteria for percent recovery and RPD ($<30\%$) with the exception of benzene and 2-chloroethylvinylether (VOC). The MSD percent recovery for benzene for sample MW-97-10 exceeded the applicable acceptance criteria; however, no data were qualified because the associated LCS and MS percent recoveries displayed acceptable accuracy. The MS/MSD percent recoveries for 2-chloroethylvinylether were 0% due to the hydrochloric acid sample preservative and are “R” qualified (unusable) as previously discussed.

Samples MW-06-13 and MW-97-10 served as the MS/MSD samples for the SVOC analysis. Due to a laboratory error in the preparative steps, the spike solution containing the target analytes for the matrix spike sample MW-06-13 was not added. All associated field samples were re-extracted (after the EPA recommended holding time had expired) and the re-analysis yielded acceptable QA/QC results. The sample extracts from the original analysis were re-analyzed as well. Because the re-extracted samples displayed comparable results to the re-extracted/re-analyzed samples, no data were qualified. The data summary tables report the project sample results from the original (within holding time) analysis. The MS/MSD data for sample MW-97-10 met the applicable laboratory and EPA 30-150% acceptance criteria for percent recovery and RPD ($<20\%$).

For the PCB analysis, sample MW-06-13 served as the MS/MSD samples. The MS/MSD percent recoveries met the applicable laboratory and EPA 30-150% and RPD ($<30\%$) acceptance criterion.

Samples MW-06-13, MW-97-10, MW-97-6, MW-06-20, MW-EPA-1, MW-97-12 and non-project specific samples served as the MS/MSD samples for the ICP, ICP/MS and mercury analyses. The MS/MSD data met the applicable laboratory and EPA 30-150% acceptance criteria for percent recovery and RPD ($<20\%$).

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General Chemistry Analysis (bicarbonate as CaCO₃, carbonate as CaCO₃, chloride, sulfate, fluoride, ammonia as N, nitrate + nitrite as N, and total phosphorus as P)

No Guideline criteria exist for bicarbonate as CaCO₃, carbonate as CaCO₃, chloride, sulfate, fluoride, ammonia as N, nitrate + nitrite as N, and total phosphorus as P analysis. The general chemistry data were reviewed in accordance with Barr's SOPs included in the QAPP. The ICV and CCV data indicated that the laboratory and method criteria were met for the various general chemistry analyses listed above. Samples MW-06-13 and MW-97-10 served as the MS/MSD and analytical batch duplicate samples for the general chemistry analyses. The LCS, MS/MSD and analytical batch duplicate data indicated that the applicable laboratory and method criteria were met for all of the general chemistry analyses. No method blank and continuing calibration blank samples had concentrations detected above the practical quantitation limit for the general chemistry analyses.

Radiochemistry Analysis (Gross alpha, Gross Beta, Radium 226 and Radium 228)

Results were reviewed in general accordance with the analytical methods 900.0, 903.1 and 904.0 selected by ACZ for the aqueous sample analysis. Although these methods were not specified in the QAPP, the data were not qualified and should be deemed acceptable for the project. Samples SW-1, MW-97-12, MW-60-8, MW-06-12, RP-W-4 and non-project specific samples served as the MS samples for one or more of the radiochemistry methods. The LCS and MS samples met the laboratory acceptance criteria for accuracy except where noted below. The MS percent recovery radium 228 analysis for sample RP-W-4 was below the laboratory acceptance limits; therefore, the associated data were "J" qualified (estimated). Samples SW-14, MW-06-13, MW-01-2, MW-97-4, MW-97-10, RP-W-4 and non-project specific samples served as the analytical batch duplicate samples for this data package. The gross alpha, gross beta, radium 226 and radium 228 RPDs one or more laboratory duplicate samples exceeded the laboratory acceptance limits for precision. However, no gross alpha, gross beta, radium 226 and radium 228 data were qualified because the associated sample concentrations were near the practical quantitation limit which can exaggerate the deviation of the RPD. One method blank sample had detectable concentrations above the practical quantitation limit (i.e. lower limit of detection (LLD) for radium 228; however, per guidance from the laboratory (ACZ), method blank concentrations less than two times the practical quantitation limit are not controlled; therefore, no qualification of the data was deemed necessary.

Field Blank Samples

Field blank samples were collected and analyzed at the required frequency as specified in the QAPP. The field blank samples identified within this sample delivery group may apply to samples contained within other sample delivery groups. The field blank samples were collected in the following manner: The sample equipment (i.e. pump, tubing and/or hoses) were rinsed with analyte-free, deionized water and the rinse water was poured into the appropriate sample containers for analysis. No target analytes were present above the MDL for VOCs, SVOCs, PAH-SIM and PCBs or above the practical quantitation limit (inorganics, radiochemistry, general chemistry) in the field blank samples associated with this data package except where noted below. The field blank sample had detections of sulfate and metal parameters above the practical quantitation limit and trace concentrations of VOCs, SVOCs and PAH-SIM were present above the MDL and/or practical

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quantitation limit. The field blank sample results are presented in Appendix O-4b. Associated sample concentrations within five times the associated field blank sample concentrations were reported with a “<” or U (EPA 2005 Organic and 2004 Inorganic Guidelines) qualifier.

Trip Blank Samples

Trip blank samples were collected and analyzed at the required frequency as specified in the QAPP. Sample MW-65-15, MW-65-16 and MW-65-17 served as the trip blank sample collected and analyzed as part of this data package. Trace concentrations of acetone (MW-65-15 and MW-65-17) and chloromethane (MW-65-17) were detected above the method detection limit and below the practical quantitation limit in the trip blank samples. Associated sample concentrations within five times the associated trip blank sample concentrations were assigned a “<” qualifier as described above. No other target VOC compounds were present above the method detection limit in the trip blank samples.

Discussion

The reporting limit is elevated for naphthalene (PAH-SIM) for sample MW-06-11. The PAH-SIM chromatogram indicated the presence of non-target background components. The matrix interference prevented adequate resolution of the target PAH compounds at the method detection limit.

Samples MW-06-13, MW-97-10, MW-97-6, MW-06-20, MW-EPA-1, MW-97-12 and non-project specific samples served as the laboratory duplicate samples for the ICP, ICP/MS and mercury analyses. The laboratory duplicate samples met the applicable RPD criteria (<20%) with the exception of cadmium (MW-06-13) and zinc (MW-97-10) whose RPDs for ICP/MS were 22% and 21% respectively. No data were qualified based upon this deviation because the sample concentrations were near the laboratory practical quantitation limit thereby exaggerating the deviation of the RPD.

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Date of Data Validation Report: March 13, 2009

The validation of the Columbia Analytical Services, Inc. (CAS, Kelso, Washington) laboratory data for the toxicity characteristic leaching procedure metals (TCLP metals) analyses of the samples collected in 2008 to support the Phase 1 - RCRA Facility Investigation is complete as detailed below.

The analytical data were reviewed in accordance Barr's Data Validation Standard Operating Procedures (SOPs) which are based upon the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Inorganic Data Review (EPA 2004) and in general accordance with U.S. EPA Methods 6010 and 7470 as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008).

In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Summary calibration information
- Blank analysis
- ICP interference check samples (metals only)
- Laboratory control samples
- Matrix spike results
- Field duplicate samples

The results for three soil samples and for one carbon brick sample are contained in this laboratory report. The samples are identified as follows:

SP-1	SP-3	Carbon
SP-2	SP-200 (SP-2 DUP)	

The samples were analyzed for TCLP metals (ICP/mercury) as required using the methods detailed in the QAPP (Barr, May 2008).

Overall Assessment

The QAPP specified that 10% of the project data be reviewed using CLP NFG (Guidelines) and the remaining data be reviewed in accordance with Barr's Data Validation SOPs. Because 90% of the data was correspondingly validated using non-CLP criteria, the laboratory criterion were used for consistency, except where outliers exceeded 30-150% EPA quality control criteria. In summary, because the Guidelines have limits which are often different than, and in certain cases are more stringent than, the limits specified by the analytical methods and the laboratory generated limits; therefore, the end result may be slightly different data qualification.

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In accordance with the Guidelines, sample concentrations greater than the method detection limit (MDL) and below the practical quantitation limit for the TCLP metals analysis are “J” qualified indicating an estimated concentration. The non-detect concentrations are presented as “<MDL” in the data tables.

The soil and carbon brick samples’ TCLP metals results are well below the specified regulatory guidelines for hazardous waste.

The data are useable as reported and qualified and fulfill the data quality objectives (DQOs) for sensitivity, accuracy and precision as specified in the QAPP. The following sections provide specific validation details.

Holding Times, Preservation and Storage

The samples were collected September 22nd, 2008, packed on ice and sent to CAS, located in Kelso, Washington with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 1.3 °C to 1.9 °C upon receipt at the laboratories. The samples were stored at 4 °C until analysis. No qualifiers were assigned due to holding times, preservation, or storage issues.

Summary Calibration Information

The initial calibration (ICAL), continuing calibration (CCAL), initial calibration verification (ICV) and continuing calibration verifications (CCVs) are not QC elements for non-CLP data evaluation. Since the calibration data were provided in summary form within the laboratory report, the data, where available, were reviewed as part of the non-CLP data evaluation process but confirmation via raw data review was not performed.

The ICP and cold vapor mercury ICVs and CCVs met the established laboratory acceptance criterion.

Blank Analysis

As stated in Section B10.3.2 of the QAPP, when project sample concentrations are “<” (less than) five times the associated blank sample concentrations, thus suspected false positives, they are shown at the concentration reported in the sample, with a “<” qualifier.

No trace concentrations of mercury were present in the laboratory method (or preparation) blank samples. Trace concentrations of barium were present above the method detection limit in one laboratory method blank sample. Associated sample concentrations within five times the method blank sample concentration were reported with a “<” or a U (EPA 2004 Inorganic Guidelines) qualifier.

Although not part of the non-CLP data review, one or more of the following blank samples (initial calibration blank (ICB) and continuing calibration blank (CCBs) were evaluated when provided in summary form within the laboratory report but confirmation via raw data was not performed. No trace concentrations were detected above the practical quantitation limit in the blank samples for ICP analyses. Trace concentrations of mercury were detected above the MDL and below the practical quantitation limit in one ICB and CCB sample; however, no qualification was deemed necessary

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because the associated sample concentrations were greater than five times the ICB and CCB sample concentrations.

ICP Interference Check Samples (Metals only)

The interference check sample (ICS) and contract required quantitation limit standard (CRI/CRA) data review is not a QC element for non-CLP evaluation but the ICS and CRI data were evaluated when provided in summary form within the laboratory report but confirmation via raw data review was not performed. The ICP ICSs met the laboratory acceptance criteria for both solution A and solution AB. The CRI percent recoveries met the acceptance limits specified in the Guidelines.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) were prepared and analyzed at the appropriate frequency for the target compounds. The ICP and mercury LCS percent recoveries and relative percent differences (RPDs) met the relevant acceptance criteria for percent recovery of the spike concentrations, indicating in-control analytical systems.

The laboratory met the acceptance criteria for the ICP serial dilutions ($\leq 10\%$ D), between the undiluted and diluted results, where sample results are significantly greater than the MDL ($>50x$). A post-digestion spike for ICP analyses was not performed. The mercury serial dilutions and post-digestion spike percent recoveries met the applicable criteria.

Matrix Spike Results

Sample SP-1 served as the MS sample for the ICP and mercury analyses. The MS data met the applicable laboratory and EPA acceptance criteria for percent recovery and RPD.

Field Duplicate Samples

Field duplicate samples were collected and analyzed as required by the QAPP. Sample SP-200 (SP-2 DUP) served as the field duplicate sample for this data package. Field duplicate samples met the RPD criteria ($<40\%$ for solid matrices) as specified in the QAPP.

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Date of Data Validation Report: March 16, 2009

The validation of the Columbia Analytical Services, Inc. (CAS, Kelso, Washington) and ACZ Laboratories, Inc. (ACZ, Steamboat Springs, Colorado) laboratory data for the volatile, semivolatile, metals, general chemistry and radiochemistry analyses of the samples collected in 2008 to support the Phase 1 - RCRA Facility Investigation is complete as detailed below.

The analytical data were reviewed in accordance Barr's Data Validation Standard Operating Procedures (SOPs) which are based upon the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Organic and Inorganic Data Review (EPA 2005, 2004) and in general accordance with U.S. EPA Methods 160.3, 300.0, 340.2 modified, 350.1, 350.1 modified, 353.2, 353.2 modified, 365.3, 900.0 modified, 903.1 modified, 904.0 modified, 9310 modified, 9315 modified and 9320 modified as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008).

In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Summary calibration information
- Blank analysis
- Deuterated monitoring compounds (Surrogates)
- ICP/ICP/MS interference check samples (metals only)
- Laboratory control samples
- Matrix spike results
- Field duplicate samples
- Field blank samples
- Trip blank samples

The results for twelve sediment samples are contained in this laboratory report. The samples are identified as follows:

SD-13 (0-10) cm *	SD-1 (0-10) cm
SD-6 (0-10) cm *	SD-8 (0-10) cm
SD-5 (0-10) cm *	SD-20 (0-10) cm
SD-200 (0-10) cm (SD-13 (0-10) cm DUP) *	SD-19 (0-10) cm
SD-4 (0-10) cm	SD-18 (0-10) cm
SD-3 (0-10) cm	SD-220 (0-10) cm (Field Blank)
SD-9 (0-10) cm	SD-241 (0-10) cm (MeOH Trip Blank)
SD-2 (0-10) cm	SD-250 (0-10) cm (HCL Trip Blank)

* Denotes the samples whose radiochemistry data are discussed in this data evaluation. The associated VOC, SVOC, metals and general chemistry data are discussed in the data evaluation for laboratory report K0809186 (under separate cover).

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The samples were analyzed for volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), metals (ICP/ICP/MS/mercury), general chemistry parameters (total solids, chloride, sulfate, fluoride, ammonia as N, nitrate + nitrite as N and total phosphorus) and radiochemistry parameters (gross alpha, gross beta, radium 226 and radium 228) as required using the methods detailed in the QAPP (Barr, May 2008).

Alternative methods other than those specified in the QAPP were used for the gross alpha and beta and radium 226 and 228 analyses of the aqueous field blank sample SD-220 (0-10) cm. While a deviation from the QAPP, it was determined that there were no adverse effects on data quality.

Overall Assessment

The QAPP specified that 10% of the project data be reviewed using CLP NFG (Guidelines) and the remaining data be reviewed in accordance with Barr's Data Validation SOPs. Because 90% of the data was correspondingly validated using non-CLP criteria, the laboratory criterion were used for consistency, except where outliers exceeded 30-150% EPA quality control criteria. In summary, because the Guidelines have limits which are often different than, and in certain cases are more stringent than, the limits specified by the analytical methods and the laboratory generated limits; therefore, the end result may be slightly different data qualification.

The 2-chloroethylvinylether VOC results for the aqueous field blank and trip blank samples were qualified with an "R" indicating unusable data because of the known degradation of 2-chloroethylvinylether in the hydrochloric acid sample preservative.

In accordance with the Guidelines, sample concentrations greater than the method detection limit (MDL) and below the practical quantitation limit for the fluoride, VOC, SVOC, PAH-SIM, metals analysis are "J" qualified indicating estimated concentrations. The non-detect concentrations are presented as "<MDL" in the data tables.

Due to a miscommunication within the laboratory, the soil samples associated within this data package were extracted using the Bellack distillation procedure (EPA Method 340.1 modified) and not the distilled (DI) water distillation procedure required for the project. The Bellack distillation yields much higher fluoride values than the DI water distillation method due to the aggressiveness of the extraction fluid used. The fluoride results from this data package are presented on the data summary tables included in Table 3. While the data from the Bellack method met all quality assurance criteria, the use of this method is a deviation from the QAPP as it does not meet the data quality objectives. The results generated using this extraction method will be significantly higher than the method included in the QAPP. This difference needs to be considered when using the data as part of this project.

The data are useable as reported and qualified and fulfill the data quality objectives (DQOs) for sensitivity, accuracy and precision as specified in the QAPP. The following sections provide specific validation details.

Holding Times, Preservation and Storage

The samples were collected September 18th through 21st, 2008, packed on ice and sent to the laboratories (CAS, located in Kelso, Washington and ACZ, located in Steamboat Springs, CO) with

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an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of -0.3 °C to 5.7 °C upon receipt at the laboratories. The samples were stored at 4 °C until analysis. The total solids analysis was conducted after the 7 day recommended holding time had expired; therefore, the total solids results were “J” qualified (estimated) based upon this deviation. No qualifiers were assigned due to preservation or storage issues.

Summary Calibration Information

The initial calibration (ICAL), continuing calibration (CCAL), initial calibration verification (ICV) and continuing calibration verifications (CCVs) are not QC elements for non-CLP data evaluation. Since the calibration data were provided in summary form within the laboratory report, the data, where available, were reviewed as part of the non-CLP data evaluation process but confirmation via raw data review was not performed.

During the data evaluation process of the initial calibration data for VOC analysis, it was noted that the relative response factors (RRFs) for acrolein, acrylonitrile and vinyl acetate met the laboratory specific acceptance limits but did not meet the limits specified in the Guidelines. Acrolein and acrylonitrile are documented as not being particularly stable in the analytical environment. A separate method has been developed for their analysis. Due to these considerations, no qualifiers were applied for poor RRFs observed for these parameters during the calibration of the instrument. Similarly, vinyl acetate is rapidly hydrolyzed to acetaldehyde and highly volatile. Due to degradation by hydrolysis and susceptibility to polymerization, no qualifiers were applied due to variability in the RRFs observed for this compound during the calibration of the instrument.

Because the laboratory VOC and SVOC ICAL percent relative standard deviation (%RSD) and RRF criteria differ from, and in some cases are less stringent than, the criterion published in the Guidelines, the data were evaluated by using the Guideline criterion for the system performance check compounds (SPCC). The remaining VOC and SVOC compounds were evaluated using the laboratory acceptance criterion during the ICAL data evaluation.

The %RSD for dichlorodifluoromethane and trichlorofluoromethane in VOC ICAL (CAL 7782) and for acrolein and iodomethane in VOC ICAL (CAL7747) deviated from the laboratory and/or Guideline acceptance criteria. No qualifiers were assigned to dichlorodifluoromethane, trichlorofluoromethane and iodomethane because the %RSD met the requirements of the Guidelines. For acrolein, only concentrations above the MDL would require a “J” qualifier based upon this deviation but the acrolein data were already “R” qualified (unusable) due to failing LCS percent recoveries (detailed below); therefore, no additional qualification was necessary. The %RSD for twenty-one VOC compounds in VOC ICAL (CAL7821) exceeded the laboratory acceptance limits; however, of those twenty-one compounds, only bromomethane and 2,2-dichloro-propane also exceeded the criteria specified in the Guidelines. Therefore, the associated project sample whose bromomethane and 2,2-dichloropropane results were detected above the MDL, were “J” qualified (estimated) based upon this VOC ICAL deviation. The % difference for the second source calibration verification sample associated with VOC ICAL (CAL 7821) did not meet the laboratory acceptance limits for acrylonitrile, iodomethane, vinyl acetate, and acetone; however, only concentrations detected above the MDL require “J” qualification. Therefore, the associated samples whose iodomethane and acetone results were detected above the MDL were “J” qualified (estimated). The

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acrylonitrile and vinyl acetate data were not qualified based upon the second source calibration verification data because the associated samples had no detections above the MDL. The % Difference in one or more VOC CCALs did not meet the applicable laboratory acceptance limits for acrolein, bromomethane, 2-chloroethylvinylether and 1,2-dibromo-3-chloropropane and the applicable Guideline criteria for bromoform. No additional qualification was deemed necessary for acrolein because it is already “R” qualified (unusable) based upon LCS percent recoveries exceeding the EPA criteria (150%) as discussed in further detail below. The associated project sample results for bromomethane, 2-chloroethylvinylether, 1,2-dibromo-3-chloropropane and bromoform are “J” qualified (estimated) based upon the CCAL deviation(s).

The SVOC ICAL data meets both the laboratory criteria and the criteria published in the Guidelines and the SVOC CCVs met the laboratory CCV criterion for % Difference and % Drift for linear and quadratic calibrations except where noted below. The % difference for the second source calibration verification associated with ICAL CAL 7869 for one CCV sample exceeded the applicable laboratory acceptance criterion for benzidine. These deviations would require the associated sample results to be “J” qualified, however, no additional qualification was necessary because the benzidine results are already “R” qualified (unusable) due to failing LCS percent recoveries (detailed below).

The ICP, ICP/MS and cold vapor mercury ICVs and CCVs met the established laboratory acceptance criterion.

Blank Analysis

As stated in Section B10.3.2 of the QAPP, when project sample concentrations are “<” (less than) five times the associated blank sample concentrations, thus suspected false positives, they are shown at the concentration reported in the sample, with a “<” qualifier with the exception of the radiochemistry analyses detailed below.

No trace concentrations of ICP and mercury were present in the laboratory method (or preparation) blank samples. Trace concentrations of thallium (ICP/MS), VOCs and SVOCs were present above the method detection limits in one or more laboratory method blank samples. The method blank sample results are presented in Appendices O-4b and O-4c. Associated sample concentrations within five times the associated method blank sample concentrations were reported with a “<” or U (EPA 2005 Organic and 2004 Inorganic Guidelines) qualifier.

Although not part of the non-CLP data review, one or more of the following blank samples (initial calibration blank (ICB) and continuing calibration blank (CCBs)) were evaluated when provided in summary form within the laboratory report but confirmation via raw data was not performed. Trace concentrations of thallium and uranium by ICP/MS and of calcium and barium by ICP were detected above the method detection limit in one or more ICBs and CCBs. Since the associated sample concentrations were greater than five times the ICB and CCB concentrations, none of the data were qualified. No trace concentrations were detected above the method detection limit in the blank samples for mercury analyses.

Deuterated Monitoring Compounds (DMC) (Surrogates)

The laboratory and EPA specified acceptance criterion for the DMC percent recoveries for the VOC and SVOC analyses in the project samples were met.

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ICP/ICP/MS Interference Check Samples (Metals only)

The interference check sample (ICS) and contract required quantitation limit standard (CRI/CRA) data review is not a QC element for non-CLP evaluation but the ICS and CRI data were evaluated when provided in summary form within the laboratory report but confirmation via raw data review was not performed. The ICP, ICP/MS ICSs met the laboratory acceptance criteria for both solution A and solution AB. The CRI percent recovery for sodium by ICP and nickel, silver and uranium by ICP/MS did not meet the acceptance limits specified in the Guidelines in one or more CRI samples. Since Methods 6010 and 6020 do not require CRI analysis, no data were qualified.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) were prepared and analyzed at the appropriate frequency for the target compounds and met the relevant acceptance criteria for percent recovery of the spike concentrations, indicating in-control analytical systems with the exceptions noted below.

In all but three cases, the VOC LCS percent recoveries and relative percent differences (RPDs) met the relevant criteria. The percent recoveries for VOCs acrolein, vinyl chloride and bromomethane exceeded the applicable laboratory or EPA acceptance limits for accuracy. The percent recovery for acrolein was within the laboratory acceptance limits but exceeded the EPA (150%) upper limit for accuracy. Therefore, the associated acrolein data were “R” qualified (unusable). The percent recovery for vinyl chloride exceeded the laboratory acceptance limits; however, no vinyl chloride data were qualified because the deviation would equate to a potential high data bias and the associated sample concentrations are less than the MDL. The bromomethane data for trip blank sample SD-241 was “J” qualified because the LCS percent recovery exceeded the laboratory acceptance but was within the EPA acceptance criteria for accuracy.

The SVOC LCS percent recoveries and RPDs met the relevant criteria for the LCS/LCSD sample associated with the solid sample extraction batch with the exception of benzidine. The LCS/LCSD percent recoveries for benzidine were 7% and 9%, respectively; which were below the applicable laboratory and EPA acceptance criterion. Therefore, the associated benzidine results were “R” qualified (unusable) due to the potential data bias. Due to an error during the sample preparation steps for the SVOC aqueous batch of samples, the spike solution containing the target analytes for the LCS and MS/MSD samples was not added. The associated field samples were not re-extracted because there was no additional sample volume remaining. No SVOC data were qualified based upon the preparation error because the field samples associated with the SVOC extraction batch was the field blank and aqueous trip blank samples.

The ICP, ICP/MS, and mercury LCS percent recoveries met the laboratory acceptance criterion with the exception of selenium. Selenium exceeded the laboratory criterion (120%) for percent recovery in one LCS sample. However, no data were qualified because the deviation was minor (<1%) and the percent recovery met the EPA (30-150%) criteria.

The laboratory met the acceptance criteria for the ICP and ICP/MS serial dilutions ($\leq 10\%$ D), between the undiluted and diluted results, where sample results are significantly greater than the MDL ($>50\times$) with the following exceptions. The serial dilution for arsenic, lead, thallium and uranium for sample SD-20 (0-10) cm exceeded the acceptance limits specified by the laboratory and the Guidelines and were “J” qualified (estimated). A post-digestion spike for ICP analyses was not

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performed. The mercury serial dilutions and the ICP/MS and mercury post-digestion spike percent recoveries met the applicable criteria.

Matrix Spike Results

As standard practice, the laboratory reported a shortened list of VOC and SVOC compounds for MS/MSD data. No qualification was performed based upon this occurrence.

For the VOC analyses, samples SD-20 (0-10) cm and non-project specific samples were used for the MS/MSD. With the exception of seven VOC compounds, the MS/MSD data met the applicable laboratory and EPA criterion for percent recovery and RPD. The RPD for seven VOC compounds exceeded the laboratory acceptance criteria for precision; however, no VOC data were qualified because the associated MS/MSD percent recoveries met the applicable acceptance criterion.

Samples SD-20 (0-10) cm and MW-06-13 served as the MS/MSD samples for the SVOC analysis. The MS/MSD data met the applicable laboratory and EPA acceptance criteria for percent recovery and RPD for sample SD-20 (0-10) cm. Due to an error during the sample preparation steps for the SVOC aqueous batch of samples, the spike solution containing the target analytes for the LCS and MS/MSD samples was not added. The associated field samples were not re-extracted because there was no additional sample volume remaining. No SVOC data were qualified based upon the preparation error because the field samples associated with the SVOC extraction batch was the field blank and aqueous trip blank samples.

Samples SD-20 (0-10) cm and SD-220 (0-10) cm served as the MS samples for the ICP, ICP/MS and mercury analyses. The MS data met the applicable laboratory and EPA 30-150% acceptance criteria for percent recovery with the exception of antimony. The MS percent recovery for antimony was within the laboratory and EPA 30-150% criteria, but below the method criteria; therefore, the associated sample data were “J” qualified (estimated). This affected sample SD-20 (0-10) cm. The MS percent recovery for iron for sample SD-20 (0-10) cm was not applicable because the associated sample concentration was greater than four times the spike concentration thereby preventing accurate evaluation of the spike recovery.

General Chemistry Analysis (total solids, chloride, sulfate, fluoride, ammonia as N, nitrate + nitrite as N and total phosphorus)

The general chemistry data were reviewed in accordance with Barr's SOPs included in the QAPP. The associated ICV, CCV data indicated that the laboratory and method criteria were met for various general chemistry parameters (listed above). Samples SD-20 (0-10) cm, SD-220 (0-10) cm, MW-97-10, and non-project specific samples served as the MS/MSD and analytical batch duplicate samples for the general chemistry analyses. The LCS, MS/MSD and analytical batch duplicate data indicated that the laboratory and method criteria were met for all of the general chemistry analyses with the exception of fluoride. The percent recoveries and RPD did not meet the laboratory acceptance criteria for fluoride for MS/MSD sample SB-20 (0-10) CM. The associated fluoride data were “J” qualified (estimated) based upon this MS/MSD deviation of accuracy and precision. No method blank samples or continuing calibration blank samples had concentrations detected above the method detection limit (fluoride by Method 300.0) and practical quantitation limit for the remaining general chemistry analyses. Results for total solids were accepted as reported.

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Radiochemistry Analysis (Gross alpha, Gross Beta, Radium 226 and Radium 228)

Results were reviewed in general accordance with the analytical methods 900.0, 903.1 and 904.0 selected by ACZ for the aqueous sample analysis. Although these methods were not specified in the QAPP, the data were not qualified and should be deemed acceptable for the project. The results for the solid samples were reviewed in general accordance with methods 9310, 9315 and 9320 as specified in the QAPP. Samples MW-06-5, RP-W-5, SD-9 (0-10) cm, SD-2 (0-10) cm and non-project specific samples served as the MS sample for one or more of the radiochemistry methods. The LCS and MS samples met the laboratory acceptance criteria for accuracy except where detailed below. The MS percent recoveries for radium 228 for samples RP-W-5 and SD-9 (0-10) cm were below the laboratory but within the EPA (30-150%) acceptance criteria; therefore, the associated sample data were “J” qualified (estimated). Samples BSB-4, SD-220 (0-10) cm, SW-15, SD-4 (0-10) cm, SD-3 (0-10) cm and non-project specific samples served as the analytical batch duplicate samples for this data package. The gross alpha, gross beta and radium 226 and 228 RPDs for one or more laboratory duplicate samples exceeded the laboratory acceptance limits for precision. However, no data were qualified because the associated sample concentrations were near the practical quantitation limit which can exaggerate the deviation of the RPD. One or more method blank samples had detectable concentrations above the practical quantitation limit (i.e. lower limit of detection (LLD) for gross alpha, radium 226 and radium 228; however, per guidance from the laboratory (ACZ), method blank concentrations less than two times the practical quantitation limit are not controlled; therefore, no qualification of the data was deemed necessary.

Field Duplicate Samples

Field duplicate samples were collected and analyzed as required by the QAPP. Sample SD-200 (0-10) cm (SD-13 (0-10) cm DUP) served as the field duplicate sample for this data package. Field duplicate samples met the RPD criteria (<40% for solid matrices) as specified in the QAPP for the radiochemistry parameters discussed as part of this data evaluation.

Field Blank Samples

The field blank sample SD-220 (0-10) cm was collected in the following manner: The sample equipment (i.e. piston core sampler) were rinsed with analyte-free, deionized water and the rinse water was poured into the appropriate sample containers for analysis. Field blank sampling procedures and protocols were determined to be appropriate and were collected and analyzed at the required frequency as specified in the QAPP. No target analytes were present above the MDL for VOCs, SVOCs, metals and fluoride or above the practical quantitation limit (metals, radiochemistry, and general chemistry) in the field blank samples associated with this data package except where noted below. The field blank sample had detections of metals and radium 228 above the practical quantitation limit and trace concentrations of VOCs and SVOCs were present above the MDL. The field blank sample results are presented in Appendix O-4b. Once these field blank sample concentrations undergo unit conversions (for comparison to mg/kg soil results) the metals, VOC and SVOC concentrations are very low and are unlikely to adversely affect final sample results, therefore, no data qualifiers were applied. The field blank sample had detections of radium 228 above the practical quantitation limit. Due to the nature of the analyses, the radiochemistry field blank

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sample data were used to evaluate if any gross system contamination occurred. No qualifiers were applied to the samples based upon the field blank sample data for the radiochemistry analyses.

Trip Blank Samples

Trip blank samples were collected and analyzed at the required frequency as specified in the QAPP. Samples SD-241 and SD-250 served as the trip blank samples collected and analyzed as part of this data package. Trace concentrations of iodomethane, bromomethane and methylene chloride (SD-241) and carbon disulfide, chloromethane, acetone, toluene and isopropylbenzene (SD-250) were detected above the method detection limit and below the practical quantitation limit. Once the aqueous field blank sample (SD-250) concentrations undergo unit conversions (for comparison to mg/kg soil results) the VOC concentrations are very low and are unlikely to adversely affect final sample results, therefore, no data qualifiers were applied. However, the associated sample concentrations within five times the VOC concentrations for the methanol trip blank sample (SD-241) were reported with a “<” or U (EPA 2005 Organic Guidelines) qualifier. No other target VOC compounds were present above the method detection limit in the trip blank samples.

Discussion

The VOC and SVOC data for sample SD-1 (0-10) cm were “J” qualified because the total solids content of the sample was 29.1% which is below the 30% criteria stated in the Guidelines.

For the ICP, ICP/MS and mercury analysis, the analytical batch duplicate sample RPDs met the applicable laboratory criteria with the exception of silver and uranium (ICP/MS) for sample SD-20 (0-10) CM and for manganese (ICP/MS) for sample SD-220 (0-10) CM. Sample SD-20 (0-10) CM silver results were “J” qualified (estimated) because the RPD exceeded the laboratory acceptance criteria (< 20%) for precision; however, additional qualification was necessary for uranium because it was already “J” qualified based upon the serial dilution results previously detailed in this data evaluation. No manganese data were qualified based upon the analytical batch duplicate sample RPD results for sample SD-220 (0-10) CM because the sample concentration was near the practical quantitation limit thereby exaggerating the deviation of the RPD.

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The validation of the Columbia Analytical Services, Inc. (CAS, Kelso, Washington) and ACZ Laboratories, Inc. (ACZ, Steamboat Springs, Colorado) laboratory data for the volatile, semivolatile, metals, general chemistry and radiochemistry analyses of the samples collected in 2008 to support the Phase 1 - RCRA Facility Investigation is complete as detailed below.

The analytical data were reviewed in accordance Barr's Data Validation Standard Operating Procedures (SOPs) which are based upon the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Organic and Inorganic Data Review (EPA 2005, 2004) and in general accordance with U.S. EPA Methods 300.0, 350.1, 353.2, 365.3, 900.0 modified, 903.1 modified, 904.0 modified and Standard Method 2320B as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008).

In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Summary calibration information
- Blank analysis
- Deuterated monitoring compounds (Surrogates)
- ICP/ICP/MS interference check samples (metals only)
- Laboratory control samples
- Matrix spike results
- Field duplicate samples
- Field blank samples
- Trip blank samples

The results for eighteen groundwater samples are contained in this laboratory report. The samples are identified as follows:

RP-W-6	RP-W-4X (RP-W-4 DUP)	MW-06-12
MW-06-21	MW-97-11	MW-06-8
MW-60-9 (Field Blank)	MW-97-9	MW-86-12 (MW-06-12 DUP)
RP-W-5	MW-77-9 (MW-97-9 DUP)	MW-97-7
MW-97-8	MW-65-18 (Trip Blank)	MW-06-22
RP-W-4	PW-99-1	MW-06-25
RP-W-1	MW-06-9	MW-02-1
RP-W-7	MW-06-18	MW-65-19 (Trip Blank)

The samples were analyzed for volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), polynuclear aromatic hydrocarbon selective ion monitoring (PAH-SIM), metals (ICP/ICP/MS/mercury), general chemistry parameters (bicarbonate as CaCO₃, carbonate as CaCO₃,

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chloride, sulfate, fluoride, ammonia as N, nitrate + nitrite as N, and total phosphorus as P) and radiochemistry parameters (gross alpha, gross beta, radium 226, and radium 228) as required using the methods detailed in the QAPP (Barr, May 2008).

Alternative methods other than those specified in the QAPP were used for the fluoride, gross alpha, gross beta, radium 226 and radium 228 analyses. While a deviation from the QAPP, it was determined that there were no adverse effects on data quality.

Overall Assessment

The QAPP specified that 10% of the project data be reviewed using CLP NFG (Guidelines) and the remaining data be reviewed in accordance with Barr's Data Validation SOPs. Because 90% of the data was correspondingly validated using non-CLP criteria, the laboratory criterion were used for consistency, except where outliers exceeded 30-150% EPA quality control criteria. In summary, because the Guidelines have limits which are often different than, and in certain cases are more stringent than, the limits specified by the analytical methods and the laboratory generated limits; therefore, the end result may be slightly different data qualification.

The 2-chloroethylvinylether VOC results from groundwater, field blank and trip blank samples were qualified with an "R" indicating unusable data because of the known degradation of 2-chloroethylvinylether in the hydrochloric acid sample preservative.

In accordance with the Guidelines, sample concentrations greater than the method detection limit (MDL) and below the practical quantitation limit for the VOC, SVOC and PAH-SIM analysis are "J" qualified indicating an estimated concentration. The non-detect concentrations are presented as "<MDL" in the data tables.

The data are useable as reported and qualified and fulfill the data quality objectives (DQOs) for sensitivity, accuracy and precision as specified in the QAPP. The following sections provide specific validation details.

Holding Times, Preservation and Storage

The samples were collected September 24th through 26th, 2008, packed on ice and sent to the laboratories (CAS, located in Kelso, Washington and ACZ, located in Steamboat Springs, CO) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of -0.5 °C to 5.4 °C upon receipt at the laboratories. The samples were stored at 4 °C until analysis. No qualifiers were assigned due to holding times, preservation, or storage issues.

Summary Calibration Information

The initial calibration (ICAL), continuing calibration (CCAL), initial calibration verification (ICV) and continuing calibration verifications (CCVs) are not QC elements for non-CLP data evaluation. Since the calibration data were provided in summary form within the laboratory report, the data, where available, were reviewed as part of the non-CLP data evaluation process but confirmation via raw data review was not performed.

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During the data evaluation process of the initial calibration data for VOC analysis, it was noted that the relative response factors (RRFs) for acrolein, acrylonitrile and vinyl acetate met the laboratory specific acceptance limits but did not meet the limits specified in the Guidelines. Acrolein and acrylonitrile are documented as not being particularly stable in the analytical environment. A separate method has been developed for their analysis. Due to these considerations, no qualifiers were applied for poor RRFs observed for these parameters during the calibration of the instrument. Similarly, vinyl acetate is rapidly hydrolyzed to acetaldehyde and highly volatile. Due to degradation by hydrolysis and susceptibility to polymerization, no qualifiers were applied due to variability in the RRFs observed for this compound during the calibration of the instrument.

Because the laboratory VOC and SVOC ICAL percent relative standard deviation (%RSD) and RRF criteria differ from, and in some cases are less stringent than, the criterion published in the Guidelines, the data were evaluated by using the Guideline criterion for the system performance check compounds (SPCC). The remaining VOC and SVOC compounds were evaluated using the laboratory acceptance criterion during the ICAL data evaluation.

The %RSD for dichlorodifluoromethane and trichlorofluoromethane in VOC ICAL (CAL 7782) and for acrolein and iodomethane in VOC ICAL (CAL 7747) deviated from the laboratory and/or Guideline acceptance limits. No qualifiers were assigned to dichlorodifluoromethane, trichlorofluoromethane and iodomethane because the %RSD met the requirements of the Guidelines. For acrolein, only concentrations above the MDL would require a “J” qualifier based upon this deviation but the acrolein data was already “R” qualified (unusable) due to failing LCS percent recoveries (detailed below); therefore, no additional qualification was necessary. The % Difference and minimum response factor criterion for one or more VOC CCALs did not meet the applicable laboratory acceptance limits for acrolein and 1,2-dibromo-3-chloropropane and the applicable Guideline criteria for bromoform. The Guidelines require the acrolein data be “J” qualified (estimated) based upon VOC CCAL criteria deviations, however, no additional qualification was necessary for acrolein, because the affected results were already “R” qualified (unusable) due to failing LCS percent recoveries. The associated project samples 1,2-dibromo-3-chloropropane and bromoform results are “J” qualified (estimated) based upon the VOC CCAL deviation(s).

The SVOC ICAL data associated with the samples contained in this SDG meets both the laboratory criteria and the criteria published in the Guidelines. The SVOC CCVs met the laboratory CCV criterion for % Drift and % Difference for linear and quadratic calibrations.

The PAH-SIM ICALs met relevant acceptance criteria including the average RRFs and %RSD for target PAHs and DMC except where detailed as follows. The %RSD for indeno(1,2,3-cd)pyrene and dibenz(a,h)anthracene in PAH-SIM ICAL CAL 7814 deviated from the laboratory and/or Guideline acceptance limits. The associated samples that had indeno(1,2,3-cd)pyrene and dibenz(a,h)anthracene concentrations above the MDL were assigned the “J” qualifier (estimated) based upon the failing %RSD ICAL criterion. This affected the method blank sample associated with ICAL CAL 7814. The PAH-SIM CCVs met the laboratory CCV criterion for % Difference for linear calibrations.

The ICP, ICP/MS and cold vapor mercury ICVs and CCVs met the established laboratory acceptance criterion.

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Blank Analysis

As stated in Section B10.3.2 of the QAPP, when project sample concentrations are “<” (less than) five times the associated blank sample concentrations, thus suspected false positives, they are shown at the concentration reported in the sample, with a “<” qualifier with the exception of the radiochemistry analyses detailed below.

No trace concentrations of ICP, ICP/MS and mercury were present in the laboratory method (or preparation) blank samples. Trace concentrations of VOCs, SVOCs and PAH-SIM compounds were present above the method detection limits and below the practical quantitation limit in one or more laboratory method blank samples. The method blank sample results are presented in Appendices O-4b and O-4c. Associated sample concentrations within five times the associated method blank sample concentrations were reported with a “<” or U (EPA 2005 Organic Guidelines) qualifier.

Although not part of the non-CLP data review, one or more of the following blank samples (initial calibration blank (ICB) and continuing calibration blank (CCBs) were evaluated when provided in summary form within the laboratory report but confirmation via raw data was not performed. No trace concentrations were detected above the practical quantitation limit in the blank samples for mercury, ICP, and ICP/MS analyses.

Deuterated Monitoring Compounds (DMC) (Surrogates)

The laboratory and EPA specified acceptance criterion for the DMC percent recoveries for the VOC and PAH-SIM analyses in the project samples were met. Two surrogate standard percent recoveries were below the laboratory and EPA 30-150% criterion for sample MW-97-11. The associated SVOC compounds are “R” qualified (unusable) based upon the low surrogate percent recoveries.

ICP/ICP/MS Interference Check Samples (Metals only)

The interference check sample (ICS) and contract required quantitation limit standard (CRI/CRA) data review is not a QC element for non-CLP evaluation but the ICS and CRI data were evaluated when provided in summary form within the laboratory report but confirmation via raw data review was not performed. The ICP, ICP/MS ICSs met the laboratory acceptance criteria for both solution A and solution AB. The CRI percent recoveries for beryllium, chromium, lead, thallium and uranium by ICP/MS and sodium by ICP did not meet the acceptance limits specified in the Guidelines. Since Methods 6010 and 6020 do not require CRI analysis, no data were qualified.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) were prepared and analyzed at the appropriate frequency for the target compounds and met the relevant acceptance criteria for percent recovery of the spike concentrations, indicating in-control analytical systems with the exceptions noted below.

In all but four cases, the VOC LCS percent recoveries and relative percent differences (RPDs) met the relevant criteria. The percent recoveries for VOCs carbon disulfide, cis-1,3-dichloropropene, acrolein and vinyl chloride did not meet the applicable laboratory and EPA acceptance limits for accuracy in one or more LCS/LCSD samples. The percent recoveries for carbon disulfide and cis-1,3-dichloropropene were below the laboratory acceptance criteria in one LCS sample; however, no data were qualified because the percent recoveries were slightly low (<2%) and the associated

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LSCD percent recoveries and RPDs met the applicable laboratory and EPA criterion. The percent recovery for acrolein met the laboratory acceptance criteria but was below the EPA 30-150% criterion in a second LCS sample; therefore, the associated sample data were “R” qualified (unusable) based upon this deviation. Additionally, the percent recoveries for vinyl chloride exceeded the laboratory acceptance criteria in one LCS sample. No vinyl chloride data were qualified because the deviation would equate to a potentially high data bias and because the associated samples had no detectable concentrations above the MDL.

In all but seven cases, the SVOC LCS percent recoveries and RPDs met the relevant criteria. The LCS/LCSD percent recoveries and/or RPDs for SVOCs pyridine, 2,4-dimethylphenol, benzoic acid, hexachlorocyclopentadiene, benzo(b)fluoranthene, indeno(1,2,3-cd)pyrene and 3-nitroaniline did not meet the applicable laboratory or EPA acceptance limits for precision and accuracy. The associated project sample results are “R” qualified (unusable) due to the potential data bias of pyridine, 2,4-dimethylphenol, benzoic acid, hexachlorocyclopentadiene. However, no qualification was deemed necessary for benzo(b)fluoranthene and indeno(1,2,3-cd)pyrene because the deviations in percent recovery were minor (<6% below the lower acceptance criteria). The RPD for 3-nitroaniline did not meet the laboratory acceptance limits for precision, but no data were qualified because the LCS/LCSD percent recoveries were within acceptable limits for accuracy.

The laboratory met the acceptance criteria for the ICP/MS serial dilutions ($\leq 10\%$ D), between the undiluted and diluted results, where sample results are significantly greater than the MDL ($>50\times$). A post-digestion spike for ICP analyses was not performed. The ICP/MS and mercury serial dilutions and post-digestion spike percent recoveries met the applicable criteria.

Matrix Spike Results

As standard practice, the laboratory reported a shortened list of VOC and SVOC compounds for MS/MSD data. No qualification was performed based upon this occurrence.

Samples RP-W-5, MW-06-18 and MW-06-13 served as the MS/MSD sample for the VOC, SVOC and PAH-SIM analyses. The MS/MSD data met the applicable laboratory and EPA acceptance criteria for percent recovery and RPD.

Samples RP-W-5, MW-06-18, MW-06-25 served as the MS/MSD samples for the ICP, ICP/MS and mercury analyses. The MS/MSD data met the applicable laboratory and EPA acceptance criteria for percent recovery and RPD with the exception of barium. The percent recovery for barium in one MS sample was below the laboratory acceptance limits; however, no data were qualified because the deviation was minor (<5%). The MS percent recoveries for manganese and zinc for sample MW-06-18 and cadmium, manganese and zinc for sample MW-06-25 were not applicable because the associated sample concentrations were greater than four times the spike concentration thereby preventing accurate evaluation of the spike recovery.

General Chemistry Analysis (bicarbonate as CaCO_3 , carbonate as CaCO_3 , chloride, sulfate, fluoride, ammonia as N, nitrate + nitrite as N, and total phosphorus as P)

The general chemistry data were reviewed in accordance with Barr's SOPs included in the QAPP. The ICV, CCV data indicated that the laboratory and method criteria were met for various general chemistry parameters (listed above). Samples RP-W-5 and MW-06-18 served as the MS/MSD and

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analytical batch duplicate samples for the general chemistry analyses. The LCS, MS/MSD and analytical batch duplicate sample data indicated that the laboratory and method criteria were met for the general chemistry analyses. With the exception of fluoride, no method blank samples or continuing calibration blank samples had concentrations detected above the method detection limit (fluoride) and practical quantitation limit for the remaining general chemistry analyses. However, fluoride was detected above the method detection limit and below the practical quantitation limit in the ICB and CCB samples. No data qualifiers were applied because the reported concentrations of fluoride in the ICB and CCBs were well below the practical quantitation limit and because the associated project sample concentrations were greater than five times the ICB and CCB sample concentrations.

Radiochemistry Analysis (Gross alpha, Gross Beta, Radium 226 and Radium 228)

Results were reviewed in general accordance with the analytical methods 900.0, 903.1 and 904.0 selected by ACZ. Although these methods were not specified in the QAPP, the data were not qualified and should be deemed acceptable for the project. Samples MW-06-8, RP-W-1, MW-06-25, RP-W-7, MW-06-12, MW-06-18, MW-02-1, RP-W-5 and non-project specific samples served as the MS sample for one or more of the radiochemistry methods. The LCS and MS samples met the laboratory acceptance criteria for accuracy with the exception of gross alpha and radium 228 as detailed below. The percent recovery for one MS sample (MW-06-8) was below the laboratory and the EPA (30-150%) criteria for gross alpha analysis; therefore, the associated data were “R” qualified (unusable) based upon this deviation. The percent recovery for one MS sample (RP-W-5) was below the laboratory but within the EPA 30-150% acceptance criteria for radium 228; therefore, the associated data were “J” qualified (estimated). Samples RP-W-5, MW-06-18, MW-97-10, RP-W-1 and non-project specific samples served as the analytical batch duplicate samples for this data package. The RPDs for one or more laboratory duplicate samples exceeded the laboratory acceptance limits for precision for gross alpha, gross beta, radium 226 and radium 228. However, no data were qualified because the associated sample concentrations were near the practical quantitation limit which can exaggerate the deviation of the RPD. One or more method blank samples had detectable concentrations above the practical quantitation limit (i.e. lower limit of detection (LLD) for gross alpha and radium 228. However, per guidance from the laboratory (ACZ), method blank concentrations less than two times the practical quantitation limit are not controlled; therefore, no qualification of the data was deemed necessary.

Field Duplicate Samples

Field duplicate samples were collected and analyzed as required by the QAPP. Samples RP-W-4X (RP-W-4 DUP), MW-77-9 (MW-97-9 DUP) and MW-86-12 (MW-06-12 DUP) served as the field duplicate samples for this data package. Field duplicate samples met the RPD criteria (<30% for aqueous matrices) as specified in the QAPP with the exception of gross alpha, gross beta, radium 226, radium 228, bicarbonate alkalinity as CaCO₃, iron, zinc, and VOCs acetone and toluene. Sample concentrations near the practical quantitation limit can exaggerate the deviation of the RPD. Since the gross alpha, gross beta, radium 226, radium 228 and zinc sample concentrations were within five times the practical quantitation limit and the acetone and toluene sample concentrations were within five times the MDL, no qualifiers were applied to the data based upon the RPD of the field duplicate sample results. The bicarbonate alkalinity as CaCO₃ data for sample MW-06-12 and its associated

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field duplicate sample MW-86-12 were “J” qualified (estimated) based upon the deviation of the RPD. No iron data were qualified based upon the field duplicate RPD data because the deviation was minor (<2%) for sample MW-97-9 and its associated field duplicate sample MW-77-9.

Field Blank Samples

The field blank samples identified within this sample delivery group may apply to samples contained within other sample delivery groups. The field blank samples were collected in the following manner: the sample equipment (i.e. pump, tubing and/or hoses) were rinsed with analyte-free, deionized water and the rinse water was poured into the appropriate sample containers for analysis. Field blank sampling procedures and protocols were determined to be appropriate and were collected and analyzed at the required frequency as specified in the QAPP. No target analytes were present above the MDL for VOCs, SVOCs and PAH-SIM or above the practical quantitation limit (inorganics, radiochemistry, general chemistry) in the field blank samples associated with this data package except where noted below. One or more of the field blank samples had detections of sulfate, metals and radiochemistry parameters above the practical quantitation limit and trace concentrations of VOCs, SVOCs and PAH-SIM were present above the MDL and below the practical quantitation limit. The field blank sample results are presented in Appendix O-4b. Associated sample concentrations within five times the associated field blank sample concentrations were reported with a “<” or U (EPA 2005 Organic and 2004 Inorganic Guidelines) qualifier with the exception of the gross alpha and gross beta analysis. Due to the nature of the analyses, the radiochemistry field blank sample data were used to evaluate if any gross system contamination occurred. No qualifiers were applied to the samples based upon the field blank sample data for the radiochemistry analyses.

Trip Blank Samples

Trip blank samples were collected and analyzed at the required frequency as specified in the QAPP. Samples MW-65-18 and MW-65-19 served as the trip blank samples collected and analyzed as part of this data package. Trace concentrations of carbon disulfide, acetone and toluene were detected above the method detection limit and below the practical quantitation limit in both of the trip blank samples. Associated sample concentrations within five times the associated trip blank sample concentrations were reported with a “<” or U (EPA 2005 Organic Guidelines) qualifier. No other target VOC compounds were present above the method detection limit in the trip blank samples.

Discussion

The analytical batch duplicate sample RPDs met the applicable laboratory criteria with the exception of lead (ICP/MS) for sample RP-W-5; therefore, the associated data were “J” qualified (estimated).

The EPA Method 6020 analysis could not be performed without dilution of twenty-two groundwater samples associated with this sample delivery group. Attempts to analyze the samples undiluted and then at a 2x dilution both resulted in the internal standards drifting below the method criteria. The samples were successfully analyzed after a 5x dilution. The practical quantitation limits for the affected samples are elevated accordingly; therefore, no additional qualification was appropriate.

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Date of Data Validation Report: March 24, 2009

The validation of the Columbia Analytical Services, Inc. (CAS, Kelso, Washington) and ACZ Laboratories, Inc. (ACZ, Steamboat Springs, Colorado) laboratory data for the general chemistry, metals and radiochemistry analyses of the samples collected in 2008 to support the Phase 1 - RCRA Facility Investigation is complete as detailed below.

The analytical data were reviewed in accordance Barr's Data Validation Standard Operating Procedures (SOPs) which are based upon the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Organic and Inorganic Data Review (EPA 2005, 2004) and in general accordance with U.S. EPA Methods 160.3 modified, 6010B, 6020, 7471A, 9315 modified; EICHROM method for lead 210 and uranium 234, 235 and 238 isotope analysis; and the Department of Energy's Environmental Survey Manual Method 4506 (ESM 4506) as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008).

In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Instrument performance checks - ICP/MS Tuning
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Blank analysis
- ICP/ICP/MS interference check samples
- Laboratory control samples
- Internal standards
- Matrix spike results
- Field duplicate samples
- Field blank samples

The results for ten native soil and tailings samples are contained in this laboratory report. The samples are identified as follows:

SB-08-1 (8-11) *	SB-08-2 (17.5-18.5)	SB-08-3 (2-6)
SB-08-1 (11-12) *	SB-08-2 (26-28)	SB-08-3 (13-20)
SB-08-1 (19-21)	SB-08-A (SB-08-2 (10-14) DUP)	SB-08-3 (28-32)
SB-08-2 (10-14)	SB-08-B (SB-08-2 (26-28) DUP)	SB-08-3 (36-40)

* Denotes the samples whose metals data were reviewed using CLP NFG (Guidelines). The remaining data were reviewed general accordance with the analytical methods cited in the QAPP (Barr, May 2008).

The samples were analyzed for metals (ICP/ICP/MS/mercury), total solids, and radiochemistry parameters (lead 210, radium 226, thorium 230, and uranium 234, 235 and 238 isotopes) as required using the methods detailed in the QAPP (Barr, May 2008).

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Date Data Validation Report: March 24, 2009

Overall Assessment

The QAPP specified that 10% of the project data be reviewed using CLP NFG (Guidelines) and the remaining data be reviewed in accordance with Barr's Data Validation SOPs. Because 90% of the data was correspondingly validated using non-CLP criteria, the laboratory criterion were used for consistency, except where outliers exceeded 30-150% EPA quality control criteria. In summary, because the Guidelines have limits which are often different than, and in certain cases are more stringent than, the limits specified by the analytical methods and the laboratory generated limits; therefore, the end result may be slightly different data qualification.

In accordance with the Guidelines, sample concentrations greater than the method detection limit (MDL) and below the practical quantitation limit for the metals analysis are "J" qualified indicating an estimated concentration. The non-detect concentrations are presented as "<MDL" in the data tables.

The data are useable as reported and qualified and fulfill the data quality objectives (DQOs) for sensitivity, accuracy and precision as specified in the QAPP. The following sections provide specific validation details.

Holding Times, Preservation and Storage

The samples were collected December 11th through 12th, 2008, packed on ice and sent to the laboratories (CAS, located in Kelso, Washington and ACZ, located in Steamboat Springs, CO) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 0 °C to 4.8 °C upon receipt at the laboratories. The samples were stored at 4 °C until analysis. No qualifiers were assigned due to holding times, preservation, or storage issues.

Instrument Performance Checks –ICP/MS Tuning (ICP/MS Metals)

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

The tuning aspects of the inductively coupled plasma mass spectrometer (ICP/MS) met the applicable acceptance criteria for mass resolution and the percent relative standard deviation (%RSD) for the five consecutive replicates at <5%.

Initial Calibration and Initial Calibration Verification

The ICP and ICP/MS initial calibrations were performed at the appropriate frequency and run order, and met minimum percent recovery (%R) acceptance criteria for each of the target metals. Mean concentrations from 2 replicate exposures were reported for ICP and from 3 replicate exposures for ICP/MS as required. Initial calibration verification (ICV) criterion of $\pm 10\%$ (of true value) for the target analytes was met during the initial calibration events.

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The cold vapor mercury initial calibration events met the acceptance criterion of a correlation coefficient >0.995 using a minimum of at least four calibration standard solutions. The ICV criterion of 20% of the true value was also met for the cold vapor mercury analysis.

Continuing Calibration Verification

The continuing calibration verification samples (CCVs) for the ICP and ICP/MS analyses met data validation criteria for frequency, run order and acceptable percent recoveries were achieved within the analytes' method detection limit and the documented upper linear range of the instrument. Mean concentrations from the 2 (for ICP) and 3 (for ICP/MS) replicate exposures were reported as required.

The CCVs associated with the cold vapor mercury analyses met the established acceptance criteria for frequency and the calculated percent recovery of 20% of the true value.

The Contract Required Quantitation Limit (CRQL) Check Standard (CRI) sample data for ICP, ICP/MS, and mercury met the percent recovery criteria, but did not meet the data validation criteria for frequency and run order as dictated in the Guidelines. The CRI samples reported in the data packages were analyzed at the beginning of the analytical sequence(s) but the Guidelines require a CRI sample to be analyzed at the beginning and end of each analytical sequence and every twenty samples. Although this is a deviation from the Guidelines, no qualification was deemed necessary based upon the frequency of the CRI samples reported within this data package.

Blank Analysis

As stated in Section B10.3.2 of the QAPP, when project sample concentrations are “<” (less than) five times the associated blank sample concentrations, thus suspected false positives, they are shown at the concentration reported in the sample, with a “<” qualifier with the exception of the radiochemistry analyses detailed below.

The ICP, ICP/MS and mercury analyses method blank samples, initial calibration blank (ICB) and continuing calibration blank samples (CCBs) were prepared and analyzed at the appropriate frequency and met acceptance criteria for proper run order. Trace concentrations of calcium and magnesium (ICP) were detected above the method detection limit in one method blank sample; however, no data were qualified because the associated sample concentrations were greater than five times the method blank sample concentrations. The ICBs and CCBs have multiple target metals analytes present above the MDL but below the practical quantitation limit for ICP and ICP/MS analysis. Once these ICB and CCB concentrations undergo unit conversions (for comparison to mg/kg soil results) they are very low and are unlikely to adversely affect final sample results, therefore, no data qualifier were applied. No positive concentrations of mercury were present above the method detection limit in the method blank, ICB or CCB samples.

ICP/ICP/MS Interference Check Samples (Metals only)

The ICP and ICP/MS interference check samples (ICS) were analyzed at the appropriate frequency and in the correct order during the analysis of the project samples. Acceptable results of $\pm 20\%$ of the true value were obtained for both solution A and solution AB.

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Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) were prepared and analyzed at the appropriate frequency for the target compounds and met the relevant acceptance criteria for percent recovery of the spike concentrations, indicating in-control analytical systems.

The laboratory met the acceptance criteria for the ICP and ICP/MS serial dilutions ($\leq 10\%$), between the undiluted and diluted results, where sample results are significantly greater than the MDL ($>50\times$) with the exception of magnesium. The serial dilution for magnesium by ICP/MS did not meet the applicable acceptance criteria for sample SB-08-3 (2-6); therefore, the associated data were “J” qualified (estimated). The ICP/MS and mercury post-digestion spike percent recoveries met the applicable criteria.

Internal Standards (ICP/MS Analyses Only)

The ICP/MS internal standard data were acceptable. The internal standards displayed percent relative intensity (%RI) within the 60-125% range.

Matrix Spike Results

Samples SB-08-3 (2-6) and SB-08-3 (50-52) served as the MS/MSD sample for the ICP, ICP/MS and mercury analyses. The MS/MSD data met the applicable laboratory and EPA 30-150% acceptance criteria for percent recovery and RPD ($<20\%$) with the exception of nickel. The MS percent recovery for nickel was below the laboratory acceptance criteria for sample SB-08-3 (2-6). However, no nickel data were qualified because the deviation was 1 % below the laboratory limit. The MS percent recoveries for cadmium, chromium, iron, uranium, vanadium and zinc for sample SB-08-3 (2-6) were not applicable because the associated sample concentrations were greater than four times the spike concentration thereby preventing accurate evaluation of the spike recovery.

General Chemistry Analysis (Total solids)

No Guideline criteria exist for total solids analysis. The total solids data were reviewed in accordance with Barr’s SOPs included in the QAPP. Samples SB-08-1 (8-11) and SB-08-3 (28-32) served as the analytical batch duplicate samples for the total solids analyses. The analytical batch duplicate data indicated that the applicable laboratory and method criteria were met.

Radiochemistry Analysis (Lead 210, radium 226, thorium 230, and uranium 234, 235 and 238 isotopes)

Results were reviewed in general accordance with the analytical methods specified in the QAPP. Sample SB-08-1 (11-12) served as the MS sample for one or more of the radiochemistry methods. The LCS and MS samples met the laboratory acceptance criteria for accuracy. Samples SB-08-1 (8-11) and SB-08-3 (50-52) served as the analytical batch duplicate samples for this data package. The replicate error ratios met the laboratory acceptance criteria for the target radiochemistry parameters. The method blank samples had no detectable concentrations above the practical quantitation limit (i.e. lower limit of detection (LLD) for the target radiochemistry analytes.

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Field Duplicate Samples

Field duplicate samples were collected and analyzed as required by the QAPP. Samples SB-08-A (SB-08-2 (10-14) DUP) and SB-08-B (SB-08-2 (26-28) DUP) served as the field duplicate samples for this data package. Field duplicate samples met the RPD criteria (< 40% for solid matrices) as specified in the QAPP with the exceptions detailed below. The RPD for sample SB-08-2 (28-28) and its associated field duplicate sample (SB-08-B) exceeded the applicable acceptance criteria for precision for barium, cadmium, chromium, nickel, potassium, sodium, zinc, lead 210, radium 226, thorium 230, and uranium 235 and 238. The laboratory reviewed the ICP and ICP/MS data and found the data to be correct; therefore, the associated ICP and ICP/MS sample data were “J” qualified (estimated) based upon the deviation of the RPD. Since the radiochemistry sample concentrations were within five times the practical quantitation limit, no qualifiers were applied to the data based upon the RPD of the field duplicate sample results.

Field Blank Samples

Field blank samples were collected and analyzed at the required frequency as specified in the QAPP. The field blank samples SB-08-C and SB-08-D were collected in the following manner: The sample equipment (i.e. stainless-steel bowl and ceramic bowl) was rinsed with analyte-free, deionized water and the rinse water was poured into the appropriate sample containers for analysis. The field blank sample results are presented in Appendix O-4b. No target analytes were present above the MDL for the metals analysis or above the practical quantitation limit for the radiochemistry analyses in the field blank samples associated with this data package except where noted below. Trace concentrations of metals were present above the MDL but below the practical quantitation limit. Once these field blank sample concentrations undergo unit conversions (for comparison to mg/kg soil results) they are very low and are unlikely to adversely affect final sample results, therefore, no data qualifiers were applied. The field blank sample had detections of uranium 238 above the practical quantitation limit. Due to the nature of the analyses, the radiochemistry field blank sample data were used to evaluate if any gross system contamination occurred. No qualifiers were applied to the samples based upon the field blank sample data for the radiochemistry analyses.

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U.S. EPA Corrective Action Order on Consent,
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Date of Data Validation Report: March 26, 2009

The validation of the Columbia Analytical Services, Inc. (CAS, Kelso, Washington) and ACZ Laboratories, Inc. (ACZ, Steamboat Springs, Colorado) laboratory data for the general chemistry, metals and radiochemistry analyses of the samples collected in 2008 to support the Phase 1 - RCRA Facility Investigation is complete as detailed below.

The analytical data were reviewed in accordance Barr's Data Validation Standard Operating Procedures (SOPs) which are based upon the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Organic and Inorganic Data Review (EPA 2005, 2004) and in general accordance with U.S. EPA Methods 160.3 modified, 6010B, 6020, 7470A, 7471A, 9315 modified; EICHRON method for lead 210 and uranium 234, 235 and 238 isotope analysis; and the Department of Energy's Environmental Survey Manual Method 4506 (ESM 4506) as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008).

In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Summary calibration information
- Blank analysis
- ICP/ICP/MS interference check samples
- Laboratory control samples
- Matrix spike results
- Field blank samples

The results for five native soil and tailings samples and two aqueous field blank samples are contained in this laboratory report. The samples are identified as follows:

SB-08-3 (50-52)	SB-08-6 (12-13)	SB-08-D (Field Blank)
SB-08-3 (42-43)	SB-08-6 (20-22)	
SB-08-6 (9-12)	SB-08-C (Field Blank)	

The samples were analyzed for metals (ICP/ICP/MS/mercury), total solids, and radiochemistry parameters (lead 210, radium 226, thorium 230, and uranium 234, 235 and 238 isotopes) as required using the methods detailed in the QAPP (Barr, May 2008).

Overall Assessment

The QAPP specified that 10% of the project data be reviewed using CLP NFG (Guidelines) and the remaining data be reviewed in accordance with Barr's Data Validation SOPs. Because 90% of the data was correspondingly validated using non-CLP criteria, the laboratory criterion were used for consistency, except where outliers exceeded 30-150% EPA quality control criteria. In summary, because the Guidelines have limits which are often different than, and in certain cases are more

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stringent than, the limits specified by the analytical methods and the laboratory generated limits; therefore, the end result may be slightly different data qualification.

In accordance with the Guidelines, sample concentrations greater than the method detection limit (MDL) and below the practical quantitation limit for the metals analysis for solid samples are “J” qualified indicating an estimated concentration. The non-detect concentrations are presented as “<MDL” in the data tables.

The data are useable as reported and qualified and fulfill the data quality objectives (DQOs) for sensitivity, accuracy and precision as specified in the QAPP. The following sections provide specific validation details.

Holding Times, Preservation and Storage

The samples were collected December 12th and 13th, 2008, packed on ice and sent to CAS, located in Kelso, Washington with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 0.5 °C to 2.6 °C upon receipt at the laboratories. The samples were stored at 4 °C until analysis. No qualifiers were assigned due to holding times, preservation, or storage issues.

Summary Calibration Information

The initial calibration (ICAL), continuing calibration (CCAL), initial calibration verification (ICV) and continuing calibration verifications (CCVs) are not QC elements for non-CLP data evaluation. Since the calibration data were provided in summary form within the laboratory report, the data, where available, were reviewed as part of the non-CLP data evaluation process but confirmation via raw data review was not performed.

The ICP, ICP/MS and cold vapor mercury ICVs and CCVs met the established laboratory acceptance criterion.

Blank Analysis

As stated in Section B10.3.2 of the QAPP, when project sample concentrations are “<” (less than) five times the associated blank sample concentrations, thus suspected false positives, they are shown at the concentration reported in the sample, with a “<” qualifier with the exception of the radiochemistry analyses detailed below.

Trace concentrations of calcium, magnesium and uranium were present in one laboratory method (or preparation) blank sample; however, no data were qualified because the associated sample concentrations were greater than five times the method blank sample concentration.

Although not part of the non-CLP data review, one or more of the following blank samples (initial calibration blank (ICB) and continuing calibration blank (CCBs) were evaluated when provided in summary form within the laboratory report but confirmation via raw data was not performed. The ICBs and CCBs have multiple target metals analytes present above the MDL but below the practical quantitation limit for ICP and ICP/MS analysis. Once these ICB and CCB concentrations undergo unit conversions (for comparison to mg/kg soil results) they are very low and are unlikely to

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adversely affect final sample results; therefore, no data qualifiers were applied. No positive concentrations of mercury were present above the method detection limit in the method blank, ICB or CCB samples.

ICP Interference Check Samples (Metals only)

The interference check sample (ICS) and contract required quantitation limit standard (CRI/CRA) data review is not a QC element for non-CLP evaluation but the ICS and CRI data were evaluated when provided in summary form within the laboratory report but confirmation via raw data review was not performed. The ICP and ICP/MS ICSs met the laboratory acceptance criteria for both solution A and solution AB. The CRI percent recoveries for selenium by ICP/MS did not meet the acceptance limits specified in the Guidelines. Since Method 6020 does not require CRI analysis, no selenium data were qualified.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) were prepared and analyzed at the appropriate frequency for the target compounds. The ICP, ICP/MS and mercury LCS percent recoveries and relative percent differences (RPDs) met the relevant acceptance criteria for percent recovery of the spike concentrations, indicating in-control analytical systems.

The laboratory met the acceptance criteria for the ICP and ICP/MS serial dilutions ($\leq 10\%$ D), between the undiluted and diluted results, where sample results are significantly greater than the MDL ($>50\times$) with the following exceptions. The % difference for the serial dilution from sample SB-08-3 (50-52) did not meet the applicable acceptance criteria for barium, calcium, copper, manganese, sodium, thallium and zinc; therefore, the associated ICP and ICP/MS sample data were “J” qualified (estimated). A post-digestion spike for ICP analyses was not performed. The serial dilutions (mercury) and post-digestion spike percent recoveries (ICP/MS and mercury) met the applicable criteria.

Matrix Spike Results

Samples SB-08-3 (50-52), SB-08-C and SB-08-D served as the MS samples for the ICP, ICP/MS and mercury analyses. The MS data met the applicable laboratory and EPA acceptance criteria for percent recovery and RPD with the exception of vanadium. The percent recovery for vanadium was below the laboratory acceptance criteria for MS sample SB-08-3 (50-52); therefore, the associated data were “J” qualified (estimated). The MS percent recoveries for barium, iron and manganese for sample SB-08-3 (50-52) were not applicable because the associated sample concentrations were greater than four times the spike concentration thereby preventing accurate evaluation of the spike recovery.

General Chemistry Analysis (Total solids)

No Guideline criteria exist for total solids analysis. The total solids data were reviewed in accordance with Barr’s SOPs included in the QAPP. Samples SB-08-6 (12-13) served as the analytical batch duplicate samples for the total solids analyses. The analytical batch duplicate data indicated that the applicable laboratory and method criteria were met.

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Radiochemistry Analysis (Lead 210, radium 226, thorium 230, and uranium 234, 235 and 238 isotopes)

Results were reviewed in general accordance with the analytical methods specified in the QAPP. Sample SB-08-1 (11-12), SB-08-C and non-project specific samples served as the MS samples for one or more of the radiochemistry methods. The LCS and MS samples met the laboratory acceptance criteria for accuracy. Samples SB-08-1 (8-11), SB-08-3 (50-52), SB-08-D and non-project specific samples served as the analytical batch duplicate samples for this data package. The replicate error ratios met the laboratory acceptance criteria for the target radiochemistry parameters. The method blank samples had no detectable concentrations above the practical quantitation limit (i.e. lower limit of detection (LLD) for the target radiochemistry analytes.

Field Blank Samples

Field blank samples were collected and analyzed at the required frequency as specified in the QAPP. The field blank samples SB-08-C and SB-08-D were collected in the following manner: The sample equipment (i.e. stainless-steel bowl and ceramic bowl) was rinsed with analyte-free, deionized water and the rinse water was poured into the appropriate sample containers for analysis. The field blank sample results are presented in Appendix O-4b. No target analytes were present above the MDL for the metals analysis or above the practical quantitation limit for the radiochemistry analyses in the field blank samples associated with this data package except where noted below. Trace concentrations of metals were present above the MDL but below the practical quantitation limit. Once these field blank sample concentrations undergo unit conversions (for comparison to mg/kg soil results) they are very low and are unlikely to adversely affect final sample results; therefore, no data qualifiers were applied. The field blank sample had detections of uranium 238 above the practical quantitation limit. Due to the nature of the analyses, the radiochemistry field blank sample data were used to evaluate if any gross system contamination occurred. No qualifiers were applied to the samples based upon the field blank sample data for the radiochemistry analyses.

Discussion

Samples SB-08-3 (50-52) SB-08-C and SB-08-D served as the analytical batch duplicate samples for the ICP, ICP/MS and mercury analyses. The MS/MSD data met the applicable RPD criteria with the exceptions noted below. The RPD for antimony, barium, manganese, thallium and vanadium exceeded the laboratory criterion for sample SB-08-3 (50-52). The associated antimony data were “J” qualified (estimated) based upon the deviation in precision. Based upon the analytical batch duplicate data, no additional qualification was necessary for barium, manganese, thallium and vanadium because the associated data were already “J” qualified because the serial dilution data and MS percent recoveries did not meet the applicable acceptance criteria (as detailed in the preceding sections of this evaluation). Additionally, the analytical batch duplicate sample RPDs exceeded the applicable laboratory criteria for lead and silver for sample SB-08-C; however, no qualification was deemed necessary because the lead and silver sample concentrations were close to the practical quantitation limit thereby exaggerating the deviation of the RPD.

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Laboratory Report / Batch: K0812294

Rhodia Silver Bow Plant – Butte, Montana
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Date of Data Validation Report: March 27, 2009

The validation of the Columbia Analytical Services, Inc. (CAS, Kelso, Washington) and ACZ Laboratories, Inc. (ACZ, Steamboat Springs, Colorado) laboratory data for the general chemistry, metals and radiochemistry analyses of the samples collected in 2008 to support the Phase 1 - RCRA Facility Investigation is complete as detailed below.

The analytical data were reviewed in accordance Barr's Data Validation Standard Operating Procedures (SOPs) which are based upon the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Organic and Inorganic Data Review (EPA 2005, 2004) and in general accordance with U.S. EPA Methods 160.3 modified, 6010B, 6020, 7471A, 9315 modified; EICHRON method for lead 210 and uranium 234, 235 and 238 isotope analysis; and the Department of Energy's Environmental Survey Manual Method 4506 (ESM 4506) as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008).

In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Summary calibration information
- Blank analysis
- ICP/ICP/MS interference check samples
- Laboratory control samples
- Matrix spike results
- Field blank samples

The results for eleven native soil and tailings samples are contained in this laboratory report. The samples are identified as follows:

SB-08-5 (4-10)	SB-08-5 (46-47)	SB-08-4 (32-38)
SB-08-5 (16-22)	SB-08-5 (54-56)	SB-08-4 (40.5-41.5)
SB-08-5 (28-36)	SB-08-4 (6-12)	SB-08-4 (50-52)
SB-08-5 (42-44)	SB-08-4 (18-24)	

The samples were analyzed for metals (ICP/ICP/MS/mercury), total solids, and radiochemistry parameters (lead 210, radium 226, thorium 230, and uranium 234, 235 and 238 isotopes) as required using the methods detailed in the QAPP (Barr, May 2008).

Overall Assessment

The QAPP specified that 10% of the project data be reviewed using CLP NFG (Guidelines) and the remaining data be reviewed in accordance with Barr's Data Validation SOPs. Because 90% of the data was correspondingly validated using non-CLP criteria, the laboratory criterion were used for consistency, except where outliers exceeded 30-150% EPA quality control criteria. In summary,

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because the Guidelines have limits which are often different than, and in certain cases are more stringent than, the limits specified by the analytical methods and the laboratory generated limits; therefore, the end result may be slightly different data qualification.

In accordance with the Guidelines, sample concentrations greater than the method detection limit (MDL) and below the practical quantitation limit for the metals analysis for solid samples are “J” qualified indicating an estimated concentration. The non-detect concentrations are presented as “<MDL” in the data tables.

The data are useable as reported and qualified and fulfill the data quality objectives (DQOs) for sensitivity, accuracy and precision as specified in the QAPP. The following sections provide specific validation details.

Holding Times, Preservation and Storage

The samples were collected December 16th through 18th, 2008, packed on ice and sent to CAS, located in Kelso, Washington with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of -0.2 °C to 3.9 °C upon receipt at the laboratories. The samples were stored at 4 °C until analysis. No qualifiers were assigned due to holding times, preservation, or storage issues.

Summary Calibration Information

The initial calibration (ICAL), continuing calibration (CCAL), initial calibration verification (ICV) and continuing calibration verifications (CCVs) are not QC elements for non-CLP data evaluation. Since the calibration data were provided in summary form within the laboratory report, the data, where available, were reviewed as part of the non-CLP data evaluation process but confirmation via raw data review was not performed.

The ICP, ICP/MS and cold vapor mercury ICVs and CCVs met the established laboratory acceptance criterion.

Blank Analysis

As stated in Section B10.3.2 of the QAPP, when project sample concentrations are “<” (less than) five times the associated blank sample concentrations, thus suspected false positives, they are shown at the concentration reported in the sample, with a “<” qualifier with the exception of the radiochemistry analyses detailed below.

Trace concentrations of calcium, magnesium and uranium were present in one laboratory method (or preparation) blank sample; however, no data were qualified because the associated sample concentrations were greater than five times the method blank sample concentration.

Although not part of the non-CLP data review, one or more of the following blank samples (initial calibration blank (ICB) and continuing calibration blank (CCBs) were evaluated when provided in summary form within the laboratory report but confirmation via raw data was not performed. The ICBs and CCBs have multiple target metals analytes present above the MDL but below the practical quantitation limit (PQL) for ICP and ICP/MS analysis. Once these ICB and CCB concentrations

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undergo unit conversions (for comparison to mg/kg soil results) they are very low and are unlikely to adversely affect final sample results, therefore, no data qualifier were applied. No positive concentrations of mercury were present above the method detection limit in the method blank, ICB or CCB samples.

ICP Interference Check Samples (Metals only)

The interference check sample (ICS) and contract required quantitation limit standard (CRI/CRA) data review is not a QC element for non-CLP evaluation but the ICS and CRI data were evaluated when provided in summary form within the laboratory report but confirmation via raw data review was not performed. The ICP and ICP/MS ICSs met the laboratory acceptance criteria for both solution A and solution AB. The CRI percent recoveries for iron by ICP did not meet the acceptance limits specified in the Guidelines. Since Method 6010 does not require CRI analysis, no iron data were qualified.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) were prepared and analyzed at the appropriate frequency for the target compounds. The ICP, ICP/MS and mercury LCS percent recoveries and relative percent differences (RPDs) met the relevant acceptance criteria for percent recovery of the spike concentrations, indicating in-control analytical systems.

The laboratory met the acceptance criteria for the ICP and ICP/MS serial dilutions ($\leq 10\%$ D), between the undiluted and diluted results, where sample results are significantly greater than the MDL ($>50\times$) with the following exceptions. The % difference for the serial dilution from sample SB-08-5 (28-36) did not meet the applicable acceptance criteria for beryllium, cadmium, magnesium, nickel and zinc and the % difference for the serial dilution from sample SB-08-3 (50-52) did not meet the applicable acceptance criteria for thallium; therefore, the associated ICP and ICP/MS sample data were “J” qualified (estimated). A post-digestion spike for ICP analyses was not performed. The serial dilutions (mercury) and post-digestion spike percent recoveries (ICP/MS and mercury) met the applicable criteria.

Matrix Spike Results

Sample SB-08-5 (28-36) served as the MS sample for the ICP, ICP/MS and mercury analyses. The MS data met the applicable laboratory and EPA acceptance criteria for percent recovery and RPD. The MS percent recoveries for cadmium, chromium, iron, vanadium and zinc for sample SB-08-5 (28-36) were not applicable because the associated sample concentrations were greater than four times the spike concentration thereby preventing accurate evaluation of the spike recovery.

General Chemistry Analysis (Total solids)

No Guideline criteria exist for total solids analysis. The total solids data were reviewed in accordance with Barr's SOPs included in the QAPP. Samples SB-08-5 (28-36) served as the analytical batch duplicate samples for the total solids analyses. The analytical batch duplicate data indicated that the applicable laboratory and method criteria were met.

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Radiochemistry Analysis (Lead 210, radium 226, thorium 230, and uranium 234, 235 and 238 isotopes)

Results were reviewed in general accordance with the analytical methods specified in the QAPP. Sample SB-08-4 (40.5-41.5) and SB-08-5 (54-56) served as the MS samples for one or more of the radiochemistry methods. The percent recovery for MS sample SB-08-5 (54-56) exceeded the laboratory acceptance criteria for radium 226 analysis; therefore, the associated data were “J” qualified (estimated). The LCS data met the laboratory acceptance criteria for accuracy. Samples SB-08-4 (18-24), SB-08-4 (32-38) and SB-08-5 (54-56) served as the analytical batch duplicate samples for this data package. The replicate error ratios met the laboratory acceptance criteria for the target radiochemistry parameters. One method blank sample had detectable concentrations above the practical quantitation limit (i.e. lower limit of detection (LLD) for lead 210; however, per guidance from the laboratory (ACZ), method blank concentrations less than two times the practical quantitation limit are not controlled; therefore, no qualification of the data was deemed necessary.

Field Blank Samples

Field blank samples were collected and analyzed at the required frequency as specified in the QAPP. The field blank samples SB-08-C and SB-08-D were collected in the following manner: The sample equipment (i.e. stainless-steel bowl and ceramic bowl) was rinsed with analyte-free, deionized water and the rinse water was poured into the appropriate sample containers for analysis. The field blank sample results are presented in Appendix O-4b. No target analytes were present above the MDL for the metals analysis or above the practical quantitation limit for the radiochemistry analyses in the field blank samples associated with this data package except where noted below. Trace concentrations of metals were present above the MDL but below the practical quantitation limit. Once these field blank sample concentrations undergo unit conversions (for comparison to mg/kg soil results) they are very low and are unlikely to adversely affect final sample results, therefore, no data qualifiers were applied. The field blank sample had detections of uranium 238 above the practical quantitation limit. Due to the nature of the analyses, the radiochemistry field blank sample data were used to evaluate if any gross system contamination occurred. No qualifiers were applied to the samples based upon the field blank sample data for the radiochemistry analyses.

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Date of Data Validation Report: June 6, 2008

The data validation of the DataChem Laboratories, Inc. (DataChem) laboratory data for the elemental (white) phosphorus analysis of the 2008 – Phase I RCRA Facility Investigation Work Plan samples contained in the aforementioned report is complete as detailed below.

The analytical data were reviewed in general accordance with the quality control aspects contained in the U.S. EPA Method 7580 and/or DataChem Laboratories, Inc. Laboratory Standard Operating Procedure as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008). In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Method blank analysis
- Laboratory control samples
- Matrix spike results

Four water sample results are contained in this laboratory report. The samples are identified as follows:

MW-06-23 MW-06-24 MW-97-1 MW-97-2

The groundwater samples were analyzed for elemental phosphorus using U.S.EPA method 7580 as specified in the QAPP (Barr, 2008). During the data validation process, procedural deviations from the initial calibration procedures defined the U.S.EPA method were identified and are detailed below. While a deviation from the published procedures, this deviation is not considered to have a significant adverse affect on the final usability of the data; therefore, no qualification of the elemental phosphorus data was performed.

It is noted that, as required by the QAPP, elemental phosphorus concentrations were evaluated down to the laboratory's method detection limit (MDL). Any sample concentrations below the practical quantitation limit but above the method detection limit are qualified with a "J" indicating an estimated value. The non-detected concentrations are presented as "<MDL" in the data tables.

The data met the data quality objectives (DQOs) and are useable as reported and qualified.

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Holding Times, Preservation and Storage

The EPA method 7580 defines the holding time as 5 calendar days from collection to extraction for water samples that are chilled to 4° C upon sample collection. Following extraction (iso-octane procedure) the method recommends a maximum holding time of 30 calendar days until analysis. The project samples were collected May 13th, 2008, packed on ice and sent to the laboratory (DataChem, Utah) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 5° C upon receipt at the laboratory and were stored at 4° C until analysis. Subsequent holding times for extraction and analysis were met. No qualifiers were assigned due to holding times, sample preservation or storage issues.

Initial Calibration and Initial Calibration Verification

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

Method 7580 requires an initial calibration (ICAL) to be performed every 12 hours and that it consist of (at a minimum) a 5-point calibration standard curve. Calibration factors (CFs) and associated standard deviation of those CFs are then calculated and must meet a relative standard deviation (RSD) of $\leq 15\%$. The laboratory SOP requires a minimum 6-point calibration standard (quadratic) curve and a coefficient of correlation of ≥ 0.99 .

Upon review of the initial calibration data for the elemental phosphorus analyses, the following EPA method and laboratory SOP deviations are noted.

The laboratory created the new “working stock solutions” on May 13th and 14th, 2008. The ICAL was performed on May 14th, 2008 and the project samples were analyzed on May 16th, 2008. This ICAL frequency exceeds the 12-hour requirement as defined in EPA Method 7580. While the published laboratory SOP does not specify a frequency of ICAL, it does indicate in Section 2.1 that, “no substantial modifications from the promulgated method have been made”. Since the laboratory considers the working standards to be very stable under appropriate storage conditions, no elemental phosphorus data were qualified.

Initial (opening) calibration verification standards (ICVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results at the beginning of the analytical process. The ICVs should be representative of the mid-point of the calibration curve. ICVs are required to be analyzed prior to the analysis of the method blank samples and project samples and must fall within $\pm 15\%$ of the known value. The ICVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ difference (%D) criterion (from the associated mid-level standard in the ICAL).

The laboratory used a flame-photometric detector (FPD) for elemental phosphorus analysis instead of the nitrogen-phosphorus detector (NPD) listed in Method 7580. According to the laboratory, the NPD cited in the Method had problems with long-term stability and the FPD did not have similar difficulty. Initial calibration verification standards (ICVs) and continuing calibration verification

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standards (CCVs) were analyzed at the beginning and end of each analytical sequence and after every ten samples to demonstrate continued acceptable calibration. No elemental phosphorus data were qualified based upon the use of the alternate analytical detector.

Continuing Calibration Verification

Ongoing calibration verification standards (CCVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results throughout the analytical process. The CCVs should be representative of the mid-point of the calibration curve. CCVs are required to be analyzed every 10 samples and must fall within $\pm 15\%$ of the known value. The CCVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ D criterion (from the associated mid-level standard in the ICAL).

Method Blank Analysis

The purpose of the method or laboratory blank sample is to evaluate the existence and magnitude of contamination problems resulting from laboratory extraction and analytical activities. Method blank samples were prepared and analyzed with every batch of 20 project samples (or less). One method blank sample was prepared and analyzed at the appropriate frequency and was non-detect for elemental phosphorus.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) are prepared and analyzed to provide information on the accuracy of the analytical procedures and the overall laboratory performance. LCSs are prepared and analyzed with every batch of 20 project samples (or less). The percent recoveries of the spike concentration in the LCS samples are required to fall between 75-125%. One LCS sample was prepared and analyzed at the appropriate frequency and met the acceptance limits of 75-125% for the elemental phosphorus analyses associated with this data package.

Matrix Spike Results

The purpose of matrix spike (MS) and matrix spike duplicate (MSD) samples is to evaluate precision and accuracy of the methodology on specific sample matrices by demonstrating acceptable percent recovery of the known spike concentrations. Matrix spike (MS) and/or matrix spike duplicate (MSD) samples are prepared and analyzed at the appropriate frequency (every batch of ≤ 20 samples) during the analytical events. A non-project specific sample served as the MS/MSD sample associated with this analytical batch. The percent recoveries and associated relative percent differences (RPDs) met the criteria of 75-125% and $\leq 15\%$ RPD, respectively.

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DataChem Laboratory Report / Batch: 08E-0374-01

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Date of Data Validation Report: June 9, 2008

The data validation of the DataChem Laboratories, Inc. (DataChem) laboratory data for the elemental (white) phosphorus analysis of the 2008 – Phase I RCRA Facility Investigation Work Plan samples contained in the aforementioned report is complete as detailed below.

