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Racer Trust Lansing-Plant 2

Data Review

LANSING, MICHIGAN

Volatiles, Semivolatiles, PCBs, and Metals Analyses

SDG# S50296, S50297, S50331, S50332 and S50467

Analyses Performed By:
Merit Laboratories, Inc.
East Lansing, MI

Report: #15018R
Review Level: Tier I
Project: B0064479.2011.21GWS

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) # S50296, S50297, S50331, S50332 and S50467 for samples collected in association with the Racer Trust Plant 2 Site. The review was conducted as a Tier I evaluation and included review of data package completeness as required under Region III M2 validation. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

SDG Number	Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
						VOC	SVOC	PCB	MET	TPH
50296	P2-SB-37 (10/6/11)	S50296.01	Oil	10/06/2011						X
50297	P2-MW-4 (10/5/11)	S50297.01	Water	10/05/2011		X	X	X	X	
	Trip Blank	S50297.02	Water	10/05/2011		X				
50331	P2-MW-2 (10/10/11)	S50331.01	Water	10/10/2011		X	X	X	X	
	P2-MW-3 (10/10/11)	S50331.02	Water	10/10/2011		X	X	X	X	
	P2-MW-1 (10/10/11)	S50331.03	Water	10/10/2011		X	X	X	X	
	Trip Blank 2 (10/10/11)	S50331.04	Water	10/10/2011		X				
50332	MW-02-04 (10/11/11)	S50332.01	Water	10/11/2011		X	X	X	X	
	Duplicate 1 (10/11/11)	S50332.04	Water	10/11/2011	MW-02-04 (10/11/11)	X	X	X	X	
	MW-04-03 (10/11/11)	S50332.05	Water	10/11/2011		X	X	X	X	
50467	P2-MW-2(10/19/11)	S50467.01	Water	10/19/2011					X	

Note:

1. Matrix spike/matrix spike duplicate was performed on sample location MW-02-04 (10/11/11).
2. Please note SDG S50332 was mistakenly identified by the laboratory as Plant 2. Samples associated with this SDG are from Plant 3.

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

QA - Quality Assurance

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Methods 8260B, 8260–SIM, 8270C, 8270–SIM and 8082. All samples in this data set were subjected to M-2 (Tier I) level data validation for organic compounds, as defined in the *USEPA Region III Innovative Approaches to Data Validation (June 1995)*. Validation was performed following the procedures specified in *Region III Modifications to National Functional Guidelines for Organic Data Review (September 1994) and* USEPA National Functional Guidelines of October 1999*.* Modifications to the procedures were necessary to accommodate method and reporting differences for samples analyzed using non-CLP methods (i.e., USEPA SW-846 methods). The Tier I was completed as defined in the MLC Buick City work plan (August 13, 2010). The quality indicators of this limited data review are included in the checklist.

The quality indicators of this data review were limited to the forms/data supplied by the laboratory which included: holding times, associated blanks, laboratory control samples, matrix spike/matrix spike duplicate samples, field duplicates and surrogate recoveries.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

  U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

  B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

  J The compound was positively identified; however, the associated numerical value is an estimated concentration only..

  UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

  UL The compound was not detected, quantitation limit is probably higher.

JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

UB Compound considered non-detect at the listed value due to associated blank contamination.

N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

K The compound was positively identified; however, the associated numerical value is an estimated concentration only and the reported value may be biased high. Actual concentration is expected lower.

L The compound was positively identified; however, the associated numerical value is an estimated concentration only and the reported value may be biased low. Actual concentration is expected to be higher.

R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8260B and 8260B-SIM	Water	14 days from collection to analysis	Cool to 4°C±2°C; preserved to a pH of less than 2 s.u.
	Soil	48 hours from collection to extraction and 14 days from extraction to analysis	Cool to 4°C±2°C.

s.u. Standard units

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were detected in the associated QA blanks; however, the associated sample results were greater than the BAL and/or were non-detect. No qualification of the sample results was required.

3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries.

5. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries within the control limits.

6. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
MW-02-04 (10/11/11) Duplicate 1 (10/11/11)	All compounds	U	U	AC

AC Acceptable
U Not detected

The calculated RPDs between the parent sample and field duplicate were acceptable.

7. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR VOCs

VOCs: SW-846 8260B	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier I Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks					X
C. Trip blanks		X		X	
Laboratory Control Sample (LCS)		X		X	
Laboratory Control Sample Duplicate(LCSD)		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS)		X		X	
Matrix Spike Duplicate(MSD)		X		X	
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X

%R Percent recovery
RPD Relative percent difference
%D Percent difference

SEMIVOLATILE ORGANIC COMPOUND (VOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8270C and 8270C-SIM	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cool to 4°C±2°C
	Soil	14 days from collection to extraction and 40 days from extraction to analysis	Cool to 4°C±2°C

s.u. Standard units

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were detected in the associated QA blanks; however, the associated sample results were greater than the BAL and/or were non-detect. No qualification of the sample results was required.

3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries.

Sample locations associated with MS/MSD recoveries exhibiting an RPD greater than of the control limit presented in the following table.

Sample Locations	Compound
MW-02-04 (10/11/11)	Benzaldehyde
	Phenol

The criteria used to evaluate the RPD between the MS/MSD recoveries are presented in the following table. In the case of an RPD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	UJ
	Detect	J

5. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

Sample locations associated with LCS/LCSD analysis exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Compound	LCS Recovery	LCSD Recovery
MW-02-04 (10/11/11) Duplicate 1 (10/11/11) MW-04-03 (10/11/11)	3,4-Methylphenol	>UL	>UL

The criteria used to evaluate the LCS recoveries are presented in the following table. In the case of an LCS deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J

6. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
MW-02-04 (10/11/11) Duplicate 1 (10/11/11)	All compounds	U	U	AC

AC Acceptable
U Not detected

The calculated RPDs between the parent sample and field duplicate were acceptable.

7. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR SVOCs

SVOCs: SW-846 8270C	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier I Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X		X	
Laboratory Control Sample (LCS)		X	X		
Laboratory Control Sample Duplicate(LCSD)		X	X		
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS)		X		X	
Matrix Spike Duplicate(MSD)		X		X	
MS/MSD Precision (RPD)		X	X		
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X

%R - percent recovery, RPD - relative percent difference

POLYCHLORINATED BIPHENYLS (PCBs) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8082	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cool to 4°C±2°C
	Soil	14 days from collection to extraction and 40 days from extraction to analysis	Cool to 4°C±2°C

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. PCB analysis requires that one of the two PCB surrogate compounds exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries reported from the primary column were within control limits.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

A MS/MSD was not performed on a sample location within this SDG.

5. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

6. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
MW-02-04 (10/11/11) Duplicate 1 (10/11/11)	All compounds	U	U	AC

AC Acceptable
U Not detected

The calculated RPDs between the parent sample and field duplicate were acceptable.

7. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR PCBs

PCBs; SW-846 8082	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY (GC/ECD)					
Tier I Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks					X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R		X		X	
Matrix Spike Duplicate(MSD) %R		X		X	
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X

%RSD – relative standard deviation, %R - percent recovery, RPD - relative percent difference, %D – difference

DIESEL RANGE ORGANICS (DRO) – GAS RANGE ORGANICS (GRO) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8015	Soil	14 days from collection to extraction and 40 days from extraction to analysis	Cool to 4°C±2°C
	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cool to 4°C±2°C

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the reporting limit (RL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were detected in the associated QA blanks; however, the associated sample results were greater than the BAL and/or were non-detect. No qualification of the sample results was required.

3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. The analysis requires surrogate compounds exhibit recoveries within the laboratory-established acceptance limits.

Sample locations associated with surrogates exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Surrogate	Recovery
P2-SB-37 (10/6/11)	2-Fluorobiphenyl	D

Diluted (D)

The criteria used to evaluate the surrogate recoveries are presented in the following table. In the case of a surrogate deviation, the sample results associated with the deviant fraction are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	No Action
	Detect	J
< LL but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
Surrogates diluted below the calibration curve due to the high concentration of a target compounds	Non-detect	J[1]
	Detect	

Note:
[1]. A more concentrated analysis was not performed with surrogate compounds within the calibration range therefore no determination of extraction efficiency could be made.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

A MS/MSD was not performed on a sample location within this SDG.

5. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries within the control limits.

6. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

A field duplicate was not included with these SDGs.

7. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR DRO - GRO

DRO/GRO; SW-846 8015	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY (GC/FID)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks					X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R					X
Matrix Spike Duplicate(MSD) %R					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)					X
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X

%RSD – relative standard deviation, %R - percent recovery, RPD - relative percent difference, %D – difference

INORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) Method 6020 and 7470A. All samples in this data set were subjected to IM-1 (Tier I) level data validation for inorganic compounds, as defined in the *USEPA Region III Innovative Approaches to Data Validation (June 1995)*. Validation was performed following the procedures specified in *Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses (April 1993)* and USEPA *National Functional Guidelines for Inorganic Data Review (July 2002).* Modifications to the procedures were necessary to accommodate method and reporting differences for samples analyzed using non-CLP methods (i.e., USEPA SW-846 methods). The Tier I was completed as defined in the MLC Buick City work plan (August 13, 2010). The quality indicators of this limited data review are included in the checklist.

The quality indicators of this data review were limited to the forms/data supplied by the laboratory which included: holding times, associated blanks, laboratory control samples, matrix spike/matrix spike duplicate samples, and field duplicates.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and that it was already subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with the USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

  U The analyte was analyzed for but not detected. The associated value is the analyte instrument detection limit.

  B The reported value was obtained from a reading less than the contract-required detection limit (CRDL), but greater than or equal to the instrument detection limit (IDL).

- Quantitation (Q) Qualifiers

  E The reported value is estimated due to the presence of interference.

  N Spiked sample recovery is not within control limits.

  * Duplicate analysis is not within control limits.

