

Lockheed Martin
Maritime Systems & Sensors
1210 Massillon Road Akron, OH 44315
Telephone 330.796.2800



January 9, 2009

Ms. Vanessa Steigerwald Dick, Ph.D.
Ohio Environmental Protection Agency
Northeast District Office
2110 East Aurora Road
Twinsburg, Ohio 44087

Re: Stormwater Sampling Results

Dear Ms. Steigerwald Dick:

Attached is report detailing the stormwater sampling conducted on December 9, 2008 in accordance with the *Stormwater Sampling and Analysis Plan*, revision 1.

Because of the temporal and spatial variability that is inherent in stormwater sampling and analysis, no trends can be established and no conclusions can be made based on a single data set. Further interpretation of these results will continue as additional sampling episodes occur and Lockheed Martin will continue to implement the Plan and forward results of subsequent sampling to you.

Please let me know if you have any questions or need additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Gunnarson", with a long horizontal flourish extending to the right.

David Gunnarson
Lockheed Martin Corporation
1210 Massillon Road
Akron, Ohio 44315
330-796-8751

Copy: Phil Rhodes, Ohio EPA, Division of Surface Water
Dave Gunnarson, Lockheed Martin
Steve Vardavas, Lockheed Martin
Norma Fox Horwitz, Summit County Port Authority
Terrence Finn, Roetzel & Andress

Attachment:
URS Stormwater Sampling Report, January 9, 2009



January 9, 2009

Mr. David Gunnarson
Lockheed Martin Corporation
1210 Massillon Road
Akron, Ohio 44315

**Re: Interim Report
Stormwater Sampling – Event No. 1 (December 9, 2008)
Akron Airdock, Akron, Ohio**

Dear Mr. Gunnarson:

URS conducted the first stormwater sampling event at the Akron Airdock on December 9, 2008. Sampling and analysis procedures followed the *Stormwater Sampling and Analysis Plan - Revision 1* (SAP), for the Akron Airdock dated November 17, 2008 that has been provided to the Ohio Environmental Protection Agency (Ohio EPA).

This interim report transmits the results of the December 9, 2008 sampling. Because of the temporal and spatial variability that is inherent in stormwater sampling and analysis, no trends can be established and no conclusions can be made based on a single data set. Further interpretation of these results will continue as additional sampling episodes occur.

Weather and Sampling Conditions

A 0.51-inch rainfall occurred beginning on December 9, 2008 (as reported by the weather station at Akron Fulton International Airport¹). The rainfall event began at approximately 2 pm on December 9, 2008 and ended by 11 am on December 10, 2008 for a total duration of 21 hours. The weather station reported no measurable precipitation in the preceding 72 hours. Based upon the airport's weather data, the storm characteristics met the target rainfall criteria for stormwater sampling with the exception that the duration, 21 hours, exceeded the desired upper duration range value of 16.8 hours as discussed in the SAP.

In accordance with the SAP, the sampling event targeted "first flush" stormwater flow. URS collected unfiltered samples at the designated on-property points (CB-1462, PAE-2, PAE-3, PAE-5, and PAE-7) within the first 45 minutes of initial discharge. Sampling at the off-property points, 601 and Temp001, was completed within 70 minutes of initial discharge.

Sample collection, field measurements, and sample handling was conducted in accordance with the SAP. URS submitted the samples to TestAmerica, Inc. (TestAmerica) in North Canton, Ohio for laboratory analysis.

¹ The site rain gauge was not functioning on December 9, 2008.

Analytical Results

TestAmerica analyzed the unfiltered samples for polychlorinated biphenyls (PCBs) by United States Environmental Protection Agency (U.S. EPA) Method 8082-low level and total suspended solids (TSS) by Standard Methods (SM) 2540D. Table 1 presents the lab and field results; Figure 1 shows the sampling locations and a lab data summary. The complete laboratory report is attached in Appendix A.

URS' data review report of the lab results is attached as Appendix B. The data are considered usable however; all PCB results are considered estimated concentrations (J-flagged) because of quality control (QC) issues associated with the analytical process. Specifically, the recoveries of Aroclor 1268 were slightly below the lab's QC acceptance limits, which are advisory limits due to the low solubility of Aroclor 1268 in water.

As summarized below, estimated concentrations of total PCBs in the December 9, 2008 on-property samples ranged from non-detect (0.2 U,J microgram per liter [$\mu\text{g/L}$]) at the east side location (CB 1462) to 0.68 J $\mu\text{g/L}$ at the west side location (PAW-7). Total PCB concentrations in the off-property locations were reported at estimated levels of 0.13 J $\mu\text{g/L}$ (601 at the Airport) and 0.11 J $\mu\text{g/L}$ (Temp001 at Triplett Boulevard).

Total PCB Summary - December 9, 2008 Samples

On-Property Locations					Off-Property Locations	
CB-1462	PAE-2	PAE-3	PAE-5	PAW-7	Outfall 601	Temp 001
0.2 UJ $\mu\text{g/L}$	0.13 J $\mu\text{g/L}$	0.20 J $\mu\text{g/L}$	0.50 J $\mu\text{g/L}$	0.68 J $\mu\text{g/L}$	0.13 J $\mu\text{g/L}$	0.11 J $\mu\text{g/L}$

UJ = The analyte was not detected at or above the sample reporting limit. However, the reporting limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

Discussion

These interim sampling results represent the first data set of a planned 12-event program that is designed to provide post-remediation data that are representative of stormwater discharges from the 19-acre Airdock parcel. The objectives of the SAP include addressing certain programmatic elements of the Ohio EPA Voluntary Action Program (VAP) and Division of Surface Water (DSW), as well as the federal PCB rules under the Toxic Substances Control Act (TSCA). As with most environmental data, results from a single sample event are insufficient on which to base conclusions and recommendations. An in-depth evaluation of the data will be performed going forward as additional sampling events occur and data patterns become apparent.