The analytical data were reviewed in general accordance with the quality control aspects contained in the U.S. EPA Method 7580 and/or DataChem Laboratories, Inc. Laboratory Standard Operating Procedure as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008). In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Method blank analysis
- Laboratory control samples
- Matrix spike results

Five water sample results are contained in this laboratory report. The samples are identified as follows:

MW-06-6 MW-EPA-1 MW-06-10 MW-06-3 MW-06-5

The groundwater samples were analyzed for elemental phosphorus using U.S.EPA method 7580 as specified in the QAPP (Barr, 2008). During the data validation process, procedural deviations from the initial calibration procedures defined the U.S.EPA method were identified and are detailed below. While a deviation from the published procedures, this deviation is not considered to have a significant adverse affect on the final usability of the data; therefore, no qualification of the elemental phosphorus data was performed.

It is noted that, as required by the QAPP, elemental phosphorus concentrations were evaluated down to the laboratory's method detection limit (MDL). Any sample concentrations below the practical quantitation limit but above the method detection limit are qualified with a "J" indicating an estimated value. The non-detected concentrations are presented as "<MDL" in the data tables.

The data met the data quality objectives (DQOs) and are useable as reported and qualified.

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Holding Times, Preservation and Storage

The EPA method 7580 defines the holding time as 5 calendar days from collection to extraction for water samples that are chilled to 4° C upon sample collection. Following extraction (iso-octane procedure) the method recommends a maximum holding time of 30 calendar days until analysis. The project samples were collected May 14th, 2008, packed on ice and sent to the laboratory (DataChem, Utah) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 3° C upon receipt at the laboratory and were stored at 4° C until analysis. Subsequent holding times for extraction and analysis were met. No qualifiers were assigned due to holding times, sample preservation or storage issues.

Initial Calibration and Initial Calibration Verification

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

Method 7580 requires an initial calibration (ICAL) to be performed every 12 hours and that it consist of (at a minimum) a 5-point calibration standard curve. Calibration factors (CFs) and associated standard deviation of those CFs are then calculated and must meet a relative standard deviation (RSD) of $\leq 15\%$. The laboratory SOP requires a minimum 6-point calibration standard (quadratic) curve and a coefficient of correlation of ≥ 0.99 .

Upon review of the initial calibration data for the elemental phosphorus analyses, the following EPA method and laboratory SOP deviations are noted.

The laboratory created the new “working stock solutions” on May 13th and 14th, 2008. The ICAL was performed on May 14th, 2008 and the project samples were analyzed on May 17th, 2008. This ICAL frequency exceeds the 12-hour requirement as defined in EPA Method 7580. While the published laboratory SOP does not specify a frequency of ICAL, it does indicate in Section 2.1 that, “no substantial modifications from the promulgated method have been made”. Since the laboratory considers the working standards to be very stable under appropriate storage conditions, no elemental phosphorus data were qualified.

Initial (opening) calibration verification standards (ICVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results at the beginning of the analytical process. The ICVs should be representative of the mid-point of the calibration curve. ICVs are required to be analyzed prior to the analysis of the method blank samples and project samples and must fall within $\pm 15\%$ of the known value. The ICVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ difference (%D) criterion (from the associated mid-level standard in the ICAL).

The laboratory used a flame-photometric detector (FPD) for elemental phosphorus analysis instead of the nitrogen-phosphorus detector (NPD) listed in Method 7580. According to the laboratory, the NPD cited in the Method had problems with long-term stability and the FPD did not have similar difficulty. Initial calibration verification standards (ICVs) and continuing calibration verification

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standards (CCVs) were analyzed at the beginning and end of each analytical sequence and after every ten samples to demonstrate continued acceptable calibration. No elemental phosphorus data were qualified based upon the use of the alternate analytical detector.

Continuing Calibration Verification

Ongoing calibration verification standards (CCVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results throughout the analytical process. The CCVs should be representative of the mid-point of the calibration curve. CCVs are required to be analyzed every 10 samples and must fall within $\pm 15\%$ of the known value. The CCVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ D criterion (from the associated mid-level standard in the ICAL).

Method Blank Analysis

The purpose of the method or laboratory blank sample is to evaluate the existence and magnitude of contamination problems resulting from laboratory extraction and analytical activities. Method blank samples were prepared and analyzed with every batch of 20 project samples (or less). One method blank sample was prepared and analyzed at the appropriate frequency and was non-detect for elemental phosphorus.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) are prepared and analyzed to provide information on the accuracy of the analytical procedures and the overall laboratory performance. LCSs are prepared and analyzed with every batch of 20 project samples (or less). The percent recoveries of the spike concentration in the LCS samples are required to fall between 75-125%. One LCS sample was prepared and analyzed at the appropriate frequency and met the acceptance limits of 75-125% for the elemental phosphorus analyses associated with this data package.

Matrix Spike Results

The purpose of matrix spike (MS) and matrix spike duplicate (MSD) samples is to evaluate precision and accuracy of the methodology on specific sample matrices by demonstrating acceptable percent recovery of the known spike concentrations. Matrix spike (MS) and/or matrix spike duplicate (MSD) samples are prepared and analyzed at the appropriate frequency (every batch of ≤ 20 samples) during the analytical events. Sample MW-06-6 served as the MS/MSD sample. The percent recoveries and associated relative percent differences (RPDs) met the criteria of 75-125% and $\leq 15\%$ RPD, respectively.

Data Validation Report

DataChem Laboratory Report / Batch: 08E-0381-01

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Date of Data Validation Report: June 9, 2008

The data validation of the DataChem Laboratories, Inc. (DataChem) laboratory data for the elemental (white) phosphorus analysis of the 2008 – Phase I RCRA Facility Investigation Work Plan samples contained in the aforementioned report is complete as detailed below.

The analytical data were reviewed in general accordance with the quality control aspects contained in the U.S. EPA Method 7580 and/or DataChem Laboratories, Inc. Laboratory Standard Operating Procedure as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008). In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Method blank analysis
- Laboratory control samples
- Matrix spike results
- Field duplicate samples
- Field blank samples

Fourteen water sample results are contained in this laboratory report. The samples are identified as follows:

MW-06-4	MW-EPA-4	MW-02-3	MW-EPA-3	MW-02-4	MW-02-4 DUP
MW-06-2	MW-97-5	MW-06-1	MW-97-9	MW-01-1	MW-97-8
MW-01-4	MW-60-1 (Field Blank Sample)				

The groundwater samples were analyzed for elemental phosphorus using U.S.EPA method 7580 as specified in the QAPP (Barr, 2008). During the data validation process, procedural deviations from the initial calibration procedures defined the U.S.EPA method were identified and are detailed below. While a deviation from the published procedures, this deviation is not considered to have a significant adverse affect on the final usability of the data; therefore, no qualification of the elemental phosphorus data was performed.

It is noted that, as required by the QAPP, elemental phosphorus concentrations were evaluated down to the laboratory's method detection limit (MDL). Any sample concentrations below the practical quantitation limit but above the method detection limit are qualified with a "J" indicating an estimated value. The non-detected concentrations are presented as "<MDL" in the data tables.

The data met the data quality objectives (DQOs) and are useable as reported and qualified.

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Holding Times, Preservation and Storage

The EPA method 7580 defines the holding time as 5 calendar days from collection to extraction for water samples that are chilled to 4° C upon sample collection. Following extraction (iso-octane procedure) the method recommends a maximum holding time of 30 calendar days until analysis. The project samples were collected on May 15th and 16th, 2008, packed on ice and sent to the laboratory (DataChem, Utah) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 6° C upon receipt at the laboratory and were stored at 4° C until analysis. Subsequent holding times for extraction and analysis were met. No qualifiers were assigned due to holding times, preservation, or storage issues.

Initial Calibration and Initial Calibration Verification

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

Method 7580 requires an initial calibration (ICAL) to be performed every 12 hours and that it consist of (at a minimum) a 5-point calibration standard curve. Calibration factors (CFs) and associated standard deviation of those CFs are then calculated and must meet a relative standard deviation (RSD) of $\leq 15\%$. The laboratory SOP requires a minimum 6-point calibration standard (quadratic) curve and a coefficient of correlation of ≥ 0.99 .

Upon review of the initial calibration data for the elemental phosphorus analyses, the following EPA method and laboratory SOP deviations are noted.

The laboratory created the new “working stock solutions” on May 13th and 14th, 2008. The ICAL was performed on May 14th, 2008 and the project samples were analyzed on May 20th, 2008. This ICAL frequency exceeds the 12-hour requirement as defined in EPA Method 7580. While the published laboratory SOP does not specify a frequency of ICAL, it does indicate in Section 2.1 that, “no substantial modifications from the promulgated method have been made”. Since the laboratory considers the working standards to be very stable under appropriate storage conditions, no elemental phosphorus data were qualified.

Initial (opening) calibration verification standards (ICVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results at the beginning of the analytical process. The ICVs should be representative of the mid-point of the calibration curve. ICVs are required to be analyzed prior to the analysis of the method blank samples and project samples and must fall within $\pm 15\%$ of the known value. The ICVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ difference (%D) criterion (from the associated mid-level standard in the ICAL).

The laboratory used a flame-photometric detector (FPD) for elemental phosphorus analysis instead of the nitrogen-phosphorus detector (NPD) listed in Method 7580. According to the laboratory, the NPD cited in the Method had problems with long-term stability and the FPD did not have similar difficulty. Initial calibration verification standards (ICVs) and continuing calibration verification standards (CCVs) were analyzed at the beginning and end of each analytical sequence and after every

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ten samples to demonstrate continued acceptable calibration. No elemental phosphorus data were qualified based upon the use of the alternate analytical detector.

Continuing Calibration Verification

Ongoing calibration verification standards (CCVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results throughout the analytical process. The CCVs should be representative of the mid-point of the calibration curve. CCVs are required to be analyzed every 10 samples and must fall within $\pm 15\%$ of the known value. The CCVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ D criterion (from the associated mid-level standard in the ICAL).

Method Blank Analysis

The purpose of the method or laboratory blank sample is to evaluate the existence and magnitude of contamination problems resulting from laboratory extraction and analytical activities. Method blank samples were prepared and analyzed with every batch of 20 project samples (or less). One method blank sample was prepared and analyzed at the appropriate frequency and was non-detect for elemental phosphorus.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) are prepared and analyzed to provide information on the accuracy of the analytical procedures and the overall laboratory performance. LCSs are prepared and analyzed with every batch of 20 project samples (or less). The percent recoveries of the spike concentration in the LCS samples are required to fall between 75-125%. One LCS sample was prepared and analyzed at the appropriate frequency and met the acceptance limits of 75-125% for the elemental phosphorus analyses associated with this data package.

Matrix Spike Results

The purpose of matrix spike (MS) and matrix spike duplicate (MSD) samples is to evaluate precision and accuracy of the methodology on specific sample matrices by demonstrating acceptable percent recovery of the known spike concentrations. Matrix spike (MS) and/or matrix spike duplicate (MSD) samples are prepared and analyzed at the appropriate frequency (every batch of ≤ 20 samples) during the analytical events. A non-project specific sample served as the MS/MSD sample associated with this analytical batch. The percent recoveries met the criteria of 75-125% however, the relative percent difference (RPD) criteria ($\leq 15\%$) specified in the QAPP was not achieved. No data were qualified based upon this deviation because the sample was not a project specific sample. No further action is necessary.

Field Duplicate Samples

Field duplicate samples were collected and analyzed to determine the precision of the combined sampling and analytical process. Precision was determined by calculating the RPD for the data pairs where both values were above the method detection limit. Sample MW-02-4 served as the field

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duplicate sample for this event and was non-detect; therefore, the RPD was not calculated. All data was accepted as reported.

Field Blank Samples

The purpose of the collection and analysis of field (rinsate) blank sample is to monitor the contamination introduced from improper field equipment decontamination and sample transport procedures. One field blank sample (MW-60-1) was collected during the groundwater monitoring event and was non-detect for elemental phosphorus.

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DataChem Laboratory Report / Batch: 08E-0383-01

**Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001**

Date of Data Validation Report: June 9, 2008

The data validation of the DataChem Laboratories, Inc. (DataChem) laboratory data for the elemental (white) phosphorus analysis of the 2008 – Phase I RCRA Facility Investigation Work Plan samples contained in the aforementioned report is complete as detailed below.

The analytical data were reviewed in general accordance with the quality control aspects contained in the U.S. EPA Method 7580 and/or DataChem Laboratories, Inc. Laboratory Standard Operating Procedure as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008). In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Method blank analysis
- Laboratory control samples
- Matrix spike results

Six water sample results are contained in this laboratory report. The samples are identified as follows:

MW-06-21 MW-01-5 MW-06-9 MW-97-6 MW-06-8 PW-99-1

The groundwater samples were analyzed for elemental phosphorus using U.S.EPA method 7580 as specified in the QAPP (Barr, 2008). During the data validation process, procedural deviations from the initial calibration procedures defined the U.S.EPA method were identified and are detailed below. While a deviation from the published procedures, this deviation is not considered to have a significant adverse affect on the final usability of the data; therefore, no qualification of the elemental phosphorus data was performed.

It is noted that, as required by the QAPP, elemental phosphorus concentrations were evaluated down to the laboratory's method detection limit (MDL). Any sample concentrations below the practical quantitation limit but above the method detection limit are qualified with a "J" indicating an estimated value. The non-detected concentrations are presented as "<MDL" in the data tables.

The data met the data quality objectives (DQOs) and are useable as reported and qualified.

Holding Times, Preservation and Storage

The EPA method 7580 defines the holding time as 5 calendar days from collection to extraction for water samples that are chilled to 4° C upon sample collection. Following extraction (iso-octane procedure) the method recommends a maximum holding time of 30 calendar days until analysis. The project samples were collected on May 17th and 18th, 2008, packed on ice and sent to the laboratory

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(DataChem, Utah) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 6° C upon receipt at the laboratory and were stored at 4° C until analysis. Subsequent holding times for extraction and analysis were met. No qualifiers were assigned due to holding times, preservation, or storage issues.

Initial Calibration and Initial Calibration Verification

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

Method 7580 requires an initial calibration (ICAL) to be performed every 12 hours and that it consist of (at a minimum) a 5-point calibration standard curve. Calibration factors (CFs) and associated standard deviation of those CFs are then calculated and must meet a relative standard deviation (RSD) of $\leq 15\%$. The laboratory SOP requires a minimum 6-point calibration standard (quadratic) curve and a coefficient of correlation of ≥ 0.99 .

Upon review of the initial calibration data for the elemental phosphorus analyses, the following EPA method and laboratory SOP deviations are noted.

The laboratory created the new “working stock solutions” on May 13th and 14th, 2008. The ICAL was performed on May 14th, 2008 and the project samples were analyzed on May 22nd, 2008. This ICAL frequency exceeds the 12-hour requirement as defined in EPA Method 7580. While the published laboratory SOP does not specify a frequency of ICAL, it does indicate in Section 2.1 that, “no substantial modifications from the promulgated method have been made”. Since the laboratory considers the working standards to be very stable under appropriate storage conditions, no elemental phosphorus data were qualified.

Initial (opening) calibration verification standards (ICVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results at the beginning of the analytical process. The ICVs should be representative of the mid-point of the calibration curve. ICVs are required to be analyzed prior to the analysis of the method blank samples and project samples and must fall within $\pm 15\%$ of the known value. The ICVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ difference (%D) criterion (from the associated mid-level standard in the ICAL).

The laboratory used a flame-photometric detector (FPD) for elemental phosphorus analysis instead of the nitrogen-phosphorus detector (NPD) listed in Method 7580. According to the laboratory, the NPD cited in the Method had problems with long-term stability and the FPD did not have similar difficulty. Initial calibration verification standards (ICVs) and continuing calibration verification standards (CCVs) were analyzed at the beginning and end of each analytical sequence and after every ten samples to demonstrate continued acceptable calibration. No elemental phosphorus data were qualified based upon the use of the alternate analytical detector.

Continuing Calibration Verification

Ongoing calibration verification standards (CCVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results throughout the

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analytical process. The CCVs should be representative of the mid-point of the calibration curve. CCVs are required to be analyzed every 10 samples and must fall within $\pm 15\%$ of the known value. The CCVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ D criterion (from the associated mid-level standard in the ICAL).

Method Blank Analysis

The purpose of the method or laboratory blank sample is to evaluate the existence and magnitude of contamination problems resulting from laboratory extraction and analytical activities. Method blank samples were prepared and analyzed with every batch of 20 project samples (or less). One method blank sample was prepared and analyzed at the appropriate frequency and was non-detect for elemental phosphorus.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) are prepared and analyzed to provide information on the accuracy of the analytical procedures and the overall laboratory performance. LCSs are prepared and analyzed with every batch of 20 project samples (or less). The percent recoveries of the spike concentration in the LCS samples are required to fall between 75-125%. One LCS sample was prepared and analyzed at the appropriate frequency and met the acceptance limits of 75-125% for the elemental phosphorus analyses associated with this data package.

Matrix Spike Results

The purpose of matrix spike (MS) and matrix spike duplicate (MSD) samples is to evaluate precision and accuracy of the methodology on specific sample matrices by demonstrating acceptable percent recovery of the known spike concentrations. Matrix spike (MS) and/or matrix spike duplicate (MSD) samples are prepared and analyzed at the appropriate frequency (every batch of ≤ 20 samples) during the analytical events. Sample PW-99-1 served as the MS/MSD sample. The percent recoveries and associated RPDs met the criteria of 75-125% and $\leq 15\%$ relative percent difference (RPD), respectively.

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Date of Data Validation Report: June 26, 2008

The data validation of the DataChem Laboratories, Inc. (DataChem) laboratory data for the elemental (white) phosphorus analysis of the 2008 – Phase I RCRA Facility Investigation Work Plan samples contained in the aforementioned report is complete as detailed below.

The analytical data were reviewed in general accordance with the quality control aspects contained in the U.S. EPA Method 7580 and/or DataChem Laboratories, Inc. Laboratory Standard Operating Procedure as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008). In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Method blank analysis
- Laboratory control samples
- Matrix spike results

Four water sample results are contained in this laboratory report. The samples are identified as follows:

MW-01-2 MW-02-2 MW-01-6 MW-01-3

The groundwater samples were analyzed for elemental phosphorus using U.S.EPA method 7580 as specified in the QAPP (Barr, 2008). During the data validation process, procedural deviations from the initial calibration procedures defined the U.S.EPA method were identified and are detailed below. While a deviation from the published procedures, this deviation is not considered to have a significant adverse affect on the final usability of the data; therefore, no qualification of the elemental phosphorus data was performed.

It is noted that, as required by the QAPP, elemental phosphorus concentrations were evaluated down to the laboratory's method detection limit (MDL). Any sample concentrations below the practical quantitation limit but above the method detection limit are qualified with a "J" indicating an estimated value. The non-detected concentrations are presented as "<MDL" in the data tables.

The elemental phosphorus sample concentration for sample MW-01-3 exceeded the instrument's calibration range when the sample was analyzed at a 1:1 dilution on May 22nd, 2008. Due to the high elemental phosphorus concentration, sample MW-01-3 was reanalyzed at a 1:1000x dilution on May 28th, 2008. This reanalysis was bracketed by CCVs that met the $\pm 15\%$ D criterion (from the associated mid-level standard in the ICAL). However, no other QC samples (i.e. ICAL, method blank sample, LCS, etc.) were analyzed as part of the analytical sequence prior to the diluted sample being analyzed. Although this is a deviation from U.S.EPA Method 7580, no data were qualified.

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The data met the data quality objectives (DQOs) and are useable as reported and qualified.

Holding Times, Preservation and Storage

The EPA method 7580 defines the holding time as 5 calendar days from collection to extraction for water samples that are chilled to 4° C upon sample collection. Following extraction (iso-octane procedure) the method recommends a maximum holding time of 30 calendar days until analysis. The project samples were collected on May 19th, 2008, packed on ice and sent to the laboratory (DataChem, Utah) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 5° C upon receipt at the laboratory and were stored at 4° C until analysis. Subsequent holding times for extraction and analysis were met. No qualifiers were assigned due to holding times, preservation, or storage issues.

Initial Calibration and Initial Calibration Verification

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

Method 7580 requires an initial calibration (ICAL) to be performed every 12 hours and that it consist of (at a minimum) a 5-point calibration standard curve. Calibration factors (CFs) and associated standard deviation of those CFs are then calculated and must meet a relative standard deviation (RSD) of $\leq 15\%$. The laboratory SOP requires a minimum 6-point calibration standard (quadratic) curve and a coefficient of correlation of ≥ 0.99 .

Upon review of the initial calibration data for the elemental phosphorus analyses, the following EPA method and laboratory SOP deviations are noted.

The laboratory created the new “working stock solutions” on May 13th and 14th, 2008. The ICAL was performed on May 14th, 2008 and the project samples were analyzed on May 22nd and May 28th, 2008. This ICAL frequency exceeds the 12-hour requirement as defined in EPA Method 7580. While the published laboratory SOP does not specify a frequency of ICAL, it does indicate in Section 2.1 that, “no substantial modifications from the promulgated method have been made”. Since the laboratory considers the working standards to be very stable under appropriate storage conditions, no elemental phosphorus data were qualified.

Initial (opening) calibration verification standards (ICVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results at the beginning of the analytical process. The ICVs should be representative of the mid-point of the calibration curve. ICVs are required to be analyzed prior to the analysis of the method blank samples and project samples and must fall within $\pm 15\%$ of the known value. The ICVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ difference (%D) criterion (from the associated mid-level standard in the ICAL) for the analytical run performed on May 22nd, 2008.

The laboratory used a flame-photometric detector (FPD) for elemental phosphorus analysis instead of the nitrogen-phosphorus detector (NPD) listed in Method 7580. According to the laboratory, the NPD cited in the Method had problems with long-term stability and the FPD did not have similar difficulty. Initial calibration verification standards (ICVs) and continuing calibration verification

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standards (CCVs) were analyzed at the beginning and end of each analytical sequence and after every ten samples to demonstrate continued acceptable calibration. No elemental phosphorus data were qualified based upon the use of the alternate analytical detector.

Continuing Calibration Verification

Ongoing calibration verification standards (CCVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results throughout the analytical process. The CCVs should be representative of the mid-point of the calibration curve. CCVs are required to be analyzed every 10 samples and must fall within $\pm 15\%$ of the known value. The CCVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ D criterion (from the associated mid-level standard in the ICAL) for the May 22nd, 2008 analytical sequence.

Method Blank Analysis

The purpose of the method or laboratory blank sample is to evaluate the existence and magnitude of contamination problems resulting from laboratory extraction and analytical activities. Method blank samples were prepared and analyzed with every batch of 20 project samples (or less). One method blank sample was prepared and analyzed at the appropriate frequency and was non-detect for elemental phosphorus during the May 22nd, 2008 analytical sequence. As stated previously, no method blank sample was analyzed prior to the sample dilution for MW-01-3 on May 28th, 2008; however, no data were qualified based upon this deviation from U.S. EPA Method 7580.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) are prepared and analyzed to provide information on the accuracy of the analytical procedures and the overall laboratory performance. LCSs are prepared and analyzed with every batch of 20 project samples (or less). The percent recoveries of the spike concentration in the LCS samples are required to fall between 75-125%. One LCS sample was prepared and analyzed at the appropriate frequency and met the acceptance limits of 75-125% for the elemental phosphorus analyses associated with this data package during the May 22nd, 2008 analytical sequence. As stated previously, no LCS was analyzed prior to the sample dilution for MW-01-3 on May 28th, 2008; however, no data were qualified based upon this deviation from U.S. EPA Method 7580.

Matrix Spike Results

The purpose of matrix spike (MS) and matrix spike duplicate (MSD) samples is to evaluate precision and accuracy of the methodology on specific sample matrices by demonstrating acceptable percent recovery of the known spike concentrations. Matrix spike (MS) and/or matrix spike duplicate (MSD) samples are prepared and analyzed at the appropriate frequency (every batch of ≤ 20 samples) during the analytical events. Sample PW-99-1 served as the MS/MSD sample. The percent recoveries and associated RPDs met the criteria of 75-125% and $\leq 15\%$ relative percent difference (RPD), respectively.

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DataChem Laboratory Report / Batch: 08E-0388-01

Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
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Date of Data Validation Report: June 20, 2008

The data validation of the DataChem Laboratories, Inc. (DataChem) laboratory data for the elemental (white) phosphorus analysis of the 2008 – Phase I RCRA Facility Investigation Work Plan samples contained in the aforementioned report is complete as detailed below.

The analytical data were reviewed in general accordance with the quality control aspects contained in the U.S. EPA Method 7580 and/or DataChem Laboratories, Inc. Laboratory Standard Operating Procedure as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008). In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Method blank analysis
- Laboratory control samples
- Matrix spike results

Four water sample results are contained in this laboratory report. The samples are identified as follows:

SW-15 SW-17 SW-16 SW-14

The surface water samples were analyzed for elemental phosphorus using U.S.EPA method 7580 as specified in the QAPP (Barr, 2008). During the data validation process, procedural deviations from the initial calibration procedures defined the U.S.EPA method were identified and are detailed below. While a deviation from the published procedures, this deviation is not considered to have a significant adverse affect on the final usability of the data; therefore, no qualification of the elemental phosphorus data was performed.

It is noted that, as required by the QAPP, elemental phosphorus concentrations were evaluated down to the laboratory's method detection limit (MDL). Any sample concentrations below the practical quantitation limit but above the method detection limit are qualified with a "J" indicating an estimated value. The non-detected concentrations are presented as "<MDL" in the data tables.

The data met the data quality objectives (DQOs) and are useable as reported and qualified.

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DataChem Laboratory Report / Batch: 08E-0388-01**

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Holding Times, Preservation and Storage

The EPA method 7580 defines the holding time as 5 calendar days from collection to extraction for water samples that are chilled to 4° C upon sample collection. Following extraction (iso-octane procedure) the method recommends a maximum holding time of 30 calendar days until analysis. The project samples were collected on May 19th, 2008, packed on ice and sent to the laboratory (DataChem, Utah) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 5° C upon receipt at the laboratory and were stored at 4° C until analysis. Subsequent holding times for extraction and analysis were met. No qualifiers were assigned due to holding times, preservation, or storage issues.

Initial Calibration and Initial Calibration Verification

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

Method 7580 requires an initial calibration (ICAL) to be performed every 12 hours and that it consist of (at a minimum) a 5-point calibration standard curve. Calibration factors (CFs) and associated standard deviation of those CFs are then calculated and must meet a relative standard deviation (RSD) of $\leq 15\%$. The laboratory SOP requires a minimum 6-point calibration standard (quadratic) curve and a coefficient of correlation of ≥ 0.99 .

Upon review of the initial calibration data for the elemental phosphorus analyses, the following EPA method and laboratory SOP deviations are noted.

The laboratory created the new “working stock solutions” on May 13th and 14th, 2008. The ICAL was performed on May 14th, 2008 and the project samples were analyzed on May 22nd, 2008. This ICAL frequency exceeds the 12-hour requirement as defined in EPA Method 7580. While the published laboratory SOP does not specify a frequency of ICAL, it does indicate in Section 2.1 that, “no substantial modifications from the promulgated method have been made”. Since the laboratory considers the working standards to be very stable under appropriate storage conditions, no elemental phosphorus data were qualified.

Initial (opening) calibration verification standards (ICVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results at the beginning of the analytical process. The ICVs should be representative of the mid-point of the calibration curve. ICVs are required to be analyzed prior to the analysis of the method blank samples and project samples and must fall within $\pm 15\%$ of the known value. The ICVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ difference (%D) criterion (from the associated mid-level standard in the ICAL).

The laboratory used a flame-photometric detector (FPD) for elemental phosphorus analysis instead of the nitrogen-phosphorus detector (NPD) listed in Method 7580. According to the laboratory, the NPD cited in the Method had problems with long-term stability and the FPD did not have similar difficulty. Initial calibration verification standards (ICVs) and continuing calibration verification

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standards (CCVs) were analyzed at the beginning and end of each analytical sequence and after every ten samples to demonstrate continued acceptable calibration. No elemental phosphorus data were qualified based upon the use of the alternate analytical detector.

Continuing Calibration Verification

Ongoing calibration verification standards (CCVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results throughout the analytical process. The CCVs should be representative of the mid-point of the calibration curve. CCVs are required to be analyzed every 10 samples and must fall within $\pm 15\%$ of the known value. The CCVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ D criterion (from the associated mid-level standard in the ICAL).

Method Blank Analysis

The purpose of the method or laboratory blank sample is to evaluate the existence and magnitude of contamination problems resulting from laboratory extraction and analytical activities. Method blank samples were prepared and analyzed with every batch of 20 project samples (or less). One method blank sample was prepared and analyzed at the appropriate frequency and was non-detect for elemental phosphorus.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) are prepared and analyzed to provide information on the accuracy of the analytical procedures and the overall laboratory performance. LCSs are prepared and analyzed with every batch of 20 project samples (or less). The percent recoveries of the spike concentration in the LCS samples are required to fall between 75-125%. One LCS sample was prepared and analyzed at the appropriate frequency and met the acceptance limits of 75-125% for the elemental phosphorus analyses associated with this data package.

Matrix Spike Results

The purpose of matrix spike (MS) and matrix spike duplicate (MSD) samples is to evaluate precision and accuracy of the methodology on specific sample matrices by demonstrating acceptable percent recovery of the known spike concentrations. Matrix spike (MS) and/or matrix spike duplicate (MSD) samples are prepared and analyzed at the appropriate frequency (every batch of ≤ 20 samples) during the analytical events. Sample SW-15 served as the MS/MSD sample. The percent recoveries and associated RPDs met the criteria of 75-125% and $\leq 15\%$ relative percent difference (RPD), respectively.

Data Validation Report

DataChem Laboratory Report / Batch: 08E-0393-01

**Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001**

Date of Data Validation Report: June 20, 2008

The data validation of the DataChem Laboratories, Inc. (DataChem) laboratory data for the elemental (white) phosphorus analysis of the 2008 – Phase I RCRA Facility Investigation Work Plan samples contained in the aforementioned report is complete as detailed below.

The analytical data were reviewed in general accordance with the quality control aspects contained in the U.S. EPA Method 7580 and/or DataChem Laboratories, Inc. Laboratory Standard Operating Procedure as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008). In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Method blank analysis
- Laboratory control samples
- Matrix spike results

Three water sample results are contained in this laboratory report. The samples are identified as follows:

SW-5 SW-6 SW-13

The surface water samples were analyzed for elemental phosphorus using U.S.EPA method 7580 as specified in the QAPP (Barr, 2008). During the data validation process, procedural deviations from the initial calibration procedures defined the U.S.EPA method were identified and are detailed below. While a deviation from the published procedures, this deviation is not considered to have a significant adverse affect on the final usability of the data; therefore, no qualification of the elemental phosphorus data was performed.

It is noted that, as required by the QAPP, elemental phosphorus concentrations were evaluated down to the laboratory's method detection limit (MDL). Any sample concentrations below the practical quantitation limit but above the method detection limit are qualified with a "J" indicating an estimated value. The non-detected concentrations are presented as "<MDL" in the data tables.

The data met the data quality objectives (DQOs) and are useable as reported and qualified.

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Holding Times, Preservation and Storage

The EPA method 7580 defines the holding time as 5 calendar days from collection to extraction for water samples that are chilled to 4° C upon sample collection. Following extraction (iso-octane procedure) the method recommends a maximum holding time of 30 calendar days until analysis. The project samples were collected on May 20th, 2008, packed on ice and sent to the laboratory (DataChem, Utah) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 6° C upon receipt at the laboratory and were stored at 4° C until analysis. Subsequent holding times for extraction and analysis were met. No qualifiers were assigned due to holding times, preservation, or storage issues.

Initial Calibration and Initial Calibration Verification

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

Method 7580 requires an initial calibration (ICAL) to be performed every 12 hours and that it consist of (at a minimum) a 5-point calibration standard curve. Calibration factors (CFs) and associated standard deviation of those CFs are then calculated and must meet a relative standard deviation (RSD) of $\leq 15\%$. The laboratory SOP requires a minimum 6-point calibration standard (quadratic) curve and a coefficient of correlation of ≥ 0.99 .

Upon review of the initial calibration data for the elemental phosphorus analyses, the following EPA method and laboratory SOP deviations are noted.

The laboratory created the new “working stock solutions” on May 13th and 14th, 2008. The ICAL was performed on May 14th, 2008 and the project samples were analyzed on May 28th, 2008. This ICAL frequency exceeds the 12-hour requirement as defined in EPA Method 7580. While the published laboratory SOP does not specify a frequency of ICAL, it does indicate in Section 2.1 that, “no substantial modifications from the promulgated method have been made”. Since the laboratory considers the working standards to be very stable under appropriate storage conditions, no elemental phosphorus data were qualified.

Initial (opening) calibration verification standards (ICVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results at the beginning of the analytical process. The ICVs should be representative of the mid-point of the calibration curve. ICVs are required to be analyzed prior to the analysis of the method blank samples and project samples and must fall within $\leq 15\%$ of the known value. The ICVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ difference (%D) criterion (from the associated mid-level standard in the ICAL).

The laboratory used a flame-photometric detector (FPD) for elemental phosphorus analysis instead of the nitrogen-phosphorus detector (NPD) listed in Method 7580. According to the laboratory, the NPD cited in the Method had problems with long-term stability and the FPD did not have similar difficulty. Initial calibration verification standards (ICVs) and continuing calibration verification

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standards (CCVs) were analyzed at the beginning and end of each analytical sequence and after every ten samples to demonstrate continued acceptable calibration. No elemental phosphorus data were qualified based upon the use of the alternate analytical detector.

Continuing Calibration Verification

Ongoing calibration verification standards (CCVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results throughout the analytical process. The CCVs should be representative of the mid-point of the calibration curve. CCVs are required to be analyzed every 10 samples and must fall within $\pm 15\%$ of the known value. The CCVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ D criterion (from the associated mid-level standard in the ICAL).

Method Blank Analysis

The purpose of the method or laboratory blank sample is to evaluate the existence and magnitude of contamination problems resulting from laboratory extraction and analytical activities. Method blank samples were prepared and analyzed with every batch of 20 project samples (or less). One method blank sample was prepared and analyzed at the appropriate frequency and was non-detect for elemental phosphorus.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) are prepared and analyzed to provide information on the accuracy of the analytical procedures and the overall laboratory performance. LCSs are prepared and analyzed with every batch of 20 project samples (or less). The percent recoveries of the spike concentration in the LCS samples are required to fall between 75-125%. One LCS sample was prepared and analyzed at the appropriate frequency and met the acceptance limits of 75-125% for the elemental phosphorus analyses associated with this data package.

Matrix Spike Results

The purpose of matrix spike (MS) and matrix spike duplicate (MSD) samples is to evaluate precision and accuracy of the methodology on specific sample matrices by demonstrating acceptable percent recovery of the known spike concentrations. Matrix spike (MS) and/or matrix spike duplicate (MSD) samples are prepared and analyzed at the appropriate frequency (every batch of ≤ 20 samples) during the analytical events. Sample SW-13 served as the MS/MSD sample. The percent recoveries met the criteria of 75-125% however, the relative percent difference (RPD) criteria ($\leq 15\%$) specified in the QAPP was not achieved. No data were qualified based upon this deviation because the MS/MSD percent recoveries indicate an acceptable level of accuracy was achieved. No further action is necessary.

Data Validation Report
DataChem Laboratory Report / Batch: 08E-0394-01

Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date of Data Validation Report: June 20, 2008

The data validation of the DataChem Laboratories, Inc. (DataChem) laboratory data for the elemental (white) phosphorus analysis of the 2008 – Phase I RCRA Facility Investigation Work Plan samples contained in the aforementioned report is complete as detailed below.

The analytical data were reviewed in general accordance with the quality control aspects contained in the U.S. EPA Method 7580 and/or DataChem Laboratories, Inc. Laboratory Standard Operating Procedure as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008). In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Method blank analysis
- Laboratory control samples
- Matrix spike results

Eight water sample results are contained in this laboratory report. The samples are identified as follows:

MW-06-25	MW-97-7	MW-97-4	MW-06-12	GW-1	GW-3
MW-06-19	MW-06-20				

The groundwater samples were analyzed for elemental phosphorus using U.S.EPA method 7580 as specified in the QAPP (Barr, 2008). During the data validation process, procedural deviations from the initial calibration procedures defined the U.S.EPA method were identified and are detailed below. While a deviation from the published procedures, this deviation is not considered to have a significant adverse affect on the final usability of the data; therefore, no qualification of the elemental phosphorus data was performed.

It is noted that, as required by the QAPP, elemental phosphorus concentrations were evaluated down to the laboratory's method detection limit (MDL). Any sample concentrations below the practical quantitation limit but above the method detection limit are qualified with a "J" indicating an estimated value. The non-detected concentrations are presented as "<MDL" in the data tables.

The data met the data quality objectives (DQOs) and are useable as reported and qualified.

**Data Validation Report
DataChem Laboratory Report / Batch: 08E-0394-01**

Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date Data Validation Report: June 20, 2008

Holding Times, Preservation and Storage

The EPA method 7580 defines the holding time as 5 calendar days from collection to extraction for water samples that are chilled to 4° C upon sample collection. Following extraction (iso-octane procedure) the method recommends a maximum holding time of 30 calendar days until analysis. The project samples were collected on May 20th, 2008, packed on ice and sent to the laboratory (DataChem, Utah) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 6° C upon receipt at the laboratory and were stored at 4° C until analysis. Subsequent holding times for extraction and analysis were met. No qualifiers were assigned due to holding times, preservation, or storage issues.

Initial Calibration and Initial Calibration Verification

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

Method 7580 requires an initial calibration (ICAL) to be performed every 12 hours and that it consist of (at a minimum) a 5-point calibration standard curve. Calibration factors (CFs) and associated standard deviation of those CFs are then calculated and must meet a relative standard deviation (RSD) of $\leq 15\%$. The laboratory SOP requires a minimum 6-point calibration standard (quadratic) curve and a coefficient of correlation of ≥ 0.99 .

Upon review of the initial calibration data for the elemental phosphorus analyses, the following EPA method and laboratory SOP deviations are noted.

The laboratory created the new “working stock solutions” on May 13th and 14th, 2008. The ICAL was performed on May 14th, 2008 and the project samples were analyzed on May 27th, 2008. This ICAL frequency exceeds the 12-hour requirement as defined in EPA Method 7580. While the published laboratory SOP does not specify a frequency of ICAL, it does indicate in Section 2.1 that, “no substantial modifications from the promulgated method have been made”. Since the laboratory considers the working standards to be very stable under appropriate storage conditions, no elemental phosphorus data were qualified.

Initial (opening) calibration verification standards (ICVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results at the beginning of the analytical process. The ICVs should be representative of the mid-point of the calibration curve. ICVs are required to be analyzed prior to the analysis of the method blank samples and project samples and must fall within $\pm 15\%$ of the known value. The ICVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ difference (%D) criterion (from the associated mid-level standard in the ICAL).

The laboratory used a flame-photometric detector (FPD) for elemental phosphorus analysis instead of the nitrogen-phosphorus detector (NPD) listed in Method 7580. According to the laboratory, the NPD cited in the Method had problems with long-term stability and the FPD did not have similar difficulty. Initial calibration verification standards (ICVs) and continuing calibration verification

**Data Validation Report
DataChem Laboratory Report / Batch: 08E-0394-01**

Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
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Docket No. RCRA-2006-08-2004-0001

Date Data Validation Report: June 20, 2008

standards (CCVs) were analyzed at the beginning and end of each analytical sequence and after every ten samples to demonstrate continued acceptable calibration. No elemental phosphorus data were qualified based upon the use of the alternate analytical detector.

Continuing Calibration Verification

Ongoing calibration verification standards (CCVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results throughout the analytical process. The CCVs should be representative of the mid-point of the calibration curve. CCVs are required to be analyzed every 10 samples and must fall within $\pm 15\%$ of the known value. The CCVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ D criterion (from the associated mid-level standard in the ICAL).

Method Blank Analysis

The purpose of the method or laboratory blank sample is to evaluate the existence and magnitude of contamination problems resulting from laboratory extraction and analytical activities. Method blank samples were prepared and analyzed with every batch of 20 project samples (or less). One method blank sample was prepared and analyzed at the appropriate frequency and was non-detect for elemental phosphorus.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) are prepared and analyzed to provide information on the accuracy of the analytical procedures and the overall laboratory performance. LCSs are prepared and analyzed with every batch of 20 project samples (or less). The percent recoveries of the spike concentration in the LCS samples are required to fall between 75-125%. One LCS sample was prepared and analyzed at the appropriate frequency and met the acceptance limits of 75-125% for the elemental phosphorus analyses associated with this data package.

Matrix Spike Results

The purpose of matrix spike (MS) and matrix spike duplicate (MSD) samples is to evaluate precision and accuracy of the methodology on specific sample matrices by demonstrating acceptable percent recovery of the known spike concentrations. Matrix spike (MS) and/or matrix spike duplicate (MSD) samples are prepared and analyzed at the appropriate frequency (every batch of ≤ 20 samples) during the analytical events. Sample GW-06-25 served as the MS/MSD sample. The percent recoveries and associated relative percent differences (RPDs) met the criteria of 75-125% and $\leq 15\%$ RPD, respectively.

Data Validation Report
DataChem Laboratory Report / Batch: 08E-0403-01

Rhodia Silver Bow Plant – Butte, Montana
2006 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date of Data Validation Report: June 20, 2008

The data validation of the DataChem Laboratories, Inc. (DataChem) laboratory data for the elemental (white) phosphorus analysis of the 2008 – Phase I RCRA Facility Investigation Work Plan samples contained in the aforementioned report is complete as detailed below.

The analytical data were reviewed in general accordance with the quality control aspects contained in the U.S. EPA Method 7580 and/or DataChem Laboratories, Inc. Laboratory Standard Operating Procedure as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008). In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Method blank analysis
- Laboratory control samples
- Matrix spike results
- Field duplicate samples

Seven water sample results are contained in this laboratory report. The samples are identified as follows:

MW-06-22	MW-06-18	MW-97-10	MW-97-11	MW-06-16
MW-06-15	MW-06-18 DUP (MW-86-18)			

The groundwater samples were analyzed for elemental phosphorus using U.S.EPA method 7580 as specified in the QAPP (Barr, 2008). During the data validation process, procedural deviations from the initial calibration procedures defined the U.S.EPA method were identified and are detailed below. While a deviation from the published procedures, this deviation is not considered to have a significant adverse affect on the final usability of the data; therefore, no qualification of the elemental phosphorus data was performed.

It is noted that, as required by the QAPP, elemental phosphorus concentrations were evaluated down to the laboratory's method detection limit (MDL). Any sample concentrations below the practical quantitation limit but above the method detection limit are qualified with a "J" indicating an estimated value. The non-detected concentrations are presented as "<MDL" in the data tables.

The data met the data quality objectives (DQOs) and are useable as reported and qualified.

**Data Validation Report
DataChem Laboratory Report / Batch: 08E-0403-01**

Rhodia Silver Bow Plant – Butte, Montana
2006 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date Data Validation Report: June 6, 2008

Holding Times, Preservation and Storage

The EPA method 7580 defines the holding time as 5 calendar days from collection to extraction for water samples that are chilled to 4° C upon sample collection. Following extraction (iso-octane procedure) the method recommends a maximum holding time of 30 calendar days until analysis. The project samples were collected May 21st, 2008, packed on ice and sent to the laboratory (DataChem, Utah) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 4° C upon receipt at the laboratory and were stored at 4° C until analysis. Subsequent holding times for extraction and analysis were met. No qualifiers were assigned due to holding times, sample preservation or storage issues.

Initial Calibration and Initial Calibration Verification

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

Method 7580 requires an initial calibration (ICAL) to be performed every 12 hours and that it consist of (at a minimum) a 5-point calibration standard curve. Calibration factors (CFs) and associated standard deviation of those CFs are then calculated and must meet a relative standard deviation (RSD) of $\leq 15\%$. The laboratory SOP requires a minimum 6-point calibration standard (quadratic) curve and a coefficient of correlation of ≥ 0.99 .

Upon review of the initial calibration data for the elemental phosphorus analyses, the following EPA method and laboratory SOP deviations are noted.

The laboratory created the new “working stock solutions” on May 13th and 14th, 2008. The ICAL was performed on May 14th, 2008 and the project samples were analyzed on May 27th, 2008. This ICAL frequency exceeds the 12-hour requirement as defined in EPA Method 7580. While the published laboratory SOP does not specify a frequency of ICAL, it does indicate in Section 2.1 that, “no substantial modifications from the promulgated method have been made”. Since the laboratory considers the working standards to be very stable under appropriate storage conditions, no elemental phosphorus data were qualified.

Initial (opening) calibration verification standards (ICVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results at the beginning of the analytical process. The ICVs should be representative of the mid-point of the calibration curve. ICVs are required to be analyzed prior to the analysis of the method blank samples and project samples and must fall within $\pm 15\%$ of the known value. The ICVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ difference (% D) criterion (from the associated mid-level standard in the ICAL).

The laboratory used a flame-photometric detector (FPD) for elemental phosphorus analysis instead of the nitrogen-phosphorus detector (NPD) listed in Method 7580. According to the laboratory, the NPD cited in the Method had problems with long-term stability and the FPD did not have similar difficulty. Initial calibration verification standards (ICVs) and continuing calibration verification

**Data Validation Report
DataChem Laboratory Report / Batch: 08E-0403-01**

Rhodia Silver Bow Plant – Butte, Montana
2006 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date Data Validation Report: June 6, 2008

standards (CCVs) were analyzed at the beginning and end of each analytical sequence and after every ten samples to demonstrate continued acceptable calibration. No elemental phosphorus data were qualified based upon the use of the alternate analytical detector.

Continuing Calibration Verification

Ongoing calibration verification standards (CCVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results throughout the analytical process. The CCVs should be representative of the mid-point of the calibration curve. CCVs are required to be analyzed every 10 samples and must fall within $\pm 15\%$ of the known value. The CCVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ D criterion (from the associated mid-level standard in the ICAL).

Method Blank Analysis

The purpose of the method or laboratory blank sample is to evaluate the existence and magnitude of contamination problems resulting from laboratory extraction and analytical activities. Method blank samples were prepared and analyzed with every batch of 20 project samples (or less). One method blank sample was prepared and analyzed at the appropriate frequency and was non-detect for elemental phosphorus.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) are prepared and analyzed to provide information on the accuracy of the analytical procedures and the overall laboratory performance. LCSs are prepared and analyzed with every batch of 20 project samples (or less). The percent recoveries of the spike concentration in the LCS samples are required to fall between 75-125%. One LCS sample was prepared and analyzed at the appropriate frequency and met the acceptance limits of 75-125% for the elemental phosphorus analyses associated with this data package.

Matrix Spike Results

The purpose of matrix spike (MS) and matrix spike duplicate (MSD) samples is to evaluate precision and accuracy of the methodology on specific sample matrices by demonstrating acceptable percent recovery of the known spike concentrations. Matrix spike (MS) and/or matrix spike duplicate (MSD) samples are prepared and analyzed at the appropriate frequency (every batch of ≤ 20 samples) during the analytical events. Sample MW-06-25 served as the MS/MSD sample associated with this analytical batch. The percent recoveries and associated relative percent differences (RPDs) met the criteria of 75-125% and $\leq 15\%$ RPD, respectively.

Field Duplicate Samples

Field duplicate samples were collected and analyzed to determine the precision of the combined sampling and analytical process. Precision was determined by calculating the RPD for the data pairs where both values were above the method detection limit. Sample MW-06-18 served as the field duplicate sample for this event and was non-detect; therefore, the RPD was not calculated. All data was accepted as reported.

Data Validation Report

DataChem Laboratory Report / Batch: 08E-0404-01

**Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001**

Date of Data Validation Report: June 20, 2008

The data validation of the DataChem Laboratories, Inc. (DataChem) laboratory data for the elemental (white) phosphorus analysis of the 2008 – Phase I RCRA Facility Investigation Work Plan samples contained in the aforementioned report is complete as detailed below.

The analytical data were reviewed in general accordance with the quality control aspects contained in the U.S. EPA Method 7580 and/or DataChem Laboratories, Inc. Laboratory Standard Operating Procedure as specified in the Quality Assurance Project Plan (QAPP, Barr, May 2008). In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Method blank analysis
- Laboratory control samples
- Matrix spike results
- Field duplicate samples

Five water sample results are contained in this laboratory report. The samples are identified as follows:

SW-10 SW-11 SW-12 SW-4 SW-4 DUP (SW-100)

The surface water samples were analyzed for elemental phosphorus using U.S.EPA method 7580 as specified in the QAPP (Barr, 2008). During the data validation process, procedural deviations from the initial calibration procedures defined the U.S.EPA method were identified and are detailed below. While a deviation from the published procedures, this deviation is not considered to have a significant adverse affect on the final usability of the data; therefore, no qualification of the elemental phosphorus data was performed.

It is noted that, as required by the QAPP, elemental phosphorus concentrations were evaluated down to the laboratory's method detection limit (MDL). Any sample concentrations below the practical quantitation limit but above the method detection limit are qualified with a "J" indicating an estimated value. The non-detected concentrations are presented as "<MDL" in the data tables.

The data met the data quality objectives (DQOs) and are useable as reported and qualified.

Holding Times, Preservation and Storage

The EPA method 7580 defines the holding time as 5 calendar days from collection to extraction for water samples that are chilled to 4° C upon sample collection. Following extraction (iso-octane

**Data Validation Report
DataChem Laboratory Report / Batch: 08E-0404-01**

Rhodia Silver Bow Plant – Butte, Montana
2008 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date Data Validation Report: June 20, 2008

procedure) the method recommends a maximum holding time of 30 calendar days until analysis. The project samples were collected on May 21st, 2008, packed on ice and sent to the laboratory (DataChem, Utah) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 4° C upon receipt at the laboratory and were stored at 4° C until analysis. Subsequent holding times for extraction and analysis were met. No qualifiers were assigned due to holding times, preservation, or storage issues.

Initial Calibration and Initial Calibration Verification

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

Method 7580 requires an initial calibration (ICAL) to be performed every 12 hours and that it consist of (at a minimum) a 5-point calibration standard curve. Calibration factors (CFs) and associated standard deviation of those CFs are then calculated and must meet a relative standard deviation (RSD) of $\leq 15\%$. The laboratory SOP requires a minimum 6-point calibration standard (quadratic) curve and a coefficient of correlation of ≥ 0.99 .

Upon review of the initial calibration data for the elemental phosphorus analyses, the following EPA method and laboratory SOP deviations are noted.

The laboratory created the new “working stock solutions” on May 13th and 14th, 2008. The ICAL was performed on May 14th, 2008 and the project samples were analyzed on May 28th, 2008. This ICAL frequency exceeds the 12-hour requirement as defined in EPA Method 7580. While the published laboratory SOP does not specify a frequency of ICAL, it does indicate in Section 2.1 that, “no substantial modifications from the promulgated method have been made”. Since the laboratory considers the working standards to be very stable under appropriate storage conditions, no elemental phosphorus data were qualified.

Initial (opening) calibration verification standards (ICVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results at the beginning of the analytical process. The ICVs should be representative of the mid-point of the calibration curve. ICVs are required to be analyzed prior to the analysis of the method blank samples and project samples and must fall within $\pm 15\%$ of the known value. The ICVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ difference (% D) criterion (from the associated mid-level standard in the ICAL).

The laboratory used a flame-photometric detector (FPD) for elemental phosphorus analysis instead of the nitrogen-phosphorus detector (NPD) listed in Method 7580. According to the laboratory, the NPD cited in the Method had problems with long-term stability and the FPD did not have similar difficulty. Initial calibration verification standards (ICVs) and continuing calibration verification standards (CCVs) were analyzed at the beginning and end of each analytical sequence and after every ten samples to demonstrate continued acceptable calibration. No elemental phosphorus data were qualified based upon the use of the alternate analytical detector.

Continuing Calibration Verification

Ongoing calibration verification standards (CCVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results throughout the analytical process. The CCVs should be representative of the mid-point of the calibration curve. CCVs are required to be analyzed every 10 samples and must fall within $\pm 15\%$ of the known value. The CCVs associated with the analyses of project samples met requirements for frequency and the $\pm 15\%$ D criterion (from the associated mid-level standard in the ICAL).

Method Blank Analysis

The purpose of the method or laboratory blank sample is to evaluate the existence and magnitude of contamination problems resulting from laboratory extraction and analytical activities. Method blank samples were prepared and analyzed with every batch of 20 project samples (or less). One method blank sample was prepared and analyzed at the appropriate frequency and was non-detect for elemental phosphorus.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) are prepared and analyzed to provide information on the accuracy of the analytical procedures and the overall laboratory performance. LCSs are prepared and analyzed with every batch of 20 project samples (or less). The percent recoveries of the spike concentration in the LCS samples are required to fall between 75-125%. One LCS sample was prepared and analyzed at the appropriate frequency and met the acceptance limits of 75-125% for the elemental phosphorus analyses associated with this data package.

Matrix Spike Results

The purpose of matrix spike (MS) and matrix spike duplicate (MSD) samples is to evaluate precision and accuracy of the methodology on specific sample matrices by demonstrating acceptable percent recovery of the known spike concentrations. Matrix spike (MS) and/or matrix spike duplicate (MSD) samples are prepared and analyzed at the appropriate frequency (every batch of ≤ 20 samples) during the analytical events. Sample SW-13 served as the MS/MSD sample. The percent recoveries met the criteria of 75-125% however, the relative percent difference (RPD) criteria ($\leq 15\%$) specified in the QAPP was not achieved. No data were qualified based upon this deviation because the MS/MSD percent recoveries indicate an acceptable level of accuracy was achieved. No further action is necessary.

Field Duplicate Samples

Field duplicate samples were collected and analyzed to determine the precision of the combined sampling and analytical process. Precision was determined by calculating the RPD for the data pairs where both values were above the method detection limit. Sample SW-4 served as the field duplicate sample for this event and was non-detect; therefore, the RPD was not calculated. All data was accepted as reported.

Appendix 1-C4

2008 Quality Assurance Data Summaries

Appendix 1-C4a
Laboratory Precision Data Summary
2008
Rhodia Silver Bow Plant

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Sys Loc Code Sample Date			MW-02-1 5/29/2008		RPD Percent %	MW-02-4 5/15/2008		RPD Percent %
Depth Interval Depth Unit Sample Name				MW-82-1 MW-02-1_05292008_FD			MW-82-4 MW-02-4_05152008_FD	
Sys Sample Code Sample Type Code			MW-02-1_05292008 N			MW-02-4_05152008 N		
Chemical Name	Total or Dissolved	Analysis Location						
General Parameters								
Alkalinity, bicarbonate as CaCO3	NA	Lab	222 mg/l	223 mg/l	0.45	200 mg/l	202 mg/l	1.00
Alkalinity, carbonate as CaCO3	NA	Lab	< 2 mg/l	< 2 mg/l		< 2 mg/l	< 2 mg/l	
Chloride	NA	Lab	251 mg/l	251 mg/l	0.00	187 mg/l	166 mg/l	11.90
Dissolved oxygen	NA	Field	0.32 mg/l	--		1.82 mg/l	--	
Fluoride	NA	Lab	< 1.0 mg/l	< 1.0 mg/l		0.5 mg/l	0.5 mg/l	0.00
Fluoride by Bellack	NA	Lab	--	--		--	--	
Nitrate + Nitrite	NA	Lab	< 0.05 mg/l	< 0.05 mg/l		0.21 mg/l	0.21 mg/l	0.00
Nitrogen, ammonia as N	NA	Lab	< 0.05 mg/l	0.05 mg/l		< 0.05 mg/l	< 0.05 mg/l	
pH, standard units	NA	Field	7.15 pH units	--		6.97 pH units	--	
Phosphorus, elemental (white)	NA	Lab	< 0.0000230 mg/l	< 0.0000230 mg/l		< 0.0000230 mg/l	< 0.0000230 mg/l	
Phosphorus, total	NA	Lab	4.56 mg/l	4.41 mg/l	3.34	0.59 mg/l	0.58 mg/l	1.71
Redox (oxidation potential)	NA	Field	-163 mV	--		71 mV	--	
Specific Conductance umhos@ 25oC	NA	Field	2584 umhos/cm	--		1713 umhos/cm	--	
Sulfate	NA	Lab	1200 mg/l	1210 mg/l	0.83	645 mg/l	566 mg/l	13.05
Temperature, degrees C	NA	Field	11.57 deg C	--		8.85 deg C	--	
Turbidity	NA	Field	3.30 NTU	--		5.75 NTU	--	
Metals								
Antimony	Dissolved	Lab	--	--		--	--	
Antimony	NA	Lab	--	--		--	--	
Antimony	Total	Lab	< 0.00005 mg/l	0.00005 mg/l		0.00015 mg/l	0.00014 mg/l	6.90
Arsenic	Dissolved	Lab	--	--		--	--	
Arsenic	NA	Lab	--	--		--	--	
Arsenic	Total	Lab	0.0044 mg/l	0.0047 mg/l	6.59	0.0211 mg/l	0.0217 mg/l	2.80
Barium	Dissolved	Lab	--	--		--	--	
Barium	NA	Lab	--	--		--	--	
Barium	Total	Lab	0.0293 mg/l	0.0286 mg/l	2.42	0.0363 mg/l	0.0359 mg/l	1.11
Beryllium	Dissolved	Lab	--	--		--	--	
Beryllium	NA	Lab	--	--		--	--	
Beryllium	Total	Lab	0.00004 mg/l	0.00005 mg/l	22.22	< 0.00002 mg/l	< 0.00002 mg/l	
Cadmium	Dissolved	Lab	--	--		--	--	
Cadmium	NA	Lab	--	--		--	--	
Cadmium	Total	Lab	0.00003 mg/l	< 0.00002 mg/l		0.00004 mg/l	0.00004 mg/l	0.00
Calcium	Dissolved	Lab	--	--		--	--	
Calcium	NA	Lab	--	--		--	--	
Calcium	Total	Lab	324 mg/l	325 mg/l	0.31	334 mg/l	342 mg/l	2.37

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-02-1 5/29/2008		RPD Percent %	MW-02-4 5/15/2008		RPD Percent %
			N	FD		N	FD	
Chemical Name	Total or Dissolved	Analysis Location						
Chromium	Dissolved	Lab	--	--		--	--	
Chromium	NA	Lab	--	--		--	--	
Chromium	Total	Lab	< 0.0002 mg/l	< 0.0002 mg/l		0.0004 mg/l	0.0004 mg/l	0.00
Cobalt	Dissolved	Lab	--	--		--	--	
Cobalt	NA	Lab	--	--		--	--	
Cobalt	Total	Lab	0.00185 mg/l	0.00194 mg/l	4.75	0.00092 mg/l	0.00089 mg/l	3.31
Copper	Dissolved	Lab	--	--		--	--	
Copper	NA	Lab	--	--		--	--	
Copper	Total	Lab	< 0.0030 mg/l	< 0.0026 mg/l		< 0.0022 mg/l	< 0.0021 mg/l	
Iron	Dissolved	Lab	--	--		--	--	
Iron	NA	Lab	--	--		--	--	
Iron	Total	Lab	2.29 mg/l	2.41 mg/l	5.11	0.329 mg/l	0.298 mg/l	9.89
Lead	Dissolved	Lab	--	--		--	--	
Lead	NA	Lab	--	--		--	--	
Lead	Total	Lab	< 0.00030 mg/l	< 0.00033 mg/l		< 0.00024 mg/l	< 0.00022 mg/l	
Magnesium	Dissolved	Lab	--	--		--	--	
Magnesium	NA	Lab	--	--		--	--	
Magnesium	Total	Lab	62.7 mg/l	63.4 mg/l	1.11	52.5 mg/l	52.8 mg/l	0.57
Manganese	Dissolved	Lab	--	--		--	--	
Manganese	NA	Lab	--	--		--	--	
Manganese	Total	Lab	2.15 mg/l	2.1 mg/l	2.35	0.00271 mg/l	0.00256 mg/l	5.69
Mercury	Dissolved	Lab	--	--		--	--	
Mercury	NA	Lab	--	--		--	--	
Mercury	Total	Lab	< 0.0002 mg/l	< 0.0002 mg/l		< 0.0002 mg/l	< 0.0002 mg/l	
Nickel	Dissolved	Lab	--	--		--	--	
Nickel	NA	Lab	--	--		--	--	
Nickel	Total	Lab	0.0048 mg/l	0.0050 mg/l	4.08	0.0053 mg/l	0.0052 mg/l	1.90
Phosphorus, total	NA	Lab	--	--		--	--	
Potassium	Dissolved	Lab	--	--		--	--	
Potassium	NA	Lab	--	--		--	--	
Potassium	Total	Lab	28.8 mg/l	28.9 mg/l	0.35	17.1 mg/l	17.1 mg/l	0.00
Selenium	Dissolved	Lab	--	--		--	--	
Selenium	NA	Lab	--	--		--	--	
Selenium	Total	Lab	0.0045 mg/l	0.0054 mg/l	18.18	0.0017 mg/l	0.0013 mg/l	26.67
Silver	Dissolved	Lab	--	--		--	--	
Silver	NA	Lab	--	--		--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-02-1 5/29/2008		RPD Percent %	MW-02-4 5/15/2008		RPD Percent %
			N	MW-82-1 MW-02-1_05292008_FD FD		N	MW-82-4 MW-02-4_05152008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
Silver	Total	Lab	0.00002 mg/l	0.00002 mg/l	0.00	< 0.00002 mg/l	< 0.00002 mg/l	
Sodium	Dissolved	Lab	--	--		--	--	
Sodium	NA	Lab	--	--		--	--	
Sodium	Total	Lab	306 mg/l	308 mg/l	0.65	82.9 mg/l	83.9 mg/l	1.20
Thallium	Dissolved	Lab	--	--		--	--	
Thallium	NA	Lab	--	--		--	--	
Thallium	Total	Lab	< 0.00002 mg/l	< 0.00002 mg/l		< 0.00002 mg/l	< 0.00002 mg/l	
Uranium	Dissolved	Lab	--	--		--	--	
Uranium	NA	Lab	--	--		--	--	
Uranium	Total	Lab	0.0035 mg/l	0.0034 mg/l	2.90	0.0256 mg/l	0.0258 mg/l	0.78
Vanadium	Dissolved	Lab	--	--		--	--	
Vanadium	NA	Lab	--	--		--	--	
Vanadium	Total	Lab	< 0.0004 mg/l	< 0.0003 mg/l		0.0058 mg/l	0.0059 mg/l	1.71
Zinc	Dissolved	Lab	--	--		--	--	
Zinc	NA	Lab	--	--		--	--	
Zinc	Total	Lab	< 0.0016 mg/l	< 0.0020 mg/l		< 0.0058 mg/l	< 0.0032 mg/l	
TCLP Metals								
Arsenic	NA	Lab	--	--		--	--	
Barium	NA	Lab	--	--		--	--	
Cadmium	NA	Lab	--	--		--	--	
Chromium	NA	Lab	--	--		--	--	
Lead	NA	Lab	--	--		--	--	
Mercury	NA	Lab	--	--		--	--	
Selenium	NA	Lab	--	--		--	--	
Silver	NA	Lab	--	--		--	--	
SVOCs								
1,2,4-Trichlorobenzene	NA	Lab	< 0.16 ug/l	< 0.32 ug/l		< 0.016 ug/l	< 0.016 ug/l	
1,2-Dichlorobenzene	NA	Lab	< 0.22 ug/l	< 0.44 ug/l		< 0.022 ug/l	< 0.022 ug/l	
1,2-Diphenylhydrazine	NA	Lab	--	--		--	--	
1,3-Dichlorobenzene	NA	Lab	< 0.21 ug/l	< 0.42 ug/l		< 0.021 ug/l	< 0.021 ug/l	
1,4-Dichlorobenzene	NA	Lab	< 0.29 ug/l	< 0.58 ug/l		< 0.029 ug/l	< 0.029 ug/l	
2,4,5-Trichlorophenol	NA	Lab	< 0.31 ug/l	< 0.62 ug/l		< 0.031 ug/l	< 0.031 ug/l	
2,4,6-Trichlorophenol	NA	Lab	< 0.58 ug/l	< 1.2 ug/l		< 0.058 ug/l	< 0.058 ug/l	
2,4-Dichlorophenol	NA	Lab	< 0.47 ug/l	< 0.94 ug/l		< 0.047 ug/l	< 0.047 ug/l	
2,4-Dimethylphenol	NA	Lab	< 22 R ug/l	< 44 R ug/l		< 2.2 R ug/l	< 2.2 R ug/l	
2,4-Dinitrophenol	NA	Lab	< 1.7 ug/l	< 3.4 ug/l		< 0.17 ug/l	< 0.17 ug/l	

Appendix 1-C4a
Laboratory Precision Data Summary
2008
Rhodia Silver Bow Plant

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-02-1 5/29/2008		RPD Percent %	MW-02-4 5/15/2008		RPD Percent %
			MW-02-1_05292008 N	MW-82-1 MW-02-1_05292008_FD FD		MW-02-4_05152008 N	MW-82-4 MW-02-4_05152008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
2,4-Dinitrotoluene	NA	Lab	< 0.18 ug/l	< 0.36 ug/l		< 0.018 ug/l	< 0.018 ug/l	
2,6-Dinitrotoluene	NA	Lab	< 0.33 ug/l	< 0.66 ug/l		< 0.033 ug/l	< 0.033 ug/l	
2-Chloronaphthalene	NA	Lab	< 0.41 ug/l	< 0.82 ug/l		< 0.041 ug/l	< 0.041 ug/l	
2-Chlorophenol	NA	Lab	< 0.54 ug/l	< 1.1 ug/l		< 0.054 ug/l	< 0.054 ug/l	
2-Methyl-4,6-dinitrophenol	NA	Lab	< 0.25 ug/l	< 0.50 ug/l		< 0.025 ug/l	< 0.025 ug/l	
2-Methylnaphthalene	NA	Lab	< 0.26 ug/l	< 0.52 ug/l		< 0.026 ug/l	< 0.026 ug/l	
2-Nitroaniline	NA	Lab	< 0.24 ug/l	< 0.48 ug/l		< 0.024 ug/l	< 0.024 ug/l	
2-Nitrophenol	NA	Lab	< 0.63 ug/l	< 1.3 ug/l		< 0.063 ug/l	< 0.063 ug/l	
3,3'-Dichlorobenzidine	NA	Lab	< 4.3 ug/l	< 8.6 ug/l		< 0.43 ug/l	< 0.43 ug/l	
3-Nitroaniline	NA	Lab	< 0.29 ug/l	< 0.58 ug/l		< 0.029 ug/l	< 0.029 ug/l	
4-Bromophenyl phenyl ether	NA	Lab	< 0.26 ug/l	< 0.52 ug/l		< 0.026 ug/l	< 0.026 ug/l	
4-Chloro-3-methylphenol	NA	Lab	< 0.37 ug/l	< 0.74 ug/l		< 0.037 ug/l	< 0.037 ug/l	
4-Chloroaniline	NA	Lab	< 0.25 ug/l	< 0.50 ug/l		< 0.025 ug/l	< 0.025 ug/l	
4-Chlorophenyl phenyl ether	NA	Lab	< 0.27 ug/l	< 0.54 ug/l		< 0.027 ug/l	< 0.027 ug/l	
4-Nitroaniline	NA	Lab	< 0.19 ug/l	< 0.38 ug/l		< 0.019 ug/l	< 0.019 ug/l	
4-Nitrophenol	NA	Lab	< 2.8 ug/l	< 5.6 ug/l		< 0.28 ug/l	< 0.28 ug/l	
Acenaphthene	NA	Lab	< 0.26 ug/l	< 0.52 ug/l		< 0.026 ug/l	< 0.026 ug/l	
Acenaphthylene	NA	Lab	< 0.15 ug/l	< 0.30 ug/l		< 0.015 ug/l	< 0.015 ug/l	
Anthracene	NA	Lab	< 0.24 ug/l	< 0.48 ug/l		< 0.024 ug/l	< 0.024 ug/l	
Azobenzene	NA	Lab	< 0.21 ug/l	< 0.42 ug/l		< 0.021 ug/l	< 0.021 ug/l	
Benzidine	NA	Lab	--	--		--	--	
Benzo(a)anthracene	NA	Lab	< 0.18 ug/l	< 0.36 ug/l		< 0.018 ug/l	< 0.018 ug/l	
Benzo(a)pyrene	NA	Lab	< 0.31 ug/l	< 0.62 ug/l		< 0.031 ug/l	< 0.031 ug/l	
Benzo(b)fluoranthene	NA	Lab	< 0.17 ug/l	< 0.34 ug/l		< 0.017 ug/l	< 0.017 ug/l	
Benzo(g,h,i)perylene	NA	Lab	< 0.19 ug/l	< 0.38 ug/l		< 0.019 ug/l	< 0.019 ug/l	
Benzo(k)fluoranthene	NA	Lab	< 0.24 ug/l	< 0.48 ug/l		< 0.024 ug/l	< 0.024 ug/l	
Benzoic Acid	NA	Lab	< 11 R ug/l	< 22 R ug/l		< 1.1 R ug/l	< 1.1 R ug/l	
Benzyl alcohol	NA	Lab	< 0.73 ug/l	< 1.5 ug/l		< 0.073 ug/l	< 0.073 ug/l	
Bis(2-chloroethoxy)methane	NA	Lab	< 0.24 ug/l	< 0.48 ug/l		< 0.024 ug/l	< 0.024 ug/l	
Bis(2-chloroethyl)ether	NA	Lab	< 0.35 ug/l	< 0.70 ug/l		< 0.035 ug/l	< 0.035 ug/l	
Bis(2-chloroisopropyl)ether	NA	Lab	< 0.26 ug/l	< 0.52 ug/l		< 0.026 ug/l	< 0.026 ug/l	
Bis(2-ethylhexyl)phthalate	NA	Lab	1400 J ug/l	22000 J ug/l	176.07	< 0.17 ug/l	< 0.21 ug/l	
Butyl benzyl phthalate	NA	Lab	< 0.18 ug/l	< 0.36 ug/l		< 0.018 ug/l	< 0.018 ug/l	
Carbazole	NA	Lab	< 0.18 ug/l	< 0.36 ug/l		< 0.018 ug/l	< 0.018 ug/l	
Chrysene	NA	Lab	< 0.28 ug/l	< 0.56 ug/l		< 0.028 ug/l	< 0.028 ug/l	
Dibenz(a,h)anthracene	NA	Lab	< 0.17 ug/l	< 0.34 ug/l		< 0.017 ug/l	< 0.017 ug/l	

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Laboratory Precision Data Summary
2008
Rhodia Silver Bow Plant

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-02-1 5/29/2008		RPD Percent %	MW-02-4 5/15/2008		RPD Percent %
			MW-02-1_05292008 N	MW-82-1 MW-02-1_05292008_FD FD		MW-02-4_05152008 N	MW-82-4 MW-02-4_05152008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
Dibenzofuran	NA	Lab	< 0.18 ug/l	< 0.36 ug/l		< 0.018 ug/l	< 0.018 ug/l	
Diethyl phthalate	NA	Lab	< 0.12 ug/l	< 0.24 ug/l		< 0.018 ug/l	< 0.012 ug/l	
Dimethyl phthalate	NA	Lab	< 0.21 ug/l	< 0.42 ug/l		< 0.021 ug/l	< 0.021 ug/l	
Di-n-butyl phthalate	NA	Lab	< 0.23 ug/l	< 0.46 ug/l		< 0.048 ug/l	< 0.031 ug/l	
Di-n-octyl phthalate	NA	Lab	< 0.18 ug/l	< 0.36 ug/l		< 0.018 ug/l	< 0.018 ug/l	
Fluoranthene	NA	Lab	< 0.20 ug/l	< 0.40 ug/l		< 0.020 ug/l	< 0.022 ug/l	
Fluorene	NA	Lab	< 0.27 ug/l	< 0.54 ug/l		< 0.027 ug/l	< 0.027 ug/l	
Hexachlorobenzene	NA	Lab	< 0.22 ug/l	< 0.44 ug/l		< 0.022 ug/l	< 0.022 ug/l	
Hexachlorobutadiene	NA	Lab	< 0.27 R ug/l	< 0.54 R ug/l		< 0.027 ug/l	< 0.027 ug/l	
Hexachlorocyclopentadiene	NA	Lab	< 1.9 R ug/l	< 3.8 R ug/l		< 0.19 R ug/l	< 0.19 R ug/l	
Hexachloroethane	NA	Lab	< 0.24 R ug/l	< 0.48 R ug/l		< 0.024 ug/l	< 0.024 ug/l	
Indeno(1,2,3-cd)pyrene	NA	Lab	< 0.21 ug/l	< 0.42 ug/l		< 0.021 ug/l	< 0.021 ug/l	
Isophorone	NA	Lab	< 0.16 ug/l	< 0.32 ug/l		< 0.016 ug/l	< 0.016 ug/l	
Naphthalene	NA	Lab	< 0.22 ug/l	< 0.44 ug/l		< 0.022 ug/l	< 0.022 ug/l	
Nitrobenzene	NA	Lab	< 0.28 ug/l	< 0.56 ug/l		< 0.028 ug/l	< 0.028 ug/l	
N-Nitrosodimethylamine	NA	Lab	< 4.2 ug/l	< 8.4 ug/l		< 0.42 ug/l	< 0.42 ug/l	
N-Nitrosodi-n-propylamine	NA	Lab	< 0.37 ug/l	< 0.74 ug/l		< 0.037 ug/l	< 0.037 ug/l	
N-Nitrosodiphenylamine	NA	Lab	< 0.48 ug/l	< 0.96 ug/l		< 0.048 ug/l	< 0.048 ug/l	
o-Cresol	NA	Lab	< 1.1 ug/l	< 2.2 ug/l		< 0.11 ug/l	< 0.11 ug/l	
p-Cresol	NA	Lab	< 1.2 ug/l	< 2.4 ug/l		< 0.12 ug/l	< 0.12 ug/l	
Pentachlorophenol	NA	Lab	< 3.4 ug/l	< 6.8 ug/l		< 0.34 ug/l	< 0.34 ug/l	
Phenanthrene	NA	Lab	< 0.22 ug/l	< 0.44 ug/l		< 0.022 ug/l	< 0.022 ug/l	
Phenol	NA	Lab	< 13 ug/l	< 15 ug/l		< 0.28 ug/l	< 0.45 ug/l	
Pyrene	NA	Lab	< 0.19 ug/l	< 0.38 ug/l		< 0.019 ug/l	< 0.020 ug/l	
Pyridine	NA	Lab	--	--		--	--	
VOCs								
1,1,1,2-Tetrachloroethane	NA	Lab	< 0.047 ug/l	< 0.047 ug/l		< 0.047 ug/l	< 0.047 ug/l	
1,1,1-Trichloroethane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l		< 0.050 ug/l	< 0.050 ug/l	
1,1,2,2-Tetrachloroethane	NA	Lab	< 0.064 ug/l	< 0.064 ug/l		< 0.064 ug/l	< 0.064 ug/l	
1,1,2-Trichloroethane	NA	Lab	< 0.061 ug/l	< 0.061 ug/l		< 0.061 ug/l	< 0.061 ug/l	
1,1-Dichloro-1-propene	NA	Lab	< 0.051 ug/l	< 0.051 ug/l		< 0.051 ug/l	< 0.051 ug/l	
1,1-Dichloroethane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l		< 0.042 ug/l	< 0.042 ug/l	
1,1-Dichloroethylene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l		< 0.10 ug/l	< 0.10 ug/l	
1,2,3-Trichlorobenzene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l		< 0.10 ug/l	< 0.10 ug/l	
1,2,3-Trichloropropane	NA	Lab	< 0.14 ug/l	< 0.14 ug/l		< 0.14 ug/l	< 0.14 ug/l	
1,2,4-Trichlorobenzene	NA	Lab	< 0.13 ug/l	< 0.13 ug/l		< 0.13 ug/l	< 0.13 ug/l	

Appendix 1-C4a
Laboratory Precision Data Summary
2008
Rhodia Silver Bow Plant

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
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Sys Loc Code Sample Date			MW-02-1 5/29/2008		RPD Percent %	MW-02-4 5/15/2008		RPD Percent %
Depth Interval Depth Unit Sample Name				MW-82-1 MW-02-1_05292008_FD FD		MW-02-4_05152008 N	MW-82-4 MW-02-4_05152008_FD FD	
Sys Sample Code Sample Type Code								
Chemical Name	Total or Dissolved	Analysis Location						
1,2,4-Trimethylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l		< 0.037 ug/l	< 0.037 ug/l	
1,2-Dibromo-3-chloropropane	NA	Lab	< 0.22 ug/l	< 0.22 ug/l		< 0.22 ug/l	< 0.22 ug/l	
1,2-Dibromoethane	NA	Lab	< 0.084 ug/l	< 0.084 ug/l		< 0.084 ug/l	< 0.084 ug/l	
1,2-Dichlorobenzene	NA	Lab	< 0.044 ug/l	< 0.044 ug/l		< 0.044 ug/l	< 0.044 ug/l	
1,2-Dichloroethane	NA	Lab	< 0.073 ug/l	< 0.073 ug/l		< 0.073 ug/l	< 0.073 ug/l	
1,2-Dichloroethylene, cis	NA	Lab	< 0.045 ug/l	< 0.045 ug/l		< 0.045 ug/l	< 0.045 ug/l	
1,2-Dichloroethylene, trans	NA	Lab	< 0.048 ug/l	< 0.048 ug/l		< 0.048 ug/l	< 0.048 ug/l	
1,2-Dichloropropane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l		< 0.042 ug/l	< 0.042 ug/l	
1,3,5-Trimethylbenzene	NA	Lab	0.78 ug/l	0.32 J ug/l	83.64	< 0.042 ug/l	< 0.042 ug/l	
1,3-Dichloro-1-propene trans	NA	Lab	< 0.041 ug/l	< 0.041 ug/l		< 0.041 ug/l	< 0.041 ug/l	
1,3-Dichloro-1-propene, cis	NA	Lab	< 0.038 ug/l	< 0.038 ug/l		< 0.038 ug/l	< 0.038 ug/l	
1,3-Dichlorobenzene	NA	Lab	< 0.041 ug/l	< 0.041 ug/l		< 0.041 ug/l	< 0.041 ug/l	
1,3-Dichloropropane	NA	Lab	< 0.032 ug/l	< 0.032 ug/l		< 0.032 ug/l	< 0.032 ug/l	
1,4-Dichlorobenzene	NA	Lab	< 0.054 ug/l	< 0.054 ug/l		< 0.054 ug/l	< 0.054 ug/l	
2,2-Dichloropropane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l		< 0.050 ug/l	< 0.050 ug/l	
2-Chloroethyl Vinyl Ether	NA	Lab	< 0.19 R ug/l	< 0.19 R ug/l		< 0.19 R ug/l	< 0.19 R ug/l	
2-Hexanone	NA	Lab	< 2.9 ug/l	< 2.9 ug/l		< 2.9 ug/l	< 2.9 ug/l	
Acetone	NA	Lab	< 2.5 ug/l	< 2.5 ug/l		< 2.5 ug/l	< 2.5 ug/l	
Acrolein	NA	Lab	< 2.0 J ug/l	< 2.0 J ug/l		< 2.0 ug/l	< 2.0 ug/l	
Acrylonitrile	NA	Lab	< 0.31 ug/l	< 0.31 ug/l		< 0.31 ug/l	< 0.31 ug/l	
Benzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l		< 0.045 ug/l	< 0.045 ug/l	
Bromobenzene	NA	Lab	< 0.027 ug/l	< 0.027 ug/l		< 0.027 ug/l	< 0.027 ug/l	
Bromochloromethane	NA	Lab	< 0.091 ug/l	< 0.091 ug/l		< 0.091 ug/l	< 0.091 ug/l	
Bromodichloromethane	NA	Lab	< 0.036 ug/l	< 0.036 ug/l		< 0.036 ug/l	< 0.036 ug/l	
Bromoform	NA	Lab	< 0.080 ug/l	< 0.080 ug/l		< 0.080 ug/l	< 0.080 ug/l	
Bromomethane	NA	Lab	< 0.072 ug/l	< 0.072 ug/l		< 0.072 ug/l	< 0.072 ug/l	
Butyl benzene	NA	Lab	< 0.72 ug/l	< 0.056 ug/l		< 0.056 ug/l	< 0.056 ug/l	
Butylbenzene sec	NA	Lab	2.9 ug/l	0.69 J ug/l	123.12	< 0.036 ug/l	< 0.036 ug/l	
Butylbenzene tert-	NA	Lab	0.13 J ug/l	0.050 J ug/l	88.89	< 0.038 ug/l	< 0.038 ug/l	
Carbon disulfide	NA	Lab	< 0.045 ug/l	< 0.045 ug/l		< 0.045 ug/l	< 0.045 ug/l	
Carbon tetrachloride	NA	Lab	< 0.068 ug/l	< 0.068 ug/l		< 0.068 ug/l	< 0.068 ug/l	
Chlorobenzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l		< 0.045 ug/l	< 0.045 ug/l	
Chlorodibromomethane	NA	Lab	< 0.057 ug/l	< 0.057 ug/l		< 0.057 ug/l	< 0.057 ug/l	
Chloroethane	NA	Lab	< 0.13 ug/l	0.22 J ug/l		< 0.13 ug/l	< 0.13 ug/l	
Chloroform	NA	Lab	< 0.042 ug/l	< 0.042 ug/l		< 0.042 ug/l	< 0.042 ug/l	
Chloromethane	NA	Lab	< 0.053 ug/l	< 0.053 ug/l		< 0.053 ug/l	< 0.053 ug/l	

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Laboratory Precision Data Summary
2008
Rhodia Silver Bow Plant

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-02-1 5/29/2008		RPD Percent %	MW-02-4 5/15/2008		RPD Percent %
			MW-02-1_05292008 N	MW-82-1 MW-02-1_05292008_FD FD		MW-02-4_05152008 N	MW-82-4 MW-02-4_05152008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
Chlorotoluene o-	NA	Lab	< 0.035 ug/l	< 0.035 ug/l		< 0.035 ug/l	< 0.035 ug/l	
Chlorotoluene p-	NA	Lab	< 0.025 ug/l	< 0.025 ug/l		< 0.025 ug/l	< 0.025 ug/l	
Cumene (isopropyl benzene)	NA	Lab	0.34 J ug/l	0.16 J ug/l	72.00	< 0.031 ug/l	< 0.031 ug/l	
Cymene p- (Toluene isopropyl p-)	NA	Lab	1.4 J ug/l	< 0.044 ug/l		< 0.044 ug/l	< 0.044 ug/l	
Dibromomethane (methylene bromide)	NA	Lab	< 0.089 ug/l	< 0.089 ug/l		< 0.089 ug/l	< 0.089 ug/l	
Dichlorodifluoromethane (CFC-12)	NA	Lab	< 0.083 ug/l	< 0.083 ug/l		< 0.083 ug/l	< 0.083 ug/l	
Ethyl benzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l		< 0.042 ug/l	< 0.042 ug/l	
Hexachlorobutadiene	NA	Lab	< 0.19 ug/l	< 0.19 ug/l		< 0.19 ug/l	< 0.19 ug/l	
Iodomethane	NA	Lab	< 0.27 ug/l	< 0.27 ug/l		< 0.27 R ug/l	< 0.27 R ug/l	
Methyl ethyl ketone	NA	Lab	< 3.8 ug/l	< 3.8 ug/l		< 3.8 ug/l	< 3.8 ug/l	
Methyl isobutyl ketone	NA	Lab	< 3.0 ug/l	< 3.0 ug/l		< 3.0 ug/l	< 3.0 ug/l	
Methyl tertiary butyl ether (MTBE)	NA	Lab	< 0.070 ug/l	< 0.070 ug/l		< 0.070 ug/l	< 0.070 ug/l	
Methylene chloride	NA	Lab	< 0.23 ug/l	< 0.23 ug/l		< 0.23 ug/l	< 0.23 ug/l	
Naphthalene	NA	Lab	< 0.53 ug/l	< 0.38 ug/l		< 0.10 ug/l	< 0.10 ug/l	
Propylbenzene	NA	Lab	0.18 J ug/l	0.070 J ug/l	88.00	< 0.037 ug/l	< 0.037 ug/l	
Styrene	NA	Lab	< 0.039 ug/l	< 0.039 ug/l		< 0.039 ug/l	< 0.039 ug/l	
Tetrachloroethylene	NA	Lab	< 0.077 ug/l	< 0.077 ug/l		< 0.077 ug/l	< 0.077 ug/l	
Toluene	NA	Lab	< 0.060 ug/l	< 0.20 ug/l		< 0.13 ug/l	< 0.080 ug/l	
Trichloroethylene	NA	Lab	< 0.061 ug/l	< 0.061 ug/l		< 0.061 ug/l	< 0.061 ug/l	
Trichlorofluoromethane	NA	Lab	< 0.086 ug/l	< 0.086 ug/l		< 0.086 ug/l	< 0.086 ug/l	
Vinyl acetate	NA	Lab	< 0.91 ug/l	< 0.91 ug/l		< 0.91 ug/l	< 0.91 ug/l	
Vinyl chloride	NA	Lab	< 0.071 ug/l	< 0.071 ug/l		< 0.071 ug/l	< 0.071 ug/l	
Xylene m & p	NA	Lab	< 0.078 ug/l	< 0.078 ug/l		< 0.078 ug/l	< 0.078 ug/l	
Xylene, o-	NA	Lab	< 0.037 ug/l	< 0.037 ug/l		< 0.037 ug/l	< 0.037 ug/l	
PCBs								
Aroclor 1016	NA	Lab	< 0.0094 ug/l	< 0.0094 ug/l		< 0.0094 ug/l	< 0.0094 ug/l	
Aroclor 1221	NA	Lab	< 0.020 ug/l	< 0.020 ug/l		< 0.020 ug/l	< 0.020 ug/l	
Aroclor 1232	NA	Lab	< 0.023 ug/l	< 0.023 ug/l		< 0.023 ug/l	< 0.023 ug/l	
Aroclor 1242	NA	Lab	< 0.013 ug/l	< 0.013 ug/l		< 0.013 ug/l	< 0.013 ug/l	
Aroclor 1248	NA	Lab	< 0.0054 ug/l	< 0.0054 ug/l		< 0.0054 ug/l	< 0.0054 ug/l	
Aroclor 1254	NA	Lab	< 0.0070 ug/l	< 0.0070 ug/l		< 0.0070 ug/l	< 0.0070 ug/l	
Aroclor 1260	NA	Lab	< 0.0031 ug/l	< 0.0031 ug/l		< 0.0031 ug/l	< 0.0031 ug/l	
Aroclor 1262	NA	Lab	< 0.0048 ug/l	< 0.0048 ug/l		< 0.0048 ug/l	< 0.0048 ug/l	
Aroclor 1268	NA	Lab	< 0.0065 ug/l	< 0.0065 ug/l		< 0.0065 ug/l	< 0.0065 ug/l	