- Validation Qualifiers

  J The analyte was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The analyte was not detected above the reported sample detection limit. However, the reported limit is approximate and may or may not represent the actual limit of detection.

  UL The analyte was not detected, quantitation limit is probably higher.

JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

UB Analyte considered non-detect at the listed value due to associated blank contamination.

N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

K The analyte was positively identified; however, the associated numerical value is an estimated concentration only and the reported value may be biased high. Actual concentration is expected lower.

L The analyte was positively identified; however, the associated numerical value is an estimated concentration only and the reported value may be biased low. Actual concentration is expected to be higher.

R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

METALS ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 6020	Water	180 days from collection to analysis	Cooled @ Cooled @ 4°C +/- 2; preserved to a pH of less than 2.
	Soil	180 days from collection to analysis	Cooled @ 4°C +/- 2
SW-846 7470	Water	28 days from collection to analysis	Cool to 4°C±2°C; preserved to a pH of less than 2.
SW-846 7471	Soil	28 days from collection to analysis	Cool to 4°C±2°C.

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the instrument detection limit (IDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Analytes were not detected in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Matrix Spike (MS/MSD)/ Matrix Spike Duplicate Analysis

MS/MSD and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

3.1 MS/MSD Analysis

All metal analytes must exhibit a percent recovery within the established acceptance limits of 75% to 125%. The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the analyte's concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater. In instance where this is true, the data will not be qualified even if the percent recovery does not meet the control limits and the laboratory qualifier "N" will be removed.

The MS/MSD exhibited recoveries within the control limits.

3.2 Laboratory Duplicate Analysis

The laboratory duplicate relative percent difference (RPD) criterion is applied when parent and duplicate sample concentrations are greater than or equal to 5 times the CRDL. A control limit of 20% for water matrices and 35% for soil matrices is applied when the criteria above is true. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the CRDL, a control limit of one times the CRDL is applied for water matrices and two times the CRDL for soil matrices.

MS/MSD analysis was performed in replacement of the laboratory duplicate analysis. The MS/MSD recoveries exhibited acceptable RPD.

4. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
MW-02-04 (10/11/11) Duplicate 1 (10/11/11)	Arsenic	0.017	0.018	5.7%
	Barium	0.148	0.142	4.1%
	Manganese	0.095	0.094	1.1%
	Nickel	0.013	0.013	AC
	Arsenic (Dissolved)	0.012	0.013	8.0%
	Barium (Dissolved)	0.137	0.142	3.6%
	Copper (Dissolved)	0.002 U	0.002	AC
	Manganese (Dissolved)	0.079	0.079	0%
	Nickel (Dissolved)	0.013	0.014	AC

AC Acceptable
U Not detected

The calculated RPDs between the parent sample and field duplicate were acceptable.

5. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The analytes associated with the LCS analysis must exhibit a percent recovery between the control limits of 80% and 120%.

The LCS analysis exhibited recoveries within the control limits.

6. System Performance and Overall Assessment

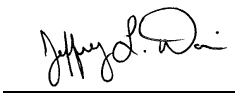
Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR METAL

METALS; SW-846 6000/7000	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
Inductively Coupled Plasma-Atomic Emission Spectrometry (ICP)					
Tier I Validation					
Holding Times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Instrument Blanks					X
B. Method Blanks		X		X	
C. Rinse Blanks					X
Laboratory Control Sample (LCS)		X		X	
Matrix Spike (MS) %R		X		X	
Matrix Spike Duplicate (MSD) %R		X		X	
MS/MSD Precision (RPD)		X		X	
Field Duplicate (RPD)		X		X	
ICP Serial Dilution					X

%R Percent recovery
RPD Relative percent difference

VALIDATION PERFORMED BY: Jeffrey L. Davin

SIGNATURE: 

DATE: November 7, 2011

PEER REVIEW BY: Dennis Capria

DATE: November 28, 2011

CORRECTED SAMPLE ANALYSIS DATA SHEETS AND COCs

Merit Laboratories, Inc.

Analytical Laboratory Report

Lab Sample ID: S50296.01
Sample Tag: P2-SB-37 (10/6/11)
Collected Date/Time: 10/06/2011 12:30
Matrix: Oil
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Amber	None	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
DRO Extraction	Completed			3510C	10/12/11 18:50	EMR		
Organics - Semi-Volatiles								
TPH DRO (C10-C28)	270,000,000	ug/L J	20,000,000	8015M	10/13/11 14:43	PL		~~X~~
TPH DRO (C28-C34)	190,000,000	ug/L J	20,000,000	8015M	10/13/11 14:43	PL		~~X~~
Organics - Volatiles								
TPH GRO (C5-C10)	1,100,000	ug/L	500,000	8015M	10/18/11 16:56	WAT		~~Y~~

X-Elevated reporting limit due to matrix interference
Y-Elevated reporting limit due to high target concentration

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Plant 2

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page ___ of ___

Lab Work Order #:

Send Results to:

Contact & Company Name: Randy Christensen / Arcadis
Telephone: 810-225-1940
Address: 10559 Citation Dr, Suite 100
Fax:
City: Brighton, State: MI, Zip: 48116
E-mail Address: Randy.Christensen@Arcadis-us.com
Project Name/Desc. (City, State): RACER Trust Lansing, MI
Project #: 60064479.2011.216WS
Sampler's Printed Name: Austin Westhuis
Sampler's Signature:

Preservative	E							
Filtered (✓)								
# of Containers	1							
Container Information								

PARAMETER ANALYSIS & METHOD

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	TPH Range C5 - C34							
50296.01 P2-SB-37 (10/6/11)	10/6/11	1230		✓	NL	✓							

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: ____
G. Other: ____
H. Other: ____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: ____
10. Other: ____

Matrix Key:
SO - Soil
W - Water
T - Tissue
SE - Sediment
SL - Sludge
A - Air
NL - NAPL/Oil
SW - Sample Wipe
Other: ____

REMARKS

Special Instructions/Comments:

* Please provide copies of chromatograph

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact	Printed Name: Austin Westhuis	Printed Name: Tim Glass	Printed Name:	Printed Name: Paula Shaw
☒ Cooler packed with ice (✓)		Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements: Standard	Sample Receipt:	Firm: Arcadis	Firm/Courier: Merit	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 5.0	Date/Time: 10-7-11 1500	Date/Time: 10-7-11 1500	Date/Time:	Date/Time: 10-7-11 1545

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Merit Laboratories, Inc.

Analytical Laboratory Report

Revised Report

Lab Sample ID: S50297.01
Sample Tag: P2-MW-4 (10/5/11)
Collected Date/Time: 10/05/2011 16:45
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	1L Amber	None	Yes	5.0	IR
2	40ml Glass	HCL	Yes	5.0	IR
1	125ml Plastic	HNO3	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	10/12/11 22:55	EMR		
Extraction, PCB	Completed			3510C	10/11/11 12:30	CCM		
Mercury Digestion	Completed			7471A	10/11/11 10:30	JRH		
Metal Digestion	Completed			3015A	10/17/11 01:00	SLR		
Metals								
Antimony	Not detected	mg/L	0.002	6020	10/17/11 19:36	SLS	7440-36-0	
Arsenic	0.003	mg/L	0.002	6020	10/17/11 19:36	SLS	7440-38-2	
Barium	0.567	mg/L	0.010	6020	10/17/11 19:36	SLS	7440-39-3	
Beryllium	Not detected	mg/L	0.001	6020	10/18/11 13:32	SLS	7440-41-7	
Boron	0.10	mg/L	0.04	6020	10/18/11 13:32	SLS	7440-42-8	
Cadmium	Not detected	mg/L	0.001	6020	10/17/11 19:36	SLS	7440-43-9	
Chromium	Not detected	mg/L	0.010	6020	10/17/11 19:36	SLS	7440-47-3	
Cobalt	Not detected	mg/L	0.010	6020	10/17/11 19:36	SLS	7440-48-4	
Copper	Not detected	mg/L	0.002	6020	10/17/11 19:36	SLS	7440-50-8	
Lead	Not detected	mg/L	0.002	6020	10/17/11 19:36	SLS	7439-92-1	
Manganese	0.132	mg/L	0.010	6020	10/17/11 19:36	SLS	7439-96-5	
Mercury	Not detected	mg/L	0.0001	7471A	10/11/11 15:09	JRT	7439-97-6	
Nickel	Not detected	mg/L	0.010	6020	10/17/11 19:36	SLS	7440-02-0	
Selenium	Not detected	mg/L	0.002	6020	10/17/11 19:36	SLS	7782-49-2	
Silver	Not detected	mg/L	0.0002	6020	10/17/11 19:36	SLS	7440-22-4	
Thallium	Not detected	mg/L	0.002	6020	10/17/11 19:36	SLS	7440-28-0	
Vanadium	Not detected	mg/L	0.002	6020	10/17/11 19:36	SLS	7440-62-2	
Zinc	Not detected	mg/L	0.010	6020	10/17/11 19:36	SLS	7440-66-6	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/L	0.05	8082A	10/11/11 13:09	JANB	12674-11-2	
PCB-1242	Not detected	ug/L	0.05	8082A	10/11/11 13:09	JANB	53469-21-9	
PCB-1221	Not detected	ug/L	0.05	8082A	10/11/11 13:09	JANB	11104-28-2	
PCB-1232	Not detected	ug/L	0.05	8082A	10/11/11 13:09	JANB	11141-16-5	
PCB-1248	Not detected	ug/L	0.05	8082A	10/11/11 13:09	JANB	12672-29-6	
PCB-1254	Not detected	ug/L	0.05	8082A	10/11/11 13:09	JANB	11097-69-1	
PCB-1260	Not detected	ug/L	0.05	8082A	10/11/11 13:09	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/L	0.05	8082A	10/11/11 13:09	JANB	12674-11-2	
PCB-1242	Not detected	ug/L	0.05	8082A	10/11/11 13:09	JANB	53469-21-9	
PCB-1221	Not detected	ug/L	0.05	8082A	10/11/11 13:09	JANB	11104-28-2	
PCB-1232	Not detected	ug/L	0.05	8082A	10/11/11 13:09	JANB	11141-16-5	
PCB-1248	Not detected	ug/L	0.05	8082A	10/11/11 13:09	JANB	12672-29-6	