Mr. David Gunnarson
January 9, 2009
Page 3 of 3

Future Activities

Monitoring is continuing under the current SAP. URS recommends no changes in the program at this time.

-oOo-

Please contact me if you have any questions or comments on the stormwater program or if further information is needed.

Sincerely,
URS Corporation



Jennifer J. Krueger, P.G., C.P.
Project Manager

14947614.03000

Enclosures: Table 1 – Stormwater Sampling Results – December 9, 2008 Event No. 1
 Figure 1 – December 9, 2008 Stormwater Sampling Results
 Appendix A – Laboratory Report
 Appendix B – Data Review Report

Table 1
Stormwater Sampling Results- December 9, 2008 Event No. 1
Akron Airdock
Akron, Ohio

Lab Analyte	Units	On-Property Locations					Off-Property Locations	
		East Side	East Side	East Side	East Side	West Side	Airport	Triplett Blvd.
		LM-SW-CB1462 12/09/2008 14:20	LM-SW-PAE-2 12/09/2008 14:30	LM-SW-PAE-3 12/09/2008 14:40	LM-SW-PAE-5 12/09/2008 14:05	LM-SW-PAW-7 12/09/2008 14:50	LM-SW-601 12/09/2008 15:00	LM-SW-TEMP001 12/09/2008 15:30
Aroclor 1016	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor 1221	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor 1232	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor 1242	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor 1248	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor 1254	ug/L	0.20 U	0.20 U	0.20 U	0.14 J	0.15 J	0.20 U	0.20 U
Aroclor 1260	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor 1268	ug/L	0.20 UJ	0.13 J	0.20 J	0.36 J	0.53 J	0.13 J	0.11 J
Total PCBs	ug/L	0.20 UJ	0.13 J	0.20 J	0.50 J	0.68 J	0.13 J	0.11 J
Total Suspended Solids	mg/L	13	51	31	30	63	28	110
Field Parameters								
pH	S. U.	8.64	7.36	8.00	8.02	8.26	7.95	7.83
Dissolved Oxygen	mg/L	15.15	15.94	15.80	15.40	16.33	16.14	15.87
Temperature	°C	9.31	7.60	7.34	9.34	7.29	7.56	6.94
Conductivity	mS/cm	0.14	1.27	1.79	0.85	1.17	0.003	3.48
Total Dissolved Solids	mg/L	87	751	1120	544	705	3	2230
ORP	mV	159	193	184	323	195	96	244
Turbidity	NTU	126	126	141	76.2	344	187	447
Salinity	%	0.0	0.06	0.09	0.03	0.05	0.01	0.2

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.

UJ = The analyte was not detected at or above the sample reporting limit. However, the reporting limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