**Appendix 1-C4a
Laboratory Precision Data Summary
2008**

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-02-1 5/29/2008		RPD Percent %	MW-02-4 5/15/2008		RPD Percent %
			MW-02-1_05292008 N	MW-82-1 MW-02-1_05292008_FD FD		MW-02-4_05152008 N	MW-82-4 MW-02-4_05152008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
Radiochemical Parameters								
Gross Alpha (radiation)	NA	Lab	< 6.3 pCi/l	< 6.9 pCi/l		6.8 +/- 5.9 pCi/l	11 +/- 6.5 pCi/l	47.19
Gross Beta (radiation)	NA	Lab	24 +/- 11 pCi/l	27 +/- 11 pCi/l	11.76	24 +/- 7.6 pCi/l	25 +/- 8.8 pCi/l	4.08
Lead 210	NA	Lab	--	--		--	--	
Radium 226	NA	Lab	< 0.17 pCi/l	< 0.35 pCi/l		< 0.24 pCi/l	< 0.21 pCi/l	
Radium 228	NA	Lab	1.1 +/- 0.32 pCi/l	1.2 +/- 0.32 pCi/l	8.70	0.71 +/- 0.28 pCi/l	< 0.7 pCi/l	
Thorium 230	NA	Lab	--	--		--	--	
Uranium 234	NA	Lab	--	--		--	--	
Uranium 235	NA	Lab	--	--		--	--	
Uranium 238 (radiochemical method)	NA	Lab	--	--		--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008
Rhodia Silver Bow Plant

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Sys Loc Code Sample Date			MW-06-12 9/25/2008		RPD Percent %	MW-06-13 5/27/2008		RPD Percent %
Depth Interval Depth Unit Sample Name			MW-06-12_09252008 N	MW-86-12 MW-06-12_09252008_FD FD		MW-06-13_05272008 N	MW-86-13 MW-06-13_05272008_FD FD	
Sys Sample Code								
Sample Type Code								
Chemical Name	Total or Dissolved	Analysis Location						
General Parameters								
Alkalinity, bicarbonate as CaCO3	NA	Lab	65 J mg/l	103 J mg/l	45.24	104 mg/l	100 mg/l	3.92
Alkalinity, carbonate as CaCO3	NA	Lab	< 2 mg/l	< 2 mg/l		< 2 mg/l	< 2 mg/l	
Chloride	NA	Lab	185 mg/l	184 mg/l	0.54	168 mg/l	167 mg/l	0.60
Dissolved oxygen	NA	Field	1.54 mg/l	--		6.81 mg/l	--	
Fluoride	NA	Lab	1.5 mg/l	1.4 mg/l	6.90	0.3 mg/l	0.2 mg/l	40.00
Fluoride by Bellack	NA	Lab	--	--		--	--	
Nitrate + Nitrite	NA	Lab	< 0.05 mg/l	< 0.05 mg/l		3.62 mg/l	3.62 mg/l	0.00
Nitrogen, ammonia as N	NA	Lab	< 0.05 mg/l	< 0.05 mg/l		< 0.05 mg/l	< 0.05 mg/l	
pH, standard units	NA	Field	6.82 pH units	--		7.07 pH units	--	
Phosphorus, elemental (white)	NA	Lab	< 0.0000230 mg/l	< 0.0000230 mg/l		--	--	
Phosphorus, total	NA	Lab	3.10 mg/l	3.29 mg/l	5.95	0.49 mg/l	0.52 mg/l	5.94
Redox (oxidation potential)	NA	Field	183 mV	--		56 mV	--	
Specific Conductance umhos@ 25oC	NA	Field	2139 umhos/cm	--		1235 umhos/cm	--	
Sulfate	NA	Lab	928 mg/l	875 mg/l	5.88	471 mg/l	472 mg/l	0.21
Temperature, degrees C	NA	Field	10.95 deg C	--		10.15 deg C	--	
Turbidity	NA	Field	1.00 NTU	--		2.97 NTU	--	
Metals								
Antimony	Dissolved	Lab	--	--		--	--	
Antimony	NA	Lab	--	--		--	--	
Antimony	Total	Lab	< 0.00025 mg/l	< 0.00025 mg/l		< 0.00013 mg/l	< 0.00014 mg/l	
Arsenic	Dissolved	Lab	--	--		--	--	
Arsenic	NA	Lab	--	--		--	--	
Arsenic	Total	Lab	0.0212 mg/l	0.0218 mg/l	2.79	0.0103 mg/l	0.0106 mg/l	2.87
Barium	Dissolved	Lab	--	--		--	--	
Barium	NA	Lab	--	--		--	--	
Barium	Total	Lab	0.0293 mg/l	0.0299 mg/l	2.03	0.0382 mg/l	0.0387 mg/l	1.30
Beryllium	Dissolved	Lab	--	--		--	--	
Beryllium	NA	Lab	--	--		--	--	
Beryllium	Total	Lab	< 0.00010 mg/l	< 0.00010 mg/l		< 0.00002 mg/l	< 0.00002 mg/l	
Cadmium	Dissolved	Lab	--	--		--	--	
Cadmium	NA	Lab	--	--		--	--	
Cadmium	Total	Lab	0.00019 mg/l	< 0.00010 mg/l		0.00004 mg/l	0.00004 mg/l	0.00
Calcium	Dissolved	Lab	--	--		--	--	
Calcium	NA	Lab	--	--		--	--	
Calcium	Total	Lab	351 mg/l	357 mg/l	1.69	188 mg/l	185 mg/l	1.61

Appendix 1-C4a
Laboratory Precision Data Summary
2008
Rhodia Silver Bow Plant

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-06-12 9/25/2008		RPD Percent %	MW-06-13 5/27/2008		RPD Percent %
			N	FD		N	FD	
Chemical Name	Total or Dissolved	Analysis Location						
Chromium	Dissolved	Lab	--	--		--	--	
Chromium	NA	Lab	--	--		--	--	
Chromium	Total	Lab	< 0.0010 mg/l	< 0.0010 mg/l		< 0.0003 mg/l	< 0.0003 mg/l	
Cobalt	Dissolved	Lab	--	--		--	--	
Cobalt	NA	Lab	--	--		--	--	
Cobalt	Total	Lab	0.0018 mg/l	0.0017 mg/l	5.71	0.00199 mg/l	0.00201 mg/l	1.00
Copper	Dissolved	Lab	--	--		--	--	
Copper	NA	Lab	--	--		--	--	
Copper	Total	Lab	0.0018 mg/l	0.0018 mg/l	0.00	< 0.0021 mg/l	< 0.0026 mg/l	
Iron	Dissolved	Lab	--	--		--	--	
Iron	NA	Lab	--	--		--	--	
Iron	Total	Lab	< 0.02 mg/l	< 0.02 mg/l		0.068 mg/l	0.069 mg/l	1.46
Lead	Dissolved	Lab	--	--		--	--	
Lead	NA	Lab	--	--		--	--	
Lead	Total	Lab	0.00027 mg/l	< 0.00025 mg/l		< 0.00013 mg/l	< 0.00014 mg/l	
Magnesium	Dissolved	Lab	--	--		--	--	
Magnesium	NA	Lab	--	--		--	--	
Magnesium	Total	Lab	60.4 mg/l	61.3 mg/l	1.48	36.4 mg/l	35.7 mg/l	1.94
Manganese	Dissolved	Lab	--	--		--	--	
Manganese	NA	Lab	--	--		--	--	
Manganese	Total	Lab	0.292 mg/l	0.298 mg/l	2.03	0.00284 mg/l	0.00236 mg/l	18.46
Mercury	Dissolved	Lab	--	--		--	--	
Mercury	NA	Lab	--	--		--	--	
Mercury	Total	Lab	0.0006 mg/l	0.0005 mg/l	18.18	< 0.0002 mg/l	< 0.0002 mg/l	
Nickel	Dissolved	Lab	--	--		--	--	
Nickel	NA	Lab	--	--		--	--	
Nickel	Total	Lab	0.0085 mg/l	0.0080 mg/l	6.06	0.0036 mg/l	0.0035 mg/l	2.82
Phosphorus, total	NA	Lab	--	--		--	--	
Potassium	Dissolved	Lab	--	--		--	--	
Potassium	NA	Lab	--	--		--	--	
Potassium	Total	Lab	19.3 mg/l	19.6 mg/l	1.54	16.4 mg/l	16.2 mg/l	1.23
Selenium	Dissolved	Lab	--	--		--	--	
Selenium	NA	Lab	--	--		--	--	
Selenium	Total	Lab	< 0.0050 mg/l	0.0050 mg/l		0.0060 mg/l	0.0068 mg/l	12.50
Silver	Dissolved	Lab	--	--		--	--	
Silver	NA	Lab	--	--		--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-06-12 9/25/2008		RPD Percent %	MW-06-13 5/27/2008		RPD Percent %
			N	MW-86-12 MW-06-12_09252008_FD FD		N	MW-86-13 MW-06-13_05272008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
Silver	Total	Lab	< 0.00010 mg/l	< 0.00010 mg/l		0.00005 mg/l	0.00005 mg/l	0.00
Sodium	Dissolved	Lab	--	--		--	--	
Sodium	NA	Lab	--	--		--	--	
Sodium	Total	Lab	81.8 mg/l	84.5 mg/l	3.25	80.5 mg/l	79.9 mg/l	0.75
Thallium	Dissolved	Lab	--	--		--	--	
Thallium	NA	Lab	--	--		--	--	
Thallium	Total	Lab	< 0.00010 mg/l	< 0.00010 mg/l		< 0.00002 mg/l	< 0.00002 mg/l	
Uranium	Dissolved	Lab	--	--		--	--	
Uranium	NA	Lab	--	--		--	--	
Uranium	Total	Lab	0.00200 mg/l	0.00199 mg/l	0.50	0.009860 mg/l	0.009930 mg/l	0.71
Vanadium	Dissolved	Lab	--	--		--	--	
Vanadium	NA	Lab	--	--		--	--	
Vanadium	Total	Lab	0.0026 mg/l	0.0027 mg/l	3.77	0.0060 mg/l	0.0061 mg/l	1.65
Zinc	Dissolved	Lab	--	--		--	--	
Zinc	NA	Lab	--	--		--	--	
Zinc	Total	Lab	0.0142 mg/l	0.0127 mg/l	11.15	< 0.0016 mg/l	< 0.0019 mg/l	
TCLP Metals								
Arsenic	NA	Lab	--	--		--	--	
Barium	NA	Lab	--	--		--	--	
Cadmium	NA	Lab	--	--		--	--	
Chromium	NA	Lab	--	--		--	--	
Lead	NA	Lab	--	--		--	--	
Mercury	NA	Lab	--	--		--	--	
Selenium	NA	Lab	--	--		--	--	
Silver	NA	Lab	--	--		--	--	
SVOCs								
1,2,4-Trichlorobenzene	NA	Lab	< 0.016 ug/l	< 0.016 ug/l		< 0.016 ug/l	< 0.016 ug/l	
1,2-Dichlorobenzene	NA	Lab	< 0.022 ug/l	< 0.022 ug/l		< 0.022 ug/l	< 0.022 ug/l	
1,2-Diphenylhydrazine	NA	Lab	--	--		--	--	
1,3-Dichlorobenzene	NA	Lab	< 0.021 ug/l	< 0.021 ug/l		< 0.021 ug/l	< 0.021 ug/l	
1,4-Dichlorobenzene	NA	Lab	< 0.029 ug/l	< 0.029 ug/l		< 0.029 ug/l	< 0.029 ug/l	
2,4,5-Trichlorophenol	NA	Lab	< 0.031 ug/l	< 0.031 ug/l		< 0.031 ug/l	< 0.031 ug/l	
2,4,6-Trichlorophenol	NA	Lab	< 0.058 ug/l	< 0.058 ug/l		< 0.058 ug/l	< 0.058 ug/l	
2,4-Dichlorophenol	NA	Lab	< 0.047 ug/l	< 0.047 ug/l		< 0.047 ug/l	< 0.047 ug/l	
2,4-Dimethylphenol	NA	Lab	< 2.2 R ug/l	< 2.2 R ug/l		< 2.2 R ug/l	< 2.2 R ug/l	
2,4-Dinitrophenol	NA	Lab	< 0.17 ug/l	< 0.17 ug/l		< 0.17 ug/l	< 0.17 ug/l	

Appendix 1-C4a
Laboratory Precision Data Summary
2008
Rhodia Silver Bow Plant

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-06-12 9/25/2008		RPD Percent %	MW-06-13 5/27/2008		RPD Percent %
			N	MW-86-12 MW-06-12_09252008_FD FD		N	MW-86-13 MW-06-13_05272008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
2,4-Dinitrotoluene	NA	Lab	< 0.018 ug/l	< 0.018 ug/l		< 0.018 ug/l	< 0.018 ug/l	
2,6-Dinitrotoluene	NA	Lab	< 0.033 ug/l	< 0.033 ug/l		< 0.033 ug/l	< 0.033 ug/l	
2-Chloronaphthalene	NA	Lab	< 0.041 ug/l	< 0.041 ug/l		< 0.041 ug/l	< 0.041 ug/l	
2-Chlorophenol	NA	Lab	< 0.054 ug/l	< 0.054 ug/l		< 0.054 ug/l	< 0.054 ug/l	
2-Methyl-4,6-dinitrophenol	NA	Lab	< 0.025 ug/l	< 0.025 ug/l		< 0.025 ug/l	< 0.025 ug/l	
2-Methylnaphthalene	NA	Lab	< 0.026 ug/l	< 0.026 ug/l		< 0.026 ug/l	< 0.026 ug/l	
2-Nitroaniline	NA	Lab	< 0.024 ug/l	< 0.024 ug/l		< 0.024 ug/l	< 0.024 ug/l	
2-Nitrophenol	NA	Lab	< 0.063 ug/l	< 0.063 ug/l		< 0.063 ug/l	< 0.063 ug/l	
3,3'-Dichlorobenzidine	NA	Lab	< 0.43 ug/l	< 0.43 ug/l		< 0.43 ug/l	< 0.43 ug/l	
3-Nitroaniline	NA	Lab	< 0.029 ug/l	< 0.029 ug/l		< 0.029 ug/l	< 0.029 ug/l	
4-Bromophenyl phenyl ether	NA	Lab	< 0.026 ug/l	< 0.026 ug/l		< 0.026 ug/l	< 0.026 ug/l	
4-Chloro-3-methylphenol	NA	Lab	< 0.037 ug/l	< 0.037 ug/l		< 0.037 ug/l	< 0.037 ug/l	
4-Chloroaniline	NA	Lab	< 0.025 ug/l	< 0.025 ug/l		< 0.025 ug/l	< 0.025 ug/l	
4-Chlorophenyl phenyl ether	NA	Lab	< 0.027 ug/l	< 0.027 ug/l		< 0.027 ug/l	< 0.027 ug/l	
4-Nitroaniline	NA	Lab	< 0.019 ug/l	< 0.019 ug/l		< 0.019 ug/l	< 0.019 ug/l	
4-Nitrophenol	NA	Lab	< 0.28 ug/l	< 0.28 ug/l		< 0.28 ug/l	< 0.28 ug/l	
Acenaphthene	NA	Lab	< 0.0044 ug/l	0.0046 J ug/l		< 0.026 ug/l	< 0.026 ug/l	
Acenaphthylene	NA	Lab	< 0.0034 ug/l	< 0.0034 ug/l		< 0.015 ug/l	< 0.015 ug/l	
Anthracene	NA	Lab	< 0.0036 ug/l	< 0.0036 ug/l		< 0.024 ug/l	< 0.024 ug/l	
Azobenzene	NA	Lab	< 0.021 ug/l	< 0.021 ug/l		< 0.021 ug/l	< 0.021 ug/l	
Benzidine	NA	Lab	--	--		--	--	
Benzo(a)anthracene	NA	Lab	< 0.0026 ug/l	< 0.0026 ug/l		< 0.018 ug/l	< 0.018 ug/l	
Benzo(a)pyrene	NA	Lab	< 0.0043 ug/l	< 0.0043 ug/l		< 0.031 ug/l	< 0.031 ug/l	
Benzo(b)fluoranthene	NA	Lab	< 0.0023 ug/l	< 0.0023 ug/l		< 0.017 ug/l	< 0.017 ug/l	
Benzo(g,h,i)perylene	NA	Lab	< 0.0029 ug/l	< 0.0029 ug/l		< 0.019 ug/l	< 0.019 ug/l	
Benzo(k)fluoranthene	NA	Lab	< 0.0025 ug/l	< 0.0025 ug/l		< 0.024 ug/l	< 0.024 ug/l	
Benzoic Acid	NA	Lab	< 1.1 ug/l	< 1.1 ug/l		< 1.1 R ug/l	< 1.1 R ug/l	
Benzyl alcohol	NA	Lab	< 0.073 ug/l	< 0.073 ug/l		< 0.073 ug/l	< 0.073 ug/l	
Bis(2-chloroethoxy)methane	NA	Lab	< 0.024 ug/l	< 0.024 ug/l		< 0.024 ug/l	< 0.024 ug/l	
Bis(2-chloroethyl)ether	NA	Lab	< 0.035 ug/l	< 0.035 ug/l		< 0.035 ug/l	< 0.035 ug/l	
Bis(2-chloroisopropyl)ether	NA	Lab	< 0.026 ug/l	< 0.026 ug/l		< 0.026 ug/l	< 0.026 ug/l	
Bis(2-ethylhexyl)phthalate	NA	Lab	< 0.17 ug/l	< 0.14 ug/l		< 0.31 ug/l	< 0.24 ug/l	
Butyl benzyl phthalate	NA	Lab	< 0.049 ug/l	< 0.041 ug/l		< 0.042 ug/l	< 0.018 ug/l	
Carbazole	NA	Lab	< 0.018 ug/l	< 0.018 ug/l		< 0.018 ug/l	< 0.018 ug/l	
Chrysene	NA	Lab	< 0.0034 ug/l	< 0.0034 ug/l		< 0.028 ug/l	< 0.028 ug/l	
Dibenz(a,h)anthracene	NA	Lab	< 0.0025 ug/l	< 0.0025 ug/l		< 0.017 ug/l	< 0.017 ug/l	

Appendix 1-C4a
Laboratory Precision Data Summary
2008
Rhodia Silver Bow Plant

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-06-12 9/25/2008		RPD Percent %	MW-06-13 5/27/2008		RPD Percent %
			N	MW-86-12 MW-06-12_09252008_FD FD		N	MW-86-13 MW-06-13_05272008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
Dibenzofuran	NA	Lab	< 0.018 ug/l	< 0.018 ug/l		< 0.018 ug/l	< 0.018 ug/l	
Diethyl phthalate	NA	Lab	< 0.13 ug/l	< 0.11 ug/l		< 0.034 ug/l	< 0.032 ug/l	
Dimethyl phthalate	NA	Lab	< 0.021 ug/l	< 0.021 ug/l		< 0.021 ug/l	< 0.021 ug/l	
Di-n-butyl phthalate	NA	Lab	< 0.092 ug/l	< 0.062 ug/l		< 0.22 ug/l	< 0.11 ug/l	
Di-n-octyl phthalate	NA	Lab	< 0.018 ug/l	< 0.018 ug/l		< 0.018 ug/l	< 0.018 ug/l	
Fluoranthene	NA	Lab	< 0.0044 ug/l	< 0.0044 ug/l		< 0.020 ug/l	< 0.020 ug/l	
Fluorene	NA	Lab	< 0.0038 ug/l	< 0.0038 ug/l		< 0.027 ug/l	< 0.027 ug/l	
Hexachlorobenzene	NA	Lab	< 0.022 ug/l	< 0.022 ug/l		< 0.022 ug/l	< 0.022 ug/l	
Hexachlorobutadiene	NA	Lab	< 0.027 ug/l	< 0.027 ug/l		< 0.027 ug/l	< 0.027 ug/l	
Hexachlorocyclopentadiene	NA	Lab	< 0.19 R ug/l	< 0.19 R ug/l		< 0.19 R ug/l	< 0.19 R ug/l	
Hexachloroethane	NA	Lab	< 0.024 ug/l	< 0.024 ug/l		< 0.024 ug/l	< 0.024 ug/l	
Indeno(1,2,3-cd)pyrene	NA	Lab	< 0.0026 ug/l	< 0.0026 ug/l		< 0.021 ug/l	< 0.021 ug/l	
Isophorone	NA	Lab	< 0.016 ug/l	< 0.016 ug/l		< 0.016 ug/l	< 0.016 ug/l	
Naphthalene	NA	Lab	< 0.0061 ug/l	< 0.0088 ug/l		< 0.022 ug/l	< 0.028 ug/l	
Nitrobenzene	NA	Lab	< 0.028 ug/l	< 0.028 ug/l		< 0.028 ug/l	< 0.028 ug/l	
N-Nitrosodimethylamine	NA	Lab	< 0.42 ug/l	< 0.42 ug/l		< 0.42 ug/l	< 0.42 ug/l	
N-Nitrosodi-n-propylamine	NA	Lab	< 0.037 ug/l	< 0.037 ug/l		< 0.037 ug/l	< 0.037 ug/l	
N-Nitrosodiphenylamine	NA	Lab	< 0.048 ug/l	< 0.048 ug/l		< 0.048 ug/l	< 0.048 ug/l	
o-Cresol	NA	Lab	< 0.11 ug/l	< 0.11 ug/l		< 0.11 ug/l	< 0.11 ug/l	
p-Cresol	NA	Lab	< 0.12 ug/l	< 0.12 ug/l		< 0.12 ug/l	< 0.12 ug/l	
Pentachlorophenol	NA	Lab	< 0.34 ug/l	< 0.34 ug/l		< 0.34 ug/l	< 0.34 ug/l	
Phenanthrene	NA	Lab	< 0.0050 ug/l	< 0.0050 ug/l		< 0.022 ug/l	< 0.022 ug/l	
Phenol	NA	Lab	< 0.063 ug/l	< 0.063 ug/l		< 0.82 ug/l	< 0.54 ug/l	
Pyrene	NA	Lab	< 0.0035 ug/l	< 0.0035 ug/l		< 0.019 ug/l	< 0.019 ug/l	
Pyridine	NA	Lab	< 1.4 R ug/l	< 1.4 R ug/l		--	--	
VOCs								
1,1,1,2-Tetrachloroethane	NA	Lab	< 0.047 ug/l	< 0.047 ug/l		< 0.047 ug/l	< 0.047 ug/l	
1,1,1-Trichloroethane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l		0.070 J ug/l	0.080 J ug/l	13.33
1,1,2,2-Tetrachloroethane	NA	Lab	< 0.064 ug/l	< 0.064 ug/l		< 0.064 ug/l	< 0.064 ug/l	
1,1,2-Trichloroethane	NA	Lab	< 0.061 ug/l	< 0.061 ug/l		< 0.061 ug/l	< 0.061 ug/l	
1,1-Dichloro-1-propene	NA	Lab	< 0.051 ug/l	< 0.051 ug/l		< 0.051 ug/l	< 0.051 ug/l	
1,1-Dichloroethane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l		< 0.042 ug/l	< 0.042 ug/l	
1,1-Dichloroethylene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l		< 0.10 ug/l	< 0.10 ug/l	
1,2,3-Trichlorobenzene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l		< 0.10 ug/l	< 0.10 ug/l	
1,2,3-Trichloropropane	NA	Lab	< 0.14 ug/l	< 0.14 ug/l		< 0.14 ug/l	< 0.14 ug/l	
1,2,4-Trichlorobenzene	NA	Lab	< 0.13 ug/l	< 0.13 ug/l		< 0.13 ug/l	< 0.13 ug/l	

Appendix 1-C4a
Laboratory Precision Data Summary
2008
Rhodia Silver Bow Plant

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-06-12 9/25/2008		RPD Percent %	MW-06-13 5/27/2008		RPD Percent %
			N	MW-86-12 MW-06- 12_09252008_FD FD		N	MW-86-13 MW-06- 13_05272008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
1,2,4-Trimethylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l		< 0.037 ug/l	< 0.037 ug/l	
1,2-Dibromo-3-chloropropane	NA	Lab	< 0.22 J ug/l	< 0.22 J ug/l		< 0.22 ug/l	< 0.22 ug/l	
1,2-Dibromoethane	NA	Lab	< 0.084 ug/l	< 0.084 ug/l		< 0.084 ug/l	< 0.084 ug/l	
1,2-Dichlorobenzene	NA	Lab	< 0.044 ug/l	< 0.044 ug/l		< 0.044 ug/l	< 0.044 ug/l	
1,2-Dichloroethane	NA	Lab	< 0.073 ug/l	< 0.073 ug/l		< 0.073 ug/l	< 0.073 ug/l	
1,2-Dichloroethylene, cis	NA	Lab	< 0.045 ug/l	< 0.045 ug/l		< 0.045 ug/l	< 0.045 ug/l	
1,2-Dichloroethylene, trans	NA	Lab	< 0.048 ug/l	< 0.048 ug/l		< 0.048 ug/l	< 0.048 ug/l	
1,2-Dichloropropane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l		< 0.042 ug/l	< 0.042 ug/l	
1,3,5-Trimethylbenzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l		< 0.042 ug/l	< 0.042 ug/l	
1,3-Dichloro-1-propene trans	NA	Lab	< 0.041 ug/l	< 0.041 ug/l		< 0.041 ug/l	< 0.041 ug/l	
1,3-Dichloro-1-propene, cis	NA	Lab	< 0.038 ug/l	< 0.038 ug/l		< 0.038 ug/l	< 0.038 ug/l	
1,3-Dichlorobenzene	NA	Lab	< 0.041 ug/l	< 0.041 ug/l		< 0.041 ug/l	< 0.041 ug/l	
1,3-Dichloropropane	NA	Lab	< 0.032 ug/l	< 0.032 ug/l		< 0.032 ug/l	< 0.032 ug/l	
1,4-Dichlorobenzene	NA	Lab	< 0.054 ug/l	< 0.054 ug/l		< 0.054 ug/l	< 0.054 ug/l	
2,2-Dichloropropane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l		< 0.050 ug/l	< 0.050 ug/l	
2-Chloroethyl Vinyl Ether	NA	Lab	< 0.19 R ug/l	< 0.19 R ug/l		< 0.19 R ug/l	< 0.19 R ug/l	
2-Hexanone	NA	Lab	< 2.9 ug/l	< 2.9 ug/l		< 2.9 ug/l	< 2.9 ug/l	
Acetone	NA	Lab	< 4.2 ug/l	< 2.5 ug/l		< 2.5 ug/l	< 2.5 ug/l	
Acrolein	NA	Lab	< 2.0 R ug/l	< 2.0 R ug/l		< 2.0 ug/l	< 2.0 ug/l	
Acrylonitrile	NA	Lab	< 0.31 ug/l	< 0.31 ug/l		< 0.31 ug/l	< 0.31 ug/l	
Benzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l		< 0.045 ug/l	< 0.045 ug/l	
Bromobenzene	NA	Lab	< 0.027 ug/l	< 0.027 ug/l		< 0.027 ug/l	< 0.027 ug/l	
Bromochloromethane	NA	Lab	< 0.091 ug/l	< 0.091 ug/l		< 0.091 ug/l	< 0.091 ug/l	
Bromodichloromethane	NA	Lab	< 0.036 ug/l	< 0.036 ug/l		< 0.036 ug/l	< 0.036 ug/l	
Bromoform	NA	Lab	< 0.080 J ug/l	< 0.080 J ug/l		< 0.080 ug/l	< 0.080 ug/l	
Bromomethane	NA	Lab	< 0.072 ug/l	< 0.072 ug/l		< 0.072 J ug/l	< 0.072 J ug/l	
Butyl benzene	NA	Lab	< 0.056 ug/l	< 0.056 ug/l		< 0.056 ug/l	< 0.056 ug/l	
Butylbenzene sec	NA	Lab	< 0.036 ug/l	< 0.036 ug/l		< 0.036 ug/l	< 0.036 ug/l	
Butylbenzene tert-	NA	Lab	< 0.038 ug/l	< 0.038 ug/l		< 0.038 ug/l	< 0.038 ug/l	
Carbon disulfide	NA	Lab	< 0.060 ug/l	< 0.060 ug/l		< 0.045 ug/l	< 0.045 ug/l	
Carbon tetrachloride	NA	Lab	< 0.068 ug/l	< 0.068 ug/l		< 0.068 ug/l	< 0.068 ug/l	
Chlorobenzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l		< 0.045 ug/l	< 0.045 ug/l	
Chlorodibromomethane	NA	Lab	< 0.057 ug/l	< 0.057 ug/l		< 0.057 ug/l	< 0.057 ug/l	
Chloroethane	NA	Lab	< 0.13 ug/l	< 0.13 ug/l		< 0.13 ug/l	< 0.13 ug/l	
Chloroform	NA	Lab	< 0.042 ug/l	< 0.042 ug/l		< 0.13 ug/l	< 0.12 ug/l	
Chloromethane	NA	Lab	< 0.053 ug/l	< 0.053 ug/l		< 0.14 ug/l	< 0.080 ug/l	

Appendix 1-C4a
Laboratory Precision Data Summary
2008
Rhodia Silver Bow Plant

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-06-12 9/25/2008		RPD Percent %	MW-06-13 5/27/2008		RPD Percent %
			N	FD		N	FD	
Chemical Name	Total or Dissolved	Analysis Location						
Chlorotoluene o-	NA	Lab	< 0.035 ug/l	< 0.035 ug/l		< 0.035 ug/l	< 0.035 ug/l	
Chlorotoluene p-	NA	Lab	< 0.025 ug/l	< 0.025 ug/l		< 0.025 ug/l	< 0.025 ug/l	
Cumene (isopropyl benzene)	NA	Lab	< 0.031 ug/l	< 0.031 ug/l		< 0.031 ug/l	< 0.031 ug/l	
Cymene p- (Toluene isopropyl p-)	NA	Lab	< 0.044 ug/l	< 0.044 ug/l		< 0.044 ug/l	< 0.044 ug/l	
Dibromomethane (methylene bromide)	NA	Lab	< 0.089 ug/l	< 0.089 ug/l		< 0.089 ug/l	< 0.089 ug/l	
Dichlorodifluoromethane (CFC-12)	NA	Lab	< 0.083 ug/l	< 0.083 ug/l		< 0.083 ug/l	< 0.083 ug/l	
Ethyl benzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l		< 0.042 ug/l	< 0.042 ug/l	
Hexachlorobutadiene	NA	Lab	< 0.19 ug/l	< 0.19 ug/l		< 0.19 ug/l	< 0.19 ug/l	
Iodomethane	NA	Lab	< 0.27 ug/l	< 0.27 ug/l		< 0.27 ug/l	< 0.27 ug/l	
Methyl ethyl ketone	NA	Lab	< 3.8 ug/l	< 3.8 ug/l		< 3.8 ug/l	< 3.8 ug/l	
Methyl isobutyl ketone	NA	Lab	< 3.0 ug/l	< 3.0 ug/l		< 3.0 ug/l	< 3.0 ug/l	
Methyl tertiary butyl ether (MTBE)	NA	Lab	< 0.070 ug/l	< 0.070 ug/l		< 0.070 ug/l	< 0.070 ug/l	
Methylene chloride	NA	Lab	< 0.23 ug/l	< 0.23 ug/l		< 0.23 ug/l	< 0.23 ug/l	
Naphthalene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l		< 0.10 J ug/l	< 0.10 J ug/l	
Propylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l		< 0.037 ug/l	< 0.037 ug/l	
Styrene	NA	Lab	< 0.039 ug/l	< 0.039 ug/l		< 0.039 ug/l	< 0.039 ug/l	
Tetrachloroethylene	NA	Lab	< 0.077 ug/l	< 0.077 ug/l		< 0.080 ug/l	< 0.090 ug/l	
Toluene	NA	Lab	< 0.048 ug/l	< 0.39 ug/l		< 0.10 ug/l	< 0.11 ug/l	
Trichloroethylene	NA	Lab	< 0.061 ug/l	< 0.061 ug/l		< 0.061 ug/l	< 0.061 ug/l	
Trichlorofluoromethane	NA	Lab	< 0.086 ug/l	< 0.086 ug/l		< 0.086 ug/l	< 0.086 ug/l	
Vinyl acetate	NA	Lab	< 0.91 ug/l	< 0.91 ug/l		< 0.91 ug/l	< 0.91 ug/l	
Vinyl chloride	NA	Lab	< 0.071 ug/l	< 0.071 ug/l		< 0.071 ug/l	< 0.071 ug/l	
Xylene m & p	NA	Lab	< 0.078 ug/l	< 0.078 ug/l		< 0.078 ug/l	< 0.078 ug/l	
Xylene, o-	NA	Lab	< 0.037 ug/l	< 0.037 ug/l		< 0.037 ug/l	< 0.037 ug/l	
PCBs								
Aroclor 1016	NA	Lab	--	--		< 0.0094 ug/l	< 0.0094 ug/l	
Aroclor 1221	NA	Lab	--	--		< 0.020 ug/l	< 0.020 ug/l	
Aroclor 1232	NA	Lab	--	--		< 0.023 ug/l	< 0.023 ug/l	
Aroclor 1242	NA	Lab	--	--		< 0.013 ug/l	< 0.013 ug/l	
Aroclor 1248	NA	Lab	--	--		< 0.0054 ug/l	< 0.0054 ug/l	
Aroclor 1254	NA	Lab	--	--		< 0.0070 ug/l	< 0.0070 ug/l	
Aroclor 1260	NA	Lab	--	--		0.0042 J ug/l	0.0075 J ug/l	56.41
Aroclor 1262	NA	Lab	--	--		< 0.0048 ug/l	< 0.0048 ug/l	
Aroclor 1268	NA	Lab	--	--		< 0.0065 ug/l	< 0.0065 ug/l	

**Appendix 1-C4a
Laboratory Precision Data Summary
2008**

%RPD = $\left| \frac{(N - FD)}{(N + FD)} \right| \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-06-12 9/25/2008		RPD Percent %	MW-06-13 5/27/2008		RPD Percent %		
				MW-86-12 MW-06- 12_09252008_FD			MW-86-13 MW-06- 13_05272008_FD			
Chemical Name	Total or Dissolved	Analysis Location								
Radiochemical Parameters										
Gross Alpha (radiation)	NA	Lab	11 +/- 6.7 pCi/l	7.4 +/- 5.8 pCi/l	39.13	5.8 +/- 4.3 pCi/l	7 +/- 4.9 pCi/l	18.75		
Gross Beta (radiation)	NA	Lab	32 +/- 8.6 pCi/l	43 +/- 10 pCi/l	29.33	20 +/- 5.4 pCi/l	18 +/- 5.5 pCi/l	10.53		
Lead 210	NA	Lab	--	--		--	--			
Radium 226	NA	Lab	< 0.26 pCi/l	< 0.34 pCi/l		< 0.52 pCi/l	< 0.35 pCi/l			
Radium 228	NA	Lab	< 1.4 pCi/l	< 1.4 pCi/l		< 0.71 pCi/l	0.72 +/- 0.28 pCi/l			
Thorium 230	NA	Lab	--	--		--	--			
Uranium 234	NA	Lab	--	--		--	--			
Uranium 235	NA	Lab	--	--		--	--			
Uranium 238 (radiochemical method)	NA	Lab	--	--		--	--			

Appendix 1-C4a
Laboratory Precision Data Summary
2008
Rhodia Silver Bow Plant

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-06-13 6/9/2008		RPD Percent %	MW-06-18 5/21/2008		RPD Percent %
			N	MW-86-13 MW-06- 13_06092008_FD FD		N	MW-86-18 MW-06- 18_05212008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
General Parameters								
Alkalinity, bicarbonate as CaCO3	NA	Lab	--	--		26 mg/l	34 mg/l	26.67
Alkalinity, carbonate as CaCO3	NA	Lab	--	--		< 2 mg/l	< 2 mg/l	
Chloride	NA	Lab	--	--		231 mg/l	222 mg/l	3.97
Dissolved oxygen	NA	Field	5.61 mg/l	--		0.23 mg/l	--	
Fluoride	NA	Lab	--	--		< 1.0 mg/l	< 1.0 mg/l	
Fluoride by Bellack	NA	Lab	--	--		--	--	
Nitrate + Nitrite	NA	Lab	--	--		14.0 mg/l	14.4 mg/l	2.82
Nitrogen, ammonia as N	NA	Lab	--	--		0.22 mg/l	0.22 mg/l	0.00
pH, standard units	NA	Field	6.98 pH units	--		5.90 pH units	--	
Phosphorus, elemental (white)	NA	Lab	< 0.0000230 mg/l	< 0.0000230 mg/l		< 0.0000230 mg/l	< 0.0000230 mg/l	
Phosphorus, total	NA	Lab	--	--		51.3 mg/l	51.3 mg/l	0.00
Redox (oxidation potential)	NA	Field	217 mV	--		103 mV	--	
Specific Conductance umhos@ 25oC	NA	Field	1560 umhos/cm	--		1861 umhos/cm	--	
Sulfate	NA	Lab	--	--		647 mg/l	646 mg/l	0.15
Temperature, degrees C	NA	Field	9.05 deg C	--		14.04 deg C	--	
Turbidity	NA	Field	2.10 NTU	--		1.95 NTU	--	
Metals								
Antimony	Dissolved	Lab	--	--		--	--	
Antimony	NA	Lab	--	--		--	--	
Antimony	Total	Lab	--	--		0.00011 mg/l	0.00011 mg/l	0.00
Arsenic	Dissolved	Lab	--	--		--	--	
Arsenic	NA	Lab	--	--		--	--	
Arsenic	Total	Lab	--	--		0.0698 mg/l	0.0704 mg/l	0.86
Barium	Dissolved	Lab	--	--		--	--	
Barium	NA	Lab	--	--		--	--	
Barium	Total	Lab	--	--		0.0625 mg/l	0.0624 mg/l	0.16
Beryllium	Dissolved	Lab	--	--		--	--	
Beryllium	NA	Lab	--	--		--	--	
Beryllium	Total	Lab	--	--		< 0.00002 mg/l	0.00002 mg/l	
Cadmium	Dissolved	Lab	--	--		--	--	
Cadmium	NA	Lab	--	--		--	--	
Cadmium	Total	Lab	--	--		0.0405 mg/l	0.0402 mg/l	0.74
Calcium	Dissolved	Lab	--	--		--	--	
Calcium	NA	Lab	--	--		--	--	
Calcium	Total	Lab	--	--		270 mg/l	254 mg/l	6.11

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-06-13 6/9/2008		RPD Percent %	MW-06-18 5/21/2008		RPD Percent %
			N	FD		N	FD	
Chemical Name	Total or Dissolved	Analysis Location						
Chromium	Dissolved	Lab	--	--		--	--	
Chromium	NA	Lab	--	--		--	--	
Chromium	Total	Lab	--	--		0.0004 mg/l	0.0005 mg/l	22.22
Cobalt	Dissolved	Lab	--	--		--	--	
Cobalt	NA	Lab	--	--		--	--	
Cobalt	Total	Lab	--	--		0.00802 mg/l	0.00801 mg/l	0.12
Copper	Dissolved	Lab	--	--		--	--	
Copper	NA	Lab	--	--		--	--	
Copper	Total	Lab	--	--		0.0057 J mg/l	0.0028 J mg/l	68.24
Iron	Dissolved	Lab	--	--		--	--	
Iron	NA	Lab	--	--		--	--	
Iron	Total	Lab	--	--		< 0.02 mg/l	< 0.02 mg/l	
Lead	Dissolved	Lab	--	--		--	--	
Lead	NA	Lab	--	--		--	--	
Lead	Total	Lab	--	--		0.00009 mg/l	0.00006 mg/l	40.00
Magnesium	Dissolved	Lab	--	--		--	--	
Magnesium	NA	Lab	--	--		--	--	
Magnesium	Total	Lab	--	--		46.2 R mg/l	43.8 R mg/l	5.33
Manganese	Dissolved	Lab	--	--		--	--	
Manganese	NA	Lab	--	--		--	--	
Manganese	Total	Lab	--	--		0.906 mg/l	0.908 mg/l	0.22
Mercury	Dissolved	Lab	--	--		--	--	
Mercury	NA	Lab	--	--		--	--	
Mercury	Total	Lab	--	--		< 0.0002 mg/l	< 0.0002 mg/l	
Nickel	Dissolved	Lab	--	--		--	--	
Nickel	NA	Lab	--	--		--	--	
Nickel	Total	Lab	--	--		0.0302 mg/l	0.0301 mg/l	0.33
Phosphorus, total	NA	Lab	--	--		--	--	
Potassium	Dissolved	Lab	--	--		--	--	
Potassium	NA	Lab	--	--		--	--	
Potassium	Total	Lab	--	--		32 mg/l	29.9 mg/l	6.79
Selenium	Dissolved	Lab	--	--		--	--	
Selenium	NA	Lab	--	--		--	--	
Selenium	Total	Lab	--	--		0.0328 mg/l	0.0330 mg/l	0.61
Silver	Dissolved	Lab	--	--		--	--	
Silver	NA	Lab	--	--		--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008
Rhodia Silver Bow Plant

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-06-13 6/9/2008		RPD Percent %	MW-06-18 5/21/2008		RPD Percent %	
				MW-86-13 MW-06- 13_06092008_FD		MW-06-18 MW-06- 18_05212008_FD	MW-86-18 MW-06- 18_05212008_FD		
			N	FD		N	FD		
Chemical Name	Total or Dissolved	Analysis Location							
Silver	Total	Lab	--	--		< 0.00002 mg/l	< 0.00002 mg/l		
Sodium	Dissolved	Lab	--	--		--	--		
Sodium	NA	Lab	--	--		--	--		
Sodium	Total	Lab	--	--		109 mg/l	104 mg/l	4.69	
Thallium	Dissolved	Lab	--	--		--	--		
Thallium	NA	Lab	--	--		--	--		
Thallium	Total	Lab	--	--		< 0.00002 mg/l	< 0.00002 mg/l		
Uranium	Dissolved	Lab	--	--		--	--		
Uranium	NA	Lab	--	--		--	--		
Uranium	Total	Lab	--	--		0.000103 mg/l	0.000109 mg/l	5.66	
Vanadium	Dissolved	Lab	--	--		--	--		
Vanadium	NA	Lab	--	--		--	--		
Vanadium	Total	Lab	--	--		0.0068 mg/l	0.0070 mg/l	2.90	
Zinc	Dissolved	Lab	--	--		--	--		
Zinc	NA	Lab	--	--		--	--		
Zinc	Total	Lab	--	--		1.24 mg/l	1.25 mg/l	0.80	
TCLP Metals									
Arsenic	NA	Lab	--	--		--	--		
Barium	NA	Lab	--	--		--	--		
Cadmium	NA	Lab	--	--		--	--		
Chromium	NA	Lab	--	--		--	--		
Lead	NA	Lab	--	--		--	--		
Mercury	NA	Lab	--	--		--	--		
Selenium	NA	Lab	--	--		--	--		
Silver	NA	Lab	--	--		--	--		
SVOCs									
1,2,4-Trichlorobenzene	NA	Lab	--	--		< 0.016 ug/l	< 0.016 ug/l		
1,2-Dichlorobenzene	NA	Lab	--	--		< 0.022 ug/l	< 0.022 ug/l		
1,2-Diphenylhydrazine	NA	Lab	--	--		--	--		
1,3-Dichlorobenzene	NA	Lab	--	--		< 0.021 ug/l	< 0.021 ug/l		
1,4-Dichlorobenzene	NA	Lab	--	--		< 0.029 ug/l	< 0.029 ug/l		
2,4,5-Trichlorophenol	NA	Lab	--	--		< 0.031 ug/l	< 0.031 ug/l		
2,4,6-Trichlorophenol	NA	Lab	--	--		< 0.058 ug/l	< 0.058 ug/l		
2,4-Dichlorophenol	NA	Lab	--	--		< 0.047 ug/l	< 0.047 ug/l		
2,4-Dimethylphenol	NA	Lab	--	--		< 2.2 R ug/l	< 2.2 R ug/l		
2,4-Dinitrophenol	NA	Lab	--	--		< 0.17 ug/l	< 0.17 ug/l		

Appendix 1-C4a
Laboratory Precision Data Summary
2008
Rhodia Silver Bow Plant

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-06-13 6/9/2008		RPD Percent %	MW-06-18 5/21/2008		RPD Percent %
			N	MW-86-13 MW-06- 13_06092008_FD FD		N	MW-86-18 MW-06- 18_05212008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
2,4-Dinitrotoluene	NA	Lab	--	--		< 0.018 ug/l	< 0.018 ug/l	
2,6-Dinitrotoluene	NA	Lab	--	--		< 0.033 ug/l	< 0.033 ug/l	
2-Chloronaphthalene	NA	Lab	--	--		< 0.041 ug/l	< 0.041 ug/l	
2-Chlorophenol	NA	Lab	--	--		< 0.054 ug/l	< 0.054 ug/l	
2-Methyl-4,6-dinitrophenol	NA	Lab	--	--		< 0.025 ug/l	< 0.025 ug/l	
2-Methylnaphthalene	NA	Lab	--	--		< 0.026 ug/l	< 0.026 ug/l	
2-Nitroaniline	NA	Lab	--	--		< 0.024 ug/l	< 0.024 ug/l	
2-Nitrophenol	NA	Lab	--	--		< 0.063 ug/l	< 0.063 ug/l	
3,3'-Dichlorobenzidine	NA	Lab	--	--		< 0.43 ug/l	< 0.43 ug/l	
3-Nitroaniline	NA	Lab	--	--		< 0.029 ug/l	< 0.029 ug/l	
4-Bromophenyl phenyl ether	NA	Lab	--	--		< 0.026 ug/l	< 0.026 ug/l	
4-Chloro-3-methylphenol	NA	Lab	--	--		< 0.037 ug/l	< 0.037 ug/l	
4-Chloroaniline	NA	Lab	--	--		< 0.025 ug/l	< 0.025 ug/l	
4-Chlorophenyl phenyl ether	NA	Lab	--	--		< 0.027 ug/l	< 0.027 ug/l	
4-Nitroaniline	NA	Lab	--	--		< 0.019 ug/l	< 0.019 ug/l	
4-Nitrophenol	NA	Lab	--	--		< 0.28 ug/l	< 0.28 ug/l	
Acenaphthene	NA	Lab	--	--		< 0.026 ug/l	< 0.026 ug/l	
Acenaphthylene	NA	Lab	--	--		< 0.015 ug/l	< 0.015 ug/l	
Anthracene	NA	Lab	--	--		< 0.024 ug/l	< 0.024 ug/l	
Azobenzene	NA	Lab	--	--		< 0.021 ug/l	< 0.021 ug/l	
Benzidine	NA	Lab	--	--		--	--	
Benzo(a)anthracene	NA	Lab	--	--		< 0.018 ug/l	< 0.018 ug/l	
Benzo(a)pyrene	NA	Lab	--	--		< 0.031 ug/l	< 0.031 ug/l	
Benzo(b)fluoranthene	NA	Lab	--	--		< 0.017 ug/l	< 0.017 ug/l	
Benzo(g,h,i)perylene	NA	Lab	--	--		< 0.019 ug/l	< 0.019 ug/l	
Benzo(k)fluoranthene	NA	Lab	--	--		< 0.024 ug/l	< 0.024 ug/l	
Benzoic Acid	NA	Lab	--	--		< 1.1 R ug/l	< 1.1 R ug/l	
Benzyl alcohol	NA	Lab	--	--		< 0.073 ug/l	< 0.073 ug/l	
Bis(2-chloroethoxy)methane	NA	Lab	--	--		< 0.024 ug/l	< 0.024 ug/l	
Bis(2-chloroethyl)ether	NA	Lab	--	--		< 0.035 ug/l	< 0.035 ug/l	
Bis(2-chloroisopropyl)ether	NA	Lab	--	--		< 0.026 ug/l	< 0.026 ug/l	
Bis(2-ethylhexyl)phthalate	NA	Lab	--	--		0.31 J ug/l	0.40 J ug/l	25.35
Butyl benzyl phthalate	NA	Lab	--	--		< 0.032 ug/l	< 0.018 ug/l	
Carbazole	NA	Lab	--	--		< 0.018 ug/l	< 0.018 ug/l	
Chrysene	NA	Lab	--	--		< 0.028 ug/l	< 0.028 ug/l	
Dibenz(a,h)anthracene	NA	Lab	--	--		< 0.017 ug/l	< 0.017 ug/l	

Appendix 1-C4a
Laboratory Precision Data Summary
2008
Rhodia Silver Bow Plant

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-06-13 6/9/2008		RPD Percent %	MW-06-18 5/21/2008		RPD Percent %
			N	MW-86-13 MW-06- 13_06092008_FD FD		N	MW-86-18 MW-06- 18_05212008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
Dibenzofuran	NA	Lab	--	--		< 0.018 ug/l	< 0.018 ug/l	
Diethyl phthalate	NA	Lab	--	--		< 0.048 ug/l	< 0.047 ug/l	
Dimethyl phthalate	NA	Lab	--	--		< 0.021 ug/l	< 0.021 ug/l	
Di-n-butyl phthalate	NA	Lab	--	--		< 0.11 ug/l	< 0.13 ug/l	
Di-n-octyl phthalate	NA	Lab	--	--		< 0.018 ug/l	< 0.018 ug/l	
Fluoranthene	NA	Lab	--	--		0.11 J ug/l	0.12 J ug/l	8.70
Fluorene	NA	Lab	--	--		< 0.027 ug/l	< 0.027 ug/l	
Hexachlorobenzene	NA	Lab	--	--		< 0.022 ug/l	< 0.022 ug/l	
Hexachlorobutadiene	NA	Lab	--	--		< 0.027 R ug/l	< 0.027 R ug/l	
Hexachlorocyclopentadiene	NA	Lab	--	--		< 0.19 R ug/l	< 0.19 R ug/l	
Hexachloroethane	NA	Lab	--	--		< 0.024 ug/l	< 0.024 ug/l	
Indeno(1,2,3-cd)pyrene	NA	Lab	--	--		< 0.021 ug/l	< 0.021 ug/l	
Isophorone	NA	Lab	--	--		< 0.016 ug/l	< 0.016 ug/l	
Naphthalene	NA	Lab	--	--		< 0.022 ug/l	0.052 J ug/l	
Nitrobenzene	NA	Lab	--	--		< 0.028 ug/l	< 0.028 ug/l	
N-Nitrosodimethylamine	NA	Lab	--	--		< 0.42 ug/l	< 0.42 ug/l	
N-Nitrosodi-n-propylamine	NA	Lab	--	--		< 0.037 ug/l	< 0.037 ug/l	
N-Nitrosodiphenylamine	NA	Lab	--	--		< 0.048 ug/l	< 0.048 ug/l	
o-Cresol	NA	Lab	--	--		< 0.11 ug/l	< 0.11 ug/l	
p-Cresol	NA	Lab	--	--		< 0.12 ug/l	< 0.12 ug/l	
Pentachlorophenol	NA	Lab	--	--		< 0.34 ug/l	< 0.34 ug/l	
Phenanthrene	NA	Lab	--	--		< 0.022 ug/l	0.023 J ug/l	
Phenol	NA	Lab	--	--		1.6 ug/l	1.5 ug/l	6.45
Pyrene	NA	Lab	--	--		< 0.019 ug/l	< 0.019 ug/l	
Pyridine	NA	Lab	--	--		--	--	
VOCs								
1,1,1,2-Tetrachloroethane	NA	Lab	--	--		< 0.047 ug/l	< 0.047 ug/l	
1,1,1-Trichloroethane	NA	Lab	--	--		< 0.050 ug/l	< 0.050 ug/l	
1,1,2,2-Tetrachloroethane	NA	Lab	--	--		< 0.064 ug/l	< 0.064 ug/l	
1,1,2-Trichloroethane	NA	Lab	--	--		< 0.061 ug/l	< 0.061 ug/l	
1,1-Dichloro-1-propene	NA	Lab	--	--		< 0.051 ug/l	< 0.051 ug/l	
1,1-Dichloroethane	NA	Lab	--	--		< 0.042 ug/l	< 0.042 ug/l	
1,1-Dichloroethylene	NA	Lab	--	--		< 0.10 ug/l	< 0.10 ug/l	
1,2,3-Trichlorobenzene	NA	Lab	--	--		< 0.10 ug/l	< 0.10 ug/l	
1,2,3-Trichloropropane	NA	Lab	--	--		< 0.14 ug/l	< 0.14 ug/l	
1,2,4-Trichlorobenzene	NA	Lab	--	--		< 0.13 ug/l	< 0.13 ug/l	

Appendix 1-C4a
Laboratory Precision Data Summary
2008
Rhodia Silver Bow Plant

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
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Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-06-13 6/9/2008		RPD Percent %	MW-06-18 5/21/2008		RPD Percent %
			N	MW-86-13 MW-06- 13_06092008_FD FD		N	MW-86-18 MW-06- 18_05212008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
1,2,4-Trimethylbenzene	NA	Lab	--	--		< 0.037 ug/l	< 0.037 ug/l	
1,2-Dibromo-3-chloropropane	NA	Lab	--	--		< 0.22 ug/l	< 0.22 ug/l	
1,2-Dibromoethane	NA	Lab	--	--		< 0.084 ug/l	< 0.084 ug/l	
1,2-Dichlorobenzene	NA	Lab	--	--		< 0.044 ug/l	< 0.044 ug/l	
1,2-Dichloroethane	NA	Lab	--	--		< 0.073 ug/l	< 0.073 ug/l	
1,2-Dichloroethylene, cis	NA	Lab	--	--		< 0.045 ug/l	< 0.045 ug/l	
1,2-Dichloroethylene, trans	NA	Lab	--	--		< 0.048 ug/l	< 0.048 ug/l	
1,2-Dichloropropane	NA	Lab	--	--		< 0.042 ug/l	< 0.042 ug/l	
1,3,5-Trimethylbenzene	NA	Lab	--	--		< 0.042 ug/l	< 0.042 ug/l	
1,3-Dichloro-1-propene trans	NA	Lab	--	--		< 0.041 ug/l	< 0.041 ug/l	
1,3-Dichloro-1-propene, cis	NA	Lab	--	--		< 0.038 ug/l	< 0.038 ug/l	
1,3-Dichlorobenzene	NA	Lab	--	--		< 0.041 ug/l	< 0.041 ug/l	
1,3-Dichloropropane	NA	Lab	--	--		< 0.032 ug/l	< 0.032 ug/l	
1,4-Dichlorobenzene	NA	Lab	--	--		< 0.054 ug/l	< 0.054 ug/l	
2,2-Dichloropropane	NA	Lab	--	--		< 0.050 ug/l	< 0.050 ug/l	
2-Chloroethyl Vinyl Ether	NA	Lab	--	--		< 0.19 R ug/l	< 0.19 R ug/l	
2-Hexanone	NA	Lab	--	--		< 2.9 ug/l	< 2.9 ug/l	
Acetone	NA	Lab	--	--		< 2.5 ug/l	< 2.5 ug/l	
Acrolein	NA	Lab	--	--		< 2.0 ug/l	< 2.0 ug/l	
Acrylonitrile	NA	Lab	--	--		< 0.31 ug/l	< 0.31 ug/l	
Benzene	NA	Lab	--	--		0.050 J ug/l	< 0.045 ug/l	
Bromobenzene	NA	Lab	--	--		< 0.027 ug/l	< 0.027 ug/l	
Bromochloromethane	NA	Lab	--	--		< 0.091 ug/l	< 0.091 ug/l	
Bromodichloromethane	NA	Lab	--	--		< 0.036 ug/l	< 0.036 ug/l	
Bromoform	NA	Lab	--	--		< 0.080 J ug/l	< 0.080 J ug/l	
Bromomethane	NA	Lab	--	--		< 0.072 ug/l	< 0.072 ug/l	
Butyl benzene	NA	Lab	--	--		< 0.056 ug/l	< 0.056 ug/l	
Butylbenzene sec	NA	Lab	--	--		< 0.036 ug/l	< 0.036 ug/l	
Butylbenzene tert-	NA	Lab	--	--		< 0.038 ug/l	< 0.038 ug/l	
Carbon disulfide	NA	Lab	--	--		< 0.045 ug/l	< 0.045 ug/l	
Carbon tetrachloride	NA	Lab	--	--		< 0.068 ug/l	< 0.068 ug/l	
Chlorobenzene	NA	Lab	--	--		< 0.045 ug/l	< 0.045 ug/l	
Chlorodibromomethane	NA	Lab	--	--		< 0.057 ug/l	< 0.057 ug/l	
Chloroethane	NA	Lab	--	--		< 0.13 ug/l	< 0.13 ug/l	
Chloroform	NA	Lab	--	--		< 0.042 ug/l	< 0.042 ug/l	
Chloromethane	NA	Lab	--	--		< 0.053 ug/l	< 0.053 ug/l	

Appendix 1-C4a
Laboratory Precision Data Summary
2008
Rhodia Silver Bow Plant

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-06-13 6/9/2008		RPD Percent %	MW-06-18 5/21/2008		RPD Percent %
			N	FD		N	FD	
Chemical Name	Total or Dissolved	Analysis Location						
Chlorotoluene o-	NA	Lab	--	--		0.040 J ug/l	< 0.035 ug/l	
Chlorotoluene p-	NA	Lab	--	--		0.040 J ug/l	< 0.025 ug/l	
Cumene (isopropyl benzene)	NA	Lab	--	--		< 0.031 ug/l	< 0.031 ug/l	
Cymene p- (Toluene isopropyl p-)	NA	Lab	--	--		< 0.044 ug/l	< 0.044 ug/l	
Dibromomethane (methylene bromide)	NA	Lab	--	--		< 0.089 ug/l	< 0.089 ug/l	
Dichlorodifluoromethane (CFC-12)	NA	Lab	--	--		< 0.083 ug/l	< 0.083 ug/l	
Ethyl benzene	NA	Lab	--	--		< 0.042 ug/l	< 0.042 ug/l	
Hexachlorobutadiene	NA	Lab	--	--		< 0.19 ug/l	< 0.19 ug/l	
Iodomethane	NA	Lab	--	--		< 0.27 R ug/l	< 0.27 R ug/l	
Methyl ethyl ketone	NA	Lab	--	--		< 3.8 ug/l	< 3.8 ug/l	
Methyl isobutyl ketone	NA	Lab	--	--		< 3.0 ug/l	< 3.0 ug/l	
Methyl tertiary butyl ether (MTBE)	NA	Lab	--	--		< 0.070 ug/l	< 0.070 ug/l	
Methylene chloride	NA	Lab	--	--		< 0.23 ug/l	< 0.23 ug/l	
Naphthalene	NA	Lab	--	--		< 0.21 ug/l	< 0.10 ug/l	
Propylbenzene	NA	Lab	--	--		< 0.037 ug/l	< 0.037 ug/l	
Styrene	NA	Lab	--	--		< 0.039 ug/l	< 0.039 ug/l	
Tetrachloroethylene	NA	Lab	--	--		1.4 ug/l	1.5 ug/l	6.90
Toluene	NA	Lab	--	--		0.63 ug/l	< 0.18 ug/l	
Trichloroethylene	NA	Lab	--	--		< 0.061 ug/l	< 0.061 ug/l	
Trichlorofluoromethane	NA	Lab	--	--		< 0.086 ug/l	< 0.086 ug/l	
Vinyl acetate	NA	Lab	--	--		< 0.91 ug/l	< 0.91 ug/l	
Vinyl chloride	NA	Lab	--	--		< 0.071 ug/l	< 0.071 ug/l	
Xylene m & p	NA	Lab	--	--		< 0.078 ug/l	< 0.078 ug/l	
Xylene, o-	NA	Lab	--	--		< 0.037 ug/l	< 0.037 ug/l	
PCBs								
Aroclor 1016	NA	Lab	--	--		< 0.028 ug/l	< 0.024 ug/l	
Aroclor 1221	NA	Lab	--	--		< 0.020 ug/l	< 0.020 ug/l	
Aroclor 1232	NA	Lab	--	--		< 0.064 ug/l	< 0.051 ug/l	
Aroclor 1242	NA	Lab	--	--		< 0.031 ug/l	< 0.064 ug/l	
Aroclor 1248	NA	Lab	--	--		< 0.0054 ug/l	< 0.0056 ug/l	
Aroclor 1254	NA	Lab	--	--		< 0.0070 ug/l	< 0.0070 ug/l	
Aroclor 1260	NA	Lab	--	--		< 0.0031 ug/l	< 0.0031 ug/l	
Aroclor 1262	NA	Lab	--	--		< 0.0048 ug/l	< 0.0048 ug/l	
Aroclor 1268	NA	Lab	--	--		< 0.0065 ug/l	< 0.0065 ug/l	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-06-13 6/9/2008		RPD Percent %	MW-06-18 5/21/2008		RPD Percent %		
				MW-86-13 MW-06- 13_06092008_FD			MW-86-18 MW-06- 18_05212008_FD			
			MW-06-13_06092008			MW-06-18_05212008				
			N	FD		N	FD			
Chemical Name	Total or Dissolved	Analysis Location								
Radiochemical Parameters										
Gross Alpha (radiation)	NA	Lab	--	--		7.5 +/- 5.4 pCi/l	10 +/- 6.3 pCi/l	28.57		
Gross Beta (radiation)	NA	Lab	--	--		43 +/- 9.1 pCi/l	35 +/- 8.8 pCi/l	20.51		
Lead 210	NA	Lab	--	--		--	--			
Radium 226	NA	Lab	--	--		< 0.23 pCi/l	< 0.18 pCi/l			
Radium 228	NA	Lab	--	--		< 0.69 pCi/l	< 0.73 pCi/l			
Thorium 230	NA	Lab	--	--		--	--			
Uranium 234	NA	Lab	--	--		--	--			
Uranium 235	NA	Lab	--	--		--	--			
Uranium 238 (radiochemical method)	NA	Lab	--	--		--	--			

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Laboratory Precision Data Summary
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%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-06-5 9/19/2008		RPD Percent %	MW-06-5 12/13/2008		RPD Percent %
			N	MW-86-5 MW-06-5_09192008_FD FD		N	MW-86-5 MW-06-5_12132008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
General Parameters								
Alkalinity, bicarbonate as CaCO3	NA	Lab	306 mg/l	304 mg/l	0.66	--	--	
Alkalinity, carbonate as CaCO3	NA	Lab	< 2 mg/l	< 2 mg/l		--	--	
Chloride	NA	Lab	386 mg/l	391 mg/l	1.29	--	--	
Dissolved oxygen	NA	Field	1.58 mg/l	--		--	--	
Fluoride	NA	Lab	0.3 mg/l	0.3 mg/l	0.00	--	--	
Fluoride by Bellack	NA	Lab	--	--		--	--	
Nitrate + Nitrite	NA	Lab	0.73 mg/l	0.73 mg/l	0.00	--	--	
Nitrogen, ammonia as N	NA	Lab	< 0.05 mg/l	< 0.05 mg/l		--	--	
pH, standard units	NA	Field	6.98 pH units	--		--	--	
Phosphorus, elemental (white)	NA	Lab	0.00358 R mg/l	0.00423 R mg/l	16.65	< 0.0000230 mg/l	< 0.0000230 mg/l	
Phosphorus, total	NA	Lab	0.25 mg/l	0.26 mg/l	3.92	--	--	
Redox (oxidation potential)	NA	Field	27.8 mV	--		--	--	
Specific Conductance umhos@ 25oC	NA	Field	1814 umhos/cm	--		--	--	
Sulfate	NA	Lab	53 mg/l	53 mg/l	0.00	--	--	
Temperature, degrees C	NA	Field	11.78 deg C	--		--	--	
Turbidity	NA	Field	5.38 NTU	--		--	--	
Metals								
Antimony	Dissolved	Lab	--	--		--	--	
Antimony	NA	Lab	--	--		--	--	
Antimony	Total	Lab	0.00039 mg/l	0.00038 mg/l	2.60	--	--	
Arsenic	Dissolved	Lab	--	--		--	--	
Arsenic	NA	Lab	--	--		--	--	
Arsenic	Total	Lab	0.0594 mg/l	0.0590 mg/l	0.68	--	--	
Barium	Dissolved	Lab	--	--		--	--	
Barium	NA	Lab	--	--		--	--	
Barium	Total	Lab	0.0842 mg/l	0.0803 mg/l	4.74	--	--	
Beryllium	Dissolved	Lab	--	--		--	--	
Beryllium	NA	Lab	--	--		--	--	
Beryllium	Total	Lab	< 0.000020 mg/l	< 0.000020 mg/l		--	--	
Cadmium	Dissolved	Lab	--	--		--	--	
Cadmium	NA	Lab	--	--		--	--	
Cadmium	Total	Lab	0.00004 mg/l	0.00003 mg/l	28.57	--	--	
Calcium	Dissolved	Lab	--	--		--	--	
Calcium	NA	Lab	--	--		--	--	
Calcium	Total	Lab	174 mg/l	180 mg/l	3.39	--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
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Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-06-5 9/19/2008		RPD Percent %	MW-06-5 12/13/2008		RPD Percent %
			N	MW-86-5 MW-06-5_09192008_FD FD		N	MW-86-5 MW-06-5_12132008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
Chromium	Dissolved	Lab	--	--		--	--	
Chromium	NA	Lab	--	--		--	--	
Chromium	Total	Lab	< 0.00020 mg/l	< 0.00020 mg/l		--	--	
Cobalt	Dissolved	Lab	--	--		--	--	
Cobalt	NA	Lab	--	--		--	--	
Cobalt	Total	Lab	0.000346 mg/l	0.000373 mg/l	7.51	--	--	
Copper	Dissolved	Lab	--	--		--	--	
Copper	NA	Lab	--	--		--	--	
Copper	Total	Lab	0.001816 mg/l	0.001776 mg/l	2.23	--	--	
Iron	Dissolved	Lab	--	--		--	--	
Iron	NA	Lab	--	--		--	--	
Iron	Total	Lab	0.23 mg/l	0.26 mg/l	12.24	--	--	
Lead	Dissolved	Lab	--	--		--	--	
Lead	NA	Lab	--	--		--	--	
Lead	Total	Lab	0.000296 mg/l	0.000275 mg/l	7.36	--	--	
Magnesium	Dissolved	Lab	--	--		--	--	
Magnesium	NA	Lab	--	--		--	--	
Magnesium	Total	Lab	28.9 mg/l	29.8 mg/l	3.07	--	--	
Manganese	Dissolved	Lab	--	--		--	--	
Manganese	NA	Lab	--	--		--	--	
Manganese	Total	Lab	0.0140 mg/l	0.0150 mg/l	6.90	--	--	
Mercury	Dissolved	Lab	--	--		--	--	
Mercury	NA	Lab	--	--		--	--	
Mercury	Total	Lab	< 0.00020 mg/l	< 0.00020 mg/l		--	--	
Nickel	Dissolved	Lab	--	--		--	--	
Nickel	NA	Lab	--	--		--	--	
Nickel	Total	Lab	0.0018 mg/l	0.0021 mg/l	15.38	--	--	
Phosphorus, total	NA	Lab	--	--		--	--	
Potassium	Dissolved	Lab	--	--		--	--	
Potassium	NA	Lab	--	--		--	--	
Potassium	Total	Lab	16.1 mg/l	16.7 mg/l	3.66	--	--	
Selenium	Dissolved	Lab	--	--		--	--	
Selenium	NA	Lab	--	--		--	--	
Selenium	Total	Lab	< 0.0010 mg/l	< 0.0010 mg/l		--	--	
Silver	Dissolved	Lab	--	--		--	--	
Silver	NA	Lab	--	--		--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-06-5 9/19/2008		RPD Percent %	MW-06-5 12/13/2008		RPD Percent %
			N	MW-86-5 MW-06-5_09192008_FD FD		N	MW-86-5 MW-06-5_12132008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
Silver	Total	Lab	< 0.000020 mg/l	< 0.000020 mg/l		--	--	
Sodium	Dissolved	Lab	--	--		--	--	
Sodium	NA	Lab	--	--		--	--	
Sodium	Total	Lab	149 mg/l	151 mg/l	1.33	--	--	
Thallium	Dissolved	Lab	--	--		--	--	
Thallium	NA	Lab	--	--		--	--	
Thallium	Total	Lab	< 0.000020 mg/l	< 0.000020 mg/l		--	--	
Uranium	Dissolved	Lab	--	--		--	--	
Uranium	NA	Lab	--	--		--	--	
Uranium	Total	Lab	0.00623 mg/l	0.006714 mg/l	7.48	--	--	
Vanadium	Dissolved	Lab	--	--		--	--	
Vanadium	NA	Lab	--	--		--	--	
Vanadium	Total	Lab	0.0078 mg/l	0.0076 mg/l	2.60	--	--	
Zinc	Dissolved	Lab	--	--		--	--	
Zinc	NA	Lab	--	--		--	--	
Zinc	Total	Lab	< 0.0033 mg/l	< 0.0023 mg/l		--	--	
TCLP Metals								
Arsenic	NA	Lab	--	--		--	--	
Barium	NA	Lab	--	--		--	--	
Cadmium	NA	Lab	--	--		--	--	
Chromium	NA	Lab	--	--		--	--	
Lead	NA	Lab	--	--		--	--	
Mercury	NA	Lab	--	--		--	--	
Selenium	NA	Lab	--	--		--	--	
Silver	NA	Lab	--	--		--	--	
SVOCs								
1,2,4-Trichlorobenzene	NA	Lab	< 0.016 ug/l	< 0.016 ug/l		--	--	
1,2-Dichlorobenzene	NA	Lab	< 0.022 ug/l	< 0.022 ug/l		--	--	
1,2-Diphenylhydrazine	NA	Lab	--	--		--	--	
1,3-Dichlorobenzene	NA	Lab	< 0.021 ug/l	< 0.021 ug/l		--	--	
1,4-Dichlorobenzene	NA	Lab	< 0.029 ug/l	< 0.029 ug/l		--	--	
2,4,5-Trichlorophenol	NA	Lab	< 0.031 ug/l	< 0.031 ug/l		--	--	
2,4,6-Trichlorophenol	NA	Lab	< 0.058 ug/l	< 0.058 ug/l		--	--	
2,4-Dichlorophenol	NA	Lab	< 0.047 ug/l	< 0.047 ug/l		--	--	
2,4-Dimethylphenol	NA	Lab	< 2.2 ug/l	< 2.2 ug/l		--	--	
2,4-Dinitrophenol	NA	Lab	< 0.17 R ug/l	< 0.17 R ug/l		--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-06-5 9/19/2008		RPD Percent %	MW-06-5 12/13/2008		RPD Percent %
			MW-06-5_09192008 N	MW-86-5 MW-06-5_09192008_FD FD		MW-06-5_12132008 N	MW-86-5 MW-06-5_12132008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
2,4-Dinitrotoluene	NA	Lab	< 0.018 ug/l	< 0.018 ug/l		--	--	
2,6-Dinitrotoluene	NA	Lab	< 0.033 ug/l	< 0.033 ug/l		--	--	
2-Chloronaphthalene	NA	Lab	< 0.041 ug/l	< 0.041 ug/l		--	--	
2-Chlorophenol	NA	Lab	< 0.054 ug/l	< 0.054 ug/l		--	--	
2-Methyl-4,6-dinitrophenol	NA	Lab	< 0.025 ug/l	< 0.025 ug/l		--	--	
2-Methylnaphthalene	NA	Lab	< 0.026 ug/l	< 0.026 ug/l		--	--	
2-Nitroaniline	NA	Lab	< 0.024 ug/l	< 0.024 ug/l		--	--	
2-Nitrophenol	NA	Lab	< 0.063 ug/l	< 0.063 ug/l		--	--	
3,3'-Dichlorobenzidine	NA	Lab	< 0.43 ug/l	< 0.43 ug/l		--	--	
3-Nitroaniline	NA	Lab	< 0.029 ug/l	< 0.029 ug/l		--	--	
4-Bromophenyl phenyl ether	NA	Lab	< 0.026 ug/l	< 0.026 ug/l		--	--	
4-Chloro-3-methylphenol	NA	Lab	< 0.037 ug/l	< 0.037 ug/l		--	--	
4-Chloroaniline	NA	Lab	< 0.025 ug/l	< 0.025 ug/l		--	--	
4-Chlorophenyl phenyl ether	NA	Lab	< 0.027 ug/l	< 0.027 ug/l		--	--	
4-Nitroaniline	NA	Lab	< 0.019 ug/l	< 0.019 ug/l		--	--	
4-Nitrophenol	NA	Lab	< 0.28 ug/l	< 0.28 ug/l		--	--	
Acenaphthene	NA	Lab	< 0.026 ug/l	< 0.026 ug/l		--	--	
Acenaphthylene	NA	Lab	< 0.015 ug/l	< 0.015 ug/l		--	--	
Anthracene	NA	Lab	< 0.024 ug/l	< 0.024 ug/l		--	--	
Azobenzene	NA	Lab	< 0.021 ug/l	< 0.021 ug/l		--	--	
Benzidine	NA	Lab	--	--		--	--	
Benzo(a)anthracene	NA	Lab	< 0.018 ug/l	< 0.018 ug/l		--	--	
Benzo(a)pyrene	NA	Lab	< 0.031 ug/l	< 0.031 ug/l		--	--	
Benzo(b)fluoranthene	NA	Lab	< 0.017 ug/l	< 0.017 ug/l		--	--	
Benzo(g,h,i)perylene	NA	Lab	< 0.019 ug/l	< 0.019 ug/l		--	--	
Benzo(k)fluoranthene	NA	Lab	< 0.024 ug/l	< 0.024 ug/l		--	--	
Benzoic Acid	NA	Lab	< 1.1 R ug/l	< 1.1 R ug/l		--	--	
Benzyl alcohol	NA	Lab	< 0.073 ug/l	0.11 J ug/l		--	--	
Bis(2-chloroethoxy)methane	NA	Lab	< 0.024 ug/l	< 0.024 ug/l		--	--	
Bis(2-chloroethyl)ether	NA	Lab	< 0.035 ug/l	< 0.035 ug/l		--	--	
Bis(2-chloroisopropyl)ether	NA	Lab	< 0.026 ug/l	< 0.026 ug/l		--	--	
Bis(2-ethylhexyl)phthalate	NA	Lab	< 0.14 ug/l	< 0.17 ug/l		--	--	
Butyl benzyl phthalate	NA	Lab	< 0.018 ug/l	< 0.018 ug/l		--	--	
Carbazole	NA	Lab	< 0.018 ug/l	< 0.018 ug/l		--	--	
Chrysene	NA	Lab	< 0.028 ug/l	< 0.028 ug/l		--	--	
Dibenz(a,h)anthracene	NA	Lab	< 0.017 ug/l	< 0.017 ug/l		--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-06-5 9/19/2008		RPD Percent %	MW-06-5 12/13/2008		RPD Percent %
			MW-06-5_09192008 N	MW-86-5 MW-06-5_09192008_FD FD		MW-06-5_12132008 N	MW-86-5 MW-06-5_12132008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
Dibenzofuran	NA	Lab	< 0.018 ug/l	< 0.018 ug/l		--	--	
Diethyl phthalate	NA	Lab	< 0.022 ug/l	< 0.025 ug/l		--	--	
Dimethyl phthalate	NA	Lab	< 0.021 ug/l	< 0.021 ug/l		--	--	
Di-n-butyl phthalate	NA	Lab	< 0.065 ug/l	< 0.075 ug/l		--	--	
Di-n-octyl phthalate	NA	Lab	< 0.018 ug/l	< 0.018 ug/l		--	--	
Fluoranthene	NA	Lab	< 0.020 ug/l	< 0.020 ug/l		--	--	
Fluorene	NA	Lab	< 0.027 ug/l	< 0.027 ug/l		--	--	
Hexachlorobenzene	NA	Lab	< 0.022 ug/l	< 0.022 ug/l		--	--	
Hexachlorobutadiene	NA	Lab	< 0.027 R ug/l	< 0.027 R ug/l		--	--	
Hexachlorocyclopentadiene	NA	Lab	< 0.19 R ug/l	< 0.19 R ug/l		--	--	
Hexachloroethane	NA	Lab	< 0.024 R ug/l	< 0.024 R ug/l		--	--	
Indeno(1,2,3-cd)pyrene	NA	Lab	< 0.021 ug/l	< 0.021 ug/l		--	--	
Isophorone	NA	Lab	< 0.016 ug/l	< 0.016 ug/l		--	--	
Naphthalene	NA	Lab	< 0.022 ug/l	< 0.022 ug/l		--	--	
Nitrobenzene	NA	Lab	< 0.028 ug/l	< 0.028 ug/l		--	--	
N-Nitrosodimethylamine	NA	Lab	< 0.42 ug/l	< 0.42 ug/l		--	--	
N-Nitrosodi-n-propylamine	NA	Lab	< 0.037 ug/l	< 0.037 ug/l		--	--	
N-Nitrosodiphenylamine	NA	Lab	< 0.048 ug/l	< 0.048 ug/l		--	--	
o-Cresol	NA	Lab	< 0.11 ug/l	< 0.11 ug/l		--	--	
p-Cresol	NA	Lab	< 0.12 ug/l	< 0.12 ug/l		--	--	
Pentachlorophenol	NA	Lab	< 0.34 ug/l	< 0.34 ug/l		--	--	
Phenanthrene	NA	Lab	< 0.022 ug/l	< 0.022 ug/l		--	--	
Phenol	NA	Lab	< 0.063 ug/l	< 0.063 ug/l		--	--	
Pyrene	NA	Lab	< 0.019 ug/l	< 0.019 ug/l		--	--	
Pyridine	NA	Lab	< 1.4 R ug/l	< 1.4 R ug/l		--	--	
VOCs								
1,1,1,2-Tetrachloroethane	NA	Lab	< 0.047 ug/l	< 0.047 ug/l		--	--	
1,1,1-Trichloroethane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l		--	--	
1,1,2,2-Tetrachloroethane	NA	Lab	< 0.064 ug/l	< 0.064 ug/l		--	--	
1,1,2-Trichloroethane	NA	Lab	< 0.061 ug/l	< 0.061 ug/l		--	--	
1,1-Dichloro-1-propene	NA	Lab	< 0.051 ug/l	< 0.051 ug/l		--	--	
1,1-Dichloroethane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l		--	--	
1,1-Dichloroethylene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l		--	--	
1,2,3-Trichlorobenzene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l		--	--	
1,2,3-Trichloropropane	NA	Lab	< 0.14 ug/l	< 0.14 ug/l		--	--	
1,2,4-Trichlorobenzene	NA	Lab	< 0.13 ug/l	< 0.13 ug/l		--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-06-5 9/19/2008		RPD Percent %	MW-06-5 12/13/2008		RPD Percent %
			MW-06-5_09192008 N	MW-86-5 MW-06-5_09192008_FD FD		MW-06-5_12132008 N	MW-86-5 MW-06-5_12132008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
1,2,4-Trimethylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l		--	--	
1,2-Dibromo-3-chloropropane	NA	Lab	< 0.22 J ug/l	< 0.22 J ug/l		--	--	
1,2-Dibromoethane	NA	Lab	< 0.084 ug/l	< 0.084 ug/l		--	--	
1,2-Dichlorobenzene	NA	Lab	< 0.044 ug/l	< 0.044 ug/l		--	--	
1,2-Dichloroethane	NA	Lab	< 0.073 ug/l	< 0.073 ug/l		--	--	
1,2-Dichloroethylene, cis	NA	Lab	< 0.045 ug/l	< 0.045 ug/l		--	--	
1,2-Dichloroethylene, trans	NA	Lab	< 0.048 ug/l	< 0.048 ug/l		--	--	
1,2-Dichloropropane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l		--	--	
1,3,5-Trimethylbenzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l		--	--	
1,3-Dichloro-1-propene trans	NA	Lab	< 0.041 ug/l	< 0.041 ug/l		--	--	
1,3-Dichloro-1-propene, cis	NA	Lab	< 0.038 ug/l	< 0.038 ug/l		--	--	
1,3-Dichlorobenzene	NA	Lab	< 0.041 ug/l	< 0.041 ug/l		--	--	
1,3-Dichloropropane	NA	Lab	< 0.032 ug/l	< 0.032 ug/l		--	--	
1,4-Dichlorobenzene	NA	Lab	< 0.054 ug/l	< 0.054 ug/l		--	--	
2,2-Dichloropropane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l		--	--	
2-Chloroethyl Vinyl Ether	NA	Lab	< 0.19 R ug/l	< 0.19 R ug/l		--	--	
2-Hexanone	NA	Lab	< 2.9 ug/l	< 2.9 ug/l		--	--	
Acetone	NA	Lab	< 7.9 ug/l	< 6.5 ug/l		--	--	
Acrolein	NA	Lab	< 2.0 ug/l	< 2.0 ug/l		--	--	
Acrylonitrile	NA	Lab	< 0.31 ug/l	< 0.31 ug/l		--	--	
Benzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l		--	--	
Bromobenzene	NA	Lab	< 0.027 ug/l	< 0.027 ug/l		--	--	
Bromochloromethane	NA	Lab	< 0.091 ug/l	< 0.091 ug/l		--	--	
Bromodichloromethane	NA	Lab	< 0.036 ug/l	< 0.036 ug/l		--	--	
Bromoform	NA	Lab	< 0.080 J ug/l	< 0.080 J ug/l		--	--	
Bromomethane	NA	Lab	< 0.072 ug/l	< 0.072 ug/l		--	--	
Butyl benzene	NA	Lab	< 0.056 ug/l	< 0.056 ug/l		--	--	
Butylbenzene sec	NA	Lab	< 0.036 ug/l	< 0.036 ug/l		--	--	
Butylbenzene tert-	NA	Lab	< 0.038 ug/l	< 0.038 ug/l		--	--	
Carbon disulfide	NA	Lab	< 0.045 ug/l	< 0.045 ug/l		--	--	
Carbon tetrachloride	NA	Lab	< 0.068 ug/l	< 0.068 ug/l		--	--	
Chlorobenzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l		--	--	
Chlorodibromomethane	NA	Lab	< 0.057 ug/l	< 0.057 ug/l		--	--	
Chloroethane	NA	Lab	< 0.13 ug/l	< 0.13 ug/l		--	--	
Chloroform	NA	Lab	< 0.050 ug/l	< 0.060 ug/l		--	--	
Chloromethane	NA	Lab	0.060 J ug/l	< 0.053 ug/l		--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008
Rhodia Silver Bow Plant

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-06-5 9/19/2008		RPD Percent %	MW-06-5 12/13/2008		RPD Percent %
				MW-86-5 MW-06- 5_09192008_FD FD		MW-06-5_12132008 N	MW-86-5 MW-06- 5_12132008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
Chlorotoluene o-	NA	Lab	< 0.035 ug/l	< 0.035 ug/l		--	--	
Chlorotoluene p-	NA	Lab	< 0.025 ug/l	< 0.025 ug/l		--	--	
Cumene (isopropyl benzene)	NA	Lab	< 0.031 ug/l	< 0.031 ug/l		--	--	
Cymene p- (Toluene isopropyl p-)	NA	Lab	< 0.044 ug/l	< 0.044 ug/l		--	--	
Dibromomethane (methylene bromide)	NA	Lab	< 0.089 ug/l	< 0.089 ug/l		--	--	
Dichlorodifluoromethane (CFC-12)	NA	Lab	< 0.083 ug/l	< 0.083 ug/l		--	--	
Ethyl benzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l		--	--	
Hexachlorobutadiene	NA	Lab	< 0.19 ug/l	< 0.19 ug/l		--	--	
Iodomethane	NA	Lab	< 0.27 ug/l	< 0.27 ug/l		--	--	
Methyl ethyl ketone	NA	Lab	< 3.8 ug/l	< 3.8 ug/l		--	--	
Methyl isobutyl ketone	NA	Lab	< 3.0 ug/l	< 3.0 ug/l		--	--	
Methyl tertiary butyl ether (MTBE)	NA	Lab	< 0.070 ug/l	< 0.070 ug/l		--	--	
Methylene chloride	NA	Lab	< 0.23 ug/l	< 0.23 ug/l		--	--	
Naphthalene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l		--	--	
Propylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l		--	--	
Styrene	NA	Lab	< 0.060 ug/l	< 0.039 ug/l		--	--	
Tetrachloroethylene	NA	Lab	< 0.077 ug/l	< 0.077 ug/l		--	--	
Toluene	NA	Lab	< 0.048 ug/l	< 0.048 ug/l		--	--	
Trichloroethylene	NA	Lab	< 0.061 ug/l	< 0.061 ug/l		--	--	
Trichlorofluoromethane	NA	Lab	< 0.086 ug/l	< 0.086 ug/l		--	--	
Vinyl acetate	NA	Lab	< 0.91 ug/l	< 0.91 ug/l		--	--	
Vinyl chloride	NA	Lab	< 0.071 ug/l	< 0.071 ug/l		--	--	
Xylene m & p	NA	Lab	< 0.078 ug/l	< 0.078 ug/l		--	--	
Xylene, o-	NA	Lab	< 0.037 ug/l	< 0.037 ug/l		--	--	
PCBs								
Aroclor 1016	NA	Lab	--	--		--	--	
Aroclor 1221	NA	Lab	--	--		--	--	
Aroclor 1232	NA	Lab	--	--		--	--	
Aroclor 1242	NA	Lab	--	--		--	--	
Aroclor 1248	NA	Lab	--	--		--	--	
Aroclor 1254	NA	Lab	--	--		--	--	
Aroclor 1260	NA	Lab	--	--		--	--	
Aroclor 1262	NA	Lab	--	--		--	--	
Aroclor 1268	NA	Lab	--	--		--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-06-5 9/19/2008		RPD Percent %	MW-06-5 12/13/2008		RPD Percent %
			MW-06-5_09192008 N	MW-86-5 MW-06-5_09192008_FD FD		MW-06-5_12132008 N	MW-86-5 MW-06-5_12132008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
Radiochemical Parameters								
Gross Alpha (radiation)	NA	Lab	< 4.6 pCi/l	< 4.4 pCi/l		--	--	
Gross Beta (radiation)	NA	Lab	29 +/- 7.8 pCi/l	20 +/- 7.9 pCi/l	36.73	--	--	
Lead 210	NA	Lab	--	--		--	--	
Radium 226	NA	Lab	< 0.23 pCi/l	< 0.36 pCi/l		--	--	
Radium 228	NA	Lab	0.9 +/- 0.31 pCi/l	0.87 +/- 0.31 pCi/l	3.39	--	--	
Thorium 230	NA	Lab	--	--		--	--	
Uranium 234	NA	Lab	--	--		--	--	
Uranium 235	NA	Lab	--	--		--	--	
Uranium 238 (radiochemical method)	NA	Lab	--	--		--	--	