Lab Sample ID: S50297.01 (continued)
Sample Tag: P2-MW-4 (10/5/11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - PCBs/Pesticides (continued)								
TCL PCB List (Column 2) (continued)								
PCB-1254	Not detected	ug/L	0.05	8082A	10/11/11 13:09	JANB	11097-69-1	
PCB-1260	Not detected	ug/L	0.05	8082A	10/11/11 13:09	JANB	11096-82-5	
Organics - Semi-Volatiles								
3,3'-Dichlorobenzidine	Not detected	ug/L	0.05	8270C	10/20/11 22:07	PL	91-94-1	
Hexachlorobenzene	Not detected	ug/L	0.05	8270C	10/20/11 22:07	PL	118-74-1	
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	98-86-2	
Anthracene	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	120-12-7	
Atrazine	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	2	8270C	10/13/11 16:25	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	105-60-2	
Carbazole	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	108-60-1	
Chrysene	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	8270C	10/13/11 16:25	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	2	8270C	10/13/11 16:25	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	2	8270C	10/13/11 16:25	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	206-44-0	
Fluorene	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	77-47-4	

Lab Sample ID: S50297.01 (continued)
Sample Tag: P2-MW-4 (10/5/11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachloroethane	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	193-39-5	
Isophorone	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	85-01-8	
Phenol	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	108-95-2	
Pyrene	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	8270C	10/13/11 16:25	PL	88-06-2	
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.05	8260B - SIM	10/13/11 15:05	JGH	96-12-8	
1,2-Dibromoethane	Not detected	ug/L	0.02	8260B - SIM	10/13/11 15:05	JGH	106-93-4	
1,4-Dioxane	62	ug/L	5	8260B - SIM	10/13/11 15:05	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	76-13-1	
Acetone	Not detected	ug/L	10	8260B	10/11/11 19:01	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	8260B	10/11/11 19:01	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	8260B	10/11/11 19:01	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	110-82-7	

Lab Sample ID: S50297.01 (continued)
Sample Tag: P2-MW-4 (10/5/11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	8260B	10/11/11 19:01	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	8260B	10/11/11 19:01	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	56-23-5	
Benzene	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	8260B	10/11/11 19:01	JGH		
o-Xylene	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	95-47-6	
Styrene	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	8260B	10/11/11 19:01	JGH	120-82-1	

Lab Sample ID: S50297.02
Sample Tag: Trip Blank
Collected Date/Time: 10/05/2011 00:01
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.05	8260B - SIM	10/13/11 15:24	JGH	96-12-8	
1,2-Dibromoethane	Not detected	ug/L	0.02	8260B - SIM	10/13/11 15:24	JGH	106-93-4	
1,4-Dioxane	Not detected	ug/L	5	8260B - SIM	10/13/11 15:24	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	76-13-1	
Acetone	Not detected	ug/L	10	8260B	10/11/11 19:21	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	8260B	10/11/11 19:21	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	8260B	10/11/11 19:21	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	8260B	10/11/11 19:21	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	8260B	10/11/11 19:21	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	56-23-5	
Benzene	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	100-41-4	

Lab Sample ID: S50297.02 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
p,m-Xylene	Not detected	ug/L	2	8260B	10/11/11 19:21	JGH		
o-Xylene	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	95-47-6	
Styrene	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	8260B	10/11/11 19:21	JGH	120-82-1	

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Plant 2

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page ___ of ___

Lab Work Order #:

Send Results to:

Contact & Company Name: Randy Christensen/Arcadis
Telephone: 810-225-1940
Address: 10559 Citation Dr: Suite 100
Fax:
City: Brighton, State: MI, Zip: 48116
E-mail Address: Randy.Christensen@Arcadis-us.com
Project Name/Location (City, State): BAKER Trust Lansing, MI
Project #: B0064479.2011.216WS
Sampler's Printed Name: Austin Westhuis
Sampler's Signature:

Preservative	B	E	C	E				
Filtered (✓)								
# of Containers								
Container Information								

PARAMETER ANALYSIS & METHOD

Keys

Preservation Key: A. H_2SO_4; B. HCl; C. HNO_3; D. NaOH; E. None; F. Other ____; G. Other ____; H. Other ____

Container Information Key: 1. 40 ml Vial; 2. 1 L Amber; 3. 250 ml Plastic; 4. 500 ml Plastic; 5. Encore; 6. 2 oz. Glass; 7. 4 oz. Glass; 8. 8 oz. Glass; 9. Other: ____; 10. Other: ____

Matrix Key: SO - Soil; SE - Sediment; NL - NAPL/Oil; W - Water; SL - Sludge; SW - Sample Wipe; T - Tissue; A - Air; Other: ____

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	TCL VOCs	TCL SVOCs	TAL Metals	PCBs	REMARKS
50291 01	P2-MW-4(10/5/11)	10/5/11	1645		✓	W	✓	✓	✓	✓	
02	Trip Blank	10/5/11	—				✓				

Special Instructions/Comments:

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓)	Printed Name: Austin Westhuis	Printed Name: Tom Gees	Printed Name:	Printed Name: Paula Shaw
☆ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements: Standard	Sample Receipt:	Firm: Arcadis	Firm/Courier: Merit	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 5.0	Date/Time: 10-7-11 15:20	Date/Time: 10-7-11 1500	Date/Time:	Date/Time: 10-7-11 1545

Distribution: WHITE – Laboratory returns with results; YELLOW – Lab copy; PINK – Retained by ARCADIS

Lab Sample ID: S50331.01
Sample Tag: P2-MW-2 (10/10/11)
Collected Date/Time: 10/10/2011 12:00
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1L Amber	None	Yes	4.3	IR
2	40ml Glass	HCL	Yes	4.3	IR
2	125ml Plastic	HNO3	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	10/12/11 22:55	EMR		
Extraction, PCB	Completed			3510C	10/13/11 16:10	CCM		
Mercury Digestion	Completed			7471A	10/17/11 12:10	JRH		
Metal Digestion	Completed			3015A	10/17/11 01:00	SLR		
Metals								
Antimony	Not detected	mg/L	0.002	6020	10/17/11 19:45	SLS	7440-36-0	
Arsenic	0.009	mg/L	0.002	6020	10/17/11 19:45	SLS	7440-38-2	
Barium	0.213	mg/L	0.010	6020	10/17/11 19:45	SLS	7440-39-3	
Beryllium	Not detected	mg/L	0.001	6020	10/18/11 13:37	SLS	7440-41-7	
Boron	0.05	mg/L	0.04	6020	10/18/11 13:37	SLS	7440-42-8	
Cadmium	Not detected	mg/L	0.001	6020	10/17/11 19:45	SLS	7440-43-9	
Chromium	Not detected	mg/L	0.010	6020	10/17/11 19:45	SLS	7440-47-3	
Cobalt	Not detected	mg/L	0.010	6020	10/17/11 19:45	SLS	7440-48-4	
Copper	Not detected	mg/L	0.002	6020	10/17/11 19:45	SLS	7440-50-8	
Lead	Not detected	mg/L	0.002	6020	10/17/11 19:45	SLS	7439-92-1	
Manganese	0.086	mg/L	0.010	6020	10/17/11 19:45	SLS	7439-96-5	
Mercury	Not detected	mg/L	0.0001	7471A	10/17/11 16:01	JRT	7439-97-6	
Nickel	Not detected	mg/L	0.010	6020	10/17/11 19:45	SLS	7440-02-0	
Selenium	Not detected	mg/L	0.002	6020	10/17/11 19:45	SLS	7782-49-2	
Silver	Not detected	mg/L	0.0002	6020	10/17/11 19:45	SLS	7440-22-4	
Thallium	Not detected	mg/L	0.002	6020	10/17/11 19:45	SLS	7440-28-0	
Vanadium	Not detected	mg/L	0.002	6020	10/17/11 19:45	SLS	7440-62-2	
Zinc	Not detected	mg/L	0.010	6020	10/17/11 19:45	SLS	7440-66-6	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/L	0.05	8082A	10/13/11 14:15	JANB	12674-11-2	
PCB-1242	Not detected	ug/L	0.05	8082A	10/13/11 14:15	JANB	53469-21-9	
PCB-1221	Not detected	ug/L	0.05	8082A	10/13/11 14:15	JANB	11104-28-2	
PCB-1232	Not detected	ug/L	0.05	8082A	10/13/11 14:15	JANB	11141-16-5	
PCB-1248	Not detected	ug/L	0.05	8082A	10/13/11 14:15	JANB	12672-29-6	
PCB-1254	Not detected	ug/L	0.05	8082A	10/13/11 14:15	JANB	11097-69-1	
PCB-1260	Not detected	ug/L	0.05	8082A	10/13/11 14:15	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/L	0.05	8082A	10/13/11 14:15	JANB	12674-11-2	
PCB-1242	Not detected	ug/L	0.05	8082A	10/13/11 14:15	JANB	53469-21-9	
PCB-1221	Not detected	ug/L	0.05	8082A	10/13/11 14:15	JANB	11104-28-2	
PCB-1232	Not detected	ug/L	0.05	8082A	10/13/11 14:15	JANB	11141-16-5	
PCB-1248	Not detected	ug/L	0.05	8082A	10/13/11 14:15	JANB	12672-29-6	