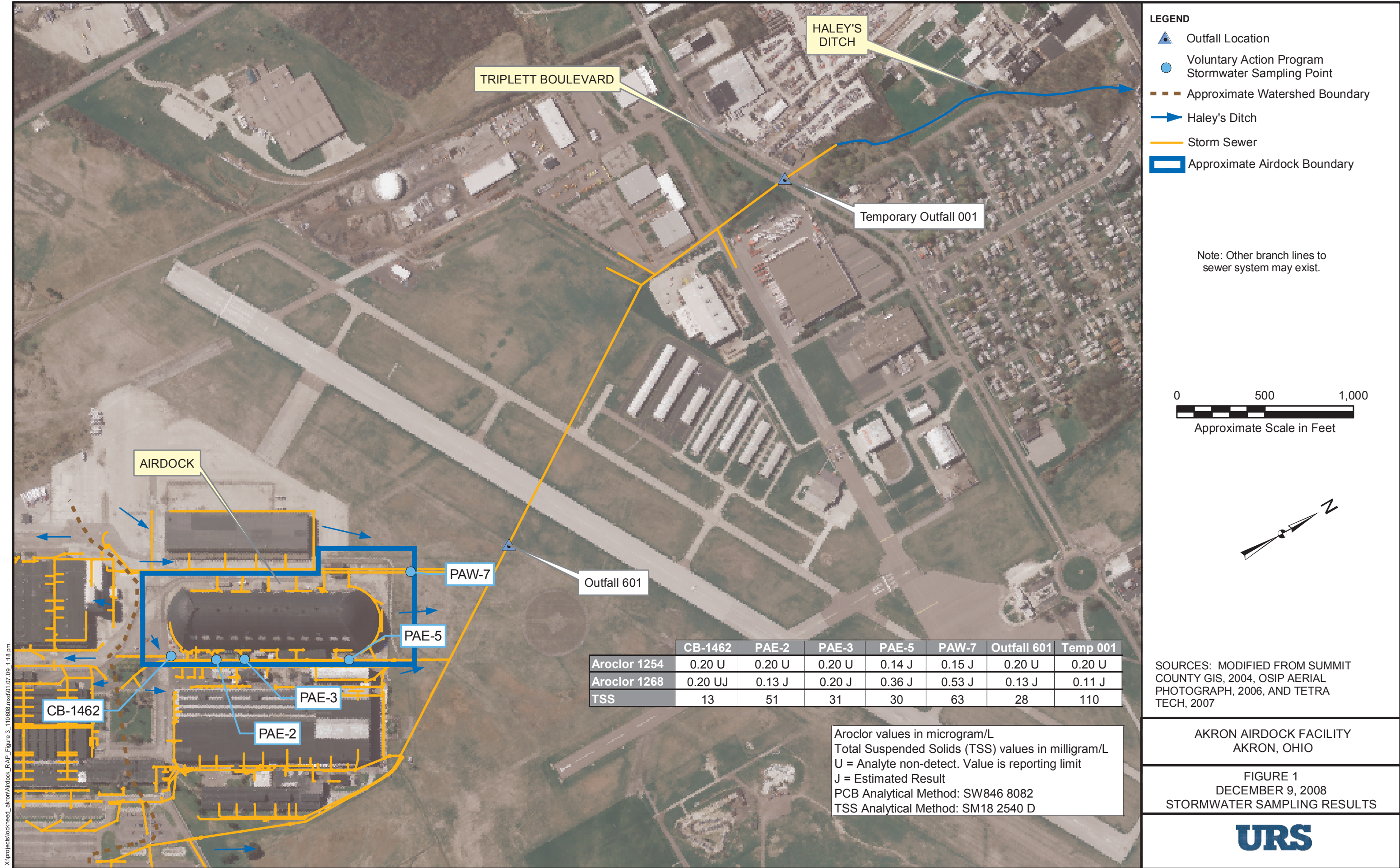
S.U. = Standard Units

ORP= Oxidation Reduction Potential

NTU= Nephelometric Turbidity Units

mV= millivolts

mS/cm= microSeimens per centimeter



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APPENDIX A

LABORATORY REPORT

ANALYTICAL REPORT

AKRON AIRDOCK/AIRDOCK EXTERIOR

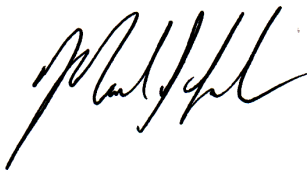
Lot #: A8L120214

David Gunnarson

Lockheed Martin Tactical Defen
Maritime Systems and Sensors
MS2

1210 Massilon Road
Akron, OH 44315-0001

TESTAMERICA LABORATORIES, INC.



Mark J. Loeb
Project Manager
mark.loeb@testamericainc.com

Approved for release.
Mark J. Loeb
Project Manager II
12/23/2008 2:49 PM

December 22, 2008

TestAmerica Laboratories, Inc.

TestAmerica North Canton 4101 Shuffel Street NW, North Canton, OH 44720

Tel (330)497-9396 Fax (330)497-0772 www.testamericainc.com



CASE NARRATIVE

A8L120214

The following report contains the analytical results for seven water samples submitted to TestAmerica North Canton by Lockheed Martin Tactical Defense Systems from the Akron Airdock/Airdock Exterior Site. The samples were received December 10, 2008, according to documented sample acceptance procedures and were analyzed in accordance with Ohio Voluntary Action Program protocols, where applicable.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to David Gunnarson and Jennifer J. Krueger on December 20, 2008. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

Any reference within this document to Severn Trent Laboratories, Inc. or STL, should be understood to refer to TestAmerica Laboratories, Inc. (formerly known as Severn Trent Laboratories, Inc.)

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Mark J. Loeb, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperatures of the coolers upon sample receipt were 0.3 and 0.8°C.

POLYCHLORINATED BIPHENYLS-8082

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

There were no client requested Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples in batch(es) 8348015. Therefore, the laboratory has included a Laboratory Control Sample Duplicate (LCSD) in the QC batch. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system.

Surrogate recoveries were outside criteria for LCS/LCSD associated with batch(es) 8348015. Since the method criterion is that one of two surrogate compounds must meet acceptance criteria, no corrective action was required.

The opening and closing CCV passed average. Since sample(s) LM-SW-PAE-3, LM-SW-PAE-2, LM-SW-CB1462, LM-SW-601, and LM-SW-TEMP001 were non-detect (or J-flag values), no corrective action was needed.

The LCS/LCSD associated with batch(es) 8348015 failed QC criteria low for 1268. The acceptance limits are advisory due to the solubility issues surrounding Aroclor 1268 in water; therefore, the data has been reported.

GENERAL CHEMISTRY

The analytical results met the requirements of the laboratory's QA/QC program.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the reparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

<u>Volatile (GC or GC/MS)</u>	<u>Semivolatile (GC/MS)</u>	<u>Metals ICP-MS</u>	<u>Metals ICP Trace</u>
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

QUALITY CONTROL ELEMENTS NARRATIVE (continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.
- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the reparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

TestAmerica North Canton Certifications and Approvals:

California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#200004), Kansas (#E10336), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Ohio VAP (#CL0024), West Virginia (#210), Wisconsin (#999518190), NAVY, ARMY, USDA Soil Permit



EXECUTIVE SUMMARY - Detection Highlights

A8L120214

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
LM-SW-PAE-5 12/09/08 14:05 001				
Aroclor 1254	0.14 J	0.20	ug/L	SW846 8082
Aroclor 1268	0.36	0.20	ug/L	SW846 8082
Total Suspended Solids	30	4.0	mg/L	SM18 2540 D
LM-SW-PAE-3 12/09/08 14:40 002				
Aroclor 1268	0.20	0.20	ug/L	SW846 8082
Total Suspended Solids	31	4.0	mg/L	SM18 2540 D
LM-SW-PAE-2 12/09/08 14:30 003				
Aroclor 1268	0.13 J	0.20	ug/L	SW846 8082
Total Suspended Solids	51	4.0	mg/L	SM18 2540 D
LM-SW-CB1462 12/09/08 14:20 004				
Total Suspended Solids	13	4.0	mg/L	SM18 2540 D
LM-SW-PAW-7 12/09/08 14:50 005				
Aroclor 1254	0.15 J	0.20	ug/L	SW846 8082
Aroclor 1268	0.53	0.20	ug/L	SW846 8082
Total Suspended Solids	63	4.0	mg/L	SM18 2540 D
LM-SW-601 12/09/08 15:00 006				
Aroclor 1268	0.13 J	0.20	ug/L	SW846 8082
Total Suspended Solids	28	4.0	mg/L	SM18 2540 D
LM-SW-TEMP001 12/09/08 15:20 007				
Aroclor 1268	0.11 J	0.20	ug/L	SW846 8082
Total Suspended Solids	110	4.0	mg/L	SM18 2540 D