**Appendix 1-C4a
Laboratory Precision Data Summary
2008**

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-97-9 9/24/2008		RPD Percent %
			N	MW-77-9 MW97-9_09242008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location			
General Parameters					
Alkalinity, bicarbonate as CaCO3	NA	Lab	74 mg/l	80 mg/l	7.79
Alkalinity, carbonate as CaCO3	NA	Lab	< 2 mg/l	< 2 mg/l	
Chloride	NA	Lab	144 mg/l	144 mg/l	0.00
Dissolved oxygen	NA	Field	0.36 mg/l	--	
Fluoride	NA	Lab	11.1 mg/l	11.2 mg/l	0.90
Fluoride by Bellack	NA	Lab	--	--	
Nitrate + Nitrite	NA	Lab	1.25 mg/l	1.28 mg/l	2.37
Nitrogen, ammonia as N	NA	Lab	0.49 mg/l	0.50 mg/l	2.02
pH, standard units	NA	Field	6.33 pH units	--	
Phosphorus, elemental (white)	NA	Lab	< 0.0000230 mg/l	< 0.0000230 mg/l	
Phosphorus, total	NA	Lab	7.12 mg/l	6.86 mg/l	3.72
Redox (oxidation potential)	NA	Field	120.4 mV	--	
Specific Conductance umhos@ 25oC	NA	Field	1523 umhos/cm	--	
Sulfate	NA	Lab	478 mg/l	496 mg/l	3.70
Temperature, degrees C	NA	Field	15.09 deg C	--	
Turbidity	NA	Field	2.15 NTU	--	
Metals					
Antimony	Dissolved	Lab	--	--	
Antimony	NA	Lab	--	--	
Antimony	Total	Lab	0.0025 mg/l	0.0024 mg/l	4.08
Arsenic	Dissolved	Lab	--	--	
Arsenic	NA	Lab	--	--	
Arsenic	Total	Lab	0.0631 mg/l	0.0629 mg/l	0.32
Barium	Dissolved	Lab	--	--	
Barium	NA	Lab	--	--	
Barium	Total	Lab	0.0593 mg/l	0.0586 mg/l	1.19
Beryllium	Dissolved	Lab	--	--	
Beryllium	NA	Lab	--	--	
Beryllium	Total	Lab	0.00078 mg/l	0.00067 mg/l	15.17
Cadmium	Dissolved	Lab	--	--	
Cadmium	NA	Lab	--	--	
Cadmium	Total	Lab	0.0903 mg/l	0.0903 mg/l	0.00
Calcium	Dissolved	Lab	--	--	
Calcium	NA	Lab	--	--	
Calcium	Total	Lab	201 mg/l	209 mg/l	3.90

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-97-9 9/24/2008		RPD Percent %
			MW97-9_09242008 N	MW-77-9 MW97- 9_09242008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location			
Chromium	Dissolved	Lab	--	--	
Chromium	NA	Lab	--	--	
Chromium	Total	Lab	< 0.0010 mg/l	< 0.0010 mg/l	
Cobalt	Dissolved	Lab	--	--	
Cobalt	NA	Lab	--	--	
Cobalt	Total	Lab	0.0029 mg/l	0.0029 mg/l	0.00
Copper	Dissolved	Lab	--	--	
Copper	NA	Lab	--	--	
Copper	Total	Lab	0.0011 mg/l	0.0010 mg/l	9.52
Iron	Dissolved	Lab	--	--	
Iron	NA	Lab	--	--	
Iron	Total	Lab	0.26 mg/l	0.19 mg/l	31.11
Lead	Dissolved	Lab	--	--	
Lead	NA	Lab	--	--	
Lead	Total	Lab	0.00036 mg/l	0.00033 mg/l	8.70
Magnesium	Dissolved	Lab	--	--	
Magnesium	NA	Lab	--	--	
Magnesium	Total	Lab	37.2 mg/l	38.5 mg/l	3.43
Manganese	Dissolved	Lab	--	--	
Manganese	NA	Lab	--	--	
Manganese	Total	Lab	0.573 mg/l	0.567 mg/l	1.05
Mercury	Dissolved	Lab	--	--	
Mercury	NA	Lab	--	--	
Mercury	Total	Lab	< 0.0002 mg/l	< 0.0002 mg/l	
Nickel	Dissolved	Lab	--	--	
Nickel	NA	Lab	--	--	
Nickel	Total	Lab	0.0224 mg/l	0.0225 mg/l	0.45
Phosphorus, total	NA	Lab	--	--	
Potassium	Dissolved	Lab	--	--	
Potassium	NA	Lab	--	--	
Potassium	Total	Lab	28.8 mg/l	29.7 mg/l	3.08
Selenium	Dissolved	Lab	--	--	
Selenium	NA	Lab	--	--	
Selenium	Total	Lab	0.0120 mg/l	0.0120 mg/l	0.00
Silver	Dissolved	Lab	--	--	
Silver	NA	Lab	--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-97-9 9/24/2008		RPD Percent %
			N	FD	
Chemical Name	Total or Dissolved	Analysis Location			
Silver	Total	Lab	< 0.00010 mg/l	< 0.00010 mg/l	
Sodium	Dissolved	Lab	--	--	
Sodium	NA	Lab	--	--	
Sodium	Total	Lab	79.1 mg/l	82.1 mg/l	3.72
Thallium	Dissolved	Lab	--	--	
Thallium	NA	Lab	--	--	
Thallium	Total	Lab	0.00039 mg/l	0.00039 mg/l	0.00
Uranium	Dissolved	Lab	--	--	
Uranium	NA	Lab	--	--	
Uranium	Total	Lab	0.00019 mg/l	0.00020 mg/l	5.13
Vanadium	Dissolved	Lab	--	--	
Vanadium	NA	Lab	--	--	
Vanadium	Total	Lab	0.0236 mg/l	0.0234 mg/l	0.85
Zinc	Dissolved	Lab	--	--	
Zinc	NA	Lab	--	--	
Zinc	Total	Lab	0.3702 mg/l	0.3704 mg/l	0.05
TCLP Metals					
Arsenic	NA	Lab	--	--	
Barium	NA	Lab	--	--	
Cadmium	NA	Lab	--	--	
Chromium	NA	Lab	--	--	
Lead	NA	Lab	--	--	
Mercury	NA	Lab	--	--	
Selenium	NA	Lab	--	--	
Silver	NA	Lab	--	--	
SVOCs					
1,2,4-Trichlorobenzene	NA	Lab	< 0.016 ug/l	< 0.016 ug/l	
1,2-Dichlorobenzene	NA	Lab	< 0.022 ug/l	< 0.022 ug/l	
1,2-Diphenylhydrazine	NA	Lab	--	--	
1,3-Dichlorobenzene	NA	Lab	< 0.021 ug/l	< 0.021 ug/l	
1,4-Dichlorobenzene	NA	Lab	< 0.044 ug/l	< 0.045 ug/l	
2,4,5-Trichlorophenol	NA	Lab	< 0.031 ug/l	< 0.031 ug/l	
2,4,6-Trichlorophenol	NA	Lab	< 0.058 ug/l	< 0.058 ug/l	
2,4-Dichlorophenol	NA	Lab	< 0.047 ug/l	< 0.047 ug/l	
2,4-Dimethylphenol	NA	Lab	< 2.2 R ug/l	< 2.2 R ug/l	
2,4-Dinitrophenol	NA	Lab	< 0.17 ug/l	< 0.17 ug/l	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-97-9 9/24/2008		RPD Percent %
			N	FD	
Chemical Name	Total or Dissolved	Analysis Location			
2,4-Dinitrotoluene	NA	Lab	< 0.018 ug/l	< 0.018 ug/l	
2,6-Dinitrotoluene	NA	Lab	< 0.033 ug/l	< 0.033 ug/l	
2-Chloronaphthalene	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	
2-Chlorophenol	NA	Lab	< 0.054 ug/l	< 0.054 ug/l	
2-Methyl-4,6-dinitrophenol	NA	Lab	< 0.025 ug/l	< 0.025 ug/l	
2-Methylnaphthalene	NA	Lab	< 0.026 ug/l	< 0.026 ug/l	
2-Nitroaniline	NA	Lab	< 0.024 ug/l	< 0.024 ug/l	
2-Nitrophenol	NA	Lab	< 0.063 ug/l	< 0.063 ug/l	
3,3'-Dichlorobenzidine	NA	Lab	< 0.43 ug/l	< 0.43 ug/l	
3-Nitroaniline	NA	Lab	< 0.029 ug/l	< 0.029 ug/l	
4-Bromophenyl phenyl ether	NA	Lab	< 0.026 ug/l	< 0.026 ug/l	
4-Chloro-3-methylphenol	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	
4-Chloroaniline	NA	Lab	< 0.025 ug/l	< 0.025 ug/l	
4-Chlorophenyl phenyl ether	NA	Lab	< 0.027 ug/l	< 0.027 ug/l	
4-Nitroaniline	NA	Lab	< 0.019 ug/l	< 0.019 ug/l	
4-Nitrophenol	NA	Lab	< 0.28 ug/l	< 0.28 ug/l	
Acenaphthene	NA	Lab	< 0.026 ug/l	< 0.026 ug/l	
Acenaphthylene	NA	Lab	< 0.015 ug/l	< 0.015 ug/l	
Anthracene	NA	Lab	< 0.024 ug/l	< 0.024 ug/l	
Azobenzene	NA	Lab	< 0.021 ug/l	< 0.021 ug/l	
Benzidine	NA	Lab	--	--	
Benzo(a)anthracene	NA	Lab	< 0.018 ug/l	< 0.018 ug/l	
Benzo(a)pyrene	NA	Lab	< 0.031 ug/l	< 0.031 ug/l	
Benzo(b)fluoranthene	NA	Lab	< 0.017 ug/l	< 0.017 ug/l	
Benzo(g,h,i)perylene	NA	Lab	< 0.019 ug/l	< 0.019 ug/l	
Benzo(k)fluoranthene	NA	Lab	< 0.024 ug/l	< 0.024 ug/l	
Benzoic Acid	NA	Lab	< 1.1 R ug/l	< 1.1 R ug/l	
Benzyl alcohol	NA	Lab	< 0.073 ug/l	< 0.073 ug/l	
Bis(2-chloroethoxy)methane	NA	Lab	< 0.024 ug/l	< 0.024 ug/l	
Bis(2-chloroethyl)ether	NA	Lab	< 0.035 ug/l	< 0.035 ug/l	
Bis(2-chloroisopropyl)ether	NA	Lab	< 0.026 ug/l	< 0.026 ug/l	
Bis(2-ethylhexyl)phthalate	NA	Lab	< 3.6 ug/l	< 18 ug/l	
Butyl benzyl phthalate	NA	Lab	< 0.041 ug/l	< 0.033 ug/l	
Carbazole	NA	Lab	< 0.018 ug/l	< 0.018 ug/l	
Chrysene	NA	Lab	< 0.028 ug/l	< 0.028 ug/l	
Dibenz(a,h)anthracene	NA	Lab	< 0.017 ug/l	< 0.017 ug/l	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-97-9 9/24/2008		RPD Percent %
			N	FD	
Chemical Name	Total or Dissolved	Analysis Location			
Dibenzofuran	NA	Lab	< 0.018 ug/l	< 0.018 ug/l	
Diethyl phthalate	NA	Lab	< 0.041 ug/l	< 0.045 ug/l	
Dimethyl phthalate	NA	Lab	< 0.021 ug/l	< 0.021 ug/l	
Di-n-butyl phthalate	NA	Lab	< 0.064 ug/l	< 0.067 ug/l	
Di-n-octyl phthalate	NA	Lab	< 0.018 ug/l	< 0.018 ug/l	
Fluoranthene	NA	Lab	< 0.020 ug/l	< 0.020 ug/l	
Fluorene	NA	Lab	< 0.027 ug/l	< 0.027 ug/l	
Hexachlorobenzene	NA	Lab	< 0.022 ug/l	< 0.022 ug/l	
Hexachlorobutadiene	NA	Lab	< 0.027 ug/l	< 0.027 ug/l	
Hexachlorocyclopentadiene	NA	Lab	< 0.19 R ug/l	< 0.19 R ug/l	
Hexachloroethane	NA	Lab	< 0.024 ug/l	< 0.024 ug/l	
Indeno(1,2,3-cd)pyrene	NA	Lab	< 0.021 ug/l	< 0.021 ug/l	
Isophorone	NA	Lab	< 0.016 ug/l	< 0.016 ug/l	
Naphthalene	NA	Lab	< 0.022 ug/l	< 0.022 ug/l	
Nitrobenzene	NA	Lab	< 0.028 ug/l	< 0.028 ug/l	
N-Nitrosodimethylamine	NA	Lab	< 0.42 ug/l	< 0.42 ug/l	
N-Nitrosodi-n-propylamine	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	
N-Nitrosodiphenylamine	NA	Lab	< 0.048 ug/l	< 0.048 ug/l	
o-Cresol	NA	Lab	< 0.11 ug/l	< 0.11 ug/l	
p-Cresol	NA	Lab	< 0.12 ug/l	< 0.12 ug/l	
Pentachlorophenol	NA	Lab	< 0.34 ug/l	< 0.34 ug/l	
Phenanthrene	NA	Lab	< 0.022 ug/l	< 0.022 ug/l	
Phenol	NA	Lab	< 0.063 ug/l	< 0.063 ug/l	
Pyrene	NA	Lab	< 0.019 ug/l	< 0.019 ug/l	
Pyridine	NA	Lab	< 1.4 R ug/l	< 1.4 R ug/l	
VOCs					
1,1,1,2-Tetrachloroethane	NA	Lab	< 0.047 ug/l	< 0.047 ug/l	
1,1,1-Trichloroethane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l	
1,1,2,2-Tetrachloroethane	NA	Lab	< 0.064 ug/l	< 0.064 ug/l	
1,1,2-Trichloroethane	NA	Lab	< 0.061 ug/l	< 0.061 ug/l	
1,1-Dichloro-1-propene	NA	Lab	< 0.051 ug/l	< 0.051 ug/l	
1,1-Dichloroethane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	
1,1-Dichloroethylene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	
1,2,3-Trichlorobenzene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	
1,2,3-Trichloropropane	NA	Lab	< 0.14 ug/l	< 0.14 ug/l	
1,2,4-Trichlorobenzene	NA	Lab	< 0.13 ug/l	< 0.13 ug/l	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-97-9 9/24/2008		RPD Percent %
			N	FD	
Chemical Name	Total or Dissolved	Analysis Location			
1,2,4-Trimethylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	
1,2-Dibromo-3-chloropropane	NA	Lab	< 0.22 ug/l	< 0.22 ug/l	
1,2-Dibromoethane	NA	Lab	< 0.084 ug/l	< 0.084 ug/l	
1,2-Dichlorobenzene	NA	Lab	< 0.044 ug/l	< 0.044 ug/l	
1,2-Dichloroethane	NA	Lab	< 0.073 ug/l	< 0.073 ug/l	
1,2-Dichloroethylene, cis	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	
1,2-Dichloroethylene, trans	NA	Lab	< 0.048 ug/l	< 0.048 ug/l	
1,2-Dichloropropane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	
1,3,5-Trimethylbenzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	
1,3-Dichloro-1-propene trans	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	
1,3-Dichloro-1-propene, cis	NA	Lab	< 0.038 ug/l	< 0.038 ug/l	
1,3-Dichlorobenzene	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	
1,3-Dichloropropane	NA	Lab	< 0.032 ug/l	< 0.032 ug/l	
1,4-Dichlorobenzene	NA	Lab	< 0.070 ug/l	< 0.080 ug/l	
2,2-Dichloropropane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l	
2-Chloroethyl Vinyl Ether	NA	Lab	< 0.19 R ug/l	< 0.19 R ug/l	
2-Hexanone	NA	Lab	< 2.9 ug/l	< 2.9 ug/l	
Acetone	NA	Lab	< 3.4 ug/l	< 7.6 ug/l	
Acrolein	NA	Lab	< 2.0 ug/l	< 2.0 ug/l	
Acrylonitrile	NA	Lab	< 0.31 ug/l	< 0.31 ug/l	
Benzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	
Bromobenzene	NA	Lab	< 0.027 ug/l	< 0.027 ug/l	
Bromochloromethane	NA	Lab	< 0.091 ug/l	< 0.091 ug/l	
Bromodichloromethane	NA	Lab	< 0.036 ug/l	< 0.036 ug/l	
Bromoform	NA	Lab	< 0.080 ug/l	< 0.080 ug/l	
Bromomethane	NA	Lab	< 0.072 ug/l	< 0.072 ug/l	
Butyl benzene	NA	Lab	< 0.056 ug/l	< 0.056 ug/l	
Butylbenzene sec	NA	Lab	< 0.036 ug/l	< 0.036 ug/l	
Butylbenzene tert-	NA	Lab	< 0.038 ug/l	< 0.038 ug/l	
Carbon disulfide	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	
Carbon tetrachloride	NA	Lab	< 0.068 ug/l	< 0.068 ug/l	
Chlorobenzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	
Chlorodibromomethane	NA	Lab	< 0.057 ug/l	< 0.057 ug/l	
Chloroethane	NA	Lab	< 0.13 ug/l	< 0.13 ug/l	
Chloroform	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	
Chloromethane	NA	Lab	0.060 J ug/l	0.060 J ug/l	0.00

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-97-9 9/24/2008		RPD Percent %
			MW97-9_09242008 N	MW-77-9 MW97- 9_09242008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location			
Chlorotoluene o-	NA	Lab	< 0.035 ug/l	< 0.035 ug/l	
Chlorotoluene p-	NA	Lab	< 0.025 ug/l	< 0.025 ug/l	
Cumene (isopropyl benzene)	NA	Lab	< 0.031 ug/l	< 0.031 ug/l	
Cymene p- (Toluene isopropyl p-)	NA	Lab	< 0.044 ug/l	< 0.044 ug/l	
Dibromomethane (methylene bromide)	NA	Lab	< 0.089 ug/l	< 0.089 ug/l	
Dichlorodifluoromethane (CFC-12)	NA	Lab	< 0.083 ug/l	< 0.083 ug/l	
Ethyl benzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	
Hexachlorobutadiene	NA	Lab	< 0.19 ug/l	< 0.19 ug/l	
Iodomethane	NA	Lab	< 0.27 ug/l	< 0.27 ug/l	
Methyl ethyl ketone	NA	Lab	< 3.8 ug/l	< 3.8 ug/l	
Methyl isobutyl ketone	NA	Lab	< 3.0 ug/l	< 3.0 ug/l	
Methyl tertiary butyl ether (MTBE)	NA	Lab	< 0.070 ug/l	< 0.070 ug/l	
Methylene chloride	NA	Lab	< 0.23 ug/l	< 0.23 ug/l	
Naphthalene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	
Propylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	
Styrene	NA	Lab	< 0.039 ug/l	< 0.039 ug/l	
Tetrachloroethylene	NA	Lab	< 0.077 ug/l	< 0.077 ug/l	
Toluene	NA	Lab	< 0.21 ug/l	< 0.33 ug/l	
Trichloroethylene	NA	Lab	< 0.061 ug/l	< 0.061 ug/l	
Trichlorofluoromethane	NA	Lab	< 0.086 ug/l	< 0.086 ug/l	
Vinyl acetate	NA	Lab	< 0.91 ug/l	< 0.91 ug/l	
Vinyl chloride	NA	Lab	< 0.071 ug/l	< 0.071 ug/l	
Xylene m & p	NA	Lab	< 0.078 ug/l	< 0.078 ug/l	
Xylene, o-	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	
PCBs					
Aroclor 1016	NA	Lab	--	--	
Aroclor 1221	NA	Lab	--	--	
Aroclor 1232	NA	Lab	--	--	
Aroclor 1242	NA	Lab	--	--	
Aroclor 1248	NA	Lab	--	--	
Aroclor 1254	NA	Lab	--	--	
Aroclor 1260	NA	Lab	--	--	
Aroclor 1262	NA	Lab	--	--	
Aroclor 1268	NA	Lab	--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			MW-97-9 9/24/2008		RPD Percent %
			MW97-9_09242008 N	MW-77-9 MW97- 9_09242008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location			
Radiochemical Parameters					
Gross Alpha (radiation)	NA	Lab	< 3.9 pCi/l	< 3.2 pCi/l	
Gross Beta (radiation)	NA	Lab	30 +/- 6.7 pCi/l	33 +/- 6.1 pCi/l	9.52
Lead 210	NA	Lab	--	--	
Radium 226	NA	Lab	< 0.26 pCi/l	< 0.33 pCi/l	
Radium 228	NA	Lab	< 1.5 pCi/l	< 1.5 pCi/l	
Thorium 230	NA	Lab	--	--	
Uranium 234	NA	Lab	--	--	
Uranium 235	NA	Lab	--	--	
Uranium 238 (radiochemical method)	NA	Lab	--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date			RP-W-4 9/24/2008		RPD Percent %	SB-08-2 12/11/2008		RPD Percent %
Depth Interval Depth Unit Sample Name				RP-W-4X		10 - 14 ft	10 - 14 ft	
Sys Sample Code Sample Type Code			RPW4_09242008 N	RPW4_09242008_FD FD		SB-08-2 10- 14_12112008 N	SB-08-A SB-08-2 10- 14_12112008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
General Parameters								
Alkalinity, bicarbonate as CaCO3	NA	Lab	59 mg/l	68 mg/l	14.17	--	--	
Alkalinity, carbonate as CaCO3	NA	Lab	< 2 mg/l	< 2 mg/l		--	--	
Chloride	NA	Lab	147 mg/l	145 mg/l	1.37	--	--	
Dissolved oxygen	NA	Field	--	--		--	--	
Fluoride	NA	Lab	< 1.0 mg/l	< 1.0 mg/l		--	--	
Fluoride by Bellack	NA	Lab	--	--		--	--	
Nitrate + Nitrite	NA	Lab	0.16 mg/l	0.16 mg/l	0.00	--	--	
Nitrogen, ammonia as N	NA	Lab	< 0.05 mg/l	< 0.05 mg/l		--	--	
pH, standard units	NA	Field	--	--		--	--	
Phosphorus, elemental (white)	NA	Lab	< 0.0000230 mg/l	< 0.0000230 mg/l		0.00407 mg/kg	0.00236 mg/kg	53.19
Phosphorus, total	NA	Lab	0.35 mg/l	0.33 mg/l	5.88	--	--	
Redox (oxidation potential)	NA	Field	--	--		--	--	
Specific Conductance umhos@ 25oC	NA	Field	--	--		--	--	
Sulfate	NA	Lab	784 mg/l	735 mg/l	6.45	--	--	
Temperature, degrees C	NA	Field	--	--		--	--	
Turbidity	NA	Field	--	--		--	--	
Metals								
Antimony	Dissolved	Lab	--	--		--	--	
Antimony	NA	Lab	--	--		35.0 mg/kg	34.5 mg/kg	1.44
Antimony	Total	Lab	< 0.00025 mg/l	< 0.00025 mg/l		--	--	
Arsenic	Dissolved	Lab	--	--		--	--	
Arsenic	NA	Lab	--	--		112 mg/kg	115 mg/kg	2.64
Arsenic	Total	Lab	0.0336 mg/l	0.0328 mg/l	2.41	--	--	
Barium	Dissolved	Lab	--	--		--	--	
Barium	NA	Lab	--	--		135 mg/kg	133 mg/kg	1.49
Barium	Total	Lab	0.0243 mg/l	0.0250 mg/l	2.84	--	--	
Beryllium	Dissolved	Lab	--	--		--	--	
Beryllium	NA	Lab	--	--		1.28 mg/kg	1.24 mg/kg	3.17
Beryllium	Total	Lab	< 0.00010 mg/l	< 0.00010 mg/l		--	--	
Cadmium	Dissolved	Lab	--	--		--	--	
Cadmium	NA	Lab	--	--		1160 mg/kg	1190 mg/kg	2.55
Cadmium	Total	Lab	0.0016 mg/l	0.0016 mg/l	0.00	--	--	
Calcium	Dissolved	Lab	--	--		--	--	
Calcium	NA	Lab	--	--		207000 mg/kg	208000 mg/kg	0.48
Calcium	Total	Lab	264 mg/l	253 mg/l	4.26	--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008
Rhodia Silver Bow Plant

%RPD = $|(N - FD) / (N + FD) / 2| \times 100$
Where: N = 1st Value
FD = 2nd Value

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			RP-W-4 9/24/2008		RPD Percent %	SB-08-2 12/11/2008		RPD Percent %
			RPW4_09242008 N	RPW4_09242008_FD FD		10 - 14 ft	10 - 14 ft	
						SB-08-2 10- 14_12112008 N	SB-08-A SB-08-2 10- 14_12112008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
Chromium	Dissolved	Lab	--	--		--	--	
Chromium	NA	Lab	--	--		910 mg/kg	910 mg/kg	0.00
Chromium	Total	Lab	< 0.0010 mg/l	< 0.0010 mg/l		--	--	
Cobalt	Dissolved	Lab	--	--		--	--	
Cobalt	NA	Lab	--	--		3.0 mg/kg	3.1 mg/kg	3.28
Cobalt	Total	Lab	0.0044 mg/l	0.0044 mg/l	0.00	--	--	
Copper	Dissolved	Lab	--	--		--	--	
Copper	NA	Lab	--	--		97.4 mg/kg	96.8 mg/kg	0.62
Copper	Total	Lab	0.0054 mg/l	0.0057 mg/l	5.41	--	--	
Iron	Dissolved	Lab	--	--		--	--	
Iron	NA	Lab	--	--		11300 mg/kg	11400 mg/kg	0.88
Iron	Total	Lab	2.22 mg/l	2.05 mg/l	7.96	--	--	
Lead	Dissolved	Lab	--	--		--	--	
Lead	NA	Lab	--	--		238 mg/kg	242 mg/kg	1.67
Lead	Total	Lab	0.00062 mg/l	0.00051 mg/l	19.47	--	--	
Magnesium	Dissolved	Lab	--	--		--	--	
Magnesium	NA	Lab	--	--		6370 mg/kg	6280 mg/kg	1.42
Magnesium	Total	Lab	51.3 mg/l	49.9 mg/l	2.77	--	--	
Manganese	Dissolved	Lab	--	--		--	--	
Manganese	NA	Lab	--	--		122 mg/kg	118 mg/kg	3.33
Manganese	Total	Lab	0.726 mg/l	0.727 mg/l	0.14	--	--	
Mercury	Dissolved	Lab	--	--		--	--	
Mercury	NA	Lab	--	--		2.230 mg/kg	2.250 mg/kg	0.89
Mercury	Total	Lab	0.0004 mg/l	0.0004 mg/l	0.00	--	--	
Nickel	Dissolved	Lab	--	--		--	--	
Nickel	NA	Lab	--	--		131 mg/kg	132 mg/kg	0.76
Nickel	Total	Lab	0.0084 mg/l	0.0080 mg/l	4.88	--	--	
Phosphorus, total	NA	Lab	--	--		--	--	
Potassium	Dissolved	Lab	--	--		--	--	
Potassium	NA	Lab	--	--		9490 mg/kg	9250 mg/kg	2.56
Potassium	Total	Lab	15.9 mg/l	15.3 mg/l	3.85	--	--	
Selenium	Dissolved	Lab	--	--		--	--	
Selenium	NA	Lab	--	--		136 mg/kg	139 mg/kg	2.18
Selenium	Total	Lab	0.0060 mg/l	0.0060 mg/l	0.00	--	--	
Silver	Dissolved	Lab	--	--		--	--	
Silver	NA	Lab	--	--		33.6 ma/qa	33.7 ma/qa	0.30

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			RP-W-4 9/24/2008		RPD Percent %	SB-08-2 12/11/2008		RPD Percent %
				RP-W-4X		10 - 14 ft SB-08-2 10- 14_12112008 N	10 - 14 ft SB-08-A SB-08-2 10- 14_12112008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
Silver	Total	Lab	< 0.00010 mg/l	< 0.00010 mg/l		--	--	
Sodium	Dissolved	Lab	--	--		--	--	
Sodium	NA	Lab	--	--		2010 mg/kg	2010 mg/kg	0.00
Sodium	Total	Lab	59.3 mg/l	55.8 mg/l	6.08	--	--	
Thallium	Dissolved	Lab	--	--		--	--	
Thallium	NA	Lab	--	--		31.9 mg/kg	30.1 mg/kg	5.81
Thallium	Total	Lab	< 0.00010 mg/l	< 0.00010 mg/l		--	--	
Uranium	Dissolved	Lab	--	--		--	--	
Uranium	NA	Lab	--	--		63 mg/kg	74 mg/kg	16.06
Uranium	Total	Lab	0.00217 mg/l	0.00218 mg/l	0.46	--	--	
Vanadium	Dissolved	Lab	--	--		--	--	
Vanadium	NA	Lab	--	--		1330 mg/kg	1340 mg/kg	0.75
Vanadium	Total	Lab	0.0047 mg/l	0.0047 mg/l	0.00	--	--	
Zinc	Dissolved	Lab	--	--		--	--	
Zinc	NA	Lab	--	--		6890 mg/kg	6940 mg/kg	0.72
Zinc	Total	Lab	0.0145 mg/l	0.0058 mg/l	85.71	--	--	
TCLP Metals								
Arsenic	NA	Lab	--	--		--	--	
Barium	NA	Lab	--	--		--	--	
Cadmium	NA	Lab	--	--		--	--	
Chromium	NA	Lab	--	--		--	--	
Lead	NA	Lab	--	--		--	--	
Mercury	NA	Lab	--	--		--	--	
Selenium	NA	Lab	--	--		--	--	
Silver	NA	Lab	--	--		--	--	
SVOCs								
1,2,4-Trichlorobenzene	NA	Lab	< 0.016 ug/l	< 0.016 ug/l		--	--	
1,2-Dichlorobenzene	NA	Lab	< 0.022 ug/l	< 0.022 ug/l		--	--	
1,2-Diphenylhydrazine	NA	Lab	--	--		--	--	
1,3-Dichlorobenzene	NA	Lab	< 0.021 ug/l	< 0.021 ug/l		--	--	
1,4-Dichlorobenzene	NA	Lab	< 0.029 ug/l	< 0.029 ug/l		--	--	
2,4,5-Trichlorophenol	NA	Lab	< 0.031 ug/l	< 0.031 ug/l		--	--	
2,4,6-Trichlorophenol	NA	Lab	< 0.058 ug/l	< 0.058 ug/l		--	--	
2,4-Dichlorophenol	NA	Lab	< 0.047 ug/l	< 0.047 ug/l		--	--	
2,4-Dimethylphenol	NA	Lab	< 2.2 R ug/l	< 2.2 R ug/l		--	--	
2,4-Dinitrophenol	NA	Lab	< 0.17 ug/l	< 0.17 ug/l		--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date			RP-W-4 9/24/2008		RPD Percent %	SB-08-2 12/11/2008		RPD Percent %
Depth Interval Depth Unit Sample Name			RPW4_09242008 N	RPW4_09242008_FD FD		10 - 14 ft	10 - 14 ft	
Sys Sample Code Sample Type Code						SB-08-2 10- 14_12112008 N	SB-08-A SB-08-2 10- 14_12112008_FD FD	
Chemical Name								
2,4-Dinitrotoluene	NA	Lab	< 0.018 ug/l	< 0.018 ug/l	--	--		
2,6-Dinitrotoluene	NA	Lab	< 0.033 ug/l	< 0.033 ug/l	--	--		
2-Chloronaphthalene	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	--	--		
2-Chlorophenol	NA	Lab	< 0.054 ug/l	< 0.054 ug/l	--	--		
2-Methyl-4,6-dinitrophenol	NA	Lab	< 0.025 ug/l	< 0.025 ug/l	--	--		
2-Methylnaphthalene	NA	Lab	< 0.026 ug/l	< 0.026 ug/l	--	--		
2-Nitroaniline	NA	Lab	< 0.024 ug/l	< 0.024 ug/l	--	--		
2-Nitrophenol	NA	Lab	< 0.063 ug/l	< 0.063 ug/l	--	--		
3,3'-Dichlorobenzidine	NA	Lab	< 0.43 ug/l	< 0.43 ug/l	--	--		
3-Nitroaniline	NA	Lab	< 0.029 ug/l	< 0.029 ug/l	--	--		
4-Bromophenyl phenyl ether	NA	Lab	< 0.026 ug/l	< 0.026 ug/l	--	--		
4-Chloro-3-methylphenol	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	--	--		
4-Chloroaniline	NA	Lab	< 0.025 ug/l	< 0.025 ug/l	--	--		
4-Chlorophenyl phenyl ether	NA	Lab	< 0.027 ug/l	< 0.027 ug/l	--	--		
4-Nitroaniline	NA	Lab	< 0.019 ug/l	< 0.019 ug/l	--	--		
4-Nitrophenol	NA	Lab	< 0.28 ug/l	< 0.28 ug/l	--	--		
Acenaphthene	NA	Lab	< 0.026 ug/l	< 0.026 ug/l	--	--		
Acenaphthylene	NA	Lab	< 0.015 ug/l	< 0.015 ug/l	--	--		
Anthracene	NA	Lab	< 0.024 ug/l	< 0.024 ug/l	--	--		
Azobenzene	NA	Lab	< 0.021 ug/l	< 0.021 ug/l	--	--		
Benzidine	NA	Lab	--	--	--	--		
Benzo(a)anthracene	NA	Lab	< 0.018 ug/l	< 0.018 ug/l	--	--		
Benzo(a)pyrene	NA	Lab	< 0.031 ug/l	< 0.031 ug/l	--	--		
Benzo(b)fluoranthene	NA	Lab	< 0.017 ug/l	< 0.017 ug/l	--	--		
Benzo(g,h,i)perylene	NA	Lab	< 0.019 ug/l	< 0.019 ug/l	--	--		
Benzo(k)fluoranthene	NA	Lab	< 0.024 ug/l	< 0.024 ug/l	--	--		
Benzoic Acid	NA	Lab	< 1.1 R ug/l	< 1.1 R ug/l	--	--		
Benzyl alcohol	NA	Lab	< 0.073 ug/l	< 0.073 ug/l	--	--		
Bis(2-chloroethoxy)methane	NA	Lab	< 0.024 ug/l	< 0.024 ug/l	--	--		
Bis(2-chloroethyl)ether	NA	Lab	< 0.035 ug/l	< 0.035 ug/l	--	--		
Bis(2-chloroisopropyl)ether	NA	Lab	< 0.026 ug/l	< 0.026 ug/l	--	--		
Bis(2-ethylhexyl)phthalate	NA	Lab	< 0.13 ug/l	< 0.13 ug/l	--	--		
Butyl benzyl phthalate	NA	Lab	< 0.018 ug/l	< 0.020 ug/l	--	--		
Carbazole	NA	Lab	< 0.018 ug/l	< 0.018 ug/l	--	--		
Chrysene	NA	Lab	< 0.028 ug/l	< 0.028 ug/l	--	--		
Dibenz(a,h)anthracene	NA	Lab	< 0.017 ug/l	< 0.017 ug/l	--	--		

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date			RP-W-4 9/24/2008		RPD Percent %	SB-08-2 12/11/2008		RPD Percent %
Depth Interval				RP-W-4X		10 - 14	10 - 14	
Depth Unit						ft	ft	
Sample Name						SB-08-2 10- 14_12112008	SB-08-A SB-08-2 10- 14_12112008_FD	
Sys Sample Code			RPW4_09242008	RPW4_09242008_FD				
Sample Type Code			N	FD		N	FD	
Chemical Name	Total or Dissolved	Analysis Location						
Dibenzofuran	NA	Lab	< 0.018 ug/l	< 0.018 ug/l		--	--	
Diethyl phthalate	NA	Lab	< 0.042 ug/l	< 0.032 ug/l		--	--	
Dimethyl phthalate	NA	Lab	< 0.021 ug/l	< 0.021 ug/l		--	--	
Di-n-butyl phthalate	NA	Lab	< 0.087 ug/l	< 0.085 ug/l		--	--	
Di-n-octyl phthalate	NA	Lab	< 0.018 ug/l	< 0.018 ug/l		--	--	
Fluoranthene	NA	Lab	< 0.020 ug/l	< 0.020 ug/l		--	--	
Fluorene	NA	Lab	< 0.027 ug/l	< 0.027 ug/l		--	--	
Hexachlorobenzene	NA	Lab	< 0.022 ug/l	< 0.022 ug/l		--	--	
Hexachlorobutadiene	NA	Lab	< 0.027 ug/l	< 0.027 ug/l		--	--	
Hexachlorocyclopentadiene	NA	Lab	< 0.19 R ug/l	< 0.19 R ug/l		--	--	
Hexachloroethane	NA	Lab	< 0.024 ug/l	< 0.024 ug/l		--	--	
Indeno(1,2,3-cd)pyrene	NA	Lab	< 0.021 ug/l	< 0.021 ug/l		--	--	
Isophorone	NA	Lab	< 0.016 ug/l	< 0.016 ug/l		--	--	
Naphthalene	NA	Lab	< 0.022 ug/l	< 0.022 ug/l		--	--	
Nitrobenzene	NA	Lab	< 0.028 ug/l	< 0.028 ug/l		--	--	
N-Nitrosodimethylamine	NA	Lab	< 0.42 ug/l	< 0.42 ug/l		--	--	
N-Nitrosodi-n-propylamine	NA	Lab	< 0.037 ug/l	< 0.037 ug/l		--	--	
N-Nitrosodiphenylamine	NA	Lab	< 0.048 ug/l	< 0.048 ug/l		--	--	
o-Cresol	NA	Lab	< 0.11 ug/l	< 0.11 ug/l		--	--	
p-Cresol	NA	Lab	< 0.12 ug/l	< 0.12 ug/l		--	--	
Pentachlorophenol	NA	Lab	< 0.34 ug/l	< 0.34 ug/l		--	--	
Phenanthrene	NA	Lab	< 0.022 ug/l	< 0.022 ug/l		--	--	
Phenol	NA	Lab	< 0.063 ug/l	< 0.063 ug/l		--	--	
Pyrene	NA	Lab	< 0.019 ug/l	< 0.019 ug/l		--	--	
Pyridine	NA	Lab	< 1.4 R ug/l	< 1.4 R ug/l		--	--	
VOCs								
1,1,1,2-Tetrachloroethane	NA	Lab	< 0.047 ug/l	< 0.047 ug/l		--	--	
1,1,1-Trichloroethane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l		--	--	
1,1,2,2-Tetrachloroethane	NA	Lab	< 0.064 ug/l	< 0.064 ug/l		--	--	
1,1,2-Trichloroethane	NA	Lab	< 0.061 ug/l	< 0.061 ug/l		--	--	
1,1-Dichloro-1-propene	NA	Lab	< 0.051 ug/l	< 0.051 ug/l		--	--	
1,1-Dichloroethane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l		--	--	
1,1-Dichloroethylene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l		--	--	
1,2,3-Trichlorobenzene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l		--	--	
1,2,3-Trichloropropane	NA	Lab	< 0.14 ug/l	< 0.14 ug/l		--	--	
1,2,4-Trichlorobenzene	NA	Lab	< 0.13 ug/l	< 0.13 ug/l		--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code			RP-W-4		RPD Percent %	SB-08-2		RPD Percent %
Sample Date			9/24/2008			12/11/2008		
Depth Interval				RP-W-4X		10 - 14	10 - 14	
Depth Unit						ft	ft	
Sample Name					SB-08-2 10- 14_12112008	SB-08-A SB-08-2 10- 14_12112008_FD		
Sys Sample Code			RPW4_09242008	RPW4_09242008_FD				
Sample Type Code			N	FD				
Chemical Name	Total or Dissolved	Analysis Location						
1,2,4-Trimethylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l		--	--	
1,2-Dibromo-3-chloropropane	NA	Lab	< 0.22 J ug/l	< 0.22 J ug/l		--	--	
1,2-Dibromoethane	NA	Lab	< 0.084 ug/l	< 0.084 ug/l		--	--	
1,2-Dichlorobenzene	NA	Lab	< 0.044 ug/l	< 0.044 ug/l		--	--	
1,2-Dichloroethane	NA	Lab	< 0.073 ug/l	< 0.073 ug/l		--	--	
1,2-Dichloroethylene, cis	NA	Lab	< 0.045 ug/l	< 0.045 ug/l		--	--	
1,2-Dichloroethylene, trans	NA	Lab	< 0.048 ug/l	< 0.048 ug/l		--	--	
1,2-Dichloropropane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l		--	--	
1,3,5-Trimethylbenzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l		--	--	
1,3-Dichloro-1-propene trans	NA	Lab	< 0.041 ug/l	< 0.041 ug/l		--	--	
1,3-Dichloro-1-propene, cis	NA	Lab	< 0.038 ug/l	< 0.038 ug/l		--	--	
1,3-Dichlorobenzene	NA	Lab	< 0.041 ug/l	< 0.041 ug/l		--	--	
1,3-Dichloropropane	NA	Lab	< 0.032 ug/l	< 0.032 ug/l		--	--	
1,4-Dichlorobenzene	NA	Lab	< 0.054 ug/l	< 0.054 ug/l		--	--	
2,2-Dichloropropane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l		--	--	
2-Chloroethyl Vinyl Ether	NA	Lab	< 0.19 R ug/l	< 0.19 R ug/l		--	--	
2-Hexanone	NA	Lab	< 2.9 ug/l	< 2.9 ug/l		--	--	
Acetone	NA	Lab	< 3.1 ug/l	< 3.2 ug/l		--	--	
Acrolein	NA	Lab	< 2.0 ug/l	< 2.0 ug/l		--	--	
Acrylonitrile	NA	Lab	< 0.31 ug/l	< 0.31 ug/l		--	--	
Benzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l		--	--	
Bromobenzene	NA	Lab	< 0.027 ug/l	< 0.027 ug/l		--	--	
Bromochloromethane	NA	Lab	< 0.091 ug/l	< 0.091 ug/l		--	--	
Bromodichloromethane	NA	Lab	< 0.036 ug/l	< 0.036 ug/l		--	--	
Bromoform	NA	Lab	< 0.080 ug/l	< 0.080 ug/l		--	--	
Bromomethane	NA	Lab	< 0.072 ug/l	< 0.072 ug/l		--	--	
Butyl benzene	NA	Lab	< 0.056 ug/l	< 0.056 ug/l		--	--	
Butylbenzene sec	NA	Lab	< 0.036 ug/l	< 0.036 ug/l		--	--	
Butylbenzene tert-	NA	Lab	< 0.038 ug/l	< 0.038 ug/l		--	--	
Carbon disulfide	NA	Lab	< 0.045 ug/l	< 0.045 ug/l		--	--	
Carbon tetrachloride	NA	Lab	< 0.068 ug/l	< 0.068 ug/l		--	--	
Chlorobenzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l		--	--	
Chlorodibromomethane	NA	Lab	< 0.057 ug/l	< 0.057 ug/l		--	--	
Chloroethane	NA	Lab	< 0.13 ug/l	< 0.13 ug/l		--	--	
Chloroform	NA	Lab	< 0.042 ug/l	< 0.042 ug/l		--	--	
Chloromethane	NA	Lab	< 0.053 ug/l	0.070 J ug/l		--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			RP-W-4 9/24/2008		RPD Percent %	SB-08-2 12/11/2008		RPD Percent %
			RPW4_09242008 N	RPW4_09242008_FD FD		10 - 14	10 - 14	
						ft	ft	
						SB-08-2 10- 14_12112008	SB-08-A SB-08-2 10- 14_12112008_FD	
						N	FD	
Chemical Name	Total or Dissolved	Analysis Location						
Chlorotoluene o-	NA	Lab	< 0.035 ug/l	< 0.035 ug/l		--	--	
Chlorotoluene p-	NA	Lab	< 0.025 ug/l	< 0.025 ug/l		--	--	
Cumene (isopropyl benzene)	NA	Lab	< 0.031 ug/l	< 0.031 ug/l		--	--	
Cymene p- (Toluene isopropyl p-)	NA	Lab	< 0.044 ug/l	< 0.044 ug/l		--	--	
Dibromomethane (methylene bromide)	NA	Lab	< 0.089 ug/l	< 0.089 ug/l		--	--	
Dichlorodifluoromethane (CFC-12)	NA	Lab	< 0.083 ug/l	< 0.083 ug/l		--	--	
Ethyl benzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l		--	--	
Hexachlorobutadiene	NA	Lab	< 0.19 ug/l	< 0.19 ug/l		--	--	
Iodomethane	NA	Lab	< 0.27 ug/l	< 0.27 ug/l		--	--	
Methyl ethyl ketone	NA	Lab	< 3.8 ug/l	< 3.8 ug/l		--	--	
Methyl isobutyl ketone	NA	Lab	< 3.0 ug/l	< 3.0 ug/l		--	--	
Methyl tertiary butyl ether (MTBE)	NA	Lab	< 0.070 ug/l	< 0.070 ug/l		--	--	
Methylene chloride	NA	Lab	< 0.23 ug/l	< 0.23 ug/l		--	--	
Naphthalene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l		--	--	
Propylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l		--	--	
Styrene	NA	Lab	< 0.039 ug/l	< 0.039 ug/l		--	--	
Tetrachloroethylene	NA	Lab	< 0.077 ug/l	< 0.077 ug/l		--	--	
Toluene	NA	Lab	< 0.048 ug/l	< 0.060 ug/l		--	--	
Trichloroethylene	NA	Lab	< 0.061 ug/l	< 0.061 ug/l		--	--	
Trichlorofluoromethane	NA	Lab	< 0.086 ug/l	< 0.086 ug/l		--	--	
Vinyl acetate	NA	Lab	< 0.91 ug/l	< 0.91 ug/l		--	--	
Vinyl chloride	NA	Lab	< 0.071 ug/l	< 0.071 ug/l		--	--	
Xylene m & p	NA	Lab	< 0.078 ug/l	< 0.078 ug/l		--	--	
Xylene, o-	NA	Lab	< 0.037 ug/l	< 0.037 ug/l		--	--	
PCBs								
Aroclor 1016	NA	Lab	--	--		--	--	
Aroclor 1221	NA	Lab	--	--		--	--	
Aroclor 1232	NA	Lab	--	--		--	--	
Aroclor 1242	NA	Lab	--	--		--	--	
Aroclor 1248	NA	Lab	--	--		--	--	
Aroclor 1254	NA	Lab	--	--		--	--	
Aroclor 1260	NA	Lab	--	--		--	--	
Aroclor 1262	NA	Lab	--	--		--	--	
Aroclor 1268	NA	Lab	--	--		--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			RP-W-4 9/24/2008		RPD Percent %	SB-08-2 12/11/2008		RPD Percent %	
				RP-W-4X RPW4_09242008_FD FD		10 - 14 ft	10 - 14 ft		
						SB-08-2 10- 14_12112008	SB-08-A SB-08-2 10- 14_12112008_FD		
						N	FD		
Chemical Name	Total or Dissolved	Analysis Location							
Radiochemical Parameters									
Gross Alpha (radiation)	NA	Lab	8.8 +/- 4.8 pCi/l	6.4 +/- 4.4 pCi/l	31.58	--	--		
Gross Beta (radiation)	NA	Lab	21 +/- 6.7 pCi/l	29 +/- 6.6 pCi/l	32.00	--	--		
Lead 210	NA	Lab	--	--		200 +/- 4.5 pCi/g	220 +/- 4.6 pCi/g	9.52	
Radium 226	NA	Lab	< 0.4 pCi/l	< 0.29 pCi/l		20 +/- 1.9 pCi/g	22 +/- 2 pCi/g	9.52	
Radium 228	NA	Lab	< 1.4 pCi/l	< 1.5 pCi/l		--	--		
Thorium 230	NA	Lab	--	--		20 +/- 1.6 pCi/g	18 +/- 1.5 pCi/g	10.53	
Uranium 234	NA	Lab	--	--		19 +/- 1.4 pCi/g	20 +/- 1.4 pCi/g	5.13	
Uranium 235	NA	Lab	--	--		0.94 +/- 0.38 pCi/g	0.73 +/- 0.34 pCi/g	25.15	
Uranium 238 (radiochemical method)	NA	Lab	--	--		18.2 +/- 1.4 pCi/g	18.8 +/- 1.4 pCi/g	3.24	

Appendix 1-C4a
Laboratory Precision Data Summary
2008
Rhodia Silver Bow Plant

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Sys Loc Code Sample Date			SB-08-2 12/11/2008		RPD Percent %	SD-13 9/18/2008		RPD Percent %
Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			26 - 28 ft SB-08-2 26- 28_12112008 N	26 - 28 ft SB-08-B SB-08-2 26- 28_12112008_FD FD		0 - 10 cm SD-13 (0-10) CM_09182008 N	0 - 10 cm SD-200 0-10 SD-13 (0-10) CM_09182008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
General Parameters								
Alkalinity, bicarbonate as CaCO3	NA	Lab	--	--		--	--	
Alkalinity, carbonate as CaCO3	NA	Lab	--	--		--	--	
Chloride	NA	Lab	--	--		605 mg/kg	505 mg/kg	18.02
Dissolved oxygen	NA	Field	--	--		--	--	
Fluoride	NA	Lab	--	--		--	--	
Fluoride by Bellack	NA	Lab	--	--		947 J mg/kg	9840 J mg/kg	164.88
Nitrate + Nitrite	NA	Lab	--	--		< 1.6 J mg/kg	< 1.6 J mg/kg	
Nitrogen, ammonia as N	NA	Lab	--	--		15.8 mg/kg	15.5 mg/kg	1.92
pH, standard units	NA	Field	--	--		--	--	
Phosphorus, elemental (white)	NA	Lab	< 0.000469 mg/kg	< 0.000469 mg/kg		< 0.000280 mg/kg	< 0.000280 mg/kg	
Phosphorus, total	NA	Lab	--	--		--	--	
Redox (oxidation potential)	NA	Field	--	--		--	--	
Specific Conductance umhos@ 25oC	NA	Field	--	--		--	--	
Sulfate	NA	Lab	--	--		431 mg/kg	541 mg/kg	22.63
Temperature, degrees C	NA	Field	--	--		--	--	
Turbidity	NA	Field	--	--		--	--	
Metals								
Antimony	Dissolved	Lab	--	--		--	--	
Antimony	NA	Lab	0.27 mg/kg	0.25 mg/kg	7.69	0.68 mg/kg	0.65 mg/kg	4.51
Antimony	Total	Lab	--	--		--	--	
Arsenic	Dissolved	Lab	--	--		--	--	
Arsenic	NA	Lab	5.77 mg/kg	4.82 mg/kg	17.94	11.4 mg/kg	11.2 mg/kg	1.77
Arsenic	Total	Lab	--	--		--	--	
Barium	Dissolved	Lab	--	--		--	--	
Barium	NA	Lab	721 J mg/kg	172 J mg/kg	122.96	244 mg/kg	249 mg/kg	2.03
Barium	Total	Lab	--	--		--	--	
Beryllium	Dissolved	Lab	--	--		--	--	
Beryllium	NA	Lab	0.75 J mg/kg	0.52 J mg/kg	36.22	0.97 J mg/kg	1.01 J mg/kg	4.04
Beryllium	Total	Lab	--	--		--	--	
Cadmium	Dissolved	Lab	--	--		--	--	
Cadmium	NA	Lab	1.3 J mg/kg	0.4 J mg/kg	105.88	26.2 mg/kg	25.6 mg/kg	2.32
Cadmium	Total	Lab	--	--		--	--	
Calcium	Dissolved	Lab	--	--		--	--	
Calcium	NA	Lab	5110 mg/kg	3830 mg/kg	28.64	17200 mg/kg	17000 mg/kg	1.17
Calcium	Total	Lab	--	--		--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date			SB-08-2 12/11/2008		RPD Percent %	SD-13 9/18/2008		RPD Percent %
Depth Interval	Depth Unit	Sample Name	26 - 28 ft	26 - 28 ft		0 - 10 cm	0 - 10 cm	
Sys Sample Code	Sample Type Code		SB-08-2 26- 28_12112008 N	SB-08-B SB-08-2 26- 28_12112008_FD FD		SD-13 (0-10) CM_09182008 N	SD-200 0-10 SD-13 (0-10) CM_09182008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
Chromium	Dissolved	Lab	--	--		--	--	
Chromium	NA	Lab	13.1 J mg/kg	8.1 J mg/kg	47.17	14.1 mg/kg	14.8 mg/kg	4.84
Chromium	Total	Lab	--	--		--	--	
Cobalt	Dissolved	Lab	--	--		--	--	
Cobalt	NA	Lab	5.2 mg/kg	4.7 mg/kg	10.10	6.69 mg/kg	6.96 mg/kg	3.96
Cobalt	Total	Lab	--	--		--	--	
Copper	Dissolved	Lab	--	--		--	--	
Copper	NA	Lab	12.7 mg/kg	11.1 mg/kg	13.45	83.2 mg/kg	83.5 mg/kg	0.36
Copper	Total	Lab	--	--		--	--	
Iron	Dissolved	Lab	--	--		--	--	
Iron	NA	Lab	17100 mg/kg	15300 mg/kg	11.11	16800 mg/kg	17900 mg/kg	6.34
Iron	Total	Lab	--	--		--	--	
Lead	Dissolved	Lab	--	--		--	--	
Lead	NA	Lab	5.5 J mg/kg	< 3.5 mg/kg		25.9 mg/kg	26.1 mg/kg	0.77
Lead	Total	Lab	--	--		--	--	
Magnesium	Dissolved	Lab	--	--		--	--	
Magnesium	NA	Lab	4290 mg/kg	3560 mg/kg	18.60	5090 mg/kg	5310 mg/kg	4.23
Magnesium	Total	Lab	--	--		--	--	
Manganese	Dissolved	Lab	--	--		--	--	
Manganese	NA	Lab	255 mg/kg	217 mg/kg	16.10	556 mg/kg	571 mg/kg	2.66
Manganese	Total	Lab	--	--		--	--	
Mercury	Dissolved	Lab	--	--		--	--	
Mercury	NA	Lab	0.008 J mg/kg	0.007 J mg/kg	13.33	0.183 mg/kg	0.171 mg/kg	6.78
Mercury	Total	Lab	--	--		--	--	
Nickel	Dissolved	Lab	--	--		--	--	
Nickel	NA	Lab	7.3 J mg/kg	3.7 J mg/kg	65.45	11.5 mg/kg	11.9 mg/kg	3.42
Nickel	Total	Lab	--	--		--	--	
Phosphorus, total	NA	Lab	--	--		1580 mg/kg	1630 mg/kg	3.12
Potassium	Dissolved	Lab	--	--		--	--	
Potassium	NA	Lab	5730 J mg/kg	3260 J mg/kg	54.95	4770 mg/kg	4980 mg/kg	4.31
Potassium	Total	Lab	--	--		--	--	
Selenium	Dissolved	Lab	--	--		--	--	
Selenium	NA	Lab	< 0.5 mg/kg	0.5 J mg/kg		2.7 mg/kg	2.7 mg/kg	0.00
Selenium	Total	Lab	--	--		--	--	
Silver	Dissolved	Lab	--	--		--	--	
Silver	NA	Lab	< 0.9 mg/kg	< 0.9 mg/kg		0.52 mg/kg	0.51 mg/kg	1.94

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
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Rhodia Silver Bow Plant

Sys Loc Code Sample Date			SB-08-2 12/11/2008		RPD Percent %	SD-13 9/18/2008		RPD Percent %
Depth Interval Depth Unit Sample Name			26 - 28 ft	26 - 28 ft		0 - 10 cm	0 - 10 cm	
Sys Sample Code			SB-08-2 26- 28_12112008	SB-08-B SB-08-2 26- 28_12112008_FD		SD-13 (0-10) CM_09182008	SD-200 0-10 SD-13 (0-10) CM_09182008_FD	
Sample Type Code			N	FD		N	FD	
Chemical Name	Total or Dissolved	Analysis Location						
Silver	Total	Lab	--	--		--	--	
Sodium	Dissolved	Lab	--	--		--	--	
Sodium	NA	Lab	449 J mg/kg	213 J mg/kg	71.30	1590 mg/kg	1600 mg/kg	0.63
Sodium	Total	Lab	--	--		--	--	
Thallium	Dissolved	Lab	--	--		--	--	
Thallium	NA	Lab	0.655 mg/kg	0.626 mg/kg	4.53	0.427 mg/kg	0.437 mg/kg	2.31
Thallium	Total	Lab	--	--		--	--	
Uranium	Dissolved	Lab	--	--		--	--	
Uranium	NA	Lab	1.300 mg/kg	1.100 mg/kg	16.67	2.600 mg/kg	2.700 mg/kg	3.77
Uranium	Total	Lab	--	--		--	--	
Vanadium	Dissolved	Lab	--	--		--	--	
Vanadium	NA	Lab	36.9 mg/kg	32.2 mg/kg	13.60	34.1 mg/kg	36.8 mg/kg	7.62
Vanadium	Total	Lab	--	--		--	--	
Zinc	Dissolved	Lab	--	--		--	--	
Zinc	NA	Lab	262 J mg/kg	30.2 J mg/kg	158.66	178 mg/kg	182 mg/kg	2.22
Zinc	Total	Lab	--	--		--	--	
TCLP Metals								
Arsenic	NA	Lab	--	--		--	--	
Barium	NA	Lab	--	--		--	--	
Cadmium	NA	Lab	--	--		--	--	
Chromium	NA	Lab	--	--		--	--	
Lead	NA	Lab	--	--		--	--	
Mercury	NA	Lab	--	--		--	--	
Selenium	NA	Lab	--	--		--	--	
Silver	NA	Lab	--	--		--	--	
SVOCs								
1,2,4-Trichlorobenzene	NA	Lab	--	--		< 0.026 mg/kg	< 0.027 mg/kg	
1,2-Dichlorobenzene	NA	Lab	--	--		< 0.042 mg/kg	< 0.043 mg/kg	
1,2-Diphenylhydrazine	NA	Lab	--	--		< 0.035 mg/kg	< 0.035 mg/kg	
1,3-Dichlorobenzene	NA	Lab	--	--		< 0.043 mg/kg	< 0.044 mg/kg	
1,4-Dichlorobenzene	NA	Lab	--	--		< 0.041 mg/kg	< 0.042 mg/kg	
2,4,5-Trichlorophenol	NA	Lab	--	--		< 0.041 mg/kg	< 0.041 mg/kg	
2,4,6-Trichlorophenol	NA	Lab	--	--		< 0.034 mg/kg	< 0.034 mg/kg	
2,4-Dichlorophenol	NA	Lab	--	--		< 0.039 mg/kg	< 0.039 mg/kg	
2,4-Dimethylphenol	NA	Lab	--	--		< 0.036 mg/kg	< 0.036 mg/kg	
2,4-Dinitrophenol	NA	Lab	--	--		< 0.27 mg/kg	< 0.27 mg/kg	

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Laboratory Precision Data Summary
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Where: N = 1st Value
FD = 2nd Value

Sys Loc Code Sample Date			SB-08-2 12/11/2008		RPD Percent %	SD-13 9/18/2008		RPD Percent %
Depth Interval	Depth Unit	Sample Name	26 - 28 ft	26 - 28 ft		0 - 10 cm	0 - 10 cm	
Sys Sample Code	Sample Type Code		SB-08-2 26- 28_12112008	SB-08-B SB-08-2 26- 28_12112008_FD		SD-13 (0-10) CM_09182008	SD-200 0-10 SD-13 (0-10) CM_09182008_FD	
			N	FD		N	FD	
Chemical Name	Total or Dissolved	Analysis Location						
2,4-Dinitrotoluene	NA	Lab	--	--		< 0.035 mg/kg	< 0.036 mg/kg	
2,6-Dinitrotoluene	NA	Lab	--	--		< 0.037 mg/kg	< 0.038 mg/kg	
2-Chloronaphthalene	NA	Lab	--	--		< 0.024 mg/kg	< 0.024 mg/kg	
2-Chlorophenol	NA	Lab	--	--		< 0.024 mg/kg	< 0.024 mg/kg	
2-Methyl-4,6-dinitrophenol	NA	Lab	--	--		< 0.34 mg/kg	< 0.35 mg/kg	
2-Methylnaphthalene	NA	Lab	--	--		< 0.026 mg/kg	< 0.027 mg/kg	
2-Nitroaniline	NA	Lab	--	--		< 0.040 mg/kg	< 0.041 mg/kg	
2-Nitrophenol	NA	Lab	--	--		< 0.033 mg/kg	< 0.033 mg/kg	
3,3'-Dichlorobenzidine	NA	Lab	--	--		< 0.064 mg/kg	< 0.065 mg/kg	
3-Nitroaniline	NA	Lab	--	--		< 0.41 mg/kg	< 0.42 mg/kg	
4-Bromophenyl phenyl ether	NA	Lab	--	--		< 0.029 mg/kg	< 0.029 mg/kg	
4-Chloro-3-methylphenol	NA	Lab	--	--		< 0.039 mg/kg	< 0.040 mg/kg	
4-Chloroaniline	NA	Lab	--	--		< 0.034 mg/kg	< 0.035 mg/kg	
4-Chlorophenyl phenyl ether	NA	Lab	--	--		< 0.038 mg/kg	< 0.038 mg/kg	
4-Nitroaniline	NA	Lab	--	--		< 0.42 mg/kg	< 0.43 mg/kg	
4-Nitrophenol	NA	Lab	--	--		< 0.35 mg/kg	< 0.35 mg/kg	
Acenaphthene	NA	Lab	--	--		< 0.032 mg/kg	< 0.032 mg/kg	
Acenaphthylene	NA	Lab	--	--		< 0.038 mg/kg	< 0.038 mg/kg	
Anthracene	NA	Lab	--	--		< 0.033 mg/kg	< 0.033 mg/kg	
Azobenzene	NA	Lab	--	--		--	--	
Benidine	NA	Lab	--	--		< 0.99 R mg/kg	< 1.0 R mg/kg	
Benzo(a)anthracene	NA	Lab	--	--		< 0.029 mg/kg	< 0.030 mg/kg	
Benzo(a)pyrene	NA	Lab	--	--		< 0.047 mg/kg	< 0.047 mg/kg	
Benzo(b)fluoranthene	NA	Lab	--	--		< 0.041 mg/kg	< 0.041 mg/kg	
Benzo(g,h,i)perylene	NA	Lab	--	--		< 0.048 mg/kg	< 0.048 mg/kg	
Benzo(k)fluoranthene	NA	Lab	--	--		< 0.046 mg/kg	< 0.047 mg/kg	
Benzoic Acid	NA	Lab	--	--		1.3 J mg/kg	1.3 J mg/kg	0.00
Benzyl alcohol	NA	Lab	--	--		< 0.040 mg/kg	< 0.040 mg/kg	
Bis(2-chloroethoxy)methane	NA	Lab	--	--		< 0.026 mg/kg	< 0.027 mg/kg	
Bis(2-chloroethyl)ether	NA	Lab	--	--		< 0.028 mg/kg	< 0.028 mg/kg	
Bis(2-chloroisopropyl)ether	NA	Lab	--	--		< 0.033 mg/kg	< 0.034 mg/kg	
Bis(2-ethylhexyl)phthalate	NA	Lab	--	--		< 0.044 mg/kg	< 0.045 mg/kg	
Butyl benzyl phthalate	NA	Lab	--	--		< 0.039 mg/kg	< 0.039 mg/kg	
Carbazole	NA	Lab	--	--		< 0.027 mg/kg	< 0.027 mg/kg	
Chrysene	NA	Lab	--	--		< 0.028 mg/kg	< 0.028 mg/kg	
Dibenz(a,h)anthracene	NA	Lab	--	--		< 0.065 mg/kg	< 0.066 mg/kg	

Appendix 1-C4a
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Where: N = 1st Value
FD = 2nd Value

Sys Loc Code Sample Date			SB-08-2 12/11/2008		RPD Percent %	SD-13 9/18/2008		RPD Percent %
Depth Interval Depth Unit			26 - 28 ft	26 - 28 ft		0 - 10 cm	0 - 10 cm	
Sample Name			SB-08-2 26- 28_12112008	SB-08-B SB-08-2 26- 28_12112008_FD		SD-13 (0-10) CM_09182008	SD-200 0-10 SD-13 (0-10) CM_09182008_FD	
Sys Sample Code			N	FD		N	FD	
Sample Type Code								
Chemical Name	Total or Dissolved	Analysis Location						
Dibenzofuran	NA	Lab	--	--		< 0.028 mg/kg	< 0.028 mg/kg	
Diethyl phthalate	NA	Lab	--	--		< 0.033 mg/kg	< 0.034 mg/kg	
Dimethyl phthalate	NA	Lab	--	--		< 0.039 mg/kg	< 0.039 mg/kg	
Di-n-butyl phthalate	NA	Lab	--	--		0.036 J mg/kg	0.039 J mg/kg	8.00
Di-n-octyl phthalate	NA	Lab	--	--		< 0.057 mg/kg	< 0.057 mg/kg	
Fluoranthene	NA	Lab	--	--		< 0.027 mg/kg	< 0.028 mg/kg	
Fluorene	NA	Lab	--	--		< 0.031 mg/kg	< 0.031 mg/kg	
Hexachlorobenzene	NA	Lab	--	--		< 0.035 mg/kg	< 0.035 mg/kg	
Hexachlorobutadiene	NA	Lab	--	--		< 0.033 mg/kg	< 0.034 mg/kg	
Hexachlorocyclopentadiene	NA	Lab	--	--		< 0.030 mg/kg	< 0.030 mg/kg	
Hexachloroethane	NA	Lab	--	--		< 0.051 mg/kg	< 0.052 mg/kg	
Indeno(1,2,3-cd)pyrene	NA	Lab	--	--		< 0.092 mg/kg	< 0.093 mg/kg	
Isophorone	NA	Lab	--	--		< 0.033 mg/kg	< 0.034 mg/kg	
Naphthalene	NA	Lab	--	--		< 0.034 mg/kg	< 0.035 mg/kg	
Nitrobenzene	NA	Lab	--	--		< 0.062 mg/kg	< 0.062 mg/kg	
N-Nitrosodimethylamine	NA	Lab	--	--		< 0.059 mg/kg	< 0.060 mg/kg	
N-Nitrosodi-n-propylamine	NA	Lab	--	--		< 0.045 mg/kg	< 0.046 mg/kg	
N-Nitrosodiphenylamine	NA	Lab	--	--		< 0.043 mg/kg	< 0.043 mg/kg	
o-Cresol	NA	Lab	--	--		< 0.040 mg/kg	< 0.040 mg/kg	
p-Cresol	NA	Lab	--	--		1.1 mg/kg	0.97 mg/kg	12.56
Pentachlorophenol	NA	Lab	--	--		< 0.30 mg/kg	< 0.30 mg/kg	
Phenanthrene	NA	Lab	--	--		< 0.024 mg/kg	< 0.024 mg/kg	
Phenol	NA	Lab	--	--		0.16 J mg/kg	0.12 J mg/kg	28.57
Pyrene	NA	Lab	--	--		< 0.033 mg/kg	< 0.034 mg/kg	
Pyridine	NA	Lab	--	--		< 0.047 mg/kg	< 0.048 mg/kg	
VOCs								
1,1,1,2-Tetrachloroethane	NA	Lab	--	--		< 0.00077 mg/kg	< 0.00085 mg/kg	
1,1,1-Trichloroethane	NA	Lab	--	--		< 0.00064 mg/kg	< 0.00071 mg/kg	
1,1,2,2-Tetrachloroethane	NA	Lab	--	--		< 0.00038 mg/kg	< 0.00042 mg/kg	
1,1,2-Trichloroethane	NA	Lab	--	--		< 0.00038 mg/kg	< 0.00042 mg/kg	
1,1-Dichloro-1-propene	NA	Lab	--	--		< 0.00064 mg/kg	< 0.00071 mg/kg	
1,1-Dichloroethane	NA	Lab	--	--		< 0.00021 mg/kg	< 0.00023 mg/kg	
1,1-Dichloroethylene	NA	Lab	--	--		< 0.00030 mg/kg	< 0.00033 mg/kg	
1,2,3-Trichlorobenzene	NA	Lab	--	--		< 0.00060 mg/kg	< 0.00066 mg/kg	
1,2,3-Trichloropropane	NA	Lab	--	--		< 0.0012 mg/kg	< 0.0013 mg/kg	
1,2,4-Trichlorobenzene	NA	Lab	--	--		< 0.00093 mg/kg	< 0.0011 mg/kg	

Appendix 1-C4a
Laboratory Precision Data Summary
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Where: N = 1st Value
FD = 2nd Value

Sys Loc Code Sample Date			SB-08-2 12/11/2008		RPD Percent %	SD-13 9/18/2008		RPD Percent %
Depth Interval			26 - 28	26 - 28		0 - 10	0 - 10	
Depth Unit			ft	ft		cm	cm	
Sample Name			SB-08-2 26- 28_12112008	SB-08-B SB-08-2 26- 28_12112008_FD		SD-13 (0-10) CM_09182008	SD-200 0-10 SD-13 (0-10) CM_09182008_FD	
Sys Sample Code			N	FD		N	FD	
Sample Type Code								
Chemical Name	Total or Dissolved	Analysis Location						
1,2,4-Trimethylbenzene	NA	Lab	--	--		0.00055 J mg/kg	< 0.00044 mg/kg	
1,2-Dibromo-3-chloropropane	NA	Lab	--	--		< 0.0033 mg/kg	< 0.0037 mg/kg	
1,2-Dibromoethane	NA	Lab	--	--		< 0.00081 mg/kg	< 0.00090 mg/kg	
1,2-Dichlorobenzene	NA	Lab	--	--		< 0.00027 mg/kg	< 0.00030 mg/kg	
1,2-Dichloroethane	NA	Lab	--	--		< 0.00023 mg/kg	< 0.00026 mg/kg	
1,2-Dichloroethylene, cis	NA	Lab	--	--		< 0.00035 mg/kg	< 0.00039 mg/kg	
1,2-Dichloroethylene, trans	NA	Lab	--	--		< 0.00021 mg/kg	< 0.00023 mg/kg	
1,2-Dichloropropane	NA	Lab	--	--		< 0.00028 mg/kg	< 0.00031 mg/kg	
1,3,5-Trimethylbenzene	NA	Lab	--	--		< 0.00017 mg/kg	< 0.00019 mg/kg	
1,3-Dichloro-1-propene trans	NA	Lab	--	--		< 0.00043 mg/kg	< 0.00048 mg/kg	
1,3-Dichloro-1-propene, cis	NA	Lab	--	--		< 0.00014 mg/kg	< 0.00015 mg/kg	
1,3-Dichlorobenzene	NA	Lab	--	--		< 0.00030 mg/kg	< 0.00033 mg/kg	
1,3-Dichloropropane	NA	Lab	--	--		< 0.00025 mg/kg	< 0.00028 mg/kg	
1,4-Dichlorobenzene	NA	Lab	--	--		< 0.00043 mg/kg	< 0.00048 mg/kg	
2,2-Dichloropropane	NA	Lab	--	--		< 0.00043 mg/kg	< 0.00048 mg/kg	
2-Chloroethyl Vinyl Ether	NA	Lab	--	--		< 0.0014 mg/kg	< 0.0015 mg/kg	
2-Hexanone	NA	Lab	--	--		< 0.0033 mg/kg	< 0.0037 mg/kg	
Acetone	NA	Lab	--	--		0.27 mg/kg	0.28 mg/kg	3.64
Acrolein	NA	Lab	--	--		< 0.015 mg/kg	< 0.017 mg/kg	
Acrylonitrile	NA	Lab	--	--		< 0.0043 mg/kg	< 0.0048 mg/kg	
Benzene	NA	Lab	--	--		0.0089 J mg/kg	0.011 J mg/kg	21.11
Bromobenzene	NA	Lab	--	--		< 0.00039 mg/kg	< 0.00044 mg/kg	
Bromochloromethane	NA	Lab	--	--		< 0.0011 mg/kg	< 0.0012 mg/kg	
Bromodichloromethane	NA	Lab	--	--		< 0.00019 mg/kg	< 0.00021 mg/kg	
Bromoform	NA	Lab	--	--		< 0.0011 mg/kg	< 0.0012 mg/kg	
Bromomethane	NA	Lab	--	--		< 0.0018 mg/kg	< 0.0020 mg/kg	
Butyl benzene	NA	Lab	--	--		< 0.00038 mg/kg	< 0.00042 mg/kg	
Butylbenzene sec	NA	Lab	--	--		< 0.00028 mg/kg	< 0.00031 mg/kg	
Butylbenzene tert-	NA	Lab	--	--		< 0.00023 mg/kg	< 0.00026 mg/kg	
Carbon disulfide	NA	Lab	--	--		0.05 mg/kg	0.05 mg/kg	0.00
Carbon tetrachloride	NA	Lab	--	--		< 0.00033 mg/kg	< 0.00037 mg/kg	
Chlorobenzene	NA	Lab	--	--		< 0.00023 mg/kg	< 0.00026 mg/kg	
Chlorodibromomethane	NA	Lab	--	--		< 0.00068 mg/kg	< 0.00076 mg/kg	
Chloroethane	NA	Lab	--	--		< 0.0013 mg/kg	< 0.0015 mg/kg	
Chloroform	NA	Lab	--	--		< 0.00021 mg/kg	< 0.00023 mg/kg	
Chloromethane	NA	Lab	--	--		< 0.00025 mg/kg	< 0.00027 mg/kg	

Appendix 1-C4a
Laboratory Precision Data Summary
2008
Rhodia Silver Bow Plant

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			SB-08-2 12/11/2008		RPD Percent %	SD-13 9/18/2008		RPD Percent %
			26 - 28	26 - 28		0 - 10	0 - 10	
			ft	ft		cm	cm	
			SB-08-2 26-28_12112008	SB-08-B SB-08-2 26-28_12112008_FD		SD-13 (0-10) CM_09182008	SD-200 0-10 SD-13 (0-10) CM_09182008_FD	
			N	FD		N	FD	
Chemical Name	Total or Dissolved	Analysis Location						
Chlorotoluene o-	NA	Lab	--	--		< 0.00022 mg/kg	< 0.00025 mg/kg	
Chlorotoluene p-	NA	Lab	--	--		< 0.00039 mg/kg	< 0.00044 mg/kg	
Cumene (isopropyl benzene)	NA	Lab	--	--		< 0.00014 mg/kg	< 0.00015 mg/kg	
Cymene p- (Toluene isopropyl p-)	NA	Lab	--	--		0.0011 J mg/kg	0.0039 J mg/kg	112.00
Dibromomethane (methylene bromide)	NA	Lab	--	--		< 0.00077 mg/kg	< 0.00085 mg/kg	
Dichlorodifluoromethane (CFC-12)	NA	Lab	--	--		< 0.00031 mg/kg	< 0.00034 mg/kg	
Ethyl benzene	NA	Lab	--	--		0.0010 J mg/kg	< 0.00020 mg/kg	
Hexachlorobutadiene	NA	Lab	--	--		< 0.00072 mg/kg	< 0.00081 mg/kg	
Iodomethane	NA	Lab	--	--		< 0.0025 mg/kg	< 0.0028 mg/kg	
Methyl ethyl ketone	NA	Lab	--	--		0.048 J mg/kg	0.049 J mg/kg	2.06
Methyl isobutyl ketone	NA	Lab	--	--		< 0.0011 mg/kg	< 0.0012 mg/kg	
Methyl tertiary butyl ether (MTBE)	NA	Lab	--	--		< 0.00034 mg/kg	< 0.00038 mg/kg	
Methylene chloride	NA	Lab	--	--		< 0.0011 mg/kg	< 0.00066 mg/kg	
Naphthalene	NA	Lab	--	--		< 0.0014 mg/kg	< 0.0016 mg/kg	
Propylbenzene	NA	Lab	--	--		< 0.00027 mg/kg	< 0.00030 mg/kg	
Styrene	NA	Lab	--	--		< 0.00033 mg/kg	< 0.00036 mg/kg	
Tetrachloroethylene	NA	Lab	--	--		< 0.00051 mg/kg	< 0.00057 mg/kg	
Toluene	NA	Lab	--	--		0.0063 J mg/kg	0.0065 J mg/kg	3.12
Trichloroethylene	NA	Lab	--	--		< 0.00055 mg/kg	< 0.00062 mg/kg	
Trichlorofluoromethane	NA	Lab	--	--		< 0.00023 mg/kg	< 0.00026 mg/kg	
Vinyl acetate	NA	Lab	--	--		< 0.0026 mg/kg	< 0.0029 mg/kg	
Vinyl chloride	NA	Lab	--	--		< 0.00025 R mg/kg	< 0.00027 R mg/kg	
Xylene m & p	NA	Lab	--	--		0.0028 J mg/kg	0.0020 J mg/kg	33.33
Xylene, o-	NA	Lab	--	--		0.0011 J mg/kg	0.00080 J mg/kg	31.58
PCBs								
Aroclor 1016	NA	Lab	--	--		--	--	
Aroclor 1221	NA	Lab	--	--		--	--	
Aroclor 1232	NA	Lab	--	--		--	--	
Aroclor 1242	NA	Lab	--	--		--	--	
Aroclor 1248	NA	Lab	--	--		--	--	
Aroclor 1254	NA	Lab	--	--		--	--	
Aroclor 1260	NA	Lab	--	--		--	--	
Aroclor 1262	NA	Lab	--	--		--	--	
Aroclor 1268	NA	Lab	--	--		--	--	

**Appendix 1-C4a
Laboratory Precision Data Summary
2008**

%RPD = $\left| \frac{(N - FD)}{(N + FD)} \right| \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			SB-08-2 12/11/2008		RPD Percent %	SD-13 9/18/2008		RPD Percent %
			26 - 28	26 - 28		0 - 10	0 - 10	
			ft	ft		cm	cm	
			SB-08-2 26- 28_12112008	SB-08-B SB-08-2 26- 28_12112008_FD		SD-13 (0-10) CM_09182008	SD-200 0-10 SD-13 (0-10) CM_09182008_FD	
			N	FD		N	FD	
Chemical Name	Total or Dissolved	Analysis Location						
Radiochemical Parameters								
Gross Alpha (radiation)	NA	Lab	--	--		12 +/- 2.1 pCi/g	12 +/- 2.6 pCi/g	0.00
Gross Beta (radiation)	NA	Lab	--	--		16 +/- 1.6 pCi/g	11 +/- 1.8 pCi/g	37.04
Lead 210	NA	Lab	< 3.5 pCi/g	< 3.8 pCi/g		--	--	
Radium 226	NA	Lab	3.3 +/- 0.81 pCi/g	2.1 +/- 0.6 pCi/g	44.44	3.1 +/- 0.76 pCi/g	3.5 +/- 0.81 pCi/g	12.12
Radium 228	NA	Lab	--	--		< 3 pCi/g	< 2.9 pCi/g	
Thorium 230	NA	Lab	< 0.62 pCi/g	< 0.92 pCi/g		--	--	
Uranium 234	NA	Lab	0.6 +/- 0.35 pCi/g	0.46 +/- 0.28 pCi/g	26.42	--	--	
Uranium 235	NA	Lab	< 0.22 pCi/g	< 0.18 pCi/g		--	--	
Uranium 238 (radiochemical method)	NA	Lab	0.38 +/- 0.32 pCi/g	0.71 +/- 0.27 pCi/g	60.55	--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			SW-15 9/16/2008		RPD Percent %
			SW15_09162008 N	SW15_09162008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location			
General Parameters					
Alkalinity, bicarbonate as CaCO3	NA	Lab	111 mg/l	110 mg/l	0.90
Alkalinity, carbonate as CaCO3	NA	Lab	< 2 mg/l	< 2 mg/l	
Chloride	NA	Lab	33.8 mg/l	33.6 mg/l	0.59
Dissolved oxygen	NA	Field	--	--	
Fluoride	NA	Lab	0.5 mg/l	0.5 mg/l	0.00
Fluoride by Bellack	NA	Lab	--	--	
Nitrate + Nitrite	NA	Lab	2.62 mg/l	2.62 mg/l	0.00
Nitrogen, ammonia as N	NA	Lab	0.32 mg/l	0.32 mg/l	0.00
pH, standard units	NA	Field	--	--	
Phosphorus, elemental (white)	NA	Lab	< 0.0000230 mg/l	< 0.0000230 mg/l	
Phosphorus, total	NA	Lab	0.44 mg/l	0.45 mg/l	2.25
Redox (oxidation potential)	NA	Field	--	--	
Specific Conductance umhos@ 25oC	NA	Field	--	--	
Sulfate	NA	Lab	127 mg/l	126 mg/l	0.79
Temperature, degrees C	NA	Field	--	--	
Turbidity	NA	Field	--	--	
Metals					
Antimony	Dissolved	Lab	0.00031 mg/l	0.00035 mg/l	12.12
Antimony	NA	Lab	--	--	
Antimony	Total	Lab	0.00034 mg/l	0.00032 mg/l	6.06
Arsenic	Dissolved	Lab	0.0076 mg/l	0.0074 mg/l	2.67
Arsenic	NA	Lab	--	--	
Arsenic	Total	Lab	0.0079 mg/l	0.0077 mg/l	2.56
Barium	Dissolved	Lab	0.03881 mg/l	0.03833 mg/l	1.24
Barium	NA	Lab	--	--	
Barium	Total	Lab	0.04257 mg/l	0.04209 mg/l	1.13
Beryllium	Dissolved	Lab	< 0.00002 mg/l	< 0.00002 mg/l	
Beryllium	NA	Lab	--	--	
Beryllium	Total	Lab	< 0.00002 mg/l	< 0.00002 mg/l	
Cadmium	Dissolved	Lab	0.00021 mg/l	0.00023 mg/l	9.09
Cadmium	NA	Lab	--	--	
Cadmium	Total	Lab	0.00040 mg/l	0.00038 mg/l	5.13
Calcium	Dissolved	Lab	58.3 mg/l	57.6 mg/l	1.21
Calcium	NA	Lab	--	--	
Calcium	Total	Lab	57.8 mg/l	57.8 mg/l	0.00