Lab Sample ID: S50331.01 (continued)
Sample Tag: P2-MW-2 (10/10/11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - PCBs/Pesticides (continued)								
TCL PCB List (Column 2) (continued)								
PCB-1254	Not detected	ug/L	0.05	8082A	10/13/11 14:15	JANB	11097-69-1	
PCB-1260	Not detected	ug/L	0.05	8082A	10/13/11 14:15	JANB	11096-82-5	
Organics - Semi-Volatiles								
3,3'-Dichlorobenzidine	Not detected	ug/L	0.05	8270C	10/20/11 23:07	PL	91-94-1	
Hexachlorobenzene	Not detected	ug/L	0.05	8270C	10/20/11 23:07	PL	118-74-1	
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	98-86-2	
Anthracene	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	120-12-7	
Atrazine	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	2	8270C	10/13/11 17:30	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	105-60-2	
Carbazole	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	108-60-1	
Chrysene	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	8270C	10/13/11 17:30	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	2	8270C	10/13/11 17:30	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	2	8270C	10/13/11 17:30	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	206-44-0	
Fluorene	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	77-47-4	

Lab Sample ID: S50331.01 (continued)
Sample Tag: P2-MW-2 (10/10/11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachloroethane	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	193-39-5	
Isophorone	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	85-01-8	
Phenol	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	108-95-2	
Pyrene	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	8270C	10/13/11 17:30	PL	88-06-2	
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.05	8260B - SIM	10/13/11 16:12	JGH	96-12-8	
1,2-Dibromoethane	Not detected	ug/L	0.02	8260B - SIM	10/13/11 16:12	JGH	106-93-4	
1,4-Dioxane	Not detected	ug/L	5	8260B - SIM	10/13/11 16:12	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	76-13-1	
Acetone	Not detected	ug/L	10	8260B	10/13/11 16:13	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	8260B	10/13/11 16:13	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	8260B	10/13/11 16:13	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	75-09-2	
trans-1,2-Dichloroethene	1	ug/L	1	8260B	10/13/11 16:13	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	110-82-7	

Lab Sample ID: S50331.01 (continued)
Sample Tag: P2-MW-2 (10/10/11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	8260B	10/13/11 16:13	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	8260B	10/13/11 16:13	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	56-23-5	
Benzene	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	8260B	10/13/11 16:13	WAT		
o-Xylene	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	95-47-6	
Styrene	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 16:13	WAT	120-82-1	

Merit Laboratories, Inc.

Analytical Laboratory Report

Revised Report

Lab Sample ID: S50331.02
Sample Tag: P2-MW-3 (10/10/11)
Collected Date/Time: 10/10/2011 13:00
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	1L Amber	None	Yes	4.3	IR
2	40ml Glass	HCL	Yes	4.3	IR
2	125ml Plastic	HNO3	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	10/12/11 22:55	EMR		
Extraction, PCB	Completed			3510C	10/13/11 16:10	CCM		
Mercury Digestion	Completed			7471A	10/17/11 12:10	JRH		
Mercury Digestion	Completed			7471A	10/17/11 12:10	JRH		
Metal Digestion	Completed			3015A	10/17/11 01:00	SLR		
Metal Digestion	Completed			3015A	10/17/11 01:00	SLR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	6020	10/17/11 19:53	SLS	7440-36-0	
Antimony	Not detected	mg/L	0.002	6020	10/17/11 19:49	SLS	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	6020	10/17/11 19:53	SLS	7440-38-2	
Arsenic	0.007	mg/L	0.002	6020	10/17/11 19:49	SLS	7440-38-2	
Barium, Dissolved	0.371	mg/L	0.010	6020	10/17/11 19:53	SLS	7440-39-3	
Barium	0.408	mg/L	0.010	6020	10/17/11 19:49	SLS	7440-39-3	
Beryllium, Dissolved	Not detected	mg/L	0.001	6020	10/18/11 13:41	SLS	7440-41-7	
Beryllium	Not detected	mg/L	0.001	6020	10/18/11 13:39	SLS	7440-41-7	
Boron, Dissolved	0.07	mg/L	0.04	6020	10/18/11 13:41	SLS	7440-42-8	
Boron	0.06	mg/L	0.04	6020	10/18/11 13:39	SLS	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.001	6020	10/17/11 19:53	SLS	7440-43-9	
Cadmium	Not detected	mg/L	0.001	6020	10/17/11 19:49	SLS	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	6020	10/17/11 19:53	SLS	7440-47-3	
Chromium	Not detected	mg/L	0.010	6020	10/17/11 19:49	SLS	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	6020	10/17/11 19:53	SLS	7440-48-4	
Cobalt	Not detected	mg/L	0.010	6020	10/17/11 19:49	SLS	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.002	6020	10/17/11 19:53	SLS	7440-50-8	
Copper	0.005	mg/L	0.002	6020	10/17/11 19:49	SLS	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	6020	10/17/11 19:53	SLS	7439-92-1	
Lead	Not detected	mg/L	0.002	6020	10/17/11 19:49	SLS	7439-92-1	
Manganese, Dissolved	0.126	mg/L	0.010	6020	10/17/11 19:53	SLS	7439-96-5	
Manganese	0.135	mg/L	0.010	6020	10/17/11 19:49	SLS	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	7471A	10/17/11 16:06	JRT	7439-97-6	
Mercury	Not detected	mg/L	0.0001	7471A	10/17/11 16:03	JRT	7439-97-6	
Nickel, Dissolved	0.035	mg/L	0.010	6020	10/17/11 19:53	SLS	7440-02-0	
Nickel	0.036	mg/L	0.010	6020	10/17/11 19:49	SLS	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.002	6020	10/17/11 19:53	SLS	7782-49-2	
Selenium	Not detected	mg/L	0.002	6020	10/17/11 19:49	SLS	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0002	6020	10/17/11 19:53	SLS	7440-22-4	
Silver	Not detected	mg/L	0.0002	6020	10/17/11 19:49	SLS	7440-22-4	
Thallium, Dissolved	Not detected	mg/L	0.002	6020	10/17/11 19:53	SLS	7440-28-0	
Thallium	Not detected	mg/L	0.002	6020	10/17/11 19:49	SLS	7440-28-0	
Vanadium, Dissolved	Not detected	mg/L	0.002	6020	10/17/11 19:53	SLS	7440-62-2	

Lab Sample ID: S50331.02 (continued)
Sample Tag: P2-MW-3 (10/10/11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Vanadium	Not detected	mg/L	0.002	6020	10/17/11 19:49	SLS	7440-62-2	
Zinc, Dissolved	0.02	mg/L	0.010	6020	10/17/11 19:53	SLS	7440-66-6	
Zinc	0.01	mg/L	0.010	6020	10/17/11 19:49	SLS	7440-66-6	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/L	0.05	8082A	10/13/11 14:25	JANB	12674-11-2	
PCB-1242	Not detected	ug/L	0.05	8082A	10/13/11 14:25	JANB	53469-21-9	
PCB-1221	Not detected	ug/L	0.05	8082A	10/13/11 14:25	JANB	11104-28-2	
PCB-1232	Not detected	ug/L	0.05	8082A	10/13/11 14:25	JANB	11141-16-5	
PCB-1248	Not detected	ug/L	0.05	8082A	10/13/11 14:25	JANB	12672-29-6	
PCB-1254	Not detected	ug/L	0.05	8082A	10/13/11 14:25	JANB	11097-69-1	
PCB-1260	Not detected	ug/L	0.05	8082A	10/13/11 14:25	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/L	0.05	8082A	10/13/11 14:25	JANB	12674-11-2	
PCB-1242	Not detected	ug/L	0.05	8082A	10/13/11 14:25	JANB	53469-21-9	
PCB-1221	Not detected	ug/L	0.05	8082A	10/13/11 14:25	JANB	11104-28-2	
PCB-1232	Not detected	ug/L	0.05	8082A	10/13/11 14:25	JANB	11141-16-5	
PCB-1248	Not detected	ug/L	0.05	8082A	10/13/11 14:25	JANB	12672-29-6	
PCB-1254	Not detected	ug/L	0.05	8082A	10/13/11 14:25	JANB	11097-69-1	
PCB-1260	Not detected	ug/L	0.05	8082A	10/13/11 14:25	JANB	11096-82-5	
Organics - Semi-Volatiles								
3,3'-Dichlorobenzidine	Not detected	ug/L	0.05	8270C	10/20/11 23:36	PL	91-94-1	
Hexachlorobenzene	Not detected	ug/L	0.05	8270C	10/20/11 23:36	PL	118-74-1	
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	98-86-2	
Anthracene	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	120-12-7	
Atrazine	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	2	8270C	10/13/11 18:03	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	105-60-2	
Carbazole	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	86-74-8	

Lab Sample ID: S50331.02 (continued)
Sample Tag: P2-MW-3 (10/10/11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	108-60-1	
Chrysene	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	8270C	10/13/11 18:03	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	2	8270C	10/13/11 18:03	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	2	8270C	10/13/11 18:03	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	206-44-0	
Fluorene	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	193-39-5	
Isophorone	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	85-01-8	
Phenol	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	108-95-2	
Pyrene	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	8270C	10/13/11 18:03	PL	88-06-2	
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.05	8260B - SIM	10/13/11 16:30	JGH	96-12-8	
1,2-Dibromoethane	Not detected	ug/L	0.02	8260B - SIM	10/13/11 16:30	JGH	106-93-4	
1,4-Dioxane	43	ug/L	5	8260B - SIM	10/13/11 16:30	JGH	123-91-1	

Lab Sample ID: S50331.02 (continued)
Sample Tag: P2-MW-3 (10/10/11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	76-13-1	
Acetone	Not detected	ug/L	10	8260B	10/13/11 16:33	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	8260B	10/13/11 16:33	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	8260B	10/13/11 16:33	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	8260B	10/13/11 16:33	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	8260B	10/13/11 16:33	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	56-23-5	
Benzene	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	8260B	10/13/11 16:33	WAT		
o-Xylene	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	95-47-6	
Styrene	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 16:33	WAT	120-82-1	