ANALYTICAL METHODS SUMMARY

A8L120214

PARAMETER	ANALYTICAL METHOD
PCBs by SW-846 8082	SW846 8082
Total Suspended Solids	SM18 2540 D

References:

- SM18 "Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992.
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A8L120214

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
K4LQN	001	LM-SW-PAE-5	12/09/08	14:05
K4LRP	002	LM-SW-PAE-3	12/09/08	14:40
K4LRQ	003	LM-SW-PAE-2	12/09/08	14:30
K4LRV	004	LM-SW-CB1462	12/09/08	14:20
K4LR1	005	LM-SW-PAW-7	12/09/08	14:50
K4LR2	006	LM-SW-601	12/09/08	15:00
K4LR4	007	LM-SW-TEMP001	12/09/08	15:20

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Lockheed Martin Tactical Defense Systems

Client Sample ID: LM-SW-PAE-5

GC Semivolatiles

Lot-Sample #...: A8L120214-001 **Work Order #...**: K4LQN1AA **Matrix.....**: WG
Date Sampled...: 12/09/08 14:05 **Date Received...**: 12/10/08
Prep Date.....: 12/13/08 **Analysis Date...**: 12/17/08
Prep Batch #...: 8348015
Dilution Factor: 1 **Method.....**: SW846 8082

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Aroclor 1016	ND	0.20	ug/L
Aroclor 1221	ND	0.20	ug/L
Aroclor 1232	ND	0.20	ug/L
Aroclor 1242	ND	0.20	ug/L
Aroclor 1248	ND	0.20	ug/L
Aroclor 1254	0.14 J	0.20	ug/L
Aroclor 1260	ND	0.20	ug/L
Aroclor 1268	0.36	0.20	ug/L
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	
Tetrachloro-m-xylene	102	(35 - 130)	
Decachlorobiphenyl	55	(10 - 110)	

NOTE(S):

J Estimated result. Result is less than RL.

Lockheed Martin Tactical Defense Systems

Client Sample ID: LM-SW-PAE-5

General Chemistry

Lot-Sample #...: A8L120214-001 Work Order #...: K4LQN Matrix.....: WG

Date Sampled...: 12/09/08 14:05 Date Received...: 12/10/08

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Suspended Solids	30	4.0	mg/L	SM18 2540 D	12/15/08	8350099

Dilution Factor: 1

Lockheed Martin Tactical Defense Systems

Client Sample ID: LM-SW-PAE-3

GC Semivolatiles

Lot-Sample #...: A8L120214-002 **Work Order #...**: K4LRP1AA **Matrix.....**: WG
Date Sampled...: 12/09/08 14:40 **Date Received...**: 12/10/08
Prep Date.....: 12/13/08 **Analysis Date...**: 12/16/08
Prep Batch #...: 8348015
Dilution Factor: 1 **Method.....**: SW846 8082

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Aroclor 1016	ND	0.20	ug/L
Aroclor 1221	ND	0.20	ug/L
Aroclor 1232	ND	0.20	ug/L
Aroclor 1242	ND	0.20	ug/L
Aroclor 1248	ND	0.20	ug/L
Aroclor 1254	ND	0.20	ug/L
Aroclor 1260	ND	0.20	ug/L
Aroclor 1268	0.20	0.20	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Tetrachloro-m-xylene	50	(35 - 130)
Decachlorobiphenyl	28	(10 - 110)

Lockheed Martin Tactical Defense Systems

Client Sample ID: LM-SW-PAE-3

General Chemistry

Lot-Sample #...: A8L120214-002 Work Order #...: K4LRP Matrix.....: WG
Date Sampled...: 12/09/08 14:40 Date Received...: 12/10/08

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Suspended Solids	31	4.0	mg/L	SM18 2540 D	12/15/08	8350099

Dilution Factor: 1

Lockheed Martin Tactical Defense Systems

Client Sample ID: LM-SW-PAE-2

GC Semivolatiles

Lot-Sample #...: A8L120214-003 **Work Order #...**: K4LRQ1AA **Matrix.....**: WG
Date Sampled...: 12/09/08 14:30 **Date Received...**: 12/10/08
Prep Date.....: 12/13/08 **Analysis Date...**: 12/16/08
Prep Batch #...: 8348015
Dilution Factor: 1 **Method.....**: SW846 8082

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Aroclor 1016	ND	0.20	ug/L
Aroclor 1221	ND	0.20	ug/L
Aroclor 1232	ND	0.20	ug/L
Aroclor 1242	ND	0.20	ug/L
Aroclor 1248	ND	0.20	ug/L
Aroclor 1254	ND	0.20	ug/L
Aroclor 1260	ND	0.20	ug/L
Aroclor 1268	0.13 J	0.20	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Tetrachloro-m-xylene	79	(35 - 130)
Decachlorobiphenyl	99	(10 - 110)

NOTE(S):

J Estimated result. Result is less than RL.