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			SW-15 9/16/2008		RPD Percent %
			SW-101 SW15_09162008_FD FD		
Chemical Name	Total or Dissolved	Analysis Location			
Chromium	Dissolved	Lab	< 0.0003 mg/l	< 0.0003 mg/l	
Chromium	NA	Lab	--	--	
Chromium	Total	Lab	< 0.0005 mg/l	< 0.0004 mg/l	
Cobalt	Dissolved	Lab	0.00027 J mg/l	0.00065 J mg/l	82.61
Cobalt	NA	Lab	--	--	
Cobalt	Total	Lab	0.00036 mg/l	0.00036 mg/l	0.00
Copper	Dissolved	Lab	0.0112 mg/l	0.0107 mg/l	4.57
Copper	NA	Lab	--	--	
Copper	Total	Lab	0.0205 mg/l	0.0199 mg/l	2.97
Iron	Dissolved	Lab	< 0.02 mg/l	< 0.02 mg/l	
Iron	NA	Lab	--	--	
Iron	Total	Lab	0.24 mg/l	0.25 mg/l	4.08
Lead	Dissolved	Lab	0.00013 mg/l	0.00012 mg/l	8.00
Lead	NA	Lab	--	--	
Lead	Total	Lab	0.00150 mg/l	0.00152 mg/l	1.32
Magnesium	Dissolved	Lab	13.5 mg/l	13.4 mg/l	0.74
Magnesium	NA	Lab	--	--	
Magnesium	Total	Lab	13.4 mg/l	13.5 mg/l	0.74
Manganese	Dissolved	Lab	0.12390 mg/l	0.12100 mg/l	2.37
Manganese	NA	Lab	--	--	
Manganese	Total	Lab	0.24820 mg/l	0.25150 mg/l	1.32
Mercury	Dissolved	Lab	< 0.0002 mg/l	< 0.0002 mg/l	
Mercury	NA	Lab	--	--	
Mercury	Total	Lab	< 0.0002 mg/l	< 0.0002 mg/l	
Nickel	Dissolved	Lab	0.0027 mg/l	0.0026 mg/l	3.77
Nickel	NA	Lab	--	--	
Nickel	Total	Lab	0.0024 mg/l	0.0025 mg/l	4.08
Phosphorus, total	NA	Lab	--	--	
Potassium	Dissolved	Lab	6.2 mg/l	6.2 mg/l	0.00
Potassium	NA	Lab	--	--	
Potassium	Total	Lab	6.3 mg/l	6.3 mg/l	0.00
Selenium	Dissolved	Lab	< 0.001 mg/l	< 0.001 mg/l	
Selenium	NA	Lab	--	--	
Selenium	Total	Lab	< 0.001 mg/l	< 0.001 mg/l	
Silver	Dissolved	Lab	< 0.00002 mg/l	< 0.00002 mg/l	
Silver	NA	Lab	--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			SW-15 9/16/2008		RPD Percent %
			SW-101		
			SW15_09162008 N	SW15_09162008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location			
Silver	Total	Lab	0.00004 mg/l	< 0.00002 mg/l	
Sodium	Dissolved	Lab	39.3 mg/l	39.3 mg/l	0.00
Sodium	NA	Lab	--	--	
Sodium	Total	Lab	39.0 mg/l	39.0 mg/l	0.00
Thallium	Dissolved	Lab	< 0.00002 mg/l	< 0.00002 mg/l	
Thallium	NA	Lab	--	--	
Thallium	Total	Lab	< 0.00002 mg/l	< 0.00002 mg/l	
Uranium	Dissolved	Lab	0.00569 mg/l	0.00528 mg/l	7.47
Uranium	NA	Lab	--	--	
Uranium	Total	Lab	0.00546 mg/l	0.00544 mg/l	0.37
Vanadium	Dissolved	Lab	0.0025 mg/l	0.0025 mg/l	0.00
Vanadium	NA	Lab	--	--	
Vanadium	Total	Lab	0.0031 mg/l	0.0029 mg/l	6.67
Zinc	Dissolved	Lab	0.0590 mg/l	0.0590 mg/l	0.00
Zinc	NA	Lab	--	--	
Zinc	Total	Lab	0.1008 mg/l	0.0986 mg/l	2.21
TCLP Metals					
Arsenic	NA	Lab	--	--	
Barium	NA	Lab	--	--	
Cadmium	NA	Lab	--	--	
Chromium	NA	Lab	--	--	
Lead	NA	Lab	--	--	
Mercury	NA	Lab	--	--	
Selenium	NA	Lab	--	--	
Silver	NA	Lab	--	--	
SVOCs					
1,2,4-Trichlorobenzene	NA	Lab	< 0.016 ug/l	< 0.016 ug/l	
1,2-Dichlorobenzene	NA	Lab	< 0.022 ug/l	< 0.022 ug/l	
1,2-Diphenylhydrazine	NA	Lab	--	--	
1,3-Dichlorobenzene	NA	Lab	< 0.021 ug/l	< 0.021 ug/l	
1,4-Dichlorobenzene	NA	Lab	< 0.029 ug/l	< 0.029 ug/l	
2,4,5-Trichlorophenol	NA	Lab	< 0.031 ug/l	< 0.031 ug/l	
2,4,6-Trichlorophenol	NA	Lab	< 0.058 ug/l	< 0.058 ug/l	
2,4-Dichlorophenol	NA	Lab	< 0.047 ug/l	< 0.047 ug/l	
2,4-Dimethylphenol	NA	Lab	< 2.2 ug/l	< 2.2 ug/l	
2,4-Dinitrophenol	NA	Lab	< 0.17 R ug/l	< 0.17 R ug/l	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			SW-15 9/16/2008		RPD Percent %
			SW15_09162008 N	SW15_09162008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location			
2,4-Dinitrotoluene	NA	Lab	< 0.018 ug/l	< 0.018 ug/l	
2,6-Dinitrotoluene	NA	Lab	< 0.033 ug/l	< 0.033 ug/l	
2-Chloronaphthalene	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	
2-Chlorophenol	NA	Lab	< 0.054 ug/l	< 0.054 ug/l	
2-Methyl-4,6-dinitrophenol	NA	Lab	< 0.025 R ug/l	< 0.025 R ug/l	
2-Methylnaphthalene	NA	Lab	< 0.026 ug/l	< 0.026 ug/l	
2-Nitroaniline	NA	Lab	< 0.024 ug/l	< 0.024 ug/l	
2-Nitrophenol	NA	Lab	< 0.063 ug/l	< 0.063 ug/l	
3,3'-Dichlorobenzidine	NA	Lab	< 0.43 ug/l	< 0.43 ug/l	
3-Nitroaniline	NA	Lab	< 0.029 ug/l	< 0.029 ug/l	
4-Bromophenyl phenyl ether	NA	Lab	< 0.026 ug/l	< 0.026 ug/l	
4-Chloro-3-methylphenol	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	
4-Chloroaniline	NA	Lab	< 0.025 ug/l	< 0.025 ug/l	
4-Chlorophenyl phenyl ether	NA	Lab	< 0.027 ug/l	< 0.027 ug/l	
4-Nitroaniline	NA	Lab	< 0.019 ug/l	< 0.019 ug/l	
4-Nitrophenol	NA	Lab	< 0.28 ug/l	< 0.28 ug/l	
Acenaphthene	NA	Lab	0.0047 J ug/l	0.0049 J ug/l	4.17
Acenaphthylene	NA	Lab	0.0044 J ug/l	< 0.0034 ug/l	
Anthracene	NA	Lab	< 0.0036 ug/l	< 0.0036 ug/l	
Azobenzene	NA	Lab	< 0.021 ug/l	< 0.021 ug/l	
Benzidine	NA	Lab	--	--	
Benzo(a)anthracene	NA	Lab	< 0.0026 ug/l	< 0.0026 ug/l	
Benzo(a)pyrene	NA	Lab	< 0.0043 ug/l	< 0.0043 ug/l	
Benzo(b)fluoranthene	NA	Lab	< 0.0023 ug/l	< 0.0023 ug/l	
Benzo(g,h,i)perylene	NA	Lab	< 0.0029 ug/l	< 0.0029 ug/l	
Benzo(k)fluoranthene	NA	Lab	< 0.0025 ug/l	< 0.0025 ug/l	
Benzoic Acid	NA	Lab	1.7 R ug/l	1.6 R ug/l	6.06
Benzyl alcohol	NA	Lab	< 0.073 ug/l	< 0.073 ug/l	
Bis(2-chloroethoxy)methane	NA	Lab	< 0.024 ug/l	< 0.024 ug/l	
Bis(2-chloroethyl)ether	NA	Lab	< 0.035 ug/l	< 0.035 ug/l	
Bis(2-chloroisopropyl)ether	NA	Lab	< 0.026 ug/l	< 0.026 ug/l	
Bis(2-ethylhexyl)phthalate	NA	Lab	< 0.49 ug/l	< 0.40 ug/l	
Butyl benzyl phthalate	NA	Lab	< 0.018 ug/l	< 0.018 ug/l	
Carbazole	NA	Lab	< 0.018 ug/l	0.023 J ug/l	
Chrysene	NA	Lab	< 0.0034 ug/l	< 0.0034 ug/l	
Dibenz(a,h)anthracene	NA	Lab	< 0.0025 ug/l	< 0.0025 ug/l	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			SW-15 9/16/2008		RPD Percent %
			SW15_09162008 N	SW15_09162008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location			
Dibenzofuran	NA	Lab	< 0.018 ug/l	< 0.018 ug/l	
Diethyl phthalate	NA	Lab	< 0.043 ug/l	< 0.060 ug/l	
Dimethyl phthalate	NA	Lab	< 0.12 ug/l	< 0.021 ug/l	
Di-n-butyl phthalate	NA	Lab	< 0.082 ug/l	< 0.068 ug/l	
Di-n-octyl phthalate	NA	Lab	< 0.018 ug/l	< 0.018 ug/l	
Fluoranthene	NA	Lab	< 0.0044 ug/l	< 0.0044 ug/l	
Fluorene	NA	Lab	< 0.0038 ug/l	< 0.0038 ug/l	
Hexachlorobenzene	NA	Lab	< 0.022 ug/l	< 0.022 ug/l	
Hexachlorobutadiene	NA	Lab	< 0.027 R ug/l	< 0.027 R ug/l	
Hexachlorocyclopentadiene	NA	Lab	< 0.19 R ug/l	< 0.19 R ug/l	
Hexachloroethane	NA	Lab	< 0.024 R ug/l	< 0.024 R ug/l	
Indeno(1,2,3-cd)pyrene	NA	Lab	< 0.0026 ug/l	< 0.0026 ug/l	
Isophorone	NA	Lab	< 0.016 ug/l	< 0.016 ug/l	
Naphthalene	NA	Lab	< 0.019 ug/l	< 0.020 ug/l	
Nitrobenzene	NA	Lab	< 0.028 ug/l	< 0.028 ug/l	
N-Nitrosodimethylamine	NA	Lab	< 0.42 ug/l	< 0.42 ug/l	
N-Nitrosodi-n-propylamine	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	
N-Nitrosodiphenylamine	NA	Lab	< 0.048 ug/l	< 0.048 ug/l	
o-Cresol	NA	Lab	< 0.11 ug/l	< 0.11 ug/l	
p-Cresol	NA	Lab	< 0.12 ug/l	< 0.12 ug/l	
Pentachlorophenol	NA	Lab	< 0.34 R ug/l	< 0.34 R ug/l	
Phenanthrene	NA	Lab	0.0093 J ug/l	0.0066 J ug/l	33.96
Phenol	NA	Lab	< 0.063 ug/l	< 0.063 ug/l	
Pyrene	NA	Lab	< 0.0035 ug/l	< 0.0035 ug/l	
Pyridine	NA	Lab	< 1.4 R ug/l	< 1.4 R ug/l	
VOCs					
1,1,1,2-Tetrachloroethane	NA	Lab	< 0.047 ug/l	< 0.047 ug/l	
1,1,1-Trichloroethane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l	
1,1,2,2-Tetrachloroethane	NA	Lab	< 0.064 ug/l	< 0.064 ug/l	
1,1,2-Trichloroethane	NA	Lab	< 0.061 ug/l	< 0.061 ug/l	
1,1-Dichloro-1-propene	NA	Lab	< 0.051 ug/l	< 0.051 ug/l	
1,1-Dichloroethane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	
1,1-Dichloroethylene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	
1,2,3-Trichlorobenzene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	
1,2,3-Trichloropropane	NA	Lab	< 0.14 ug/l	< 0.14 ug/l	
1,2,4-Trichlorobenzene	NA	Lab	< 0.13 ug/l	< 0.13 ug/l	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			SW-15 9/16/2008		RPD Percent %
				SW-101	
			SW15_09162008 N	SW15_09162008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location			
1,2,4-Trimethylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	
1,2-Dibromo-3-chloropropane	NA	Lab	< 0.22 ug/l	< 0.22 ug/l	
1,2-Dibromoethane	NA	Lab	< 0.084 ug/l	< 0.084 ug/l	
1,2-Dichlorobenzene	NA	Lab	< 0.044 ug/l	< 0.044 ug/l	
1,2-Dichloroethane	NA	Lab	< 0.073 ug/l	< 0.073 ug/l	
1,2-Dichloroethylene, cis	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	
1,2-Dichloroethylene, trans	NA	Lab	< 0.048 ug/l	< 0.048 ug/l	
1,2-Dichloropropane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	
1,3,5-Trimethylbenzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	
1,3-Dichloro-1-propene trans	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	
1,3-Dichloro-1-propene, cis	NA	Lab	< 0.038 ug/l	< 0.038 ug/l	
1,3-Dichlorobenzene	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	
1,3-Dichloropropane	NA	Lab	< 0.032 ug/l	< 0.032 ug/l	
1,4-Dichlorobenzene	NA	Lab	< 0.054 ug/l	< 0.054 ug/l	
2,2-Dichloropropane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l	
2-Chloroethyl Vinyl Ether	NA	Lab	< 0.19 R ug/l	< 0.19 R ug/l	
2-Hexanone	NA	Lab	< 2.9 ug/l	< 2.9 ug/l	
Acetone	NA	Lab	< 5.3 ug/l	< 5.2 ug/l	
Acrolein	NA	Lab	< 2.0 ug/l	< 2.0 ug/l	
Acrylonitrile	NA	Lab	< 0.31 ug/l	< 0.31 ug/l	
Benzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	
Bromobenzene	NA	Lab	< 0.027 ug/l	< 0.027 ug/l	
Bromochloromethane	NA	Lab	< 0.091 ug/l	< 0.091 ug/l	
Bromodichloromethane	NA	Lab	< 0.036 ug/l	< 0.036 ug/l	
Bromoform	NA	Lab	< 0.080 J ug/l	< 0.080 J ug/l	
Bromomethane	NA	Lab	< 0.072 ug/l	< 0.072 ug/l	
Butyl benzene	NA	Lab	< 0.056 ug/l	< 0.056 ug/l	
Butylbenzene sec	NA	Lab	< 0.036 ug/l	< 0.036 ug/l	
Butylbenzene tert-	NA	Lab	< 0.038 ug/l	< 0.038 ug/l	
Carbon disulfide	NA	Lab	< 0.070 ug/l	< 0.080 ug/l	
Carbon tetrachloride	NA	Lab	< 0.068 ug/l	< 0.068 ug/l	
Chlorobenzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	
Chlorodibromomethane	NA	Lab	< 0.057 ug/l	< 0.057 ug/l	
Chloroethane	NA	Lab	< 0.13 ug/l	< 0.13 ug/l	
Chloroform	NA	Lab	< 0.12 ug/l	< 0.14 ug/l	
Chloromethane	NA	Lab	< 0.060 ug/l	< 0.060 ug/l	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			SW-15 9/16/2008		RPD Percent %
				SW-101	
			SW15_09162008 N	SW15_09162008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location			
Chlorotoluene o-	NA	Lab	< 0.035 ug/l	< 0.035 ug/l	
Chlorotoluene p-	NA	Lab	< 0.025 ug/l	< 0.025 ug/l	
Cumene (isopropyl benzene)	NA	Lab	< 0.031 ug/l	< 0.031 ug/l	
Cymene p- (Toluene isopropyl p-)	NA	Lab	< 0.044 ug/l	< 0.044 ug/l	
Dibromomethane (methylene bromide)	NA	Lab	< 0.089 ug/l	< 0.089 ug/l	
Dichlorodifluoromethane (CFC-12)	NA	Lab	< 0.083 ug/l	< 0.083 ug/l	
Ethyl benzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	
Hexachlorobutadiene	NA	Lab	< 0.19 ug/l	< 0.19 ug/l	
Iodomethane	NA	Lab	< 0.27 ug/l	< 0.27 ug/l	
Methyl ethyl ketone	NA	Lab	< 3.8 ug/l	< 3.8 ug/l	
Methyl isobutyl ketone	NA	Lab	< 3.0 ug/l	< 3.0 ug/l	
Methyl tertiary butyl ether (MTBE)	NA	Lab	< 0.070 ug/l	< 0.070 ug/l	
Methylene chloride	NA	Lab	< 0.23 ug/l	< 0.23 ug/l	
Naphthalene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	
Propylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	
Styrene	NA	Lab	< 0.039 ug/l	< 0.039 ug/l	
Tetrachloroethylene	NA	Lab	< 0.077 ug/l	< 0.077 ug/l	
Toluene	NA	Lab	< 0.26 ug/l	< 0.32 ug/l	
Trichloroethylene	NA	Lab	< 0.061 ug/l	< 0.061 ug/l	
Trichlorofluoromethane	NA	Lab	< 0.086 ug/l	< 0.086 ug/l	
Vinyl acetate	NA	Lab	< 0.91 ug/l	< 0.91 ug/l	
Vinyl chloride	NA	Lab	< 0.071 ug/l	< 0.071 ug/l	
Xylene m & p	NA	Lab	< 0.078 ug/l	< 0.078 ug/l	
Xylene, o-	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	
PCBs					
Aroclor 1016	NA	Lab	--	--	
Aroclor 1221	NA	Lab	--	--	
Aroclor 1232	NA	Lab	--	--	
Aroclor 1242	NA	Lab	--	--	
Aroclor 1248	NA	Lab	--	--	
Aroclor 1254	NA	Lab	--	--	
Aroclor 1260	NA	Lab	--	--	
Aroclor 1262	NA	Lab	--	--	
Aroclor 1268	NA	Lab	--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			SW-15 9/16/2008		RPD Percent %
			SW-101		
			SW15_09162008		
			SW15_09162008_FD		
			N	FD	
Chemical Name	Total or Dissolved	Analysis Location			
Radiochemical Parameters					
Gross Alpha (radiation)	NA	Lab	2.2 +/- 1.8 pCi/l	< 1.5 pCi/l	
Gross Beta (radiation)	NA	Lab	7.1 +/- 2.6 pCi/l	7.5 +/- 2.5 pCi/l	5.48
Lead 210	NA	Lab	--	--	
Radium 226	NA	Lab	< 0.38 pCi/l	< 0.22 pCi/l	
Radium 228	NA	Lab	< 0.8 pCi/l	< 0.73 pCi/l	
Thorium 230	NA	Lab	--	--	
Uranium 234	NA	Lab	--	--	
Uranium 235	NA	Lab	--	--	
Uranium 238 (radiochemical method)	NA	Lab	--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008
Rhodia Silver Bow Plant

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code		SW-4 5/21/2008		RPD Percent %	SWMU-3 SP-2 9/22/2008		RPD Percent %
		SW4_05212008 N	SW4_05212008_FD FD		SWMU-3 SP- 2TCLP_09222008 N	SWMU-3 SP-200 SWMU-3 SP- 2TCLP_09222008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location					
General Parameters							
Alkalinity, bicarbonate as CaCO3	NA	Lab	129 mg/l	106 mg/l	19.57	--	--
Alkalinity, carbonate as CaCO3	NA	Lab	65 mg/l	90 mg/l	32.26	--	--
Chloride	NA	Lab	270 mg/l	275 mg/l	1.83	--	--
Dissolved oxygen	NA	Field	--	--		--	--
Fluoride	NA	Lab	0.5 mg/l	0.5 mg/l	0.00	--	--
Fluoride by Bellack	NA	Lab	--	--		--	--
Nitrate + Nitrite	NA	Lab	0.25 mg/l	0.27 mg/l	7.69	--	--
Nitrogen, ammonia as N	NA	Lab	< 0.05 mg/l	< 0.05 mg/l		--	--
pH, standard units	NA	Field	--	--		--	--
Phosphorus, elemental (white)	NA	Lab	< 0.0000230 mg/l	< 0.0000230 mg/l		--	--
Phosphorus, total	NA	Lab	0.04 mg/l	0.05 mg/l	22.22	--	--
Redox (oxidation potential)	NA	Field	--	--		--	--
Specific Conductance umhos@ 25oC	NA	Field	--	--		--	--
Sulfate	NA	Lab	48.3 mg/l	48.8 mg/l	1.03	--	--
Temperature, degrees C	NA	Field	--	--		--	--
Turbidity	NA	Field	--	--		--	--
Metals							
Antimony	Dissolved	Lab	0.00036 mg/l	0.00035 mg/l	2.82	--	--
Antimony	NA	Lab	--	--		--	--
Antimony	Total	Lab	0.00035 mg/l	0.00034 mg/l	2.90	--	--
Arsenic	Dissolved	Lab	0.0054 mg/l	0.0055 mg/l	1.83	--	--
Arsenic	NA	Lab	--	--		--	--
Arsenic	Total	Lab	0.0056 mg/l	0.0055 mg/l	1.80	--	--
Barium	Dissolved	Lab	0.0198 mg/l	0.0197 mg/l	0.51	--	--
Barium	NA	Lab	--	--		--	--
Barium	Total	Lab	0.0212 mg/l	0.0211 mg/l	0.47	--	--
Beryllium	Dissolved	Lab	< 0.00002 mg/l	< 0.00002 mg/l		--	--
Beryllium	NA	Lab	--	--		--	--
Beryllium	Total	Lab	< 0.00002 mg/l	< 0.00002 mg/l		--	--
Cadmium	Dissolved	Lab	0.00045 mg/l	0.00041 mg/l	9.30	--	--
Cadmium	NA	Lab	--	--		--	--
Cadmium	Total	Lab	0.00067 mg/l	0.00067 mg/l	0.00	--	--
Calcium	Dissolved	Lab	52.1 mg/l	52 mg/l	0.19	--	--
Calcium	NA	Lab	--	--		--	--
Calcium	Total	Lab	51 mg/l	52 mg/l	1.94	--	--

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			SW-4 5/21/2008		RPD Percent %	SWMU-3 SP-2 9/22/2008		RPD Percent %
			SW4_05212008 N	SW4_05212008_FD FD		SWMU-3 SP-2TCLP_09222008 N	SWMU-3 SP-200 SWMU-3 SP-2TCLP_09222008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
Chromium	Dissolved	Lab	0.0003 mg/l	0.0004 mg/l	28.57	--	--	
Chromium	NA	Lab	--	--		--	--	
Chromium	Total	Lab	0.0004 mg/l	0.0005 mg/l	22.22	--	--	
Cobalt	Dissolved	Lab	0.00015 mg/l	0.00015 mg/l	0.00	--	--	
Cobalt	NA	Lab	--	--		--	--	
Cobalt	Total	Lab	0.00015 mg/l	0.00015 mg/l	0.00	--	--	
Copper	Dissolved	Lab	0.0055 mg/l	0.0054 mg/l	1.83	--	--	
Copper	NA	Lab	--	--		--	--	
Copper	Total	Lab	0.0061 mg/l	0.0061 mg/l	0.00	--	--	
Iron	Dissolved	Lab	0.026 mg/l	0.022 mg/l	16.67	--	--	
Iron	NA	Lab	--	--		--	--	
Iron	Total	Lab	0.093 mg/l	0.094 mg/l	1.07	--	--	
Lead	Dissolved	Lab	0.00009 mg/l	0.00008 mg/l	11.76	--	--	
Lead	NA	Lab	--	--		--	--	
Lead	Total	Lab	0.00020 mg/l	0.00020 mg/l	0.00	--	--	
Magnesium	Dissolved	Lab	9.91 mg/l	9.91 mg/l	0.00	--	--	
Magnesium	NA	Lab	--	--		--	--	
Magnesium	Total	Lab	9.75 mg/l	9.9 mg/l	1.53	--	--	
Manganese	Dissolved	Lab	0.00427 mg/l	0.00398 mg/l	7.03	--	--	
Manganese	NA	Lab	--	--		--	--	
Manganese	Total	Lab	0.00822 mg/l	0.00812 mg/l	1.22	--	--	
Mercury	Dissolved	Lab	< 0.0002 mg/l	< 0.0002 mg/l		--	--	
Mercury	NA	Lab	--	--		--	--	
Mercury	Total	Lab	< 0.0002 mg/l	< 0.0002 mg/l		--	--	
Nickel	Dissolved	Lab	0.0017 mg/l	0.0017 mg/l	0.00	--	--	
Nickel	NA	Lab	--	--		--	--	
Nickel	Total	Lab	0.0018 mg/l	0.0017 mg/l	5.71	--	--	
Phosphorus, total	NA	Lab	--	--		--	--	
Potassium	Dissolved	Lab	< 2 mg/l	< 2 mg/l		--	--	
Potassium	NA	Lab	--	--		--	--	
Potassium	Total	Lab	< 2 mg/l	< 2 mg/l		--	--	
Selenium	Dissolved	Lab	< 0.0010 mg/l	< 0.0010 mg/l		--	--	
Selenium	NA	Lab	--	--		--	--	
Selenium	Total	Lab	< 0.0010 mg/l	< 0.0010 mg/l		--	--	
Silver	Dissolved	Lab	< 0.00002 mg/l	< 0.00002 mg/l		--	--	
Silver	NA	Lab	--	--		--	--	

**Appendix 1-C4a
Laboratory Precision Data Summary
2008**

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date			SW-4 5/21/2008		RPD Percent %	SWMU-3 SP-2 9/22/2008		RPD Percent %
Depth Interval Depth Unit Sample Name								
Sys Sample Code Sample Type Code			SW4_05212008 N	SW4_05212008_FD FD		SWMU-3 SP- 2TCLP_09222008 N	SWMU-3 SP-200 SWMU-3 SP- 2TCLP_09222008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
Silver	Total	Lab	< 0.00002 mg/l	< 0.00002 mg/l		--	--	
Sodium	Dissolved	Lab	214 mg/l	215 mg/l	0.47	--	--	
Sodium	NA	Lab	--	--		--	--	
Sodium	Total	Lab	210 mg/l	211 mg/l	0.48	--	--	
Thallium	Dissolved	Lab	< 0.00002 mg/l	< 0.00002 mg/l		--	--	
Thallium	NA	Lab	--	--		--	--	
Thallium	Total	Lab	< 0.00002 mg/l	< 0.00002 mg/l		--	--	
Uranium	Dissolved	Lab	0.0018 mg/l	0.0018 mg/l	0.00	--	--	
Uranium	NA	Lab	--	--		--	--	
Uranium	Total	Lab	0.0018 mg/l	0.0018 mg/l	0.00	--	--	
Vanadium	Dissolved	Lab	0.0031 mg/l	0.0031 mg/l	0.00	--	--	
Vanadium	NA	Lab	--	--		--	--	
Vanadium	Total	Lab	0.0032 mg/l	0.0031 mg/l	3.17	--	--	
Zinc	Dissolved	Lab	< 0.0015 mg/l	< 0.0017 mg/l		--	--	
Zinc	NA	Lab	--	--		--	--	
Zinc	Total	Lab	< 0.0030 mg/l	< 0.0027 mg/l		--	--	
TCLP Metals								
Arsenic	NA	Lab	--	--		0.10 J mg/l	0.10 mg/l	0.00
Barium	NA	Lab	--	--		< 0.200 mg/l	< 0.200 mg/l	
Cadmium	NA	Lab	--	--		0.0039 J mg/l	0.0054 J mg/l	32.26
Chromium	NA	Lab	--	--		0.007 J mg/l	0.005 J mg/l	33.33
Lead	NA	Lab	--	--		< 0.01 mg/l	< 0.01 mg/l	
Mercury	NA	Lab	--	--		< 0.0002 mg/l	< 0.0002 mg/l	
Selenium	NA	Lab	--	--		< 0.009 mg/l	< 0.009 mg/l	
Silver	NA	Lab	--	--		< 0.007 mg/l	< 0.007 mg/l	
SVOCs								
1,2,4-Trichlorobenzene	NA	Lab	< 0.016 ug/l	< 0.016 ug/l		--	--	
1,2-Dichlorobenzene	NA	Lab	< 0.022 ug/l	< 0.022 ug/l		--	--	
1,2-Diphenylhydrazine	NA	Lab	--	--		--	--	
1,3-Dichlorobenzene	NA	Lab	< 0.021 ug/l	< 0.021 ug/l		--	--	
1,4-Dichlorobenzene	NA	Lab	< 0.029 ug/l	< 0.029 ug/l		--	--	
2,4,5-Trichlorophenol	NA	Lab	< 0.031 ug/l	< 0.031 ug/l		--	--	
2,4,6-Trichlorophenol	NA	Lab	< 0.058 ug/l	< 0.058 ug/l		--	--	
2,4-Dichlorophenol	NA	Lab	< 0.047 ug/l	< 0.047 ug/l		--	--	
2,4-Dimethylphenol	NA	Lab	< 2.2 R ug/l	< 2.2 R ug/l		--	--	
2,4-Dinitrophenol	NA	Lab	< 0.17 ua/l	< 0.17 ua/l		--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code			SW-4		RPD Percent %	SWMU-3 SP-2		RPD Percent %
Sample Date			5/21/2008			9/22/2008		
Depth Interval								
Depth Unit								
Sample Name								
Sys Sample Code			SW4_05212008	SW4_05212008_FD		SWMU-3 SP-200		
Sample Type Code			N	FD		2TCLP_09222008	2TCLP_09222008_FD	
Chemical Name	Total or Dissolved	Analysis Location						
2,4-Dinitrotoluene	NA	Lab	< 0.018 ug/l	< 0.018 ug/l		--	--	
2,6-Dinitrotoluene	NA	Lab	< 0.033 ug/l	< 0.033 ug/l		--	--	
2-Chloronaphthalene	NA	Lab	< 0.041 ug/l	< 0.041 ug/l		--	--	
2-Chlorophenol	NA	Lab	< 0.054 ug/l	< 0.054 ug/l		--	--	
2-Methyl-4,6-dinitrophenol	NA	Lab	< 0.025 ug/l	< 0.025 ug/l		--	--	
2-Methylnaphthalene	NA	Lab	< 0.026 ug/l	< 0.026 ug/l		--	--	
2-Nitroaniline	NA	Lab	< 0.024 ug/l	< 0.024 ug/l		--	--	
2-Nitrophenol	NA	Lab	< 0.063 ug/l	< 0.063 ug/l		--	--	
3,3'-Dichlorobenzidine	NA	Lab	< 0.43 ug/l	< 0.43 ug/l		--	--	
3-Nitroaniline	NA	Lab	< 0.029 ug/l	< 0.029 ug/l		--	--	
4-Bromophenyl phenyl ether	NA	Lab	< 0.026 ug/l	< 0.026 ug/l		--	--	
4-Chloro-3-methylphenol	NA	Lab	< 0.037 ug/l	< 0.037 ug/l		--	--	
4-Chloroaniline	NA	Lab	< 0.025 ug/l	< 0.025 ug/l		--	--	
4-Chlorophenyl phenyl ether	NA	Lab	< 0.027 ug/l	< 0.027 ug/l		--	--	
4-Nitroaniline	NA	Lab	< 0.019 ug/l	< 0.019 ug/l		--	--	
4-Nitrophenol	NA	Lab	< 0.28 ug/l	< 0.28 ug/l		--	--	
Acenaphthene	NA	Lab	< 0.026 ug/l	< 0.026 ug/l		--	--	
Acenaphthylene	NA	Lab	< 0.015 ug/l	< 0.015 ug/l		--	--	
Anthracene	NA	Lab	< 0.024 ug/l	< 0.024 ug/l		--	--	
Azobenzene	NA	Lab	< 0.021 ug/l	< 0.021 ug/l		--	--	
Benzidine	NA	Lab	--	--		--	--	
Benzo(a)anthracene	NA	Lab	< 0.018 ug/l	< 0.018 ug/l		--	--	
Benzo(a)pyrene	NA	Lab	< 0.031 ug/l	< 0.031 ug/l		--	--	
Benzo(b)fluoranthene	NA	Lab	< 0.017 ug/l	< 0.017 ug/l		--	--	
Benzo(g,h,i)perylene	NA	Lab	< 0.019 ug/l	< 0.019 ug/l		--	--	
Benzo(k)fluoranthene	NA	Lab	< 0.024 ug/l	< 0.024 ug/l		--	--	
Benzoic Acid	NA	Lab	< 1.1 R ug/l	< 1.1 R ug/l		--	--	
Benzyl alcohol	NA	Lab	< 0.073 ug/l	< 0.073 ug/l		--	--	
Bis(2-chloroethoxy)methane	NA	Lab	< 0.024 ug/l	< 0.024 ug/l		--	--	
Bis(2-chloroethyl)ether	NA	Lab	< 0.035 ug/l	< 0.035 ug/l		--	--	
Bis(2-chloroisopropyl)ether	NA	Lab	< 0.026 ug/l	< 0.026 ug/l		--	--	
Bis(2-ethylhexyl)phthalate	NA	Lab	< 0.13 ug/l	< 0.13 ug/l		--	--	
Butyl benzyl phthalate	NA	Lab	< 0.032 ug/l	< 0.044 ug/l		--	--	
Carbazole	NA	Lab	< 0.018 ug/l	< 0.018 ug/l		--	--	
Chrysene	NA	Lab	< 0.028 ug/l	< 0.028 ug/l		--	--	
Dibenz(a,h)anthracene	NA	Lab	< 0.017 ug/l	< 0.017 ug/l		--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date		SW-4 5/21/2008		RPD Percent %	SWMU-3 SP-2 9/22/2008		RPD Percent %
		Depth Interval Depth Unit Sample Name	SW4_05212008 N		SW4_05212008_FD FD	SWMU-3 SP- 2TCLP_09222008 N	
Sys Sample Code Sample Type Code							
Chemical Name	Total or Dissolved	Analysis Location					
Dibenzofuran	NA	Lab	< 0.018 ug/l	< 0.018 ug/l		--	--
Diethyl phthalate	NA	Lab	0.027 J ug/l	0.028 J ug/l	3.64	--	--
Dimethyl phthalate	NA	Lab	< 0.021 ug/l	< 0.021 ug/l		--	--
Di-n-butyl phthalate	NA	Lab	< 0.077 ug/l	< 0.093 ug/l		--	--
Di-n-octyl phthalate	NA	Lab	0.042 J ug/l	0.048 J ug/l	13.33	--	--
Fluoranthene	NA	Lab	< 0.020 ug/l	< 0.020 ug/l		--	--
Fluorene	NA	Lab	< 0.027 ug/l	< 0.027 ug/l		--	--
Hexachlorobenzene	NA	Lab	< 0.022 ug/l	< 0.022 ug/l		--	--
Hexachlorobutadiene	NA	Lab	< 0.027 R ug/l	< 0.027 R ug/l		--	--
Hexachlorocyclopentadiene	NA	Lab	< 0.19 R ug/l	< 0.19 R ug/l		--	--
Hexachloroethane	NA	Lab	< 0.024 R ug/l	< 0.024 R ug/l		--	--
Indeno(1,2,3-cd)pyrene	NA	Lab	< 0.021 ug/l	< 0.021 ug/l		--	--
Isophorone	NA	Lab	< 0.016 ug/l	< 0.016 ug/l		--	--
Naphthalene	NA	Lab	< 0.022 ug/l	< 0.022 ug/l		--	--
Nitrobenzene	NA	Lab	< 0.028 ug/l	< 0.028 ug/l		--	--
N-Nitrosodimethylamine	NA	Lab	< 0.42 ug/l	< 0.42 ug/l		--	--
N-Nitrosodi-n-propylamine	NA	Lab	< 0.037 ug/l	< 0.037 ug/l		--	--
N-Nitrosodiphenylamine	NA	Lab	< 0.048 ug/l	< 0.048 ug/l		--	--
o-Cresol	NA	Lab	< 0.11 ug/l	< 0.11 ug/l		--	--
p-Cresol	NA	Lab	< 0.12 ug/l	< 0.12 ug/l		--	--
Pentachlorophenol	NA	Lab	< 0.34 ug/l	< 0.34 ug/l		--	--
Phenanthrene	NA	Lab	< 0.022 ug/l	< 0.022 ug/l		--	--
Phenol	NA	Lab	< 0.063 ug/l	< 0.063 ug/l		--	--
Pyrene	NA	Lab	< 0.019 ug/l	< 0.019 ug/l		--	--
Pyridine	NA	Lab	--	--		--	--
VOCs							
1,1,1,2-Tetrachloroethane	NA	Lab	< 0.047 ug/l	< 0.047 ug/l		--	--
1,1,1-Trichloroethane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l		--	--
1,1,2,2-Tetrachloroethane	NA	Lab	< 0.064 ug/l	< 0.064 ug/l		--	--
1,1,2-Trichloroethane	NA	Lab	< 0.061 ug/l	< 0.061 ug/l		--	--
1,1-Dichloro-1-propene	NA	Lab	< 0.051 ug/l	< 0.051 ug/l		--	--
1,1-Dichloroethane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l		--	--
1,1-Dichloroethylene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l		--	--
1,2,3-Trichlorobenzene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l		--	--
1,2,3-Trichloropropane	NA	Lab	< 0.14 ug/l	< 0.14 ug/l		--	--
1,2,4-Trichlorobenzene	NA	Lab	< 0.13 ug/l	< 0.13 ug/l		--	--

Appendix 1-C4a
Laboratory Precision Data Summary
2008
Rhodia Silver Bow Plant

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			SW-4 5/21/2008		RPD Percent %	SWMU-3 SP-2 9/22/2008		RPD Percent %
				SW-100		SWMU-3 SP- 2TCLP_09222008 N	SWMU-3 SP-200 SWMU-3 SP- 2TCLP_09222008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
1,2,4-Trimethylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l		--	--	
1,2-Dibromo-3-chloropropane	NA	Lab	< 0.22 ug/l	< 0.22 ug/l		--	--	
1,2-Dibromoethane	NA	Lab	< 0.084 ug/l	< 0.084 ug/l		--	--	
1,2-Dichlorobenzene	NA	Lab	< 0.044 ug/l	< 0.044 ug/l		--	--	
1,2-Dichloroethane	NA	Lab	< 0.073 ug/l	< 0.073 ug/l		--	--	
1,2-Dichloroethylene, cis	NA	Lab	< 0.045 ug/l	< 0.045 ug/l		--	--	
1,2-Dichloroethylene, trans	NA	Lab	< 0.048 ug/l	< 0.048 ug/l		--	--	
1,2-Dichloropropane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l		--	--	
1,3,5-Trimethylbenzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l		--	--	
1,3-Dichloro-1-propene trans	NA	Lab	< 0.041 ug/l	< 0.041 ug/l		--	--	
1,3-Dichloro-1-propene, cis	NA	Lab	< 0.038 ug/l	< 0.038 ug/l		--	--	
1,3-Dichlorobenzene	NA	Lab	< 0.041 ug/l	< 0.041 ug/l		--	--	
1,3-Dichloropropane	NA	Lab	< 0.032 ug/l	< 0.032 ug/l		--	--	
1,4-Dichlorobenzene	NA	Lab	< 0.054 ug/l	< 0.054 ug/l		--	--	
2,2-Dichloropropane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l		--	--	
2-Chloroethyl Vinyl Ether	NA	Lab	< 0.19 R ug/l	< 0.19 R ug/l		--	--	
2-Hexanone	NA	Lab	< 2.9 ug/l	< 2.9 ug/l		--	--	
Acetone	NA	Lab	< 2.5 ug/l	< 2.5 ug/l		--	--	
Acrolein	NA	Lab	< 2.0 ug/l	< 2.0 ug/l		--	--	
Acrylonitrile	NA	Lab	< 0.31 ug/l	< 0.31 ug/l		--	--	
Benzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l		--	--	
Bromobenzene	NA	Lab	< 0.027 ug/l	< 0.027 ug/l		--	--	
Bromochloromethane	NA	Lab	< 0.091 ug/l	< 0.091 ug/l		--	--	
Bromodichloromethane	NA	Lab	< 0.036 ug/l	< 0.036 ug/l		--	--	
Bromoform	NA	Lab	< 0.080 ug/l	< 0.080 ug/l		--	--	
Bromomethane	NA	Lab	< 0.072 ug/l	< 0.072 ug/l		--	--	
Butyl benzene	NA	Lab	< 0.056 ug/l	< 0.056 ug/l		--	--	
Butylbenzene sec	NA	Lab	< 0.036 ug/l	< 0.036 ug/l		--	--	
Butylbenzene tert-	NA	Lab	< 0.038 ug/l	< 0.038 ug/l		--	--	
Carbon disulfide	NA	Lab	< 0.045 ug/l	< 0.045 ug/l		--	--	
Carbon tetrachloride	NA	Lab	< 0.068 ug/l	< 0.068 ug/l		--	--	
Chlorobenzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l		--	--	
Chlorodibromomethane	NA	Lab	< 0.057 ug/l	< 0.057 ug/l		--	--	
Chloroethane	NA	Lab	< 0.13 ug/l	< 0.13 ug/l		--	--	
Chloroform	NA	Lab	< 0.042 ug/l	< 0.042 ug/l		--	--	
Chloromethane	NA	Lab	< 0.053 ug/l	< 0.053 ug/l		--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008
Rhodia Silver Bow Plant

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			SW-4 5/21/2008		RPD Percent %	SWMU-3 SP-2 9/22/2008		RPD Percent %
			SW4_05212008 N	SW4_05212008_FD FD		SWMU-3 SP- 2TCLP_09222008 N	SWMU-3 SP-200 SWMU-3 SP- 2TCLP_09222008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
Chlorotoluene o-	NA	Lab	< 0.035 ug/l	< 0.035 ug/l		--	--	
Chlorotoluene p-	NA	Lab	< 0.025 ug/l	< 0.025 ug/l		--	--	
Cumene (isopropyl benzene)	NA	Lab	< 0.031 ug/l	< 0.031 ug/l		--	--	
Cymene p- (Toluene isopropyl p-)	NA	Lab	< 0.044 ug/l	< 0.044 ug/l		--	--	
Dibromomethane (methylene bromide)	NA	Lab	< 0.089 ug/l	< 0.089 ug/l		--	--	
Dichlorodifluoromethane (CFC-12)	NA	Lab	< 0.083 ug/l	< 0.083 ug/l		--	--	
Ethyl benzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l		--	--	
Hexachlorobutadiene	NA	Lab	< 0.19 ug/l	< 0.19 ug/l		--	--	
Iodomethane	NA	Lab	< 0.27 ug/l	< 0.27 ug/l		--	--	
Methyl ethyl ketone	NA	Lab	< 3.8 ug/l	< 3.8 ug/l		--	--	
Methyl isobutyl ketone	NA	Lab	< 3.0 ug/l	< 3.0 ug/l		--	--	
Methyl tertiary butyl ether (MTBE)	NA	Lab	< 0.070 ug/l	< 0.070 ug/l		--	--	
Methylene chloride	NA	Lab	< 0.23 ug/l	< 0.23 ug/l		--	--	
Naphthalene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l		--	--	
Propylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l		--	--	
Styrene	NA	Lab	< 0.039 ug/l	< 0.039 ug/l		--	--	
Tetrachloroethylene	NA	Lab	< 0.077 ug/l	< 0.077 ug/l		--	--	
Toluene	NA	Lab	0.16 J ug/l	0.28 J ug/l	54.55	--	--	
Trichloroethylene	NA	Lab	< 0.061 ug/l	< 0.061 ug/l		--	--	
Trichlorofluoromethane	NA	Lab	< 0.086 ug/l	< 0.086 ug/l		--	--	
Vinyl acetate	NA	Lab	< 0.91 ug/l	< 0.91 ug/l		--	--	
Vinyl chloride	NA	Lab	< 0.071 ug/l	< 0.071 ug/l		--	--	
Xylene m & p	NA	Lab	< 0.078 ug/l	< 0.078 ug/l		--	--	
Xylene, o-	NA	Lab	< 0.037 ug/l	< 0.037 ug/l		--	--	
PCBs								
Aroclor 1016	NA	Lab	--	--		--	--	
Aroclor 1221	NA	Lab	--	--		--	--	
Aroclor 1232	NA	Lab	--	--		--	--	
Aroclor 1242	NA	Lab	--	--		--	--	
Aroclor 1248	NA	Lab	--	--		--	--	
Aroclor 1254	NA	Lab	--	--		--	--	
Aroclor 1260	NA	Lab	--	--		--	--	
Aroclor 1262	NA	Lab	--	--		--	--	
Aroclor 1268	NA	Lab	--	--		--	--	

Appendix 1-C4a
Laboratory Precision Data Summary
2008

%RPD = $| (N - FD) / (N + FD) / 2 | \times 100$
Where: N = 1st Value
FD = 2nd Value

Rhodia Silver Bow Plant

Sys Loc Code Sample Date Depth Interval Depth Unit Sample Name Sys Sample Code Sample Type Code			SW-4 5/21/2008		RPD Percent %	SWMU-3 SP-2 9/22/2008		RPD Percent %
				SW-100				
			SW4_05212008 N	SW4_05212008_FD FD		SWMU-3 SP- 2TCLP_09222008 N	SWMU-3 SP-200 SWMU-3 SP- 2TCLP_09222008_FD FD	
Chemical Name	Total or Dissolved	Analysis Location						
Radiochemical Parameters								
Gross Alpha (radiation)	NA	Lab	3.8 +/- 3.2 pCi/l	< 2.9 pCi/l		--	--	
Gross Beta (radiation)	NA	Lab	< 5.5 pCi/l	< 5.7 pCi/l		--	--	
Lead 210	NA	Lab	--	--		--	--	
Radium 226	NA	Lab	< 0.16 pCi/l	< 0.2 pCi/l		--	--	
Radium 228	NA	Lab	< 2.1 pCi/l	< 0.69 pCi/l		--	--	
Thorium 230	NA	Lab	--	--		--	--	
Uranium 234	NA	Lab	--	--		--	--	
Uranium 235	NA	Lab	--	--		--	--	
Uranium 238 (radiochemical method)	NA	Lab	--	--		--	--	

Appendix 1-C4b-1
Trip Blank Data - Aqueous
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 5/13/2008 MW-65-1 TB804207_05132008 TB	QC 5/14/2008 MW-65-2 TB804207_05142008 TB	QC 5/15/2008 MW-65-3 TB804207_05152008 TB	QC 5/18/2008 MW-65-4 TB804324_05182008 TB	QC 5/19/2008 SW-140 TB804416_05192008 TB	QC 5/19/2008 MW-65-5 TB804434_05192008 TB
Chemical Name	Total or Dissolved	Analysis Location						
VOCs								
1,1,1,2-Tetrachloroethane	NA	Lab	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l
1,1,1-Trichloroethane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l
1,1,2,2-Tetrachloroethane	NA	Lab	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l
1,1,2-Trichloroethane	NA	Lab	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l
1,1-Dichloro-1-propene	NA	Lab	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l
1,1-Dichloroethane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,1-Dichloroethylene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l
1,2,3-Trichlorobenzene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	0.17 J ug/l
1,2,3-Trichloropropane	NA	Lab	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l
1,2,4-Trichlorobenzene	NA	Lab	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l
1,2,4-Trimethylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
1,2-Dibromo-3-chloropropane	NA	Lab	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l
1,2-Dibromoethane	NA	Lab	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l
1,2-Dichlorobenzene	NA	Lab	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l
1,2-Dichloroethane	NA	Lab	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l
1,2-Dichloroethylene, cis	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
1,2-Dichloroethylene, trans	NA	Lab	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l
1,2-Dichloropropane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l

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Trip Blank Data - Aqueous
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 5/13/2008 MW-65-1 TB804207_05132008 TB	QC 5/14/2008 MW-65-2 TB804207_05142008 TB	QC 5/15/2008 MW-65-3 TB804207_05152008 TB	QC 5/18/2008 MW-65-4 TB804324_05182008 TB	QC 5/19/2008 SW-140 TB804416_05192008 TB	QC 5/19/2008 MW-65-5 TB804434_05192008 TB
Chemical Name	Total or Dissolved	Analysis Location						
1,3,5-Trimethylbenzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,3-Dichloro-1-propene trans	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l
1,3-Dichloro-1-propene, cis	NA	Lab	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l
1,3-Dichlorobenzene	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l
1,3-Dichloropropane	NA	Lab	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l
1,4-Dichlorobenzene	NA	Lab	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l
2,2-Dichloropropane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l
2-Chloroethyl Vinyl Ether	NA	Lab	< 0.19 R ug/l	< 0.19 R ug/l	< 0.19 R ug/l	< 0.19 R ug/l	< 0.19 R ug/l	< 0.19 R ug/l
2-Hexanone	NA	Lab	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l
Acetone	NA	Lab	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l
Acrolein	NA	Lab	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Acrylonitrile	NA	Lab	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l
Benzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
Bromobenzene	NA	Lab	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l
Bromochloromethane	NA	Lab	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l
Bromodichloromethane	NA	Lab	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l
Bromoform	NA	Lab	< 0.080 ug/l	< 0.080 ug/l	< 0.080 ug/l	0.24 J ug/l	< 0.080 ug/l	< 0.080 ug/l
Bromomethane	NA	Lab	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l
Butyl benzene	NA	Lab	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l

Appendix 1-C4b-1
Trip Blank Data - Aqueous
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 5/13/2008 MW-65-1 TB804207_05132008 TB	QC 5/14/2008 MW-65-2 TB804207_05142008 TB	QC 5/15/2008 MW-65-3 TB804207_05152008 TB	QC 5/18/2008 MW-65-4 TB804324_05182008 TB	QC 5/19/2008 SW-140 TB804416_05192008 TB	QC 5/19/2008 MW-65-5 TB804434_05192008 TB
Chemical Name	Total or Dissolved	Analysis Location						
Butylbenzene sec	NA	Lab	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l
Butylbenzene tert-	NA	Lab	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l
Carbon disulfide	NA	Lab	0.050 J ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	0.11 J ug/l	0.050 J ug/l
Carbon tetrachloride	NA	Lab	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l
Chlorobenzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
Chlorodibromomethane	NA	Lab	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	0.11 J ug/l	< 0.057 ug/l	< 0.057 ug/l
Chloroethane	NA	Lab	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l
Chloroform	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
Chloromethane	NA	Lab	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l
Chlorotoluene o-	NA	Lab	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l
Chlorotoluene p-	NA	Lab	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l
Cumene (isopropyl benzene)	NA	Lab	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l
Cymene p- (Toluene isopropyl p-)	NA	Lab	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l
Dibromomethane (methylene bromide)	NA	Lab	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l
Dichlorodifluoromethane (CFC-12)	NA	Lab	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l
Ethyl benzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
Hexachlorobutadiene	NA	Lab	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l
Iodomethane	NA	Lab	< 0.27 R ug/l	< 0.27 R ug/l	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l
Methyl ethyl ketone	NA	Lab	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l

Appendix 1-C4b-1
Trip Blank Data - Aqueous
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 5/13/2008 MW-65-1 TB804207_05132008 TB	QC 5/14/2008 MW-65-2 TB804207_05142008 TB	QC 5/15/2008 MW-65-3 TB804207_05152008 TB	QC 5/18/2008 MW-65-4 TB804324_05182008 TB	QC 5/19/2008 SW-140 TB804416_05192008 TB	QC 5/19/2008 MW-65-5 TB804434_05192008 TB
Chemical Name	Total or Dissolved	Analysis Location						
Methyl isobutyl ketone	NA	Lab	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l
Methyl tertiary butyl ether (MTBE)	NA	Lab	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l
Methylene chloride	NA	Lab	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l
Naphthalene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	0.10 J ug/l
Propylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
Styrene	NA	Lab	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l
Tetrachloroethylene	NA	Lab	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l
Toluene	NA	Lab	0.13 J ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	0.26 J ug/l	0.060 J ug/l
Trichloroethylene	NA	Lab	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l
Trichlorofluoromethane	NA	Lab	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l
Vinyl acetate	NA	Lab	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l
Vinyl chloride	NA	Lab	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l
Xylene m & p	NA	Lab	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l
Xylene, o-	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l

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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 5/20/2008 SW-141 TB804416_05202008 TB	QC 5/20/2008 MW-65-6 TB804434_05202008 TB	QC 5/21/2008 SW-142 TB804416_05212008 TB	QC 5/21/2008 MW-65-7 TB804434_05212008 TB	QC 5/22/2008 SW-143 TB804416_05222008 TB	QC 5/22/2008 MW-65-8 TB804545_05222008 TB
Chemical Name	Total or Dissolved	Analysis Location						
VOCs								
1,1,1,2-Tetrachloroethane	NA	Lab	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l
1,1,1-Trichloroethane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l
1,1,2,2-Tetrachloroethane	NA	Lab	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l
1,1,2-Trichloroethane	NA	Lab	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l
1,1-Dichloro-1-propene	NA	Lab	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l
1,1-Dichloroethane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,1-Dichloroethylene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l
1,2,3-Trichlorobenzene	NA	Lab	< 0.10 ug/l	0.10 J ug/l	0.10 J ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l
1,2,3-Trichloropropane	NA	Lab	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l
1,2,4-Trichlorobenzene	NA	Lab	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l
1,2,4-Trimethylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
1,2-Dibromo-3-chloropropane	NA	Lab	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l
1,2-Dibromoethane	NA	Lab	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l
1,2-Dichlorobenzene	NA	Lab	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l
1,2-Dichloroethane	NA	Lab	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l
1,2-Dichloroethylene, cis	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
1,2-Dichloroethylene, trans	NA	Lab	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l
1,2-Dichloropropane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l

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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 5/20/2008 SW-141 TB804416_05202008 TB	QC 5/20/2008 MW-65-6 TB804434_05202008 TB	QC 5/21/2008 SW-142 TB804416_05212008 TB	QC 5/21/2008 MW-65-7 TB804434_05212008 TB	QC 5/22/2008 SW-143 TB804416_05222008 TB	QC 5/22/2008 MW-65-8 TB804545_05222008 TB
Chemical Name	Total or Dissolved	Analysis Location						
1,3,5-Trimethylbenzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,3-Dichloro-1-propene trans	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l
1,3-Dichloro-1-propene, cis	NA	Lab	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l
1,3-Dichlorobenzene	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l
1,3-Dichloropropane	NA	Lab	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l
1,4-Dichlorobenzene	NA	Lab	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l
2,2-Dichloropropane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l
2-Chloroethyl Vinyl Ether	NA	Lab	< 0.19 R ug/l	< 0.19 R ug/l	< 0.19 R ug/l	< 0.19 R ug/l	< 0.19 R ug/l	< 0.19 R ug/l
2-Hexanone	NA	Lab	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l
Acetone	NA	Lab	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l
Acrolein	NA	Lab	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Acrylonitrile	NA	Lab	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l
Benzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
Bromobenzene	NA	Lab	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l
Bromochloromethane	NA	Lab	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l
Bromodichloromethane	NA	Lab	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l
Bromoform	NA	Lab	< 0.080 ug/l	< 0.080 ug/l	< 0.080 ug/l	< 0.080 J ug/l	< 0.080 ug/l	< 0.080 J ug/l
Bromomethane	NA	Lab	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l
Butyl benzene	NA	Lab	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l

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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 5/20/2008 SW-141 TB804416_05202008 TB	QC 5/20/2008 MW-65-6 TB804434_05202008 TB	QC 5/21/2008 SW-142 TB804416_05212008 TB	QC 5/21/2008 MW-65-7 TB804434_05212008 TB	QC 5/22/2008 SW-143 TB804416_05222008 TB	QC 5/22/2008 MW-65-8 TB804545_05222008 TB
Chemical Name	Total or Dissolved	Analysis Location						
Butylbenzene sec	NA	Lab	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l
Butylbenzene tert-	NA	Lab	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l
Carbon disulfide	NA	Lab	0.090 J ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
Carbon tetrachloride	NA	Lab	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l
Chlorobenzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
Chlorodibromomethane	NA	Lab	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l
Chloroethane	NA	Lab	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l
Chloroform	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
Chloromethane	NA	Lab	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	0.080 J ug/l	< 0.053 ug/l
Chlorotoluene o-	NA	Lab	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l
Chlorotoluene p-	NA	Lab	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l
Cumene (isopropyl benzene)	NA	Lab	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l
Cymene p- (Toluene isopropyl p-)	NA	Lab	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l
Dibromomethane (methylene bromide)	NA	Lab	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l
Dichlorodifluoromethane (CFC-12)	NA	Lab	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l
Ethyl benzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
Hexachlorobutadiene	NA	Lab	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l
Iodomethane	NA	Lab	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l	< 0.27 R ug/l	< 0.27 ug/l	< 0.27 R ug/l
Methyl ethyl ketone	NA	Lab	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l

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Chemical Name	Total or Dissolved	Analysis Location						
Methyl isobutyl ketone	NA	Lab	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l
Methyl tertiary butyl ether (MTBE)	NA	Lab	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l
Methylene chloride	NA	Lab	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l
Naphthalene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l
Propylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
Styrene	NA	Lab	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l
Tetrachloroethylene	NA	Lab	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l
Toluene	NA	Lab	0.21 J ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l
Trichloroethylene	NA	Lab	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l
Trichlorofluoromethane	NA	Lab	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l
Vinyl acetate	NA	Lab	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l
Vinyl chloride	NA	Lab	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l
Xylene m & p	NA	Lab	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l
Xylene, o-	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l

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Chemical Name	Total or Dissolved	Analysis Location						
VOCs								
1,1,1,2-Tetrachloroethane	NA	Lab	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l
1,1,1-Trichloroethane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l
1,1,2,2-Tetrachloroethane	NA	Lab	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l
1,1,2-Trichloroethane	NA	Lab	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l
1,1-Dichloro-1-propene	NA	Lab	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l
1,1-Dichloroethane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,1-Dichloroethylene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l
1,2,3-Trichlorobenzene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l
1,2,3-Trichloropropane	NA	Lab	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l
1,2,4-Trichlorobenzene	NA	Lab	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l
1,2,4-Trimethylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
1,2-Dibromo-3-chloropropane	NA	Lab	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l
1,2-Dibromoethane	NA	Lab	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l
1,2-Dichlorobenzene	NA	Lab	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l
1,2-Dichloroethane	NA	Lab	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l
1,2-Dichloroethylene, cis	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
1,2-Dichloroethylene, trans	NA	Lab	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l
1,2-Dichloropropane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l

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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 5/23/2008 SW-144 TB804416_05232008 TB	QC 5/27/2008 MW-65-9 TB804658_05272008 TB	QC 5/29/2008 MW-65-10 TB804658_05292008 TB	QC 5/30/2008 MW-65-11 TB804724_05302008 TB	QC 9/16/2008 SW-145 TB809096_09162008 TB	QC 9/17/2008 MW-65-12 TB809092_09172008 TB
Chemical Name	Total or Dissolved	Analysis Location						
1,3,5-Trimethylbenzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,3-Dichloro-1-propene trans	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l
1,3-Dichloro-1-propene, cis	NA	Lab	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l
1,3-Dichlorobenzene	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l
1,3-Dichloropropane	NA	Lab	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l
1,4-Dichlorobenzene	NA	Lab	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l
2,2-Dichloropropane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l
2-Chloroethyl Vinyl Ether	NA	Lab	< 0.19 R ug/l	< 0.19 R ug/l	< 0.19 R ug/l	< 0.19 R ug/l	< 0.19 R ug/l	< 0.19 R ug/l
2-Hexanone	NA	Lab	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l
Acetone	NA	Lab	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	4.6 J ug/l	< 2.5 ug/l
Acrolein	NA	Lab	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Acrylonitrile	NA	Lab	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l
Benzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
Bromobenzene	NA	Lab	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l
Bromochloromethane	NA	Lab	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l
Bromodichloromethane	NA	Lab	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l
Bromoform	NA	Lab	< 0.080 ug/l	< 0.080 ug/l	< 0.080 ug/l	< 0.080 ug/l	< 0.080 J ug/l	< 0.080 J ug/l
Bromomethane	NA	Lab	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l
Butyl benzene	NA	Lab	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l

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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 5/23/2008 SW-144 TB804416_05232008 TB	QC 5/27/2008 MW-65-9 TB804658_05272008 TB	QC 5/29/2008 MW-65-10 TB804658_05292008 TB	QC 5/30/2008 MW-65-11 TB804724_05302008 TB	QC 9/16/2008 SW-145 TB809096_09162008 TB	QC 9/17/2008 MW-65-12 TB809092_09172008 TB
Chemical Name	Total or Dissolved	Analysis Location						
Butylbenzene sec	NA	Lab	< 0.036 ug/l	< 0.036 ug/l	< 0.036 J ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l
Butylbenzene tert-	NA	Lab	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l
Carbon disulfide	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	0.090 J ug/l	< 0.045 ug/l
Carbon tetrachloride	NA	Lab	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l
Chlorobenzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
Chlorodibromomethane	NA	Lab	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l
Chloroethane	NA	Lab	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l
Chloroform	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
Chloromethane	NA	Lab	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	0.060 J ug/l
Chlorotoluene o-	NA	Lab	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l
Chlorotoluene p-	NA	Lab	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l
Cumene (isopropyl benzene)	NA	Lab	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l
Cymene p- (Toluene isopropyl p-)	NA	Lab	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l
Dibromomethane (methylene bromide)	NA	Lab	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l
Dichlorodifluoromethane (CFC-12)	NA	Lab	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l
Ethyl benzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
Hexachlorobutadiene	NA	Lab	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l
Iodomethane	NA	Lab	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l
Methyl ethyl ketone	NA	Lab	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l

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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 5/23/2008 SW-144 TB804416_05232008 TB	QC 5/27/2008 MW-65-9 TB804658_05272008 TB	QC 5/29/2008 MW-65-10 TB804658_05292008 TB	QC 5/30/2008 MW-65-11 TB804724_05302008 TB	QC 9/16/2008 SW-145 TB809096_09162008 TB	QC 9/17/2008 MW-65-12 TB809092_09172008 TB
Chemical Name	Total or Dissolved	Analysis Location						
Methyl isobutyl ketone	NA	Lab	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l
Methyl tertiary butyl ether (MTBE)	NA	Lab	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l
Methylene chloride	NA	Lab	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l
Naphthalene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l
Propylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
Styrene	NA	Lab	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l
Tetrachloroethylene	NA	Lab	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l
Toluene	NA	Lab	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	0.070 J ug/l	< 0.048 ug/l
Trichloroethylene	NA	Lab	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l
Trichlorofluoromethane	NA	Lab	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l
Vinyl acetate	NA	Lab	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l
Vinyl chloride	NA	Lab	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l
Xylene m & p	NA	Lab	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l
Xylene, o-	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l

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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 9/17/2008 SW-146 TB809096_09172008 TB	QC 9/18/2008 MW-65-13 TB809092_09182008 TB	QC 9/18/2008 SW-147 TB809096_09182008 TB	QC 9/19/2008 MW-65-14 TB809092_09192008 TB	QC 9/21/2008 SW-148 TB809096_09212008 TB	QC 9/21/2008 SD-250 (0-10) CM TB809275_09212008 TB
Chemical Name	Total or Dissolved	Analysis Location						
VOCs								
1,1,1,2-Tetrachloroethane	NA	Lab	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l
1,1,1-Trichloroethane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l
1,1,2,2-Tetrachloroethane	NA	Lab	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l
1,1,2-Trichloroethane	NA	Lab	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l
1,1-Dichloro-1-propene	NA	Lab	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l
1,1-Dichloroethane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,1-Dichloroethylene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l
1,2,3-Trichlorobenzene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l
1,2,3-Trichloropropane	NA	Lab	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l
1,2,4-Trichlorobenzene	NA	Lab	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l
1,2,4-Trimethylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
1,2-Dibromo-3-chloropropane	NA	Lab	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 J ug/l	< 0.22 J ug/l
1,2-Dibromoethane	NA	Lab	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l
1,2-Dichlorobenzene	NA	Lab	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l
1,2-Dichloroethane	NA	Lab	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l
1,2-Dichloroethylene, cis	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
1,2-Dichloroethylene, trans	NA	Lab	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l
1,2-Dichloropropane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l

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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 9/17/2008 SW-146 TB809096_09172008 TB	QC 9/18/2008 MW-65-13 TB809092_09182008 TB	QC 9/18/2008 SW-147 TB809096_09182008 TB	QC 9/19/2008 MW-65-14 TB809092_09192008 TB	QC 9/21/2008 SW-148 TB809096_09212008 TB	QC 9/21/2008 SD-250 (0-10) CM TB809275_09212008 TB
Chemical Name	Total or Dissolved	Analysis Location						
1,3,5-Trimethylbenzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,3-Dichloro-1-propene trans	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l
1,3-Dichloro-1-propene, cis	NA	Lab	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l
1,3-Dichlorobenzene	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l
1,3-Dichloropropane	NA	Lab	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l
1,4-Dichlorobenzene	NA	Lab	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l
2,2-Dichloropropane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l
2-Chloroethyl Vinyl Ether	NA	Lab	< 0.19 R ug/l	< 0.19 R ug/l	< 0.19 R ug/l	< 0.19 R ug/l	< 0.19 R ug/l	< 0.19 R ug/l
2-Hexanone	NA	Lab	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l
Acetone	NA	Lab	< 2.5 ug/l	4.9 J ug/l	< 2.5 ug/l	2.7 J ug/l	< 2.5 ug/l	12 J ug/l
Acrolein	NA	Lab	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Acrylonitrile	NA	Lab	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l
Benzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
Bromobenzene	NA	Lab	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l
Bromochloromethane	NA	Lab	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l
Bromodichloromethane	NA	Lab	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l
Bromoform	NA	Lab	< 0.080 ug/l	< 0.080 J ug/l	< 0.080 ug/l	< 0.080 J ug/l	< 0.080 J ug/l	< 0.080 J ug/l
Bromomethane	NA	Lab	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l
Butyl benzene	NA	Lab	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l

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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 9/17/2008 SW-146 TB809096_09172008 TB	QC 9/18/2008 MW-65-13 TB809092_09182008 TB	QC 9/18/2008 SW-147 TB809096_09182008 TB	QC 9/19/2008 MW-65-14 TB809092_09192008 TB	QC 9/21/2008 SW-148 TB809096_09212008 TB	QC 9/21/2008 SD-250 (0-10) CM TB809275_09212008 TB
Chemical Name	Total or Dissolved	Analysis Location						
Butylbenzene sec	NA	Lab	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l
Butylbenzene tert-	NA	Lab	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l
Carbon disulfide	NA	Lab	0.10 J ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	0.070 J ug/l	0.070 J ug/l
Carbon tetrachloride	NA	Lab	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l
Chlorobenzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
Chlorodibromomethane	NA	Lab	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l
Chloroethane	NA	Lab	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l
Chloroform	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
Chloromethane	NA	Lab	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	0.16 J ug/l
Chlorotoluene o-	NA	Lab	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l
Chlorotoluene p-	NA	Lab	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l
Cumene (isopropyl benzene)	NA	Lab	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	0.14 J ug/l
Cymene p- (Toluene isopropyl p-)	NA	Lab	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l
Dibromomethane (methylene bromide)	NA	Lab	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l
Dichlorodifluoromethane (CFC-12)	NA	Lab	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l
Ethyl benzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
Hexachlorobutadiene	NA	Lab	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l
Iodomethane	NA	Lab	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l
Methyl ethyl ketone	NA	Lab	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l

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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 9/17/2008 SW-146 TB809096_09172008 TB	QC 9/18/2008 MW-65-13 TB809092_09182008 TB	QC 9/18/2008 SW-147 TB809096_09182008 TB	QC 9/19/2008 MW-65-14 TB809092_09192008 TB	QC 9/21/2008 SW-148 TB809096_09212008 TB	QC 9/21/2008 SD-250 (0-10) CM TB809275_09212008 TB
Chemical Name	Total or Dissolved	Analysis Location						
Methyl isobutyl ketone	NA	Lab	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l
Methyl tertiary butyl ether (MTBE)	NA	Lab	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l
Methylene chloride	NA	Lab	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l
Naphthalene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l
Propylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
Styrene	NA	Lab	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l
Tetrachloroethylene	NA	Lab	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l
Toluene	NA	Lab	0.070 J ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	0.080 J ug/l	0.10 J ug/l
Trichloroethylene	NA	Lab	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l
Trichlorofluoromethane	NA	Lab	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l
Vinyl acetate	NA	Lab	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l
Vinyl chloride	NA	Lab	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l
Xylene m & p	NA	Lab	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l
Xylene, o-	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l

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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 9/22/2008 MW-65-15, MW-65-16 TB809270_09222008 TB	QC 9/23/2008 MW-65-17 TB809270_09232008 TB	QC 9/24/2008 MW-65-18 TB0809408_09242008 TB	QC 9/26/2008 MW-65-19 TB0809408_09262008 TB
Chemical Name	Total or Dissolved	Analysis Location				
VOCs						
1,1,1,2-Tetrachloroethane	NA	Lab	< 0.047 ug/l < 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l
1,1,1-Trichloroethane	NA	Lab	< 0.050 ug/l < 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l
1,1,2,2-Tetrachloroethane	NA	Lab	< 0.064 ug/l < 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l
1,1,2-Trichloroethane	NA	Lab	< 0.061 ug/l < 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l
1,1-Dichloro-1-propene	NA	Lab	< 0.051 ug/l < 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l
1,1-Dichloroethane	NA	Lab	< 0.042 ug/l < 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,1-Dichloroethylene	NA	Lab	< 0.10 ug/l < 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l
1,2,3-Trichlorobenzene	NA	Lab	< 0.10 ug/l < 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l
1,2,3-Trichloropropane	NA	Lab	< 0.14 ug/l < 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l
1,2,4-Trichlorobenzene	NA	Lab	< 0.13 ug/l < 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l
1,2,4-Trimethylbenzene	NA	Lab	< 0.037 ug/l < 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
1,2-Dibromo-3-chloropropane	NA	Lab	< 0.22 J ug/l < 0.22 J ug/l	< 0.22 J ug/l	< 0.22 ug/l	< 0.22 J ug/l
1,2-Dibromoethane	NA	Lab	< 0.084 ug/l < 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l
1,2-Dichlorobenzene	NA	Lab	< 0.044 ug/l < 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l
1,2-Dichloroethane	NA	Lab	< 0.073 ug/l < 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l
1,2-Dichloroethylene, cis	NA	Lab	< 0.045 ug/l < 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
1,2-Dichloroethylene, trans	NA	Lab	< 0.048 ug/l < 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l
1,2-Dichloropropane	NA	Lab	< 0.042 ug/l < 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l

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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 9/22/2008 MW-65-15, MW-65-16 TB809270_09222008 TB	QC 9/23/2008 MW-65-17 TB809270_09232008 TB	QC 9/24/2008 MW-65-18 TB0809408_09242008 TB	QC 9/26/2008 MW-65-19 TB0809408_09262008 TB
Chemical Name	Total or Dissolved	Analysis Location				
1,3,5-Trimethylbenzene	NA	Lab	< 0.042 ug/l < 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,3-Dichloro-1-propene trans	NA	Lab	< 0.041 ug/l < 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l
1,3-Dichloro-1-propene, cis	NA	Lab	< 0.038 ug/l < 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l
1,3-Dichlorobenzene	NA	Lab	< 0.041 ug/l < 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l
1,3-Dichloropropane	NA	Lab	< 0.032 ug/l < 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l
1,4-Dichlorobenzene	NA	Lab	< 0.054 ug/l < 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l
2,2-Dichloropropane	NA	Lab	< 0.050 ug/l < 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l
2-Chloroethyl Vinyl Ether	NA	Lab	< 0.19 R ug/l < 0.19 R ug/l	< 0.19 R ug/l	< 0.19 R ug/l	< 0.19 R ug/l
2-Hexanone	NA	Lab	< 2.9 ug/l < 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l
Acetone	NA	Lab	3.4 J ug/l < 2.5 ug/l	3.9 J ug/l	3.8 J ug/l	2.5 J ug/l
Acrolein	NA	Lab	< 2.0 ug/l < 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Acrylonitrile	NA	Lab	< 0.31 ug/l < 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l
Benzene	NA	Lab	< 0.045 ug/l < 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
Bromobenzene	NA	Lab	< 0.027 ug/l < 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l
Bromochloromethane	NA	Lab	< 0.091 ug/l < 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l
Bromodichloromethane	NA	Lab	< 0.036 ug/l < 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l
Bromoform	NA	Lab	< 0.080 J ug/l < 0.080 J ug/l	< 0.080 J ug/l	< 0.080 ug/l	< 0.080 J ug/l
Bromomethane	NA	Lab	< 0.072 ug/l < 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l
Butyl benzene	NA	Lab	< 0.056 ug/l < 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l

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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 9/22/2008 MW-65-15, MW-65-16 TB809270_09222008 TB	QC 9/23/2008 MW-65-17 TB809270_09232008 TB	QC 9/24/2008 MW-65-18 TB0809408_09242008 TB	QC 9/26/2008 MW-65-19 TB0809408_09262008 TB
Chemical Name	Total or Dissolved	Analysis Location				
Butylbenzene sec	NA	Lab	< 0.036 ug/l < 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l
Butylbenzene tert-	NA	Lab	< 0.038 ug/l < 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l
Carbon disulfide	NA	Lab	< 0.045 ug/l < 0.045 ug/l	< 0.045 ug/l	0.11 J ug/l	0.070 J ug/l
Carbon tetrachloride	NA	Lab	< 0.068 ug/l < 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l
Chlorobenzene	NA	Lab	< 0.045 ug/l < 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
Chlorodibromomethane	NA	Lab	< 0.057 ug/l < 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l
Chloroethane	NA	Lab	< 0.13 ug/l < 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l
Chloroform	NA	Lab	< 0.042 ug/l < 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
Chloromethane	NA	Lab	< 0.053 ug/l < 0.053 ug/l	0.060 J ug/l	< 0.053 ug/l	< 0.053 ug/l
Chlorotoluene o-	NA	Lab	< 0.035 ug/l < 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l
Chlorotoluene p-	NA	Lab	< 0.025 ug/l < 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l
Cumene (isopropyl benzene)	NA	Lab	< 0.031 ug/l < 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l
Cymene p- (Toluene isopropyl p-)	NA	Lab	< 0.044 ug/l < 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l
Dibromomethane (methylene bromide)	NA	Lab	< 0.089 ug/l < 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l
Dichlorodifluoromethane (CFC-12)	NA	Lab	< 0.083 ug/l < 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l
Ethyl benzene	NA	Lab	< 0.042 ug/l < 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
Hexachlorobutadiene	NA	Lab	< 0.19 ug/l < 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l
Iodomethane	NA	Lab	< 0.27 ug/l < 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l
Methyl ethyl ketone	NA	Lab	< 3.8 ug/l < 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l

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Sys Loc Code			QC	QC	QC	QC
Sample Date			9/22/2008	9/23/2008	9/24/2008	9/26/2008
Sample Name			MW-65-15, MW-65-16	MW-65-17	MW-65-18	MW-65-19
Sys Sample Code			TB809270_09222008	TB809270_09232008	TB0809408_09242008	TB0809408_09262008
Sample Type Code			TB	TB	TB	TB
Chemical Name	Total or Dissolved	Analysis Location				
Methyl isobutyl ketone	NA	Lab	< 3.0 ug/l < 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l
Methyl tertiary butyl ether (MTBE)	NA	Lab	< 0.070 ug/l < 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l
Methylene chloride	NA	Lab	< 0.23 ug/l < 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l
Naphthalene	NA	Lab	< 0.10 ug/l < 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l
Propylbenzene	NA	Lab	< 0.037 ug/l < 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
Styrene	NA	Lab	< 0.039 ug/l < 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l
Tetrachloroethylene	NA	Lab	< 0.077 ug/l < 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l
Toluene	NA	Lab	< 0.048 ug/l < 0.048 ug/l	< 0.048 ug/l	0.26 J ug/l	0.11 J ug/l
Trichloroethylene	NA	Lab	< 0.061 ug/l < 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l
Trichlorofluoromethane	NA	Lab	< 0.086 ug/l < 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l
Vinyl acetate	NA	Lab	< 0.91 ug/l < 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l
Vinyl chloride	NA	Lab	< 0.071 ug/l < 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l
Xylene m & p	NA	Lab	< 0.078 ug/l < 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l
Xylene, o-	NA	Lab	< 0.037 ug/l < 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l

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Field Blank Data - Aqueous
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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 5/15/2008 MW-60-1 FBMW-06-1_05152008 FB	QC 5/22/2008 MW-60-2 FBRPW1_05222008 FB	QC 5/22/2008 SW-120 FBSW2_05222008 FB	QC 5/27/2008 MW-60-3 FBMW-06-17_05272008 FB	QC 5/29/2008 MW-60-4 FBPW99-1_05292008 FB
Chemical Name	Total or Dissolved	Analysis Location					
General Parameters							
Alkalinity, bicarbonate as CaCO ₃	NA	Lab	< 2 mg/l	--	< 2 mg/l	< 2 mg/l	< 2 mg/l
Alkalinity, carbonate as CaCO ₃	NA	Lab	< 2 mg/l	--	< 2 mg/l	< 2 mg/l	< 2 mg/l
Chloride	NA	Lab	< 0.2 mg/l	--	< 0.2 mg/l	< 0.2 mg/l	< 0.2 mg/l
Fluoride	NA	Lab	< 0.2 mg/l	--	< 0.2 mg/l	< 0.2 mg/l	< 0.2 mg/l
Nitrate + Nitrite	NA	Lab	< 0.05 mg/l	--	< 0.05 mg/l	< 0.05 mg/l	< 0.05 mg/l
Nitrogen, ammonia as N	NA	Lab	< 0.05 mg/l	--	< 0.05 mg/l	< 0.05 mg/l	< 0.05 mg/l
Phosphorus, elemental (white)	NA	Lab	< 0.0000234 mg/l	< 0.0000234 mg/l	< 0.0000234 mg/l	--	< 0.0000234 mg/l
Phosphorus, total	NA	Lab	< 0.01 mg/l	--	< 0.01 mg/l	0.01 mg/l	0.02 mg/l
Sulfate	NA	Lab	< 0.2 mg/l	--	< 0.2 mg/l	< 0.2 mg/l	0.3 mg/l
Metals							
Antimony	Dissolved	Lab	--	--	< 0.00005 mg/l	--	--
Antimony	Total	Lab	< 0.00005 mg/l	--	< 0.00005 mg/l	0.00007 mg/l	< 0.00005 mg/l
Arsenic	Dissolved	Lab	--	--	< 0.0005 mg/l	--	--
Arsenic	Total	Lab	< 0.0005 mg/l	--	< 0.0005 mg/l	< 0.0005 mg/l	< 0.0005 mg/l
Barium	Dissolved	Lab	--	--	< 0.00005 mg/l	--	--
Barium	Total	Lab	0.00008 mg/l	--	< 0.00005 mg/l	0.00022 mg/l	0.00018 mg/l
Beryllium	Dissolved	Lab	--	--	< 0.00002 mg/l	--	--
Beryllium	Total	Lab	< 0.00002 mg/l	--	< 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l
Cadmium	Dissolved	Lab	--	--	< 0.00002 mg/l	--	--
Cadmium	Total	Lab	< 0.00002 mg/l	--	< 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l
Calcium	Dissolved	Lab	--	--	< 0.0500 mg/l	--	--
Calcium	Total	Lab	0.173 mg/l	--	< 0.0500 mg/l	0.083 mg/l	0.0613 mg/l
Chromium	Dissolved	Lab	--	--	< 0.0002 mg/l	--	--
Chromium	Total	Lab	< 0.0002 mg/l	--	< 0.0002 mg/l	0.0002 mg/l	< 0.0002 mg/l
Cobalt	Dissolved	Lab	--	--	< 0.00002 mg/l	--	--
Cobalt	Total	Lab	< 0.00002 mg/l	--	< 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l
Copper	Dissolved	Lab	--	--	0.0002 mg/l	--	--
Copper	Total	Lab	0.0006 mg/l	--	< 0.0001 mg/l	0.0023 mg/l	0.0008 mg/l
Iron	Dissolved	Lab	--	--	< 0.02 mg/l	--	--
Iron	Total	Lab	< 0.02 mg/l	--	< 0.02 mg/l	< 0.02 mg/l	< 0.02 mg/l
Lead	Dissolved	Lab	--	--	< 0.00002 mg/l	--	--
Lead	Total	Lab	0.00008 mg/l	--	< 0.00002 mg/l	0.00240 mg/l	0.00033 mg/l
Magnesium	Dissolved	Lab	--	--	< 0.0200 mg/l	--	--
Magnesium	Total	Lab	< 0.02 mg/l	--	< 0.0200 mg/l	< 0.02 mg/l	< 0.02 mg/l

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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 5/15/2008 MW-60-1 FBMW-06-1_05152008 FB	QC 5/22/2008 MW-60-2 FBRPW1_05222008 FB	QC 5/22/2008 SW-120 FBSW2_05222008 FB	QC 5/27/2008 MW-60-3 FBMW-06-17_05272008 FB	QC 5/29/2008 MW-60-4 FBPW99-1_05292008 FB
Chemical Name	Total or Dissolved	Analysis Location					
Manganese	Dissolved	Lab	--	--	< 0.00005 mg/l	--	--
Manganese	Total	Lab	< 0.00005 mg/l	--	< 0.00005 mg/l	0.00020 mg/l	0.00055 mg/l
Mercury	Dissolved	Lab	--	--	< 0.0002 mg/l	--	--
Mercury	Total	Lab	< 0.0002 mg/l	--	< 0.0002 mg/l	< 0.0002 mg/l	< 0.000200 mg/l
Nickel	Dissolved	Lab	--	--	< 0.0002 mg/l	--	--
Nickel	Total	Lab	< 0.0002 mg/l	--	< 0.0002 mg/l	< 0.0002 mg/l	< 0.0002 mg/l
Potassium	Dissolved	Lab	--	--	< 2 mg/l	--	--
Potassium	Total	Lab	< 2 mg/l	--	< 2 mg/l	< 2 mg/l	< 2 mg/l
Selenium	Dissolved	Lab	--	--	< 0.0010 mg/l	--	--
Selenium	Total	Lab	< 0.0010 mg/l	--	< 0.0010 mg/l	< 0.0010 mg/l	< 0.0010 mg/l
Silver	Dissolved	Lab	--	--	< 0.00002 mg/l	--	--
Silver	Total	Lab	< 0.00002 mg/l	--	< 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l
Sodium	Dissolved	Lab	--	--	< 0.5 mg/l	--	--
Sodium	Total	Lab	0.238 mg/l	--	< 0.5 mg/l	< 0.1 mg/l	0.404 mg/l
Thallium	Dissolved	Lab	--	--	< 0.00002 mg/l	--	--
Thallium	Total	Lab	< 0.00002 mg/l	--	< 0.00002 mg/l	< 0.00002 mg/l	0.00003 mg/l
Uranium	Dissolved	Lab	--	--	< 0.00002 mg/l	--	--
Uranium	Total	Lab	< 0.00002 mg/l	--	< 0.00002 mg/l	< 0.000020 mg/l	< 0.00002 mg/l
Vanadium	Dissolved	Lab	--	--	< 0.0002 mg/l	--	--
Vanadium	Total	Lab	< 0.0002 mg/l	--	< 0.0002 mg/l	< 0.0002 mg/l	< 0.0002 mg/l
Zinc	Dissolved	Lab	--	--	0.0007 mg/l	--	--
Zinc	Total	Lab	0.0021 mg/l	--	0.0012 mg/l	0.0019 mg/l	0.0128 mg/l
SVOCs							
1,2,4-Trichlorobenzene	NA	Lab	< 0.016 ug/l	--	< 0.016 ug/l	< 0.016 ug/l	< 0.016 ug/l
1,2-Dichlorobenzene	NA	Lab	< 0.022 ug/l	--	< 0.022 ug/l	< 0.022 ug/l	< 0.022 ug/l
1,3-Dichlorobenzene	NA	Lab	< 0.021 ug/l	--	< 0.021 ug/l	< 0.021 ug/l	< 0.021 ug/l
1,4-Dichlorobenzene	NA	Lab	< 0.029 ug/l	--	0.055 J ug/l	0.033 J ug/l	< 0.029 ug/l
2,4,5-Trichlorophenol	NA	Lab	< 0.031 ug/l	--	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l
2,4,6-Trichlorophenol	NA	Lab	< 0.058 ug/l	--	< 0.058 ug/l	< 0.058 ug/l	< 0.058 ug/l
2,4-Dichlorophenol	NA	Lab	< 0.047 ug/l	--	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l
2,4-Dimethylphenol	NA	Lab	< 2.2 R ug/l	--	< 2.2 R ug/l	< 2.2 R ug/l	< 2.2 R ug/l
2,4-Dinitrophenol	NA	Lab	< 0.17 ug/l	--	< 0.17 ug/l	< 0.17 ug/l	< 0.17 ug/l
2,4-Dinitrotoluene	NA	Lab	< 0.018 ug/l	--	< 0.018 ug/l	< 0.018 ug/l	< 0.018 ug/l
2,6-Dinitrotoluene	NA	Lab	< 0.033 ug/l	--	< 0.033 ug/l	< 0.033 ug/l	< 0.033 ug/l
2-Chloronaphthalene	NA	Lab	< 0.041 ug/l	--	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l

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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 5/15/2008 MW-60-1 FBMW-06-1_05152008 FB	QC 5/22/2008 MW-60-2 FBRPW1_05222008 FB	QC 5/22/2008 SW-120 FBSW2_05222008 FB	QC 5/27/2008 MW-60-3 FBMW-06-17_05272008 FB	QC 5/29/2008 MW-60-4 FBPW99-1_05292008 FB
Chemical Name	Total or Dissolved	Analysis Location					
2-Chlorophenol	NA	Lab	< 0.054 ug/l	--	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l
2-Methyl-4,6-dinitrophenol	NA	Lab	< 0.025 ug/l	--	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l
2-Methylnaphthalene	NA	Lab	< 0.026 ug/l	--	0.29 ug/l	0.36 ug/l	< 0.026 ug/l
2-Nitroaniline	NA	Lab	< 0.024 ug/l	--	< 0.024 ug/l	< 0.024 ug/l	< 0.024 ug/l
2-Nitrophenol	NA	Lab	< 0.063 ug/l	--	< 0.063 ug/l	< 0.063 ug/l	< 0.063 ug/l
3,3'-Dichlorobenzidine	NA	Lab	< 0.43 ug/l	--	< 0.43 ug/l	< 0.43 ug/l	< 0.43 ug/l
3-Nitroaniline	NA	Lab	< 0.029 ug/l	--	< 0.029 ug/l	< 0.029 ug/l	< 0.029 ug/l
4-Bromophenyl phenyl ether	NA	Lab	< 0.026 ug/l	--	< 0.026 ug/l	< 0.026 ug/l	< 0.026 ug/l
4-Chloro-3-methylphenol	NA	Lab	< 0.037 ug/l	--	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
4-Chloroaniline	NA	Lab	< 0.025 ug/l	--	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l
4-Chlorophenyl phenyl ether	NA	Lab	< 0.027 ug/l	--	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l
4-Nitroaniline	NA	Lab	< 0.019 ug/l	--	< 0.019 ug/l	< 0.019 ug/l	< 0.019 ug/l
4-Nitrophenol	NA	Lab	< 0.28 ug/l	--	< 0.28 ug/l	< 0.28 ug/l	< 0.28 ug/l
Acenaphthene	NA	Lab	< 0.026 ug/l	--	0.10 J ug/l	< 0.026 ug/l	< 0.026 ug/l
Acenaphthylene	NA	Lab	< 0.015 ug/l	--	0.025 J ug/l	< 0.015 ug/l	< 0.015 ug/l
Anthracene	NA	Lab	< 0.024 ug/l	--	< 0.024 ug/l	< 0.024 ug/l	< 0.024 ug/l
Azobenzene	NA	Lab	< 0.021 ug/l	--	< 0.021 ug/l	< 0.021 ug/l	< 0.021 ug/l
Benzo(a)anthracene	NA	Lab	< 0.018 ug/l	--	< 0.018 ug/l	< 0.018 ug/l	< 0.018 ug/l
Benzo(a)pyrene	NA	Lab	< 0.031 ug/l	--	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l
Benzo(b)fluoranthene	NA	Lab	< 0.017 ug/l	--	< 0.017 ug/l	< 0.017 ug/l	< 0.017 ug/l
Benzo(g,h,i)perylene	NA	Lab	< 0.019 ug/l	--	< 0.019 ug/l	< 0.019 ug/l	< 0.019 ug/l
Benzo(k)fluoranthene	NA	Lab	< 0.024 ug/l	--	< 0.024 ug/l	< 0.024 ug/l	< 0.024 ug/l
Benzoic Acid	NA	Lab	< 1.1 R ug/l	--	< 1.1 R ug/l	< 1.1 R ug/l	< 1.1 R ug/l
Benzyl alcohol	NA	Lab	< 0.073 ug/l	--	0.14 J ug/l	0.89 J ug/l	0.20 J ug/l
Bis(2-chloroethoxy)methane	NA	Lab	< 0.024 ug/l	--	< 0.024 ug/l	< 0.024 ug/l	< 0.024 ug/l
Bis(2-chloroethyl)ether	NA	Lab	< 0.035 ug/l	--	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l
Bis(2-chloroisopropyl)ether	NA	Lab	< 0.026 ug/l	--	< 0.026 ug/l	< 0.026 ug/l	< 0.026 ug/l

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Field Blank Data - Aqueous
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 5/15/2008 MW-60-1 FBMW-06-1_05152008 FB	QC 5/22/2008 MW-60-2 FBRPW1_05222008 FB	QC 5/22/2008 SW-120 FBSW2_05222008 FB	QC 5/27/2008 MW-60-3 FBMW-06-17_05272008 FB	QC 5/29/2008 MW-60-4 FBPW99-1_05292008 FB
Chemical Name	Total or Dissolved	Analysis Location					
Bis(2-ethylhexyl)phthalate	NA	Lab	3.9 ug/l	--	0.16 J ug/l	3.6 ug/l	1.9 ug/l
Butyl benzyl phthalate	NA	Lab	< 0.018 ug/l	--	0.058 J ug/l	0.045 J ug/l	< 0.018 ug/l
Carbazole	NA	Lab	< 0.018 ug/l	--	0.033 J ug/l	< 0.018 ug/l	< 0.018 ug/l
Chrysene	NA	Lab	< 0.028 ug/l	--	< 0.028 ug/l	< 0.028 ug/l	< 0.028 ug/l
Dibenz(a,h)anthracene	NA	Lab	< 0.017 ug/l	--	< 0.017 ug/l	< 0.017 ug/l	< 0.017 ug/l
Dibenzofuran	NA	Lab	< 0.018 ug/l	--	< 0.018 ug/l	< 0.018 ug/l	< 0.018 ug/l
Diethyl phthalate	NA	Lab	< 0.012 ug/l	--	1.3 ug/l	0.78 ug/l	0.024 J ug/l
Dimethyl phthalate	NA	Lab	< 0.021 ug/l	--	< 0.021 ug/l	0.033 J ug/l	< 0.021 ug/l
Di-n-butyl phthalate	NA	Lab	0.035 J ug/l	--	0.21 ug/l	0.21 ug/l	0.067 J ug/l
Di-n-octyl phthalate	NA	Lab	< 0.018 ug/l	--	< 0.018 ug/l	< 0.018 ug/l	< 0.018 ug/l
Fluoranthene	NA	Lab	< 0.020 ug/l	--	< 0.020 ug/l	< 0.020 ug/l	< 0.020 ug/l
Fluorene	NA	Lab	< 0.027 ug/l	--	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l
Hexachlorobenzene	NA	Lab	< 0.022 ug/l	--	< 0.022 ug/l	< 0.022 ug/l	< 0.022 ug/l
Hexachlorobutadiene	NA	Lab	< 0.027 ug/l	--	< 0.027 R ug/l	< 0.027 ug/l	< 0.027 R ug/l
Hexachlorocyclopentadiene	NA	Lab	< 0.19 R ug/l	--	< 0.19 R ug/l	< 0.19 R ug/l	< 0.19 R ug/l
Hexachloroethane	NA	Lab	< 0.024 ug/l	--	< 0.024 ug/l	< 0.024 ug/l	< 0.024 R ug/l
Indeno(1,2,3-cd)pyrene	NA	Lab	< 0.021 ug/l	--	< 0.021 ug/l	< 0.021 ug/l	< 0.021 ug/l
Isophorone	NA	Lab	< 0.016 ug/l	--	< 0.016 ug/l	< 0.016 ug/l	< 0.016 ug/l
Naphthalene	NA	Lab	< 0.022 ug/l	--	3.9 ug/l	1.2 ug/l	0.038 J ug/l
Nitrobenzene	NA	Lab	< 0.028 ug/l	--	< 0.028 ug/l	0.040 J ug/l	< 0.028 ug/l
N-Nitrosodimethylamine	NA	Lab	< 0.42 ug/l	--	< 0.42 ug/l	< 0.42 ug/l	< 0.42 ug/l
N-Nitrosodi-n-propylamine	NA	Lab	< 0.037 ug/l	--	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
N-Nitrosodiphenylamine	NA	Lab	< 0.048 ug/l	--	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l
o-Cresol	NA	Lab	< 0.11 ug/l	--	< 0.11 ug/l	< 0.11 ug/l	< 0.11 ug/l
p-Cresol	NA	Lab	< 0.12 ug/l	--	< 0.12 ug/l	< 0.12 ug/l	< 0.12 ug/l
Pentachlorophenol	NA	Lab	< 0.34 ug/l	--	< 0.34 ug/l	< 0.34 ug/l	< 0.34 ug/l
Phenanthrene	NA	Lab	< 0.022 ug/l	--	< 0.022 ug/l	< 0.022 ug/l	< 0.022 ug/l
Phenol	NA	Lab	2.5 ug/l	--	0.29 J ug/l	0.88 ug/l	9.5 ug/l

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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 5/15/2008 MW-60-1 FBMW-06-1_05152008 FB	QC 5/22/2008 MW-60-2 FBRPW1_05222008 FB	QC 5/22/2008 SW-120 FBSW2_05222008 FB	QC 5/27/2008 MW-60-3 FBMW-06-17_05272008 FB	QC 5/29/2008 MW-60-4 FBPW99-1_05292008 FB
Chemical Name	Total or Dissolved	Analysis Location					
Pyrene	NA	Lab	< 0.019 ug/l	--	< 0.019 ug/l	< 0.019 ug/l	< 0.019 ug/l
Pyridine	NA	Lab	--	--	--	--	--
VOCs							
1,1,1,2-Tetrachloroethane	NA	Lab	< 0.047 ug/l	--	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l
1,1,1-Trichloroethane	NA	Lab	< 0.050 ug/l	--	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l
1,1,2,2-Tetrachloroethane	NA	Lab	< 0.064 ug/l	--	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l
1,1,2-Trichloroethane	NA	Lab	< 0.061 ug/l	--	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l
1,1-Dichloro-1-propene	NA	Lab	< 0.051 ug/l	--	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l
1,1-Dichloroethane	NA	Lab	< 0.042 ug/l	--	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,1-Dichloroethylene	NA	Lab	< 0.10 ug/l	--	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l
1,2,3-Trichlorobenzene	NA	Lab	< 0.10 ug/l	--	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l
1,2,3-Trichloropropane	NA	Lab	< 0.14 ug/l	--	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l
1,2,4-Trichlorobenzene	NA	Lab	< 0.13 ug/l	--	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l
1,2,4-Trimethylbenzene	NA	Lab	< 0.037 ug/l	--	< 0.037 ug/l	9.3 ug/l	< 0.037 ug/l
1,2-Dibromo-3-chloropropane	NA	Lab	< 0.22 ug/l	--	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l
1,2-Dibromoethane	NA	Lab	< 0.084 ug/l	--	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l
1,2-Dichlorobenzene	NA	Lab	< 0.044 ug/l	--	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l
1,2-Dichloroethane	NA	Lab	< 0.073 ug/l	--	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l
1,2-Dichloroethylene, cis	NA	Lab	< 0.045 ug/l	--	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
1,2-Dichloroethylene, trans	NA	Lab	< 0.048 ug/l	--	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l
1,2-Dichloropropane	NA	Lab	< 0.042 ug/l	--	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,3,5-Trimethylbenzene	NA	Lab	< 0.042 ug/l	--	< 0.042 ug/l	2.7 ug/l	< 0.042 ug/l
1,3-Dichloro-1-propene trans	NA	Lab	< 0.041 ug/l	--	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l
1,3-Dichloro-1-propene, cis	NA	Lab	< 0.038 ug/l	--	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l
1,3-Dichlorobenzene	NA	Lab	< 0.041 ug/l	--	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l
1,3-Dichloropropane	NA	Lab	< 0.032 ug/l	--	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l
1,4-Dichlorobenzene	NA	Lab	< 0.054 ug/l	--	0.080 J ug/l	0.060 J ug/l	< 0.054 ug/l
2,2-Dichloropropane	NA	Lab	< 0.050 ug/l	--	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l
2-Chloroethyl Vinyl Ether	NA	Lab	< 0.19 R ug/l	--	< 0.19 R ug/l	< 0.19 R ug/l	< 0.19 R ug/l
2-Hexanone	NA	Lab	< 2.9 ug/l	--	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l
Acetone	NA	Lab	< 2.5 ug/l	--	< 2.5 ug/l	3.1 J ug/l	2.9 J ug/l
Acrolein	NA	Lab	< 2.0 ug/l	--	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Acrylonitrile	NA	Lab	< 0.31 ug/l	--	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l
Benzene	NA	Lab	< 0.045 ug/l	--	0.12 J ug/l	0.49 J ug/l	< 0.045 ug/l

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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 5/15/2008 MW-60-1 FBMW-06-1_05152008 FB	QC 5/22/2008 MW-60-2 FBRPW1_05222008 FB	QC 5/22/2008 SW-120 FBSW2_05222008 FB	QC 5/27/2008 MW-60-3 FBMW-06-17_05272008 FB	QC 5/29/2008 MW-60-4 FBPW99-1_05292008 FB
Chemical Name	Total or Dissolved	Analysis Location					
Bromobenzene	NA	Lab	< 0.027 ug/l	--	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l
Bromochloromethane	NA	Lab	< 0.091 ug/l	--	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l
Bromodichloromethane	NA	Lab	< 0.036 ug/l	--	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l
Bromoform	NA	Lab	< 0.080 ug/l	--	< 0.080 ug/l	< 0.080 ug/l	< 0.080 ug/l
Bromomethane	NA	Lab	< 0.072 ug/l	--	< 0.072 J ug/l	< 0.072 J ug/l	< 0.072 ug/l
Butyl benzene	NA	Lab	< 0.056 ug/l	--	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l
Butylbenzene sec	NA	Lab	< 0.036 ug/l	--	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l
Butylbenzene tert-	NA	Lab	< 0.038 ug/l	--	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l
Carbon disulfide	NA	Lab	0.050 J ug/l	--	< 0.045 J ug/l	< 0.045 ug/l	< 0.045 ug/l
Carbon tetrachloride	NA	Lab	< 0.068 ug/l	--	< 0.068 ug/l	0.070 J ug/l	< 0.068 ug/l
Chlorobenzene	NA	Lab	< 0.045 ug/l	--	0.050 J ug/l	< 0.045 ug/l	< 0.045 ug/l
Chlorodibromomethane	NA	Lab	< 0.057 ug/l	--	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l
Chloroethane	NA	Lab	< 0.13 ug/l	--	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l
Chloroform	NA	Lab	0.18 J ug/l	--	0.070 J ug/l	6.1 ug/l	0.10 J ug/l
Chloromethane	NA	Lab	< 0.053 ug/l	--	< 0.053 ug/l	0.13 J ug/l	< 0.053 ug/l
Chlorotoluene o-	NA	Lab	< 0.035 ug/l	--	< 0.035 ug/l	0.44 J ug/l	< 0.035 ug/l
Chlorotoluene p-	NA	Lab	< 0.025 ug/l	--	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l
Cumene (isopropyl benzene)	NA	Lab	< 0.031 ug/l	--	< 0.031 ug/l	0.33 J ug/l	< 0.031 ug/l
Cymene p- (Toluene isopropyl p-)	NA	Lab	< 0.044 ug/l	--	< 0.044 ug/l	0.050 J ug/l	< 0.044 ug/l
Dibromomethane (methylene bromide)	NA	Lab	< 0.089 ug/l	--	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l
Dichlorodifluoromethane (CFC-12)	NA	Lab	< 0.083 ug/l	--	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l
Ethyl benzene	NA	Lab	< 0.042 ug/l	--	0.070 J ug/l	14 ug/l	< 0.042 ug/l
Hexachlorobutadiene	NA	Lab	< 0.19 ug/l	--	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l
Iodomethane	NA	Lab	< 0.27 ug/l	--	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l
Methyl ethyl ketone	NA	Lab	< 3.8 ug/l	--	< 3.8 ug/l	5.0 J ug/l	< 3.8 ug/l
Methyl isobutyl ketone	NA	Lab	< 3.0 ug/l	--	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l
Methyl tertiary butyl ether (MTBE)	NA	Lab	< 0.070 ug/l	--	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l
Methylene chloride	NA	Lab	< 0.23 ug/l	--	< 0.23 ug/l	14 ug/l	< 0.23 ug/l
Naphthalene	NA	Lab	< 0.10 ug/l	--	2.9 ug/l	1.6 J ug/l	< 0.10 ug/l
Propylbenzene	NA	Lab	< 0.037 ug/l	--	< 0.037 ug/l	0.86 J ug/l	< 0.037 ug/l
Styrene	NA	Lab	< 0.039 ug/l	--	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l
Tetrachloroethylene	NA	Lab	< 0.077 ug/l	--	< 0.077 ug/l	14 ug/l	< 0.077 ug/l
Toluene	NA	Lab	0.27 J ug/l	--	0.96 ug/l	30 ug/l	0.13 J ug/l
Trichloroethylene	NA	Lab	< 0.061 ug/l	--	< 0.061 ug/l	0.99 ug/l	< 0.061 ug/l
Trichlorofluoromethane	NA	Lab	< 0.086 ug/l	--	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l

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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 5/15/2008 MW-60-1 FBMW-06-1_05152008 FB	QC 5/22/2008 MW-60-2 FBRPW1_05222008 FB	QC 5/22/2008 SW-120 FBSW2_05222008 FB	QC 5/27/2008 MW-60-3 FBMW-06-17_05272008 FB	QC 5/29/2008 MW-60-4 FBPW99-1_05292008 FB
Chemical Name	Total or Dissolved	Analysis Location					
Vinyl acetate	NA	Lab	< 0.91 ug/l	--	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l
Vinyl chloride	NA	Lab	< 0.071 ug/l	--	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l
Xylene m & p	NA	Lab	< 0.078 ug/l	--	0.25 J ug/l	68 ug/l	< 0.078 ug/l
Xylene, o-	NA	Lab	< 0.037 ug/l	--	0.13 J ug/l	39 ug/l	< 0.037 ug/l
PCBs							
Aroclor 1016	NA	Lab	< 0.0094 ug/l	< 0.0094 ug/l	--	< 0.0094 ug/l	< 0.0094 ug/l
Aroclor 1221	NA	Lab	< 0.020 ug/l	< 0.020 ug/l	--	< 0.020 ug/l	< 0.020 ug/l
Aroclor 1232	NA	Lab	< 0.023 ug/l	< 0.023 ug/l	--	< 0.023 ug/l	< 0.023 ug/l
Aroclor 1242	NA	Lab	< 0.013 ug/l	< 0.013 ug/l	--	< 0.013 ug/l	< 0.013 ug/l
Aroclor 1248	NA	Lab	< 0.0054 ug/l	< 0.0054 ug/l	--	< 0.0054 ug/l	< 0.0054 ug/l
Aroclor 1254	NA	Lab	< 0.0070 ug/l	< 0.0070 ug/l	--	< 0.0070 ug/l	< 0.0070 ug/l
Aroclor 1260	NA	Lab	< 0.0031 ug/l	< 0.0031 ug/l	--	< 0.0031 ug/l	< 0.0031 ug/l
Aroclor 1262	NA	Lab	< 0.0048 ug/l	< 0.0048 ug/l	--	< 0.0048 ug/l	< 0.0048 ug/l
Aroclor 1268	NA	Lab	< 0.0065 ug/l	< 0.0065 ug/l	--	< 0.0065 ug/l	< 0.0065 ug/l
Radiochemical Parameters							
Gross Alpha (radiation)	NA	Lab	< 0.81 pCi/l	--	-0.05 +/- -0.08 pCi/l	< 0.82 pCi/l	< 0.81 pCi/l
Gross Beta (radiation)	NA	Lab	< 2.5 pCi/l	--	9.8 +/- 4.5 pCi/l	< 2.5 pCi/l	< 2.6 pCi/l
Lead 210	NA	Lab	--	--	--	--	--
Radium 226	NA	Lab	< 0.27 pCi/l	< 0.35 pCi/l	< 0.37 pCi/l	< 0.89 pCi/l	< 0.41 pCi/l
Radium 228	NA	Lab	< 0.67 pCi/l	--	< 1.5 pCi/l	< 0.64 pCi/l	0.92 +/- 0.32 pCi/l
Thorium 230	NA	Lab	--	--	--	--	--
Uranium 234	NA	Lab	--	--	--	--	--
Uranium 235	NA	Lab	--	--	--	--	--
Uranium 238 (radiochemical method)	NA	Lab	--	--	--	--	--

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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 5/30/2008 MW-60-5 FBRPW1_05302008 FB	QC 6/9/2008 MW-60-3 FBMW-06-17_06092008 FB	QC 9/17/2008 MW-60-6 FBMW97-2_09172008 FB	QC 9/17/2008 SW-121 FBSW14_09172008 FB	QC 9/19/2008 MW-60-8 FBMW-06-13_09192008 FB
Chemical Name	Total or Dissolved	Analysis Location					
General Parameters							
Alkalinity, bicarbonate as CaCO ₃	NA	Lab	< 2 mg/l	--	< 2 mg/l	< 2 mg/l	< 2 mg/l
Alkalinity, carbonate as CaCO ₃	NA	Lab	< 2 mg/l	--	< 2 mg/l	< 2 mg/l	< 2 mg/l
Chloride	NA	Lab	< 0.2 mg/l	--	0.2 mg/l	< 0.2 mg/l	< 0.2 mg/l
Fluoride	NA	Lab	< 0.2 mg/l	--	< 0.010 mg/l	< 0.005 mg/l	< 0.2 mg/l
Nitrate + Nitrite	NA	Lab	< 0.05 mg/l	--	< 0.05 mg/l	< 0.05 mg/l	< 0.05 mg/l
Nitrogen, ammonia as N	NA	Lab	< 0.05 mg/l	--	< 0.05 mg/l	< 0.05 mg/l	< 0.05 mg/l
Phosphorus, elemental (white)	NA	Lab	< 0.0000234 mg/l	< 0.0000234 mg/l	< 0.0000234 mg/l	< 0.0000234 mg/l	0.00177 R mg/l
Phosphorus, total	NA	Lab	0.01 mg/l	--	< 0.01 mg/l	0.01 mg/l	< 0.01 mg/l
Sulfate	NA	Lab	0.7 mg/l	--	0.2 mg/l	< 0.2 mg/l	1.2 mg/l
Metals							
Antimony	Dissolved	Lab	--	--	--	< 0.00005 mg/l	--
Antimony	Total	Lab	< 0.00005 mg/l	--	< 0.00005 mg/l	< 0.00005 mg/l	< 0.00005 mg/l
Arsenic	Dissolved	Lab	--	--	--	< 0.0005 mg/l	--
Arsenic	Total	Lab	< 0.0005 mg/l	--	< 0.0005 mg/l	< 0.0005 mg/l	< 0.0005 mg/l
Barium	Dissolved	Lab	--	--	--	< 0.00005 mg/l	--
Barium	Total	Lab	0.00007 mg/l	--	0.000173 mg/l	< 0.00005 mg/l	0.00009 mg/l
Beryllium	Dissolved	Lab	--	--	--	< 0.00002 mg/l	--
Beryllium	Total	Lab	< 0.00002 mg/l	--	0.0041 mg/l	< 0.00002 mg/l	< 0.00002 mg/l
Cadmium	Dissolved	Lab	--	--	--	< 0.00002 mg/l	--
Cadmium	Total	Lab	< 0.00002 mg/l	--	< 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l
Calcium	Dissolved	Lab	--	--	--	< 0.05 mg/l	--
Calcium	Total	Lab	0.113 mg/l	--	0.06 mg/l	< 0.05 mg/l	< 0.05 mg/l
Chromium	Dissolved	Lab	--	--	--	0.0002 mg/l	--
Chromium	Total	Lab	< 0.0002 mg/l	--	0.00029 mg/l	0.0003 mg/l	< 0.0002 mg/l
Cobalt	Dissolved	Lab	--	--	--	< 0.00002 mg/l	--
Cobalt	Total	Lab	< 0.00002 mg/l	--	0.000404 mg/l	< 0.00002 mg/l	< 0.00002 mg/l
Copper	Dissolved	Lab	--	--	--	< 0.0001 mg/l	--
Copper	Total	Lab	0.0002 mg/l	--	0.738500 mg/l	< 0.0001 mg/l	0.0002 mg/l
Iron	Dissolved	Lab	--	--	--	< 0.02 mg/l	--
Iron	Total	Lab	< 0.02 mg/l	--	0.14 mg/l	< 0.02 mg/l	< 0.02 mg/l
Lead	Dissolved	Lab	--	--	--	< 0.00002 mg/l	--
Lead	Total	Lab	< 0.00002 mg/l	--	0.001046 mg/l	< 0.00002 mg/l	< 0.00002 mg/l
Magnesium	Dissolved	Lab	--	--	--	< 0.02 mg/l	--
Magnesium	Total	Lab	< 0.02 mg/l	--	< 0.020 mg/l	< 0.02 mg/l	< 0.02 mg/l

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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 5/30/2008 MW-60-5 FBRPW1_05302008 FB	QC 6/9/2008 MW-60-3 FBMW-06-17_06092008 FB	QC 9/17/2008 MW-60-6 FBMW97-2_09172008 FB	QC 9/17/2008 SW-121 FBSW14_09172008 FB	QC 9/19/2008 MW-60-8 FBMW-06-13_09192008 FB
Chemical Name	Total or Dissolved	Analysis Location					
Manganese	Dissolved	Lab	--	--	--	0.00008 mg/l	--
Manganese	Total	Lab	0.00008 mg/l	--	0.000360 mg/l	< 0.00005 mg/l	< 0.00010 mg/l
Mercury	Dissolved	Lab	--	--	--	< 0.0002 mg/l	--
Mercury	Total	Lab	< 0.0002 mg/l	--	< 0.00020 mg/l	< 0.0002 mg/l	< 0.0002 mg/l
Nickel	Dissolved	Lab	--	--	--	< 0.0002 mg/l	--
Nickel	Total	Lab	< 0.0002 mg/l	--	< 0.0002 mg/l	< 0.0002 mg/l	< 0.0002 mg/l
Potassium	Dissolved	Lab	--	--	--	< 2.0 mg/l	--
Potassium	Total	Lab	< 2 mg/l	--	< 2.0 mg/l	< 2.0 mg/l	< 0.4 mg/l
Selenium	Dissolved	Lab	--	--	--	< 0.001 mg/l	--
Selenium	Total	Lab	< 0.001 mg/l	--	< 0.0010 mg/l	< 0.001 mg/l	< 0.002 mg/l
Silver	Dissolved	Lab	--	--	--	< 0.00002 mg/l	--
Silver	Total	Lab	< 0.00002 mg/l	--	0.000134 mg/l	< 0.00002 mg/l	< 0.00002 mg/l
Sodium	Dissolved	Lab	--	--	--	< 0.1 mg/l	--
Sodium	Total	Lab	0.155 mg/l	--	< 0.1 mg/l	< 0.1 mg/l	< 0.2 mg/l
Thallium	Dissolved	Lab	--	--	--	< 0.00002 mg/l	--
Thallium	Total	Lab	< 0.00002 mg/l	--	< 0.000020 mg/l	< 0.00002 mg/l	< 0.00002 mg/l
Uranium	Dissolved	Lab	--	--	--	< 0.00002 mg/l	--
Uranium	Total	Lab	< 0.00002 mg/l	--	0.000030 mg/l	< 0.00002 mg/l	< 0.00002 mg/l
Vanadium	Dissolved	Lab	--	--	--	< 0.0002 mg/l	--
Vanadium	Total	Lab	0.0005 mg/l	--	< 0.000200 mg/l	< 0.0002 mg/l	< 0.0002 mg/l
Zinc	Dissolved	Lab	--	--	--	0.0010 mg/l	--
Zinc	Total	Lab	0.0013 mg/l	--	0.1166 mg/l	< 0.0005 mg/l	0.002 mg/l
SVOCs							
1,2,4-Trichlorobenzene	NA	Lab	< 0.016 ug/l	--	< 0.016 ug/l	< 0.016 ug/l	< 0.016 ug/l
1,2-Dichlorobenzene	NA	Lab	< 0.022 ug/l	--	< 0.022 ug/l	< 0.022 ug/l	< 0.022 ug/l
1,3-Dichlorobenzene	NA	Lab	< 0.021 ug/l	--	< 0.021 ug/l	< 0.021 ug/l	< 0.021 ug/l
1,4-Dichlorobenzene	NA	Lab	< 0.029 ug/l	--	0.14 J ug/l	0.13 J ug/l	0.14 J ug/l
2,4,5-Trichlorophenol	NA	Lab	< 0.031 ug/l	--	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l
2,4,6-Trichlorophenol	NA	Lab	< 0.058 ug/l	--	< 0.058 ug/l	< 0.058 ug/l	< 0.058 ug/l
2,4-Dichlorophenol	NA	Lab	< 0.047 ug/l	--	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l
2,4-Dimethylphenol	NA	Lab	< 2.2 R ug/l	--	< 2.2 ug/l	< 2.2 ug/l	< 2.2 ug/l
2,4-Dinitrophenol	NA	Lab	< 0.17 ug/l	--	< 0.17 R ug/l	< 0.17 R ug/l	< 0.17 ug/l
2,4-Dinitrotoluene	NA	Lab	< 0.018 ug/l	--	< 0.018 ug/l	< 0.018 ug/l	< 0.018 ug/l
2,6-Dinitrotoluene	NA	Lab	< 0.033 ug/l	--	< 0.033 ug/l	< 0.033 ug/l	< 0.033 ug/l
2-Chloronaphthalene	NA	Lab	< 0.041 ug/l	--	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l

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Chemical Name	Total or Dissolved	Analysis Location					
2-Chlorophenol	NA	Lab	< 0.054 ug/l	--	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l
2-Methyl-4,6-dinitrophenol	NA	Lab	< 0.025 ug/l	--	< 0.025 R ug/l	< 0.025 R ug/l	< 0.025 ug/l
2-Methylnaphthalene	NA	Lab	0.12 J ug/l	--	< 0.026 ug/l	< 0.026 ug/l	< 0.026 ug/l
2-Nitroaniline	NA	Lab	< 0.024 ug/l	--	< 0.024 ug/l	< 0.024 ug/l	< 0.024 ug/l
2-Nitrophenol	NA	Lab	< 0.063 ug/l	--	< 0.063 ug/l	< 0.063 ug/l	< 0.063 ug/l
3,3'-Dichlorobenzidine	NA	Lab	< 0.43 ug/l	--	< 0.43 ug/l	< 0.43 ug/l	< 0.43 ug/l
3-Nitroaniline	NA	Lab	< 0.029 ug/l	--	< 0.029 ug/l	< 0.029 ug/l	< 0.029 ug/l
4-Bromophenyl phenyl ether	NA	Lab	< 0.026 ug/l	--	< 0.026 ug/l	< 0.026 ug/l	< 0.026 ug/l
4-Chloro-3-methylphenol	NA	Lab	< 0.037 ug/l	--	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
4-Chloroaniline	NA	Lab	< 0.025 ug/l	--	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l
4-Chlorophenyl phenyl ether	NA	Lab	< 0.027 ug/l	--	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l
4-Nitroaniline	NA	Lab	< 0.019 ug/l	--	< 0.019 ug/l	< 0.019 ug/l	< 0.019 ug/l
4-Nitrophenol	NA	Lab	< 0.28 ug/l	--	< 0.28 ug/l	< 0.28 ug/l	< 0.28 ug/l
Acenaphthene	NA	Lab	0.055 J ug/l	--	< 0.0044 ug/l < 0.026 ug/l	< 0.0044 ug/l < 0.026 ug/l	< 0.0044 ug/l < 0.026 ug/l
Acenaphthylene	NA	Lab	< 0.015 ug/l	--	< 0.0034 ug/l < 0.015 ug/l	< 0.0034 ug/l < 0.015 ug/l	< 0.0034 ug/l < 0.015 ug/l
Anthracene	NA	Lab	< 0.024 ug/l	--	< 0.0036 ug/l < 0.024 ug/l	< 0.0036 ug/l < 0.024 ug/l	< 0.0036 ug/l < 0.024 ug/l
Azobenzene	NA	Lab	< 0.021 ug/l	--	< 0.021 ug/l	< 0.021 ug/l	< 0.021 ug/l
Benzo(a)anthracene	NA	Lab	< 0.018 ug/l	--	< 0.0026 ug/l < 0.018 ug/l	< 0.0026 ug/l < 0.018 ug/l	< 0.0026 ug/l < 0.018 ug/l
Benzo(a)pyrene	NA	Lab	< 0.031 ug/l	--	< 0.0043 ug/l < 0.031 ug/l	< 0.0043 ug/l < 0.031 ug/l	< 0.0043 ug/l < 0.031 ug/l
Benzo(b)fluoranthene	NA	Lab	< 0.017 ug/l	--	< 0.0023 ug/l < 0.017 ug/l	< 0.0023 ug/l < 0.017 ug/l	< 0.0023 ug/l < 0.017 ug/l
Benzo(g,h,i)perylene	NA	Lab	< 0.019 ug/l	--	< 0.0029 ug/l < 0.019 ug/l	< 0.0029 ug/l < 0.019 ug/l	< 0.0029 ug/l < 0.019 ug/l
Benzo(k)fluoranthene	NA	Lab	< 0.024 ug/l	--	< 0.0025 ug/l < 0.024 ug/l	< 0.0025 ug/l < 0.024 ug/l	< 0.0025 ug/l < 0.024 ug/l
Benzoic Acid	NA	Lab	< 1.1 R ug/l	--	< 1.1 R ug/l	< 1.1 R ug/l	< 1.1 ug/l
Benzyl alcohol	NA	Lab	0.20 J ug/l	--	0.12 J ug/l	0.19 J ug/l	< 0.073 ug/l
Bis(2-chloroethoxy)methane	NA	Lab	< 0.024 ug/l	--	< 0.024 ug/l	< 0.024 ug/l	< 0.024 ug/l
Bis(2-chloroethyl)ether	NA	Lab	< 0.035 ug/l	--	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l
Bis(2-chloroisopropyl)ether	NA	Lab	< 0.026 ug/l	--	< 0.026 ug/l	< 0.026 ug/l	< 0.026 ug/l

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Chemical Name	Total or Dissolved	Analysis Location					
Bis(2-ethylhexyl)phthalate	NA	Lab	0.48 J ug/l	--	6.3 ug/l	0.27 J ug/l	1.8 ug/l
Butyl benzyl phthalate	NA	Lab	0.042 J ug/l	--	0.037 J ug/l	0.039 J ug/l	0.035 J ug/l
Carbazole	NA	Lab	0.024 J ug/l	--	< 0.018 ug/l	< 0.018 ug/l	< 0.018 ug/l
Chrysene	NA	Lab	< 0.028 ug/l	--	< 0.0034 ug/l < 0.028 ug/l	< 0.0034 ug/l < 0.028 ug/l	< 0.0034 ug/l < 0.028 ug/l
Dibenz(a,h)anthracene	NA	Lab	< 0.017 ug/l	--	< 0.0025 ug/l < 0.017 ug/l	< 0.0025 ug/l < 0.017 ug/l	< 0.0025 ug/l < 0.017 ug/l
Dibenzofuran	NA	Lab	< 0.018 ug/l	--	< 0.018 ug/l	< 0.018 ug/l	< 0.018 ug/l
Diethyl phthalate	NA	Lab	1.1 ug/l	--	0.35 ug/l	0.85 ug/l	0.49 ug/l
Dimethyl phthalate	NA	Lab	< 0.021 ug/l	--	< 0.021 ug/l	0.054 J ug/l	< 0.021 ug/l
Di-n-butyl phthalate	NA	Lab	0.15 J ug/l	--	0.10 J ug/l	0.11 J ug/l	0.13 J ug/l
Di-n-octyl phthalate	NA	Lab	< 0.018 ug/l	--	< 0.018 ug/l	< 0.018 ug/l	< 0.018 ug/l
Fluoranthene	NA	Lab	< 0.020 ug/l	--	< 0.0044 ug/l < 0.020 ug/l	< 0.0044 ug/l 0.021 J ug/l	< 0.0044 ug/l < 0.020 ug/l
Fluorene	NA	Lab	< 0.027 ug/l	--	< 0.0038 ug/l < 0.027 ug/l	< 0.0038 ug/l < 0.027 ug/l	< 0.0038 ug/l < 0.027 ug/l
Hexachlorobenzene	NA	Lab	< 0.022 ug/l	--	< 0.022 ug/l	< 0.022 ug/l	< 0.022 ug/l
Hexachlorobutadiene	NA	Lab	< 0.027 R ug/l	--	< 0.027 R ug/l	< 0.027 R ug/l	< 0.027 ug/l
Hexachlorocyclopentadiene	NA	Lab	< 0.19 R ug/l	--	< 0.19 R ug/l	< 0.19 R ug/l	< 0.19 ug/l
Hexachloroethane	NA	Lab	< 0.024 R ug/l	--	< 0.024 R ug/l	< 0.024 R ug/l	< 0.024 ug/l
Indeno(1,2,3-cd)pyrene	NA	Lab	< 0.021 ug/l	--	< 0.0026 ug/l < 0.021 ug/l	< 0.0026 ug/l < 0.021 ug/l	< 0.0026 ug/l < 0.021 ug/l
Isophorone	NA	Lab	< 0.016 ug/l	--	< 0.016 ug/l	0.041 J ug/l	< 0.016 ug/l
Naphthalene	NA	Lab	1.2 ug/l	--	0.030 ug/l 0.028 J ug/l	0.030 ug/l 0.036 J ug/l	0.017 J ug/l 0.027 J ug/l
Nitrobenzene	NA	Lab	< 0.028 ug/l	--	< 0.028 ug/l	< 0.028 ug/l	< 0.028 ug/l
N-Nitrosodimethylamine	NA	Lab	< 0.42 ug/l	--	< 0.42 ug/l	< 0.42 ug/l	< 0.42 ug/l
N-Nitrosodi-n-propylamine	NA	Lab	< 0.037 ug/l	--	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
N-Nitrosodiphenylamine	NA	Lab	< 0.048 ug/l	--	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l
o-Cresol	NA	Lab	< 0.11 ug/l	--	< 0.11 ug/l	< 0.11 ug/l	< 0.11 ug/l
p-Cresol	NA	Lab	< 0.12 ug/l	--	< 0.12 ug/l	< 0.12 ug/l	< 0.12 ug/l
Pentachlorophenol	NA	Lab	< 0.34 ug/l	--	< 0.34 R ug/l	< 0.34 R ug/l	< 0.34 ug/l
Phenanthrene	NA	Lab	< 0.022 ug/l	--	< 0.0050 ug/l < 0.022 ug/l	< 0.0050 ug/l < 0.022 ug/l	< 0.0050 ug/l < 0.022 ug/l
Phenol	NA	Lab	< 0.063 ug/l	--	< 0.063 ug/l	0.30 J ug/l	< 0.063 ug/l

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Chemical Name	Total or Dissolved	Analysis Location					
Pyrene	NA	Lab	0.022 J ug/l	--	< 0.0035 ug/l < 0.019 ug/l	< 0.0035 ug/l < 0.019 ug/l	< 0.0035 ug/l < 0.019 ug/l
Pyridine	NA	Lab	--	--	< 1.4 R ug/l	< 1.4 R ug/l	< 1.4 ug/l
VOCs							
1,1,1,2-Tetrachloroethane	NA	Lab	< 0.047 ug/l	--	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l
1,1,1-Trichloroethane	NA	Lab	< 0.050 ug/l	--	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l
1,1,2,2-Tetrachloroethane	NA	Lab	< 0.064 ug/l	--	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l
1,1,2-Trichloroethane	NA	Lab	< 0.061 ug/l	--	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l
1,1-Dichloro-1-propene	NA	Lab	< 0.051 ug/l	--	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l
1,1-Dichloroethane	NA	Lab	< 0.042 ug/l	--	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,1-Dichloroethylene	NA	Lab	< 0.10 ug/l	--	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l
1,2,3-Trichlorobenzene	NA	Lab	< 0.10 ug/l	--	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l
1,2,3-Trichloropropane	NA	Lab	< 0.14 ug/l	--	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l
1,2,4-Trichlorobenzene	NA	Lab	< 0.13 ug/l	--	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l
1,2,4-Trimethylbenzene	NA	Lab	< 0.037 ug/l	--	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
1,2-Dibromo-3-chloropropane	NA	Lab	< 0.22 ug/l	--	< 0.22 ug/l	< 0.22 ug/l	< 0.22 J ug/l
1,2-Dibromoethane	NA	Lab	< 0.084 ug/l	--	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l
1,2-Dichlorobenzene	NA	Lab	< 0.044 ug/l	--	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l
1,2-Dichloroethane	NA	Lab	< 0.073 ug/l	--	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l
1,2-Dichloroethylene, cis	NA	Lab	< 0.045 ug/l	--	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
1,2-Dichloroethylene, trans	NA	Lab	< 0.048 ug/l	--	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l
1,2-Dichloropropane	NA	Lab	< 0.042 ug/l	--	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,3,5-Trimethylbenzene	NA	Lab	< 0.042 ug/l	--	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,3-Dichloro-1-propene trans	NA	Lab	< 0.041 ug/l	--	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l
1,3-Dichloro-1-propene, cis	NA	Lab	< 0.038 ug/l	--	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l
1,3-Dichlorobenzene	NA	Lab	< 0.041 ug/l	--	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l
1,3-Dichloropropane	NA	Lab	< 0.032 ug/l	--	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l
1,4-Dichlorobenzene	NA	Lab	< 0.054 ug/l	--	0.20 J ug/l	0.23 J ug/l	0.17 J ug/l
2,2-Dichloropropane	NA	Lab	< 0.050 ug/l	--	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l
2-Chloroethyl Vinyl Ether	NA	Lab	< 0.19 R ug/l	--	< 0.19 R ug/l	< 0.19 R ug/l	< 0.19 R ug/l
2-Hexanone	NA	Lab	< 2.9 ug/l	--	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l
Acetone	NA	Lab	< 2.5 ug/l	--	5.2 J ug/l	5.6 J ug/l	6.9 J ug/l
Acrolein	NA	Lab	< 2.0 ug/l	--	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Acrylonitrile	NA	Lab	< 0.31 ug/l	--	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l
Benzene	NA	Lab	0.050 J ug/l	--	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l

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Chemical Name	Total or Dissolved	Analysis Location					
Bromobenzene	NA	Lab	< 0.027 ug/l	--	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l
Bromochloromethane	NA	Lab	< 0.091 ug/l	--	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l
Bromodichloromethane	NA	Lab	< 0.036 ug/l	--	< 0.036 ug/l	< 0.036 ug/l	0.28 J ug/l
Bromoform	NA	Lab	< 0.080 ug/l	--	< 0.080 J ug/l	< 0.080 J ug/l	< 0.080 J ug/l
Bromomethane	NA	Lab	< 0.072 ug/l	--	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l
Butyl benzene	NA	Lab	< 0.056 ug/l	--	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l
Butylbenzene sec	NA	Lab	< 0.036 ug/l	--	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l
Butylbenzene tert-	NA	Lab	< 0.038 ug/l	--	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l
Carbon disulfide	NA	Lab	< 0.045 ug/l	--	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
Carbon tetrachloride	NA	Lab	< 0.068 ug/l	--	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l
Chlorobenzene	NA	Lab	< 0.045 ug/l	--	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
Chlorodibromomethane	NA	Lab	< 0.057 ug/l	--	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l
Chloroethane	NA	Lab	< 0.13 ug/l	--	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l
Chloroform	NA	Lab	< 0.042 ug/l	--	< 0.042 ug/l	0.050 J ug/l	1.4 ug/l
Chloromethane	NA	Lab	< 0.053 ug/l	--	< 0.053 ug/l	0.060 J ug/l	< 0.053 ug/l
Chlorotoluene o-	NA	Lab	< 0.035 ug/l	--	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l
Chlorotoluene p-	NA	Lab	< 0.025 ug/l	--	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l
Cumene (isopropyl benzene)	NA	Lab	< 0.031 ug/l	--	< 0.031 ug/l	< 0.031 ug/l	0.070 J ug/l
Cymene p- (Toluene isopropyl p-)	NA	Lab	< 0.044 ug/l	--	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l
Dibromomethane (methylene bromide)	NA	Lab	< 0.089 ug/l	--	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l
Dichlorodifluoromethane (CFC-12)	NA	Lab	< 0.083 ug/l	--	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l
Ethyl benzene	NA	Lab	< 0.042 ug/l	--	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
Hexachlorobutadiene	NA	Lab	< 0.19 ug/l	--	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l
Iodomethane	NA	Lab	< 0.27 ug/l	--	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l
Methyl ethyl ketone	NA	Lab	< 3.8 ug/l	--	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l
Methyl isobutyl ketone	NA	Lab	< 3.0 ug/l	--	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l
Methyl tertiary butyl ether (MTBE)	NA	Lab	< 0.070 ug/l	--	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l
Methylene chloride	NA	Lab	< 0.23 ug/l	--	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l
Naphthalene	NA	Lab	1.1 J ug/l	--	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l
Propylbenzene	NA	Lab	< 0.037 ug/l	--	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
Styrene	NA	Lab	< 0.039 ug/l	--	< 0.039 ug/l	< 0.039 ug/l	0.080 J ug/l
Tetrachloroethylene	NA	Lab	< 0.077 ug/l	--	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l
Toluene	NA	Lab	0.17 J ug/l	--	0.54 ug/l	1.1 ug/l	0.60 ug/l
Trichloroethylene	NA	Lab	< 0.061 ug/l	--	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l
Trichlorofluoromethane	NA	Lab	< 0.086 ug/l	--	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l

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Chemical Name	Total or Dissolved	Analysis Location					
Vinyl acetate	NA	Lab	< 0.91 ug/l	--	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l
Vinyl chloride	NA	Lab	< 0.071 ug/l	--	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l
Xylene m & p	NA	Lab	0.080 J ug/l	--	< 0.078 ug/l	0.13 J ug/l	0.080 J ug/l
Xylene, o-	NA	Lab	0.050 J ug/l	--	< 0.037 ug/l	0.050 J ug/l	< 0.037 ug/l
PCBs							
Aroclor 1016	NA	Lab	< 0.0094 ug/l	--	--	--	< 0.0094 ug/l
Aroclor 1221	NA	Lab	< 0.020 ug/l	--	--	--	< 0.020 ug/l
Aroclor 1232	NA	Lab	< 0.023 ug/l	--	--	--	< 0.023 ug/l
Aroclor 1242	NA	Lab	< 0.013 ug/l	--	--	--	< 0.013 ug/l
Aroclor 1248	NA	Lab	< 0.0054 ug/l	--	--	--	< 0.0054 ug/l
Aroclor 1254	NA	Lab	< 0.0070 ug/l	--	--	--	< 0.0070 ug/l
Aroclor 1260	NA	Lab	< 0.0031 ug/l	--	--	--	< 0.0031 ug/l
Aroclor 1262	NA	Lab	< 0.0048 ug/l	--	--	--	< 0.0048 ug/l
Aroclor 1268	NA	Lab	< 0.0065 ug/l	--	--	--	< 0.0065 ug/l
Radiochemical Parameters							
Gross Alpha (radiation)	NA	Lab	< 0.83 pCi/l	--	0.98 +/- 0.92 pCi/l	< 0.76 pCi/l	< 0.76 pCi/l
Gross Beta (radiation)	NA	Lab	< 2.5 pCi/l	--	3.1 +/- 1.8 pCi/l	< 2.5 pCi/l	< 2.5 pCi/l
Lead 210	NA	Lab	--	--	--	--	--
Radium 226	NA	Lab	< 0.45 pCi/l	--	< 1.7 pCi/l	< 0.38 pCi/l	< 0.44 pCi/l
Radium 228	NA	Lab	1.2 +/- 0.34 pCi/l	--	< 0.7 pCi/l	< 0.73 pCi/l	< 0.75 pCi/l
Thorium 230	NA	Lab	--	--	--	--	--
Uranium 234	NA	Lab	--	--	--	--	--
Uranium 235	NA	Lab	--	--	--	--	--
Uranium 238 (radiochemical method)	NA	Lab	--	--	--	--	--

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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 9/19/2008 MW-60-7 FBMW-06-3_09192008 FB	QC 9/21/2008 SD-220 (0-10) CM FBSD-20_09212008 FB	QC 9/24/2008 MW-60-8 FBRPW6_09242008 FB	QC 9/24/2008 MW-60-9 FBRPW-6_09242008 FB	QC 9/26/2008 MW-60-9 FBRPW6_09262008 FB
Chemical Name	Total or Dissolved	Analysis Location					
General Parameters							
Alkalinity, bicarbonate as CaCO3	NA	Lab	< 2 mg/l	--	--	< 2 mg/l	--
Alkalinity, carbonate as CaCO3	NA	Lab	< 2 mg/l	--	--	< 2 mg/l	--
Chloride	NA	Lab	< 0.2 mg/l	< 0.2 mg/l	--	< 0.2 mg/l	--
Fluoride	NA	Lab	< 0.005 mg/l	< 0.2 mg/l	--	< 0.2 mg/l	--
Nitrate + Nitrite	NA	Lab	< 0.05 mg/l	< 0.05 mg/l	--	< 0.05 mg/l	--
Nitrogen, ammonia as N	NA	Lab	< 0.05 mg/l	< 0.05 mg/l	--	< 0.05 mg/l	--
Phosphorus, elemental (white)	NA	Lab	< 0.0000234 mg/l	< 0.0000234 mg/l	--	--	< 0.0000234 mg/l
Phosphorus, total	NA	Lab	< 0.01 mg/l	< 0.01 mg/l	--	< 0.01 mg/l	--
Sulfate	NA	Lab	0.3 mg/l	< 0.2 mg/l	--	1.3 mg/l	--
Metals							
Antimony	Dissolved	Lab	--	--	--	--	--
Antimony	Total	Lab	< 0.00005 mg/l	< 0.00005 mg/l	--	< 0.00025 mg/l	--
Arsenic	Dissolved	Lab	--	--	--	--	--
Arsenic	Total	Lab	< 0.0005 mg/l	< 0.0005 mg/l	--	< 0.0025 mg/l	--
Barium	Dissolved	Lab	--	--	--	--	--
Barium	Total	Lab	0.000579 mg/l	0.00026 mg/l	--	< 0.00025 mg/l	--
Beryllium	Dissolved	Lab	--	--	--	--	--
Beryllium	Total	Lab	< 0.000020 mg/l	< 0.00002 mg/l	--	< 0.00010 mg/l	--
Cadmium	Dissolved	Lab	--	--	--	--	--
Cadmium	Total	Lab	< 0.00002 mg/l	< 0.00002 mg/l	--	< 0.00010 mg/l	--
Calcium	Dissolved	Lab	--	--	--	--	--
Calcium	Total	Lab	0.11 mg/l	< 0.05 mg/l	--	< 0.05 mg/l	--
Chromium	Dissolved	Lab	--	--	--	--	--
Chromium	Total	Lab	0.00021 mg/l	< 0.0002 mg/l	--	< 0.0010 mg/l	--
Cobalt	Dissolved	Lab	--	--	--	--	--
Cobalt	Total	Lab	< 0.000020 mg/l	< 0.00002 mg/l	--	< 0.00010 mg/l	--
Copper	Dissolved	Lab	--	--	--	--	--
Copper	Total	Lab	0.000127 mg/l	< 0.0001 mg/l	--	< 0.0005 mg/l	--
Iron	Dissolved	Lab	--	--	--	--	--
Iron	Total	Lab	< 0.02 mg/l	< 0.02 mg/l	--	< 0.02 mg/l	--
Lead	Dissolved	Lab	--	--	--	--	--
Lead	Total	Lab	< 0.000050 mg/l	< 0.00002 mg/l	--	< 0.00025 mg/l	--
Magnesium	Dissolved	Lab	--	--	--	--	--
Magnesium	Total	Lab	< 0.02 mg/l	< 0.02 mg/l	--	< 0.02 mg/l	--

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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 9/19/2008 MW-60-7 FBMW-06-3_09192008 FB	QC 9/21/2008 SD-220 (0-10) CM FBSD-20_09212008 FB	QC 9/24/2008 MW-60-8 FBRPW6_09242008 FB	QC 9/24/2008 MW-60-9 FBRPW-6_09242008 FB	QC 9/26/2008 MW-60-9 FBRPW6_09262008 FB
Chemical Name	Total or Dissolved	Analysis Location					
Manganese	Dissolved	Lab	--	--	--	--	--
Manganese	Total	Lab	0.000101 mg/l	0.00021 mg/l	--	< 0.00025 mg/l	--
Mercury	Dissolved	Lab	--	--	--	--	--
Mercury	Total	Lab	< 0.00020 mg/l	< 0.0002 mg/l	--	< 0.0002 mg/l	--
Nickel	Dissolved	Lab	--	--	--	--	--
Nickel	Total	Lab	< 0.0002 mg/l	< 0.0002 mg/l	--	< 0.0010 mg/l	--
Potassium	Dissolved	Lab	--	--	--	--	--
Potassium	Total	Lab	< 2.0 mg/l	< 0.4 mg/l	--	< 0.4 mg/l	--
Selenium	Dissolved	Lab	--	--	--	--	--
Selenium	Total	Lab	< 0.0010 mg/l	< 0.001 mg/l	--	< 0.0050 mg/l	--
Silver	Dissolved	Lab	--	--	--	--	--
Silver	Total	Lab	< 0.000020 mg/l	< 0.00002 mg/l	--	< 0.00010 mg/l	--
Sodium	Dissolved	Lab	--	--	--	--	--
Sodium	Total	Lab	< 0.1 mg/l	< 0.2 mg/l	--	< 0.2 mg/l	--
Thallium	Dissolved	Lab	--	--	--	--	--
Thallium	Total	Lab	< 0.000020 mg/l	< 0.00002 mg/l	--	< 0.00010 mg/l	--
Uranium	Dissolved	Lab	--	--	--	--	--
Uranium	Total	Lab	< 0.000020 mg/l	< 0.00002 mg/l	--	< 0.00010 mg/l	--
Vanadium	Dissolved	Lab	--	--	--	--	--
Vanadium	Total	Lab	< 0.000200 mg/l	< 0.0002 mg/l	--	< 0.0010 mg/l	--
Zinc	Dissolved	Lab	--	--	--	--	--
Zinc	Total	Lab	0.0023 mg/l	0.0015 mg/l	--	< 0.0050 mg/l	--
SVOCs							
1,2,4-Trichlorobenzene	NA	Lab	< 0.016 ug/l	< 0.016 ug/l	--	< 0.016 ug/l	--
1,2-Dichlorobenzene	NA	Lab	< 0.022 ug/l	< 0.022 ug/l	--	< 0.022 ug/l	--
1,3-Dichlorobenzene	NA	Lab	< 0.021 ug/l	< 0.021 ug/l	--	< 0.021 ug/l	--
1,4-Dichlorobenzene	NA	Lab	0.12 J ug/l	0.24 ug/l	--	0.24 ug/l	--
2,4,5-Trichlorophenol	NA	Lab	< 0.031 ug/l	< 0.031 ug/l	--	< 0.031 ug/l	--
2,4,6-Trichlorophenol	NA	Lab	< 0.058 ug/l	< 0.058 ug/l	--	< 0.058 ug/l	--
2,4-Dichlorophenol	NA	Lab	< 0.047 ug/l	< 0.047 ug/l	--	< 0.047 ug/l	--
2,4-Dimethylphenol	NA	Lab	< 2.2 ug/l	< 2.2 ug/l	--	< 2.2 R ug/l	--
2,4-Dinitrophenol	NA	Lab	< 0.17 R ug/l	< 0.17 ug/l	--	< 0.17 ug/l	--
2,4-Dinitrotoluene	NA	Lab	< 0.018 ug/l	< 0.018 ug/l	--	< 0.018 ug/l	--
2,6-Dinitrotoluene	NA	Lab	< 0.033 ug/l	< 0.033 ug/l	--	< 0.033 ug/l	--
2-Chloronaphthalene	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	--	< 0.041 ug/l	--

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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 9/19/2008 MW-60-7 FBMW-06-3_09192008 FB	QC 9/21/2008 SD-220 (0-10) CM FBSD-20_09212008 FB	QC 9/24/2008 MW-60-8 FBRPW6_09242008 FB	QC 9/24/2008 MW-60-9 FBRPW-6_09242008 FB	QC 9/26/2008 MW-60-9 FBRPW6_09262008 FB
Chemical Name	Total or Dissolved	Analysis Location					
2-Chlorophenol	NA	Lab	< 0.054 ug/l	< 0.054 ug/l	--	< 0.054 ug/l	--
2-Methyl-4,6-dinitrophenol	NA	Lab	< 0.025 ug/l	< 0.025 ug/l	--	< 0.025 ug/l	--
2-Methylnaphthalene	NA	Lab	< 0.026 ug/l	< 0.026 ug/l	--	< 0.026 ug/l	--
2-Nitroaniline	NA	Lab	< 0.024 ug/l	< 0.024 ug/l	--	< 0.024 ug/l	--
2-Nitrophenol	NA	Lab	< 0.063 ug/l	< 0.063 ug/l	--	< 0.063 ug/l	--
3,3'-Dichlorobenzidine	NA	Lab	< 0.43 ug/l	< 0.43 ug/l	--	< 0.43 ug/l	--
3-Nitroaniline	NA	Lab	< 0.029 ug/l	< 0.029 ug/l	--	< 0.029 ug/l	--
4-Bromophenyl phenyl ether	NA	Lab	< 0.026 ug/l	< 0.026 ug/l	--	< 0.026 ug/l	--
4-Chloro-3-methylphenol	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	--	< 0.037 ug/l	--
4-Chloroaniline	NA	Lab	< 0.025 ug/l	< 0.025 ug/l	--	< 0.025 ug/l	--
4-Chlorophenyl phenyl ether	NA	Lab	< 0.027 ug/l	< 0.027 ug/l	--	< 0.027 ug/l	--
4-Nitroaniline	NA	Lab	< 0.019 ug/l	< 0.019 ug/l	--	< 0.019 ug/l	--
4-Nitrophenol	NA	Lab	< 0.28 ug/l	< 0.28 ug/l	--	< 0.28 ug/l	--
Acenaphthene	NA	Lab	< 0.0044 ug/l < 0.026 ug/l	< 0.026 ug/l	--	< 0.0044 ug/l < 0.026 ug/l	--
Acenaphthylene	NA	Lab	< 0.0034 ug/l < 0.015 ug/l	< 0.015 ug/l	--	< 0.0034 ug/l < 0.015 ug/l	--
Anthracene	NA	Lab	< 0.0036 ug/l < 0.024 ug/l	< 0.024 ug/l	--	< 0.0036 ug/l < 0.024 ug/l	--
Azobenzene	NA	Lab	< 0.021 ug/l	< 0.021 ug/l	--	< 0.021 ug/l	--
Benzo(a)anthracene	NA	Lab	0.0027 J ug/l < 0.018 ug/l	< 0.018 ug/l	--	< 0.0026 ug/l < 0.018 ug/l	--
Benzo(a)pyrene	NA	Lab	< 0.0043 ug/l < 0.031 ug/l	< 0.031 ug/l	--	< 0.0043 ug/l < 0.031 ug/l	--
Benzo(b)fluoranthene	NA	Lab	< 0.0023 ug/l < 0.017 ug/l	< 0.017 ug/l	--	< 0.0023 ug/l < 0.017 ug/l	--
Benzo(g,h,i)perylene	NA	Lab	< 0.0029 ug/l < 0.019 ug/l	< 0.019 ug/l	--	< 0.0029 ug/l < 0.019 ug/l	--
Benzo(k)fluoranthene	NA	Lab	< 0.0025 ug/l < 0.024 ug/l	< 0.024 ug/l	--	< 0.0025 ug/l < 0.024 ug/l	--
Benzoic Acid	NA	Lab	< 1.1 R ug/l	< 1.1 ug/l	--	< 1.1 R ug/l	--
Benzyl alcohol	NA	Lab	0.15 J ug/l	0.19 J ug/l	--	0.21 J ug/l	--
Bis(2-chloroethoxy)methane	NA	Lab	< 0.024 ug/l	< 0.024 ug/l	--	< 0.024 ug/l	--
Bis(2-chloroethyl)ether	NA	Lab	< 0.035 ug/l	< 0.035 ug/l	--	< 0.035 ug/l	--
Bis(2-chloroisopropyl)ether	NA	Lab	< 0.026 ug/l	< 0.026 ug/l	--	< 0.026 ug/l	--

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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 9/19/2008 MW-60-7 FBMW-06-3_09192008 FB	QC 9/21/2008 SD-220 (0-10) CM FBSD-20_09212008 FB	QC 9/24/2008 MW-60-8 FBRPW6_09242008 FB	QC 9/24/2008 MW-60-9 FBRPW-6_09242008 FB	QC 9/26/2008 MW-60-9 FBRPW6_09262008 FB
Chemical Name	Total or Dissolved	Analysis Location					
Bis(2-ethylhexyl)phthalate	NA	Lab	0.29 J ug/l	0.24 J ug/l	--	40 ug/l	--
Butyl benzyl phthalate	NA	Lab	0.050 J ug/l	< 0.018 ug/l	--	0.051 J ug/l	--
Carbazole	NA	Lab	< 0.018 ug/l	< 0.018 ug/l	--	< 0.018 ug/l	--
Chrysene	NA	Lab	< 0.0034 ug/l < 0.028 ug/l	< 0.028 ug/l	--	< 0.0034 ug/l < 0.028 ug/l	--
Dibenz(a,h)anthracene	NA	Lab	< 0.0025 ug/l < 0.017 ug/l	< 0.017 ug/l	--	< 0.0025 ug/l < 0.017 ug/l	--
Dibenzofuran	NA	Lab	< 0.018 ug/l	< 0.018 ug/l	--	< 0.018 ug/l	--
Diethyl phthalate	NA	Lab	0.66 ug/l	0.93 ug/l	--	1.8 ug/l	--
Dimethyl phthalate	NA	Lab	< 0.021 ug/l	0.031 J ug/l	--	0.032 J ug/l	--
Di-n-butyl phthalate	NA	Lab	0.18 J ug/l	0.12 J ug/l	--	0.18 J ug/l	--
Di-n-octyl phthalate	NA	Lab	< 0.018 ug/l	< 0.018 ug/l	--	< 0.018 ug/l	--
Fluoranthene	NA	Lab	< 0.0044 ug/l < 0.020 ug/l	< 0.020 ug/l	--	< 0.0044 ug/l < 0.020 ug/l	--
Fluorene	NA	Lab	< 0.0038 ug/l < 0.027 ug/l	< 0.027 ug/l	--	< 0.0038 ug/l < 0.027 ug/l	--
Hexachlorobenzene	NA	Lab	< 0.022 ug/l	< 0.022 ug/l	--	< 0.022 ug/l	--
Hexachlorobutadiene	NA	Lab	< 0.027 R ug/l	< 0.027 ug/l	--	< 0.027 ug/l	--
Hexachlorocyclopentadiene	NA	Lab	< 0.19 R ug/l	< 0.19 ug/l	--	< 0.19 R ug/l	--
Hexachloroethane	NA	Lab	< 0.024 R ug/l	< 0.024 ug/l	--	< 0.024 ug/l	--
Indeno(1,2,3-cd)pyrene	NA	Lab	< 0.0026 ug/l < 0.021 ug/l	< 0.021 ug/l	--	< 0.0026 ug/l < 0.021 ug/l	--
Isophorone	NA	Lab	< 0.016 ug/l	< 0.016 ug/l	--	< 0.016 ug/l	--
Naphthalene	NA	Lab	0.023 ug/l < 0.022 ug/l	0.028 J ug/l	--	0.017 J ug/l 0.040 J ug/l	--
Nitrobenzene	NA	Lab	< 0.028 ug/l	< 0.028 ug/l	--	< 0.028 ug/l	--
N-Nitrosodimethylamine	NA	Lab	< 0.42 ug/l	< 0.42 ug/l	--	< 0.42 ug/l	--
N-Nitrosodi-n-propylamine	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	--	< 0.037 ug/l	--
N-Nitrosodiphenylamine	NA	Lab	< 0.048 ug/l	< 0.048 ug/l	--	< 0.048 ug/l	--
o-Cresol	NA	Lab	< 0.11 ug/l	< 0.11 ug/l	--	< 0.11 ug/l	--
p-Cresol	NA	Lab	< 0.12 ug/l	< 0.12 ug/l	--	< 0.12 ug/l	--
Pentachlorophenol	NA	Lab	< 0.34 ug/l	< 0.34 ug/l	--	< 0.34 ug/l	--
Phenanthrene	NA	Lab	< 0.0050 ug/l < 0.022 ug/l	< 0.022 ug/l	--	< 0.0050 ug/l < 0.022 ug/l	--
Phenol	NA	Lab	0.49 ug/l	< 0.063 ug/l	--	< 0.063 ug/l	--

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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 9/19/2008 MW-60-7 FBMW-06-3_09192008 FB	QC 9/21/2008 SD-220 (0-10) CM FBSD-20_09212008 FB	QC 9/24/2008 MW-60-8 FBRPW6_09242008 FB	QC 9/24/2008 MW-60-9 FBRPW-6_09242008 FB	QC 9/26/2008 MW-60-9 FBRPW6_09262008 FB
Chemical Name	Total or Dissolved	Analysis Location					
Pyrene	NA	Lab	< 0.0035 ug/l < 0.019 ug/l	< 0.019 ug/l	--	< 0.0035 ug/l < 0.019 ug/l	--
Pyridine	NA	Lab	< 1.4 R ug/l	< 1.4 ug/l	--	< 1.4 R ug/l	--
VOCs							
1,1,1,2-Tetrachloroethane	NA	Lab	< 0.047 ug/l	< 0.047 ug/l	--	< 0.047 ug/l	--
1,1,1-Trichloroethane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l	--	< 0.050 ug/l	--
1,1,2,2-Tetrachloroethane	NA	Lab	< 0.064 ug/l	< 0.064 ug/l	--	< 0.064 ug/l	--
1,1,2-Trichloroethane	NA	Lab	< 0.061 ug/l	< 0.061 ug/l	--	< 0.061 ug/l	--
1,1-Dichloro-1-propene	NA	Lab	< 0.051 ug/l	< 0.051 ug/l	--	< 0.051 ug/l	--
1,1-Dichloroethane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	--	< 0.042 ug/l	--
1,1-Dichloroethylene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	--	< 0.10 ug/l	--
1,2,3-Trichlorobenzene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	--	< 0.10 ug/l	--
1,2,3-Trichloropropane	NA	Lab	< 0.14 ug/l	< 0.14 ug/l	--	< 0.14 ug/l	--
1,2,4-Trichlorobenzene	NA	Lab	< 0.13 ug/l	< 0.13 ug/l	--	< 0.13 ug/l	--
1,2,4-Trimethylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	--	< 0.037 ug/l	--
1,2-Dibromo-3-chloropropane	NA	Lab	< 0.22 J ug/l	< 0.22 J ug/l	--	< 0.22 J ug/l	--
1,2-Dibromoethane	NA	Lab	< 0.084 ug/l	< 0.084 ug/l	--	< 0.084 ug/l	--
1,2-Dichlorobenzene	NA	Lab	< 0.044 ug/l	< 0.044 ug/l	--	< 0.044 ug/l	--
1,2-Dichloroethane	NA	Lab	< 0.073 ug/l	< 0.073 ug/l	--	< 0.073 ug/l	--
1,2-Dichloroethylene, cis	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	--	< 0.045 ug/l	--
1,2-Dichloroethylene, trans	NA	Lab	< 0.048 ug/l	< 0.048 ug/l	--	< 0.048 ug/l	--
1,2-Dichloropropane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	--	< 0.042 ug/l	--
1,3,5-Trimethylbenzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	--	< 0.042 ug/l	--
1,3-Dichloro-1-propene trans	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	--	< 0.041 ug/l	--
1,3-Dichloro-1-propene, cis	NA	Lab	< 0.038 ug/l	< 0.038 ug/l	--	< 0.038 ug/l	--
1,3-Dichlorobenzene	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	--	< 0.041 ug/l	--
1,3-Dichloropropane	NA	Lab	< 0.032 ug/l	< 0.032 ug/l	--	< 0.032 ug/l	--
1,4-Dichlorobenzene	NA	Lab	0.17 J ug/l	0.30 J ug/l	--	0.26 J ug/l	--
2,2-Dichloropropane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l	--	< 0.050 ug/l	--
2-Chloroethyl Vinyl Ether	NA	Lab	< 0.19 R ug/l	< 0.19 R ug/l	--	< 0.19 R ug/l	--
2-Hexanone	NA	Lab	< 2.9 ug/l	< 2.9 ug/l	--	< 2.9 ug/l	--
Acetone	NA	Lab	3.2 J ug/l	13 J ug/l	--	5.4 J ug/l	--
Acrolein	NA	Lab	< 2.0 ug/l	< 2.0 ug/l	--	< 2.0 ug/l	--
Acrylonitrile	NA	Lab	< 0.31 ug/l	< 0.31 ug/l	--	< 0.31 ug/l	--
Benzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	--	< 0.045 ug/l	--

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Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 9/19/2008 MW-60-7 FBMW-06-3_09192008 FB	QC 9/21/2008 SD-220 (0-10) CM FBSD-20_09212008 FB	QC 9/24/2008 MW-60-8 FBRPW6_09242008 FB	QC 9/24/2008 MW-60-9 FBRPW-6_09242008 FB	QC 9/26/2008 MW-60-9 FBRPW6_09262008 FB
Chemical Name	Total or Dissolved	Analysis Location					
Bromobenzene	NA	Lab	< 0.027 ug/l	< 0.027 ug/l	--	< 0.027 ug/l	--
Bromochloromethane	NA	Lab	< 0.091 ug/l	< 0.091 ug/l	--	< 0.091 ug/l	--
Bromodichloromethane	NA	Lab	< 0.036 ug/l	< 0.036 ug/l	--	< 0.036 ug/l	--
Bromoform	NA	Lab	< 0.080 J ug/l	< 0.080 J ug/l	--	< 0.080 ug/l	--
Bromomethane	NA	Lab	< 0.072 ug/l	< 0.072 ug/l	--	< 0.072 ug/l	--
Butyl benzene	NA	Lab	< 0.056 ug/l	< 0.056 ug/l	--	< 0.056 ug/l	--
Butylbenzene sec	NA	Lab	< 0.036 ug/l	< 0.036 ug/l	--	< 0.036 ug/l	--
Butylbenzene tert-	NA	Lab	< 0.038 ug/l	< 0.038 ug/l	--	< 0.038 ug/l	--
Carbon disulfide	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	--	< 0.045 ug/l	--
Carbon tetrachloride	NA	Lab	< 0.068 ug/l	< 0.068 ug/l	--	< 0.068 ug/l	--
Chlorobenzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	--	< 0.045 ug/l	--
Chlorodibromomethane	NA	Lab	< 0.057 ug/l	< 0.057 ug/l	--	< 0.057 ug/l	--
Chloroethane	NA	Lab	< 0.13 ug/l	< 0.13 ug/l	--	< 0.13 ug/l	--
Chloroform	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	--	< 0.042 ug/l	--
Chloromethane	NA	Lab	< 0.053 ug/l	0.060 J ug/l	--	< 0.053 ug/l	--
Chlorotoluene o-	NA	Lab	< 0.035 ug/l	< 0.035 ug/l	--	< 0.035 ug/l	--
Chlorotoluene p-	NA	Lab	< 0.025 ug/l	< 0.025 ug/l	--	< 0.025 ug/l	--
Cumene (isopropyl benzene)	NA	Lab	< 0.031 ug/l	0.040 J ug/l	--	< 0.031 ug/l	--
Cymene p- (Toluene isopropyl p-)	NA	Lab	< 0.044 ug/l	< 0.044 ug/l	--	< 0.044 ug/l	--
Dibromomethane (methylene bromide)	NA	Lab	< 0.089 ug/l	< 0.089 ug/l	--	< 0.089 ug/l	--
Dichlorodifluoromethane (CFC-12)	NA	Lab	< 0.083 ug/l	< 0.083 ug/l	--	< 0.083 ug/l	--
Ethyl benzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	--	< 0.042 ug/l	--
Hexachlorobutadiene	NA	Lab	< 0.19 ug/l	< 0.19 ug/l	--	< 0.19 ug/l	--
Iodomethane	NA	Lab	< 0.27 ug/l	< 0.27 ug/l	--	< 0.27 ug/l	--
Methyl ethyl ketone	NA	Lab	< 3.8 ug/l	7.9 J ug/l	--	< 3.8 ug/l	--
Methyl isobutyl ketone	NA	Lab	< 3.0 ug/l	< 3.0 ug/l	--	< 3.0 ug/l	--
Methyl tertiary butyl ether (MTBE)	NA	Lab	< 0.070 ug/l	< 0.070 ug/l	--	< 0.070 ug/l	--
Methylene chloride	NA	Lab	< 0.23 ug/l	0.83 J ug/l	--	0.25 J ug/l	--
Naphthalene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	--	< 0.10 ug/l	--
Propylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	--	< 0.037 ug/l	--
Styrene	NA	Lab	< 0.039 ug/l	< 0.039 ug/l	--	< 0.039 ug/l	--
Tetrachloroethylene	NA	Lab	< 0.077 ug/l	< 0.077 ug/l	--	< 0.077 ug/l	--
Toluene	NA	Lab	0.55 ug/l	0.77 ug/l	--	0.37 J ug/l	--
Trichloroethylene	NA	Lab	< 0.061 ug/l	< 0.061 ug/l	--	< 0.061 ug/l	--
Trichlorofluoromethane	NA	Lab	< 0.086 ug/l	< 0.086 ug/l	--	< 0.086 ug/l	--

Appendix 1-C4b-2
Field Blank Data - Aqueous
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 9/19/2008 MW-60-7 FBMW-06-3_09192008 FB	QC 9/21/2008 SD-220 (0-10) CM FBSD-20_09212008 FB	QC 9/24/2008 MW-60-8 FBRPW6_09242008 FB	QC 9/24/2008 MW-60-9 FBRPW-6_09242008 FB	QC 9/26/2008 MW-60-9 FBRPW6_09262008 FB
Chemical Name	Total or Dissolved	Analysis Location					
Vinyl acetate	NA	Lab	< 0.91 ug/l	< 0.91 ug/l	--	< 0.91 ug/l	--
Vinyl chloride	NA	Lab	< 0.071 ug/l	< 0.071 ug/l	--	< 0.071 ug/l	--
Xylene m & p	NA	Lab	0.14 J ug/l	< 0.078 ug/l	--	< 0.078 ug/l	--
Xylene, o-	NA	Lab	0.080 J ug/l	< 0.037 ug/l	--	< 0.037 ug/l	--
PCBs							
Aroclor 1016	NA	Lab	--	--	--	--	--
Aroclor 1221	NA	Lab	--	--	--	--	--
Aroclor 1232	NA	Lab	--	--	--	--	--
Aroclor 1242	NA	Lab	--	--	--	--	--
Aroclor 1248	NA	Lab	--	--	--	--	--
Aroclor 1254	NA	Lab	--	--	--	--	--
Aroclor 1260	NA	Lab	--	--	--	--	--
Aroclor 1262	NA	Lab	--	--	--	--	--
Aroclor 1268	NA	Lab	--	--	--	--	--
Radiochemical Parameters							
Gross Alpha (radiation)	NA	Lab	< 0.84 pCi/l	< 0.81 pCi/l	1.9 +/- 1.6 pCi/l	--	--
Gross Beta (radiation)	NA	Lab	< 2.5 pCi/l	< 2.5 pCi/l	4.2 +/- 2.8 pCi/l	--	--
Lead 210	NA	Lab	--	--	--	--	--
Radium 226	NA	Lab	< 0.39 pCi/l	< 0.43 pCi/l	< 0.34 pCi/l	--	--
Radium 228	NA	Lab	< 0.74 pCi/l	1.4 +/- 0.33 pCi/l	< 1.4 pCi/l	--	--
Thorium 230	NA	Lab	--	--	--	--	--
Uranium 234	NA	Lab	--	--	--	--	--
Uranium 235	NA	Lab	--	--	--	--	--
Uranium 238 (radiochemical method)	NA	Lab	--	--	--	--	--

Appendix 1-C4b-2
Field Blank Data - Aqueous
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 12/12/2008 MW-60-10 FBMW-06- 13_12122008 FB	QC 12/12/2008 SB-08-C FBSB-08-6 SOIL_12122008 FB	QC 12/12/2008 SB-08-D FBSB-08-6 TAIL_12122008 FB	QC 12/15/2008 MW-60-11 FBMW97- 12_12152008 FB
Chemical Name	Total or Dissolved	Analysis Location				
General Parameters						
Alkalinity, bicarbonate as CaCO3	NA	Lab	--	--	--	--
Alkalinity, carbonate as CaCO3	NA	Lab	--	--	--	--
Chloride	NA	Lab	--	--	--	--
Fluoride	NA	Lab	--	--	--	--
Nitrate + Nitrite	NA	Lab	--	--	--	--
Nitrogen, ammonia as N	NA	Lab	--	--	--	--
Phosphorus, elemental (white)	NA	Lab	< 0.0000234 mg/l	< 0.0000234 mg/l	< 0.0000234 mg/l	< 0.0000234 mg/l
Phosphorus, total	NA	Lab	--	--	--	--
Sulfate	NA	Lab	--	--	--	--
Metals						
Antimony	Dissolved	Lab	--	--	--	--
Antimony	Total	Lab	--	< 0.00005 mg/l	< 0.00005 mg/l	< 0.00005 mg/l
Arsenic	Dissolved	Lab	--	--	--	--
Arsenic	Total	Lab	--	< 0.0005 mg/l	< 0.0005 mg/l	< 0.0005 mg/l
Barium	Dissolved	Lab	--	--	--	--
Barium	Total	Lab	--	0.00008 mg/l	0.00006 mg/l	0.000071 mg/l
Beryllium	Dissolved	Lab	--	--	--	--
Beryllium	Total	Lab	--	< 0.00002 mg/l	< 0.00002 mg/l	< 0.000020 mg/l
Cadmium	Dissolved	Lab	--	--	--	--
Cadmium	Total	Lab	--	0.00004 mg/l	0.00004 mg/l	< 0.00002 mg/l
Calcium	Dissolved	Lab	--	--	--	--
Calcium	Total	Lab	--	< 0.05 mg/l	< 0.05 mg/l	0.07 mg/l
Chromium	Dissolved	Lab	--	--	--	--
Chromium	Total	Lab	--	0.0002 mg/l	< 0.0002 mg/l	< 0.00020 mg/l
Cobalt	Dissolved	Lab	--	--	--	--
Cobalt	Total	Lab	--	< 0.00002 mg/l	< 0.00002 mg/l	< 0.000020 mg/l
Copper	Dissolved	Lab	--	--	--	--
Copper	Total	Lab	--	0.0003 mg/l	0.0002 mg/l	0.000101 mg/l
Iron	Dissolved	Lab	--	--	--	--
Iron	Total	Lab	--	< 0.02 mg/l	< 0.02 mg/l	< 0.020 mg/l
Lead	Dissolved	Lab	--	--	--	--
Lead	Total	Lab	--	0.00011 mg/l	< 0.00002 mg/l	< 0.000050 mg/l
Magnesium	Dissolved	Lab	--	--	--	--
Magnesium	Total	Lab	--	< 0.02 mg/l	< 0.02 mg/l	< 0.020 mg/l

Appendix 1-C4b-2
Field Blank Data - Aqueous
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 12/12/2008 MW-60-10 FBMW-06- 13_12122008 FB	QC 12/12/2008 SB-08-C FBSB-08-6 SOIL_12122008 FB	QC 12/12/2008 SB-08-D FBSB-08-6 TAIL_12122008 FB	QC 12/15/2008 MW-60-11 FBMW97- 12_12152008 FB
Chemical Name	Total or Dissolved	Analysis Location				
Manganese	Dissolved	Lab	--	--	--	--
Manganese	Total	Lab	--	0.00029 mg/l	0.00017 mg/l	< 0.000200 mg/l
Mercury	Dissolved	Lab	--	--	--	--
Mercury	Total	Lab	--	< 0.0002 mg/l	< 0.0002 mg/l	< 0.0002 mg/l
Nickel	Dissolved	Lab	--	--	--	--
Nickel	Total	Lab	--	< 0.0002 mg/l	< 0.0002 mg/l	< 0.0002 mg/l
Potassium	Dissolved	Lab	--	--	--	--
Potassium	Total	Lab	--	< 0.4 mg/l	< 0.4 mg/l	< 0.40 mg/l
Selenium	Dissolved	Lab	--	--	--	--
Selenium	Total	Lab	--	< 0.0010 mg/l	< 0.0010 mg/l	< 0.0010 mg/l
Silver	Dissolved	Lab	--	--	--	--
Silver	Total	Lab	--	0.00014 mg/l	0.00007 mg/l	< 0.000050 mg/l
Sodium	Dissolved	Lab	--	--	--	--
Sodium	Total	Lab	--	< 0.1 mg/l	< 0.1 mg/l	< 0.10 mg/l
Thallium	Dissolved	Lab	--	--	--	--
Thallium	Total	Lab	--	< 0.00002 mg/l	< 0.00002 mg/l	< 0.000020 mg/l
Uranium	Dissolved	Lab	--	--	--	--
Uranium	Total	Lab	--	< 0.000020 mg/l	< 0.000020 mg/l	< 0.000020 mg/l
Vanadium	Dissolved	Lab	--	--	--	--
Vanadium	Total	Lab	--	< 0.0002 mg/l	< 0.0002 mg/l	< 0.000200 mg/l
Zinc	Dissolved	Lab	--	--	--	--
Zinc	Total	Lab	--	0.0013 mg/l	0.0038 mg/l	0.0015 mg/l
SVOCs						
1,2,4-Trichlorobenzene	NA	Lab	--	--	--	--
1,2-Dichlorobenzene	NA	Lab	--	--	--	--
1,3-Dichlorobenzene	NA	Lab	--	--	--	--
1,4-Dichlorobenzene	NA	Lab	--	--	--	--
2,4,5-Trichlorophenol	NA	Lab	--	--	--	--
2,4,6-Trichlorophenol	NA	Lab	--	--	--	--
2,4-Dichlorophenol	NA	Lab	--	--	--	--
2,4-Dimethylphenol	NA	Lab	--	--	--	--
2,4-Dinitrophenol	NA	Lab	--	--	--	--
2,4-Dinitrotoluene	NA	Lab	--	--	--	--
2,6-Dinitrotoluene	NA	Lab	--	--	--	--
2-Chloronaphthalene	NA	Lab	--	--	--	--

Appendix 1-C4b-2
Field Blank Data - Aqueous
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 12/12/2008 MW-60-10 FBMW-06- 13_12122008 FB	QC 12/12/2008 SB-08-C FBSB-08-6 SOIL_12122008 FB	QC 12/12/2008 SB-08-D FBSB-08-6 TAIL_12122008 FB	QC 12/15/2008 MW-60-11 FBMW97- 12_12152008 FB
Chemical Name	Total or Dissolved	Analysis Location				
2-Chlorophenol	NA	Lab	--	--	--	--
2-Methyl-4,6-dinitrophenol	NA	Lab	--	--	--	--
2-Methylnaphthalene	NA	Lab	--	--	--	--
2-Nitroaniline	NA	Lab	--	--	--	--
2-Nitrophenol	NA	Lab	--	--	--	--
3,3'-Dichlorobenzidine	NA	Lab	--	--	--	--
3-Nitroaniline	NA	Lab	--	--	--	--
4-Bromophenyl phenyl ether	NA	Lab	--	--	--	--
4-Chloro-3-methylphenol	NA	Lab	--	--	--	--
4-Chloroaniline	NA	Lab	--	--	--	--
4-Chlorophenyl phenyl ether	NA	Lab	--	--	--	--
4-Nitroaniline	NA	Lab	--	--	--	--
4-Nitrophenol	NA	Lab	--	--	--	--
Acenaphthene	NA	Lab	--	--	--	--
Acenaphthylene	NA	Lab	--	--	--	--
Anthracene	NA	Lab	--	--	--	--
Azobenzene	NA	Lab	--	--	--	--
Benzo(a)anthracene	NA	Lab	--	--	--	--
Benzo(a)pyrene	NA	Lab	--	--	--	--
Benzo(b)fluoranthene	NA	Lab	--	--	--	--
Benzo(g,h,i)perylene	NA	Lab	--	--	--	--
Benzo(k)fluoranthene	NA	Lab	--	--	--	--
Benzoic Acid	NA	Lab	--	--	--	--
Benzyl alcohol	NA	Lab	--	--	--	--
Bis(2-chloroethoxy)methane	NA	Lab	--	--	--	--
Bis(2-chloroethyl)ether	NA	Lab	--	--	--	--
Bis(2-chloroisopropyl)ether	NA	Lab	--	--	--	--

Appendix 1-C4b-2
Field Blank Data - Aqueous
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 12/12/2008 MW-60-10 FBMW-06- 13_12122008 FB	QC 12/12/2008 SB-08-C FBSB-08-6 SOIL_12122008 FB	QC 12/12/2008 SB-08-D FBSB-08-6 TAIL_12122008 FB	QC 12/15/2008 MW-60-11 FBMW97- 12_12152008 FB
Chemical Name	Total or Dissolved	Analysis Location				
Bis(2-ethylhexyl)phthalate	NA	Lab	--	--	--	--
Butyl benzyl phthalate	NA	Lab	--	--	--	--
Carbazole	NA	Lab	--	--	--	--
Chrysene	NA	Lab	--	--	--	--
Dibenz(a,h)anthracene	NA	Lab	--	--	--	--
Dibenzofuran	NA	Lab	--	--	--	--
Diethyl phthalate	NA	Lab	--	--	--	--
Dimethyl phthalate	NA	Lab	--	--	--	--
Di-n-butyl phthalate	NA	Lab	--	--	--	--
Di-n-octyl phthalate	NA	Lab	--	--	--	--
Fluoranthene	NA	Lab	--	--	--	--
Fluorene	NA	Lab	--	--	--	--
Hexachlorobenzene	NA	Lab	--	--	--	--
Hexachlorobutadiene	NA	Lab	--	--	--	--
Hexachlorocyclopentadiene	NA	Lab	--	--	--	--
Hexachloroethane	NA	Lab	--	--	--	--
Indeno(1,2,3-cd)pyrene	NA	Lab	--	--	--	--
Isophorone	NA	Lab	--	--	--	--
Naphthalene	NA	Lab	--	--	--	--
Nitrobenzene	NA	Lab	--	--	--	--
N-Nitrosodimethylamine	NA	Lab	--	--	--	--
N-Nitrosodi-n-propylamine	NA	Lab	--	--	--	--
N-Nitrosodiphenylamine	NA	Lab	--	--	--	--
o-Cresol	NA	Lab	--	--	--	--
p-Cresol	NA	Lab	--	--	--	--
Pentachlorophenol	NA	Lab	--	--	--	--
Phenanthrene	NA	Lab	--	--	--	--
Phenol	NA	Lab	--	--	--	--

Appendix 1-C4b-2
Field Blank Data - Aqueous
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 12/12/2008 MW-60-10 FBMW-06- 13_12122008 FB	QC 12/12/2008 SB-08-C FBSB-08-6 SOIL_12122008 FB	QC 12/12/2008 SB-08-D FBSB-08-6 TAIL_12122008 FB	QC 12/15/2008 MW-60-11 FBMW97- 12_12152008 FB
Chemical Name	Total or Dissolved	Analysis Location				
Pyrene	NA	Lab	--	--	--	--
Pyridine	NA	Lab	--	--	--	--
VOCs						
1,1,1,2-Tetrachloroethane	NA	Lab	--	--	--	--
1,1,1-Trichloroethane	NA	Lab	--	--	--	--
1,1,2,2-Tetrachloroethane	NA	Lab	--	--	--	--
1,1,2-Trichloroethane	NA	Lab	--	--	--	--
1,1-Dichloro-1-propene	NA	Lab	--	--	--	--
1,1-Dichloroethane	NA	Lab	--	--	--	--
1,1-Dichloroethylene	NA	Lab	--	--	--	--
1,2,3-Trichlorobenzene	NA	Lab	--	--	--	--
1,2,3-Trichloropropane	NA	Lab	--	--	--	--
1,2,4-Trichlorobenzene	NA	Lab	--	--	--	--
1,2,4-Trimethylbenzene	NA	Lab	--	--	--	--
1,2-Dibromo-3-chloropropane	NA	Lab	--	--	--	--
1,2-Dibromoethane	NA	Lab	--	--	--	--
1,2-Dichlorobenzene	NA	Lab	--	--	--	--
1,2-Dichloroethane	NA	Lab	--	--	--	--
1,2-Dichloroethylene, cis	NA	Lab	--	--	--	--
1,2-Dichloroethylene, trans	NA	Lab	--	--	--	--
1,2-Dichloropropane	NA	Lab	--	--	--	--
1,3,5-Trimethylbenzene	NA	Lab	--	--	--	--
1,3-Dichloro-1-propene trans	NA	Lab	--	--	--	--
1,3-Dichloro-1-propene, cis	NA	Lab	--	--	--	--
1,3-Dichlorobenzene	NA	Lab	--	--	--	--
1,3-Dichloropropane	NA	Lab	--	--	--	--
1,4-Dichlorobenzene	NA	Lab	--	--	--	--
2,2-Dichloropropane	NA	Lab	--	--	--	--
2-Chloroethyl Vinyl Ether	NA	Lab	--	--	--	--
2-Hexanone	NA	Lab	--	--	--	--
Acetone	NA	Lab	--	--	--	--
Acrolein	NA	Lab	--	--	--	--
Acrylonitrile	NA	Lab	--	--	--	--
Benzene	NA	Lab	--	--	--	--

Appendix 1-C4b-2
Field Blank Data - Aqueous
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 12/12/2008 MW-60-10 FBMW-06- 13_12122008 FB	QC 12/12/2008 SB-08-C FBSB-08-6 SOIL_12122008 FB	QC 12/12/2008 SB-08-D FBSB-08-6 TAIL_12122008 FB	QC 12/15/2008 MW-60-11 FBMW97- 12_12152008 FB
Chemical Name	Total or Dissolved	Analysis Location				
Bromobenzene	NA	Lab	--	--	--	--
Bromochloromethane	NA	Lab	--	--	--	--
Bromodichloromethane	NA	Lab	--	--	--	--
Bromoform	NA	Lab	--	--	--	--
Bromomethane	NA	Lab	--	--	--	--
Butyl benzene	NA	Lab	--	--	--	--
Butylbenzene sec	NA	Lab	--	--	--	--
Butylbenzene tert-	NA	Lab	--	--	--	--
Carbon disulfide	NA	Lab	--	--	--	--
Carbon tetrachloride	NA	Lab	--	--	--	--
Chlorobenzene	NA	Lab	--	--	--	--
Chlorodibromomethane	NA	Lab	--	--	--	--
Chloroethane	NA	Lab	--	--	--	--
Chloroform	NA	Lab	--	--	--	--
Chloromethane	NA	Lab	--	--	--	--
Chlorotoluene o-	NA	Lab	--	--	--	--
Chlorotoluene p-	NA	Lab	--	--	--	--
Cumene (isopropyl benzene)	NA	Lab	--	--	--	--
Cymene p- (Toluene isopropyl p-)	NA	Lab	--	--	--	--
Dibromomethane (methylene bromide)	NA	Lab	--	--	--	--
Dichlorodifluoromethane (CFC-12)	NA	Lab	--	--	--	--
Ethyl benzene	NA	Lab	--	--	--	--
Hexachlorobutadiene	NA	Lab	--	--	--	--
Iodomethane	NA	Lab	--	--	--	--
Methyl ethyl ketone	NA	Lab	--	--	--	--
Methyl isobutyl ketone	NA	Lab	--	--	--	--
Methyl tertiary butyl ether (MTBE)	NA	Lab	--	--	--	--
Methylene chloride	NA	Lab	--	--	--	--
Naphthalene	NA	Lab	--	--	--	--
Propylbenzene	NA	Lab	--	--	--	--
Styrene	NA	Lab	--	--	--	--
Tetrachloroethylene	NA	Lab	--	--	--	--
Toluene	NA	Lab	--	--	--	--
Trichloroethylene	NA	Lab	--	--	--	--
Trichlorofluoromethane	NA	Lab	--	--	--	--

Appendix 1-C4b-2
Field Blank Data - Aqueous
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 12/12/2008 MW-60-10 FBMW-06- 13_12122008 FB	QC 12/12/2008 SB-08-C FBSB-08-6 SOIL_12122008 FB	QC 12/12/2008 SB-08-D FBSB-08-6 TAIL_12122008 FB	QC 12/15/2008 MW-60-11 FBMW97- 12_12152008 FB
Chemical Name	Total or Dissolved	Analysis Location				
Vinyl acetate	NA	Lab	--	--	--	--
Vinyl chloride	NA	Lab	--	--	--	--
Xylene m & p	NA	Lab	--	--	--	--
Xylene, o-	NA	Lab	--	--	--	--
PCBs						
Aroclor 1016	NA	Lab	--	--	--	--
Aroclor 1221	NA	Lab	--	--	--	--
Aroclor 1232	NA	Lab	--	--	--	--
Aroclor 1242	NA	Lab	--	--	--	--
Aroclor 1248	NA	Lab	--	--	--	--
Aroclor 1254	NA	Lab	--	--	--	--
Aroclor 1260	NA	Lab	--	--	--	--
Aroclor 1262	NA	Lab	--	--	--	--
Aroclor 1268	NA	Lab	--	--	--	--
Radiochemical Parameters						
Gross Alpha (radiation)	NA	Lab	--	--	--	--
Gross Beta (radiation)	NA	Lab	--	--	--	--
Lead 210	NA	Lab	--	3.6 +/- 1.9 pCi/l	3.3 +/- 1.4 pCi/l	--
Radium 226	NA	Lab	--	0 +/- 0.18 pCi/l	0 +/- 0.2 pCi/l	--
Radium 228	NA	Lab	--	--	--	--
Thorium 230	NA	Lab	--	0.05 +/- 0.27 pCi/l	-0.07 +/- 0.25 pCi/l	--
Uranium 234	NA	Lab	--	-0.28 +/- 1.5 pCi/l	0.12 +/- 1.5 pCi/l	--
Uranium 235	NA	Lab	--	-0.22 +/- 1.1 pCi/l	-1.9 +/- 1.2 pCi/l	--
Uranium 238 (radiochemical method)	NA	Lab	--	0.48 +/- 1.2 pCi/l	1.44 +/- 1.2 pCi/l	--

Appendix 1-C4b-3i
Laboratory Blank Data - Aqueous General Parameters and Metals
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date			QC 5/13/2008	QC 5/17/2008	QC 5/19/2008	QC 5/19/2008	QC 5/22/2008	QC 5/27/2008
Sys Sample Code			LB804207_05132008	LB804324_05172008	LB804416_05192008	LB804434_05192008	LB804545_05222008	LB804658_05272008
Sample Type Code			LB	LB	LB	LB	LB	LB
Chemical Name	Total or Dissolved	Analysis Location						
General Parameters								
Alkalinity, bicarbonate as CaCO3	NA	Lab	< 2 mg/l < 2 mg/l	< 2 mg/l	< 2 mg/l	< 2 mg/l < 2 mg/l	< 2 mg/l	< 2 mg/l
Alkalinity, carbonate as CaCO3	NA	Lab	< 2 mg/l < 2 mg/l	< 2 mg/l	< 2 mg/l	< 2 mg/l < 2 mg/l	< 2 mg/l	< 2 mg/l
Chloride	NA	Lab	< 0.2 mg/l < 0.2 mg/l	< 0.2 mg/l	0.2 mg/l < -9999 mg/l	< 0.2 mg/l < 0.2 mg/l	< 0.2 mg/l	< 0.2 mg/l < 0.2 mg/l < 0.2 mg/l < 0.2 mg/l
Fluoride	NA	Lab	< 0.2 mg/l < 0.2 mg/l	< 0.2 mg/l	< 0.2 mg/l	< 0.2 mg/l < 0.2 mg/l	< 0.2 mg/l	< 0.2 mg/l < 0.2 mg/l < 0.2 mg/l < 0.2 mg/l
Nitrate + Nitrite	NA	Lab	< 0.05 mg/l < 0.05 mg/l	< 0.05 mg/l	< 0.05 mg/l	< 0.05 mg/l	< 0.05 mg/l	< 0.05 mg/l < 0.05 mg/l
Nitrogen, ammonia as N	NA	Lab	< 0.05 mg/l < 0.05 mg/l	< 0.05 mg/l	< 0.05 mg/l	< 0.05 mg/l	< 0.05 mg/l	< 0.05 mg/l
Phosphorus, total	NA	Lab	< 0.01 mg/l < 0.01 mg/l	< 0.01 mg/l	< 0.01 mg/l	< 0.01 mg/l	< 0.01 mg/l	< 0.01 mg/l
Sulfate	NA	Lab	< 0.2 mg/l < 0.2 mg/l	< 0.2 mg/l	< 0.2 mg/l	< 0.2 mg/l < 0.2 mg/l	< 0.2 mg/l	< 0.2 mg/l < 0.2 mg/l < 0.2 mg/l
Metals								
Antimony	Total	Lab	< 0.00005 mg/l < 0.00005 mg/l	< 0.00005 mg/l	< 0.00005 mg/l < 0.00005 mg/l	< 0.00005 mg/l	< 0.00005 mg/l	< 0.00005 mg/l
Arsenic	Total	Lab	< 0.0005 mg/l < 0.0005 mg/l	< 0.0005 mg/l	< 0.0005 mg/l < 0.0005 mg/l	< 0.0005 mg/l	< 0.0005 mg/l	< 0.0005 mg/l
Barium	Total	Lab	< 0.00005 mg/l < 0.00005 mg/l	< 0.00005 mg/l	< 0.00005 mg/l < 0.00005 mg/l	< 0.00005 mg/l	< 0.00005 mg/l	< 0.00005 mg/l
Beryllium	Total	Lab	< 0.00002 mg/l < 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l < 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l
Cadmium	Total	Lab	< 0.00002 mg/l < 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l < 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l
Calcium	Total	Lab	< 0.05 mg/l < 0.05 mg/l	< 0.0500 mg/l	< 0.0500 mg/l < 0.0500 mg/l	< 0.0500 mg/l	< 0.0500 mg/l	< 0.05 mg/l

Appendix 1-C4b-3i
Laboratory Blank Data - Aqueous General Parameters and Metals
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date			QC 5/13/2008	QC 5/17/2008	QC 5/19/2008	QC 5/19/2008	QC 5/22/2008	QC 5/27/2008
Sys Sample Code			LB804207_05132008	LB804324_05172008	LB804416_05192008	LB804434_05192008	LB804545_05222008	LB804658_05272008
Sample Type Code			LB	LB	LB	LB	LB	LB
Chemical Name	Total or Dissolved	Analysis Location						
Chromium	Total	Lab	< 0.0002 mg/l < 0.0002 mg/l	< 0.0002 mg/l	< 0.0002 mg/l < 0.0002 mg/l	< 0.0002 mg/l	< 0.0002 mg/l	< 0.0002 mg/l
Cobalt	Total	Lab	< 0.00002 mg/l < 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l < 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l
Copper	Total	Lab	< 0.0001 mg/l < 0.0001 mg/l	< 0.0001 mg/l	< 0.0001 mg/l < 0.0001 mg/l	< 0.0001 J mg/l	< 0.0001 mg/l	< 0.0001 mg/l
Iron	Total	Lab	< 0.02 mg/l < 0.02 mg/l	< 0.02 mg/l	< 0.02 mg/l < 0.02 mg/l	< 0.02 mg/l	< 0.02 mg/l	< 0.02 mg/l
Lead	Total	Lab	< 0.00002 mg/l < 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l < 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l
Magnesium	Total	Lab	< 0.02 mg/l < 0.02 mg/l	< 0.0200 mg/l	< 0.0200 mg/l < 0.0200 mg/l	< 0.0200 R mg/l	< 0.0200 R mg/l	< 0.02 mg/l
Manganese	Total	Lab	< 0.00005 mg/l < 0.00005 mg/l	< 0.00010 mg/l	< 0.00005 mg/l < 0.00005 mg/l	< 0.00005 mg/l	< 0.00005 mg/l	< 0.00005 mg/l
Mercury	Total	Lab	< 0.0002 mg/l < 0.0002 mg/l	< 0.0002 mg/l	< 0.0002 mg/l < 0.0002 mg/l	< 0.0002 mg/l	< 0.0002 mg/l	< 0.0002 mg/l
Nickel	Total	Lab	< 0.0002 mg/l < 0.0002 mg/l	< 0.0002 mg/l	< 0.0002 mg/l < 0.0002 mg/l	< 0.0002 mg/l	< 0.0002 mg/l	< 0.0002 mg/l
Potassium	Total	Lab	< 2 mg/l < 2 mg/l	< 2 mg/l	< 2 mg/l < 2 mg/l	< 2 mg/l	< 2 mg/l	< 2 mg/l
Selenium	Total	Lab	< 0.0010 mg/l < 0.0010 mg/l	< 0.0010 mg/l	< 0.0010 mg/l < 0.0010 mg/l	< 0.001 mg/l	< 0.0010 mg/l	< 0.001 mg/l
Silver	Total	Lab	< 0.00002 mg/l < 0.00002 mg/l	< 0.00003 mg/l	< 0.00002 mg/l < 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l
Sodium	Total	Lab	< 0.1 mg/l < 0.1 mg/l	< 0.5 mg/l	< 0.5 mg/l < 0.5 mg/l	< 0.1 mg/l	< 0.5 mg/l	< 0.1 mg/l
Thallium	Total	Lab	< 0.00002 mg/l < 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l < 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l
Uranium	Total	Lab	< 0.00002 mg/l < 0.00002 mg/l	< 0.00004 mg/l	< 0.00002 mg/l < 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l	< 0.000020 mg/l
Vanadium	Total	Lab	< 0.0002 mg/l < 0.0002 mg/l	< 0.0002 mg/l	< 0.0002 mg/l < 0.0002 mg/l	< 0.00020 mg/l	< 0.0002 mg/l	< 0.0002 mg/l
Zinc	Total	Lab	< 0.0005 mg/l < 0.0005 mg/l	< 0.0005 mg/l	< 0.0005 mg/l < 0.0005 mg/l	< 0.0005 mg/l	< 0.0005 mg/l	< 0.0005 mg/l

Appendix 1-C4b-3i
Laboratory Blank Data - Aqueous General Parameters and Metals
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date			QC 5/29/2008	QC 9/16/2008	QC 9/16/2008	QC 9/19/2008	QC 9/21/2008	QC 9/24/2008
Sys Sample Code			LB804724_05292008	LB809092_09162008	LB809096_09162008	LB809270_09192008	LB809275_09212008	LB809408_09242008
Sample Type Code			LB	LB	LB	LB	LB	LB
Chemical Name	Total or Dissolved	Analysis Location						
General Parameters								
Alkalinity, bicarbonate as CaCO3	NA	Lab	< 2 mg/l	< 2 mg/l < 2 mg/l	< 2 mg/l < 2 mg/l	< 2 mg/l < 2 mg/l	--	< 2 mg/l < 2 mg/l < 2 mg/l
Alkalinity, carbonate as CaCO3	NA	Lab	< 2 mg/l	< 2 mg/l < 2 mg/l	< 2 mg/l < 2 mg/l	< 2 mg/l < 2 mg/l	--	< 2 mg/l < 2 mg/l < 2 mg/l
Chloride	NA	Lab	< 0.2 mg/l < 0.2 mg/l	< 0.2 mg/l < 0.2 mg/l < 0.2 mg/l	< 0.2 mg/l < 0.2 mg/l < 0.2 mg/l	< 0.2 mg/l < 2 mg/l < 0.2 mg/l < 0.2 mg/l	< 0.2 mg/l	< 0.2 mg/l < 0.2 mg/l
Fluoride	NA	Lab	< 0.2 mg/l < 0.2 mg/l	< 0.005 mg/l < 0.005 mg/l < 0.005 mg/l	< 0.005 mg/l < 0.005 mg/l < 0.005 mg/l	< 0.2 mg/l < 0.2 mg/l < 0.2 mg/l < 0.2 mg/l	< 0.2 mg/l < 1 mg/l	< 0.2 mg/l < 0.2 mg/l < 0.2 mg/l
Nitrate + Nitrite	NA	Lab	< 0.05 mg/l	< 0.05 mg/l < 0.05 mg/l	< 0.05 mg/l < 0.05 mg/l < 0.05 mg/l	< 0.05 mg/l < 0.05 mg/l	< 0.05 mg/l	< 0.05 mg/l < 0.05 mg/l
Nitrogen, ammonia as N	NA	Lab	< 0.05 mg/l	< 0.05 mg/l < 0.05 mg/l	< 0.05 mg/l	< 0.05 mg/l < 0.05 mg/l < 0.05 mg/l < 0.05 mg/l < 0.05 mg/l	< 0.05 mg/l	< 0.05 mg/l < 0.05 mg/l
Phosphorus, total	NA	Lab	< 0.01 mg/l	< 0.01 mg/l < 0.01 mg/l	< 0.01 mg/l	< 0.01 mg/l < 0.01 mg/l	< 0.01 mg/l	< 0.01 mg/l < 0.01 mg/l
Sulfate	NA	Lab	< 0.2 mg/l < 0.2 mg/l < 0.2 mg/l	< 0.2 mg/l < 0.2 mg/l < 0.2 mg/l	< 0.2 mg/l < 0.2 mg/l < 0.2 mg/l	< 0.2 mg/l < 0.2 mg/l < 0.2 mg/l	< 0.2 mg/l	< 0.2 mg/l < 0.2 mg/l < 0.2 mg/l
Metals								
Antimony	Total	Lab	< 0.00005 mg/l	< 0.00005 mg/l < 0.00005 mg/l	< 0.00005 mg/l	< 0.00005 mg/l	< 0.00005 mg/l	< 0.00005 mg/l < 0.00005 mg/l
Arsenic	Total	Lab	< 0.0005 mg/l	< 0.0005 mg/l < 0.0005 mg/l	< 0.0005 mg/l	< 0.0005 mg/l	< 0.0005 mg/l	< 0.0005 mg/l < 0.0005 mg/l
Barium	Total	Lab	< 0.00005 mg/l	< 0.000050 mg/l < 0.000050 mg/l	< 0.00005 mg/l	< 0.00005 mg/l	< 0.00005 mg/l	< 0.00005 mg/l < 0.00005 mg/l
Beryllium	Total	Lab	< 0.00002 mg/l	< 0.000020 mg/l < 0.000020 mg/l	< 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l < 0.00002 mg/l
Cadmium	Total	Lab	< 0.00002 mg/l	< 0.00002 mg/l < 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l < 0.00002 mg/l
Calcium	Total	Lab	< 0.0500 mg/l	< 0.05 mg/l < 0.05 mg/l	< 0.05 mg/l	< 0.05 mg/l	< 0.05 mg/l	< 0.05 mg/l < 0.05 mg/l

Appendix 1-C4b-3i
Laboratory Blank Data - Aqueous General Parameters and Metals
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date			QC 5/29/2008	QC 9/16/2008	QC 9/16/2008	QC 9/19/2008	QC 9/21/2008	QC 9/24/2008
Sys Sample Code			LB804724_05292008	LB809092_09162008	LB809096_09162008	LB809270_09192008	LB809275_09212008	LB809408_09242008
Sample Type Code			LB	LB	LB	LB	LB	LB
Chemical Name	Total or Dissolved	Analysis Location						
Chromium	Total	Lab	< 0.0002 mg/l	< 0.00020 mg/l < 0.00020 mg/l	< 0.0002 mg/l	< 0.0002 mg/l	< 0.0002 mg/l	< 0.0002 mg/l < 0.0002 mg/l
Cobalt	Total	Lab	< 0.00002 mg/l	< 0.000020 mg/l < 0.000020 mg/l	< 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l < 0.00002 mg/l
Copper	Total	Lab	< 0.0001 mg/l	< 0.000100 mg/l < 0.000100 mg/l	< 0.0001 mg/l	< 0.0001 mg/l	< 0.0001 mg/l	< 0.0001 mg/l < 0.0001 mg/l
Iron	Total	Lab	< 0.02 mg/l	< 0.02 mg/l < 0.02 mg/l	< 0.02 mg/l	< 0.02 mg/l	< 0.02 mg/l	< 0.02 mg/l < 0.02 mg/l
Lead	Total	Lab	< 0.00002 mg/l	< 0.000050 mg/l < 0.000050 mg/l	< 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l	< 0.00005 mg/l < 0.00005 mg/l
Magnesium	Total	Lab	< 0.02 mg/l	< 0.02 mg/l < 0.02 mg/l	< 0.02 mg/l	< 0.02 mg/l	< 0.02 mg/l	< 0.02 mg/l < 0.02 mg/l
Manganese	Total	Lab	< 0.00005 mg/l	< 0.005 mg/l < 0.000050 mg/l < 0.000050 mg/l	< 0.00005 mg/l	< 0.00010 mg/l	< 0.00005 mg/l	< 0.00005 mg/l < 0.00005 mg/l
Mercury	Total	Lab	< 0.000200 mg/l	< 0.00020 mg/l < 0.00020 mg/l	< 0.0002 mg/l	< 0.0002 mg/l	< 0.0002 mg/l	< 0.0002 mg/l < 0.0002 mg/l
Nickel	Total	Lab	< 0.0002 mg/l	< 0.0002 mg/l < 0.0002 mg/l	< 0.0002 mg/l	< 0.0002 mg/l	< 0.0002 mg/l	< 0.0002 mg/l < 0.0002 mg/l
Potassium	Total	Lab	< 2 mg/l	< 2.0 mg/l < 2.0 mg/l	< 2.0 mg/l	< 0.4 mg/l	< 0.4 mg/l	< 0.4 mg/l < 0.4 mg/l
Selenium	Total	Lab	< 0.0010 mg/l	< 0.0010 mg/l < 0.0010 mg/l	< 0.001 mg/l	< 0.002 mg/l	< 0.001 mg/l	< 0.0010 mg/l < 0.0010 mg/l
Silver	Total	Lab	< 0.00002 mg/l	< 0.000020 mg/l < 0.000020 mg/l	< 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l < 0.00002 mg/l
Sodium	Total	Lab	< 0.1 mg/l	< 0.1 mg/l < 0.1 mg/l	< 0.1 mg/l	< 0.2 mg/l	< 0.2 mg/l	< 0.2 mg/l < 0.2 mg/l
Thallium	Total	Lab	< 0.00002 mg/l	< 0.000020 mg/l < 0.000020 mg/l	< 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l < 0.00002 mg/l
Uranium	Total	Lab	< 0.00002 mg/l	< 0.000020 mg/l < 0.000020 mg/l	< 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l	< 0.00002 mg/l < 0.00002 mg/l
Vanadium	Total	Lab	< 0.0002 mg/l	< 0.000200 mg/l < 0.000200 mg/l	< 0.0002 mg/l	< 0.0002 mg/l	< 0.0002 mg/l	< 0.0002 mg/l < 0.0002 mg/l
Zinc	Total	Lab	< 0.0005 mg/l	< 0.0005 mg/l < 0.0005 mg/l	< 0.0005 mg/l	< 0.0005 mg/l	< 0.0005 mg/l	< 0.0010 mg/l < 0.0010 mg/l

Appendix 1-C4b-3i
Laboratory Blank Data - Aqueous General Parameters and Metals
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date			QC 12/11/2008	QC 12/12/2008
Sys Sample Code Sample Type Code			LB812124_12112008 LB	LB812197_12122008 LB
Chemical Name	Total or Dissolved	Analysis Location		
General Parameters				
Alkalinity, bicarbonate as CaCO3	NA	Lab	--	--
Alkalinity, carbonate as CaCO3	NA	Lab	--	--
Chloride	NA	Lab	--	--
Fluoride	NA	Lab	--	--
Nitrate + Nitrite	NA	Lab	--	--
Nitrogen, ammonia as N	NA	Lab	--	--
Phosphorus, total	NA	Lab	--	--
Sulfate	NA	Lab	--	--
Metals				
Antimony	Total	Lab	< 0.00005 mg/l	< 0.00005 mg/l
Arsenic	Total	Lab	< 0.0005 mg/l	< 0.0005 mg/l
Barium	Total	Lab	< 0.000050 mg/l	< 0.00005 mg/l
Beryllium	Total	Lab	< 0.000020 mg/l	< 0.00002 mg/l
Cadmium	Total	Lab	< 0.00002 mg/l	< 0.00002 mg/l
Calcium	Total	Lab	< 0.05 mg/l	< 0.05 mg/l

Appendix 1-C4b-3i
Laboratory Blank Data - Aqueous General Parameters and Metals
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date			QC 12/11/2008	QC 12/12/2008
Sys Sample Code			LB812124_12112008	LB812197_12122008
Sample Type Code			LB	LB
Chemical Name	Total or Dissolved	Analysis Location		
Chromium	Total	Lab	< 0.00020 mg/l	< 0.0002 mg/l
Cobalt	Total	Lab	< 0.000020 mg/l	< 0.00002 mg/l
Copper	Total	Lab	< 0.000100 mg/l < 0.0001 mg/l	< 0.0001 mg/l
Iron	Total	Lab	< 0.020 mg/l	< 0.02 mg/l
Lead	Total	Lab	< 0.00002 mg/l	< 0.00002 mg/l
Magnesium	Total	Lab	< 0.020 mg/l	< 0.02 mg/l
Manganese	Total	Lab	< 0.000200 mg/l	< 0.00010 mg/l
Mercury	Total	Lab	< 0.0002 mg/l	< 0.0002 mg/l
Nickel	Total	Lab	< 0.0002 mg/l	< 0.0002 mg/l
Potassium	Total	Lab	< 0.40 mg/l	< 0.4 mg/l
Selenium	Total	Lab	< 0.0010 mg/l	< 0.0010 mg/l
Silver	Total	Lab	< 0.000050 mg/l	< 0.00004 mg/l
Sodium	Total	Lab	< 0.10 mg/l	< 0.1 mg/l
Thallium	Total	Lab	< 0.000020 mg/l	< 0.00002 mg/l
Uranium	Total	Lab	< 0.000020 mg/l	< 0.000020 mg/l
Vanadium	Total	Lab	< 0.000200 mg/l	< 0.0002 mg/l
Zinc	Total	Lab	< 0.0005 mg/l < 0.0005 mg/l	< 0.0005 mg/l

Appendix 1-C4b-3ii
Laboratory Blank Data - Aqueous Dissolved Metals
2008
Rhodia Silver Bow Plant

Sys Loc Code			QC
Sample Date			9/16/2008
Sys Sample Code			LB809096_09162008
Sample Type Code			LB
Chemical Name	Total or Dissolved	Analysis Location	
Metals			
Antimony	Dissolved	Lab	< 0.00005 mg/l
Arsenic	Dissolved	Lab	< 0.0005 mg/l
Barium	Dissolved	Lab	< 0.00005 mg/l
Beryllium	Dissolved	Lab	< 0.00002 mg/l
Cadmium	Dissolved	Lab	< 0.00002 mg/l
Calcium	Dissolved	Lab	< 0.05 mg/l
Chromium	Dissolved	Lab	< 0.0002 mg/l
Cobalt	Dissolved	Lab	< 0.00002 mg/l
Copper	Dissolved	Lab	< 0.0001 mg/l
Iron	Dissolved	Lab	< 0.020 mg/l
Lead	Dissolved	Lab	< 0.00002 mg/l
Magnesium	Dissolved	Lab	< 0.020 mg/l
Manganese	Dissolved	Lab	< 0.00005 mg/l
Mercury	Dissolved	Lab	< 0.0002 mg/l
Nickel	Dissolved	Lab	< 0.0002 mg/l
Potassium	Dissolved	Lab	< 2.00 mg/l
Selenium	Dissolved	Lab	< 0.001 mg/l
Silver	Dissolved	Lab	< 0.00002 mg/l
Sodium	Dissolved	Lab	< 0.10 mg/l
Thallium	Dissolved	Lab	< 0.00002 mg/l
Uranium	Dissolved	Lab	< 0.00002 mg/l
Vanadium	Dissolved	Lab	< 0.0002 mg/l
Zinc	Dissolved	Lab	< 0.0005 mg/l

Appendix 1-C4b-3iv
Laboratory Blank Data - Aqueous Organic Parameters
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date			QC 5/13/2008 LB804207_ 05132008 LB	QC 5/13/2008 LB804207_ 05132008 LB	QC 5/13/2008 LB804207_ 05132008 LB	QC 5/17/2008 LB804324_ 05172008 LB	QC 5/19/2008 LB804416_ 05192008 LB	QC 5/19/2008 LB804416_ 05192008 LB	QC 5/19/2008 LB804416_ 05192008 LB	QC 5/19/2008 LB804416_ 05192008 LB	QC 5/19/2008 LB804416_ 05192008 LB
Chemical Name	Total or Dissolved	Analysis Location									
SVOCs											
1,2,4-Trichlorobenzene	NA	Lab	< 0.016 ug/l	< 0.016 ug/l	--	< 0.016 ug/l	< 0.016 ug/l	< 0.016 ug/l	< 0.016 ug/l	--	--
1,2-Dichlorobenzene	NA	Lab	< 0.022 ug/l	< 0.022 ug/l	--	< 0.022 ug/l	< 0.022 ug/l	< 0.022 ug/l	< 0.022 ug/l	--	--
1,3-Dichlorobenzene	NA	Lab	< 0.021 ug/l	< 0.021 ug/l	--	< 0.021 ug/l	< 0.021 ug/l	< 0.021 ug/l	< 0.021 ug/l	--	--
1,4-Dichlorobenzene	NA	Lab	< 0.029 ug/l	< 0.029 ug/l	--	< 0.029 ug/l	< 0.029 ug/l	< 0.029 ug/l	< 0.029 ug/l	--	--
2,4,5-Trichlorophenol	NA	Lab	< 0.031 ug/l	< 0.031 ug/l	--	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	--	--
2,4,6-Trichlorophenol	NA	Lab	< 0.058 ug/l	< 0.058 ug/l	--	< 0.058 ug/l	< 0.058 ug/l	< 0.058 ug/l	< 0.058 ug/l	--	--
2,4-Dichlorophenol	NA	Lab	< 0.047 ug/l	< 0.047 ug/l	--	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	--	--
2,4-Dimethylphenol	NA	Lab	< 2.2 R ug/l	< 2.2 ug/l	--	< 2.2 ug/l	< 2.2 ug/l	< 2.2 R ug/l	< 2.2 R ug/l	--	--
2,4-Dinitrophenol	NA	Lab	< 0.17 ug/l	< 0.17 ug/l	--	< 0.17 ug/l	< 0.17 ug/l	< 0.17 ug/l	< 0.17 ug/l	--	--
2,4-Dinitrotoluene	NA	Lab	< 0.018 ug/l	< 0.018 ug/l	--	< 0.018 ug/l	< 0.018 ug/l	< 0.018 ug/l	< 0.018 ug/l	--	--
2,6-Dinitrotoluene	NA	Lab	< 0.033 ug/l	< 0.033 ug/l	--	< 0.033 ug/l	< 0.033 ug/l	< 0.033 ug/l	< 0.033 ug/l	--	--
2-Chloronaphthalene	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	--	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	--	--
2-Chlorophenol	NA	Lab	< 0.054 ug/l	< 0.054 ug/l	--	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	--	--
2-Methyl-4,6-dinitrophenol	NA	Lab	< 0.025 ug/l	< 0.025 ug/l	--	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	--	--
2-Methylnaphthalene	NA	Lab	< 0.026 ug/l	< 0.026 ug/l	--	< 0.026 ug/l	< 0.026 ug/l	< 0.026 ug/l	< 0.026 ug/l	--	--
2-Nitroaniline	NA	Lab	< 0.024 ug/l	< 0.024 ug/l	--	< 0.024 ug/l	< 0.024 ug/l	< 0.024 ug/l	< 0.024 ug/l	--	--
2-Nitrophenol	NA	Lab	< 0.063 ug/l	< 0.063 ug/l	--	< 0.063 ug/l	< 0.063 ug/l	< 0.063 ug/l	< 0.063 ug/l	--	--
3,3'-Dichlorobenzidine	NA	Lab	< 0.43 R ug/l	< 0.43 R ug/l	--	< 0.43 R ug/l	< 0.43 R ug/l	< 0.43 R ug/l	< 0.43 ug/l	--	--
3-Nitroaniline	NA	Lab	< 0.029 ug/l	< 0.029 ug/l	--	< 0.029 ug/l	< 0.029 ug/l	< 0.029 ug/l	< 0.029 ug/l	--	--
4-Bromophenyl phenyl ether	NA	Lab	< 0.026 ug/l	< 0.026 ug/l	--	< 0.026 ug/l	< 0.026 ug/l	< 0.026 ug/l	< 0.026 ug/l	--	--
4-Chloro-3-methylphenol	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	--	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	--	--
4-Chloroaniline	NA	Lab	< 0.025 ug/l	< 0.025 ug/l	--	< 0.025 ug/l	< 0.025 R ug/l	< 0.025 ug/l	< 0.025 ug/l	--	--
4-Chlorophenyl phenyl ether	NA	Lab	< 0.027 ug/l	< 0.027 ug/l	--	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	--	--
4-Nitroaniline	NA	Lab	< 0.019 ug/l	< 0.019 ug/l	--	< 0.019 ug/l	< 0.019 ug/l	< 0.019 ug/l	< 0.019 ug/l	--	--
4-Nitrophenol	NA	Lab	< 0.28 ug/l	< 0.28 ug/l	--	< 0.28 ug/l	< 0.28 ug/l	< 0.28 ug/l	< 0.28 ug/l	--	--
Acenaphthene	NA	Lab	< 0.026 ug/l	< 0.026 ug/l	--	< 0.026 ug/l	< 0.026 ug/l	< 0.026 ug/l	< 0.026 ug/l	--	--
Acenaphthylene	NA	Lab	< 0.015 ug/l	< 0.015 ug/l	--	< 0.015 ug/l	< 0.015 ug/l	< 0.015 ug/l	< 0.015 ug/l	--	--
Anthracene	NA	Lab	< 0.024 ug/l	< 0.024 ug/l	--	< 0.024 ug/l	< 0.024 ug/l	< 0.024 ug/l	< 0.024 ug/l	--	--
Azobenzene	NA	Lab	< 0.021 ug/l	< 0.021 ug/l	--	< 0.021 ug/l	< 0.021 ug/l	< 0.021 ug/l	< 0.021 ug/l	--	--
Benzo(a)anthracene	NA	Lab	< 0.018 ug/l	< 0.018 ug/l	--	< 0.018 ug/l	< 0.018 ug/l	< 0.018 ug/l	< 0.018 ug/l	--	--
Benzo(a)pyrene	NA	Lab	< 0.031 ug/l	< 0.031 ug/l	--	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	--	--
Benzo(b)fluoranthene	NA	Lab	0.017 J ug/l	< 0.017 ug/l	--	< 0.017 ug/l	< 0.017 ug/l	< 0.017 ug/l	< 0.017 ug/l	--	--

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Laboratory Blank Data - Aqueous Organic Parameters
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Sys Loc Code Sample Date			QC 5/13/2008	QC 5/13/2008	QC 5/13/2008	QC 5/17/2008	QC 5/19/2008	QC 5/19/2008	QC 5/19/2008	QC 5/19/2008	QC 5/19/2008
Sys Sample Code			LB804207_05132008	LB804207_05132008	LB804207_05132008	LB804324_05172008	LB804416_05192008	LB804416_05192008	LB804416_05192008	LB804416_05192008	LB804416_05192008
Sample Type Code			LB	LB	LB	LB	LB	LB	LB	LB	LB
Chemical Name	Total or Dissolved	Analysis Location									
Benzo(g,h,i)perylene	NA	Lab	< 0.019 ug/l	< 0.019 ug/l	--	< 0.019 ug/l	< 0.019 ug/l	< 0.019 ug/l	< 0.019 ug/l	--	--
Benzo(k)fluoranthene	NA	Lab	< 0.024 ug/l	< 0.024 ug/l	--	< 0.024 ug/l	< 0.024 ug/l	< 0.024 ug/l	< 0.024 ug/l	--	--
Benzoic Acid	NA	Lab	< 1.1 R ug/l	1.5 J ug/l	--	1.5 J ug/l	< 1.1 R ug/l	< 1.1 R ug/l	< 1.1 R ug/l	--	--
Benzyl alcohol	NA	Lab	< 0.073 ug/l	< 0.073 ug/l	--	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	--	--
Bis(2-chloroethoxy)methane	NA	Lab	< 0.024 ug/l	< 0.024 ug/l	--	< 0.024 ug/l	< 0.024 ug/l	< 0.024 ug/l	< 0.024 ug/l	--	--
Bis(2-chloroethyl)ether	NA	Lab	< 0.035 ug/l	< 0.035 ug/l	--	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	--	--
Bis(2-chloroisopropyl)ether	NA	Lab	< 0.026 ug/l	< 0.026 ug/l	--	< 0.026 ug/l	< 0.026 ug/l	< 0.026 ug/l	< 0.026 ug/l	--	--
Bis(2-ethylhexyl)phthalate	NA	Lab	< 0.13 ug/l	< 0.13 ug/l	--	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	--	--
Butyl benzyl phthalate	NA	Lab	0.027 J ug/l	< 0.018 ug/l	--	< 0.018 ug/l	0.050 J ug/l	< 0.018 ug/l	0.032 J ug/l	--	--
Carbazole	NA	Lab	< 0.018 ug/l	< 0.018 ug/l	--	< 0.018 ug/l	< 0.018 ug/l	< 0.018 ug/l	< 0.018 ug/l	--	--
Chrysene	NA	Lab	< 0.028 ug/l	< 0.028 ug/l	--	< 0.028 ug/l	< 0.028 ug/l	< 0.028 ug/l	< 0.028 ug/l	--	--
Dibenz(a,h)anthracene	NA	Lab	< 0.017 ug/l	< 0.017 ug/l	--	< 0.017 ug/l	< 0.017 ug/l	< 0.017 ug/l	< 0.017 ug/l	--	--
Dibenzofuran	NA	Lab	< 0.018 ug/l	< 0.018 ug/l	--	< 0.018 ug/l	< 0.018 ug/l	< 0.018 ug/l	< 0.018 ug/l	--	--
Diethyl phthalate	NA	Lab	0.019 J ug/l	< 0.012 ug/l	--	< 0.012 ug/l	< 0.012 ug/l	0.019 J ug/l	0.024 J ug/l	--	--
Dimethyl phthalate	NA	Lab	< 0.021 ug/l	< 0.021 ug/l	--	< 0.021 ug/l	< 0.021 ug/l	< 0.021 ug/l	< 0.021 ug/l	--	--
Di-n-butyl phthalate	NA	Lab	0.073 J ug/l	0.087 J ug/l	--	0.087 J ug/l	0.10 J ug/l	0.047 J ug/l	0.12 J ug/l	--	--
Di-n-octyl phthalate	NA	Lab	< 0.018 ug/l	< 0.018 ug/l	--	< 0.018 ug/l	< 0.018 ug/l	< 0.018 ug/l	< 0.018 ug/l	--	--
Fluoranthene	NA	Lab	0.025 J ug/l	< 0.020 ug/l	--	< 0.020 ug/l	0.022 J ug/l	< 0.020 ug/l	0.021 J ug/l	--	--
Fluorene	NA	Lab	< 0.027 ug/l	< 0.027 ug/l	--	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	--	--
Hexachlorobenzene	NA	Lab	< 0.022 ug/l	< 0.022 ug/l	--	< 0.022 ug/l	< 0.022 ug/l	< 0.022 ug/l	< 0.022 ug/l	--	--
Hexachlorobutadiene	NA	Lab	< 0.027 R ug/l	< 0.027 R ug/l	--	< 0.027 R ug/l	< 0.027 R ug/l	< 0.027 R ug/l	< 0.027 R ug/l	--	--
Hexachlorocyclopentadiene	NA	Lab	< 0.19 R ug/l	< 0.19 R ug/l	--	< 0.19 R ug/l	< 0.19 R ug/l	< 0.19 R ug/l	< 0.19 R ug/l	--	--
Hexachloroethane	NA	Lab	< 0.024 ug/l	< 0.024 ug/l	--	< 0.024 ug/l	< 0.024 ug/l	< 0.024 ug/l	< 0.024 R ug/l	--	--
Indeno(1,2,3-cd)pyrene	NA	Lab	< 0.021 ug/l	< 0.021 ug/l	--	< 0.021 ug/l	< 0.021 ug/l	< 0.021 ug/l	< 0.021 ug/l	--	--
Isophorone	NA	Lab	< 0.016 ug/l	< 0.016 ug/l	--	< 0.016 ug/l	< 0.016 ug/l	< 0.016 ug/l	< 0.016 ug/l	--	--
Naphthalene	NA	Lab	< 0.022 ug/l	< 0.022 ug/l	--	< 0.022 ug/l	< 0.022 ug/l	< 0.022 ug/l	< 0.022 ug/l	--	--
Nitrobenzene	NA	Lab	< 0.028 ug/l	< 0.028 ug/l	--	< 0.028 ug/l	< 0.028 ug/l	< 0.028 ug/l	< 0.028 ug/l	--	--
N-Nitrosodimethylamine	NA	Lab	< 0.42 ug/l	< 0.42 ug/l	--	< 0.42 ug/l	< 0.42 ug/l	< 0.42 ug/l	< 0.42 ug/l	--	--
N-Nitrosodi-n-propylamine	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	--	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	--	--
N-Nitrosodiphenylamine	NA	Lab	< 0.048 ug/l	< 0.048 ug/l	--	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	--	--
o-Cresol	NA	Lab	< 0.11 ug/l	< 0.11 ug/l	--	< 0.11 ug/l	< 0.11 ug/l	< 0.11 ug/l	< 0.11 ug/l	--	--

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Sys Loc Code Sample Date			QC 5/13/2008 LB804207_ 05132008 LB	QC 5/13/2008 LB804207_ 05132008 LB	QC 5/13/2008 LB804207_ 05132008 LB	QC 5/17/2008 LB804324_ 05172008 LB	QC 5/19/2008 LB804416_ 05192008 LB	QC 5/19/2008 LB804416_ 05192008 LB	QC 5/19/2008 LB804416_ 05192008 LB	QC 5/19/2008 LB804416_ 05192008 LB	QC 5/19/2008 LB804416_ 05192008 LB
Chemical Name	Total or Dissolved	Analysis Location									
p-Cresol	NA	Lab	< 0.12 ug/l	< 0.12 ug/l	--	< 0.12 ug/l	< 0.12 ug/l	< 0.12 ug/l	< 0.12 ug/l	--	--
Pentachlorophenol	NA	Lab	< 0.34 ug/l	< 0.34 ug/l	--	< 0.34 ug/l	< 0.34 ug/l	< 0.34 ug/l	< 0.34 ug/l	--	--
Phenanthrene	NA	Lab	< 0.022 ug/l	< 0.022 ug/l	--	< 0.022 ug/l	< 0.022 ug/l	< 0.022 ug/l	< 0.022 ug/l	--	--
Phenol	NA	Lab	< 0.063 ug/l	< 0.063 ug/l	--	< 0.063 ug/l	< 0.063 ug/l	< 0.063 ug/l	< 0.063 ug/l	--	--
Pyrene	NA	Lab	0.023 J ug/l	< 0.019 ug/l	--	< 0.019 ug/l	< 0.019 ug/l	< 0.019 ug/l	< 0.019 ug/l	--	--
Pyridine	NA	Lab	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	NA	Lab	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l
1,1,1,1-Trichloroethane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l
1,1,2,2-Tetrachloroethane	NA	Lab	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l
1,1,2-Trichloroethane	NA	Lab	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l
1,1-Dichloro-1-propene	NA	Lab	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l
1,1-Dichloroethane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,1-Dichloroethylene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l
1,2,3-Trichlorobenzene	NA	Lab	0.19 J ug/l	0.22 J ug/l	0.21 J ug/l	0.18 J ug/l	0.21 J ug/l	0.17 J ug/l	0.21 J ug/l	0.18 J ug/l	0.17 J ug/l
1,2,3-Trichloropropane	NA	Lab	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l
1,2,4-Trichlorobenzene	NA	Lab	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l
1,2,4-Trimethylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
1,2-Dibromo-3-chloropropane	NA	Lab	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l
1,2-Dibromoethane	NA	Lab	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l
1,2-Dichlorobenzene	NA	Lab	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l
1,2-Dichloroethane	NA	Lab	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l
1,2-Dichloroethylene, cis	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
1,2-Dichloroethylene, trans	NA	Lab	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l
1,2-Dichloropropane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,3,5-Trimethylbenzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,3-Dichloro-1-propene trans	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l
1,3-Dichloro-1-propene, cis	NA	Lab	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l
1,3-Dichlorobenzene	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l
1,3-Dichloropropane	NA	Lab	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l
1,4-Dichlorobenzene	NA	Lab	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l
2,2-Dichloropropane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l
2-Chloroethyl Vinyl Ether	NA	Lab	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 J ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 J ug/l	< 0.19 ug/l	< 0.19 ug/l
2-Hexanone	NA	Lab	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l
Acetone	NA	Lab	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l
Acrolein	NA	Lab	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Acrylonitrile	NA	Lab	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l

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Sys Loc Code Sample Date			QC 5/13/2008	QC 5/13/2008	QC 5/13/2008	QC 5/17/2008	QC 5/19/2008	QC 5/19/2008	QC 5/19/2008	QC 5/19/2008	QC 5/19/2008
Sys Sample Code			LB804207_05132008	LB804207_05132008	LB804207_05132008	LB804324_05172008	LB804416_05192008	LB804416_05192008	LB804416_05192008	LB804416_05192008	LB804416_05192008
Sample Type Code			LB	LB	LB	LB	LB	LB	LB	LB	LB
Chemical Name	Total or Dissolved	Analysis Location									
Benzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
Bromobenzene	NA	Lab	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l
Bromochloromethane	NA	Lab	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l
Bromodichloromethane	NA	Lab	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l
Bromoform	NA	Lab	< 0.080 ug/l	< 0.080 ug/l	< 0.080 ug/l	< 0.080 ug/l	< 0.080 ug/l	< 0.080 ug/l	< 0.080 ug/l	< 0.080 ug/l	< 0.080 ug/l
Bromomethane	NA	Lab	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 J ug/l
Butyl benzene	NA	Lab	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l
Butylbenzene sec	NA	Lab	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l
Butylbenzene tert-	NA	Lab	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l
Carbon disulfide	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 J ug/l
Carbon tetrachloride	NA	Lab	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l
Chlorobenzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
Chlorodibromomethane	NA	Lab	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l
Chloroethane	NA	Lab	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l
Chloroform	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
Chloromethane	NA	Lab	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l
Chlorotoluene o-	NA	Lab	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l
Chlorotoluene p-	NA	Lab	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l
Cumene (isopropyl benzene)	NA	Lab	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l
Cymene p- (Toluene isopropyl p-)	NA	Lab	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l
Dibromomethane (methylene bromide)	NA	Lab	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l
Dichlorodifluoromethane (CFC-12)	NA	Lab	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l
Ethyl benzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
Hexachlorobutadiene	NA	Lab	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l
Iodomethane	NA	Lab	< 0.27 R ug/l	< 0.27 R ug/l	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l
Methyl ethyl ketone	NA	Lab	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l
Methyl isobutyl ketone	NA	Lab	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l
Methyl tertiary butyl ether (MTBE)	NA	Lab	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l
Methylene chloride	NA	Lab	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l
Naphthalene	NA	Lab	0.12 J ug/l	0.13 J ug/l	0.18 J ug/l	0.14 J ug/l	0.11 J ug/l	< 0.10 ug/l	0.13 J ug/l	0.14 J ug/l	0.10 J ug/l
Propylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
Styrene	NA	Lab	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l
Tetrachloroethylene	NA	Lab	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l
Toluene	NA	Lab	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	0.050 J ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l
Trichloroethylene	NA	Lab	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l
Trichlorofluoromethane	NA	Lab	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l
Vinyl acetate	NA	Lab	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l
Vinyl chloride	NA	Lab	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l
Xylene m & p	NA	Lab	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l

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Laboratory Blank Data - Aqueous Organic Parameters
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Sys Loc Code Sample Date			QC 5/13/2008	QC 5/13/2008	QC 5/13/2008	QC 5/17/2008	QC 5/19/2008	QC 5/19/2008	QC 5/19/2008	QC 5/19/2008	QC 5/19/2008
Sys Sample Code Sample Type Code			LB804207_ 05132008 LB	LB804207_ 05132008 LB	LB804207_ 05132008 LB	LB804324_ 05172008 LB	LB804416_ 05192008 LB	LB804416_ 05192008 LB	LB804416_ 05192008 LB	LB804416_ 05192008 LB	LB804416_ 05192008 LB
Chemical Name	Total or Dissolved	Analysis Location									
Xylene, o-	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
PCBs											
Aroclor 1016	NA	Lab	< 0.0094 ug/l	< 0.011 ug/l	--	< 0.011 ug/l	--	--	--	--	--
Aroclor 1221	NA	Lab	< 0.020 ug/l	< 0.020 ug/l	--	< 0.020 ug/l	--	--	--	--	--
Aroclor 1232	NA	Lab	< 0.023 ug/l	< 0.023 ug/l	--	< 0.023 ug/l	--	--	--	--	--
Aroclor 1242	NA	Lab	< 0.013 ug/l	< 0.013 ug/l	--	< 0.013 ug/l	--	--	--	--	--
Aroclor 1248	NA	Lab	< 0.0054 ug/l	< 0.0077 ug/l	--	< 0.0077 ug/l	--	--	--	--	--
Aroclor 1254	NA	Lab	< 0.0070 ug/l	< 0.0070 ug/l	--	< 0.0070 ug/l	--	--	--	--	--
Aroclor 1260	NA	Lab	< 0.0031 ug/l	< 0.0036 ug/l	--	< 0.0036 ug/l	--	--	--	--	--
Aroclor 1262	NA	Lab	< 0.0048 ug/l	< 0.0048 ug/l	--	< 0.0048 ug/l	--	--	--	--	--
Aroclor 1268	NA	Lab	< 0.0065 ug/l	< 0.0065 ug/l	--	< 0.0065 ug/l	--	--	--	--	--

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Laboratory Blank Data - Aqueous Organic Parameters
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Rhodia Silver Bow Plant

Sys Loc Code Sample Date			QC 5/19/2008 LB804416_ 05192008 LB	QC 5/19/2008 LB804434_ 05192008 LB	QC 5/19/2008 LB804434_ 05192008 LB	QC 5/19/2008 LB804434_ 05192008 LB	QC 5/22/2008 LB804545_ 05222008 LB	QC 5/27/2008 LB804658_ 05272008 LB	QC 5/27/2008 LB804658_ 05272008 LB	QC 5/27/2008 LB804658_ 05272008 LB	QC 5/29/2008 LB804724_ 05292008 LB
Sys Sample Code Sample Type Code											
Chemical Name	Total or Dissolved	Analysis Location									
SVOCs											
1,2,4-Trichlorobenzene	NA	Lab	--	< 0.016 ug/l	< 0.016 ug/l	--	< 0.016 ug/l	< 0.016 ug/l	--	--	< 0.016 ug/l
1,2-Dichlorobenzene	NA	Lab	--	< 0.022 ug/l	< 0.022 ug/l	--	< 0.022 ug/l	< 0.022 ug/l	--	--	< 0.022 ug/l
1,3-Dichlorobenzene	NA	Lab	--	< 0.021 ug/l	< 0.021 ug/l	--	< 0.021 ug/l	< 0.021 ug/l	--	--	< 0.021 ug/l
1,4-Dichlorobenzene	NA	Lab	--	< 0.029 ug/l	< 0.029 ug/l	--	< 0.029 ug/l	< 0.029 ug/l	--	--	< 0.029 ug/l
2,4,5-Trichlorophenol	NA	Lab	--	< 0.031 ug/l	< 0.031 ug/l	--	< 0.031 ug/l	< 0.031 ug/l	--	--	< 0.031 ug/l
2,4,6-Trichlorophenol	NA	Lab	--	< 0.058 ug/l	< 0.058 ug/l	--	< 0.058 ug/l	< 0.058 ug/l	--	--	< 0.058 ug/l
2,4-Dichlorophenol	NA	Lab	--	< 0.047 ug/l	< 0.047 ug/l	--	< 0.047 ug/l	< 0.047 ug/l	--	--	< 0.047 ug/l
2,4-Dimethylphenol	NA	Lab	--	< 2.2 ug/l	< 2.2 R ug/l	--	< 2.2 R ug/l	< 2.2 R ug/l	--	--	< 2.2 R ug/l
2,4-Dinitrophenol	NA	Lab	--	< 0.17 ug/l	< 0.17 ug/l	--	< 0.17 ug/l	< 0.17 ug/l	--	--	< 0.17 ug/l
2,4-Dinitrotoluene	NA	Lab	--	< 0.018 ug/l	< 0.018 ug/l	--	< 0.018 ug/l	< 0.018 ug/l	--	--	< 0.018 ug/l
2,6-Dinitrotoluene	NA	Lab	--	< 0.033 ug/l	< 0.033 ug/l	--	< 0.033 ug/l	< 0.033 ug/l	--	--	< 0.033 ug/l
2-Chloronaphthalene	NA	Lab	--	< 0.041 ug/l	< 0.041 ug/l	--	< 0.041 ug/l	< 0.041 ug/l	--	--	< 0.041 ug/l
2-Chlorophenol	NA	Lab	--	< 0.054 ug/l	< 0.054 ug/l	--	< 0.054 ug/l	< 0.054 ug/l	--	--	< 0.054 ug/l
2-Methyl-4,6-dinitrophenol	NA	Lab	--	< 0.025 ug/l	< 0.025 ug/l	--	< 0.025 ug/l	< 0.025 ug/l	--	--	< 0.025 ug/l
2-Methylnaphthalene	NA	Lab	--	< 0.026 ug/l	< 0.026 ug/l	--	< 0.026 ug/l	< 0.026 ug/l	--	--	< 0.026 ug/l
2-Nitroaniline	NA	Lab	--	< 0.024 ug/l	< 0.024 ug/l	--	< 0.024 ug/l	< 0.024 ug/l	--	--	< 0.024 ug/l
2-Nitrophenol	NA	Lab	--	< 0.063 ug/l	< 0.063 ug/l	--	< 0.063 ug/l	< 0.063 ug/l	--	--	< 0.063 ug/l
3,3'-Dichlorobenzidine	NA	Lab	--	< 0.43 R ug/l	< 0.43 ug/l	--	< 0.43 ug/l	< 0.43 ug/l	--	--	< 0.43 ug/l
3-Nitroaniline	NA	Lab	--	< 0.029 ug/l	< 0.029 ug/l	--	< 0.029 ug/l	< 0.029 ug/l	--	--	< 0.029 ug/l
4-Bromophenyl phenyl ether	NA	Lab	--	< 0.026 ug/l	< 0.026 ug/l	--	< 0.026 ug/l	< 0.026 ug/l	--	--	< 0.026 ug/l
4-Chloro-3-methylphenol	NA	Lab	--	< 0.037 ug/l	< 0.037 ug/l	--	< 0.037 ug/l	< 0.037 ug/l	--	--	< 0.037 ug/l
4-Chloroaniline	NA	Lab	--	< 0.025 R ug/l	< 0.025 ug/l	--	< 0.025 ug/l	< 0.025 ug/l	--	--	< 0.025 ug/l
4-Chlorophenyl phenyl ether	NA	Lab	--	< 0.027 ug/l	< 0.027 ug/l	--	< 0.027 ug/l	< 0.027 ug/l	--	--	< 0.027 ug/l
4-Nitroaniline	NA	Lab	--	< 0.019 ug/l	< 0.019 ug/l	--	< 0.019 ug/l	< 0.019 ug/l	--	--	< 0.019 ug/l
4-Nitrophenol	NA	Lab	--	< 0.28 ug/l	< 0.28 ug/l	--	< 0.28 ug/l	< 0.28 ug/l	--	--	< 0.28 ug/l
Acenaphthene	NA	Lab	--	< 0.026 ug/l	< 0.026 ug/l	--	< 0.026 ug/l	< 0.026 ug/l	--	--	< 0.026 ug/l
Acenaphthylene	NA	Lab	--	< 0.015 ug/l	< 0.015 ug/l	--	< 0.015 ug/l	< 0.015 ug/l	--	--	< 0.015 ug/l
Anthracene	NA	Lab	--	< 0.024 ug/l	< 0.024 ug/l	--	< 0.024 ug/l	< 0.024 ug/l	--	--	< 0.024 ug/l
Azobenzene	NA	Lab	--	< 0.021 ug/l	< 0.021 ug/l	--	< 0.021 ug/l	< 0.021 ug/l	--	--	< 0.021 ug/l
Benzo(a)anthracene	NA	Lab	--	< 0.018 ug/l	< 0.018 ug/l	--	< 0.018 ug/l	< 0.018 ug/l	--	--	< 0.018 ug/l
Benzo(a)pyrene	NA	Lab	--	< 0.031 ug/l	< 0.031 ug/l	--	< 0.031 ug/l	< 0.031 ug/l	--	--	< 0.031 ug/l
Benzo(b)fluoranthene	NA	Lab	--	< 0.017 ug/l	< 0.017 ug/l	--	< 0.017 ug/l	< 0.017 ug/l	--	--	< 0.017 ug/l

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Laboratory Blank Data - Aqueous Organic Parameters
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Sys Loc Code Sample Date			QC 5/19/2008 LB804416_ 05192008 LB	QC 5/19/2008 LB804434_ 05192008 LB	QC 5/19/2008 LB804434_ 05192008 LB	QC 5/19/2008 LB804434_ 05192008 LB	QC 5/22/2008 LB804545_ 05222008 LB	QC 5/27/2008 LB804658_ 05272008 LB	QC 5/27/2008 LB804658_ 05272008 LB	QC 5/27/2008 LB804658_ 05272008 LB	QC 5/29/2008 LB804724_ 05292008 LB
Chemical Name	Total or Dissolved	Analysis Location									
Benzo(g,h,i)perylene	NA	Lab	--	< 0.019 ug/l	< 0.019 ug/l	--	< 0.019 ug/l	< 0.019 ug/l	--	--	< 0.019 ug/l
Benzo(k)fluoranthene	NA	Lab	--	< 0.024 ug/l	< 0.024 ug/l	--	< 0.024 ug/l	< 0.024 ug/l	--	--	< 0.024 ug/l
Benzoic Acid	NA	Lab	--	< 1.1 R ug/l	< 1.1 R ug/l	--	< 1.1 R ug/l	< 1.1 R ug/l	--	--	< 1.1 R ug/l
Benzyl alcohol	NA	Lab	--	< 0.073 ug/l	< 0.073 ug/l	--	< 0.073 ug/l	< 0.073 ug/l	--	--	< 0.073 ug/l
Bis(2-chloroethoxy)methane	NA	Lab	--	< 0.024 ug/l	< 0.024 ug/l	--	< 0.024 ug/l	< 0.024 ug/l	--	--	< 0.024 ug/l
Bis(2-chloroethyl)ether	NA	Lab	--	< 0.035 ug/l	< 0.035 ug/l	--	< 0.035 ug/l	< 0.035 ug/l	--	--	< 0.035 ug/l
Bis(2-chloroisopropyl)ether	NA	Lab	--	< 0.026 ug/l	< 0.026 ug/l	--	< 0.026 ug/l	< 0.026 ug/l	--	--	< 0.026 ug/l
Bis(2-ethylhexyl)phthalate	NA	Lab	--	< 0.13 ug/l	< 0.13 ug/l	--	< 0.13 ug/l	< 0.13 ug/l	--	--	< 0.13 ug/l
Butyl benzyl phthalate	NA	Lab	--	< 0.018 ug/l	0.032 J ug/l	--	0.050 J ug/l	0.033 J ug/l	--	--	< 0.018 ug/l
Carbazole	NA	Lab	--	< 0.018 ug/l	< 0.018 ug/l	--	< 0.018 ug/l	< 0.018 ug/l	--	--	< 0.018 ug/l
Chrysene	NA	Lab	--	< 0.028 ug/l	< 0.028 ug/l	--	< 0.028 ug/l	< 0.028 ug/l	--	--	< 0.028 ug/l
Dibenz(a,h)anthracene	NA	Lab	--	< 0.017 ug/l	< 0.017 ug/l	--	< 0.017 ug/l	< 0.017 ug/l	--	--	< 0.017 ug/l
Dibenzofuran	NA	Lab	--	< 0.018 ug/l	< 0.018 ug/l	--	< 0.018 ug/l	< 0.018 ug/l	--	--	< 0.018 ug/l
Diethyl phthalate	NA	Lab	--	0.019 J ug/l	0.024 J ug/l	--	< 0.012 ug/l	0.028 J ug/l	--	--	< 0.012 ug/l
Dimethyl phthalate	NA	Lab	--	< 0.021 ug/l	< 0.021 ug/l	--	< 0.021 ug/l	< 0.021 ug/l	--	--	< 0.021 ug/l
Di-n-butyl phthalate	NA	Lab	--	0.047 J ug/l	0.12 J ug/l	--	0.10 J ug/l	0.10 J ug/l	--	--	0.085 J ug/l
Di-n-octyl phthalate	NA	Lab	--	< 0.018 ug/l	< 0.018 ug/l	--	< 0.018 ug/l	< 0.018 ug/l	--	--	< 0.018 ug/l
Fluoranthene	NA	Lab	--	< 0.020 ug/l	0.021 J ug/l	--	0.022 J ug/l	< 0.020 ug/l	--	--	< 0.020 ug/l
Fluorene	NA	Lab	--	< 0.027 ug/l	< 0.027 ug/l	--	< 0.027 ug/l	< 0.027 ug/l	--	--	< 0.027 ug/l
Hexachlorobenzene	NA	Lab	--	< 0.022 ug/l	< 0.022 ug/l	--	< 0.022 ug/l	< 0.022 ug/l	--	--	< 0.022 ug/l
Hexachlorobutadiene	NA	Lab	--	< 0.027 R ug/l	< 0.027 R ug/l	--	< 0.027 R ug/l	< 0.027 ug/l	--	--	< 0.027 R ug/l
Hexachlorocyclopentadiene	NA	Lab	--	< 0.19 R ug/l	< 0.19 R ug/l	--	< 0.19 R ug/l	< 0.19 R ug/l	--	--	< 0.19 R ug/l
Hexachloroethane	NA	Lab	--	< 0.024 ug/l	< 0.024 ug/l	--	< 0.024 R ug/l	< 0.024 ug/l	--	--	< 0.024 R ug/l
Indeno(1,2,3-cd)pyrene	NA	Lab	--	< 0.021 ug/l	< 0.021 ug/l	--	< 0.021 ug/l	< 0.021 ug/l	--	--	< 0.021 ug/l
Isophorone	NA	Lab	--	< 0.016 ug/l	< 0.016 ug/l	--	< 0.016 ug/l	< 0.016 ug/l	--	--	< 0.016 ug/l
Naphthalene	NA	Lab	--	< 0.022 ug/l	< 0.022 ug/l	--	< 0.022 ug/l	< 0.022 ug/l	--	--	< 0.022 ug/l
Nitrobenzene	NA	Lab	--	< 0.028 ug/l	< 0.028 ug/l	--	< 0.028 ug/l	< 0.028 ug/l	--	--	< 0.028 ug/l
N-Nitrosodimethylamine	NA	Lab	--	< 0.42 ug/l	< 0.42 ug/l	--	< 0.42 ug/l	< 0.42 ug/l	--	--	< 0.42 ug/l
N-Nitrosodi-n-propylamine	NA	Lab	--	< 0.037 ug/l	< 0.037 ug/l	--	< 0.037 ug/l	< 0.037 ug/l	--	--	< 0.037 ug/l
N-Nitrosodiphenylamine	NA	Lab	--	< 0.048 ug/l	< 0.048 ug/l	--	< 0.048 ug/l	< 0.048 ug/l	--	--	< 0.048 ug/l
o-Cresol	NA	Lab	--	< 0.11 ug/l	< 0.11 ug/l	--	< 0.11 ug/l	< 0.11 ug/l	--	--	< 0.11 ug/l

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Sys Loc Code Sample Date			QC 5/19/2008 LB804416_ 05192008 LB	QC 5/19/2008 LB804434_ 05192008 LB	QC 5/19/2008 LB804434_ 05192008 LB	QC 5/19/2008 LB804434_ 05192008 LB	QC 5/22/2008 LB804545_ 05222008 LB	QC 5/27/2008 LB804658_ 05272008 LB	QC 5/27/2008 LB804658_ 05272008 LB	QC 5/27/2008 LB804658_ 05272008 LB	QC 5/29/2008 LB804724_ 05292008 LB
Chemical Name	Total or Dissolved	Analysis Location									
p-Cresol	NA	Lab	--	< 0.12 ug/l	< 0.12 ug/l	--	< 0.12 ug/l	< 0.12 ug/l	--	--	< 0.12 ug/l
Pentachlorophenol	NA	Lab	--	< 0.34 ug/l	< 0.34 ug/l	--	< 0.34 ug/l	< 0.34 ug/l	--	--	< 0.34 ug/l
Phenanthrene	NA	Lab	--	< 0.022 ug/l	< 0.022 ug/l	--	< 0.022 ug/l	< 0.022 ug/l	--	--	< 0.022 ug/l
Phenol	NA	Lab	--	< 0.063 ug/l	< 0.063 ug/l	--	< 0.063 ug/l	< 0.063 ug/l	--	--	< 0.063 ug/l
Pyrene	NA	Lab	--	< 0.019 ug/l	< 0.019 ug/l	--	< 0.019 ug/l	< 0.019 ug/l	--	--	< 0.019 ug/l
Pyridine	NA	Lab	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	NA	Lab	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l
1,1,1,1-Trichloroethane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l
1,1,2,2-Tetrachloroethane	NA	Lab	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l
1,1,2-Trichloroethane	NA	Lab	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l
1,1-Dichloro-1-propene	NA	Lab	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l
1,1-Dichloroethane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,1-Dichloroethylene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l
1,2,3-Trichlorobenzene	NA	Lab	0.24 J ug/l	0.38 J ug/l	1.1 J ug/l	0.13 J ug/l	0.19 J ug/l	0.21 J ug/l	0.19 J ug/l	0.14 J ug/l	0.16 J ug/l
1,2,3-Trichloropropane	NA	Lab	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l
1,2,4-Trichlorobenzene	NA	Lab	< 0.13 ug/l	0.18 J ug/l	0.50 J ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l
1,2,4-Trimethylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	0.050 J ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
1,2-Dibromo-3-chloropropane	NA	Lab	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l
1,2-Dibromoethane	NA	Lab	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l
1,2-Dichlorobenzene	NA	Lab	< 0.044 ug/l	< 0.044 ug/l	0.090 J ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l
1,2-Dichloroethane	NA	Lab	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l
1,2-Dichloroethylene, cis	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
1,2-Dichloroethylene, trans	NA	Lab	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l
1,2-Dichloropropane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,3,5-Trimethylbenzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,3-Dichloro-1-propene trans	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l
1,3-Dichloro-1-propene, cis	NA	Lab	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l
1,3-Dichlorobenzene	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	0.070 J ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l
1,3-Dichloropropane	NA	Lab	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l
1,4-Dichlorobenzene	NA	Lab	< 0.054 ug/l	< 0.054 ug/l	0.070 J ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l
2,2-Dichloropropane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l
2-Chloroethyl Vinyl Ether	NA	Lab	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l
2-Hexanone	NA	Lab	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l
Acetone	NA	Lab	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l
Acrolein	NA	Lab	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Acrylonitrile	NA	Lab	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l

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Sys Loc Code Sample Date			QC 5/19/2008	QC 5/19/2008	QC 5/19/2008	QC 5/19/2008	QC 5/22/2008	QC 5/27/2008	QC 5/27/2008	QC 5/27/2008	QC 5/29/2008
Sys Sample Code			LB804416_05192008	LB804434_05192008	LB804434_05192008	LB804434_05192008	LB804545_05222008	LB804658_05272008	LB804658_05272008	LB804658_05272008	LB804724_05292008
Sample Type Code			LB	LB	LB	LB	LB	LB	LB	LB	LB
Chemical Name	Total or Dissolved	Analysis Location									
Benzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
Bromobenzene	NA	Lab	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l
Bromochloromethane	NA	Lab	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l
Bromodichloromethane	NA	Lab	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l
Bromoform	NA	Lab	< 0.080 ug/l	< 0.080 ug/l	< 0.080 J ug/l	< 0.080 J ug/l	< 0.080 J ug/l	< 0.080 ug/l	< 0.080 ug/l	< 0.080 ug/l	< 0.080 ug/l
Bromomethane	NA	Lab	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 J ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l
Butyl benzene	NA	Lab	< 0.056 ug/l	< 0.056 ug/l	0.11 J ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l
Butylbenzene sec	NA	Lab	< 0.036 ug/l	< 0.036 ug/l	0.060 J ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 J ug/l	< 0.036 ug/l
Butylbenzene tert-	NA	Lab	< 0.038 ug/l	< 0.038 ug/l	0.040 J ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l
Carbon disulfide	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	0.050 J ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
Carbon tetrachloride	NA	Lab	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l
Chlorobenzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
Chlorodibromomethane	NA	Lab	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l
Chloroethane	NA	Lab	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l
Chloroform	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
Chloromethane	NA	Lab	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l
Chlorotoluene o-	NA	Lab	< 0.035 ug/l	< 0.035 ug/l	0.040 J ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l
Chlorotoluene p-	NA	Lab	< 0.025 ug/l	< 0.025 ug/l	0.040 J ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l
Cumene (isopropyl benzene)	NA	Lab	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l
Cymene p- (Toluene isopropyl p-)	NA	Lab	< 0.044 ug/l	< 0.044 ug/l	0.060 J ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l
Dibromomethane (methylene bromide)	NA	Lab	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l
Dichlorodifluoromethane (CFC-12)	NA	Lab	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l
Ethyl benzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
Hexachlorobutadiene	NA	Lab	< 0.19 ug/l	< 0.19 ug/l	0.61 J ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l
Iodomethane	NA	Lab	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l	< 0.27 R ug/l	< 0.27 R ug/l	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l
Methyl ethyl ketone	NA	Lab	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l
Methyl isobutyl ketone	NA	Lab	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l
Methyl tertiary butyl ether (MTBE)	NA	Lab	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l
Methylene chloride	NA	Lab	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l
Naphthalene	NA	Lab	0.22 J ug/l	0.20 J ug/l	0.83 J ug/l	0.10 J ug/l	0.15 J ug/l	1.4 J ug/l	0.11 J ug/l	0.13 J ug/l	< 0.10 ug/l
Propylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	0.040 J ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
Styrene	NA	Lab	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l
Tetrachloroethylene	NA	Lab	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l
Toluene	NA	Lab	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	0.050 J ug/l	< 0.048 ug/l	< 0.048 ug/l
Trichloroethylene	NA	Lab	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l
Trichlorofluoromethane	NA	Lab	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l
Vinyl acetate	NA	Lab	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l
Vinyl chloride	NA	Lab	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l
Xylene m & p	NA	Lab	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l

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Sys Loc Code Sample Date			QC 5/19/2008	QC 5/19/2008	QC 5/19/2008	QC 5/19/2008	QC 5/22/2008	QC 5/27/2008	QC 5/27/2008	QC 5/27/2008	QC 5/29/2008
Sys Sample Code			LB804416_ 05192008	LB804434_ 05192008	LB804434_ 05192008	LB804434_ 05192008	LB804545_ 05222008	LB804658_ 05272008	LB804658_ 05272008	LB804658_ 05272008	LB804724_ 05292008
Sample Type Code			LB	LB	LB	LB	LB	LB	LB	LB	LB
Chemical Name	Total or Dissolved	Analysis Location									
Xylene, o-	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
PCBs											
Aroclor 1016	NA	Lab	--	< 0.0094 ug/l	< 0.0094 ug/l	--	< 0.0094 ug/l	< 0.0094 ug/l	--	--	< 0.0094 ug/l
Aroclor 1221	NA	Lab	--	< 0.020 ug/l	< 0.020 ug/l	--	< 0.020 ug/l	< 0.020 ug/l	--	--	< 0.020 ug/l
Aroclor 1232	NA	Lab	--	< 0.023 ug/l	< 0.023 ug/l	--	< 0.023 ug/l	< 0.023 ug/l	--	--	< 0.023 ug/l
Aroclor 1242	NA	Lab	--	< 0.013 ug/l	< 0.013 ug/l	--	< 0.013 ug/l	< 0.013 ug/l	--	--	< 0.013 ug/l
Aroclor 1248	NA	Lab	--	< 0.0054 ug/l	< 0.0054 ug/l	--	< 0.0054 ug/l	< 0.0054 ug/l	--	--	< 0.0054 ug/l
Aroclor 1254	NA	Lab	--	< 0.0070 ug/l	< 0.0070 ug/l	--	< 0.0070 ug/l	< 0.0070 ug/l	--	--	< 0.0070 ug/l
Aroclor 1260	NA	Lab	--	< 0.0031 ug/l	< 0.0031 ug/l	--	< 0.0031 ug/l	< 0.0031 ug/l	--	--	< 0.0031 ug/l
Aroclor 1262	NA	Lab	--	< 0.0048 ug/l	< 0.0048 ug/l	--	< 0.0048 ug/l	< 0.0048 ug/l	--	--	< 0.0048 ug/l
Aroclor 1268	NA	Lab	--	< 0.0065 ug/l	< 0.0065 ug/l	--	< 0.0065 ug/l	< 0.0065 ug/l	--	--	< 0.0065 ug/l

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Laboratory Blank Data - Aqueous Organic Parameters
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Sys Loc Code Sample Date			QC 5/29/2008	QC 9/16/2008	QC 9/16/2008	QC 9/16/2008	QC 9/16/2008	QC 9/16/2008	QC 9/16/2008	QC 9/16/2008	QC 9/16/2008
Sys Sample Code			LB804724_05292008	LB809092_09162008	LB809092_09162008	LB809092_09162008	LB809092_09162008	LB809092_09162008	LB809092_09162008	LB809092_09162008	LB809092_09162008
Sample Type Code			LB	LB	LB	LB	LB	LB	LB	LB	LB
Chemical Name	Total or Dissolved	Analysis Location									
SVOCs											
1,2,4-Trichlorobenzene	NA	Lab	--	< 0.016 ug/l	< 0.016 ug/l	--	--	--	< 0.016 ug/l	< 0.016 ug/l	--
1,2-Dichlorobenzene	NA	Lab	--	< 0.022 ug/l	< 0.022 ug/l	--	--	--	< 0.022 ug/l	< 0.022 ug/l	--
1,3-Dichlorobenzene	NA	Lab	--	< 0.021 ug/l	< 0.021 ug/l	--	--	--	< 0.021 ug/l	< 0.021 ug/l	--
1,4-Dichlorobenzene	NA	Lab	--	< 0.029 ug/l	< 0.029 ug/l	--	--	--	< 0.029 ug/l	< 0.029 ug/l	--
2,4,5-Trichlorophenol	NA	Lab	--	< 0.031 ug/l	< 0.031 ug/l	--	--	--	< 0.031 ug/l	< 0.031 ug/l	--
2,4,6-Trichlorophenol	NA	Lab	--	< 0.058 ug/l	< 0.058 ug/l	--	--	--	< 0.058 ug/l	< 0.058 ug/l	--
2,4-Dichlorophenol	NA	Lab	--	< 0.047 ug/l	< 0.047 ug/l	--	--	--	< 0.047 ug/l	< 0.047 ug/l	--
2,4-Dimethylphenol	NA	Lab	--	< 2.2 ug/l	< 2.2 ug/l	--	--	--	< 2.2 ug/l	< 2.2 ug/l	--
2,4-Dinitrophenol	NA	Lab	--	< 0.17 R ug/l	< 0.17 R ug/l	--	--	--	< 0.17 R ug/l	< 0.17 R ug/l	--
2,4-Dinitrotoluene	NA	Lab	--	< 0.018 ug/l	< 0.018 ug/l	--	--	--	< 0.018 ug/l	< 0.018 ug/l	--
2,6-Dinitrotoluene	NA	Lab	--	< 0.033 ug/l	< 0.033 ug/l	--	--	--	< 0.033 ug/l	< 0.033 ug/l	--
2-Chloronaphthalene	NA	Lab	--	< 0.041 ug/l	< 0.041 ug/l	--	--	--	< 0.041 ug/l	< 0.041 ug/l	--
2-Chlorophenol	NA	Lab	--	< 0.054 ug/l	< 0.054 ug/l	--	--	--	< 0.054 ug/l	< 0.054 ug/l	--
2-Methyl-4,6-dinitrophenol	NA	Lab	--	< 0.025 R ug/l	< 0.025 ug/l	--	--	--	< 0.025 R ug/l	< 0.025 ug/l	--
2-Methylnaphthalene	NA	Lab	--	0.032 J ug/l	< 0.026 ug/l	--	--	--	0.032 J ug/l	< 0.026 ug/l	--
2-Nitroaniline	NA	Lab	--	< 0.024 ug/l	< 0.024 ug/l	--	--	--	< 0.024 ug/l	< 0.024 ug/l	--
2-Nitrophenol	NA	Lab	--	< 0.063 ug/l	< 0.063 ug/l	--	--	--	< 0.063 ug/l	< 0.063 ug/l	--
3,3'-Dichlorobenzidine	NA	Lab	--	< 0.43 ug/l	< 0.43 ug/l	--	--	--	< 0.43 ug/l	< 0.43 ug/l	--
3-Nitroaniline	NA	Lab	--	< 0.029 ug/l	< 0.029 ug/l	--	--	--	< 0.029 ug/l	< 0.029 ug/l	--
4-Bromophenyl phenyl ether	NA	Lab	--	< 0.026 ug/l	< 0.026 ug/l	--	--	--	< 0.026 ug/l	< 0.026 ug/l	--
4-Chloro-3-methylphenol	NA	Lab	--	< 0.037 ug/l	< 0.037 ug/l	--	--	--	< 0.037 ug/l	< 0.037 ug/l	--
4-Chloroaniline	NA	Lab	--	< 0.025 ug/l	< 0.025 ug/l	--	--	--	< 0.025 ug/l	< 0.025 ug/l	--
4-Chlorophenyl phenyl ether	NA	Lab	--	< 0.027 ug/l	< 0.027 ug/l	--	--	--	< 0.027 ug/l	< 0.027 ug/l	--
4-Nitroaniline	NA	Lab	--	< 0.019 ug/l	< 0.019 ug/l	--	--	--	< 0.019 ug/l	< 0.019 ug/l	--
4-Nitrophenol	NA	Lab	--	< 0.28 ug/l	< 0.28 ug/l	--	--	--	< 0.28 ug/l	< 0.28 ug/l	--
Acenaphthene	NA	Lab	--	< 0.026 ug/l	< 0.026 ug/l	< 0.0044 ug/l	--	--	< 0.026 ug/l	< 0.026 ug/l	< 0.0044 ug/l
Acenaphthylene	NA	Lab	--	< 0.015 ug/l	< 0.015 ug/l	< 0.0034 ug/l	--	--	< 0.015 ug/l	< 0.015 ug/l	< 0.0034 ug/l
Anthracene	NA	Lab	--	< 0.024 ug/l	< 0.024 ug/l	< 0.0036 ug/l	--	--	< 0.024 ug/l	< 0.024 ug/l	< 0.0036 ug/l
Azobenzene	NA	Lab	--	< 0.021 ug/l	< 0.021 ug/l	--	--	--	< 0.021 ug/l	< 0.021 ug/l	--
Benzo(a)anthracene	NA	Lab	--	< 0.018 ug/l	< 0.018 ug/l	< 0.0026 ug/l	--	--	< 0.018 ug/l	< 0.018 ug/l	< 0.0026 ug/l
Benzo(a)pyrene	NA	Lab	--	< 0.031 ug/l	< 0.031 ug/l	< 0.0043 ug/l	--	--	< 0.031 ug/l	< 0.031 ug/l	< 0.0043 ug/l
Benzo(b)fluoranthene	NA	Lab	--	< 0.017 ug/l	< 0.017 ug/l	< 0.0023 ug/l	--	--	< 0.017 ug/l	< 0.017 ug/l	< 0.0023 ug/l

Appendix 1-C4b-3iv
Laboratory Blank Data - Aqueous Organic Parameters
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date			QC 5/29/2008 LB804724_ 05292008 LB	QC 9/16/2008 LB809092_ 09162008 LB	QC 9/16/2008 LB809092_ 09162008 LB	QC 9/16/2008 LB809092_ 09162008 LB	QC 9/16/2008 LB809092_ 09162008 LB	QC 9/16/2008 LB809092_ 09162008 LB	QC 9/16/2008 LB809096_ 09162008 LB	QC 9/16/2008 LB809096_ 09162008 LB	QC 9/16/2008 LB809096_ 09162008 LB
Chemical Name	Total or Dissolved	Analysis Location									
Benzo(g,h,i)perylene	NA	Lab	--	< 0.019 ug/l	< 0.019 ug/l	< 0.0029 ug/l	--	--	< 0.019 ug/l	< 0.019 ug/l	< 0.0029 ug/l
Benzo(k)fluoranthene	NA	Lab	--	< 0.024 ug/l	< 0.024 ug/l	< 0.0025 ug/l	--	--	< 0.024 ug/l	< 0.024 ug/l	< 0.0025 ug/l
Benzoic Acid	NA	Lab	--	< 1.1 R ug/l	< 1.1 R ug/l	--	--	--	< 1.1 R ug/l	< 1.1 R ug/l	--
Benzyl alcohol	NA	Lab	--	< 0.073 ug/l	< 0.073 ug/l	--	--	--	< 0.073 ug/l	< 0.073 ug/l	--
Bis(2-chloroethoxy)methane	NA	Lab	--	< 0.024 ug/l	< 0.024 ug/l	--	--	--	< 0.024 ug/l	< 0.024 ug/l	--
Bis(2-chloroethyl)ether	NA	Lab	--	< 0.035 ug/l	< 0.035 ug/l	--	--	--	< 0.035 ug/l	< 0.035 ug/l	--
Bis(2-chloroisopropyl)ether	NA	Lab	--	< 0.026 ug/l	< 0.026 ug/l	--	--	--	< 0.026 ug/l	< 0.026 ug/l	--
Bis(2-ethylhexyl)phthalate	NA	Lab	--	< 0.13 ug/l	< 0.13 ug/l	--	--	--	< 0.13 ug/l	< 0.13 ug/l	--
Butyl benzyl phthalate	NA	Lab	--	0.035 J ug/l	0.033 J ug/l	--	--	--	0.035 J ug/l	0.033 J ug/l	--
Carbazole	NA	Lab	--	< 0.018 ug/l	< 0.018 ug/l	--	--	--	< 0.018 ug/l	< 0.018 ug/l	--
Chrysene	NA	Lab	--	< 0.028 ug/l	< 0.028 ug/l	< 0.0034 ug/l	--	--	< 0.028 ug/l	< 0.028 ug/l	< 0.0034 ug/l
Dibenz(a,h)anthracene	NA	Lab	--	< 0.017 ug/l	< 0.017 ug/l	< 0.0025 ug/l	--	--	< 0.017 ug/l	< 0.017 ug/l	< 0.0025 ug/l
Dibenzofuran	NA	Lab	--	< 0.018 ug/l	< 0.018 ug/l	--	--	--	< 0.018 ug/l	< 0.018 ug/l	--
Diethyl phthalate	NA	Lab	--	0.024 J ug/l	0.023 J ug/l	--	--	--	0.024 J ug/l	0.023 J ug/l	--
Dimethyl phthalate	NA	Lab	--	< 0.021 ug/l	< 0.021 ug/l	--	--	--	< 0.021 ug/l	< 0.021 ug/l	--
Di-n-butyl phthalate	NA	Lab	--	0.069 J ug/l	0.079 J ug/l	--	--	--	0.069 J ug/l	0.079 J ug/l	--
Di-n-octyl phthalate	NA	Lab	--	< 0.018 ug/l	< 0.018 ug/l	--	--	--	< 0.018 ug/l	< 0.018 ug/l	--
Fluoranthene	NA	Lab	--	< 0.020 ug/l	< 0.020 ug/l	< 0.0044 ug/l	--	--	< 0.020 ug/l	< 0.020 ug/l	< 0.0044 ug/l
Fluorene	NA	Lab	--	< 0.027 ug/l	< 0.027 ug/l	< 0.0038 ug/l	--	--	< 0.027 ug/l	< 0.027 ug/l	< 0.0038 ug/l
Hexachlorobenzene	NA	Lab	--	< 0.022 ug/l	< 0.022 ug/l	--	--	--	< 0.022 ug/l	< 0.022 ug/l	--
Hexachlorobutadiene	NA	Lab	--	< 0.027 R ug/l	< 0.027 R ug/l	--	--	--	< 0.027 R ug/l	< 0.027 R ug/l	--
Hexachlorocyclopentadiene	NA	Lab	--	< 0.19 R ug/l	< 0.19 R ug/l	--	--	--	< 0.19 R ug/l	< 0.19 R ug/l	--
Hexachloroethane	NA	Lab	--	< 0.024 R ug/l	< 0.024 R ug/l	--	--	--	< 0.024 R ug/l	< 0.024 R ug/l	--
Indeno(1,2,3-cd)pyrene	NA	Lab	--	< 0.021 ug/l	< 0.021 ug/l	< 0.0026 ug/l	--	--	< 0.021 ug/l	< 0.021 ug/l	< 0.0026 ug/l
Isophorone	NA	Lab	--	< 0.016 ug/l	< 0.016 ug/l	--	--	--	< 0.016 ug/l	< 0.016 ug/l	--
Naphthalene	NA	Lab	--	0.34 ug/l	< 0.022 ug/l	< 0.0030 ug/l	--	--	0.34 ug/l	< 0.022 ug/l	< 0.0030 ug/l
Nitrobenzene	NA	Lab	--	< 0.028 ug/l	< 0.028 ug/l	--	--	--	< 0.028 ug/l	< 0.028 ug/l	--
N-Nitrosodimethylamine	NA	Lab	--	< 0.42 ug/l	< 0.42 ug/l	--	--	--	< 0.42 ug/l	< 0.42 ug/l	--
N-Nitrosodi-n-propylamine	NA	Lab	--	< 0.037 ug/l	< 0.037 ug/l	--	--	--	< 0.037 ug/l	< 0.037 ug/l	--
N-Nitrosodiphenylamine	NA	Lab	--	< 0.048 ug/l	< 0.048 ug/l	--	--	--	< 0.048 ug/l	< 0.048 ug/l	--
o-Cresol	NA	Lab	--	< 0.11 ug/l	< 0.11 ug/l	--	--	--	< 0.11 ug/l	< 0.11 ug/l	--

Appendix 1-C4b-3iv
Laboratory Blank Data - Aqueous Organic Parameters
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Rhodia Silver Bow Plant

Sys Loc Code Sample Date			QC 5/29/2008 LB804724_ 05292008 LB	QC 9/16/2008 LB809092_ 09162008 LB	QC 9/16/2008 LB809092_ 09162008 LB	QC 9/16/2008 LB809092_ 09162008 LB	QC 9/16/2008 LB809092_ 09162008 LB	QC 9/16/2008 LB809092_ 09162008 LB	QC 9/16/2008 LB809096_ 09162008 LB	QC 9/16/2008 LB809096_ 09162008 LB	QC 9/16/2008 LB809096_ 09162008 LB
Chemical Name	Total or Dissolved	Analysis Location									
p-Cresol	NA	Lab	--	< 0.12 ug/l	< 0.12 ug/l	--	--	--	< 0.12 ug/l	< 0.12 ug/l	--
Pentachlorophenol	NA	Lab	--	< 0.34 R ug/l	< 0.34 ug/l	--	--	--	< 0.34 R ug/l	< 0.34 ug/l	--
Phenanthrene	NA	Lab	--	< 0.022 ug/l	< 0.022 ug/l	< 0.0050 ug/l	--	--	< 0.022 ug/l	< 0.022 ug/l	< 0.0050 ug/l
Phenol	NA	Lab	--	0.67 ug/l	0.29 J ug/l	--	--	--	0.67 ug/l	0.29 J ug/l	--
Pyrene	NA	Lab	--	< 0.019 ug/l	< 0.019 ug/l	< 0.0035 ug/l	--	--	< 0.019 ug/l	< 0.019 ug/l	< 0.0035 ug/l
Pyridine	NA	Lab	--	< 1.4 R ug/l	< 1.4 R ug/l	--	--	--	< 1.4 R ug/l	< 1.4 R ug/l	--
VOCs											
1,1,1,2-Tetrachloroethane	NA	Lab	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l
1,1,1-Trichloroethane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l
1,1,2,2-Tetrachloroethane	NA	Lab	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l
1,1,2-Trichloroethane	NA	Lab	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l
1,1-Dichloro-1-propene	NA	Lab	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l
1,1-Dichloroethane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,1-Dichloroethylene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l
1,2,3-Trichlorobenzene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l
1,2,3-Trichloropropane	NA	Lab	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l
1,2,4-Trichlorobenzene	NA	Lab	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l
1,2,4-Trimethylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
1,2-Dibromo-3-chloropropane	NA	Lab	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 J ug/l	< 0.22 ug/l	< 0.22 ug/l	< 0.22 J ug/l
1,2-Dibromoethane	NA	Lab	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l
1,2-Dichlorobenzene	NA	Lab	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l
1,2-Dichloroethane	NA	Lab	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l
1,2-Dichloroethylene, cis	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
1,2-Dichloroethylene, trans	NA	Lab	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l
1,2-Dichloropropane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,3,5-Trimethylbenzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,3-Dichloro-1-propene trans	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l
1,3-Dichloro-1-propene, cis	NA	Lab	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l
1,3-Dichlorobenzene	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l
1,3-Dichloropropane	NA	Lab	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l
1,4-Dichlorobenzene	NA	Lab	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l
2,2-Dichloropropane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l
2-Chloroethyl Vinyl Ether	NA	Lab	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l
2-Hexanone	NA	Lab	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l
Acetone	NA	Lab	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l
Acrolein	NA	Lab	< 2.0 J ug/l	< 2.0 R ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Acrylonitrile	NA	Lab	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l

Appendix 1-C4b-3iv
Laboratory Blank Data - Aqueous Organic Parameters
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date			QC 5/29/2008	QC 9/16/2008	QC 9/16/2008	QC 9/16/2008	QC 9/16/2008	QC 9/16/2008	QC 9/16/2008	QC 9/16/2008	QC 9/16/2008
Sys Sample Code			LB804724_05292008	LB809092_09162008	LB809092_09162008	LB809092_09162008	LB809092_09162008	LB809092_09162008	LB809092_09162008	LB809092_09162008	LB809092_09162008
Sample Type Code			LB	LB	LB	LB	LB	LB	LB	LB	LB
Chemical Name	Total or Dissolved	Analysis Location									
Benzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
Bromobenzene	NA	Lab	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l
Bromochloromethane	NA	Lab	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l
Bromodichloromethane	NA	Lab	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l
Bromoform	NA	Lab	< 0.080 ug/l	< 0.080 ug/l	< 0.080 J ug/l	< 0.080 J ug/l	< 0.080 J ug/l	< 0.080 J ug/l	< 0.080 J ug/l	< 0.080 J ug/l	< 0.080 J ug/l
Bromomethane	NA	Lab	< 0.072 ug/l	< 0.072 R ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l
Butyl benzene	NA	Lab	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l
Butylbenzene sec	NA	Lab	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l
Butylbenzene tert-	NA	Lab	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l
Carbon disulfide	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
Carbon tetrachloride	NA	Lab	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l
Chlorobenzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
Chlorodibromomethane	NA	Lab	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l
Chloroethane	NA	Lab	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l
Chloroform	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
Chloromethane	NA	Lab	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l
Chlorotoluene o-	NA	Lab	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l
Chlorotoluene p-	NA	Lab	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l
Cumene (isopropyl benzene)	NA	Lab	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l
Cymene p- (Toluene isopropyl p-)	NA	Lab	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l
Dibromomethane (methylene bromide)	NA	Lab	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l
Dichlorodifluoromethane (CFC-12)	NA	Lab	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l
Ethyl benzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
Hexachlorobutadiene	NA	Lab	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l
Iodomethane	NA	Lab	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l
Methyl ethyl ketone	NA	Lab	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l
Methyl isobutyl ketone	NA	Lab	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l
Methyl tertiary butyl ether (MTBE)	NA	Lab	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l
Methylene chloride	NA	Lab	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l
Naphthalene	NA	Lab	0.15 J ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l
Propylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
Styrene	NA	Lab	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l
Tetrachloroethylene	NA	Lab	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l
Toluene	NA	Lab	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l
Trichloroethylene	NA	Lab	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l
Trichlorofluoromethane	NA	Lab	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l
Vinyl acetate	NA	Lab	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l
Vinyl chloride	NA	Lab	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l
Xylene m & p	NA	Lab	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l

Appendix 1-C4b-3iv
Laboratory Blank Data - Aqueous Organic Parameters
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date			QC 5/29/2008	QC 9/16/2008	QC 9/16/2008	QC 9/16/2008	QC 9/16/2008	QC 9/16/2008	QC 9/16/2008	QC 9/16/2008	QC 9/16/2008
Sys Sample Code			LB804724_ 05292008	LB809092_ 09162008	LB809092_ 09162008	LB809092_ 09162008	LB809092_ 09162008	LB809092_ 09162008	LB809096_ 09162008	LB809096_ 09162008	LB809096_ 09162008
Sample Type Code			LB	LB	LB	LB	LB	LB	LB	LB	LB
Chemical Name	Total or Dissolved	Analysis Location									
Xylene, o-	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
PCBs											
Aroclor 1016	NA	Lab	--	--	--	--	--	--	--	--	--
Aroclor 1221	NA	Lab	--	--	--	--	--	--	--	--	--
Aroclor 1232	NA	Lab	--	--	--	--	--	--	--	--	--
Aroclor 1242	NA	Lab	--	--	--	--	--	--	--	--	--
Aroclor 1248	NA	Lab	--	--	--	--	--	--	--	--	--
Aroclor 1254	NA	Lab	--	--	--	--	--	--	--	--	--
Aroclor 1260	NA	Lab	--	--	--	--	--	--	--	--	--
Aroclor 1262	NA	Lab	--	--	--	--	--	--	--	--	--
Aroclor 1268	NA	Lab	--	--	--	--	--	--	--	--	--

Appendix 1-C4b-3iv
Laboratory Blank Data - Aqueous Organic Parameters
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date			QC 9/16/2008 LB809096_ 09162008 LB	QC 9/19/2008 LB809270_ 09192008 LB	QC 9/19/2008 LB809270_ 09192008 LB	QC 9/19/2008 LB809270_ 09192008 LB	QC 9/19/2008 LB809270_ 09192008 LB	QC 9/19/2008 LB809270_ 09192008 LB	QC 9/21/2008 LB809275_ 09212008 LB	QC 9/24/2008 LB809408_ 09242008 LB	QC 9/24/2008 LB809408_ 09242008 LB
Sys Sample Code Sample Type Code			LB	LB	LB	LB	LB	LB	LB	LB	LB
Chemical Name	Total or Dissolved	Analysis Location									
SVOCs											
1,2,4-Trichlorobenzene	NA	Lab	--	0.031 J ug/l	--	< 0.016 ug/l	--	--	0.031 J ug/l	< 0.016 ug/l	< 0.016 ug/l
1,2-Dichlorobenzene	NA	Lab	--	0.028 J ug/l	--	< 0.022 ug/l	--	--	0.028 J ug/l	0.028 J ug/l	< 0.022 ug/l
1,3-Dichlorobenzene	NA	Lab	--	0.026 J ug/l	--	< 0.021 ug/l	--	--	0.026 J ug/l	0.028 J ug/l	< 0.021 ug/l
1,4-Dichlorobenzene	NA	Lab	--	0.030 J ug/l	--	< 0.029 ug/l	--	--	0.030 J ug/l	0.037 J ug/l	< 0.029 ug/l
2,4,5-Trichlorophenol	NA	Lab	--	< 0.031 ug/l	--	< 0.031 ug/l	--	--	< 0.031 ug/l	< 0.031 ug/l	< 0.031 ug/l
2,4,6-Trichlorophenol	NA	Lab	--	< 0.058 ug/l	--	< 0.058 ug/l	--	--	< 0.058 ug/l	< 0.058 ug/l	< 0.058 ug/l
2,4-Dichlorophenol	NA	Lab	--	< 0.047 ug/l	--	< 0.047 ug/l	--	--	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l
2,4-Dimethylphenol	NA	Lab	--	< 2.2 ug/l	--	< 2.2 ug/l	--	--	< 2.2 ug/l	< 2.2 R ug/l	< 2.2 R ug/l
2,4-Dinitrophenol	NA	Lab	--	< 0.17 ug/l	--	< 0.17 R ug/l	--	--	< 0.17 ug/l	< 0.17 ug/l	< 0.17 ug/l
2,4-Dinitrotoluene	NA	Lab	--	< 0.018 ug/l	--	< 0.018 ug/l	--	--	< 0.018 ug/l	< 0.018 ug/l	< 0.018 ug/l
2,6-Dinitrotoluene	NA	Lab	--	< 0.033 ug/l	--	< 0.033 ug/l	--	--	< 0.033 ug/l	< 0.033 ug/l	< 0.033 ug/l
2-Chloronaphthalene	NA	Lab	--	< 0.041 ug/l	--	< 0.041 ug/l	--	--	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l
2-Chlorophenol	NA	Lab	--	< 0.054 ug/l	--	< 0.054 ug/l	--	--	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l
2-Methyl-4,6-dinitrophenol	NA	Lab	--	< 0.025 ug/l	--	< 0.025 ug/l	--	--	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l
2-Methylnaphthalene	NA	Lab	--	0.028 J ug/l	--	< 0.026 ug/l	--	--	0.028 J ug/l	0.028 J ug/l	< 0.026 ug/l
2-Nitroaniline	NA	Lab	--	< 0.024 ug/l	--	< 0.024 ug/l	--	--	< 0.024 ug/l	< 0.024 ug/l	< 0.024 ug/l
2-Nitrophenol	NA	Lab	--	< 0.063 ug/l	--	< 0.063 ug/l	--	--	< 0.063 ug/l	< 0.063 ug/l	< 0.063 ug/l
3,3'-Dichlorobenzidine	NA	Lab	--	< 0.43 ug/l	--	< 0.43 ug/l	--	--	< 0.43 ug/l	< 0.43 ug/l	< 0.43 ug/l
3-Nitroaniline	NA	Lab	--	< 0.029 ug/l	--	< 0.029 ug/l	--	--	< 0.029 ug/l	< 0.029 ug/l	< 0.029 ug/l
4-Bromophenyl phenyl ether	NA	Lab	--	< 0.026 ug/l	--	< 0.026 ug/l	--	--	< 0.026 ug/l	< 0.026 ug/l	< 0.026 ug/l
4-Chloro-3-methylphenol	NA	Lab	--	0.037 J ug/l	--	< 0.037 ug/l	--	--	0.037 J ug/l	< 0.037 ug/l	< 0.037 ug/l
4-Chloroaniline	NA	Lab	--	< 0.025 ug/l	--	< 0.025 ug/l	--	--	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l
4-Chlorophenyl phenyl ether	NA	Lab	--	0.029 J ug/l	--	< 0.027 ug/l	--	--	0.029 J ug/l	< 0.027 ug/l	< 0.027 ug/l
4-Nitroaniline	NA	Lab	--	< 0.019 ug/l	--	< 0.019 ug/l	--	--	< 0.019 ug/l	< 0.019 ug/l	< 0.019 ug/l
4-Nitrophenol	NA	Lab	--	< 0.28 ug/l	--	< 0.28 ug/l	--	--	< 0.28 ug/l	< 0.28 ug/l	< 0.28 ug/l
Acenaphthene	NA	Lab	< 0.0044 ug/l	< 0.026 ug/l	< 0.0044 ug/l	< 0.026 ug/l	< 0.0044 ug/l	--	< 0.026 ug/l	< 0.026 ug/l	< 0.0044 ug/l
Acenaphthylene	NA	Lab	< 0.0034 ug/l	0.026 J ug/l	< 0.0034 ug/l	< 0.015 ug/l	< 0.0034 ug/l	--	0.026 J ug/l	0.026 J ug/l	< 0.0034 ug/l
Anthracene	NA	Lab	< 0.0036 ug/l	0.029 J ug/l	< 0.0036 ug/l	< 0.024 ug/l	< 0.0036 ug/l	--	0.029 J ug/l	0.027 J ug/l	< 0.0036 ug/l
Azobenzene	NA	Lab	--	< 0.021 ug/l	--	< 0.021 ug/l	--	--	< 0.021 ug/l	< 0.021 ug/l	< 0.021 ug/l
Benzo(a)anthracene	NA	Lab	< 0.0026 ug/l	0.029 J ug/l	< 0.0026 ug/l	< 0.018 ug/l	< 0.0026 ug/l	--	0.029 J ug/l	0.037 J ug/l	< 0.0026 ug/l
Benzo(a)pyrene	NA	Lab	< 0.0043 ug/l	< 0.031 ug/l	< 0.0043 ug/l	< 0.031 ug/l	< 0.0043 ug/l	--	< 0.031 ug/l	< 0.031 ug/l	< 0.0043 ug/l
Benzo(b)fluoranthene	NA	Lab	< 0.0023 ug/l	< 0.017 ug/l	< 0.0023 ug/l	< 0.017 ug/l	< 0.0023 ug/l	--	< 0.017 ug/l	0.028 J ug/l	< 0.0023 ug/l

Appendix 1-C4b-3iv
Laboratory Blank Data - Aqueous Organic Parameters
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date			QC 9/16/2008 LB809096_ 09162008 LB	QC 9/19/2008 LB809270_ 09192008 LB	QC 9/19/2008 LB809270_ 09192008 LB	QC 9/19/2008 LB809270_ 09192008 LB	QC 9/19/2008 LB809270_ 09192008 LB	QC 9/19/2008 LB809270_ 09192008 LB	QC 9/21/2008 LB809275_ 09212008 LB	QC 9/24/2008 LB809408_ 09242008 LB	QC 9/24/2008 LB809408_ 09242008 LB
Chemical Name	Total or Dissolved	Analysis Location									
Benzo(g,h,i)perylene	NA	Lab	< 0.0029 ug/l	< 0.019 ug/l	< 0.0029 ug/l	< 0.019 ug/l	0.0044 J ug/l	--	< 0.019 ug/l	0.026 J ug/l	0.0069 J ug/l < 0.019 ug/l
Benzo(k)fluoranthene	NA	Lab	< 0.0025 ug/l	< 0.024 ug/l	< 0.0025 ug/l	< 0.024 ug/l	< 0.0025 ug/l	--	< 0.024 ug/l	0.027 J ug/l	< 0.0025 ug/l < 0.024 ug/l
Benzoic Acid	NA	Lab	--	< 1.1 ug/l	--	< 1.1 R ug/l	--	--	< 1.1 ug/l	< 1.1 R ug/l	< 1.1 ug/l
Benzyl alcohol	NA	Lab	--	0.093 J ug/l	--	< 0.073 ug/l	--	--	0.093 J ug/l	< 0.073 ug/l	< 0.073 ug/l
Bis(2-chloroethoxy)methane	NA	Lab	--	< 0.024 ug/l	--	< 0.024 ug/l	--	--	< 0.024 ug/l	< 0.024 ug/l	< 0.024 ug/l
Bis(2-chloroethyl)ether	NA	Lab	--	< 0.035 ug/l	--	< 0.035 ug/l	--	--	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l
Bis(2-chloroisopropyl)ether	NA	Lab	--	< 0.026 ug/l	--	< 0.026 ug/l	--	--	< 0.026 ug/l	< 0.026 ug/l	< 0.026 ug/l
Bis(2-ethylhexyl)phthalate	NA	Lab	--	< 0.13 ug/l	--	< 0.13 ug/l	--	--	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l
Butyl benzyl phthalate	NA	Lab	--	0.044 J ug/l	--	0.032 J ug/l	--	--	0.044 J ug/l	0.045 J ug/l	< 0.018 ug/l
Carbazole	NA	Lab	--	0.030 J ug/l	--	< 0.018 ug/l	--	--	0.030 J ug/l	0.029 J ug/l	< 0.018 ug/l
Chrysene	NA	Lab	< 0.0034 ug/l	0.030 J ug/l	< 0.0034 ug/l	< 0.028 ug/l	< 0.0034 ug/l	--	0.030 J ug/l	< 0.028 ug/l	< 0.0034 ug/l < 0.028 ug/l
Dibenz(a,h)anthracene	NA	Lab	< 0.0025 ug/l	< 0.017 ug/l	< 0.0025 ug/l	< 0.017 ug/l	0.0044 J ug/l	--	< 0.017 ug/l	0.022 J ug/l	0.0036 J ug/l < 0.017 ug/l
Dibenzofuran	NA	Lab	--	0.027 J ug/l	--	< 0.018 ug/l	--	--	0.027 J ug/l	0.029 J ug/l	< 0.018 ug/l
Diethyl phthalate	NA	Lab	--	0.043 J ug/l	--	0.014 J ug/l	--	--	0.043 J ug/l	0.045 J ug/l	0.016 J ug/l
Dimethyl phthalate	NA	Lab	--	0.026 J ug/l	--	< 0.021 ug/l	--	--	0.026 J ug/l	0.032 J ug/l	< 0.021 ug/l
Di-n-butyl phthalate	NA	Lab	--	0.099 J ug/l	--	0.056 J ug/l	--	--	0.099 J ug/l	0.062 J ug/l	0.039 J ug/l
Di-n-octyl phthalate	NA	Lab	--	< 0.018 ug/l	--	< 0.018 ug/l	--	--	< 0.018 ug/l	< 0.018 ug/l	< 0.018 ug/l
Fluoranthene	NA	Lab	< 0.0044 ug/l	0.040 J ug/l	< 0.0044 ug/l	< 0.020 ug/l	< 0.0044 ug/l	--	0.040 J ug/l	0.038 J ug/l	< 0.0044 ug/l < 0.020 ug/l
Fluorene	NA	Lab	< 0.0038 ug/l	0.031 J ug/l	< 0.0038 ug/l	< 0.027 ug/l	< 0.0038 ug/l	--	0.031 J ug/l	0.027 J ug/l	< 0.0038 ug/l < 0.027 ug/l
Hexachlorobenzene	NA	Lab	--	< 0.022 ug/l	--	< 0.022 ug/l	--	--	< 0.022 ug/l	< 0.022 ug/l	< 0.022 ug/l
Hexachlorobutadiene	NA	Lab	--	< 0.027 ug/l	--	< 0.027 ug/l	--	--	< 0.19 ug/l	< 0.027 ug/l	< 0.027 ug/l
Hexachlorocyclopentadiene	NA	Lab	--	< 0.19 ug/l	--	< 0.19 R ug/l	--	--	< 0.19 ug/l	< 0.19 R ug/l	< 0.19 R ug/l
Hexachloroethane	NA	Lab	--	< 0.024 ug/l	--	< 0.024 ug/l	--	--	< 0.024 ug/l	< 0.024 ug/l	< 0.024 ug/l
Indeno(1,2,3-cd)pyrene	NA	Lab	< 0.0026 ug/l	< 0.021 ug/l	< 0.0026 ug/l	< 0.021 ug/l	0.0047 J ug/l	--	< 0.021 ug/l	0.030 J ug/l	0.0044 J ug/l < 0.021 ug/l
Isophorone	NA	Lab	--	< 0.016 ug/l	--	< 0.016 ug/l	--	--	< 0.016 ug/l	< 0.016 ug/l	< 0.016 ug/l
Naphthalene	NA	Lab	< 0.0030 ug/l	0.032 J ug/l	< 0.0030 ug/l	< 0.022 ug/l	< 0.0030 ug/l	--	0.032 J ug/l	< 0.022 ug/l	< 0.0030 ug/l < 0.022 ug/l
Nitrobenzene	NA	Lab	--	< 0.028 ug/l	--	< 0.028 ug/l	--	--	< 0.028 ug/l	< 0.028 ug/l	< 0.028 ug/l
N-Nitrosodimethylamine	NA	Lab	--	< 0.42 ug/l	--	< 0.42 ug/l	--	--	< 0.42 ug/l	< 0.42 ug/l	< 0.42 ug/l
N-Nitrosodi-n-propylamine	NA	Lab	--	< 0.037 ug/l	--	< 0.037 ug/l	--	--	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
N-Nitrosodiphenylamine	NA	Lab	--	< 0.048 ug/l	--	< 0.048 ug/l	--	--	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l
o-Cresol	NA	Lab	--	< 0.11 ug/l	--	< 0.11 ug/l	--	--	< 0.11 ug/l	< 0.11 ug/l	< 0.11 ug/l

Appendix 1-C4b-3iv
Laboratory Blank Data - Aqueous Organic Parameters
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date			QC 9/16/2008 LB809096_ 09162008 LB	QC 9/19/2008 LB809270_ 09192008 LB	QC 9/19/2008 LB809270_ 09192008 LB	QC 9/19/2008 LB809270_ 09192008 LB	QC 9/19/2008 LB809270_ 09192008 LB	QC 9/19/2008 LB809270_ 09192008 LB	QC 9/21/2008 LB809275_ 09212008 LB	QC 9/24/2008 LB809408_ 09242008 LB	QC 9/24/2008 LB809408_ 09242008 LB
Sys Sample Code Sample Type Code			LB	LB	LB	LB	LB	LB	LB	LB	LB
Chemical Name	Total or Dissolved	Analysis Location									
p-Cresol	NA	Lab	--	< 0.12 ug/l	--	< 0.12 ug/l	--	--	< 0.12 ug/l	< 0.12 ug/l	< 0.12 ug/l
Pentachlorophenol	NA	Lab	--	< 0.34 ug/l	--	< 0.34 ug/l	--	--	< 0.34 ug/l	< 0.34 ug/l	< 0.34 ug/l
Phenanthrene	NA	Lab	< 0.0050 ug/l	0.031 J ug/l	< 0.0050 ug/l	< 0.022 ug/l	< 0.0050 ug/l	--	0.031 J ug/l	0.036 J ug/l	< 0.0050 ug/l < 0.022 ug/l
Phenol	NA	Lab	--	< 0.063 ug/l	--	< 0.063 ug/l	--	--	< 0.063 ug/l	< 0.063 ug/l	< 0.063 ug/l
Pyrene	NA	Lab	< 0.0035 ug/l	0.029 J ug/l	< 0.0035 ug/l	< 0.019 ug/l	< 0.0035 ug/l	--	0.029 J ug/l	0.033 J ug/l	< 0.0035 ug/l < 0.019 ug/l
Pyridine	NA	Lab	--	< 1.4 ug/l	--	< 1.4 R ug/l	--	--	< 1.4 ug/l	< 1.4 R ug/l	< 1.4 R ug/l
VOCs											
1,1,1,2-Tetrachloroethane	NA	Lab	< 0.047 ug/l	< 0.047 ug/l	--	< 0.047 ug/l	--	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l	< 0.047 ug/l
1,1,1-Trichloroethane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l	--	< 0.050 ug/l	--	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l
1,1,2,2-Tetrachloroethane	NA	Lab	< 0.064 ug/l	< 0.064 ug/l	--	< 0.064 ug/l	--	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l	< 0.064 ug/l
1,1,2-Trichloroethane	NA	Lab	< 0.061 ug/l	< 0.061 ug/l	--	< 0.061 ug/l	--	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l
1,1-Dichloro-1-propene	NA	Lab	< 0.051 ug/l	< 0.051 ug/l	--	< 0.051 ug/l	--	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l	< 0.051 ug/l
1,1-Dichloroethane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	--	< 0.042 ug/l	--	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,1-Dichloroethylene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	--	< 0.10 ug/l	--	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l
1,2,3-Trichlorobenzene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	--	< 0.10 ug/l	--	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l
1,2,3-Trichloropropane	NA	Lab	< 0.14 ug/l	< 0.14 ug/l	--	< 0.14 ug/l	--	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l	< 0.14 ug/l
1,2,4-Trichlorobenzene	NA	Lab	< 0.13 ug/l	< 0.13 ug/l	--	< 0.13 ug/l	--	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l
1,2,4-Trimethylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	--	0.040 J ug/l	--	0.040 J ug/l	0.040 J ug/l	< 0.037 ug/l	< 0.037 ug/l
1,2-Dibromo-3-chloropropane	NA	Lab	< 0.22 J ug/l	< 0.22 J ug/l	--	< 0.22 J ug/l	--	< 0.22 J ug/l	< 0.22 J ug/l	< 0.22 J ug/l	< 0.22 ug/l
1,2-Dibromoethane	NA	Lab	< 0.084 ug/l	< 0.084 ug/l	--	< 0.084 ug/l	--	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l	< 0.084 ug/l
1,2-Dichlorobenzene	NA	Lab	< 0.044 ug/l	< 0.044 ug/l	--	< 0.044 ug/l	--	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l
1,2-Dichloroethane	NA	Lab	< 0.073 ug/l	< 0.073 ug/l	--	< 0.073 ug/l	--	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l	< 0.073 ug/l
1,2-Dichloroethylene, cis	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	--	< 0.045 ug/l	--	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
1,2-Dichloroethylene, trans	NA	Lab	< 0.048 ug/l	< 0.048 ug/l	--	< 0.048 ug/l	--	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l
1,2-Dichloropropane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	--	< 0.042 ug/l	--	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,3,5-Trimethylbenzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	--	< 0.042 ug/l	--	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
1,3-Dichloro-1-propene trans	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	--	< 0.041 ug/l	--	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l
1,3-Dichloro-1-propene, cis	NA	Lab	< 0.038 ug/l	< 0.038 ug/l	--	< 0.038 ug/l	--	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l
1,3-Dichlorobenzene	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	--	< 0.041 ug/l	--	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l	< 0.041 ug/l
1,3-Dichloropropane	NA	Lab	< 0.032 ug/l	< 0.032 ug/l	--	< 0.032 ug/l	--	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l	< 0.032 ug/l
1,4-Dichlorobenzene	NA	Lab	< 0.054 ug/l	< 0.054 ug/l	--	< 0.054 ug/l	--	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l	< 0.054 ug/l
2,2-Dichloropropane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l	--	< 0.050 ug/l	--	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l	< 0.050 ug/l
2-Chloroethyl Vinyl Ether	NA	Lab	< 0.19 ug/l	< 0.19 ug/l	--	< 0.19 ug/l	--	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l	< 0.19 ug/l
2-Hexanone	NA	Lab	< 2.9 ug/l	< 2.9 ug/l	--	< 2.9 ug/l	--	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l	< 2.9 ug/l
Acetone	NA	Lab	< 2.5 ug/l	< 2.5 ug/l	--	< 2.5 ug/l	--	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l	< 2.5 ug/l
Acrolein	NA	Lab	< 2.0 ug/l	< 2.0 ug/l	--	< 2.0 ug/l	--	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Acrylonitrile	NA	Lab	< 0.31 ug/l	< 0.31 ug/l	--	< 0.31 ug/l	--	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l	< 0.31 ug/l

Appendix 1-C4b-3iv
Laboratory Blank Data - Aqueous Organic Parameters
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Rhodia Silver Bow Plant

Sys Loc Code Sample Date			QC 9/16/2008	QC 9/19/2008	QC 9/19/2008	QC 9/19/2008	QC 9/19/2008	QC 9/19/2008	QC 9/21/2008	QC 9/24/2008	QC 9/24/2008
Sys Sample Code			LB809096_ 09162008	LB809270_ 09192008	LB809270_ 09192008	LB809270_ 09192008	LB809270_ 09192008	LB809270_ 09192008	LB809275_ 09212008	LB809408_ 09242008	LB809408_ 09242008
Sample Type Code			LB	LB	LB	LB	LB	LB	LB	LB	LB
Chemical Name	Total or Dissolved	Analysis Location									
Benzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	--	< 0.045 ug/l	--	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
Bromobenzene	NA	Lab	< 0.027 ug/l	< 0.027 ug/l	--	< 0.027 ug/l	--	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l	< 0.027 ug/l
Bromochloromethane	NA	Lab	< 0.091 ug/l	< 0.091 ug/l	--	< 0.091 ug/l	--	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l	< 0.091 ug/l
Bromodichloromethane	NA	Lab	< 0.036 ug/l	< 0.036 ug/l	--	< 0.036 ug/l	--	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l
Bromoform	NA	Lab	< 0.080 J ug/l	< 0.080 J ug/l	--	< 0.080 J ug/l	--	< 0.080 J ug/l	< 0.080 J ug/l	< 0.080 ug/l	< 0.080 ug/l
Bromomethane	NA	Lab	< 0.072 ug/l	< 0.072 ug/l	--	< 0.072 ug/l	--	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l	< 0.072 ug/l
Butyl benzene	NA	Lab	< 0.056 ug/l	< 0.056 ug/l	--	< 0.056 ug/l	--	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l	< 0.056 ug/l
Butylbenzene sec	NA	Lab	< 0.036 ug/l	< 0.036 ug/l	--	< 0.036 ug/l	--	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l	< 0.036 ug/l
Butylbenzene tert-	NA	Lab	< 0.038 ug/l	< 0.038 ug/l	--	< 0.038 ug/l	--	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l	< 0.038 ug/l
Carbon disulfide	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	--	< 0.045 ug/l	--	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
Carbon tetrachloride	NA	Lab	< 0.068 ug/l	< 0.068 ug/l	--	< 0.068 ug/l	--	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l	< 0.068 ug/l
Chlorobenzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	--	< 0.045 ug/l	--	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l	< 0.045 ug/l
Chlorodibromomethane	NA	Lab	< 0.057 ug/l	< 0.057 ug/l	--	< 0.057 ug/l	--	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l	< 0.057 ug/l
Chloroethane	NA	Lab	< 0.13 ug/l	< 0.13 ug/l	--	< 0.13 ug/l	--	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l	< 0.13 ug/l
Chloroform	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	--	< 0.042 ug/l	--	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
Chloromethane	NA	Lab	< 0.053 ug/l	< 0.053 ug/l	--	< 0.053 ug/l	--	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l	< 0.053 ug/l
Chlorotoluene o-	NA	Lab	< 0.035 ug/l	< 0.035 ug/l	--	< 0.035 ug/l	--	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l	< 0.035 ug/l
Chlorotoluene p-	NA	Lab	< 0.025 ug/l	< 0.025 ug/l	--	< 0.025 ug/l	--	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l	< 0.025 ug/l
Cumene (isopropyl benzene)	NA	Lab	< 0.031 ug/l	< 0.031 ug/l	--	0.22 J ug/l	--	< 0.031 ug/l	0.22 J ug/l	< 0.031 ug/l	< 0.031 ug/l
Cymene p- (Toluene isopropyl p-)	NA	Lab	< 0.044 ug/l	< 0.044 ug/l	--	< 0.044 ug/l	--	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l	< 0.044 ug/l
Dibromomethane (methylene bromide)	NA	Lab	< 0.089 ug/l	< 0.089 ug/l	--	< 0.089 ug/l	--	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l	< 0.089 ug/l
Dichlorodifluoromethane (CFC-12)	NA	Lab	< 0.083 ug/l	< 0.083 ug/l	--	< 0.083 ug/l	--	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l	< 0.083 ug/l
Ethyl benzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	--	< 0.042 ug/l	--	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l	< 0.042 ug/l
Hexachlorobutadiene	NA	Lab	< 0.19 ug/l	< 0.19 ug/l	--	< 0.19 ug/l	--	< 0.19 ug/l	< 0.027 ug/l	< 0.19 ug/l	< 0.19 ug/l
Iodomethane	NA	Lab	< 0.27 ug/l	< 0.27 ug/l	--	< 0.27 ug/l	--	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l	< 0.27 ug/l
Methyl ethyl ketone	NA	Lab	< 3.8 ug/l	< 3.8 ug/l	--	< 3.8 ug/l	--	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l	< 3.8 ug/l
Methyl isobutyl ketone	NA	Lab	< 3.0 ug/l	< 3.0 ug/l	--	< 3.0 ug/l	--	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l
Methyl tertiary butyl ether (MTBE)	NA	Lab	< 0.070 ug/l	< 0.070 ug/l	--	< 0.070 ug/l	--	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l	< 0.070 ug/l
Methylene chloride	NA	Lab	< 0.23 ug/l	< 0.23 ug/l	--	< 0.23 ug/l	--	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l	< 0.23 ug/l
Naphthalene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	--	< 0.10 ug/l	--	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l	< 0.10 ug/l
Propylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	--	< 0.037 ug/l	--	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
Styrene	NA	Lab	< 0.039 ug/l	< 0.039 ug/l	--	< 0.039 ug/l	--	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l	< 0.039 ug/l
Tetrachloroethylene	NA	Lab	< 0.077 ug/l	< 0.077 ug/l	--	< 0.077 ug/l	--	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l	< 0.077 ug/l
Toluene	NA	Lab	< 0.048 ug/l	< 0.048 ug/l	--	< 0.048 ug/l	--	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l	< 0.048 ug/l
Trichloroethylene	NA	Lab	< 0.061 ug/l	< 0.061 ug/l	--	< 0.061 ug/l	--	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l	< 0.061 ug/l
Trichlorofluoromethane	NA	Lab	< 0.086 ug/l	< 0.086 ug/l	--	< 0.086 ug/l	--	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l	< 0.086 ug/l
Vinyl acetate	NA	Lab	< 0.91 ug/l	< 0.91 ug/l	--	< 0.91 ug/l	--	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l	< 0.91 ug/l
Vinyl chloride	NA	Lab	< 0.071 ug/l	< 0.071 ug/l	--	< 0.071 ug/l	--	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l	< 0.071 ug/l
Xylene m & p	NA	Lab	< 0.078 ug/l	< 0.078 ug/l	--	< 0.078 ug/l	--	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l	< 0.078 ug/l

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Rhodia Silver Bow Plant

Sys Loc Code Sample Date			QC 9/16/2008 LB809096_ 09162008 LB	QC 9/19/2008 LB809270_ 09192008 LB	QC 9/19/2008 LB809270_ 09192008 LB	QC 9/19/2008 LB809270_ 09192008 LB	QC 9/19/2008 LB809270_ 09192008 LB	QC 9/19/2008 LB809270_ 09192008 LB	QC 9/21/2008 LB809275_ 09212008 LB	QC 9/24/2008 LB809408_ 09242008 LB	QC 9/24/2008 LB809408_ 09242008 LB
Chemical Name	Total or Dissolved	Analysis Location									
Xylene, o-	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	--	< 0.037 ug/l	--	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l	< 0.037 ug/l
PCBs											
Aroclor 1016	NA	Lab	--	< 0.0094 ug/l	--	--	--	--	--	--	--
Aroclor 1221	NA	Lab	--	< 0.020 ug/l	--	--	--	--	--	--	--
Aroclor 1232	NA	Lab	--	< 0.023 ug/l	--	--	--	--	--	--	--
Aroclor 1242	NA	Lab	--	< 0.013 ug/l	--	--	--	--	--	--	--
Aroclor 1248	NA	Lab	--	< 0.0054 ug/l	--	--	--	--	--	--	--
Aroclor 1254	NA	Lab	--	< 0.0070 ug/l	--	--	--	--	--	--	--
Aroclor 1260	NA	Lab	--	< 0.0031 ug/l	--	--	--	--	--	--	--
Aroclor 1262	NA	Lab	--	< 0.0048 ug/l	--	--	--	--	--	--	--
Aroclor 1268	NA	Lab	--	< 0.0065 ug/l	--	--	--	--	--	--	--

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Laboratory Blank Data - Aqueous Organic Parameters
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Sys Loc Code Sample Date			QC 9/24/2008 LB809408_ 09242008 LB	QC 9/24/2008 LB809408_ 09242008 LB	QC 9/24/2008 LB809408_ 09242008 LB	QC 9/24/2008 LB809408_ 09242008 LB
Sys Sample Code Sample Type Code						
Chemical Name	Total or Dissolved	Analysis Location				
SVOCs						
1,2,4-Trichlorobenzene	NA	Lab	< 0.016 ug/l	--	--	--
1,2-Dichlorobenzene	NA	Lab	< 0.022 ug/l	--	--	--
1,3-Dichlorobenzene	NA	Lab	< 0.021 ug/l	--	--	--
1,4-Dichlorobenzene	NA	Lab	< 0.029 ug/l	--	--	--
2,4,5-Trichlorophenol	NA	Lab	< 0.031 ug/l	--	--	--
2,4,6-Trichlorophenol	NA	Lab	< 0.058 ug/l	--	--	--
2,4-Dichlorophenol	NA	Lab	< 0.047 ug/l	--	--	--
2,4-Dimethylphenol	NA	Lab	< 2.2 R ug/l	--	--	--
2,4-Dinitrophenol	NA	Lab	< 0.17 ug/l	--	--	--
2,4-Dinitrotoluene	NA	Lab	< 0.018 ug/l	--	--	--
2,6-Dinitrotoluene	NA	Lab	< 0.033 ug/l	--	--	--
2-Chloronaphthalene	NA	Lab	< 0.041 ug/l	--	--	--
2-Chlorophenol	NA	Lab	< 0.054 ug/l	--	--	--
2-Methyl-4,6-dinitrophenol	NA	Lab	< 0.025 ug/l	--	--	--
2-Methylnaphthalene	NA	Lab	< 0.026 ug/l	--	--	--
2-Nitroaniline	NA	Lab	< 0.024 ug/l	--	--	--
2-Nitrophenol	NA	Lab	< 0.063 ug/l	--	--	--
3,3'-Dichlorobenzidine	NA	Lab	< 0.43 ug/l	--	--	--
3-Nitroaniline	NA	Lab	< 0.029 ug/l	--	--	--
4-Bromophenyl phenyl ether	NA	Lab	< 0.026 ug/l	--	--	--
4-Chloro-3-methylphenol	NA	Lab	< 0.037 ug/l	--	--	--
4-Chloroaniline	NA	Lab	< 0.025 ug/l	--	--	--
4-Chlorophenyl phenyl ether	NA	Lab	< 0.027 ug/l	--	--	--
4-Nitroaniline	NA	Lab	< 0.019 ug/l	--	--	--
4-Nitrophenol	NA	Lab	< 0.28 ug/l	--	--	--
Acenaphthene	NA	Lab	< 0.026 ug/l	< 0.0044 ug/l	< 0.026 ug/l	< 0.0044 ug/l
Acenaphthylene	NA	Lab	< 0.015 ug/l	< 0.0034 ug/l	< 0.015 ug/l	< 0.0034 ug/l
Anthracene	NA	Lab	< 0.024 ug/l	< 0.0036 ug/l	< 0.024 ug/l	< 0.0036 ug/l
Azobenzene	NA	Lab	< 0.021 ug/l	--	--	--
Benzo(a)anthracene	NA	Lab	< 0.018 ug/l	0.0046 J ug/l	< 0.018 ug/l	< 0.0026 ug/l
Benzo(a)pyrene	NA	Lab	< 0.031 ug/l	< 0.0043 ug/l	< 0.031 ug/l	< 0.0043 ug/l
Benzo(b)fluoranthene	NA	Lab	< 0.017 ug/l	0.0040 J ug/l	< 0.017 ug/l	< 0.0023 ug/l

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Laboratory Blank Data - Aqueous Organic Parameters
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Sys Loc Code Sample Date			QC 9/24/2008 LB809408_ 09242008 LB	QC 9/24/2008 LB809408_ 09242008 LB	QC 9/24/2008 LB809408_ 09242008 LB	QC 9/24/2008 LB809408_ 09242008 LB
Sys Sample Code Sample Type Code						
Chemical Name	Total or Dissolved	Analysis Location				
Benzo(g,h,i)perylene	NA	Lab	< 0.019 ug/l	0.0053 J ug/l	< 0.019 ug/l	< 0.0029 ug/l
Benzo(k)fluoranthene	NA	Lab	< 0.024 ug/l	0.0042 J ug/l	< 0.024 ug/l	< 0.0025 ug/l
Benzoic Acid	NA	Lab	1.6 R ug/l	--	--	--
Benzyl alcohol	NA	Lab	0.076 J ug/l	--	--	--
Bis(2-chloroethoxy)methane	NA	Lab	< 0.024 ug/l	--	--	--
Bis(2-chloroethyl)ether	NA	Lab	< 0.035 ug/l	--	--	--
Bis(2-chloroisopropyl)ether	NA	Lab	< 0.026 ug/l	--	--	--
Bis(2-ethylhexyl)phthalate	NA	Lab	< 0.13 ug/l	--	--	--
Butyl benzyl phthalate	NA	Lab	0.020 J ug/l	--	--	--
Carbazole	NA	Lab	< 0.018 ug/l	--	--	--
Chrysene	NA	Lab	< 0.028 ug/l	< 0.0034 ug/l	< 0.028 ug/l	< 0.0034 ug/l
Dibenz(a,h)anthracene	NA	Lab	< 0.017 ug/l	0.0036 J ug/l	< 0.017 ug/l	< 0.0025 ug/l
Dibenzofuran	NA	Lab	< 0.018 ug/l	--	--	--
Diethyl phthalate	NA	Lab	0.015 J ug/l	--	--	--
Dimethyl phthalate	NA	Lab	< 0.021 ug/l	--	--	--
Di-n-butyl phthalate	NA	Lab	0.045 J ug/l	--	--	--
Di-n-octyl phthalate	NA	Lab	< 0.018 ug/l	--	--	--
Fluoranthene	NA	Lab	< 0.020 ug/l	< 0.0044 ug/l	< 0.020 ug/l	< 0.0044 ug/l
Fluorene	NA	Lab	< 0.027 ug/l	< 0.0038 ug/l	< 0.027 ug/l	< 0.0038 ug/l
Hexachlorobenzene	NA	Lab	< 0.022 ug/l	--	--	--
Hexachlorobutadiene	NA	Lab	< 0.027 ug/l	--	--	--
Hexachlorocyclopentadiene	NA	Lab	< 0.19 R ug/l	--	--	--
Hexachloroethane	NA	Lab	< 0.024 ug/l	--	--	--
Indeno(1,2,3-cd)pyrene	NA	Lab	< 0.021 ug/l	0.0046 J ug/l	< 0.021 ug/l	< 0.0026 ug/l
Isophorone	NA	Lab	< 0.016 ug/l	--	--	--
Naphthalene	NA	Lab	< 0.022 ug/l	< 0.0030 ug/l	< 0.022 ug/l	< 0.0030 ug/l
Nitrobenzene	NA	Lab	< 0.028 ug/l	--	--	--
N-Nitrosodimethylamine	NA	Lab	< 0.42 ug/l	--	--	--
N-Nitrosodi-n-propylamine	NA	Lab	< 0.037 ug/l	--	--	--
N-Nitrosodiphenylamine	NA	Lab	< 0.048 ug/l	--	--	--
o-Cresol	NA	Lab	< 0.11 ug/l	--	--	--

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Laboratory Blank Data - Aqueous Organic Parameters
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Sys Loc Code Sample Date			QC 9/24/2008 LB809408_ 09242008 LB	QC 9/24/2008 LB809408_ 09242008 LB	QC 9/24/2008 LB809408_ 09242008 LB	QC 9/24/2008 LB809408_ 09242008 LB
Sys Sample Code Sample Type Code						
Chemical Name	Total or Dissolved	Analysis Location				
p-Cresol	NA	Lab	< 0.12 ug/l	--	--	--
Pentachlorophenol	NA	Lab	< 0.34 ug/l	--	--	--
Phenanthrene	NA	Lab	< 0.022 ug/l	< 0.0050 ug/l	< 0.022 ug/l	< 0.0050 ug/l
Phenol	NA	Lab	< 0.063 ug/l	--	--	--
Pyrene	NA	Lab	< 0.019 ug/l	< 0.0035 ug/l	< 0.019 ug/l	< 0.0035 ug/l
Pyridine	NA	Lab	< 1.4 R ug/l	--	--	--
VOCs						
1,1,1,2-Tetrachloroethane	NA	Lab	< 0.047 ug/l	< 0.047 ug/l	--	--
1,1,1-Trichloroethane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l	--	--
1,1,2,2-Tetrachloroethane	NA	Lab	< 0.064 ug/l	< 0.064 ug/l	--	--
1,1,2-Trichloroethane	NA	Lab	< 0.061 ug/l	< 0.061 ug/l	--	--
1,1-Dichloro-1-propene	NA	Lab	< 0.051 ug/l	< 0.051 ug/l	--	--
1,1-Dichloroethane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	--	--
1,1-Dichloroethylene	NA	Lab	< 0.10 ug/l	< 0.10 ug/l	--	--
1,2,3-Trichlorobenzene	NA	Lab	0.11 J ug/l	< 0.10 ug/l	--	--
1,2,3-Trichloropropane	NA	Lab	< 0.14 ug/l	< 0.14 ug/l	--	--
1,2,4-Trichlorobenzene	NA	Lab	< 0.13 ug/l	< 0.13 ug/l	--	--
1,2,4-Trimethylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	--	--
1,2-Dibromo-3-chloropropane	NA	Lab	< 0.22 J ug/l	< 0.22 J ug/l	--	--
1,2-Dibromoethane	NA	Lab	< 0.084 ug/l	< 0.084 ug/l	--	--
1,2-Dichlorobenzene	NA	Lab	< 0.044 ug/l	< 0.044 ug/l	--	--
1,2-Dichloroethane	NA	Lab	< 0.073 ug/l	< 0.073 ug/l	--	--
1,2-Dichloroethylene, cis	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	--	--
1,2-Dichloroethylene, trans	NA	Lab	< 0.048 ug/l	< 0.048 ug/l	--	--
1,2-Dichloropropane	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	--	--
1,3,5-Trimethylbenzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	--	--
1,3-Dichloro-1-propene trans	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	--	--
1,3-Dichloro-1-propene, cis	NA	Lab	< 0.038 ug/l	< 0.038 ug/l	--	--
1,3-Dichlorobenzene	NA	Lab	< 0.041 ug/l	< 0.041 ug/l	--	--
1,3-Dichloropropane	NA	Lab	< 0.032 ug/l	< 0.032 ug/l	--	--
1,4-Dichlorobenzene	NA	Lab	< 0.054 ug/l	< 0.054 ug/l	--	--
2,2-Dichloropropane	NA	Lab	< 0.050 ug/l	< 0.050 ug/l	--	--
2-Chloroethyl Vinyl Ether	NA	Lab	< 0.19 ug/l	< 0.19 ug/l	--	--
2-Hexanone	NA	Lab	< 2.9 ug/l	< 2.9 ug/l	--	--
Acetone	NA	Lab	< 2.5 ug/l	< 2.5 ug/l	--	--
Acrolein	NA	Lab	< 2.0 R ug/l	< 2.0 ug/l	--	--
Acrylonitrile	NA	Lab	< 0.31 ug/l	< 0.31 ug/l	--	--

Appendix 1-C4b-3iv
Laboratory Blank Data - Aqueous Organic Parameters
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date			QC 9/24/2008 LB809408_ 09242008 LB	QC 9/24/2008 LB809408_ 09242008 LB	QC 9/24/2008 LB809408_ 09242008 LB	QC 9/24/2008 LB809408_ 09242008 LB
Sys Sample Code Sample Type Code						
Chemical Name	Total or Dissolved	Analysis Location				
Benzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	--	--
Bromobenzene	NA	Lab	< 0.027 ug/l	< 0.027 ug/l	--	--
Bromochloromethane	NA	Lab	< 0.091 ug/l	< 0.091 ug/l	--	--
Bromodichloromethane	NA	Lab	< 0.036 ug/l	< 0.036 ug/l	--	--
Bromoform	NA	Lab	< 0.080 J ug/l	< 0.080 J ug/l	--	--
Bromomethane	NA	Lab	< 0.072 ug/l	< 0.072 ug/l	--	--
Butyl benzene	NA	Lab	< 0.056 ug/l	< 0.056 ug/l	--	--
Butylbenzene sec	NA	Lab	< 0.036 ug/l	< 0.036 ug/l	--	--
Butylbenzene tert-	NA	Lab	< 0.038 ug/l	< 0.038 ug/l	--	--
Carbon disulfide	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	--	--
Carbon tetrachloride	NA	Lab	< 0.068 ug/l	< 0.068 ug/l	--	--
Chlorobenzene	NA	Lab	< 0.045 ug/l	< 0.045 ug/l	--	--
Chlorodibromomethane	NA	Lab	< 0.057 ug/l	< 0.057 ug/l	--	--
Chloroethane	NA	Lab	< 0.13 ug/l	< 0.13 ug/l	--	--
Chloroform	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	--	--
Chloromethane	NA	Lab	< 0.053 ug/l	< 0.053 ug/l	--	--
Chlorotoluene o-	NA	Lab	< 0.035 ug/l	< 0.035 ug/l	--	--
Chlorotoluene p-	NA	Lab	< 0.025 ug/l	< 0.025 ug/l	--	--
Cumene (isopropyl benzene)	NA	Lab	< 0.031 ug/l	< 0.031 ug/l	--	--
Cymene p- (Toluene isopropyl p-)	NA	Lab	< 0.044 ug/l	< 0.044 ug/l	--	--
Dibromomethane (methylene bromide)	NA	Lab	< 0.089 ug/l	< 0.089 ug/l	--	--
Dichlorodifluoromethane (CFC-12)	NA	Lab	< 0.083 ug/l	< 0.083 ug/l	--	--
Ethyl benzene	NA	Lab	< 0.042 ug/l	< 0.042 ug/l	--	--
Hexachlorobutadiene	NA	Lab	< 0.19 ug/l	< 0.19 ug/l	--	--
Iodomethane	NA	Lab	< 0.27 ug/l	< 0.27 ug/l	--	--
Methyl ethyl ketone	NA	Lab	< 3.8 ug/l	< 3.8 ug/l	--	--
Methyl isobutyl ketone	NA	Lab	< 3.0 ug/l	< 3.0 ug/l	--	--
Methyl tertiary butyl ether (MTBE)	NA	Lab	< 0.070 ug/l	< 0.070 ug/l	--	--
Methylene chloride	NA	Lab	< 0.23 ug/l	< 0.23 ug/l	--	--
Naphthalene	NA	Lab	0.13 J ug/l	0.12 J ug/l	--	--
Propylbenzene	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	--	--
Styrene	NA	Lab	< 0.039 ug/l	< 0.039 ug/l	--	--
Tetrachloroethylene	NA	Lab	< 0.077 ug/l	< 0.077 ug/l	--	--
Toluene	NA	Lab	< 0.048 ug/l	< 0.048 ug/l	--	--
Trichloroethylene	NA	Lab	< 0.061 ug/l	< 0.061 ug/l	--	--
Trichlorofluoromethane	NA	Lab	< 0.086 ug/l	< 0.086 ug/l	--	--
Vinyl acetate	NA	Lab	< 0.91 ug/l	< 0.91 ug/l	--	--
Vinyl chloride	NA	Lab	< 0.071 ug/l	< 0.071 ug/l	--	--
Xylene m & p	NA	Lab	< 0.078 ug/l	< 0.078 ug/l	--	--

Appendix 1-C4b-3iv
Laboratory Blank Data - Aqueous Organic Parameters
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date			QC 9/24/2008 LB809408_ 09242008 LB	QC 9/24/2008 LB809408_ 09242008 LB	QC 9/24/2008 LB809408_ 09242008 LB	QC 9/24/2008 LB809408_ 09242008 LB
Sys Sample Code Sample Type Code						
Chemical Name	Total or Dissolved	Analysis Location				
Xylene, o-	NA	Lab	< 0.037 ug/l	< 0.037 ug/l	--	--
PCBs						
Aroclor 1016	NA	Lab	--	--	--	--
Aroclor 1221	NA	Lab	--	--	--	--
Aroclor 1232	NA	Lab	--	--	--	--
Aroclor 1242	NA	Lab	--	--	--	--
Aroclor 1248	NA	Lab	--	--	--	--
Aroclor 1254	NA	Lab	--	--	--	--
Aroclor 1260	NA	Lab	--	--	--	--
Aroclor 1262	NA	Lab	--	--	--	--
Aroclor 1268	NA	Lab	--	--	--	--

Appendix 1-C4c-1
Trip Blank Data - Solid
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date Sample Name Sys Sample Code Sample Type Code			QC 9/18/2008 SD-240 (0-10) CM TBS809186_09182008 TB	QC 9/19/2008 SD-241 (0-10) CM TBS809275_09192008 TB
Chemical Name	Total or Dissolved	Analysis Location		
VOCs				
1,1,1,2-Tetrachloroethane	NA	Lab	< 0.0081 mg/kg	< 0.0081 mg/kg
1,1,1-Trichloroethane	NA	Lab	< 0.0032 mg/kg	< 0.0032 mg/kg
1,1,2,2-Tetrachloroethane	NA	Lab	< 0.0071 mg/kg	< 0.0071 mg/kg
1,1,2-Trichloroethane	NA	Lab	< 0.010 mg/kg	< 0.010 mg/kg
1,1-Dichloro-1-propene	NA	Lab	< 0.019 mg/kg	< 0.019 mg/kg
1,1-Dichloroethane	NA	Lab	< 0.0087 mg/kg	< 0.0087 mg/kg
1,1-Dichloroethylene	NA	Lab	< 0.020 mg/kg	< 0.020 mg/kg
1,2,3-Trichlorobenzene	NA	Lab	< 0.0070 mg/kg	< 0.0070 mg/kg
1,2,3-Trichloropropane	NA	Lab	< 0.021 mg/kg	< 0.021 mg/kg
1,2,4-Trichlorobenzene	NA	Lab	< 0.0048 mg/kg	< 0.0048 mg/kg
1,2,4-Trimethylbenzene	NA	Lab	< 0.0064 mg/kg	< 0.0064 mg/kg
1,2-Dibromo-3-chloropropane	NA	Lab	< 0.033 mg/kg	< 0.033 J mg/kg
1,2-Dibromoethane	NA	Lab	< 0.0073 mg/kg	< 0.0073 mg/kg
1,2-Dichlorobenzene	NA	Lab	< 0.0053 mg/kg	< 0.0053 mg/kg
1,2-Dichloroethane	NA	Lab	< 0.0054 mg/kg	< 0.0054 mg/kg
1,2-Dichloroethylene, cis	NA	Lab	< 0.011 mg/kg	< 0.011 mg/kg
1,2-Dichloroethylene, trans	NA	Lab	< 0.0090 mg/kg	< 0.0090 mg/kg
1,2-Dichloropropane	NA	Lab	< 0.0082 mg/kg	< 0.0082 mg/kg
1,3,5-Trimethylbenzene	NA	Lab	< 0.0083 mg/kg	< 0.0083 mg/kg
1,3-Dichloro-1-propene trans	NA	Lab	< 0.0091 mg/kg	< 0.0091 mg/kg
1,3-Dichloro-1-propene, cis	NA	Lab	< 0.0089 mg/kg	< 0.0089 mg/kg
1,3-Dichlorobenzene	NA	Lab	< 0.0059 mg/kg	< 0.0059 mg/kg
1,3-Dichloropropane	NA	Lab	< 0.0087 mg/kg	< 0.0087 mg/kg
1,4-Dichlorobenzene	NA	Lab	< 0.0075 mg/kg	< 0.0075 mg/kg
2,2-Dichloropropane	NA	Lab	< 0.019 mg/kg	< 0.019 mg/kg
2-Chloroethyl Vinyl Ether	NA	Lab	< 0.043 J mg/kg	< 0.043 J mg/kg
2-Hexanone	NA	Lab	< 0.19 mg/kg	< 0.19 mg/kg
Acetone	NA	Lab	< 0.24 mg/kg	< 0.24 mg/kg
Acrolein	NA	Lab	< 0.17 mg/kg	< 0.17 R mg/kg
Acrylonitrile	NA	Lab	< 0.032 mg/kg	< 0.032 mg/kg
Benzene	NA	Lab	< 0.0068 mg/kg	< 0.0068 mg/kg
Bromobenzene	NA	Lab	< 0.010 mg/kg	< 0.010 mg/kg
Bromochloromethane	NA	Lab	< 0.0096 mg/kg	< 0.0096 mg/kg
Bromodichloromethane	NA	Lab	< 0.0087 mg/kg	< 0.0087 mg/kg
Bromoform	NA	Lab	< 0.0096 mg/kg	< 0.0096 mg/kg

Appendix 1-C4c-1
Trip Blank Data - Solid
2008
Rhodia Silver Bow Plant

Sys Loc Code			QC	QC
Sample Date			9/18/2008	9/19/2008
Sample Name			SD-240 (0-10) CM	SD-241 (0-10) CM
Sys Sample Code			TBS809186_09182008	TBS809275_09192008
Sample Type Code			TB	TB
Chemical Name	Total or Dissolved	Analysis Location		
Bromomethane	NA	Lab	< 0.019 mg/kg	0.019 J mg/kg
Butyl benzene	NA	Lab	< 0.0074 mg/kg	< 0.0074 mg/kg
Butylbenzene sec	NA	Lab	< 0.0078 mg/kg	< 0.0078 mg/kg
Butylbenzene tert-	NA	Lab	< 0.010 mg/kg	< 0.010 mg/kg
Carbon disulfide	NA	Lab	< 0.015 mg/kg	< 0.015 mg/kg
Carbon tetrachloride	NA	Lab	< 0.021 mg/kg	< 0.021 mg/kg
Chlorobenzene	NA	Lab	< 0.0063 mg/kg	< 0.0063 mg/kg
Chlorodibromomethane	NA	Lab	< 0.0068 mg/kg	< 0.0068 mg/kg
Chloroethane	NA	Lab	< 0.015 mg/kg	< 0.015 mg/kg
Chloroform	NA	Lab	< 0.0090 mg/kg	< 0.0090 mg/kg
Chloromethane	NA	Lab	< 0.0096 mg/kg	< 0.0096 mg/kg
Chlorotoluene o-	NA	Lab	< 0.0062 mg/kg	< 0.0062 mg/kg
Chlorotoluene p-	NA	Lab	< 0.0082 mg/kg	< 0.0082 mg/kg
Cumene (isopropyl benzene)	NA	Lab	< 0.0093 mg/kg	< 0.0093 mg/kg
Cymene p- (Toluene isopropyl p-)	NA	Lab	< 0.0069 mg/kg	< 0.0069 mg/kg
Dibromomethane (methylene bromide)	NA	Lab	< 0.017 mg/kg	< 0.017 mg/kg
Dichlorodifluoromethane (CFC-12)	NA	Lab	< 0.021 mg/kg	< 0.021 mg/kg
Ethyl benzene	NA	Lab	< 0.0045 mg/kg	< 0.0045 mg/kg
Hexachlorobutadiene	NA	Lab	< 0.016 mg/kg	< 0.016 mg/kg
Iodomethane	NA	Lab	< 0.065 mg/kg	0.078 J mg/kg
Methyl ethyl ketone	NA	Lab	< 0.21 mg/kg	< 0.21 mg/kg
Methyl isobutyl ketone	NA	Lab	< 0.34 mg/kg	< 0.34 mg/kg
Methyl tertiary butyl ether (MTBE)	NA	Lab	< 0.015 mg/kg	< 0.015 mg/kg
Methylene chloride	NA	Lab	0.017 J mg/kg	0.012 J mg/kg
Naphthalene	NA	Lab	< 0.0068 J mg/kg	< 0.0068 mg/kg
Propylbenzene	NA	Lab	< 0.0093 mg/kg	< 0.0093 mg/kg
Styrene	NA	Lab	< 0.0045 mg/kg	< 0.0045 mg/kg
Tetrachloroethylene	NA	Lab	< 0.015 mg/kg	< 0.015 mg/kg
Toluene	NA	Lab	< 0.0085 mg/kg	< 0.0085 mg/kg
Trichloroethylene	NA	Lab	< 0.013 mg/kg	< 0.013 mg/kg
Trichlorofluoromethane	NA	Lab	< 0.023 mg/kg	< 0.023 mg/kg
Vinyl acetate	NA	Lab	< 0.037 mg/kg	< 0.037 mg/kg
Vinyl chloride	NA	Lab	< 0.019 mg/kg	< 0.019 mg/kg
Xylene m & p	NA	Lab	< 0.0093 mg/kg	< 0.0093 mg/kg
Xylene, o-	NA	Lab	< 0.0068 mg/kg	< 0.0068 mg/kg

Appendix 1-C4c-2i
Laboratory Blank Data - Solid General Parameters, Metals and Radionuclides
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date Sys Sample Code Sample Type Code			QC 9/18/2008 LBS809186_09182008 LB	QC 9/18/2008 LBS809187_09182008 LB	QC 9/18/2008 LBSSD001_09182008 LB	QC 9/19/2008 LBS809275_09192008 LB	QC 12/11/2008 LBS812125_12112008 LB
Chemical Name	Total or Dissolved	Analysis Location					
General Parameters							
Chloride	NA	Lab	< 6.3 mg/kg	--	--	< 2.2 mg/kg	--
Fluoride by Bellack	NA	Lab	< 2 mg/kg	--	--	< 2 mg/kg	--
Nitrate + Nitrite	NA	Lab	< 0.9 J mg/kg	--	--	< 0.6 mg/kg	--
Nitrogen, ammonia as N	NA	Lab	< 0.9 mg/kg	--	--	< 0.6 mg/kg	--
Phosphorus, elemental (white)	NA	Lab	--	--	< 0.000280 mg/kg < 0.000280 mg/kg	--	--
Sulfate	NA	Lab	< 6.3 mg/kg	--	--	< 2.2 mg/kg	--
Metals							
Antimony	NA	Lab	< 0.04 mg/kg	--	--	< 0.04 mg/kg	< 0.04 mg/kg
Arsenic	NA	Lab	< 0.20 mg/kg	--	--	< 0.2 mg/kg	< 0.20 mg/kg
Barium	NA	Lab	< 0.2 mg/kg	--	--	< 0.2 mg/kg	< 0.3 mg/kg
Beryllium	NA	Lab	< 0.03 mg/kg	--	--	< 0.03 mg/kg	< 0.02 mg/kg
Cadmium	NA	Lab	< 0.04 mg/kg	--	--	< 0.04 mg/kg	< 0.2 mg/kg
Calcium	NA	Lab	< 0.4 mg/kg	--	--	< 0.4 mg/kg	8.1 J mg/kg
Chromium	NA	Lab	< 0.3 mg/kg	--	--	< 0.3 mg/kg	< 0.7 mg/kg
Cobalt	NA	Lab	< 0.09 mg/kg	--	--	< 0.09 mg/kg	< 0.3 mg/kg
Copper	NA	Lab	< 0.2 mg/kg	--	--	< 0.2 mg/kg	< 0.9 mg/kg
Iron	NA	Lab	< 2.0 mg/kg	--	--	< 2.0 mg/kg	< 0.5 mg/kg
Lead	NA	Lab	< 1.0 mg/kg	--	--	< 1.0 mg/kg	< 3.0 mg/kg
Magnesium	NA	Lab	< 0.7 mg/kg	--	--	< 0.7 mg/kg	0.6 J mg/kg
Manganese	NA	Lab	< 0.04 mg/kg	--	--	< 0.04 mg/kg	< 0.10 mg/kg
Mercury	NA	Lab	< 0.002 mg/kg	--	--	< 0.002 mg/kg	< 0.002 mg/kg
Nickel	NA	Lab	< 0.2 mg/kg	--	--	< 0.2 mg/kg	< 0.4 mg/kg
Phosphorus, total	NA	Lab	< 2.0 mg/kg	--	--	< 2.0 mg/kg	--
Potassium	NA	Lab	< 20 mg/kg	--	--	< 20 mg/kg	< 9.0 mg/kg
Selenium	NA	Lab	< 0.4 mg/kg	--	--	< 0.4 mg/kg	< 0.4 mg/kg
Silver	NA	Lab	< 0.02 mg/kg	--	--	< 0.02 mg/kg	< 0.8 mg/kg
Sodium	NA	Lab	< 20 mg/kg	--	--	< 20 mg/kg	< 4.0 mg/kg
Thallium	NA	Lab	0.005 J mg/kg	--	--	0.005 J mg/kg	< 0.005 mg/kg
Uranium	NA	Lab	< 0.004 mg/kg	--	--	< 0.004 mg/kg	< 0.004 mg/kg
Vanadium	NA	Lab	< 0.2 mg/kg	--	--	< 0.2 mg/kg	< 0.70 mg/kg
Zinc	NA	Lab	< 0.3 mg/kg	--	--	< 0.3 mg/kg	< 0.4 mg/kg

Appendix 1-C4c-2i
Laboratory Blank Data - Solid General Parameters, Metals and Radionuclides
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date Sys Sample Code Sample Type Code			QC 9/18/2008 LBS809186_09182008 LB	QC 9/18/2008 LBS809187_09182008 LB	QC 9/18/2008 LBSSD001_09182008 LB	QC 9/19/2008 LBS809275_09192008 LB	QC 12/11/2008 LBS812125_12112008 LB
Chemical Name	Total or Dissolved	Analysis Location					
Radiochemical Parameters							
Gross Alpha (radiation)	NA	Lab	--	0.37 pCi/g	--	--	--
Gross Beta (radiation)	NA	Lab	--	< 0.76 pCi/g	--	--	--
Lead 210	NA	Lab	--	--	--	--	< 3.8 pCi/g
Radium 226							
	NA	Lab	--	< 1.3 pCi/g	--	--	< 2.1 pCi/g
Radium 228	NA	Lab	--	< 3 pCi/g	--	--	--
Thorium 230	NA	Lab	--	--	--	--	< 0.61 pCi/g
Uranium 234	NA	Lab	--	--	--	--	< 0.2 pCi/g
Uranium 235	NA	Lab	--	--	--	--	< 0.2 pCi/g
Uranium 238 (radiochemical method)	NA	Lab	--	--	--	--	< 0.2 pCi/g

Appendix 1-C4c-2i
Laboratory Blank Data - Solid General Parameters, Metals and Radionuclides
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date Sys Sample Code Sample Type Code			QC 12/11/2008 LBS8E109101_ 12112008 LB	QC 12/12/2008 LBS812197_12122008 LB	QC 12/13/2008 LBS8E109102_ 12132008 LB	QC 12/16/2008 LBS812294_12162008 LB	QC 12/22/2008 LBS8E109104_ 12222008 LB
Chemical Name	Total or Dissolved	Analysis Location					
General Parameters							
Chloride	NA	Lab	--	--	--	--	--
Fluoride by Bellack	NA	Lab	--	--	--	--	--
Nitrate + Nitrite	NA	Lab	--	--	--	--	--
Nitrogen, ammonia as N	NA	Lab	--	--	--	--	--
Phosphorus, elemental (white)	NA	Lab	< 0.000469 mg/kg	--	< 0.000469 mg/kg	--	< 0.000469 mg/kg
Sulfate	NA	Lab	--	--	--	--	--
Metals							
Antimony	NA	Lab	--	< 0.04 mg/kg	--	< 0.04 mg/kg	--
Arsenic	NA	Lab	--	< 0.20 mg/kg	--	< 0.20 mg/kg	--
Barium	NA	Lab	--	< 0.3 mg/kg	--	< 0.3 mg/kg	--
Beryllium	NA	Lab	--	< 0.02 mg/kg	--	< 0.02 mg/kg	--
Cadmium	NA	Lab	--	< 0.2 mg/kg	--	< 0.2 mg/kg	--
Calcium	NA	Lab	--	4.1 J mg/kg	--	4.1 J mg/kg	--
Chromium	NA	Lab	--	< 0.7 mg/kg	--	< 0.7 mg/kg	--
Cobalt	NA	Lab	--	< 0.3 mg/kg	--	< 0.3 mg/kg	--
Copper	NA	Lab	--	< 0.9 mg/kg	--	< 0.9 mg/kg	--
Iron	NA	Lab	--	< 0.5 mg/kg	--	< 0.5 mg/kg	--
Lead	NA	Lab	--	< 3.0 mg/kg	--	3.0 mg/kg	--
Magnesium	NA	Lab	--	0.2 J mg/kg	--	0.2 J mg/kg	--
Manganese	NA	Lab	--	< 0.10 mg/kg	--	< 0.10 mg/kg	--
Mercury	NA	Lab	--	< 0.002 mg/kg	--	< 0.002 mg/kg	--
Nickel	NA	Lab	--	< 0.4 mg/kg	--	< 0.4 mg/kg	--
Phosphorus, total	NA	Lab	--	--	--	--	--
Potassium	NA	Lab	--	< 9.0 mg/kg	--	< 9.0 mg/kg	--
Selenium	NA	Lab	--	< 0.4 mg/kg	--	< 0.4 mg/kg	--
Silver	NA	Lab	--	< 0.8 mg/kg	--	< 0.8 mg/kg	--
Sodium	NA	Lab	--	< 4.0 mg/kg	--	< 4.0 mg/kg	--
Thallium	NA	Lab	--	< 0.005 mg/kg	--	< 0.005 mg/kg	--
Uranium	NA	Lab	--	0.011 J mg/kg	--	0.011 J mg/kg	--
Vanadium	NA	Lab	--	< 0.70 mg/kg	--	< 0.70 mg/kg	--
Zinc	NA	Lab	--	< 0.4 mg/kg	--	< 0.4 mg/kg	--

Appendix 1-C4c-2i
Laboratory Blank Data - Solid General Parameters, Metals and Radionuclides
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date Sys Sample Code Sample Type Code			QC 12/11/2008 LBS8E109101_ 12112008 LB	QC 12/12/2008 LBS812197_12122008 LB	QC 12/13/2008 LBS8E109102_ 12132008 LB	QC 12/16/2008 LBS812294_12162008 LB	QC 12/22/2008 LBS8E109104_ 12222008 LB
Chemical Name	Total or Dissolved	Analysis Location					
Radiochemical Parameters							
Gross Alpha (radiation)	NA	Lab	--	--	--	--	--
Gross Beta (radiation)	NA	Lab	--	--	--	--	--
Lead 210	NA	Lab	--	< 3.8 pCi/g	--	5.8 pCi/g	--
Radium 226	NA	Lab	--	< 2.1 pCi/g	--	< 1.7 pCi/g < 1.7 pCi/g	--
Radium 228	NA	Lab	--	--	--	--	--
Thorium 230	NA	Lab	--	< 0.61 pCi/g	--	< 0.74 pCi/g	--
Uranium 234	NA	Lab	--	< 0.2 pCi/g	--	< 0.2 pCi/g	--
Uranium 235	NA	Lab	--	< 0.2 pCi/g	--	< 0.2 pCi/g	--
Uranium 238 (radiochemical method)	NA	Lab	--	< 0.2 pCi/g	--	< 0.2 pCi/g	--

Appendix 1-C4c-2ii
Laboratory Blank Data - Solid - Organics
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date			QC 9/18/2008	QC 9/19/2008
Sys Sample Code			LBS809186_09182008	LBS809275_09192008
Sample Type Code			LB	LB
Chemical Name	Total or Dissolved	Analysis Location		
SVOCs				
1,2,4-Trichlorobenzene	NA	Lab	< 0.011 mg/kg	< 0.011 mg/kg
1,2-Dichlorobenzene	NA	Lab	< 0.018 mg/kg	< 0.018 mg/kg
1,2-Diphenylhydrazine	NA	Lab	< 0.015 mg/kg	< 0.015 mg/kg
1,3-Dichlorobenzene	NA	Lab	< 0.019 mg/kg	< 0.019 mg/kg
1,4-Dichlorobenzene	NA	Lab	< 0.018 mg/kg	< 0.018 mg/kg
2,4,5-Trichlorophenol	NA	Lab	< 0.018 mg/kg	< 0.018 mg/kg
2,4,6-Trichlorophenol	NA	Lab	< 0.015 mg/kg	< 0.015 mg/kg
2,4-Dichlorophenol	NA	Lab	< 0.017 mg/kg	< 0.017 mg/kg
2,4-Dimethylphenol	NA	Lab	< 0.016 mg/kg	< 0.016 mg/kg
2,4-Dinitrophenol	NA	Lab	< 0.12 mg/kg	< 0.12 mg/kg
2,4-Dinitrotoluene	NA	Lab	< 0.015 mg/kg	< 0.015 mg/kg
2,6-Dinitrotoluene	NA	Lab	< 0.016 mg/kg	< 0.016 mg/kg
2-Chloronaphthalene	NA	Lab	< 0.010 mg/kg	< 0.010 mg/kg
2-Chlorophenol	NA	Lab	< 0.0099 mg/kg	< 0.0099 mg/kg
2-Methyl-4,6-dinitrophenol	NA	Lab	< 0.15 mg/kg	< 0.15 mg/kg
2-Methylnaphthalene	NA	Lab	< 0.011 mg/kg	< 0.011 mg/kg
2-Nitroaniline	NA	Lab	< 0.017 mg/kg	< 0.017 mg/kg
2-Nitrophenol	NA	Lab	< 0.014 mg/kg	< 0.014 mg/kg
3,3'-Dichlorobenzidine	NA	Lab	< 0.027 mg/kg	< 0.027 mg/kg
3-Nitroaniline	NA	Lab	< 0.18 mg/kg	< 0.18 mg/kg
4-Bromophenyl phenyl ether	NA	Lab	< 0.013 mg/kg	< 0.013 mg/kg
4-Chloro-3-methylphenol	NA	Lab	< 0.017 mg/kg	< 0.017 mg/kg
4-Chloroaniline	NA	Lab	< 0.015 mg/kg	< 0.015 mg/kg
4-Chlorophenyl phenyl ether	NA	Lab	< 0.016 mg/kg	< 0.016 mg/kg
4-Nitroaniline	NA	Lab	< 0.18 mg/kg	< 0.18 mg/kg
4-Nitrophenol	NA	Lab	< 0.15 mg/kg	< 0.15 mg/kg
Acenaphthene	NA	Lab	< 0.014 mg/kg	< 0.014 mg/kg
Acenaphthylene	NA	Lab	< 0.016 mg/kg	< 0.016 mg/kg
Anthracene	NA	Lab	< 0.014 mg/kg	< 0.014 mg/kg
Benzidine	NA	Lab	< 0.42 R mg/kg	< 0.42 R mg/kg
Benzo(a)anthracene	NA	Lab	< 0.013 mg/kg	< 0.013 mg/kg
Benzo(a)pyrene	NA	Lab	< 0.020 mg/kg	< 0.020 mg/kg
Benzo(b)fluoranthene	NA	Lab	< 0.018 mg/kg	< 0.018 mg/kg
Benzo(g,h,i)perylene	NA	Lab	< 0.021 mg/kg	< 0.021 mg/kg
Benzo(k)fluoranthene	NA	Lab	< 0.020 mg/kg	< 0.020 mg/kg
Benzoic Acid	NA	Lab	< 0.14 mg/kg	< 0.14 mg/kg

Appendix 1-C4c-2ii
Laboratory Blank Data - Solid - Organics
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date			QC 9/18/2008	QC 9/19/2008
Sys Sample Code			LBS809186_09182008	LBS809275_09192008
Sample Type Code			LB	LB
Chemical Name	Total or Dissolved	Analysis Location		
Benzyl alcohol	NA	Lab	< 0.017 mg/kg	< 0.017 mg/kg
Bis(2-chloroethoxy)methane	NA	Lab	< 0.011 mg/kg	< 0.011 mg/kg
Bis(2-chloroethyl)ether	NA	Lab	< 0.012 mg/kg	< 0.012 mg/kg
Bis(2-chloroisopropyl)ether	NA	Lab	< 0.015 mg/kg	< 0.015 mg/kg
Bis(2-ethylhexyl)phthalate	NA	Lab	< 0.019 mg/kg	< 0.019 mg/kg
Butyl benzyl phthalate	NA	Lab	< 0.017 mg/kg	< 0.017 mg/kg
Carbazole	NA	Lab	< 0.012 mg/kg	< 0.012 mg/kg
Chrysene	NA	Lab	< 0.012 mg/kg	< 0.012 mg/kg
Dibenz(a,h)anthracene	NA	Lab	< 0.028 mg/kg	< 0.028 mg/kg
Dibenzofuran	NA	Lab	< 0.012 mg/kg	< 0.012 mg/kg
Diethyl phthalate	NA	Lab	< 0.015 mg/kg	< 0.015 mg/kg
Dimethyl phthalate	NA	Lab	< 0.017 mg/kg	< 0.017 mg/kg
Di-n-butyl phthalate	NA	Lab	< 0.013 mg/kg	< 0.013 mg/kg
Di-n-octyl phthalate	NA	Lab	< 0.024 mg/kg	< 0.024 mg/kg
Fluoranthene	NA	Lab	< 0.012 mg/kg	< 0.012 mg/kg
Fluorene	NA	Lab	< 0.013 mg/kg	< 0.013 mg/kg
Hexachlorobenzene	NA	Lab	< 0.015 mg/kg	< 0.015 mg/kg
Hexachlorobutadiene	NA	Lab	< 0.015 mg/kg	< 0.015 mg/kg
Hexachlorocyclopentadiene	NA	Lab	< 0.013 mg/kg	< 0.013 mg/kg
Hexachloroethane	NA	Lab	< 0.022 mg/kg	< 0.022 mg/kg
Indeno(1,2,3-cd)pyrene	NA	Lab	< 0.039 mg/kg	< 0.039 mg/kg
Isophorone	NA	Lab	< 0.014 mg/kg	< 0.014 mg/kg
Naphthalene	NA	Lab	< 0.015 mg/kg	< 0.015 mg/kg
Nitrobenzene	NA	Lab	< 0.027 mg/kg	< 0.027 mg/kg
N-Nitrosodimethylamine	NA	Lab	< 0.026 mg/kg	< 0.026 mg/kg
N-Nitrosodi-n-propylamine	NA	Lab	< 0.020 mg/kg	< 0.020 mg/kg
N-Nitrosodiphenylamine	NA	Lab	< 0.018 mg/kg	< 0.018 mg/kg
o-Cresol	NA	Lab	< 0.017 mg/kg	< 0.017 mg/kg
p-Cresol	NA	Lab	< 0.017 mg/kg	< 0.017 mg/kg
Pentachlorophenol	NA	Lab	< 0.13 mg/kg	< 0.13 mg/kg
Phenanthrene	NA	Lab	< 0.010 mg/kg	< 0.010 mg/kg
Phenol	NA	Lab	< 0.020 mg/kg	< 0.020 mg/kg
Pyrene	NA	Lab	< 0.014 mg/kg	< 0.014 mg/kg
Pyridine	NA	Lab	< 0.020 mg/kg	< 0.020 mg/kg

Appendix 1-C4c-2ii
Laboratory Blank Data - Solid - Organics
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date			QC 9/18/2008	QC 9/19/2008
Sys Sample Code			LBS809186_09182008	LBS809275_09192008
Sample Type Code			LB	LB
Chemical Name	Total or Dissolved	Analysis Location		
VOCs				
1,1,1,2-Tetrachloroethane	NA	Lab	< 0.00018 mg/kg < 0.0081 mg/kg	< 0.0081 mg/kg < 0.00018 mg/kg
1,1,1-Trichloroethane	NA	Lab	< 0.00015 mg/kg < 0.0032 mg/kg	< 0.0032 mg/kg < 0.00015 mg/kg
1,1,2,2-Tetrachloroethane	NA	Lab	< 0.000089 mg/kg < 0.0071 mg/kg	< 0.0071 mg/kg < 0.000089 mg/kg
1,1,2-Trichloroethane	NA	Lab	< 0.000088 mg/kg < 0.010 mg/kg	< 0.010 mg/kg < 0.000088 mg/kg
1,1-Dichloro-1-propene	NA	Lab	< 0.00015 mg/kg < 0.019 mg/kg	< 0.019 mg/kg < 0.00015 mg/kg
1,1-Dichloroethane	NA	Lab	< 0.000048 mg/kg < 0.0087 mg/kg	< 0.0087 mg/kg < 0.000048 mg/kg
1,1-Dichloroethylene	NA	Lab	< 0.000070 mg/kg < 0.020 mg/kg	< 0.020 mg/kg < 0.000070 mg/kg
1,2,3-Trichlorobenzene	NA	Lab	0.00046 J mg/kg 0.023 J mg/kg	0.011 J mg/kg 0.00081 J mg/kg
1,2,3-Trichloropropane	NA	Lab	< 0.00027 mg/kg < 0.021 mg/kg	< 0.021 mg/kg < 0.00027 mg/kg
1,2,4-Trichlorobenzene	NA	Lab	0.00042 J mg/kg 0.0090 J mg/kg	0.0080 J mg/kg 0.00076 J mg/kg
1,2,4-Trimethylbenzene	NA	Lab	0.00010 J mg/kg < 0.0064 mg/kg	< 0.0064 mg/kg 0.00012 J mg/kg
1,2-Dibromo-3-chloropropane	NA	Lab	< 0.00078 mg/kg < 0.033 mg/kg	< 0.033 J mg/kg < 0.00078 mg/kg
1,2-Dibromoethane	NA	Lab	< 0.00019 mg/kg < 0.0073 mg/kg	< 0.0073 mg/kg < 0.00019 mg/kg
1,2-Dichlorobenzene	NA	Lab	0.00017 J mg/kg < 0.0053 mg/kg	< 0.0053 mg/kg 0.00028 J mg/kg
1,2-Dichloroethane	NA	Lab	< 0.000054 mg/kg < 0.0054 mg/kg	< 0.0054 mg/kg < 0.000054 mg/kg
1,2-Dichloroethylene, cis	NA	Lab	< 0.000081 mg/kg < 0.011 mg/kg	< 0.011 mg/kg < 0.000081 mg/kg
1,2-Dichloroethylene, trans	NA	Lab	< 0.000048 mg/kg < 0.0090 mg/kg	< 0.0090 mg/kg < 0.000048 mg/kg
1,2-Dichloropropane	NA	Lab	< 0.000065 mg/kg < 0.0082 mg/kg	< 0.0082 mg/kg < 0.000065 mg/kg

Appendix 1-C4c-2ii
Laboratory Blank Data - Solid - Organics
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date			QC 9/18/2008	QC 9/19/2008
Sys Sample Code			LBS809186_09182008	LBS809275_09192008
Sample Type Code			LB	LB
Chemical Name	Total or Dissolved	Analysis Location		
1,3,5-Trimethylbenzene	NA	Lab	< 0.000040 mg/kg < 0.0083 mg/kg	< 0.0083 mg/kg < 0.000040 mg/kg
1,3-Dichloro-1-propene trans	NA	Lab	< 0.00010 mg/kg < 0.0091 mg/kg	< 0.0091 mg/kg < 0.00010 mg/kg
1,3-Dichloro-1-propene, cis	NA	Lab	< 0.000031 mg/kg < 0.0089 mg/kg	< 0.0089 mg/kg < 0.000031 mg/kg
1,3-Dichlorobenzene	NA	Lab	0.00020 J mg/kg < 0.0059 mg/kg	< 0.0059 mg/kg 0.00030 J mg/kg
1,3-Dichloropropane	NA	Lab	< 0.000059 mg/kg < 0.0087 mg/kg	< 0.0087 mg/kg < 0.000059 mg/kg
1,4-Dichlorobenzene	NA	Lab	0.00027 J mg/kg < 0.0075 mg/kg	< 0.0075 mg/kg 0.00044 J mg/kg
2,2-Dichloropropane	NA	Lab	< 0.00010 mg/kg < 0.019 mg/kg	< 0.019 mg/kg < 0.00010 mg/kg
2-Chloroethyl Vinyl Ether	NA	Lab	< 0.00031 mg/kg < 0.043 J mg/kg	< 0.043 J mg/kg < 0.00031 mg/kg
2-Hexanone	NA	Lab	< 0.00078 mg/kg < 0.19 mg/kg	< 0.19 mg/kg < 0.00078 mg/kg
Acetone	NA	Lab	0.0053 J mg/kg < 0.24 mg/kg	< 0.24 mg/kg < 0.0029 mg/kg
Acrolein	NA	Lab	< 0.0034 mg/kg < 0.17 mg/kg	< 0.17 R mg/kg < 0.0034 mg/kg
Acrylonitrile	NA	Lab	< 0.0010 mg/kg < 0.032 mg/kg	< 0.032 mg/kg < 0.0010 mg/kg
Benzene	NA	Lab	< 0.00014 mg/kg < 0.0068 mg/kg	< 0.0068 mg/kg < 0.00014 mg/kg
Bromobenzene	NA	Lab	< 0.000092 mg/kg < 0.010 mg/kg	< 0.010 mg/kg < 0.000092 mg/kg
Bromochloromethane	NA	Lab	< 0.00025 mg/kg < 0.0096 mg/kg	< 0.0096 mg/kg < 0.00025 mg/kg
Bromodichloromethane	NA	Lab	< 0.000044 mg/kg < 0.0087 mg/kg	< 0.0087 mg/kg < 0.000044 mg/kg
Bromoform	NA	Lab	< 0.00025 mg/kg < 0.0096 mg/kg	< 0.0096 mg/kg < 0.00025 mg/kg
Bromomethane	NA	Lab	< 0.00042 mg/kg < 0.019 mg/kg	< 0.019 J mg/kg 0.00042 J mg/kg

Appendix 1-C4c-2ii
Laboratory Blank Data - Solid - Organics
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date			QC 9/18/2008	QC 9/19/2008
Sys Sample Code			LBS809186_09182008	LBS809275_09192008
Sample Type Code			LB	LB
Chemical Name	Total or Dissolved	Analysis Location		
Butyl benzene	NA	Lab	< 0.000088 mg/kg < 0.0074 mg/kg	< 0.0074 mg/kg < 0.000088 mg/kg
Butylbenzene sec	NA	Lab	< 0.000065 mg/kg < 0.0078 mg/kg	< 0.0078 mg/kg < 0.000065 mg/kg
Butylbenzene tert-	NA	Lab	< 0.000054 mg/kg < 0.010 mg/kg	< 0.010 mg/kg < 0.000054 mg/kg
Carbon disulfide	NA	Lab	< 0.000053 mg/kg < 0.015 mg/kg	< 0.015 mg/kg < 0.000053 mg/kg
Carbon tetrachloride	NA	Lab	< 0.000078 mg/kg < 0.021 mg/kg	< 0.021 mg/kg < 0.000078 mg/kg
Chlorobenzene	NA	Lab	0.00011 J mg/kg < 0.0063 mg/kg	< 0.0063 mg/kg 0.00015 J mg/kg
Chlorodibromomethane	NA	Lab	< 0.00016 mg/kg < 0.0068 mg/kg	< 0.0068 mg/kg < 0.00016 mg/kg
Chloroethane	NA	Lab	< 0.00030 mg/kg < 0.015 mg/kg	< 0.015 mg/kg < 0.00030 mg/kg
Chloroform	NA	Lab	< 0.000048 mg/kg < 0.0090 mg/kg	< 0.0090 mg/kg < 0.000048 mg/kg
Chloromethane	NA	Lab	< 0.000057 mg/kg < 0.0096 mg/kg	< 0.0096 mg/kg 0.00025 J mg/kg
Chlorotoluene o-	NA	Lab	< 0.000051 mg/kg < 0.0062 mg/kg	< 0.0062 mg/kg < 0.000051 mg/kg
Chlorotoluene p-	NA	Lab	0.00018 J mg/kg < 0.0082 mg/kg	< 0.0082 mg/kg 0.00023 J mg/kg
Cumene (isopropyl benzene)	NA	Lab	< 0.000031 mg/kg < 0.0093 mg/kg	< 0.0093 mg/kg < 0.000031 mg/kg
Cymene p- (Toluene isopropyl p-)	NA	Lab	< 0.000083 mg/kg < 0.0069 mg/kg	< 0.0069 mg/kg < 0.000083 mg/kg
Dibromomethane (methylene bromide)	NA	Lab	< 0.00018 mg/kg < 0.017 mg/kg	< 0.017 mg/kg < 0.00018 mg/kg
Dichlorodifluoromethane (CFC-12)	NA	Lab	< 0.000072 mg/kg < 0.021 mg/kg	< 0.021 mg/kg < 0.000072 mg/kg
Ethyl benzene	NA	Lab	< 0.000041 mg/kg < 0.0045 mg/kg	< 0.0045 mg/kg < 0.000041 mg/kg
Hexachlorobutadiene	NA	Lab	< 0.00017 mg/kg < 0.016 mg/kg	< 0.00017 mg/kg < 0.016 mg/kg

Appendix 1-C4c-2ii
Laboratory Blank Data - Solid - Organics
2008
Rhodia Silver Bow Plant

Sys Loc Code Sample Date			QC 9/18/2008	QC 9/19/2008
Sys Sample Code			LBS809186_09182008	LBS809275_09192008
Sample Type Code			LB	LB
Chemical Name	Total or Dissolved	Analysis Location		
Iodomethane	NA	Lab	< 0.00059 mg/kg < 0.065 mg/kg	< 0.065 mg/kg < 0.00059 mg/kg
Methyl ethyl ketone	NA	Lab	< 0.0016 mg/kg < 0.21 mg/kg	< 0.21 mg/kg < 0.0016 mg/kg
Methyl isobutyl ketone	NA	Lab	< 0.00024 mg/kg < 0.34 mg/kg	< 0.34 mg/kg < 0.00024 mg/kg
Methyl tertiary butyl ether (MTBE)	NA	Lab	< 0.000080 mg/kg < 0.015 mg/kg	< 0.015 mg/kg < 0.000080 mg/kg
Methylene chloride	NA	Lab	0.0039 J mg/kg < 0.0071 mg/kg	< 0.0071 mg/kg 0.00077 J mg/kg
Naphthalene	NA	Lab	0.00090 J mg/kg 0.016 J mg/kg	0.0070 J mg/kg 0.0015 J mg/kg
Propylbenzene	NA	Lab	< 0.000062 mg/kg < 0.0093 mg/kg	< 0.0093 mg/kg < 0.000062 mg/kg
Styrene	NA	Lab	0.00014 J mg/kg < 0.0045 mg/kg	< 0.0045 mg/kg 0.00014 J mg/kg
Tetrachloroethylene	NA	Lab	< 0.00012 mg/kg < 0.015 mg/kg	< 0.015 mg/kg < 0.00012 mg/kg
Toluene	NA	Lab	0.00020 J mg/kg < 0.0085 mg/kg	< 0.0085 mg/kg < 0.000044 mg/kg
Trichloroethylene	NA	Lab	< 0.00013 mg/kg < 0.013 mg/kg	< 0.013 mg/kg < 0.00013 mg/kg
Trichlorofluoromethane	NA	Lab	< 0.000054 mg/kg < 0.023 mg/kg	< 0.023 mg/kg < 0.000054 mg/kg
Vinyl acetate	NA	Lab	< 0.00060 mg/kg < 0.037 mg/kg	< 0.037 mg/kg < 0.00060 mg/kg
Vinyl chloride	NA	Lab	< 0.000057 R mg/kg < 0.019 mg/kg	< 0.019 mg/kg < 0.000057 mg/kg
Xylene m & p	NA	Lab	< 0.000093 mg/kg < 0.0093 mg/kg	< 0.0093 mg/kg 0.00018 J mg/kg
Xylene, o-	NA	Lab	< 0.000059 mg/kg < 0.0068 mg/kg	< 0.0068 mg/kg < 0.000059 mg/kg

Appendix 1-C4c-2iii
Laboratory Blank Data - Solid TCLP Metals
2008
Rhodia Silver Bow Plant

Sys Loc Code			QC
Sample Date			9/22/2008
Sys Sample Code			LB809273_09222008
Sample Type Code			LB
Chemical Name	Total or Dissolved	Analysis Location	
TCLP Metals			
Arsenic	NA	Lab	< 0.02 mg/l
Barium	NA	Lab	1.0 J mg/l
Cadmium	NA	Lab	< 0.0003 mg/l
Chromium	NA	Lab	< 0.002 mg/l
Lead	NA	Lab	< 0.01 mg/l
Mercury	NA	Lab	< 0.0002 mg/l
Selenium	NA	Lab	< 0.009 mg/l
Silver	NA	Lab	< 0.007 mg/l