Lab Sample ID: S50331.03
Sample Tag: P2-MW-1 (10/10/11)
Collected Date/Time: 10/10/2011 14:20
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	1L Amber	None	Yes	4.3	IR
2	40ml Glass	HCL	Yes	4.3	IR
2	125ml Plastic	HNO3	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	10/12/11 22:55	EMR		
Extraction, PCB	Completed			3510C	10/13/11 16:10	CCM		
Mercury Digestion	Completed			7471A	10/17/11 12:10	JRH		
Mercury Digestion	Completed			7471A	10/17/11 12:10	JRH		
Metal Digestion	Completed			3015A	10/17/11 01:00	SLR		
Metal Digestion	Completed			3015A	10/17/11 01:00	SLR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	6020	10/17/11 20:23	SLS	7440-36-0	
Antimony	Not detected	mg/L	0.002	6020	10/17/11 20:19	SLS	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	6020	10/17/11 20:23	SLS	7440-38-2	
Arsenic	Not detected	mg/L	0.002	6020	10/17/11 20:19	SLS	7440-38-2	
Barium, Dissolved	0.908	mg/L	0.010	6020	10/17/11 20:23	SLS	7440-39-3	
Barium	0.932	mg/L	0.010	6020	10/17/11 20:19	SLS	7440-39-3	
Beryllium, Dissolved	Not detected	mg/L	0.001	6020	10/18/11 14:22	SLS	7440-41-7	
Beryllium	Not detected	mg/L	0.001	6020	10/18/11 14:20	SLS	7440-41-7	
Boron, Dissolved	Not detected	mg/L	0.04	6020	10/18/11 14:22	SLS	7440-42-8	
Boron	Not detected	mg/L	0.04	6020	10/18/11 14:20	SLS	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.001	6020	10/17/11 20:23	SLS	7440-43-9	
Cadmium	Not detected	mg/L	0.001	6020	10/17/11 20:19	SLS	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	6020	10/17/11 20:23	SLS	7440-47-3	
Chromium	Not detected	mg/L	0.010	6020	10/17/11 20:19	SLS	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	6020	10/17/11 20:23	SLS	7440-48-4	
Cobalt	Not detected	mg/L	0.010	6020	10/17/11 20:19	SLS	7440-48-4	
Copper, Dissolved	0.003	mg/L	0.002	6020	10/17/11 20:23	SLS	7440-50-8	
Copper	Not detected	mg/L	0.002	6020	10/17/11 20:19	SLS	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	6020	10/17/11 20:23	SLS	7439-92-1	
Lead	Not detected	mg/L	0.002	6020	10/17/11 20:19	SLS	7439-92-1	
Manganese, Dissolved	0.133	mg/L	0.010	6020	10/17/11 20:23	SLS	7439-96-5	
Manganese	0.138	mg/L	0.010	6020	10/17/11 20:19	SLS	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	7471A	10/17/11 16:08	JRT	7439-97-6	
Mercury	Not detected	mg/L	0.0001	7471A	10/17/11 16:10	JRT	7439-97-6	
Nickel, Dissolved	Not detected	mg/L	0.010	6020	10/17/11 20:23	SLS	7440-02-0	
Nickel	Not detected	mg/L	0.010	6020	10/17/11 20:19	SLS	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.002	6020	10/17/11 20:23	SLS	7782-49-2	
Selenium	Not detected	mg/L	0.002	6020	10/17/11 20:19	SLS	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0002	6020	10/17/11 20:23	SLS	7440-22-4	
Silver	Not detected	mg/L	0.0002	6020	10/17/11 20:19	SLS	7440-22-4	
Thallium, Dissolved	Not detected	mg/L	0.002	6020	10/17/11 20:23	SLS	7440-28-0	
Thallium	Not detected	mg/L	0.002	6020	10/17/11 20:19	SLS	7440-28-0	
Vanadium, Dissolved	Not detected	mg/L	0.002	6020	10/17/11 20:23	SLS	7440-62-2	

Lab Sample ID: S50331.03 (continued)
Sample Tag: P2-MW-1 (10/10/11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Vanadium	Not detected	mg/L	0.002	6020	10/17/11 20:19	SLS	7440-62-2	
Zinc, Dissolved	0.05	mg/L	0.010	6020	10/17/11 20:23	SLS	7440-66-6	
Zinc	Not detected	mg/L	0.010	6020	10/17/11 20:19	SLS	7440-66-6	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/L	0.05	8082A	10/13/11 14:36	JANB	12674-11-2	
PCB-1242	Not detected	ug/L	0.05	8082A	10/13/11 14:36	JANB	53469-21-9	
PCB-1221	Not detected	ug/L	0.05	8082A	10/13/11 14:36	JANB	11104-28-2	
PCB-1232	Not detected	ug/L	0.05	8082A	10/13/11 14:36	JANB	11141-16-5	
PCB-1248	Not detected	ug/L	0.05	8082A	10/13/11 14:36	JANB	12672-29-6	
PCB-1254	Not detected	ug/L	0.05	8082A	10/13/11 14:36	JANB	11097-69-1	
PCB-1260	Not detected	ug/L	0.05	8082A	10/13/11 14:36	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/L	0.05	8082A	10/13/11 14:36	JANB	12674-11-2	
PCB-1242	Not detected	ug/L	0.05	8082A	10/13/11 14:36	JANB	53469-21-9	
PCB-1221	Not detected	ug/L	0.05	8082A	10/13/11 14:36	JANB	11104-28-2	
PCB-1232	Not detected	ug/L	0.05	8082A	10/13/11 14:36	JANB	11141-16-5	
PCB-1248	Not detected	ug/L	0.05	8082A	10/13/11 14:36	JANB	12672-29-6	
PCB-1254	Not detected	ug/L	0.05	8082A	10/13/11 14:36	JANB	11097-69-1	
PCB-1260	Not detected	ug/L	0.05	8082A	10/13/11 14:36	JANB	11096-82-5	
Organics - Semi-Volatiles								
3,3'-Dichlorobenzidine	Not detected	ug/L	0.05	8270C	10/21/11 00:05	PL	91-94-1	
Hexachlorobenzene	Not detected	ug/L	0.05	8270C	10/21/11 00:05	PL	118-74-1	
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	98-86-2	
Anthracene	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	120-12-7	
Atrazine	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	2	8270C	10/13/11 18:36	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	105-60-2	
Carbazole	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	86-74-8	

Lab Sample ID: S50331.03 (continued)
Sample Tag: P2-MW-1 (10/10/11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	108-60-1	
Chrysene	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	8270C	10/13/11 18:36	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	2	8270C	10/13/11 18:36	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	2	8270C	10/13/11 18:36	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	206-44-0	
Fluorene	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	193-39-5	
Isophorone	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	85-01-8	
Phenol	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	108-95-2	
Pyrene	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	8270C	10/13/11 18:36	PL	88-06-2	
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.05	8260B - SIM	10/13/11 16:49	JGH	96-12-8	
1,2-Dibromoethane	Not detected	ug/L	0.02	8260B - SIM	10/13/11 16:49	JGH	106-93-4	
1,4-Dioxane	Not detected	ug/L	5	8260B - SIM	10/13/11 16:49	JGH	123-91-1	

Lab Sample ID: S50331.03 (continued)
Sample Tag: P2-MW-1 (10/10/11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	76-13-1	
Acetone	Not detected	ug/L	10	8260B	10/13/11 16:53	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	8260B	10/13/11 16:53	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	8260B	10/13/11 16:53	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	8260B	10/13/11 16:53	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	8260B	10/13/11 16:53	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	56-23-5	
Benzene	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	8260B	10/13/11 16:53	WAT		
o-Xylene	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	95-47-6	
Styrene	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 16:53	WAT	120-82-1	

Lab Sample ID: S50331.04
Sample Tag: Trip Blank 2 (10/10/11)
Collected Date/Time: 10/10/2011 00:01
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.05	8260B - SIM	10/13/11 17:07	JGH	96-12-8	
1,2-Dibromoethane	Not detected	ug/L	0.02	8260B - SIM	10/13/11 17:07	JGH	106-93-4	
1,4-Dioxane	Not detected	ug/L	5	8260B - SIM	10/13/11 17:07	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	76-13-1	
Acetone	Not detected	ug/L	10	8260B	10/13/11 17:12	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	8260B	10/13/11 17:12	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	8260B	10/13/11 17:12	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	8260B	10/13/11 17:12	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	8260B	10/13/11 17:12	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	56-23-5	
Benzene	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	100-41-4	

Lab Sample ID: S50331.04 (continued)
Sample Tag: Trip Blank 2 (10/10/11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
p,m-Xylene	Not detected	ug/L	2	8260B	10/13/11 17:12	WAT		
o-Xylene	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	95-47-6	
Styrene	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 17:12	WAT	120-82-1	

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Plant 2

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page ___ of ___

Lab Work Order #:

Send Results to:

Contact & Company Name: Randy Christensen (Arcadis)
Telephone: 810-225-1940
Address: 10559 Citation Dr, Suite 100
Fax:
City: Brighton State: MI Zip: 48116
E-mail Address: Randy.Christensen@Arcadis-us.com
Project Name/Location (City, State): RACER Trust Lansing, MI
Project #: B006414.79.2011.21 GWS
Sampler's Printed Name: Austin Westhuis
Sampler's Signature:

Preservative	B	E	C	C	E				
Filtered (✓)									
# of Containers									
Container Information									

PARAMETER ANALYSIS & METHOD

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	TCL VOCs	TCL SVOCs	TAL Metals	Dissolved TAL Metals	PCBs				
50331.01 P2-MW-2(10/10/11)	10/10/11	1200		✓	W	✓	✓	✓	✓	✓				
.02 P2-MW-3(10/10/11)	10/10/11	1300		✓	W	✓	✓	✓	✓	✓				
.03 P2-MW-1(10/10/11)	10/10/11	1420		✓	W	✓	✓	✓	✓	✓				
.04 Trip Blank2(10/10/11)	10/10/11	—												

Keys

Preservation Key: A. H_2SO_4 B. HCL C. HNO_3 D. NaOH E. None F. Other ____ G. Other ____ H. Other ____

Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other ____ 10. Other ____

Matrix Key: SO - Soil SE - Sediment NL - NAPL/Oil W - Water SL - Sludge SW - Sample Wipe T - Tissue A - Air Other: ____

REMARKS

Special Instructions/Comments:
* Please filter one of the two provided 125ml poly HNO_3 preserve containers provided for the P2-MW-2 Dissolved TAL Metals sample, and P2-MW-3, and

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact	Printed Name: Austin Westhuis	Printed Name: P2-MW-1, 3	Printed Name:	Printed Name: Tim Glass
☒ Cooler packed with ice (✓)		Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements: Standard	Sample Receipt:	Firm: Arcadis	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: ____	Date/Time: 10/11/11 2:30	Date/Time:	Date/Time:	Date/Time: 10-11-11 2:30

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Merit Laboratories, Inc.