Lockheed Martin Tactical Defense Systems

Client Sample ID: LM-SW-PAE-2

General Chemistry

Lot-Sample #...: A8L120214-003 Work Order #...: K4LRQ Matrix.....: WG
Date Sampled...: 12/09/08 14:30 Date Received...: 12/10/08

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Suspended Solids	51	4.0	mg/L	SM18 2540 D	12/15/08	8350099

Dilution Factor: 1

Lockheed Martin Tactical Defense Systems

Client Sample ID: LM-SW-CB1462

GC Semivolatiles

Lot-Sample #...: A8L120214-004 Work Order #...: K4LRV1AA Matrix.....: WG
Date Sampled...: 12/09/08 14:20 Date Received...: 12/10/08
Prep Date.....: 12/13/08 Analysis Date...: 12/16/08
Prep Batch #...: 8348015
Dilution Factor: 1 Method.....: SW846 8082

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Aroclor 1016	ND	0.20	ug/L
Aroclor 1221	ND	0.20	ug/L
Aroclor 1232	ND	0.20	ug/L
Aroclor 1242	ND	0.20	ug/L
Aroclor 1248	ND	0.20	ug/L
Aroclor 1254	ND	0.20	ug/L
Aroclor 1260	ND	0.20	ug/L
Aroclor 1268	ND	0.20	ug/L
<u>SURROGATE</u>	<u>PERCENT</u>		<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>	
Tetrachloro-m-xylene	84	(35 - 130)	
Decachlorobiphenyl	61	(10 - 110)	

Lockheed Martin Tactical Defense Systems

Client Sample ID: LM-SW-CB1462

General Chemistry

Lot-Sample #...: A8L120214-004 Work Order #...: K4LRV Matrix.....: WG

Date Sampled...: 12/09/08 14:20 Date Received...: 12/10/08

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Suspended Solids	13	4.0	mg/L	SM18 2540 D	12/15/08	8350099

Dilution Factor: 1

Lockheed Martin Tactical Defense Systems

Client Sample ID: LM-SW-PAW-7

GC Semivolatiles

Lot-Sample #...: A8L120214-005 **Work Order #...**: K4LR11AA **Matrix.....**: WG
Date Sampled...: 12/09/08 14:50 **Date Received...**: 12/10/08
Prep Date.....: 12/13/08 **Analysis Date...**: 12/17/08
Prep Batch #...: 8348015
Dilution Factor: 1 **Method.....**: SW846 8082

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Aroclor 1016	ND	0.20	ug/L
Aroclor 1221	ND	0.20	ug/L
Aroclor 1232	ND	0.20	ug/L
Aroclor 1242	ND	0.20	ug/L
Aroclor 1248	ND	0.20	ug/L
Aroclor 1254	0.15 J	0.20	ug/L
Aroclor 1260	ND	0.20	ug/L
Aroclor 1268	0.53	0.20	ug/L
SURROGATE	PERCENT RECOVERY	RECOVERY	
		LIMITS	
Tetrachloro-m-xylene	112	(35 - 130)	
Decachlorobiphenyl	85	(10 - 110)	

NOTE(S):

J Estimated result. Result is less than RL.

Lockheed Martin Tactical Defense Systems

Client Sample ID: LM-SW-PAW-7

General Chemistry

Lot-Sample #...: A8L120214-005 Work Order #...: K4LR1 Matrix.....: WG

Date Sampled...: 12/09/08 14:50 Date Received...: 12/10/08

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Suspended Solids	63	4.0	mg/L	SM18 2540 D	12/15/08	8350099

Dilution Factor: 1

Lockheed Martin Tactical Defense Systems

Client Sample ID: LM-SW-601

GC Semivolatiles

Lot-Sample #...: A8L120214-006 **Work Order #...**: K4LR21AA **Matrix.....**: WG
Date Sampled...: 12/09/08 15:00 **Date Received...**: 12/10/08
Prep Date.....: 12/13/08 **Analysis Date...**: 12/16/08
Prep Batch #...: 8348015
Dilution Factor: 1 **Method.....**: SW846 8082

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Aroclor 1016	ND	0.20	ug/L
Aroclor 1221	ND	0.20	ug/L
Aroclor 1232	ND	0.20	ug/L
Aroclor 1242	ND	0.20	ug/L
Aroclor 1248	ND	0.20	ug/L
Aroclor 1254	ND	0.20	ug/L
Aroclor 1260	ND	0.20	ug/L
Aroclor 1268	0.13 J	0.20	ug/L
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	
Tetrachloro-m-xylene	56	(35 - 130)	
Decachlorobiphenyl	28	(10 - 110)	

NOTE(S):

J Estimated result. Result is less than RL.

Lockheed Martin Tactical Defense Systems

Client Sample ID: LM-SW-601

General Chemistry

Lot-Sample #...: A8L120214-006 Work Order #...: K4LR2 Matrix.....: WG

Date Sampled...: 12/09/08 15:00 Date Received...: 12/10/08

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Suspended Solids	28	4.0	mg/L	SM18 2540 D	12/15/08	8350099

Dilution Factor: 1

Lockheed Martin Tactical Defense Systems

Client Sample ID: LM-SW-TEMP001

GC Semivolatiles

Lot-Sample #...: A8L120214-007 **Work Order #...**: K4LR41AA **Matrix.....**: WG
Date Sampled...: 12/09/08 15:20 **Date Received...**: 12/10/08
Prep Date.....: 12/13/08 **Analysis Date...**: 12/16/08
Prep Batch #...: 8348015
Dilution Factor: 1 **Method.....**: SW846 8082

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Aroclor 1016	ND	0.20	ug/L
Aroclor 1221	ND	0.20	ug/L
Aroclor 1232	ND	0.20	ug/L
Aroclor 1242	ND	0.20	ug/L
Aroclor 1248	ND	0.20	ug/L
Aroclor 1254	ND	0.20	ug/L
Aroclor 1260	ND	0.20	ug/L
Aroclor 1268	0.11 J	0.20	ug/L
SURROGATE	PERCENT RECOVERY	RECOVERY	
		LIMITS	
Tetrachloro-m-xylene	65	(35 - 130)	
Decachlorobiphenyl	54	(10 - 110)	

NOTE(S):

J Estimated result. Result is less than RL.

Lockheed Martin Tactical Defense Systems

Client Sample ID: LM-SW-TEMP001

General Chemistry

Lot-Sample #...: A8L120214-007 Work Order #...: K4LR4 Matrix.....: WG

Date Sampled...: 12/09/08 15:20 Date Received...: 12/10/08

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Suspended Solids	110	4.0	mg/L	SM18 2540 D	12/15/08	8350099

Dilution Factor: 1

QUALITY CONTROL SECTION

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A8L120214
MB Lot-Sample #: A8L130000-015

Work Order #...: K4M3D1AA

Matrix.....: WATER

Analysis Date...: 12/16/08

Prep Date.....: 12/13/08

Prep Batch #...: 8348015

Dilution Factor: 1

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
Aroclor 1016	ND	0.20	ug/L	SW846 8082
Aroclor 1221	ND	0.20	ug/L	SW846 8082
Aroclor 1232	ND	0.20	ug/L	SW846 8082
Aroclor 1242	ND	0.20	ug/L	SW846 8082
Aroclor 1248	ND	0.20	ug/L	SW846 8082
Aroclor 1254	ND	0.20	ug/L	SW846 8082
Aroclor 1260	ND	0.20	ug/L	SW846 8082
Aroclor 1268	ND	0.20	ug/L	SW846 8082
SURROGATE	PERCENT	RECOVERY		
	RECOVERY	LIMITS		
Tetrachloro-m-xylene	69	(35 - 130)		
Decachlorobiphenyl	72	(10 - 110)		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A8L120214

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>PREP</u> <u>BATCH #</u>
Total Suspended Solids		Work Order #:	K4PN01AA	MB Lot-Sample #:	A8L150000-099	
	ND	4.0	mg/L	SM18 2540 D	12/15/08	8350099
		Dilution Factor:	1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: A8L120214 Work Order #....: K4M3D1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: A8L130000-015 K4M3D1AD-LCSD
 Prep Date.....: 12/13/08 Analysis Date...: 12/17/08
 Prep Batch #....: 8348015
 Dilution Factor: 5

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aroclor 1268	49 a	(50 - 150)			SW846 8082
	47 a	(50 - 150)	3.7	(0-30)	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	98	(35 - 130)
	90	(35 - 130)
Decachlorobiphenyl	193 *	(10 - 110)
	185 *	(10 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

* Surrogate recovery is outside stated control limits.

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A8L120214

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Suspended Solids	98	(73 - 113)	SM18 2540 D	12/15/08	8350099
		Dilution Factor: 1			

Work Order #: K4PN01AC LCS Lot-Sample#: A8L150000-099

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A8L120214

Work Order #...: K4MD9-SMP
K4MD9-DUP

Matrix.....: WATER

Date Sampled...: 11/06/08 16:38

Date Received...: 11/07/08

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Suspended Solids	450	440	mg/L	3.2	(0-20)	SD Lot-Sample #: A8L120289-001 SM18 2540 D	12/15/08	8350100
Dilution Factor: 1								

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A8L120214

Work Order #...: K4MF7-SMP
K4MF7-DUP

Matrix.....: WATER

Date Sampled...: 11/11/08 12:50

Date Received...: 11/14/08

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Suspended Solids	150	150	mg/L	0.68	(0-20)	SD Lot-Sample #: A8L120289-013 SM18 2540 D	12/15/08	8350100
Dilution Factor: 1								

North Canton
4101 Shuffel Street, N. W.

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

North Canton, OH 44720
phone 330.966.9279 fax 330.497.0772

TestAmerica Laboratories, Inc.

Client Contact		Project Manager: Jennifer Krueger - URS CN		Site Contact: Craig Maltchak - URS Akron		Date: 12-9-08		COC No. 001734	
Lockheed Martin - Dave Gunnarson		Tel/Fax: 513-419-3401/513-419-3452		Lab Contact: Mark Loeb		Carrier: 10000 Henderson		Job No. 1 of 1 COCs	
Address 1210 Massillon Road		Analysis Turnaround Time		Calendar (C) or Work Days (W)		SDG No.			
City/State/Zip Akron, Ohio 44315		TAT if different from Below							
(330) 796-8751 Phone		2 weeks							
(330) 796-2388 FAX		1 week							
Project Name: Airdock Exterior		2 days							
Site: Akron Airdock		1 day							
P O # 0810130 Line Item 2									
Sample Identification		Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Sample Specific Notes:	
LM-SW-PAE-5	12-9-08	2:05	Grab	Water	3	N	TSS by SM 2540D		
LM-SW-PAE-3		2:40	Grab	Water	3	N	PCBs plus 1268 by EPA 8082 Low Level		
LM-SW-PAE-2		2:30	Grab	Water	3	N			
LM-SW-CB1462		2:20	Grab	Water	3	N			
LM-SW-PAW-7		2:50	Grab	Water	3	N			
LM-SW-601		3:00	Grab	Water	3	N			
LM-SW-Temp001		3:20	Grab	Water	3	N			
Preservation Used: 1=Ice, 2=HCl, 3=H2SO4, 4=HNO3, 5=NaOH, 6=Other 1									
Possible Hazard Identification									
Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐									
Special Instructions/QC Requirements & Comments: VAP Certified analyses for PCBs with reporting limit of 0.2 ug/L and method detection limit of 0.1 ug/L. Hold Samples Upon Receipt. Jennifer Krueger URS to provide direction on analysis within 36 hours of sample receipt. Provide e-copy of preliminary results and final report to Jennifer_Krueger@urscorp.com. Level III QA/QC data package with final results.									
Relinquished by: <i>Jenny Krueger</i>		Company: URS	Date/Time: 12-10-08	Received by: <i>Mark Loeb</i>	Company: URS	Date/Time: 12/10/08			
Relinquished by:		Company:	Date/Time:	Received by:	Company:	Date/Time:			
Relinquished by:		Company:	Date/Time:	Received by:	Company:	Date/Time:			