Analytical Laboratory Report

Revised Report

Lab Sample ID: S50332.01
Sample Tag: MW-02-04 (10/11/11)
Collected Date/Time: 10/11/2011 11:20
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	1L Amber	None	Yes	4.3	IR
2	40ml Glass	HCL	Yes	4.3	IR
2	125ml Plastic	HNO3	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	10/12/11 22:55	EMR		
Extraction, PCB	Completed			3510C	10/13/11 16:10	CCM		
Mercury Digestion	Completed			7471A	10/14/11 11:50	JRH		
Mercury Digestion	Completed			7471A	10/14/11 11:50	JRH		
Metal Digestion	Completed			3015A	10/17/11 01:00	SLR		
Metal Digestion	Completed			3015A	10/17/11 01:00	SLR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	6020	10/17/11 20:57	SLS	7440-36-0	
Antimony	Not detected	mg/L	0.002	6020	10/17/11 19:57	SLS	7440-36-0	
Arsenic, Dissolved	0.012	mg/L	0.002	6020	10/17/11 20:57	SLS	7440-38-2	
Arsenic	0.017	mg/L	0.002	6020	10/17/11 19:57	SLS	7440-38-2	
Barium, Dissolved	0.137	mg/L	0.010	6020	10/17/11 20:57	SLS	7440-39-3	
Barium	0.148	mg/L	0.010	6020	10/17/11 19:57	SLS	7440-39-3	
Beryllium, Dissolved	Not detected	mg/L	0.001	6020	10/18/11 14:42	SLS	7440-41-7	
Beryllium	Not detected	mg/L	0.001	6020	10/18/11 13:44	SLS	7440-41-7	
Boron, Dissolved	Not detected	mg/L	0.04	6020	10/18/11 14:42	SLS	7440-42-8	
Boron	Not detected	mg/L	0.04	6020	10/18/11 13:44	SLS	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.001	6020	10/17/11 20:57	SLS	7440-43-9	
Cadmium	Not detected	mg/L	0.001	6020	10/17/11 19:57	SLS	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	6020	10/17/11 20:57	SLS	7440-47-3	
Chromium	Not detected	mg/L	0.010	6020	10/17/11 19:57	SLS	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	6020	10/17/11 20:57	SLS	7440-48-4	
Cobalt	Not detected	mg/L	0.010	6020	10/17/11 19:57	SLS	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.002	6020	10/17/11 20:57	SLS	7440-50-8	
Copper	Not detected	mg/L	0.002	6020	10/17/11 19:57	SLS	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	6020	10/17/11 20:57	SLS	7439-92-1	
Lead	Not detected	mg/L	0.002	6020	10/17/11 19:57	SLS	7439-92-1	
Manganese, Dissolved	0.079	mg/L	0.010	6020	10/17/11 20:57	SLS	7439-96-5	
Manganese	0.095	mg/L	0.010	6020	10/17/11 19:57	SLS	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	7471A	10/14/11 15:25	JRT	7439-97-6	
Mercury	Not detected	mg/L	0.0001	7471A	10/14/11 15:57	JRT	7439-97-6	
Nickel, Dissolved	0.013	mg/L	0.010	6020	10/17/11 20:57	SLS	7440-02-0	
Nickel	0.013	mg/L	0.010	6020	10/17/11 19:57	SLS	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.002	6020	10/17/11 20:57	SLS	7782-49-2	
Selenium	Not detected	mg/L	0.002	6020	10/17/11 19:57	SLS	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0002	6020	10/17/11 20:57	SLS	7440-22-4	
Silver	Not detected	mg/L	0.0002	6020	10/17/11 19:57	SLS	7440-22-4	
Thallium, Dissolved	Not detected	mg/L	0.002	6020	10/17/11 20:57	SLS	7440-28-0	
Thallium	Not detected	mg/L	0.002	6020	10/17/11 19:57	SLS	7440-28-0	
Vanadium, Dissolved	Not detected	mg/L	0.002	6020	10/17/11 20:57	SLS	7440-62-2	

Lab Sample ID: S50332.01 (continued)
Sample Tag: MW-02-04 (10/11/11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Vanadium	Not detected	mg/L	0.002	6020	10/17/11 19:57	SLS	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.010	6020	10/17/11 20:57	SLS	7440-66-6	
Zinc	Not detected	mg/L	0.010	6020	10/17/11 19:57	SLS	7440-66-6	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/L	0.05	8082A	10/13/11 13:28	JANB	12674-11-2	
PCB-1242	Not detected	ug/L	0.05	8082A	10/13/11 13:28	JANB	53469-21-9	
PCB-1221	Not detected	ug/L	0.05	8082A	10/13/11 13:28	JANB	11104-28-2	
PCB-1232	Not detected	ug/L	0.05	8082A	10/13/11 13:28	JANB	11141-16-5	
PCB-1248	Not detected	ug/L	0.05	8082A	10/13/11 13:28	JANB	12672-29-6	
PCB-1254	Not detected	ug/L	0.05	8082A	10/13/11 13:28	JANB	11097-69-1	
PCB-1260	Not detected	ug/L	0.05	8082A	10/13/11 13:28	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/L	0.05	8082A	10/13/11 13:28	JANB	12674-11-2	
PCB-1242	Not detected	ug/L	0.05	8082A	10/13/11 13:28	JANB	53469-21-9	
PCB-1221	Not detected	ug/L	0.05	8082A	10/13/11 13:28	JANB	11104-28-2	
PCB-1232	Not detected	ug/L	0.05	8082A	10/13/11 13:28	JANB	11141-16-5	
PCB-1248	Not detected	ug/L	0.05	8082A	10/13/11 13:28	JANB	12672-29-6	
PCB-1254	Not detected	ug/L	0.05	8082A	10/13/11 13:28	JANB	11097-69-1	
PCB-1260	Not detected	ug/L	0.05	8082A	10/13/11 13:28	JANB	11096-82-5	
Organics - Semi-Volatiles								
3,3'-Dichlorobenzidine	Not detected	ug/L	0.05	8270C	10/21/11 00:34	PL	91-94-1	
Hexachlorobenzene	Not detected	ug/L	0.05	8270C	10/21/11 00:34	PL	118-74-1	
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	8270C	10/13/11 19:09	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	8270C	10/13/11 19:09	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	8270C	10/13/11 19:09	PL	98-86-2	
Anthracene	Not detected	ug/L	1	8270C	10/13/11 19:09	PL	120-12-7	
Atrazine	Not detected	ug/L	1	8270C	10/13/11 19:09	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	8270C	10/13/11 19:09	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	8270C	10/13/11 19:09	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	8270C	10/13/11 19:09	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	8270C	10/13/11 19:09	PL	100-52-7	J
Benzo(a)anthracene	Not detected	ug/L	1	8270C	10/13/11 19:09	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	8270C	10/13/11 19:09	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	8270C	10/13/11 19:09	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	8270C	10/13/11 19:09	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	8270C	10/13/11 19:09	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	8270C	10/13/11 19:09	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	8270C	10/13/11 19:09	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	8270C	10/13/11 19:09	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	8270C	10/13/11 19:09	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	2	8270C	10/13/11 19:09	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	8270C	10/13/11 19:09	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	8270C	10/13/11 19:09	PL	105-60-2	
Carbazole	Not detected	ug/L	1	8270C	10/13/11 19:09	PL	86-74-8	

Lab Sample ID: S50332.01 (continued)
Sample Tag: MW-02-04 (10/11/11)

Analysis	Results	Units		RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)									
TCL Semi-Volatile Organics (continued)									
bis(2-Chloroethoxy)methane	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	108-60-1	
Chrysene	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	53-70-3	
Dibenzofuran	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L		2	8270C	10/13/11 19:09	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L		2	8270C	10/13/11 19:09	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L		2	8270C	10/13/11 19:09	PL	117-81-7	
Fluoranthene	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	206-44-0	
Fluorene	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	77-47-4	
Hexachloroethane	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	193-39-5	
Isophorone	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	91-57-6	
2-Methylphenol	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	86-30-6	
Naphthalene	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	91-20-3	
Nitrobenzene	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	87-86-5	
Phenanthrene	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	85-01-8	
Phenol	Not detected	ug/L	J	1	8270C	10/13/11 19:09	PL	108-95-2	
Pyrene	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L		1	8270C	10/13/11 19:09	PL	88-06-2	
Organics - Volatiles									
1,2-Dibromo-3-chloropropane	Not detected	ug/L		0.05	8260B - SIM	10/13/11 17:26	JGH	96-12-8	
1,2-Dibromoethane	Not detected	ug/L		0.02	8260B - SIM	10/13/11 17:26	JGH	106-93-4	
1,4-Dioxane	Not detected	ug/L		5	8260B - SIM	10/13/11 17:26	JGH	123-91-1	

Lab Sample ID: S50332.01 (continued)
Sample Tag: MW-02-04 (10/11/11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	76-13-1	
Acetone	Not detected	ug/L	10	8260B	10/13/11 17:32	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	8260B	10/13/11 17:32	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	8260B	10/13/11 17:32	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	8260B	10/13/11 17:32	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	8260B	10/13/11 17:32	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	56-23-5	
Benzene	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	8260B	10/13/11 17:32	WAT		
o-Xylene	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	95-47-6	
Styrene	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 17:32	WAT	120-82-1	

Lab Sample ID: S50332.04
Sample Tag: Duplicate 1 (10/11/11)
Collected Date/Time: 10/11/2011 00:01
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	1L Amber	None	Yes	4.3	IR
2	40ml Glass	HCL	Yes	4.3	IR
2	125ml Plastic	HNO3	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	10/12/11 22:55	EMR		
BNA Extraction (Replicate 01)	Completed			3510C	10/17/11 23:54	EMR		
Extraction, PCB	Completed			3510C	10/13/11 16:10	CCM		
Mercury Digestion	Completed			7471A	10/14/11 11:50	JRH		
Mercury Digestion	Completed			7471A	10/14/11 11:50	JRH		
Metal Digestion	Completed			3015A	10/17/11 01:00	SLR		
Metal Digestion	Completed			3015A	10/17/11 01:00	SLR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	6020	10/17/11 20:32	SLS	7440-36-0	
Antimony	Not detected	mg/L	0.002	6020	10/17/11 20:28	SLS	7440-36-0	
Arsenic, Dissolved	0.013	mg/L	0.002	6020	10/17/11 20:32	SLS	7440-38-2	
Arsenic	0.018	mg/L	0.002	6020	10/17/11 20:28	SLS	7440-38-2	
Barium, Dissolved	0.142	mg/L	0.010	6020	10/17/11 20:32	SLS	7440-39-3	
Barium	0.142	mg/L	0.010	6020	10/17/11 20:28	SLS	7440-39-3	
Beryllium, Dissolved	Not detected	mg/L	0.001	6020	10/18/11 14:27	SLS	7440-41-7	
Beryllium	Not detected	mg/L	0.001	6020	10/18/11 14:25	SLS	7440-41-7	
Boron, Dissolved	Not detected	mg/L	0.04	6020	10/18/11 14:27	SLS	7440-42-8	
Boron	Not detected	mg/L	0.04	6020	10/18/11 14:25	SLS	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.001	6020	10/17/11 20:32	SLS	7440-43-9	
Cadmium	Not detected	mg/L	0.001	6020	10/17/11 20:28	SLS	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	6020	10/17/11 20:32	SLS	7440-47-3	
Chromium	Not detected	mg/L	0.010	6020	10/17/11 20:28	SLS	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	6020	10/17/11 20:32	SLS	7440-48-4	
Cobalt	Not detected	mg/L	0.010	6020	10/17/11 20:28	SLS	7440-48-4	
Copper, Dissolved	0.002	mg/L	0.002	6020	10/17/11 20:32	SLS	7440-50-8	
Copper	Not detected	mg/L	0.002	6020	10/17/11 20:28	SLS	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	6020	10/17/11 20:32	SLS	7439-92-1	
Lead	Not detected	mg/L	0.002	6020	10/17/11 20:28	SLS	7439-92-1	
Manganese, Dissolved	0.079	mg/L	0.010	6020	10/17/11 20:32	SLS	7439-96-5	
Manganese	0.094	mg/L	0.010	6020	10/17/11 20:28	SLS	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	7471A	10/14/11 15:19	JRT	7439-97-6	
Mercury	Not detected	mg/L	0.0001	7471A	10/14/11 15:21	JRT	7439-97-6	
Nickel, Dissolved	0.014	mg/L	0.010	6020	10/17/11 20:32	SLS	7440-02-0	
Nickel	0.013	mg/L	0.010	6020	10/17/11 20:28	SLS	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.002	6020	10/17/11 20:32	SLS	7782-49-2	
Selenium	Not detected	mg/L	0.002	6020	10/17/11 20:28	SLS	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0002	6020	10/17/11 20:32	SLS	7440-22-4	
Silver	Not detected	mg/L	0.0002	6020	10/17/11 20:28	SLS	7440-22-4	
Thallium, Dissolved	Not detected	mg/L	0.002	6020	10/17/11 20:32	SLS	7440-28-0	
Thallium	Not detected	mg/L	0.002	6020	10/17/11 20:28	SLS	7440-28-0	

Lab Sample ID: S50332.04 (continued)
Sample Tag: Duplicate 1 (10/11/11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Vanadium, Dissolved	Not detected	mg/L	0.002	6020	10/17/11 20:32	SLS	7440-62-2	
Vanadium	Not detected	mg/L	0.002	6020	10/17/11 20:28	SLS	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.010	6020	10/17/11 20:32	SLS	7440-66-6	
Zinc	Not detected	mg/L	0.010	6020	10/17/11 20:28	SLS	7440-66-6	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/L	0.05	8082A	10/14/11 17:59	JANB	12674-11-2	
PCB-1242	Not detected	ug/L	0.05	8082A	10/14/11 17:59	JANB	53469-21-9	
PCB-1221	Not detected	ug/L	0.05	8082A	10/14/11 17:59	JANB	11104-28-2	
PCB-1232	Not detected	ug/L	0.05	8082A	10/14/11 17:59	JANB	11141-16-5	
PCB-1248	Not detected	ug/L	0.05	8082A	10/14/11 17:59	JANB	12672-29-6	
PCB-1254	Not detected	ug/L	0.05	8082A	10/14/11 17:59	JANB	11097-69-1	
PCB-1260	Not detected	ug/L	0.05	8082A	10/14/11 17:59	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/L	0.05	8082A	10/14/11 17:59	JANB	12674-11-2	
PCB-1242	Not detected	ug/L	0.05	8082A	10/14/11 17:59	JANB	53469-21-9	
PCB-1221	Not detected	ug/L	0.05	8082A	10/14/11 17:59	JANB	11104-28-2	
PCB-1232	Not detected	ug/L	0.05	8082A	10/14/11 17:59	JANB	11141-16-5	
PCB-1248	Not detected	ug/L	0.05	8082A	10/14/11 17:59	JANB	12672-29-6	
PCB-1254	Not detected	ug/L	0.05	8082A	10/14/11 17:59	JANB	11097-69-1	
PCB-1260	Not detected	ug/L	0.05	8082A	10/14/11 17:59	JANB	11096-82-5	
Organics - Semi-Volatiles								
3,3'-Dichlorobenzidine	Not detected	ug/L	0.05	8270C	10/21/11 01:33	PL	91-94-1	
Hexachlorobenzene	Not detected	ug/L	0.05	8270C	10/21/11 01:33	PL	118-74-1	
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	98-86-2	
Anthracene	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	120-12-7	
Atrazine	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	2	8270C	10/19/11 14:38	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	105-60-2	

Lab Sample ID: S50332.04 (continued)
Sample Tag: Duplicate 1 (10/11/11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Carbazole	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	108-60-1	
Chrysene	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	8270C	10/19/11 14:38	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	2	8270C	10/19/11 14:38	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	2	8270C	10/19/11 14:38	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	206-44-0	
Fluorene	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	193-39-5	
Isophorone	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	85-01-8	
Phenol	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	108-95-2	
Pyrene	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	8270C	10/19/11 14:38	PL	88-06-2	
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.05	8260B - SIM	10/13/11 17:44	JGH	96-12-8	
1,2-Dibromoethane	Not detected	ug/L	0.02	8260B - SIM	10/13/11 17:44	JGH	106-93-4	
1,4-Dioxane	Not detected	ug/L	5	8260B - SIM	10/13/11 17:44	JGH	123-91-1	

Lab Sample ID: S50332.04 (continued)
Sample Tag: Duplicate 1 (10/11/11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	76-13-1	
Acetone	Not detected	ug/L	10	8260B	10/13/11 17:52	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	8260B	10/13/11 17:52	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	8260B	10/13/11 17:52	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	8260B	10/13/11 17:52	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	8260B	10/13/11 17:52	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	56-23-5	
Benzene	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	8260B	10/13/11 17:52	WAT		
o-Xylene	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	95-47-6	
Styrene	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 17:52	WAT	120-82-1	