TestAmerica Cooler Receipt Form/Narrative

 Lot Number: A81120214
North Canton Facility

 Client Lockheed Martin Project _____ By: Chris L. [Signature]

 Cooler Received on 12-10-08 Opened on 12-10-08 (Signature)

 FedEx ☐ UPS ☐ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☒ TestAmerica Courier ☐ Other _____

 TestAmerica Cooler # _____ Multiple Coolers ☒ Foam Box ☐ Client Cooler ☐ Other _____

1. Were custody seals on the outside of the cooler(s)? Yes ☐ No ☒ Intact? Yes ☐ No ☐ NA ☒
 If YES, Quantity _____ Quantity Unsalvageable _____
 Were custody seals on the outside of cooler(s) signed and dated? Yes ☐ No ☐ NA ☒
 Were custody seals on the bottle(s)? Yes ☐ No ☒
 If YES, are there any exceptions? _____
 2. Shippers' packing slip attached to the cooler(s)? Yes ☐ No ☒
 3. Did custody papers accompany the sample(s)? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
 4. Were the custody papers signed in the appropriate place? Yes ☒ No ☐
 5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other _____
 6. Cooler temperature upon receipt _____ °C See back of form for multiple coolers/temps ☒
 METHOD: IR ☒ Other ☐ _____
 COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
 7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
 8. Could all bottle labels be reconciled with the COC? Yes ☒ No ☐
 9. Were sample(s) at the correct pH upon receipt? Yes ☐ No ☐ NA ☒
 10. Were correct bottle(s) used for the test(s) indicated? Yes ☒ No ☐
 11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☐ NA ☒
 12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐
 13. Was a trip blank present in the cooler(s)? Yes ☐ No ☒ Were VOAs on the COC? Yes ☐ No ☒
- Contacted PM _____ Date _____ by _____ via Verbal ☐ Voice Mail ☐ Other ☐
- Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 100108-HNO₃; Sulfuric Acid Lot# 031808-H₂SO₄; Sodium Hydroxide Lot# 073007 -NaOH; Hydrochloric Acid Lot# 092006-HCl; Sodium Hydroxide and Zinc Acetate Lot# 050205-(CH₃COO)₂ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

[illegible]

Discrepancies Cont'd:

END OF REPORT

APPENDIX B

DATA REVIEW REPORT

**DECEMBER 9, 2008 STORMWATER SAMPLING EVENT
AKRON AIRDOCK
AKRON, OHIO**

**Data Review Report
Akron Airdock/Airdock Exterior
Akron, Ohio**

Data Package: A8L120214

I. INTRODUCTION

Seven water samples were collected on December 9, 2008, at the Akron Airdock/Airdock Exterior site in Akron, Ohio. The samples were submitted to TestAmerica, Inc. (TestAmerica) in North Canton, Ohio, for analysis of the parameters listed in Table 1.

**Table 1
Sample ID Summary**

Lab ID	Sample ID ⁽¹⁾	Matrix	Date Collected	Analyses Requested ⁽¹⁾
A8L120214001	LM-SW-PAE-5	Water	12/9/2008	PCBs, TSS
A8L120214002	LM-SW-PAE-3	Water	12/9/2008	PCBs, TSS
A8L120214003	LM-SW-PAE-2	Water	12/9/2008	PCBs, TSS
A8L120214004	LM-SW-CB1462	Water	12/9/2008	PCBs, TSS
A8L120214005	LM-SW-PAW-7	Water	12/9/2008	PCBs, TSS
A8L120214006	LM-SW-601	Water	12/9/2008	PCBs, TSS
A8L120214007	LM-SW-TEMP001	Water	12/9/2008	PCBs, TSS

(1) Definitions: PCBs = Polychlorinated Biphenyls as Aroclors [SW846 Method 8082]
TSS = Total Suspended Solids [SM18 Method 2540D]

References: SW846 = "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," Third Edition, November 1986 and its updates.
SM18 = "Standard Methods for the Examination of Water and Wastewater," 18th Edition, 1992.

The PCB analyses were performed in accordance with TestAmerica's Ohio Voluntary Action Program (VAP) certification.

A standard review for data quality was conducted by URS Corporation (URS) for all samples listed in Table 1. A standard review includes assessment of supporting quality control (QC) parameters and a review for compliance with the cited methods, but does not include reconstruction of the analytical data. The following information was reviewed:

- ▶ Case Narrative
- ▶ Chain-of-Custody (COC) documents
- ▶ Laboratory sample ID
- ▶ URS sample ID
- ▶ Sample matrix
- ▶ Sample results by sample, by analytical fraction
- ▶ Analytical method performed
- ▶ Units of measure

- ▶ Analysis detection limits
- ▶ Laboratory data qualifiers
- ▶ Date samples were extracted and/or analyzed
- ▶ Surrogate recoveries
- ▶ Laboratory Check Samples (LCS) results
- ▶ Laboratory Method Blank results
- ▶ Matrix Spike/Matrix Spike Duplicate (MS/MSD) results
- ▶ Electronic Data

Guidance documents for the data review process included the referenced analytical methods and “USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,” (1999).

II. DATA REVIEW

This section describes each data quality element reviewed and discusses any findings. The data qualifiers used in this review are defined in Section III.

A. Sample Receiving

The COC Record and Cooler Receipt Form indicate that samples were collected and transported to the laboratory by URS personnel. Samples were received at TestAmerica packed in wet ice and intact. The temperatures of the coolers were 0.3 and 0.8 degrees Celsius (°C), within the acceptance range of 0 to 6°C.

B. Holding Time Criteria

The analyses were reviewed for compliance with the method-specified holding times. All sample preparation and analysis procedures were performed within the appropriate holding times.

C. Blanks

Blank samples, which can include field blanks and laboratory blanks, are evaluated to determine whether conditions exist resulting in reported sample concentrations which are not native to the sample (i.e., if samples were contaminated from external sources). Sample contamination is demonstrated if an analyte is detected in a blank, and the concentration in an associated sample is not significantly higher. Specifically, if the sample concentration is less than five times the blank concentration (or 10 times for common contaminants such as acetone, methylene chloride, 2-butanone, and phthalate esters), it may be assumed that the sample concentration was due to external contamination and not actually present in the samples. The result is, therefore, qualified as non-detect (U) at the reported concentration or at the laboratory Reporting Limit (RL), whichever is higher. If the sample concentration is greater than five times the associated blank concentration (or 10 times for common contaminants), the amount attributable to contamination is negligible and the sample concentration is reported without qualification.

All blanks associated with the project samples presented in this report were acceptable and no qualifications were required.

D. Surrogate Recoveries

Surrogates are chemicals not normally found in nature, but chemically behave in a similar fashion as the target analytes. Surrogate spikes are added prior to sample preparation for organic analyses and are used to evaluate

the effects of the sample matrix on the extraction efficiency and/or instrument response. Surrogate recoveries are evaluated against QC acceptance limits established by the laboratory.

The surrogate recoveries for all samples were within the laboratory's acceptance criteria. No qualification of data was necessary.

E. Laboratory Control Samples (LCS)

A LCS is a "contaminant-free matrix" spiked with a known concentration of all analytes of interest or a representative subset of the target analytes. The LCS is carried through the complete sample preparation and analytical procedures and provides information on the method's performance. Percent recoveries are monitored to provide a continuous measure of each method's accuracy. The LCS recoveries are compared with established method performance criteria to determine data acceptability. Recoveries above QC limits indicate a positive bias. Therefore, associated positive concentrations are qualified as estimated (J). If recoveries are below QC limits, a negative bias is assumed. Consequently, associated non-detect and positive concentrations are qualified as estimated. If recoveries are significantly low (i.e., below 10 percent), positive concentrations are estimated and non-detect results are rejected.

An LCS and LCS Duplicate were prepared and analyzed with the project sample batch. The recoveries for Aroclor 1268 in both were slightly below the laboratory's QC acceptance limits. These limits are considered advisory by the laboratory due to the limited solubility of Aroclor 1268 in water. Since the low recoveries may indicate a low bias, however, the results for Aroclor 1268 in all samples are qualified as estimated (flagged "J"). The relative percent difference (RPD) between the two results was within QC acceptance limits.

F. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

A MS is an aliquot of the matrix (water or soil) spiked with a known concentration of all compounds of interest or a representative subset of compounds. The MS/MSD samples are subjected to the entire analytical procedure in order to determine both accuracy and precision of the method for that matrix. This is accomplished by calculating the percent recovery and the RPD of the two spiked samples. The MS/MSDs do not control the analytical process, but are used to evaluate the effect of the matrix on analytical performance. Associated data (the spiked sample or samples with a like matrix) are qualified following criteria similar to the LCS.

MS/MSD analyses were not requested on project samples and additional volume was not provided. Therefore, the laboratory prepared and analyzed an LCS/LCS Duplicate pair as described above. No additional qualifications were necessary.

G. Duplicate/Replicate Samples

Duplicate or replicate samples are analyzed to estimate the precision of data generated. Duplicates may be laboratory duplicates, which monitor the precision of the analytical process, or field duplicates, which monitor the precision of the entire sampling and analytical system. If significant differences between analyses are identified, associated data are qualified as estimated.

Laboratory duplicate analyses on unrelated samples were performed for TSS in the batch containing the project samples. Acceptable precision was demonstrated. No field duplicate samples were submitted for analysis.

H. Reporting Limits

The reporting limit for each Aroclor was sufficiently sensitive to meet the VAP unrestricted potable use standard of 0.5 µg/L for total PCBs. No dilutions were required.

J. Miscellaneous Comments

TestAmerica reported results below their reporting limit but above the method detection limit (MDL) with a qualifier (“J”), in accordance with USEPA Contract Laboratory Program (CLP) conventions. During the data assessment, the “J” qualifiers were retained with the numeric results unless otherwise noted.

III. DATA QUALIFIERS AND USABILITY

The following data qualifiers were used to note data usability:

- U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.
- UJ = The analyte was not detected at or above the sample reporting limit. However, the reporting limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

The complete data set with qualifiers is presented in Table 2. All data are usable for supporting project objectives.

Table 2
Analytical Data Summary
Akron Airdock/Airdock Exterior
Akron, Ohio

Analyte	Units	A8L120214001 LM-SW-PAE-5 12/09/2008	A8L120214002 LM-SW-PAE-3 12/09/2008	A8L120214003 LM-SW-PAE-2 12/09/2008	A8L120214004 LM-SW-CB1462 12/09/2008	A8L120214005 LM-SW-PAW-7 12/09/2008	A8L120214006 LM-SW-601 12/09/2008	A8L120214007 LM-SW-TEMP001 12/09/2008
Aroclor 1016	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor 1221	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor 1232	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor 1242	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor 1248	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor 1254	ug/L	0.14 J	0.20 U	0.20 U	0.20 U	0.15 J	0.20 U	0.20 U
Aroclor 1260	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor 1268	ug/L	0.36 J	0.2 J	0.13 J	0.20 UJ	0.53 J	0.13 J	0.11 J
Total Suspended Solids	mg/L	30	31	51	13	63	28	110

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.

UJ = The analyte was not detected at or above the sample reporting limit. However, the reporting limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.