Lab Sample ID: S50332.05
Sample Tag: MW-04-03 (10/11/11)
Collected Date/Time: 10/11/2011 14:35
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	1L Amber	None	Yes	4.3	IR
2	40ml Glass	HCL	Yes	4.3	IR
1	125ml Plastic	HNO3	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	10/12/11 22:55	EMR		
Extraction, PCB	Completed			3510C	10/13/11 16:10	CCM		
Mercury Digestion	Completed			7471A	10/14/11 11:50	JRH		
Metal Digestion	Completed			3015A	10/17/11 01:00	SLR		
Metals								
Antimony	Not detected	mg/L	0.002	6020	10/17/11 20:36	SLS	7440-36-0	
Arsenic	0.005	mg/L	0.002	6020	10/17/11 20:36	SLS	7440-38-2	
Barium	0.241	mg/L	0.010	6020	10/17/11 20:36	SLS	7440-39-3	
Beryllium	Not detected	mg/L	0.001	6020	10/18/11 14:30	SLS	7440-41-7	
Boron	0.35	mg/L	0.04	6020	10/18/11 14:30	SLS	7440-42-8	
Cadmium	Not detected	mg/L	0.001	6020	10/17/11 20:36	SLS	7440-43-9	
Chromium	Not detected	mg/L	0.010	6020	10/17/11 20:36	SLS	7440-47-3	
Cobalt	Not detected	mg/L	0.010	6020	10/17/11 20:36	SLS	7440-48-4	
Copper	Not detected	mg/L	0.002	6020	10/17/11 20:36	SLS	7440-50-8	
Lead	Not detected	mg/L	0.002	6020	10/17/11 20:36	SLS	7439-92-1	
Manganese	0.197	mg/L	0.010	6020	10/17/11 20:36	SLS	7439-96-5	
Mercury	Not detected	mg/L	0.0001	7471A	10/14/11 15:23	JRT	7439-97-6	
Nickel	Not detected	mg/L	0.010	6020	10/17/11 20:36	SLS	7440-02-0	
Selenium	Not detected	mg/L	0.002	6020	10/17/11 20:36	SLS	7782-49-2	
Silver	Not detected	mg/L	0.0002	6020	10/17/11 20:36	SLS	7440-22-4	
Thallium	Not detected	mg/L	0.002	6020	10/17/11 20:36	SLS	7440-28-0	
Vanadium	Not detected	mg/L	0.002	6020	10/17/11 20:36	SLS	7440-62-2	
Zinc	Not detected	mg/L	0.010	6020	10/17/11 20:36	SLS	7440-66-6	
Organics - PCBs/Pesticides								
TCL PCB List (Column 1)								
PCB-1016	Not detected	ug/L	0.05	8082A	10/14/11 17:33	JANB	12674-11-2	
PCB-1242	Not detected	ug/L	0.05	8082A	10/14/11 17:33	JANB	53469-21-9	
PCB-1221	Not detected	ug/L	0.05	8082A	10/14/11 17:33	JANB	11104-28-2	
PCB-1232	Not detected	ug/L	0.05	8082A	10/14/11 17:33	JANB	11141-16-5	
PCB-1248	Not detected	ug/L	0.05	8082A	10/14/11 17:33	JANB	12672-29-6	
PCB-1254	Not detected	ug/L	0.05	8082A	10/14/11 17:33	JANB	11097-69-1	
PCB-1260	Not detected	ug/L	0.05	8082A	10/14/11 17:33	JANB	11096-82-5	
TCL PCB List (Column 2)								
PCB-1016	Not detected	ug/L	0.05	8082A	10/14/11 17:33	JANB	12674-11-2	
PCB-1242	Not detected	ug/L	0.05	8082A	10/14/11 17:33	JANB	53469-21-9	
PCB-1221	Not detected	ug/L	0.05	8082A	10/14/11 17:33	JANB	11104-28-2	
PCB-1232	Not detected	ug/L	0.05	8082A	10/14/11 17:33	JANB	11141-16-5	
PCB-1248	Not detected	ug/L	0.05	8082A	10/14/11 17:33	JANB	12672-29-6	

Lab Sample ID: S50332.05 (continued)
Sample Tag: MW-04-03 (10/11/11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - PCBs/Pesticides (continued)								
TCL PCB List (Column 2) (continued)								
PCB-1254	Not detected	ug/L	0.05	8082A	10/14/11 17:33	JANB	11097-69-1	
PCB-1260	Not detected	ug/L	0.05	8082A	10/14/11 17:33	JANB	11096-82-5	
Organics - Semi-Volatiles								
3,3'-Dichlorobenzidine	Not detected	ug/L	0.05	8270C	10/21/11 01:04	PL	91-94-1	
Hexachlorobenzene	Not detected	ug/L	0.05	8270C	10/21/11 01:04	PL	118-74-1	
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	98-86-2	
Anthracene	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	120-12-7	
Atrazine	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	2	8270C	10/13/11 21:20	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	105-60-2	
Carbazole	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	108-60-1	
Chrysene	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	8270C	10/13/11 21:20	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	2	8270C	10/13/11 21:20	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	2	8270C	10/13/11 21:20	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	206-44-0	
Fluorene	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	77-47-4	

Lab Sample ID: S50332.05 (continued)
Sample Tag: MW-04-03 (10/11/11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachloroethane	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	193-39-5	
Isophorone	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	85-01-8	
Phenol	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	108-95-2	
Pyrene	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	8270C	10/13/11 21:20	PL	88-06-2	
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.05	8260B - SIM	10/13/11 18:03	JGH	96-12-8	
1,2-Dibromoethane	Not detected	ug/L	0.02	8260B - SIM	10/13/11 18:03	JGH	106-93-4	
1,4-Dioxane	Not detected	ug/L	5	8260B - SIM	10/13/11 18:03	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	76-13-1	
Acetone	Not detected	ug/L	10	8260B	10/13/11 18:12	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	8260B	10/13/11 18:12	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	8260B	10/13/11 18:12	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	74-87-3	
Vinyl chloride	13	ug/L	1	8260B	10/13/11 18:12	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	110-82-7	

Lab Sample ID: S50332.05 (continued)
Sample Tag: MW-04-03 (10/11/11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	8260B	10/13/11 18:12	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	8260B	10/13/11 18:12	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	56-23-5	
Benzene	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	8260B	10/13/11 18:12	WAT		
o-Xylene	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	95-47-6	
Styrene	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	8260B	10/13/11 18:12	WAT	120-82-1	

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Plant 3

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page ___ of ___

Lab Work Order #:

Send Results to:

Contact & Company Name: Randy Christensen
Telephone: 810-225-1940
Address: 10559 Citation Dr., Suite 108
Fax:
City: Brighton State: MI Zip: 48116
E-mail Address: Randy.Christensen@Arcadis-US.com
Project Name/Location (City, State): RACER Trust Lansing, MI
Project #: B0004480.2011.316W5
Sampler's Printed Name: Austin Westhuis
Sampler's Signature:

Preservative	B	E	C	C	E		
Filtered (✓)				✓			
# of Containers							
Container Information							

PARAMETER ANALYSIS & METHOD

Keys

Preservation Key: A. H_2SO_4 B. HCl C. HNO_3 D. NaOH E. None F. Other: ___ G. Other: ___ H. Other: ___

Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other ___ 10. Other: ___

Matrix Key: SO - Soil SE - Sediment NL - NAPL/Oil W - Water SL - Sludge SW - Sample Wipe T - Tissue A - Air Other: ___

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	TCL VOCs	TCL SVOCs	TAL Metals	Dissolved TAL Metals	PCBs	REMARKS
MW-02-04(10/11/11)	10/11/11	1120		✓	W	✓	✓	✓	✓	✓	
MW-02-04(10/11/11)MS	10/11/11	1120		✓	W	✓	✓	✓	✓	✓	
MW-02-04(10/11/11)MSD	10/11/11	1120		✓	W	✓	✓	✓	✓	✓	
Duplicate 1(10/11/11)	10/11/11	[redacted]		✓	W	✓	✓	✓	✓	✓	
MW-04-03(10/11/11)	10/11/11	1435		✓	W	✓	✓	✓		✓	

Special Instructions/Comments:

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓)	Printed Name: Austin Westhuis	Printed Name:	Printed Name:	Printed Name: Tim Case
X Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements: Standard	Sample Receipt:	Firm: Arcadis	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: ___	Date/Time: 10-11-11 1430	Date/Time:	Date/Time:	Date/Time: 10-11-11 1430

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Analytical Laboratory Report

Lab Sample ID: S50467.01
Sample Tag: P2-MW-2(10/19/11)
Collected Date/Time: 10/19/2011 15:30
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	None	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			7471A	10/24/11 10:55	JRH		
Metal Digestion	Completed			3015A	10/24/11 01:00	SLR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	6020	10/24/11 18:52	SLS	7440-36-0	
Arsenic, Dissolved	0.002	mg/L	0.002	6020	10/24/11 18:52	SLS	7440-38-2	
Barium, Dissolved	0.215	mg/L	0.010	6020	10/24/11 18:52	SLS	7440-39-3	
Beryllium, Dissolved	Not detected	mg/L	0.001	6020	10/24/11 18:52	SLS	7440-41-7	
Boron, Dissolved	0.05	mg/L	0.04	6020	10/24/11 18:52	SLS	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.001	6020	10/24/11 18:52	SLS	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	6020	10/24/11 18:52	SLS	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	6020	10/24/11 18:52	SLS	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.002	6020	10/24/11 18:52	SLS	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	6020	10/24/11 18:52	SLS	7439-92-1	
Manganese, Dissolved	0.085	mg/L	0.010	6020	10/24/11 18:52	SLS	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	7471A	10/24/11 15:12	JRT	7439-97-6	
Nickel, Dissolved	Not detected	mg/L	0.010	6020	10/24/11 18:52	SLS	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.002	6020	10/24/11 18:52	SLS	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0002	6020	10/24/11 18:52	SLS	7440-22-4	
Thallium, Dissolved	Not detected	mg/L	0.002	6020	10/24/11 18:52	SLS	7440-28-0	
Vanadium, Dissolved	Not detected	mg/L	0.002	6020	10/24/11 18:52	SLS	7440-62-2	
Zinc, Dissolved	0.022	mg/L	0.010	6020	10/24/11 18:52	SLS	7440-66-6	

ARCADIS
Infrastructure - Water - Environment - Buildings

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

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Lab Work Order #:

Plant 2

Send Results to:

Contact & Company Name: Randy Christensen / Arcadis
Telephone: 810-225-1940
Address: 10559 Citation Dr, Suite 100
Fax:
City: Brighton State: MI Zip: 48116
E-mail Address: Randy.Christensen@Arcadis-us.com
Project Name/Location (City, State): BAUER Trust Lansing, MI
Project #: B0064479.2011.2KWS
Sampler's Printed Name: Austin Westhuis
Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	PARAMETER ANALYSIS & METHOD: Dissolved TAL Metals	REMARKS
50467.01 P2-MW-2(10/19/11)	10/19/11	1530		✓	W	E					

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other _____
G. Other _____
H. Other _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil
SE - Sediment
NL - NAPL/Oil
W - Water
SL - Sludge
SW - Sample Wipe
T - Tissue
A - Air
Other: _____

Special Instructions/Comments:
☆ Please Filter P2-MW-2

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓)	Printed Name: Austin Westhuis	Printed Name:	Printed Name:	Printed Name: Paula Shaw
X Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements: Standard	Sample Receipt:	Firm: Arcadis	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 4.3	Date/Time: 10/19/11 1545	Date/Time:	Date/Time:	Date/Time: 10-19-11 1545

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS