APPENDIX C

Data Quality Control Summary Report

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ATTACHMENTS

ACRONYMS AND ABBREVIATIONS

%D	percent difference
ADR	Automated Data Review
AOC	Area of Concern
D	absolute difference
DoD	United States Department of Defense
DQA	Data Quality Assessment
DQO	Data Quality Objective
FWCUG	Facility-wide Cleanup Goal
FWQAPP	Facility-wide Quality Project Plan
LCS	Laboratory Control Sample
MDL	Method Detection Level
MPR	Monthly Progress Report
MS	Matrix Spike
MSD	Matrix Spike Duplicate
Ohio EPA	Ohio Environmental Protection Agency
PAH	Polycyclic Aromatic Hydrocarbon
PBA08	Performance-Based Acquisition 2008
PBA 08 SAP	Performance-Based Acquisition 2008 Supplemental Sampling and Analysis Plan Addendum No. 1
PCB	Polychlorinated Biphenyl
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
QSM	Quality Systems Manual
REIMS	RVAAP Environmental Information Management System
RI	Remedial Investigation
RPD	Relative Percent Difference
RVAAP	Ravenna Army Ammunition Plant
SAIC	Science Applications International Corporation
SVOC	Semi-volatile Organic Compound
TestAmerica	TestAmerica Laboratories, Inc.
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
VOC	Volatile Organic Compound

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C.0 PROJECT QUALITY ASSURANCE SUMMARY

C.1 PURPOSE OF THIS REPORT

Environmental data must always be interpreted relative to its known limitations and its intended use. As can be expected in environmental media, there are areas and data points where the user needs to be cautioned relative to the quality of the project information presented. The data verification process and this data quality assessment (DQA) are performed to assist current and future data users in interpreting these data.

The purpose of this DQA report is to describe:

1. The quality control (QC) procedures followed to ensure data generated by Leidos, formerly Science Applications International Corporation (SAIC), during the remedial investigations (RIs) at the Ravenna Army Ammunition Plant (RVAAP) meet project requirements;
2. The quality of the data collected; and
3. The problems encountered during the course of the study and their solutions.

A separate Chemical Data Usability Assessment has been completed by the U.S. Army Corps of Engineers (USACE) quality assurance (QA) representative (Attachment 2). This assessment discusses the overall data quality and usability of project data based on a review of this DQA and the findings of the third-party validator contracted by USACE. While there were some differences in the qualifiers assigned by Leidos and the third-party reviewer, the findings were deemed to be compatible.

This DQA report provides an assessment of the analytical information gathered during the implementation of the RI at Load Line 10. It documents the quality of the data utilized for the RI report and assesses if QA/QC objectives were met. Evaluation of field and laboratory QC measures will constitute the majority of this assessment; however, references will also be directed toward those QA procedures that establish data credibility. The primary intent of this assessment is to illustrate that, except as noted, data generated for this investigation can withstand scientific scrutiny; are appropriate for their intended purpose; are technically defensible; and are of known and acceptable sensitivity, precision, and accuracy.

Multiple activities were performed to achieve the desired data quality for this project. As discussed in the RI Report, decisions were made during the initial scoping of the RI to define the quality and quantity of data required. Data quality objectives (DQOs) were established to guide the implementation of the field sampling and laboratory analysis [refer to the *Performance Based Acquisition 2008 Supplemental Investigation Sampling and Analysis Plan Addendum No.1,* (USACE 2009), herein referred to PBA08 SAP]. A QA program was established to standardize procedures and document activities [refer to the *Facility-Wide Quality Assurance Project Plan for Environmental Investigations*, herein referred to as the FWQAPP (USACE 2001) and Part II of the PBA08 SAP]. This program provided a means to detect and correct any deficiencies in the process. Upon receipt by

the project team, data were subjected to verification and validation review by an automated data review (ADR) process to identify and qualify problems related to the analysis. These review steps contributed to this final DQA where data used in the investigation are identified as having met the criteria and are being utilized appropriately.

C.2 QUALITY ASSURANCE PROGRAM

The FWQAPP and Part II of the PBA08 SAP were developed to guide the RI for Load Line 10. The purposes of these documents were to enumerate the quantity and type of samples to be taken to inspect the area of concern (AOC) and define the quantity and type of QA/QC samples to be used to evaluate the quality of the data obtained. The FWQAPP established requirements for field and laboratory QC procedures. In general, field QC duplicates and QA split samples were required for each environmental sample matrix collected in the area being investigated; volatile organic compound (VOC) trip blanks were to accompany each cooler containing water samples for VOC determinations; and analytical laboratory QC duplicates, matrix spikes (MSs), laboratory control samples (LCSs), and method blanks were required for each preparation batch of 20 samples or less for each matrix and analyte.

A primary goal of the former RVAAP QA program was to ensure that the quality of results for all environmental measurements were appropriate for their intended use. To this end, the FWQAPP and standardized field procedures were compiled to guide the investigation. Through the process of readiness review, training, equipment calibration, QC implementation, and detailed documentation, the project has successfully accomplished the goals set for the QA program.

C.2.1 Monthly Progress Reports

Monthly Progress Reports (MPRs) were completed by the Leidos Project Manager for the duration of the project. The MPRs contained information on work completed, problems encountered, corrective actions/solutions, summary of findings, and upcoming work. These reports were issued to the USACE, Louisville District Project Manager by e-mail with copies forwarded to the Ohio Environmental Protection Agency (Ohio EPA). Access to these reports can be obtained through the USACE, Louisville District Project Manager.

C.2.2 Daily Activity Logs

The Field Team Leader completed Daily Activity Logs. These include information such as, but not limited to, on-site sub-tier contractors, on-site equipment, work performed summaries, QC activities, health and safety activities, problems encountered, and corrective actions.

C.2.3 Laboratory "Definitive" Level Data Reporting

The Quality Assurance Project Plan (QAPP) for this project identified requirements for laboratory data reporting and identified TestAmerica Laboratories Inc. (TestAmerica) of North Canton, Ohio (a subcontractor to White Water Associates Inc., Amasa, Michigan), as the laboratory for the project. During project execution, the TestAmerica facility in North Canton, Ohio, performed all of the analyses, except explosives and propellants, which were performed at the TestAmerica facility in West Sacramento, California. Collected QA split samples were analyzed by USACE's contracted QA laboratory, RTI Laboratories, Inc., of Livonia, Michigan. TestAmerica and RTI Laboratories, Inc. are accredited by the U.S. Department of Defense (DoD). All analytical procedures were completed in accordance with applicable professional standards; U.S. Environmental Protection Agency (USEPA) requirements; government regulations and guidelines; the DoD Quality Systems Manual (QSM), Version 3; USACE, Louisville District analytical QA guidelines; and specific project goals and requirements. USEPA "definitive" data have been reported, and include the following basic information:

- Laboratory case narratives;
- Sample results (soil/sediment reported per dry weight);
- Laboratory method blank results;
- LCS results;
- Laboratory sample MS recoveries;
- Laboratory duplicate results;
- Surrogate recoveries [VOCs, semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), and explosives];
- Initial and continuing calibrations;
- Sample preparation dates; and
- Sample analysis dates.

This information from the laboratory, along with field information, provides the basis for subsequent data evaluation relative to sensitivity, precision, accuracy, representativeness, and completeness.

C.3 DATA VERIFICATION

The objective when evaluating the project data quality is to determine its usability. The evaluation is based on the interpretation of laboratory QC measures, field QC measures, and project DQOs. This project implemented ADR software to facilitate laboratory data review. The ADR output was reviewed by the project-designated verification staff.

C.3.1 Field Data Verification

Field-generated documents, such as sampling logs, boring logs, daily health and safety summaries, daily safety inspections, equipment calibration and maintenance logs, and sample management logs were peer-reviewed on site.

C.3.2 Laboratory Data Verification

Analytical data generated for this project have been subjected to a process of automated data verification and review. The following describes this systematic process and the evaluation activities performed. Several criteria have been established against which the data were compared and from which a judgment was rendered regarding the acceptance and qualification of the data. Because it is beyond the scope of this report to cite those criteria, the reader is directed to the following documents for specific detail:

- PBA08 SAP (USACE 2009).
- DoD – Quality Systems Manual for Environmental Laboratories, Version 3, January, 2006.
- USACE Louisville District, *Louisville DoD Quality Systems Manual Supplement*, Version 1, March, 2007.
- USEPA – *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, EPA-540/R-99/008, October, 1999.
- USEPA – *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, EPA 540/R-94/013, February, 1994.
- Leidos Technical Support Contractor QA Technical Procedure (TP-DM-300-7), *Data Verification and Validation.*

Upon receiving field and analytical data, verification staff performed a systematic examination of the reports, including ADR software, to ensure the content, presentation, and administrative validity of 100% of the data. Discrepancies identified during this process were recorded and documented utilizing the ADR. Any discrepancies were resolved prior to database flag entry. As part of data verification, standardized laboratory electronic data deliverables were subjected to review. This technical evaluation ensured that all contract-specified requirements had been met, and that electronic information conformed to reported hardcopy data. Outlier reports from the ADR software review are included as Attachment 1 to this appendix. QA Program Nonconformance Report and Corrective Action systems were implemented as required.

During the verification phase of the review and evaluation process, data were subjected to a systematic technical review by examining all field and analytical QC results and laboratory documentation following USEPA functional guidelines, DoD QSM criteria, and Leidos internal procedures for laboratory data review. These data review guidelines define the technical review criteria, methods for evaluating the criteria, and actions to be taken resulting from the review of these criteria. The primary objectives of this phase were to assess and summarize the quality and reliability of the data for the intended use and to document factors that may affect the usability of the data. This process did not include in-depth review of raw data instrument output or re-calculation of results from the primary instrument output. This data verification and analytical review process included, but was not necessarily limited to, the following parameters:

- Data completeness;
- Analytical holding times and sample preservation;
- Calibration (initial and continuing);

- Method blanks;
- Sample results verification;
- Surrogate recovery;
- LCS analysis;
- Internal standard performance;
- MS recovery;
- Duplicate analysis comparison;
- Reported detection limits;
- Compound, element, and isotope quantification;
- Reported detection levels;
- Method reporting levels; and
- Secondary dilutions.

As an end result of this phase of the review, the data were qualified based on the technical assessment of the verification criteria. Qualifiers were applied by the ADR to each field and analytical result to indicate the usability of the data for its intended purpose.

C.3.3 Definitions of Data Qualifiers (Flags)

During the data verification process, all laboratory data were assigned appropriate data qualification flags and reason codes. Qualification flags are defined as follows:

"U" Indicates the analyte was analyzed for, but not detected above, the level of the associated value.

"J" Indicates the analyte was positively identified; however, the associated numerical value is an approximate concentration of the analyte in the sample.

"UJ" Indicates the analyte was analyzed for, but not detected above, the associated value; however, the reported value is an estimate and demonstrates a decreased knowledge of its accuracy or precision.

"R" Indicates the analyte value reported is unusable. The integrity of the analyte's identification, accuracy, precision, or sensitivity has raised significant questions as to the reality of the information presented.

C.3.4 Data Acceptability

A total of 51 environmental sediment, soil, and surface water samples were collected with approximately 4,530 discrete analyses (i.e., analytes) being obtained, reviewed, and integrated into the assessment (these totals do not include field measurements and field descriptions). Under the direction of the PBA08 SAP and USACE, Louisville District, the project successfully collected RI samples and produced acceptable results for 99.98% of the sample analyses performed. No sediment

or surface water data were rejected. Data that were rejected are relegated to antimony non-detectable concentration levels in soil in sample L10SB-070-5510-SO.

Table C-1 summarizes all targeted field QC and QA split samples collected during the investigation. Cross-references for duplicate and QA split sample pair numbers are presented on Table C-2 along with the requested parameters for each sample. Table C-3 provides a summary of results rejected during review, Table C-4 provides a summary of qualified analyses grouped by media and analyte category, and Table C-5 shows the individual results qualified during review. The majority of the estimated values were based on values observed between the laboratory method detection levels (MDLs) and the project reporting levels (values determined in this region have an inherently higher variability and need to be considered estimated at best), MS recoveries, surrogate recoveries, and continuing calibrations.

For the PBA08 RI, five field duplicates were analyzed for Load Line 10 soil media. Two equipment rinsates and one deionized source water blank were collected for the entire field cycle. The potable water source was previously tested for use by Ohio EPA and USACE. Approval documentation is referenced under the Performance-Based Acquisition 2008 (PBA08) Sharon Conglomerate Well Installation task. The project goal for blanks is to achieve concentrations less than the reporting levels. Table C-6 summarizes analytes that were detected in these blanks. The potable water blank (SCFqc-001-0001) showed detected concentrations for 12 metals and eight miscellaneous general chemistry analytes. Of these, barium, calcium, iron, magnesium, manganese, nickel, potassium, sodium, and the general chemistry analytes exceeded their reporting limits. As noted, the results have been previously reviewed and accepted by Ohio EPA and USACE.

Toluene was the only analyte detected in the PBA08 field blank (PBA08-QC-6000-FB) and it was well below the laboratory reporting limit. The PBA08 RI equipment rinsate blanks (PBA08-QC-6001-ER and PBA08-QC-6002-ER) showed detections for a total of eight metals, five SVOCs, and three VOCs. Of the metals, only manganese and nickel in one rinsate and zinc in both rinsates exceeded the reporting limit, but all except nickel were below 2x the reporting limit. Only one VOC and one SVOC were detected slightly above the reporting limit. These analytes [acetone and bis(2-ethylhexyl)phthalate] are common laboratory contaminants. In general, the field blank and rinsate blank results indicate that the equipment decontamination procedure was effective and the potential for sample contamination due to ambient field conditions is very low.

Table C-1. Number of Samples Taken at Load Line 10

Media	Environmental Samples	Field Duplicates	USACE Split Samples	Trip Blanks	Equipment Rinse Blanks[a]	Source Water Blanks[b]
Sediment	2	0	0	0		
Soil	47	5	5	0		
Surface Water	2	0	0	2	2	2

[a] Equipment rinse blanks were collected at a frequency of two per field cycle for the entire Performance Based Acquisition 2008 (PBA08) Remedial Investigation (RI) for the 17 areas of concern (AOCs) as presented in Section 4.6 of the PBA08 Sampling and Analysis Plan (PBA08 SAP).

[b] Source water blanks for deionized and potable water used during equipment decontamination were evaluated for the entire PBA08 RI for the 17 AOCs as presented in Section 4.6 of the PBA08 SAP.

USACE = United States Army Corps of Engineers.

Table C-2. Identification of Regular and QC Samples Taken at Load Line 10

Sample ID	Laboratory SDG	Field Duplicates	USACE Split Samples	Trip Blanks[a]	Metals	Explosives	SVOCs	Propellants[b]	VOCs	Pesticides	PCBs	PAHs	Hexavalent Chromium	Total Chromium
Sediment														
FWSSD-102-5011-SD	A0B180524	NS	NS	NS	X	X	X	X	X	X	X			
L10SD-094-5531-SD	A0B190524	NS	NS	NS	X	X	X	X	X	X	X			
Soil														
L10SB-066-5493-SO	A0C170537	NS	NS	NS	X	X						X		
L10SB-066-5494-SO	A0C170537	NS	NS	NS	X	X						X		
L10SB-066-5495-SO	A0C170527, A0C170534	NS	NS	NS	X	X						X		
L10SB-066-5496-SO	A0C250407	NS	NS	NS	X	X						X		
L10SB-067-5497-SO	A0C170537	NS	NS	NS	X	X						X		
L10SB-067-5498-SO	A0C170537	NS	NS	NS	X	X						X		
L10SB-067-5499-SO	A0C170527, A0C170534	NS	NS	NS	X	X						X		
L10SB-069-5503-SO	A0C170537	NS	NS	NS	X	X						X		
L10SB-069-5504-SO	A0C170537	NS	NS	NS	X	X						X		
L10SB-069-5505-SO	A0C170527, A0C170534	NS	NS	NS	X	X						X		
L10SB-070-5507-SO	A0C170537	NS	L10SB-070-6178-QA		X	X						X		
L10SB-070-5508-SO	A0C170537	NS	NS	NS	X	X						X		
L10SB-070-5509-SO	A0C170527, A0C170534	L10SB-070-6174-FD	NS	NS	X	X						X		
L10SB-070-5510-SO	A0C170537	NS	NS	NS	X	X						X		
L10SB-071-5511-SO	A0C170537	NS	NS	NS	X	X						X		
L10SB-071-5512-SO	A0C170537	NS	NS	NS	X	X						X		
L10SB-071-5513-SO	A0C170537	NS	NS	NS	X	X						X		
L10SB-072-5515-SO	A0C170537	L10SB-072-6173-FD	L10SB-072-6177-QA	NS	X	X						X		

Table C-2. Identification of Regular and QC Samples Taken at Load Line 10 (continued)

Sample ID	Laboratory SDG	Field Duplicates	USACE Split Samples	Trip Blanks[a]	Metals	Explosives	SVOCs	Propellants[b]	VOCs	Pesticides	PCBs	PAHs	Hexavalent Chromium	Total Chromium
L10SB-072-5516-SO	A0C170537	NS	NS	NS	X	X						X		
L10SB-072-5517-SO	A0C170527, A0C170534	NS	NS	NS	X	X						X		
L10SB-073-5519-SO	A0C170537	L10SB-073-6172-FD	L10SB-073-6176-QA	NS	X	X	X	X	X	X	X			
L10SB-073-5520-SO	A0C170537	NS	NS	NS	X	X	X	X	X	X	X			
L10SB-073-5521-SO	A0C170527, A0C170534	NS	NS	NS	X	X	X	X	X	X	X			
L10SB-074-5523-SO	A0C170537	NS	NS	NS	X	X	X	X	X	X	X			
L10SB-074-5524-SO	A0C170537	NS	NS	NS	X	X	X	X	X	X	X			
L10SB-074-5525-SO	A0C170537	NS	NS	NS	X	X	X	X	X	X	X			
L10SB-075-5527-SO	A0C170537	NS	NS	NS	X	X						X		
L10SB-075-5528-SO	A0C170537	NS	NS	NS	X	X						X		
L10SB-075-5529-SO	A0C170527, A0C170534	NS	NS	NS	X	X						X		
L10SS-076-5532-SO	A0D130516	NS	NS	NS									X	X
L10SS-077-5533-SO	A0D130516	NS	NS	NS									X	X
L10SS-078-5534-SO	A0D130516	NS	NS	NS									X	X
L10SS-079M-5536-SO	A0D140520	NS	NS	NS	X	X						X		
L10SS-080M-5537-SO	A0D140520	NS	NS	NS	X	X	X	X	X	X	X			
L10SS-081M-5538-SO	A0D140520	NS	NS	NS	X	X						X		
L10SS-082M-5539-SO	A0D140520	NS	NS	NS	X	X						X		
L10SS-083M-5540-SO	A0D140520	NS	NS	NS	X	X						X		
L10SS-084M-5541-SO	A0D140520	NS	NS	NS	X	X						X		
L10SS-085M-5542-SO	A0D140520	L10SS-085M-6169-FD	L10SS-085M-6168-QA	NS	X	X						X		
L10SS-086M-5543-SO	A0D140520	NS	NS	NS	X	X						X		
L10SS-087M-5544-SO	A0D140520	NS	NS	NS	X	X						X		
L10SS-088M-5545-SO	A0D140520	NS	NS	NS	X	X	X	X	X	X	X			
L10SS-089M-5546-SO	A0D140520	L10SS-089M-6171-FD	L10SS-089M-6170-QA	NS	X	X						X		

Table C-2. Identification of Regular and QC Samples Taken at Load Line 10 (continued)

Sample ID	Laboratory SDG	Field Duplicates	USACE Split Samples	Trip Blanks[a]	Metals	Explosives	SVOCs	Propellants[b]	VOCs	Pesticides	PCBs	PAHs	Hexavalent Chromium	Total Chromium
L10SS-090M-5547-SO	A0D140520	NS	NS	NS	X	X						X		
L10SS-091M-5548-SO	A0D140520	NS	NS	NS	X	X						X		
L10SS-092M-5549-SO	A0D140520	NS	NS	NS	X	X	X	X	X	X	X			
L10SS-093M-5550-SO	A0D140520	NS	NS	NS	X	X						X		
Surface Water														
FWSSW-102-5010-SW	A0B180524	NS	NS	PBA08-QC-6009-TB	X	X	X	X	X	X	X			
L10SW-094-5535-SW	A0C100541	NS	NS	PBA08-6017-QC	X	X	X	X	X	X	X			

No equipment rinse blanks were collected at the AOC during the Performance Based Acquisition 2008 Remedial Investigation.
[a]Trip blanks only accompany samples for VOCs in water.
[b]Propellants include Nitrocellulose and Nitroguanidine
AOC = Area of Concern
NS = Not sampled
PAH = Polycyclic Aromatic Hydrocarbon
PCB = Polychlorinated Biphenyl
QC = Quality Control
SDG = Sample Delivery Group
SVOC = Semi-volatile Organic Compound
USACE = United States Army Corps of Engineers
VOC = Volatile Organic Compound

Table C-3. Results Rejected in Verification for Samples from Load Line 10

Sample Delivery Group	Sample ID	Station	Analysis Type	Chemical	Results (mg/kg)	Reporting Limit (mg/kg)	Laboratory Qualifier	Validation Qualifier	Validation Code
A0C170537	L10SB-070-5510-SO	L10sb-070	Metals	Antimony	0.58	0.58	U	R	MS-R

MS =Matrix spike
R = Rejected
U = Not detected

Table C-4. Summary of Qualified Results for Samples from Load Line 10

Analysis Group	Validation Qualifier[a]	Validation Reason Code[b]	Number Qualified	Total Number of Analyses	Percent Qualified
Sediment					
All Analyses	J		19	338	5.6
	UJ		8	338	2.4
	None		311	338	92
Metals	J	MS-J	3	45	6.7
	J	MS-J, RepLimit-J	1	45	2.2
	J	ProJudge-J	1	45	2.2
	J	RepLimit-J	6	45	13
	UJ	RepLimit-J, CalBlk-U	3	45	6.7
	None	None	31	45	69
Explosives	UJ	CCV-UJ	1	32	3.1
	None	None	31	32	97
Propellants	None	None	3	3	100
SVOCs	J	RepLimit-J	7	132	5.3
	None	None	125	132	95
Pesticides	None	None	42	42	100
PCBs	None	None	14	14	100
VOCs	J	RepLimit-J	1	70	1.4
	UJ	CCV-UJ	2	70	2.9
	UJ	MB-U, RepLimit-J	1	70	1.4
	UJ	MB-U, RepLimit-J, FldQC-U	1	70	1.4
	None	None	65	70	93
Soil					
All Analyses	R		1	3851	0.026
	J		463	3851	12
	UJ		149	3851	3.9
	U		1	3851	0.026
	None		3237	3851	84
Metals	R	MS-R	1	1130	0.088
	J	LCS-J	40	1130	3.5
	J	MS-J	117	1130	10
	J	MS-J, RepLimit-J	35	1130	3.1
	J	ProJudge-J	2	1130	0.18
	J	RepLimit-J	179	1130	16
	UJ	MS-UJ	2	1130	0.18
	UJ	RepLimit-J, CalBlk-U	33	1130	2.9
	None	None	721	1130	64

Table C-4. Summary of Qualified Results for Samples from Load Line 10 (continued)

Analysis Group	Validation Qualifier[a]	Validation Reason Code[b]	Number Qualified	Total Number of Analyses	Percent Qualified
Hexavalent Chromium	J	RepLimit-J	1	3	33
	None	None	2	3	67
Explosives	J	HT-J, RepLimit-J	1	784	0.13
	J	RepLimit-J	14	784	1.8
	UJ	CCV-UJ	10	784	1.3
	UJ	HT-UJ	15	784	1.9
	UJ	MS-UJ	3	784	0.38
	None	None	741	784	95
Propellants	J	RepLimit-J	2	20	10
	UJ	MB-U, MS-J, RepLimit-J	1	20	5
	UJ	MB-U, RepLimit-J	2	20	10
	None	None	15	20	75
SVOCs	J	MS-J	7	1,284	0.55
	J	LCS-J	1	1,284	0.08
	J	RepLimit-J	54	1,284	4.2
	UJ	LCS-UJ	5	1,284	0.39
	UJ	MB-U, RepLimit-J	1	1,284	0.08
	UJ	MS-UJ	1	1,284	0.08
	None	None	1215	1,284	95
Pesticides	J	Surr-J, CCV-J	2	210	0.95
	J	Surr-J, RepLimit-J, CCV-J	1	210	0.48
	UJ	CCV-UJ	72	210	34
	UJ	MS-UJ	1	210	0.48
	None	None	134	210	64
PCBs	J	RepLimit-J	1	70	1.4
	None	None	69	70	99
VOCs	J	RepLimit-J	6	350	1.7
	UJ	MB-U, RepLimit-J	3	350	0.86
	U	MB-U	1	350	0.29
	None	None	340	350	97
Surface Water					
All Analyses	J	--	13	339	3.8
	UJ	--	73	339	22
	None	--	253	339	75

Table C-4. Summary of Qualified Results for Samples from Load Line 10 (continued)

Analysis Group	Validation Qualifier[a]	Validation Reason Code[b]	Number Qualified	Total Number of Analyses	Percent Qualified
Metals	J	RepLimit-J	12	45	27
	UJ	MB-U, RepLimit-J	1	45	2.2
	UJ	RepLimit-J, CalBlk-U	2	45	4.4
	None	None	30	45	67
Explosives	UJ	CCV-UJ	1	32	3.1
	None	None	31	32	97
Propellants	None	None	3	3	100
SVOCs	UJ	HT-J, MB-U, RepLimit-J	1	132	0.76
	UJ	HT-UJ	65	132	49
	UJ	MB-U, RepLimit-J	1	132	0.76
	None	None	65	132	49
Pesticides	J	RepLimit-J	1	42	2.4
	None	None	41	42	98
PCBs	None	None	14	14	100
VOCs	UJ	LCS-UJ	1	70	1.4
	UJ	RepLimit-J, FldQC-U	1	70	1.4
	None	None	68	70	97
Nitrate	None	None	1	1	100

[a] Validation Qualifiers: J=estimated; U=not detected; UJ=not detected and reporting limit estimated; R=rejected.
[b] Validation Reason Codes: CalBlk=Calibration Blank; CCV=Continuing Calibration Verification; FldQC=Field QC; HT=Holding Time; LCS=Lab Control Standard; MB=Method Blank; MS=Matrix Spike; ProJudge=professional judgment; RepLimit=Reporting Limit; Surr=Surrogate Recovery.
PCB = Polychlorinated Biphenyl.
SVOC = Semi-volatile Organic Compound.
VOC = Volatile Organic Compound.

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Metals							
Sediment (mg/kg)							
Antimony	A0B180524	FWSSD-102-5011-SD	0.15	0.77	J	J	RepLimit-J
Antimony	A0B190524	L10SD-094-5531-SD	0.12	0.76	J	J	MS-J, RepLimit-J
Beryllium	A0B190524	L10SD-094-5531-SD	0.66	0.15	--	J	ProJudge-J
Cadmium	A0B180524	FWSSD-102-5011-SD	0.13	0.31	J	UJ	RepLimit-J, CalBlk-U
Calcium	A0B190524	L10SD-094-5531-SD	1860	305	--	J	MS-J
Cobalt	A0B190524	L10SD-094-5531-SD	6.5	0.76	--	J	MS-J
Lead	A0B190524	L10SD-094-5531-SD	21.7	0.46	--	J	MS-J
Mercury	A0B180524	FWSSD-102-5011-SD	0.038	0.15	J	J	RepLimit-J
Mercury	A0B190524	L10SD-094-5531-SD	0.049	0.15	J	J	RepLimit-J
Silver	A0B180524	FWSSD-102-5011-SD	0.066	0.77	J	UJ	RepLimit-J, CalBlk-U
Silver	A0B190524	L10SD-094-5531-SD	0.048	0.76	J	UJ	RepLimit-J, CalBlk-U
Sodium	A0B180524	FWSSD-102-5011-SD	72.5	155	J	J	RepLimit-J
Sodium	A0B190524	L10SD-094-5531-SD	29.8	152	J	J	RepLimit-J
Thallium	A0B190524	L10SD-094-5531-SD	0.17	0.3	J	J	RepLimit-J
Soil (mg/kg)							
Aluminum	A0C250407	L10SB-066-5496-SO	3340	11.2	--	J	ProJudge-J
Antimony	A0C170537	L10SB-066-5493-SO	0.87	0.58	--	J	MS-J
Antimony	A0C170537	L10SB-066-5494-SO	0.7	0.59	--	J	MS-J
Antimony	A0C250407	L10SB-066-5496-SO	0.12	0.56	J	J	MS-J, RepLimit-J
Antimony	A0C170537	L10SB-067-5497-SO	0.12	0.61	J	J	MS-J, RepLimit-J

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Antimony	A0C170537	L10SB-067-5498-SO	0.11	0.58	J	J	MS-J, RepLimit-J
Antimony	A0C170527	L10SB-067-5499-SO	0.15	0.59	J	J	RepLimit-J
Antimony	A0C170537	L10SB-069-5503-SO	0.62	0.6	--	J	MS-J
Antimony	A0C170537	L10SB-069-5504-SO	0.099	0.57	J	J	MS-J, RepLimit-J
Antimony	A0C170527	L10SB-069-5505-SO	0.091	0.59	J	J	RepLimit-J
Antimony	A0C170537	L10SB-070-5507-SO	4.5	0.59	--	J	MS-J
Antimony	A0C170537	L10SB-070-5508-SO	0.34	0.57	J	J	MS-J, RepLimit-J
Antimony	A0C170527	L10SB-070-5509-SO	0.15	0.59	J	J	RepLimit-J
Antimony	A0C170537	L10SB-070-5510-SO	0.58	0.58	U	R	MS-R
Antimony	A0C170537	L10SB-070-6174-FD	0.4	0.58	J	J	MS-J, RepLimit-J
Antimony	A0C170537	L10SB-071-5511-SO	0.18	0.63	J	J	MS-J, RepLimit-J
Antimony	A0C170537	L10SB-071-5512-SO	0.16	0.58	J	J	MS-J, RepLimit-J
Antimony	A0C170537	L10SB-071-5513-SO	0.082	0.61	J	J	MS-J, RepLimit-J
Antimony	A0C170537	L10SB-072-5515-SO	0.27	0.62	J	J	MS-J, RepLimit-J
Antimony	A0C170537	L10SB-072-5516-SO	0.12	0.58	J	J	MS-J, RepLimit-J
Antimony	A0C170527	L10SB-072-5517-SO	0.095	0.57	J	J	RepLimit-J
Antimony	A0C170537	L10SB-072-6173-FD	0.083	0.61	J	J	MS-J, RepLimit-J
Antimony	A0C170537	L10SB-073-5519-SO	0.14	0.63	J	J	MS-J, RepLimit-J
Antimony	A0C170537	L10SB-073-5520-SO	0.094	0.57	J	J	MS-J, RepLimit-J
Antimony	A0C170527	L10SB-073-5521-SO	0.084	0.58	J	J	RepLimit-J

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Antimony	A0C170537	L10SB-073-6172-FD	0.14	0.62	J	J	MS-J, RepLimit-J
Antimony	A0C170537	L10SB-074-5523-SO	0.087	0.64	J	J	MS-J, RepLimit-J
Antimony	A0C170537	L10SB-074-5524-SO	0.1	0.62	J	J	MS-J, RepLimit-J
Antimony	A0C170537	L10SB-074-5525-SO	0.59	0.59	U	UJ	MS-UJ
Antimony	A0C170537	L10SB-075-5527-SO	0.2	0.7	J	J	MS-J, RepLimit-J
Antimony	A0C170537	L10SB-075-5528-SO	0.57	0.57	U	UJ	MS-UJ
Antimony	A0D140520	L10SS-079M-5536-SO	0.18	0.51	J	J	MS-J, RepLimit-J
Antimony	A0D140520	L10SS-080M-5537-SO	0.39	0.51	J	J	MS-J, RepLimit-J
Antimony	A0D140520	L10SS-081M-5538-SO	0.37	0.51	J	J	MS-J, RepLimit-J
Antimony	A0D140520	L10SS-082M-5539-SO	0.11	0.51	J	J	MS-J, RepLimit-J
Antimony	A0D140520	L10SS-083M-5540-SO	0.14	0.51	J	J	MS-J, RepLimit-J
Antimony	A0D140520	L10SS-084M-5541-SO	0.12	0.51	J	J	MS-J, RepLimit-J
Antimony	A0D140520	L10SS-085M-5542-SO	0.11	0.51	J	J	MS-J, RepLimit-J
Antimony	A0D140520	L10SS-085M-6169-FD	0.12	0.51	J	J	MS-J, RepLimit-J
Antimony	A0D140520	L10SS-086M-5543-SO	0.11	0.51	J	J	MS-J, RepLimit-J
Antimony	A0D140520	L10SS-087M-5544-SO	0.16	0.51	J	J	MS-J, RepLimit-J
Antimony	A0D140520	L10SS-088M-5545-SO	0.22	0.51	J	J	MS-J, RepLimit-J
Antimony	A0D140520	L10SS-089M-5546-SO	0.22	0.51	J	J	MS-J, RepLimit-J

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Antimony	A0D140520	L10SS-089M-6171-FD	0.24	0.51	J	J	MS-J, RepLimit-J
Antimony	A0D140520	L10SS-090M-5547-SO	0.19	0.51	J	J	MS-J, RepLimit-J
Antimony	A0D140520	L10SS-091M-5548-SO	0.34	0.51	J	J	MS-J, RepLimit-J
Antimony	A0D140520	L10SS-092M-5549-SO	0.18	0.51	J	J	MS-J, RepLimit-J
Antimony	A0D140520	L10SS-093M-5550-SO	0.14	0.51	J	J	MS-J, RepLimit-J
Arsenic	A0C170537	L10SB-072-5515-SO	11.4	0.62	--	J	MS-J
Arsenic	A0C170537	L10SB-072-5516-SO	14.6	0.58	E	J	MS-J
Arsenic	A0C170537	L10SB-073-5519-SO	12.8	0.63	--	J	MS-J
Barium	A0C170537	L10SB-066-5493-SO	68.3	1.2	--	J	MS-J
Barium	A0C170537	L10SB-066-5494-SO	41.2	1.2	--	J	MS-J
Barium	A0C250407	L10SB-066-5496-SO	16.5	1.1	--	J	MS-J
Barium	A0C170537	L10SB-067-5497-SO	87.3	1.2	--	J	MS-J
Barium	A0C170537	L10SB-067-5498-SO	55.2	1.2	--	J	MS-J
Barium	A0C170537	L10SB-069-5503-SO	54.7	1.2	--	J	MS-J
Barium	A0C170537	L10SB-069-5504-SO	36.4	1.1	--	J	MS-J
Barium	A0C170537	L10SB-070-5507-SO	45.6	1.2	--	J	MS-J
Barium	A0C170537	L10SB-070-5508-SO	31.1	1.1	--	J	MS-J
Barium	A0C170537	L10SB-070-6174-FD	27.2	1.2	--	J	MS-J
Barium	A0C170537	L10SB-071-5511-SO	68.7	1.3	--	J	MS-J
Barium	A0C170537	L10SB-071-5512-SO	77.8	1.2	--	J	MS-J
Barium	A0C170537	L10SB-071-5513-SO	151	1.2	--	J	MS-J
Barium	A0C170537	L10SB-072-6173-FD	89.2	1.2	--	J	MS-J
Barium	A0C170537	L10SB-073-5519-SO	55.6	1.3	--	J	MS-J

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Barium	A0C170537	L10SB-073-5520-SO	44.1	1.1	--	J	MS-J
Barium	A0C170537	L10SB-073-6172-FD	60.3	1.2	--	J	MS-J
Barium	A0C170537	L10SB-074-5523-SO	66.5	1.3	--	J	MS-J
Barium	A0C170537	L10SB-074-5524-SO	67.7	1.2	--	J	MS-J
Barium	A0C170537	L10SB-074-5525-SO	32.4	1.2	--	J	MS-J
Barium	A0C170537	L10SB-075-5527-SO	72.8	1.4	--	J	MS-J
Barium	A0C170537	L10SB-075-5528-SO	35.9	1.1	--	J	MS-J
Cadmium	A0C170537	L10SB-066-5494-SO	0.087	0.24	J	J	RepLimit-J
Cadmium	A0C170527	L10SB-066-5495-SO	0.13	0.23	J	J	RepLimit-J
Cadmium	A0C250407	L10SB-066-5496-SO	0.073	0.22	J	J	RepLimit-J
Cadmium	A0C170537	L10SB-067-5497-SO	0.078	0.24	J	J	RepLimit-J
Cadmium	A0C170537	L10SB-067-5498-SO	0.097	0.23	J	J	RepLimit-J
Cadmium	A0C170527	L10SB-067-5499-SO	0.042	0.24	J	J	RepLimit-J
Cadmium	A0C170537	L10SB-069-5504-SO	0.088	0.23	J	J	RepLimit-J
Cadmium	A0C170527	L10SB-069-5505-SO	0.038	0.24	J	J	RepLimit-J
Cadmium	A0C170537	L10SB-070-5508-SO	0.12	0.23	J	J	RepLimit-J
Cadmium	A0C170527	L10SB-070-5509-SO	0.048	0.23	J	J	RepLimit-J
Cadmium	A0C170537	L10SB-070-5510-SO	0.039	0.23	J	J	RepLimit-J
Cadmium	A0C170537	L10SB-070-6174-FD	0.057	0.23	J	J	RepLimit-J
Cadmium	A0C170537	L10SB-072-5516-SO	0.023	0.23	J	UJ	RepLimit-J, CalBlk-U
Cadmium	A0C170527	L10SB-072-5517-SO	0.032	0.23	J	J	RepLimit-J
Cadmium	A0C170537	L10SB-072-6173-FD	0.13	0.24	J	J	RepLimit-J
Cadmium	A0C170537	L10SB-073-5519-SO	0.14	0.25	J	J	RepLimit-J
Cadmium	A0C170537	L10SB-073-5520-SO	0.14	0.23	J	J	RepLimit-J
Cadmium	A0C170527	L10SB-073-5521-SO	0.032	0.23	J	J	RepLimit-J

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Cadmium	A0C170537	L10SB-073-6172-FD	0.21	0.25	J	J	RepLimit-J
Cadmium	A0C170537	L10SB-074-5523-SO	0.068	0.26	J	J	RepLimit-J
Cadmium	A0C170537	L10SB-074-5524-SO	0.034	0.25	J	UJ	RepLimit-J, CalBlk-U
Cadmium	A0C170537	L10SB-074-5525-SO	0.053	0.24	J	J	RepLimit-J
Cadmium	A0C170537	L10SB-075-5528-SO	0.059	0.23	J	J	RepLimit-J
Cadmium	A0C170527	L10SB-075-5529-SO	0.041	0.23	J	J	RepLimit-J
Cadmium	A0D140520	L10SS-080M-5537-SO	0.19	0.2	J	J	RepLimit-J
Cadmium	A0D140520	L10SS-082M-5539-SO	0.15	0.2	J	J	RepLimit-J
Cadmium	A0D140520	L10SS-083M-5540-SO	0.16	0.2	J	J	RepLimit-J
Cadmium	A0D140520	L10SS-084M-5541-SO	0.13	0.2	J	J	RepLimit-J
Cadmium	A0D140520	L10SS-086M-5543-SO	0.15	0.2	J	J	RepLimit-J
Cadmium	A0D140520	L10SS-087M-5544-SO	0.17	0.2	J	J	RepLimit-J
Cadmium	A0D140520	L10SS-088M-5545-SO	0.18	0.2	J	J	RepLimit-J
Cadmium	A0D140520	L10SS-089M-5546-SO	0.14	0.2	J	J	RepLimit-J
Cadmium	A0D140520	L10SS-089M-6171-FD	0.17	0.2	J	J	RepLimit-J
Cadmium	A0D140520	L10SS-091M-5548-SO	0.18	0.2	J	J	RepLimit-J
Cadmium	A0D140520	L10SS-092M-5549-SO	0.17	0.2	J	J	RepLimit-J
Calcium	A0C170537	L10SB-070-5510-SO	3950	230	--	J	MS-J
Cobalt	A0C170537	L10SB-072-5515-SO	7.5	0.62	--	J	MS-J
Cobalt	A0C170537	L10SB-072-5516-SO	14.9	0.58	--	J	MS-J
Cobalt	A0C170537	L10SB-075-5528-SO	8.6	0.57	--	J	MS-J
Copper	A0C250407	L10SB-066-5496-SO	9.5	0.56	--	J	ProJudge-J
Lead	A0C170537	L10SB-072-5515-SO	38.7	0.37	--	J	MS-J
Lead	A0C170537	L10SB-072-5516-SO	13.6	0.35	--	J	MS-J
Lead	A0C170537	L10SB-073-5519-SO	22	0.38	--	J	MS-J

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Lead	A0D140520	L10SS-079M-5536-SO	29.4	0.31	--	J	MS-J
Lead	A0D140520	L10SS-080M-5537-SO	25.6	0.31	--	J	MS-J
Lead	A0D140520	L10SS-081M-5538-SO	31.5	0.31	--	J	MS-J
Lead	A0D140520	L10SS-082M-5539-SO	15.9	0.31	--	J	MS-J
Lead	A0D140520	L10SS-083M-5540-SO	20	0.31	--	J	MS-J
Lead	A0D140520	L10SS-084M-5541-SO	15.5	0.31	--	J	MS-J
Lead	A0D140520	L10SS-085M-5542-SO	17.1	0.31	--	J	MS-J
Lead	A0D140520	L10SS-085M-6169-FD	17.7	0.31	--	J	MS-J
Lead	A0D140520	L10SS-086M-5543-SO	16.8	0.31	--	J	MS-J
Lead	A0D140520	L10SS-087M-5544-SO	18.9	0.31	--	J	MS-J
Lead	A0D140520	L10SS-088M-5545-SO	27.2	0.31	--	J	MS-J
Lead	A0D140520	L10SS-089M-5546-SO	23	0.31	--	J	MS-J
Lead	A0D140520	L10SS-089M-6171-FD	26.4	0.31	--	J	MS-J
Lead	A0D140520	L10SS-090M-5547-SO	35.3	0.31	--	J	MS-J
Lead	A0D140520	L10SS-091M-5548-SO	23.3	0.31	--	J	MS-J
Lead	A0D140520	L10SS-092M-5549-SO	21.3	0.31	--	J	MS-J
Lead	A0D140520	L10SS-093M-5550-SO	20.9	0.31	--	J	MS-J
Magnesium	A0C170537	L10SB-066-5493-SO	5090	117	--	J	MS-J
Magnesium	A0C170537	L10SB-066-5494-SO	4700	118	--	J	MS-J
Magnesium	A0C250407	L10SB-066-5496-SO	1770	112	--	J	MS-J
Magnesium	A0C170537	L10SB-067-5497-SO	6910	122	--	J	MS-J
Magnesium	A0C170537	L10SB-067-5498-SO	7770	117	--	J	MS-J
Magnesium	A0C170537	L10SB-069-5503-SO	2550	119	--	J	MS-J
Magnesium	A0C170537	L10SB-069-5504-SO	2510	115	--	J	MS-J
Magnesium	A0C170537	L10SB-070-5507-SO	2190	119	--	J	MS-J

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Magnesium	A0C170537	L10SB-070-5508-SO	1890	113	--	J	MS-J
Magnesium	A0C170537	L10SB-070-6174-FD	2240	115	--	J	MS-J
Magnesium	A0C170537	L10SB-071-5511-SO	2790	126	--	J	MS-J
Magnesium	A0C170537	L10SB-071-5512-SO	3660	115	--	J	MS-J
Magnesium	A0C170537	L10SB-071-5513-SO	6200	121	--	J	MS-J
Magnesium	A0C170537	L10SB-072-6173-FD	2040	121	--	J	MS-J
Magnesium	A0C170537	L10SB-073-5520-SO	3220	115	--	J	MS-J
Magnesium	A0C170537	L10SB-073-6172-FD	2240	123	--	J	MS-J
Magnesium	A0C170537	L10SB-074-5523-SO	1910	129	--	J	MS-J
Magnesium	A0C170537	L10SB-074-5524-SO	2010	125	--	J	MS-J
Magnesium	A0C170537	L10SB-074-5525-SO	1920	118	--	J	MS-J
Magnesium	A0C170537	L10SB-075-5527-SO	4730	141	--	J	MS-J
Magnesium	A0C170537	L10SB-075-5528-SO	4290	114	--	J	MS-J
Mercury	A0C170537	L10SB-069-5503-SO	0.028	0.12	J	J	RepLimit-J
Mercury	A0C170537	L10SB-070-5507-SO	0.029	0.12	J	J	RepLimit-J
Mercury	A0C170537	L10SB-071-5511-SO	0.032	0.13	J	J	RepLimit-J
Mercury	A0C170537	L10SB-071-5512-SO	0.021	0.12	J	J	RepLimit-J
Mercury	A0C170537	L10SB-071-5513-SO	0.017	0.12	J	J	RepLimit-J
Mercury	A0C170537	L10SB-072-5515-SO	0.019	0.12	J	J	RepLimit-J
Mercury	A0C170537	L10SB-072-6173-FD	0.038	0.12	J	J	RepLimit-J
Mercury	A0C170537	L10SB-073-5519-SO	0.041	0.13	J	J	RepLimit-J
Mercury	A0C170537	L10SB-073-5520-SO	0.031	0.11	J	J	RepLimit-J
Mercury	A0C170537	L10SB-073-6172-FD	0.04	0.12	J	J	RepLimit-J
Mercury	A0C170537	L10SB-074-5523-SO	0.019	0.13	J	J	RepLimit-J
Mercury	A0C170537	L10SB-074-5524-SO	0.019	0.12	J	J	RepLimit-J

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Mercury	A0D140520	L10SS-079M-5536-SO	0.046	0.1	J	J	RepLimit-J
Mercury	A0D140520	L10SS-080M-5537-SO	0.027	0.1	J	J	RepLimit-J
Mercury	A0D140520	L10SS-081M-5538-SO	0.037	0.1	J	J	RepLimit-J
Mercury	A0D140520	L10SS-082M-5539-SO	0.043	0.1	J	J	RepLimit-J
Mercury	A0D140520	L10SS-083M-5540-SO	0.036	0.1	J	J	RepLimit-J
Mercury	A0D140520	L10SS-084M-5541-SO	0.036	0.1	J	J	RepLimit-J
Mercury	A0D140520	L10SS-085M-5542-SO	0.04	0.1	J	J	RepLimit-J
Mercury	A0D140520	L10SS-085M-6169-FD	0.041	0.1	J	J	RepLimit-J
Mercury	A0D140520	L10SS-086M-5543-SO	0.039	0.1	J	J	RepLimit-J
Mercury	A0D140520	L10SS-087M-5544-SO	0.046	0.1	J	J	RepLimit-J
Mercury	A0D140520	L10SS-088M-5545-SO	0.034	0.1	J	J	RepLimit-J
Mercury	A0D140520	L10SS-089M-5546-SO	0.042	0.1	J	J	RepLimit-J
Mercury	A0D140520	L10SS-089M-6171-FD	0.044	0.1	J	J	RepLimit-J
Mercury	A0D140520	L10SS-090M-5547-SO	0.037	0.1	J	J	RepLimit-J
Mercury	A0D140520	L10SS-091M-5548-SO	0.033	0.1	J	J	RepLimit-J
Mercury	A0D140520	L10SS-092M-5549-SO	0.041	0.1	J	J	RepLimit-J
Mercury	A0D140520	L10SS-093M-5550-SO	0.045	0.1	J	J	RepLimit-J
Nickel	A0C170537	L10SB-066-5493-SO	22.5	1.2	--	J	MS-J
Nickel	A0C250407	L10SB-066-5496-SO	12.3	1.1	--	J	MS-J
Nickel	A0C170537	L10SB-067-5497-SO	29.7	1.2	--	J	MS-J
Nickel	A0C170537	L10SB-067-5498-SO	26	1.2	--	J	MS-J
Nickel	A0C170537	L10SB-069-5503-SO	15.8	1.2	--	J	MS-J
Nickel	A0C170537	L10SB-069-5504-SO	18	1.1	--	J	MS-J
Nickel	A0C170537	L10SB-070-5507-SO	18.2	1.2	--	J	MS-J
Nickel	A0C170537	L10SB-070-5508-SO	13.5	1.1	--	J	MS-J

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Nickel	A0C170537	L10SB-070-6174-FD	16.3	1.2	--	J	MS-J
Nickel	A0C170537	L10SB-071-5511-SO	19.2	1.3	--	J	MS-J
Nickel	A0C170537	L10SB-071-5512-SO	16	1.2	--	J	MS-J
Nickel	A0C170537	L10SB-071-5513-SO	11.3	1.2	--	J	MS-J
Nickel	A0C170537	L10SB-072-6173-FD	14.7	1.2	--	J	MS-J
Nickel	A0C170537	L10SB-073-5519-SO	16.3	1.3	--	J	MS-J
Nickel	A0C170537	L10SB-073-5520-SO	23.9	1.1	--	J	MS-J
Nickel	A0C170537	L10SB-073-6172-FD	16.9	1.2	--	J	MS-J
Nickel	A0C170537	L10SB-074-5523-SO	12.7	1.3	--	J	MS-J
Nickel	A0C170537	L10SB-074-5524-SO	14.6	1.2	--	J	MS-J
Nickel	A0C170537	L10SB-074-5525-SO	18.5	1.2	--	J	MS-J
Nickel	A0C170537	L10SB-075-5527-SO	29.7	1.4	--	J	MS-J
Nickel	A0C170537	L10SB-075-5528-SO	20	1.1	--	J	MS-J
Potassium	A0C170537	L10SB-066-5494-SO	1150	118	--	J	MS-J
Potassium	A0C250407	L10SB-066-5496-SO	652	112	--	J	MS-J
Potassium	A0D140520	L10SS-079M-5536-SO	940	102	--	J	MS-J
Potassium	A0D140520	L10SS-080M-5537-SO	1470	102	--	J	MS-J
Potassium	A0D140520	L10SS-081M-5538-SO	912	102	--	J	MS-J
Potassium	A0D140520	L10SS-082M-5539-SO	793	102	--	J	MS-J
Potassium	A0D140520	L10SS-083M-5540-SO	826	509	--	J	MS-J
Potassium	A0D140520	L10SS-084M-5541-SO	921	102	--	J	MS-J
Potassium	A0D140520	L10SS-085M-5542-SO	885	510	--	J	MS-J
Potassium	A0D140520	L10SS-085M-6169-FD	899	509	--	J	MS-J
Potassium	A0D140520	L10SS-086M-5543-SO	943	510	--	J	MS-J
Potassium	A0D140520	L10SS-087M-5544-SO	730	102	--	J	MS-J

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Potassium	A0D140520	L10SS-088M-5545-SO	1100	102	--	J	MS-J
Potassium	A0D140520	L10SS-089M-5546-SO	988	102	--	J	MS-J
Potassium	A0D140520	L10SS-089M-6171-FD	1200	102	--	J	MS-J
Potassium	A0D140520	L10SS-090M-5547-SO	1130	102	--	J	MS-J
Potassium	A0D140520	L10SS-091M-5548-SO	1080	102	--	J	MS-J
Potassium	A0D140520	L10SS-092M-5549-SO	870	102	--	J	MS-J
Potassium	A0D140520	L10SS-093M-5550-SO	979	102	--	J	MS-J
Selenium	A0C170537	L10SB-066-5493-SO	1.5	0.58	--	J	LCS-J
Selenium	A0C170537	L10SB-066-5494-SO	1.3	0.59	--	J	LCS-J
Selenium	A0C250407	L10SB-066-5496-SO	0.58	0.56	--	J	MS-J
Selenium	A0C170537	L10SB-067-5497-SO	1.5	0.61	--	J	LCS-J
Selenium	A0C170537	L10SB-067-5498-SO	1.3	0.58	--	J	LCS-J
Selenium	A0C170537	L10SB-069-5503-SO	1.2	0.6	--	J	LCS-J
Selenium	A0C170537	L10SB-069-5504-SO	1.2	0.57	--	J	LCS-J
Selenium	A0C170537	L10SB-070-5507-SO	1	0.59	--	J	LCS-J
Selenium	A0C170537	L10SB-070-5508-SO	0.83	0.57	--	J	LCS-J
Selenium	A0C170537	L10SB-070-5510-SO	1.2	0.58	--	J	MS-J
Selenium	A0C170537	L10SB-070-6174-FD	0.74	0.58	--	J	LCS-J
Selenium	A0C170537	L10SB-071-5511-SO	1.4	0.63	--	J	LCS-J
Selenium	A0C170537	L10SB-071-5512-SO	1.2	0.58	--	J	LCS-J
Selenium	A0C170537	L10SB-071-5513-SO	1.3	0.61	--	J	LCS-J
Selenium	A0C170537	L10SB-072-5515-SO	0.86	0.62	--	J	LCS-J
Selenium	A0C170537	L10SB-072-5516-SO	0.94	0.58	--	J	LCS-J
Selenium	A0C170537	L10SB-072-6173-FD	1.4	0.61	--	J	LCS-J
Selenium	A0C170537	L10SB-073-5519-SO	0.94	0.63	--	J	LCS-J

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Selenium	A0C170537	L10SB-073-5520-SO	1.5	0.57	--	J	LCS-J
Selenium	A0C170537	L10SB-073-6172-FD	1.3	0.62	--	J	LCS-J
Selenium	A0C170537	L10SB-074-5523-SO	1.1	0.64	--	J	LCS-J
Selenium	A0C170537	L10SB-074-5524-SO	5.7	0.62	--	J	LCS-J
Selenium	A0C170537	L10SB-074-5525-SO	1.2	0.59	--	J	LCS-J
Selenium	A0C170537	L10SB-075-5527-SO	1.6	0.7	--	J	LCS-J
Selenium	A0C170537	L10SB-075-5528-SO	1.2	0.57	--	J	LCS-J
Selenium	A0D140520	L10SS-079M-5536-SO	0.91	0.51	--	J	LCS-J
Selenium	A0D140520	L10SS-080M-5537-SO	1.1	0.51	--	J	LCS-J
Selenium	A0D140520	L10SS-081M-5538-SO	0.89	0.51	--	J	LCS-J
Selenium	A0D140520	L10SS-082M-5539-SO	0.89	0.51	--	J	LCS-J
Selenium	A0D140520	L10SS-083M-5540-SO	0.87	0.51	--	J	LCS-J
Selenium	A0D140520	L10SS-084M-5541-SO	0.89	0.51	--	J	LCS-J
Selenium	A0D140520	L10SS-085M-5542-SO	0.85	0.51	--	J	LCS-J
Selenium	A0D140520	L10SS-085M-6169-FD	0.88	0.51	--	J	LCS-J
Selenium	A0D140520	L10SS-086M-5543-SO	0.9	0.51	--	J	LCS-J
Selenium	A0D140520	L10SS-087M-5544-SO	0.92	0.51	--	J	LCS-J
Selenium	A0D140520	L10SS-088M-5545-SO	0.97	0.51	--	J	LCS-J
Selenium	A0D140520	L10SS-089M-5546-SO	0.92	0.51	--	J	LCS-J
Selenium	A0D140520	L10SS-089M-6171-FD	1	0.51	--	J	LCS-J
Selenium	A0D140520	L10SS-090M-5547-SO	0.98	0.51	--	J	LCS-J
Selenium	A0D140520	L10SS-091M-5548-SO	0.86	0.51	--	J	LCS-J
Selenium	A0D140520	L10SS-092M-5549-SO	0.81	0.51	--	J	LCS-J
Selenium	A0D140520	L10SS-093M-5550-SO	0.88	0.51	--	J	LCS-J
Silver	A0C170537	L10SB-066-5493-SO	0.021	0.58	J	UJ	RepLimit-J, CalBlk-U

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Silver	A0C170537	L10SB-066-5494-SO	0.018	0.59	J	UJ	RepLimit-J, CalBlk-U
Silver	A0C170527	L10SB-066-5495-SO	0.02	0.58	J	J	RepLimit-J
Silver	A0C250407	L10SB-066-5496-SO	0.016	0.56	J	J	RepLimit-J
Silver	A0C170537	L10SB-067-5497-SO	0.018	0.61	J	UJ	RepLimit-J, CalBlk-U
Silver	A0C170537	L10SB-067-5498-SO	0.015	0.58	J	UJ	RepLimit-J, CalBlk-U
Silver	A0C170527	L10SB-067-5499-SO	0.01	0.59	J	J	RepLimit-J
Silver	A0C170537	L10SB-069-5503-SO	0.018	0.6	J	UJ	RepLimit-J, CalBlk-U
Silver	A0C170537	L10SB-069-5504-SO	0.01	0.57	J	J	RepLimit-J
Silver	A0C170527	L10SB-069-5505-SO	0.0099	0.59	J	J	RepLimit-J
Silver	A0C170537	L10SB-070-5507-SO	0.03	0.59	J	J	RepLimit-J
Silver	A0C170537	L10SB-070-5508-SO	0.022	0.57	J	UJ	RepLimit-J, CalBlk-U
Silver	A0C170527	L10SB-070-5509-SO	0.013	0.59	J	J	RepLimit-J
Silver	A0C170537	L10SB-070-5510-SO	0.015	0.58	J	J	RepLimit-J
Silver	A0C170537	L10SB-070-6174-FD	0.016	0.58	J	UJ	RepLimit-J, CalBlk-U
Silver	A0C170537	L10SB-071-5511-SO	0.028	0.63	J	UJ	RepLimit-J, CalBlk-U
Silver	A0C170537	L10SB-071-5512-SO	0.022	0.58	J	UJ	RepLimit-J, CalBlk-U
Silver	A0C170537	L10SB-071-5513-SO	0.016	0.61	J	UJ	RepLimit-J, CalBlk-U
Silver	A0C170537	L10SB-072-5515-SO	0.024	0.62	J	J	RepLimit-J
Silver	A0C170537	L10SB-072-5516-SO	0.0078	0.58	J	UJ	RepLimit-J, CalBlk-U
Silver	A0C170537	L10SB-072-6173-FD	0.043	0.61	J	UJ	RepLimit-J, CalBlk-U
Silver	A0C170537	L10SB-073-5519-SO	0.024	0.63	J	J	RepLimit-J

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Silver	A0C170537	L10SB-073-5520-SO	0.023	0.57	J	UJ	RepLimit-J, CalBlk-U
Silver	A0C170527	L10SB-073-5521-SO	0.006	0.58	J	J	RepLimit-J
Silver	A0C170537	L10SB-073-6172-FD	0.035	0.62	J	UJ	RepLimit-J, CalBlk-U
Silver	A0C170537	L10SB-074-5523-SO	0.03	0.64	J	UJ	RepLimit-J, CalBlk-U
Silver	A0C170537	L10SB-074-5524-SO	0.035	0.62	J	UJ	RepLimit-J, CalBlk-U
Silver	A0C170537	L10SB-074-5525-SO	0.0047	0.59	J	UJ	RepLimit-J, CalBlk-U
Silver	A0C170537	L10SB-075-5527-SO	0.034	0.7	J	UJ	RepLimit-J, CalBlk-U
Silver	A0C170537	L10SB-075-5528-SO	0.018	0.57	J	UJ	RepLimit-J, CalBlk-U
Silver	A0C170527	L10SB-075-5529-SO	0.01	0.57	J	J	RepLimit-J
Silver	A0D140520	L10SS-079M-5536-SO	0.038	0.51	J	J	RepLimit-J
Silver	A0D140520	L10SS-080M-5537-SO	0.032	0.51	J	J	RepLimit-J
Silver	A0D140520	L10SS-081M-5538-SO	0.03	0.51	J	UJ	RepLimit-J, CalBlk-U
Silver	A0D140520	L10SS-082M-5539-SO	0.036	0.51	J	J	RepLimit-J
Silver	A0D140520	L10SS-083M-5540-SO	0.032	0.51	J	UJ	RepLimit-J, CalBlk-U
Silver	A0D140520	L10SS-084M-5541-SO	0.037	0.51	J	J	RepLimit-J
Silver	A0D140520	L10SS-085M-5542-SO	0.033	0.51	J	UJ	RepLimit-J, CalBlk-U
Silver	A0D140520	L10SS-085M-6169-FD	0.036	0.51	J	J	RepLimit-J
Silver	A0D140520	L10SS-086M-5543-SO	0.033	0.51	J	UJ	RepLimit-J, CalBlk-U
Silver	A0D140520	L10SS-087M-5544-SO	0.038	0.51	J	UJ	RepLimit-J, CalBlk-U
Silver	A0D140520	L10SS-088M-5545-SO	0.029	0.51	J	UJ	RepLimit-J, CalBlk-U

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Silver	A0D140520	L10SS-089M-5546-SO	0.035	0.51	J	UJ	RepLimit-J, CalBlk-U
Silver	A0D140520	L10SS-089M-6171-FD	0.034	0.51	J	UJ	RepLimit-J, CalBlk-U
Silver	A0D140520	L10SS-090M-5547-SO	0.033	0.51	J	UJ	RepLimit-J, CalBlk-U
Silver	A0D140520	L10SS-091M-5548-SO	0.028	0.51	J	UJ	RepLimit-J, CalBlk-U
Silver	A0D140520	L10SS-092M-5549-SO	0.039	0.51	J	UJ	RepLimit-J, CalBlk-U
Silver	A0D140520	L10SS-093M-5550-SO	0.033	0.51	J	UJ	RepLimit-J, CalBlk-U
Sodium	A0C170537	L10SB-066-5493-SO	88.7	117	J	J	RepLimit-J
Sodium	A0C170537	L10SB-066-5494-SO	52.8	118	J	J	RepLimit-J
Sodium	A0C170527	L10SB-066-5495-SO	61.9	116	J	J	RepLimit-J
Sodium	A0C250407	L10SB-066-5496-SO	29.5	112	J	J	RepLimit-J
Sodium	A0C170537	L10SB-067-5497-SO	78.5	122	J	J	RepLimit-J
Sodium	A0C170537	L10SB-067-5498-SO	66.8	117	J	J	RepLimit-J
Sodium	A0C170527	L10SB-067-5499-SO	59.8	118	J	J	RepLimit-J
Sodium	A0C170537	L10SB-069-5503-SO	51.5	119	J	J	RepLimit-J
Sodium	A0C170537	L10SB-069-5504-SO	44	115	J	J	RepLimit-J
Sodium	A0C170527	L10SB-069-5505-SO	46	118	J	J	RepLimit-J
Sodium	A0C170537	L10SB-070-5508-SO	45.4	113	J	J	RepLimit-J
Sodium	A0C170527	L10SB-070-5509-SO	40.2	117	J	J	RepLimit-J
Sodium	A0C170537	L10SB-070-5510-SO	36.1	115	J	J	RepLimit-J
Sodium	A0C170537	L10SB-070-6174-FD	46.4	115	J	J	RepLimit-J
Sodium	A0C170537	L10SB-071-5511-SO	37.7	126	J	J	RepLimit-J
Sodium	A0C170537	L10SB-071-5512-SO	83.5	115	J	J	RepLimit-J
Sodium	A0C170537	L10SB-072-5515-SO	31.7	124	J	J	RepLimit-J

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Sodium	A0C170537	L10SB-072-5516-SO	28.6	117	J	J	RepLimit-J
Sodium	A0C170527	L10SB-072-5517-SO	29.3	114	J	J	RepLimit-J
Sodium	A0C170537	L10SB-072-6173-FD	23.9	121	J	J	RepLimit-J
Sodium	A0C170537	L10SB-073-5519-SO	49.9	126	J	J	RepLimit-J
Sodium	A0C170537	L10SB-073-5520-SO	40.4	115	J	J	RepLimit-J
Sodium	A0C170527	L10SB-073-5521-SO	32.6	116	J	J	RepLimit-J
Sodium	A0C170537	L10SB-073-6172-FD	31	123	J	J	RepLimit-J
Sodium	A0C170537	L10SB-074-5523-SO	30.6	129	J	J	RepLimit-J
Sodium	A0C170537	L10SB-074-5524-SO	49	125	J	J	RepLimit-J
Sodium	A0C170537	L10SB-074-5525-SO	36	118	J	J	RepLimit-J
Sodium	A0C170537	L10SB-075-5527-SO	42.5	141	J	J	RepLimit-J
Sodium	A0C170537	L10SB-075-5528-SO	41	114	J	J	RepLimit-J
Sodium	A0C170527	L10SB-075-5529-SO	36	115	J	J	RepLimit-J
Sodium	A0D140520	L10SS-079M-5536-SO	49.5	102	J	J	RepLimit-J
Sodium	A0D140520	L10SS-080M-5537-SO	79.2	102	J	J	RepLimit-J
Sodium	A0D140520	L10SS-081M-5538-SO	39.1	102	J	J	RepLimit-J
Sodium	A0D140520	L10SS-082M-5539-SO	32	102	J	J	RepLimit-J
Sodium	A0D140520	L10SS-083M-5540-SO	33.5	102	J	J	RepLimit-J
Sodium	A0D140520	L10SS-084M-5541-SO	38.8	102	J	J	RepLimit-J
Sodium	A0D140520	L10SS-085M-5542-SO	37.7	102	J	J	RepLimit-J
Sodium	A0D140520	L10SS-085M-6169-FD	38	102	J	J	RepLimit-J
Sodium	A0D140520	L10SS-086M-5543-SO	35.5	102	J	J	RepLimit-J
Sodium	A0D140520	L10SS-087M-5544-SO	33.1	102	J	J	RepLimit-J
Sodium	A0D140520	L10SS-088M-5545-SO	71.2	102	J	J	RepLimit-J
Sodium	A0D140520	L10SS-089M-5546-SO	45	102	J	J	RepLimit-J

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Sodium	A0D140520	L10SS-089M-6171-FD	46.1	102	J	J	RepLimit-J
Sodium	A0D140520	L10SS-090M-5547-SO	64.7	102	J	J	RepLimit-J
Sodium	A0D140520	L10SS-091M-5548-SO	42.9	102	J	J	RepLimit-J
Sodium	A0D140520	L10SS-092M-5549-SO	38.9	102	J	J	RepLimit-J
Sodium	A0D140520	L10SS-093M-5550-SO	40.5	102	J	J	RepLimit-J
Thallium	A0C170537	L10SB-066-5493-SO	0.14	0.23	J	J	RepLimit-J
Thallium	A0C170537	L10SB-066-5494-SO	0.12	0.24	J	J	RepLimit-J
Thallium	A0C170527	L10SB-066-5495-SO	0.14	0.23	J	J	RepLimit-J
Thallium	A0C250407	L10SB-066-5496-SO	0.08	0.22	J	J	RepLimit-J
Thallium	A0C170537	L10SB-067-5497-SO	0.17	0.24	J	J	RepLimit-J
Thallium	A0C170537	L10SB-067-5498-SO	0.18	0.23	J	J	RepLimit-J
Thallium	A0C170527	L10SB-067-5499-SO	0.14	0.24	J	J	RepLimit-J
Thallium	A0C170537	L10SB-069-5503-SO	0.13	0.24	J	J	RepLimit-J
Thallium	A0C170537	L10SB-069-5504-SO	0.12	0.23	J	J	RepLimit-J
Thallium	A0C170527	L10SB-069-5505-SO	0.13	0.24	J	J	RepLimit-J
Thallium	A0C170537	L10SB-070-5507-SO	0.11	0.24	J	J	RepLimit-J
Thallium	A0C170537	L10SB-070-5508-SO	0.093	0.23	J	J	RepLimit-J
Thallium	A0C170527	L10SB-070-5509-SO	0.12	0.23	J	J	RepLimit-J
Thallium	A0C170537	L10SB-070-5510-SO	0.12	0.23	J	J	RepLimit-J
Thallium	A0C170537	L10SB-070-6174-FD	0.095	0.23	J	J	RepLimit-J
Thallium	A0C170537	L10SB-071-5511-SO	0.15	0.25	J	J	RepLimit-J
Thallium	A0C170537	L10SB-071-5512-SO	0.14	0.23	J	J	RepLimit-J
Thallium	A0C170537	L10SB-072-5515-SO	0.12	0.25	J	J	RepLimit-J
Thallium	A0C170537	L10SB-072-5516-SO	0.16	0.23	J	J	RepLimit-J
Thallium	A0C170527	L10SB-072-5517-SO	0.11	0.23	J	J	RepLimit-J

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Thallium	A0C170537	L10SB-072-6173-FD	0.18	0.24	J	J	RepLimit-J
Thallium	A0C170537	L10SB-073-5519-SO	0.16	0.25	J	J	RepLimit-J
Thallium	A0C170537	L10SB-073-5520-SO	0.13	0.23	J	J	RepLimit-J
Thallium	A0C170527	L10SB-073-5521-SO	0.13	0.23	J	J	RepLimit-J
Thallium	A0C170537	L10SB-073-6172-FD	0.17	0.25	J	J	RepLimit-J
Thallium	A0C170537	L10SB-074-5523-SO	0.12	0.26	J	J	RepLimit-J
Thallium	A0C170537	L10SB-074-5524-SO	0.13	0.25	J	J	RepLimit-J
Thallium	A0C170537	L10SB-074-5525-SO	0.093	0.24	J	J	RepLimit-J
Thallium	A0C170537	L10SB-075-5527-SO	0.19	0.28	J	J	RepLimit-J
Thallium	A0C170537	L10SB-075-5528-SO	0.12	0.23	J	J	RepLimit-J
Thallium	A0C170527	L10SB-075-5529-SO	0.1	0.23	J	J	RepLimit-J
Thallium	A0D140520	L10SS-079M-5536-SO	0.16	0.2	J	J	RepLimit-J
Thallium	A0D140520	L10SS-080M-5537-SO	0.17	0.2	J	J	RepLimit-J
Thallium	A0D140520	L10SS-081M-5538-SO	0.16	0.2	J	J	RepLimit-J
Thallium	A0D140520	L10SS-082M-5539-SO	0.17	0.2	J	J	RepLimit-J
Thallium	A0D140520	L10SS-083M-5540-SO	0.15	0.2	J	J	RepLimit-J
Thallium	A0D140520	L10SS-084M-5541-SO	0.17	0.2	J	J	RepLimit-J
Thallium	A0D140520	L10SS-085M-5542-SO	0.15	0.2	J	J	RepLimit-J
Thallium	A0D140520	L10SS-085M-6169-FD	0.15	0.2	J	J	RepLimit-J
Thallium	A0D140520	L10SS-086M-5543-SO	0.15	0.2	J	J	RepLimit-J
Thallium	A0D140520	L10SS-087M-5544-SO	0.17	0.2	J	J	RepLimit-J
Thallium	A0D140520	L10SS-088M-5545-SO	0.16	0.2	J	J	RepLimit-J
Thallium	A0D140520	L10SS-089M-5546-SO	0.17	0.2	J	J	RepLimit-J
Thallium	A0D140520	L10SS-089M-6171-FD	0.17	0.2	J	J	RepLimit-J
Thallium	A0D140520	L10SS-090M-5547-SO	0.16	0.2	J	J	RepLimit-J

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Thallium	A0D140520	L10SS-091M-5548-SO	0.15	0.2	J	J	RepLimit-J
Thallium	A0D140520	L10SS-092M-5549-SO	0.16	0.2	J	J	RepLimit-J
Thallium	A0D140520	L10SS-093M-5550-SO	0.16	0.2	J	J	RepLimit-J
Vanadium	A0C170537	L10SB-070-5510-SO	12.5	1.2	--	J	MS-J
Surface Water (µg/L)							
Antimony	A0B180524	FWSSW-102-5010-SW	0.42	5	J	J	RepLimit-J
Antimony	A0C100541	L10SW-094-5535-SW	0.26	5	J	J	RepLimit-J
Arsenic	A0C100541	L10SW-094-5535-SW	0.87	5	J	J	RepLimit-J
Cadmium	A0B180524	FWSSW-102-5010-SW	0.65	2	J	J	RepLimit-J
Cadmium	A0C100541	L10SW-094-5535-SW	0.039	2	J	UJ	RepLimit-J, CalBlk-U
Chromium	A0C100541	L10SW-094-5535-SW	1.6	5	J	J	RepLimit-J
Cobalt	A0C100541	L10SW-094-5535-SW	0.27	5	J	J	RepLimit-J
Copper	A0C100541	L10SW-094-5535-SW	3	5	J	J	RepLimit-J
Lead	A0C100541	L10SW-094-5535-SW	1.2	3	J	J	RepLimit-J
Nickel	A0C100541	L10SW-094-5535-SW	1.5	10	J	J	RepLimit-J
Selenium	A0B180524	FWSSW-102-5010-SW	1.7	5	J	J	RepLimit-J
Silver	A0B180524	FWSSW-102-5010-SW	0.048	5	J	UJ	RepLimit-J, CalBlk-U
Sodium	A0C100541	L10SW-094-5535-SW	742	1000	J	J	RepLimit-J
Vanadium	A0C100541	L10SW-094-5535-SW	2.3	10	J	J	RepLimit-J
Zinc	A0C100541	L10SW-094-5535-SW	23.1	40	J B	UJ	MB-U, RepLimit-J
Hexavalent Chromium							
Soil (mg/kg)							
Chromium, hexavalent	A0D130516	L10SS-076-5532-SO	0.69	0.95	J	J	RepLimit-J
Explosives							

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Sediment (mg/kg)							
4-Nitrotoluene	A0B190524	L10SD-094-5531-SD	0.5	0.5	U	UJ	CCV-UJ
Soil (mg/kg)							
1,3,5-Trinitrobenzene	A0C170537	L10SB-074-5524-SO	0.037	0.24	J	J	HT-J, RepLimit-J
1,3-Dinitrobenzene	A0C170537	L10SB-074-5524-SO	0.24	0.24	U	UJ	HT-UJ
2,4,6-Trinitrotoluene (TNT)	A0C170537	L10SB-074-5524-SO	0.24	0.24	U	UJ	HT-UJ
2,4-Dinitrotoluene	A0C170537	L10SB-070-6174-FD	0.0058	0.26	J	J	RepLimit-J
2,4-Dinitrotoluene	A0C170537	L10SB-074-5524-SO	0.24	0.24	U	UJ	HT-UJ
2,6-Dinitrotoluene	A0C170537	L10SB-074-5524-SO	0.24	0.24	U	UJ	HT-UJ
2-Amino-4,6-dinitrotoluene	A0C170534	L10SB-070-5509-SO	0.04	0.24	J PG	J	RepLimit-J
2-Amino-4,6-dinitrotoluene	A0C170537	L10SB-070-6174-FD	0.035	0.26	J	J	RepLimit-J
2-Amino-4,6-dinitrotoluene	A0C170537	L10SB-074-5524-SO	0.24	0.24	U	UJ	HT-UJ
2-Nitrotoluene	A0C170537	L10SB-072-5516-SO	0.26	0.26	U	UJ	MS-UJ
2-Nitrotoluene	A0C170537	L10SB-074-5524-SO	0.24	0.24	U	UJ	HT-UJ
3-Nitrotoluene	A0C170537	L10SB-074-5524-SO	0.24	0.24	U	UJ	HT-UJ
3-Nitrotoluene	A0D140520	L10SS-080M-5537-SO	0.025	0.24	J PG	J	RepLimit-J
4-Amino-2,6-Dinitrotoluene	A0C170534	L10SB-070-5509-SO	0.039	0.24	J	J	RepLimit-J
4-Amino-2,6-Dinitrotoluene	A0C170537	L10SB-070-5510-SO	0.022	0.25	J	J	RepLimit-J
4-Amino-2,6-Dinitrotoluene	A0C170537	L10SB-070-6174-FD	0.039	0.26	J	J	RepLimit-J
4-Amino-2,6-Dinitrotoluene	A0C170537	L10SB-071-5512-SO	0.16	0.25	J PG	J	RepLimit-J
4-Amino-2,6-Dinitrotoluene	A0C170537	L10SB-072-5516-SO	0.26	0.26	U	UJ	MS-UJ
4-Amino-2,6-Dinitrotoluene	A0C170537	L10SB-074-5524-SO	0.24	0.24	U	UJ	HT-UJ
4-Nitrotoluene	A0C170537	L10SB-074-5524-SO	0.49	0.49	U	UJ	HT-UJ
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	A0C170537	L10SB-074-5524-SO	0.24	0.24	U	UJ	HT-UJ
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	A0C170534	L10SB-069-5505-SO	0.25	0.25	U	UJ	CCV-UJ

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	A0C170534	L10SB-070-5509-SO	0.24	0.24	U	UJ	CCV-UJ
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	A0C170534	L10SB-072-5517-SO	0.23	0.23	U	UJ	CCV-UJ
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	A0C170534	L10SB-073-5521-SO	0.25	0.25	U	UJ	CCV-UJ
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	A0C170537	L10SB-074-5524-SO	0.24	0.24	U	UJ	HT-UJ
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	A0C170534	L10SB-075-5529-SO	0.25	0.25	U	UJ	CCV-UJ
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	A0D140520	L10SS-079M-5536-SO	0.023	0.24	J	J	RepLimit-J
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	A0D140520	L10SS-080M-5537-SO	0.035	0.24	J PG	J	RepLimit-J
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	A0D140520	L10SS-088M-5545-SO	0.028	0.24	J PG	J	RepLimit-J
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	A0D140520	L10SS-090M-5547-SO	0.024	0.25	J PG	J	RepLimit-J
Nitrobenzene	A0C170537	L10SB-072-5516-SO	0.26	0.26	U	UJ	MS-UJ
Nitrobenzene	A0C170537	L10SB-074-5524-SO	0.24	0.24	U	UJ	HT-UJ
Nitroglycerin	A0C170537	L10SB-074-5524-SO	0.49	0.49	U	UJ	HT-UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	A0C170537	L10SB-070-6174-FD	0.26	0.26	U	UJ	CCV-UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	A0C170537	L10SB-072-6173-FD	0.26	0.26	U	UJ	CCV-UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	A0C170537	L10SB-073-6172-FD	0.25	0.25	U	UJ	CCV-UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	A0C170537	L10SB-074-5524-SO	0.24	0.24	U	UJ	HT-UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	A0C170537	L10SB-075-5527-SO	0.24	0.24	U	UJ	CCV-UJ
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	A0C170537	L10SB-075-5528-SO	0.25	0.25	U	UJ	CCV-UJ
PETN	A0C170537	L10SB-069-5504-SO	0.029	0.5	J PG	J	RepLimit-J

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
PETN	A0C170537	L10SB-071-5512-SO	0.3	0.5	J PG	J	RepLimit-J
PETN	A0C170537	L10SB-074-5524-SO	0.49	0.49	U	UJ	HT-UJ
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	A0B180524	FWSSW-102-5010-SW	0.15	0.15	U	UJ	CCV-UJ
Propellants							
Soil (mg/kg)							
Nitrocellulose	A0C170537	L10SB-073-5519-SO	1.1	6.3	B	J	RepLimit-J
Nitrocellulose	A0C170537	L10SB-073-6172-FD	1.1	6.2	B	J	RepLimit-J
Nitrocellulose	A0D140520	L10SS-080M-5537-SO	2.5	5.1	B J	UJ	MB-U, MS-J, RepLimit-J
Nitrocellulose	A0D140520	L10SS-088M-5545-SO	2.8	5.1	B J	UJ	MB-U, RepLimit-J
Nitrocellulose	A0D140520	L10SS-092M-5549-SO	1.9	5.1	B J	UJ	MB-U, RepLimit-J
PAHs							
Soil (µg/kg)							
Acenaphthene	A0C170537	L10SB-073-5520-SO	56	57	J	J	RepLimit-J
Acenaphthene	A0D140520	L10SS-092M-5549-SO	14	51	J	J	RepLimit-J
Anthracene	A0D140520	L10SS-092M-5549-SO	30	51	J	J	RepLimit-J
Benz[a]anthracene	A0C170537	L10SB-072-6173-FD	200	8.1	--	J	MS-J
Benz[a]anthracene	A0C170537	L10SB-073-5519-SO	26	63	J	J	RepLimit-J
Benz[a]anthracene	A0C170537	L10SB-073-6172-FD	21	62	J	J	RepLimit-J
Benzo[a]pyrene	A0C170537	L10SB-072-6173-FD	180	8.1	--	J	MS-J
Benzo[a]pyrene	A0C170537	L10SB-073-5519-SO	27	63	J	J	RepLimit-J
Benzo[a]pyrene	A0C170537	L10SB-073-6172-FD	17	62	J	J	RepLimit-J
Benzo[b]fluoranthene	A0C170537	L10SB-072-6173-FD	270	8.1	--	J	MS-J
Benzo[b]fluoranthene	A0C170537	L10SB-073-5519-SO	46	63	J	J	RepLimit-J
Benzo[b]fluoranthene	A0C170537	L10SB-073-6172-FD	25	62	J	J	RepLimit-J

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Benzo[b]fluoranthene	A0C170537	L10SB-074-5523-SO	12	64	J	J	RepLimit-J
Benzo[g,h,i]perylene	A0C170537	L10SB-073-5519-SO	19	63	J	J	RepLimit-J
Benzo[g,h,i]perylene	A0C170537	L10SB-073-6172-FD	11	62	J	J	RepLimit-J
Benzo[k]fluoranthene	A0C170537	L10SB-073-5519-SO	18	63	J	J	RepLimit-J
Benzo[k]fluoranthene	A0C170537	L10SB-073-6172-FD	15	62	J	J	RepLimit-J
Chrysene	A0C170537	L10SB-072-6173-FD	190	8.1	--	J	MS-J
Chrysene	A0C170537	L10SB-073-5519-SO	28	63	J	J	RepLimit-J
Chrysene	A0C170537	L10SB-073-6172-FD	22	62	J	J	RepLimit-J
Fluoranthene	A0C170537	L10SB-072-6173-FD	480	8.1	--	J	MS-J
Fluoranthene	A0C170537	L10SB-073-6172-FD	48	62	J	J	RepLimit-J
Fluoranthene	A0C170537	L10SB-074-5523-SO	16	64	J	J	RepLimit-J
Fluorene	A0C170537	L10SB-073-5520-SO	45	57	J	J	RepLimit-J
Fluorene	A0D140520	L10SS-092M-5549-SO	17	51	J	J	RepLimit-J
Indeno[1,2,3-cd]pyrene	A0C170537	L10SB-073-5519-SO	17	63	J	J	RepLimit-J
Indeno[1,2,3-cd]pyrene	A0C170537	L10SB-073-6172-FD	9.7	62	J	J	RepLimit-J
Naphthalene	A0D140520	L10SS-088M-5545-SO	120	200	J	J	RepLimit-J
Naphthalene	A0D140520	L10SS-092M-5549-SO	21	51	J	J	RepLimit-J
Phenanthrene	A0C170537	L10SB-072-6173-FD	340	8.1	--	J	MS-J
Phenanthrene	A0C170537	L10SB-073-5519-SO	19	63	J	J	RepLimit-J
Phenanthrene	A0C170537	L10SB-073-6172-FD	21	62	J	J	RepLimit-J
Pyrene	A0C170537	L10SB-072-6173-FD	350	8.1	--	J	MS-J
Pyrene	A0C170537	L10SB-073-5519-SO	47	63	J	J	RepLimit-J
Pyrene	A0C170537	L10SB-073-6172-FD	35	62	J	J	RepLimit-J
Pyrene	A0C170537	L10SB-074-5523-SO	12	64	J	J	RepLimit-J
dibenz[a,h]anthracene	A0C170537	L10SB-073-5520-SO	20	57	J	J	RepLimit-J

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
dibenz[a,h]anthracene	A0D140520	L10SS-080M-5537-SO	500	510	J	J	RepLimit-J
dibenz[a,h]anthracene	A0D140520	L10SS-088M-5545-SO	150	200	J	J	RepLimit-J
Semi-volatile Organic Compounds							
Sediment (µg/kg)							
3-methylphenol/4-methylphenol	A0B190524	L10SD-094-5531-SD	32	500	J	J	RepLimit-J
Benz[a]anthracene	A0B190524	L10SD-094-5531-SD	10	76	J	J	RepLimit-J
Benzo[a]pyrene	A0B190524	L10SD-094-5531-SD	12	76	J	J	RepLimit-J
Benzo[b]fluoranthene	A0B190524	L10SD-094-5531-SD	21	76	J	J	RepLimit-J
Chrysene	A0B190524	L10SD-094-5531-SD	15	76	J	J	RepLimit-J
Fluoranthene	A0B190524	L10SD-094-5531-SD	20	76	J	J	RepLimit-J
Pyrene	A0B190524	L10SD-094-5531-SD	13	76	J	J	RepLimit-J
2,4-Dinitrophenol	A0D140520	L10SS-080M-5537-SO	8200	8200	U	UJ	MS-UJ
2-Methylnaphthalene	A0D140520	L10SS-080M-5537-SO	410	3400	J	J	RepLimit-J
2-Methylnaphthalene	A0D140520	L10SS-088M-5545-SO	63	1300	J	J	RepLimit-J
2-Methylnaphthalene	A0D140520	L10SS-092M-5549-SO	24	340	J	J	RepLimit-J
Benz[a]anthracene	A0C170527	L10SB-073-5521-SO	7.7	58	J	J	RepLimit-J
Benzo[g,h,i]perylene	A0C170527	L10SB-073-5521-SO	9.9	58	J	J	RepLimit-J
Benzenemethanol	A0C170537	L10SB-074-5523-SO	130	420	J	J	RepLimit-J
Carbazole	A0C170537	L10SB-073-5519-SO	63	63	U	UJ	LCS-UJ
Carbazole	A0C170537	L10SB-073-5520-SO	63	57	--	J	LCS-J
Carbazole	A0C170527	L10SB-073-5521-SO	58	58	U	UJ	LCS-UJ
Carbazole	A0C170537	L10SB-074-5523-SO	64	64	U	UJ	LCS-UJ
Carbazole	A0C170537	L10SB-074-5524-SO	62	62	U	UJ	LCS-UJ
Carbazole	A0C170537	L10SB-074-5525-SO	59	59	U	UJ	LCS-UJ
Di-n-butyl phthalate	A0C170527	L10SB-073-5521-SO	27	380	J	J	RepLimit-J

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Di-n-butyl phthalate	A0D140520	L10SS-092M-5549-SO	30	340	J	J	RepLimit-J
Dibenzofuran	A0C170537	L10SB-073-5520-SO	23	380	J	J	RepLimit-J
Dibenzofuran	A0D140520	L10SS-080M-5537-SO	970	3400	J	J	RepLimit-J
Dibenzofuran	A0D140520	L10SS-088M-5545-SO	160	1300	J	J	RepLimit-J
Diethyl phthalate	A0D140520	L10SS-092M-5549-SO	25	340	J	J	RepLimit-J
Fluoranthene	A0C170527	L10SB-073-5521-SO	21	58	J	J	RepLimit-J
Indeno[1,2,3-cd]pyrene	A0C170527	L10SB-073-5521-SO	11	58	J	J	RepLimit-J
Pyrene	A0C170527	L10SB-073-5521-SO	16	58	J	J	RepLimit-J
bis(2-Ethylhexyl) phthalate	A0C170537	L10SB-073-5519-SO	30	420	J	J	RepLimit-J
bis(2-Ethylhexyl) phthalate	A0C170537	L10SB-073-5520-SO	24	380	J	J	RepLimit-J
bis(2-Ethylhexyl) phthalate	A0C170527	L10SB-073-5521-SO	33	380	J	J	RepLimit-J
bis(2-Ethylhexyl) phthalate	A0C170537	L10SB-074-5523-SO	31	420	J	J	RepLimit-J
bis(2-Ethylhexyl) phthalate	A0C170537	L10SB-074-5524-SO	27	410	J	J	RepLimit-J
bis(2-Ethylhexyl) phthalate	A0C170537	L10SB-074-5525-SO	27	390	J	J	RepLimit-J
bis(2-Ethylhexyl) phthalate	A0D140520	L10SS-092M-5549-SO	340	340	J B	UJ	MB-U, RepLimit-J
dibenz[a,h]anthracene	A0C170527	L10SB-073-5521-SO	9.8	58	J	J	RepLimit-J
Surface Water (µg/L)							
1,2,4-Trichlorobenzene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
1,2-Dichlorobenzene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
1,3-Dichlorobenzene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
1,4-Dichlorobenzene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
2,4,5-Trichlorophenol	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
2,4,6-Trichlorophenol	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
2,4-Dichlorophenol	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
2,4-Dimethylphenol	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
2,4-Dinitrophenol	A0B180524	FWSSW-102-5010-SW	25	25	U	UJ	HT-UJ
2,4-Dinitrotoluene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
2,6-Dinitrotoluene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
2-Chloronaphthalene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
2-Chlorophenol	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
2-Methylnaphthalene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
2-Methylphenol	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
2-Nitroaniline	A0B180524	FWSSW-102-5010-SW	25	25	U	UJ	HT-UJ
2-Nitrophenol	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
3,3'-Dichlorobenzidine	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
3-Nitroaniline	A0B180524	FWSSW-102-5010-SW	25	25	U	UJ	HT-UJ
3-methylphenol/4-methylphenol	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
4,6-Dinitro-2-methylphenol	A0B180524	FWSSW-102-5010-SW	25	25	U	UJ	HT-UJ
4-Bromophenyl phenyl ether	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
4-Chloro-3-methylphenol	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
4-Chloroaniline	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
4-Chlorophenyl phenyl ether	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
4-Nitroaniline	A0B180524	FWSSW-102-5010-SW	25	25	U	UJ	HT-UJ
4-Nitrophenol	A0B180524	FWSSW-102-5010-SW	25	25	U	UJ	HT-UJ
Acenaphthene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Acenaphthylene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Anthracene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Benz[a]anthracene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Benzo[a]pyrene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Benzo[b]fluoranthene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Benzo[g,h,i]perylene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Benzo[k]fluoranthene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Benzoic acid	A0B180524	FWSSW-102-5010-SW	25	25	U	UJ	HT-UJ
Benzenemethanol	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Bis(2-chloroisopropyl) ether	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Butyl benzyl phthalate	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Carbazole	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Chrysene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Di-n-butyl phthalate	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Di-n-octyl phthalate	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Dibenzofuran	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Diethyl phthalate	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Dimethyl phthalate	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Fluoranthene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Fluorene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
HEXACHLOROCYCLOPENTADIENE	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Hexachlorobenzene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Hexachlorobutadiene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Hexachloroethane	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Indeno[1,2,3-cd]pyrene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Isophorone	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
N-Nitrosodi-n-propylamine	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
N-Nitrosodiphenylamine	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Naphthalene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Nitrobenzene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Pentachlorophenol	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Phenanthrene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Phenol	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Pyrene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
bis(2-Chloroethoxy)methane	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
bis(2-Chloroethyl) ether	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
bis(2-Ethylhexyl) phthalate	A0B180524	FWSSW-102-5010-SW	0.93	10	J B	UJ	HT-J, MB-U, RepLimit-J
bis(2-Ethylhexyl) phthalate	A0C100541	L10SW-094-5535-SW	10	10	J B	UJ	MB-U, RepLimit-J
dibenz[a,h]anthracene	A0B180524	FWSSW-102-5010-SW	10	10	U	UJ	HT-UJ
Pesticides							
Soil (µg/kg)							
4,4'-DDD	A0C170537	L10SB-073-5519-SO	13	13	U	UJ	CCV-UJ
4,4'-DDD	A0C170537	L10SB-073-5520-SO	11	11	U	UJ	CCV-UJ
4,4'-DDD	A0C170537	L10SB-073-6172-FD	12	12	U	UJ	CCV-UJ
4,4'-DDD	A0C170537	L10SB-074-5523-SO	5.1	5.1	U	UJ	CCV-UJ
4,4'-DDD	A0C170537	L10SB-074-5524-SO	2.5	2.5	U	UJ	CCV-UJ
4,4'-DDD	A0C170537	L10SB-074-5525-SO	2.4	2.4	U	UJ	CCV-UJ
4,4'-DDD	A0D140520	L10SS-080M-5537-SO	41	41	U	UJ	CCV-UJ
4,4'-DDD	A0D140520	L10SS-088M-5545-SO	20	20	U	UJ	CCV-UJ
4,4'-DDD	A0D140520	L10SS-092M-5549-SO	20	20	U	UJ	CCV-UJ
4,4'-DDE	A0D140520	L10SS-080M-5537-SO	35	35	U	UJ	CCV-UJ
4,4'-DDE	A0D140520	L10SS-088M-5545-SO	17	17	U	UJ	CCV-UJ
4,4'-DDE	A0D140520	L10SS-092M-5549-SO	17	17	U	UJ	CCV-UJ
Aldrin	A0D140520	L10SS-080M-5537-SO	82	82	U	UJ	CCV-UJ

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Aldrin	A0D140520	L10SS-088M-5545-SO	41	41	U	UJ	CCV-UJ
Aldrin	A0D140520	L10SS-092M-5549-SO	41	41	U	UJ	CCV-UJ
Dieldrin	A0D140520	L10SS-080M-5537-SO	35	35	U	UJ	CCV-UJ
Dieldrin	A0D140520	L10SS-088M-5545-SO	17	17	U	UJ	CCV-UJ
Dieldrin	A0D140520	L10SS-092M-5549-SO	17	17	U	UJ	CCV-UJ
Endosulfan I	A0D140520	L10SS-080M-5537-SO	35	35	U	UJ	CCV-UJ
Endosulfan I	A0D140520	L10SS-088M-5545-SO	17	17	U	UJ	CCV-UJ
Endosulfan I	A0D140520	L10SS-092M-5549-SO	17	17	U	UJ	CCV-UJ
Endosulfan II	A0D140520	L10SS-080M-5537-SO	51	51	U	UJ	CCV-UJ
Endosulfan II	A0D140520	L10SS-088M-5545-SO	26	26	U	UJ	CCV-UJ
Endosulfan II	A0D140520	L10SS-092M-5549-SO	26	26	U	UJ	CCV-UJ
Endosulfan sulfate	A0C170537	L10SB-073-5519-SO	19	19	U	UJ	CCV-UJ
Endosulfan sulfate	A0C170537	L10SB-073-5520-SO	17	17	U	UJ	CCV-UJ
Endosulfan sulfate	A0C170537	L10SB-073-6172-FD	18	18	U	UJ	CCV-UJ
Endosulfan sulfate	A0C170537	L10SB-074-5523-SO	7.7	7.7	U	UJ	CCV-UJ
Endosulfan sulfate	A0C170537	L10SB-074-5524-SO	3.7	3.7	U	UJ	CCV-UJ
Endosulfan sulfate	A0C170537	L10SB-074-5525-SO	3.5	3.5	U	UJ	CCV-UJ
Endrin	A0D140520	L10SS-080M-5537-SO	35	35	U	UJ	CCV-UJ
Endrin	A0D140520	L10SS-088M-5545-SO	17	17	U	UJ	CCV-UJ
Endrin aldehyde	A0C170537	L10SB-073-5519-SO	19	19	U	UJ	CCV-UJ
Endrin aldehyde	A0C170537	L10SB-073-6172-FD	18	18	U	UJ	CCV-UJ
Endrin aldehyde	A0C170537	L10SB-074-5523-SO	7.7	7.7	U	UJ	CCV-UJ
Endrin aldehyde	A0C170537	L10SB-074-5524-SO	3.7	3.7	U	UJ	CCV-UJ
Endrin aldehyde	A0C170537	L10SB-074-5525-SO	3.5	3.5	U	UJ	CCV-UJ
Endrin aldehyde	A0D140520	L10SS-080M-5537-SO	61	61	U	UJ	CCV-UJ

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Endrin aldehyde	A0D140520	L10SS-088M-5545-SO	31	31	U	UJ	CCV-UJ
Endrin aldehyde	A0D140520	L10SS-092M-5549-SO	31	31	U	UJ	CCV-UJ
Heptachlor	A0D140520	L10SS-080M-5537-SO	71	71	U	UJ	CCV-UJ
Heptachlor	A0D140520	L10SS-088M-5545-SO	36	36	U	UJ	CCV-UJ
Heptachlor	A0D140520	L10SS-092M-5549-SO	36	36	U	UJ	CCV-UJ
Heptachlor epoxide	A0D140520	L10SS-080M-5537-SO	51	51	U	UJ	CCV-UJ
Heptachlor epoxide	A0D140520	L10SS-088M-5545-SO	26	26	U	UJ	CCV-UJ
Heptachlor epoxide	A0D140520	L10SS-092M-5549-SO	25	26	J	J	Surr-J, RepLimit-J, CCV-J
Methoxychlor	A0C170537	L10SB-073-5519-SO	32	32	U	UJ	CCV-UJ
Methoxychlor	A0C170537	L10SB-073-5520-SO	29	29	U	UJ	CCV-UJ
Methoxychlor	A0C170537	L10SB-073-6172-FD	31	31	U	UJ	CCV-UJ
Methoxychlor	A0C170537	L10SB-074-5523-SO	13	13	U	UJ	CCV-UJ
Methoxychlor	A0C170537	L10SB-074-5524-SO	6.2	6.2	U	UJ	CCV-UJ
Methoxychlor	A0C170537	L10SB-074-5525-SO	5.9	5.9	U	UJ	CCV-UJ
alpha-BHC	A0D140520	L10SS-080M-5537-SO	51	51	U	UJ	CCV-UJ
alpha-BHC	A0D140520	L10SS-088M-5545-SO	26	26	U	UJ	CCV-UJ
alpha-BHC	A0D140520	L10SS-092M-5549-SO	26	26	U	UJ	CCV-UJ
alpha-Chordane	A0D140520	L10SS-080M-5537-SO	61	61	U	UJ	CCV-UJ
alpha-Chordane	A0D140520	L10SS-088M-5545-SO	31	31	U	UJ	CCV-UJ
alpha-Chordane	A0D140520	L10SS-092M-5549-SO	300	31	--	J	Surr-J, CCV-J
beta-BHC	A0D140520	L10SS-080M-5537-SO	71	71	U	UJ	MS-UJ
beta-BHC	A0D140520	L10SS-088M-5545-SO	36	36	U	UJ	CCV-UJ
beta-BHC	A0D140520	L10SS-092M-5549-SO	36	36	U	UJ	CCV-UJ
delta-BHC	A0C170537	L10SB-073-5519-SO	25	25	U	UJ	CCV-UJ

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
delta-BHC	A0C170537	L10SB-073-5520-SO	23	23	U	UJ	CCV-UJ
delta-BHC	A0C170537	L10SB-073-6172-FD	25	25	U	UJ	CCV-UJ
delta-BHC	A0C170537	L10SB-074-5523-SO	10	10	U	UJ	CCV-UJ
delta-BHC	A0C170537	L10SB-074-5524-SO	5	5	U	UJ	CCV-UJ
delta-BHC	A0C170537	L10SB-074-5525-SO	4.7	4.7	U	UJ	CCV-UJ
delta-BHC	A0D140520	L10SS-080M-5537-SO	82	82	U	UJ	CCV-UJ
delta-BHC	A0D140520	L10SS-088M-5545-SO	41	41	U	UJ	CCV-UJ
delta-BHC	A0D140520	L10SS-092M-5549-SO	41	41	U	UJ	CCV-UJ
gamma-BHC (Lindane)	A0D140520	L10SS-080M-5537-SO	51	51	U	UJ	CCV-UJ
gamma-BHC (Lindane)	A0D140520	L10SS-088M-5545-SO	26	26	U	UJ	CCV-UJ
gamma-BHC (Lindane)	A0D140520	L10SS-092M-5549-SO	26	26	U	UJ	CCV-UJ
gamma-Chlordane	A0D140520	L10SS-080M-5537-SO	35	35	U	UJ	CCV-UJ
gamma-Chlordane	A0D140520	L10SS-088M-5545-SO	17	17	U	UJ	CCV-UJ
gamma-Chlordane	A0D140520	L10SS-092M-5549-SO	230	17	--	J	Surr-J, CCV-J
Surface Water (µg/L)							
beta-BHC	A0C100541	L10SW-094-5535-SW	0.0095	0.05	J	J	RepLimit-J
PCBs							
Soil (µg/kg)							
Aroclor 1254	A0D140520	L10SS-080M-5537-SO	24	34	J	J	RepLimit-J
Volatile Organic Compounds							
Sediment (µg/kg)							
2-Butanone (MEK)	A0B180524	FWSSD-102-5011-SD	3.5	31	J B	UJ	MB-U, RepLimit-J
Acetone	A0B180524	FWSSD-102-5011-SD	31	31	J B	UJ	MB-U, RepLimit-J, FldQC-U

Table C-5. Detailed Listing of Qualified Results for Samples from Load Line 10 (continued)

Chemical	Laboratory SDG	Sample ID	Results	Reporting Limit	Laboratory Qualifier[a]	Validation Qualifier[b]	Validation Code[c]
Carbon tetrachloride	A0B180524	FWSSD-102-5011-SD	7.7	7.7	U	UJ	CCV-UJ
Carbon tetrachloride	A0B190524	L10SD-094-5531-SD	7.6	7.6	U	UJ	CCV-UJ
Toluene	A0B190524	L10SD-094-5531-SD	0.42	7.6	J	J	RepLimit-J
Soil (µg/kg)							
2-Butanone (MEK)	A0C170527	L10SB-073-5521-SO	2.8	23	J	J	RepLimit-J
Acetone	A0C170537	L10SB-073-5520-SO	23	23	J B	UJ	MB-U, RepLimit-J
Acetone	A0C170527	L10SB-073-5521-SO	24	23	B	U	MB-U
Acetone	A0C170537	L10SB-074-5524-SO	25	25	J B	UJ	MB-U, RepLimit-J
Acetone	A0C170537	L10SB-074-5525-SO	24	24	J B	UJ	MB-U, RepLimit-J
Acetone	A0D140520	L10SS-092M-5549-SO	16	25	J	J	RepLimit-J
Bromomethane (Methyl bromide)	A0C170537	L10SB-073-5520-SO	1.3	5.7	J	J	RepLimit-J
Methylene chloride	A0D140520	L10SS-080M-5537-SO	0.96	6.2	J	J	RepLimit-J
Methylene chloride	A0D140520	L10SS-088M-5545-SO	1.3	6.5	J	J	RepLimit-J
Methylene chloride	A0D140520	L10SS-092M-5549-SO	1.3	6.1	J	J	RepLimit-J
Surface Water (µg/L)							
Chloroethane	A0B180524	FWSSW-102-5010-SW	1	1	U	UJ	LCS-UJ
Methylene chloride	A0C100541	L10SW-094-5535-SW	1	1	J	UJ	RepLimit-J, FldQC-U

[a] Laboratory Qualifiers: B=analyte was detected in the associated blank as well as the sample; J=estimated because result is between the method detection limit and the reporting limit; U=not detected; E=inorganic result estimated because of the presence of interference; PG=more than 40% difference between primary and confirmation analysis.
[b] Validation Qualifiers: J=estimated; U=not detected; UJ=not detected and reporting limit estimated; R=rejected.
[c] Validation Reason Codes: CalBlk=Calibration Blank; CCV=Continuing Calibration Verification; FldQC=Field QC; HT=Holding Time; LCS=Lab Control Standard; MB=Method Blank; MS=Matrix Spike; ProJudge = professional judgment; RepLimit=Reporting Limit; Surr=Surrogate Recovery.
QC = Quality Control
SDG = Sample Delivery Group
-- = No qualifier

Table C-6. Results for Analytes Detected in Field Blanks or Equipment Rinsate Samples

Sample ID	CAS Number	Project Reporting Level	SCFqc-001-0001-FB	PBA08-QC-6000-FB	PBA08-QC-6001-ER	PBA08-QC-6002-ER
Date			02/06/09	02/18/10	02/18/10	04/01/10
Sample Type			Potable Water Blank	Deionized Water Blank	Equipment Rinse Blank	Equipment Rinse Blank
Analyte (mg/L)						
Metals						
Antimony	7440-36-0	0.005	0.00019 J	<0.005 U	<0.005 U	<0.005 U
Arsenic	7440-38-2	0.005	0.0012 J	<0.005 U	<0.005 U	<0.005 U
Barium	7440-39-3	0.01	0.0472	<0.01 U	<0.01 U	<0.01 U
Calcium	7440-70-2	0.1	65.6	<2 U	<2 U	<2 U
Chromium	7440-47-3	0.005	<0.005 U	<0.005 U	<0.005 U	0.0012 J
Cobalt	7440-48-4	0.005	<0.005 U	<0.005 U	<0.005 U	0.00006 J
Copper	7440-50-8	0.005	0.00057 J	<0.005 U	<0.005 U	<0.005 U
Iron	7439-89-6	0.1	0.78	<0.15 U	<0.15 U	0.0957 J
Magnesium	7439-95-4	0.1	28.3	<1 U	<1 U	<1 U
Manganese	7439-96-5	0.01	0.0919	<0.01 U	<0.01 U	0.0155
Nickel	7440-02-0	0.0002	0.00035 J	<0.01 U	<0.01 U	0.0012 J
Potassium	7440-09-7	0.2	2.86	<1 U	<1 U	<1 U
Sodium	7440-23-5	0.2	40.1	<1 U	<1 U	<1 U
Thallium	7440-28-0	0.002	0.00036 J	<0.002 U	<0.002 U	<0.002 U
Vanadium	7440-62-2	0.01	<0.01 U	<0.01 U	0.00053 J	<0.01 U
Zinc	7440-66-6	0.01	<0.0049 UJ	<0.04 U	0.0104 J	0.0104 J
Semi-volatile Organic Compounds						
Benzenemethanol	100-51-6	0.01	<0.01 U	<0.01 U	<0.01 U	0.00078 J
Bis(2-ethylhexyl)phthalate	117-81-7	0.01	<0.01 U	<0.01 UJ	<0.01 UJ	0.014
Di-n-butyl phthalate	84-74-2	0.01	<0.01 U	<0.01 U	<0.01 U	0.00068 J

Table C-6. Results for Analytes Detected in Field Blanks or Equipment Rinsate Samples (continued)

Sample ID	CAS Number	Project Reporting Level	SCFqc-001-0001-FB	PBA08-QC-6000-FB	PBA08-QC-6001-ER	PBA08-QC-6002-ER
Date			02/06/09	02/18/10	02/18/10	04/01/10
Sample Type			Potable Water Blank	Deionized Water Blank	Equipment Rinse Blank	Equipment Rinse Blank
Analyte (mg/L)						
Volatile Organic Compounds						
2-Butanone	78-93-3	0.01	<0.01 U	<0.01 U	0.00072 J	<0.01 U
Acetone	67-64-1	0.01	<0.01 U	<0.01 U	0.004 J	0.017
Toluene	108-88-3	0.001	<0.001 U	0.00053 J	0.00042 J	0.00034 J
Miscellaneous						
Alkalinity	NA	1.0	250 J	NA	NA	NA
Bicarbonate	71-52-3	1.0	250 J	NA	NA	NA
Bromide	24959-67-9	0.2	0.3	NA	NA	NA
Chloride	16887-00-6	0.2	85.9	NA	NA	NA
Fluoride	16984-48-8	0.1	0.1	NA	NA	NA
Orthophosphate	14265-44-2	0.1	0.2	NA	NA	NA
Phosphorous, Total	NA	0.1	0.11	NA	NA	NA
Sulfate	14808-79-8	1.0	51.6	NA	NA	NA

Explosives, propellants, pesticides, and polychlorinated biphenyls were analyzed for and not detected.
Sample Type: FB = source water blank and ER = equipment rinse blank.
Data Qualifiers: J = estimated, U = not detected, and UJ = not detected and reporting limit estimated.
CAS = Chemical Abstract Service
NA = Not applicable

C.4 DATA QUALITY EVALUATION

C.4.1 Metals Analysis

C.4.1.1 Sediment and Soil

Analytical holding times were met for all samples. Initial calibration and continuing calibration criteria were achieved for all elements analyzed. Method blanks for sediment and soil were acceptable and did not impact the data. Instrument blank contamination resulted in the qualification of three sediment data points (6.7% of metals sediment data) and 33 soil data points (2.9% of metals soil data) as not detected "UJ." Sediment LCS recoveries were acceptable while soil LCS recovery deviations caused various analyte results for 40 soil data points (3.5% of metals soil data) to be qualified as estimated "J." Due to MS/Matrix Spike Duplicate (MSD) recoveries being outside control limit criteria for several analytes, four data points in sediment (8.9% of metals sediment data) and 154 data points in soil (13.3% of metals soil data) were qualified as estimated "J" or estimated non-detectable concentration "UJ." Due to very low MS recoveries, one soil data point for antimony (0.09% of metals soil data) was rejected "R." Based on professional judgment (serial dilution or laboratory duplicate deviations), one sediment data point (2.2% of metals sediment data) and two soil data points (0.2% of metals soil data) were qualified as estimated "J." Reporting levels are considered to be acceptable relative to QAPP goals. Due to elevated target levels (primarily manganese), one sediment sample and 34 soil samples required dilutions. Although some analyses were qualified as estimated, the deviations observed should not have a primary influence on the results, and the values are considered technically sound and defensible. Rejected data were relegated to one non-detectable concentration antimony result in soil. Complete data summary tables, with associated qualifiers, are provided in Appendix D of the RI report and can be found in the RVAAP Environmental Information Management System (REIMS).

C.4.1.2 Surface Water

Analytical holding times were met for all samples. Initial and continuing calibration criteria were achieved for all elements analyzed. Method and instrument blank levels did result in the qualification of three data points (6.6% of metals water data) as estimated non-detectable concentration "UJ." These qualifications did not impact the project's ability to consistently meet reporting levels. MS recoveries were within criteria. Serial dilution and duplicate comparisons were acceptable within the data set. LCS determinations were acceptable. Reporting levels are considered to be consistent with QAPP goals. Some data were qualified as estimated; however, none of the deviations were considered severe enough to reject any of the data. No dilutions were required. No data were rejected. Although some analyses were qualified as estimated, the deviations observed should not have a primary influence on the results, and the values are considered technically sound and defensible. Complete data summary tables, with associated qualifiers, are provided in Appendix D of the RI Report and can be found in REIMS.

C.4.2 Volatile Organic Analysis

C.4.2.1 Sediment and Soil

Analytical holding times were met for all samples. Initial calibrations for sediment and soil and continuing calibration criteria for soil were achieved for all analyses. However, due to less than -20% continuing calibration percent difference (%D) values, two sediment data points (2.9% of VOC sediment data) were qualified as estimated non-detectable concentration "UJ." Surrogate recovery criteria were acceptable for all sediment and soil analyses. Internal standard area and compound retention times were acceptable throughout the sample analyses. Method blanks contained low levels of various common laboratory contaminants, which caused two data points in sediment and four soil data points to be qualified as not detected "U," as required in the associated samples. All LCS recoveries were within criteria. MS/MSD recoveries and relative percent difference (RPD) values were acceptable. No sediment or soil samples required dilutions. No data were rejected for any reason. Although some analyses were qualified as estimated, the deviations observed should not have a primary influence on the results, and the values are considered technically sound and defensible. Complete data summary tables, with associated qualifiers, are provided in Appendix D of the RI Report and can be found in REIMS.

C.4.2.2 Surface Water

Analytical holding times were met for all samples. All surrogate recoveries and internal standard areas and retention times were acceptable. Initial and continuing calibration criteria were met for all target analytes. Method blanks were free of contamination and had no impact on the sample data. Associated trip blanks contained acetone and methylene chloride below the reporting levels which caused methylene chloride in one sample (1.4% of VOC water data) to be qualified as not detected "UJ." MS/MSD recoveries and RPDs were acceptable. LCS criteria were acceptable for most analytes however, low LCS recovery did result in one data point (1.4% of VOC water data) being qualified as estimated non-detectable concentration "UJ." No dilutions were required. No data were rejected for any reason. Although some analyses were flagged as estimated, the deviations observed should not have a primary influence on the results, and the values are considered technically sound and defensible. Complete data summary tables with associated qualifiers are provided in Appendix D of the RI Report and can be found in REIMS.

C.4.3 Semi-volatile Organic Analysis

C.4.3.1 Sediment and Soil

Analytical holding times were met for all samples. Surrogate recovery criteria were acceptable. Internal standard area counts and compound retention times were acceptable throughout the data analyses. Initial and continuing calibration criteria were met for all compounds. Sediment method blanks were free of contamination, however, soil blanks contained low level phthalate contamination which caused one soil data point (0.08% of soil data) to be qualified as not detected "UJ." LCS recoveries for sediment were within criteria however, low soil LCS recoveries caused six soil data points (0.47% of soil data) to be qualified as estimated "J" or estimated non-detectable concentration "UJ." MS/MSD recoveries and RPD values were acceptable in sediment; however, MS/MSD

deviations in soil resulted in eight soil data points (0.63% of soil data) being qualified as estimated "J" or estimated non-detectable concentration "UJ." Due to elevated target levels or matrix difficulties, seven soil samples required dilutions. Of these, two samples had a total of seven analytes with reporting limits above the facility-wide clean up goals (FWCUGs). Of these, all except n-nitroso-di-n-propylamine in sample L10ss-080M-5537-SO had MDLs below the FWCUG. Concentrations detected between the MDL and reporting limit would have been reported as estimated values. No sediment samples required dilutions. No sediment or soil data were rejected for any reason. Although several analyses were qualified as estimated, the deviations observed should not have a primary influence on the results, and the values are considered technically sound and defensible. Complete data summary tables, with associated qualifiers, are provided in Appendix D of the RI Report and can be found in REIMS.

C.4.3.2 Surface Water

Analytical holding times were met for water samples however, one sample was re-extracted outside criteria which resulted in 66 data points (49.8% of SVOC water data) being qualified as estimated non-detectable concentration "UJ." Surrogate recoveries and internal standard areas/retention times were acceptable. Initial and continuing calibration criteria were met for all analytes. As a result of method blank level, two data points (1.5% of water data) were qualified as not detected "UJ." All LCS recoveries were within criteria. Associated batch MS/MSD recoveries and RPD values were acceptable for all analytes. No water samples required dilutions. No data were rejected. Although some analyses were qualified as estimated, the deviations observed should not have a primary influence on the results, and the values are considered technically sound and defensible. Complete data summary tables, with associated qualifiers, are provided in Appendix D of the RI Report and can be found in REIMS.

C.4.4 Pesticide Analysis

C.4.4.1 Sediment and Soil

Analytical holding times were met for all samples. Surrogate recoveries were within acceptance criteria for sediment samples however, surrogate recovery deviations resulted in three soil data points (1.4% of pesticide soil data) to be qualified as estimated "J." Initial calibrations were acceptable for all pesticide compounds in sediment and soil as well as sediment continuing calibrations. Pesticides soil continuing calibrations exceeded the 15%D limit for several analytes which caused 75 soil data points (35.4% of pesticide soil data) to be qualified as estimated "J" or estimated non-detectable concentration "UJ." Sediment and soil method blanks were free of contamination and had no impact on the sample data. All sediment and soil LCS recoveries were within acceptance criteria. MS/MSD for sediment matrices were within criteria; however, MS/MSD deviation did result in one soil data point (0.48% of pesticide soil data) being qualified as estimated non-detectable concentration "UJ." No sediment samples were diluted; however, seven soil samples required dilutions. Of these, only aldrin for sample L10ss-080M-5537-SO had a reporting limit above the FWCUG. The MDL, however, was below the FWCUG and concentrations detected between the MDL and reporting limit would have been reported as estimated values. No pesticide sediment or soil data were rejected for

any reason. Although some analyses were qualified as estimated, the deviations observed should not have a primary influence on the results, and the values are considered technically sound and defensible. Complete data summary tables, with associated qualifiers, are provided in Appendix D of the RI Report and can be found in REIMS.

C.4.4.2 Surface Water

Analytical holding times were met for all samples. Initial and continuing calibration criteria were met for all analytes. All pesticides method blanks were free of contamination and had no impact on the data. Surrogate recoveries and MS/MSD criteria were acceptable. No pesticide water samples required dilutions. One data point was estimated because the value was less than the reporting limit. No data were rejected for any reason. The values are considered technically sound and defensible. Complete data summary tables, with associated qualifiers, are provided in Appendix D of the RI Report and can be found in REIMS.

C.4.5 Polychlorinated Biphenyl Analysis

C.4.5.1 Sediment and Soil

Analytical holding times were met for all samples. Surrogate recoveries were within acceptance criteria. Initial and continuing calibration criteria were met for all PCB compounds. All PCB method blanks were free of contamination and had no impact on the sample data. LCS recoveries were within acceptance criteria. MS/MSD recoveries and RPD values were acceptable. Sample L10SS-092M-5549-SO was analyzed at a 1:5 dilution. Of the reported analytes, only aroclor-1254 had a reporting limit above the FWCUG. The MDL, however, was below the FWCUG and concentrations detected between the MDL and reporting limit would have been reported as estimated values. No other PCB sediment or soil samples required dilutions. No PCB sediment or soil data were rejected for any reason. All PCB values are considered technically sound and defensible. Complete data summary tables, with associated qualifiers, are provided in Appendix D of the RI Report and can be found in REIMS.

C.4.5.2 Surface Water

Analytical holding times were met for all samples. All PCB initial and continuing calibration criteria were met for all analytes. PCB method blanks were free of contamination and had no impact on the data. Surrogate recoveries were within criteria. LCS recoveries were within criteria. MS/MSD recoveries and RPD values were acceptable. No PCB water samples required dilutions. No data were estimated or rejected for any reason. All values are considered technically sound and defensible. Complete data summary tables, with associated qualifiers, are provided in Appendix D of the RI Report and can be found in REIMS.

C.4.6 Explosives and Nitroglycerin Analysis

C.4.6.1 Sediment and Soil

Analytical holding times were met for all sediment samples; however, holding time deviations for one soil sample did result in 16 explosives data points (2.0% of explosives soil data) being qualified as estimated "J" or estimated non-detectable concentration "UJ." Surrogate recoveries were within acceptance criteria. Initial calibration criteria were acceptable; however, due to greater than 15% continuing calibration %D values, one sediment data point (3.1% of explosives sediment data) and 10 explosives soil data points (1.3% of explosives soil data) to be qualified as estimated non-detectable concentration "UJ." All sediment and soil method blanks were free of contamination and had no impact on the sample data. LCS recoveries were within criteria. MS/MSD recoveries and RPD values were acceptable for sediment however, MS recovery deviation did result in three soil data points (0.38% of explosives soil data) to be qualified as estimated non-detectable concentration "UJ." No explosives sediment or soil samples required dilutions. No data were rejected for any reason. Although some analyses were qualified as estimated, the deviations observed should not have a primary influence on the results, and the values are considered technically sound and defensible. Complete data summary tables, with associated qualifiers, are provided in Appendix D of the RI Report and can be found in REIMS.

C.4.6.2 Surface Water

Analytical holding times were met for all samples. Initial calibration criteria were acceptable for all analytes; however, due to greater than 15% continuing calibration %D value, one data point (3.1% of explosives water data) was qualified as estimated non-detectable concentration 'UJ." All method blanks were free of contamination and had no impact on the sample data. Surrogate recoveries were acceptable throughout the data set. LCS and MS/MSD recoveries and RPD values were within acceptance criteria. No explosives water samples required dilutions. No data were rejected for any reason. Although some analyses were qualified as estimated, the deviations observed should not have a primary influence on the results, and the data are considered technically sound and defensible. Complete data summary tables, with associated qualifiers, are provided in Appendix D of the RI Report and can be found in REIMS.

C.4.7 Nitroguanidine, Nitrocellulose, Nitrate, and Hexavalent Chromium Analysis

C.4.7.1 Sediment and Soil

Analytical holding times were met for all samples. Initial and continuing calibration criteria were met for all compounds. Method blanks were acceptable for nitroguanidine and hexavalent chromium; however, blank contamination did result in three nitrocellulose soil data points (15% of propellants soil data) being qualified as estimated non-detectable concentration "UJ." LCS recoveries were within criteria. MS recovery deviation did result in one soil data point (5% of propellant soil data) being qualified as estimated non-detectable concentration "UJ." All other MS/MSD recoveries and RPD values were acceptable for all applicable analytes. No sediment or soil dilutions were required. No

data were rejected for any reason. Although some analyses were qualified as estimated, the deviations observed should not have a primary influence on the results, and the values are considered technically sound and defensible. Complete data summary tables, with associated qualifiers, are provided in Appendix D of the RI Report and can be found in REIMS.

C.4.7.2 Surface Water

Analytical holding times were met for all samples. Initial and continuing calibration criteria were met for all analytes. Method blanks were free of contamination and had no impact on the sample data. LCS recoveries were within acceptance criteria. MS determinations were within criteria. No dilutions were required for any samples. No data were estimated or rejected. All values are considered technically sound and defensible. Complete data summary tables, with associated qualifiers, are provided in Appendix D of the RI Report and can be found in REIMS.

C.4.8 Precision

Field duplicate samples were collected to ascertain the contribution to variability (i.e., precision) due to the combination of environmental media, sampling consistency, and analytical precision. Field duplicate samples were collected from the same spatial and temporal conditions as the primary environmental sample. Soil samples were collected after homogenization for all analytes except VOCs.

Field duplicate comparison information is presented in Table C-7. If a given analyte was not detected in both the regular and field duplicate sample, precision was considered acceptable and results were not included in the table. The RPD was calculated only when both samples were > 5x the reporting level. When one or both sample values were between the reporting level and 5x the reporting level, the absolute difference (D) was evaluated. Tables 3-1 and 3-2 of the FWQAPP set the RPD criteria at 50% for soil and sediment and at 30% for waters while the absolute difference is set at 1x the reporting limit for all matrices. In general, most field duplicate comparisons are considered good. A total of 20 of 171 comparisons were outside the specified field duplicate criteria. Calcium, barium, beryllium, manganese, and a total of 16 polycyclic aromatic hydrocarbon (PAH) analytes exceeded either absolute difference or RPD criteria in 3 of the 5 soil field duplicate pairs that were collected at Load Line 10. The highest deviations observed were in soil duplicate pair L10SS-089M-5546-SO/L10SS-089M-6171-FD for acenaphthene at 13.0% absolute difference, and anthracene and phenanathrene which both exhibited RPD values of 110%.

C.4.9 Sensitivity

Determining minimum detectable values allows the investigation to assess the relative confidence that can be placed in a value relative to the magnitude or level of analyte concentration observed. The closer a measured value comes to the minimum detectable concentration, the less confidence and more variation the measurement will have. Project sensitivity goals were expressed as quantitation level goals in the QAPP. These levels were achieved or exceeded throughout the analytical process, with the exception of a few pesticide, PCB, and SVOC soil samples which were analyzed at diluted

levels. While some reporting levels were above FWCUGs, no MDLs for these dilutions exceeded FWCUGs except for n-nitroso-di-n-propylamine for sample L10ss-080M-5537-SO. Concentrations detected between the MDL and reporting level would have been reported as estimated values. Several metals soil samples (primarily for aluminum and manganese) required dilutions to bring analyte concentrations within the calibration range of the instrument. Reporting levels were elevated in soil due to dilution factors, inherent moisture content variability, and results being reported in the standard dry weight format. Reporting level variations have been considered during data interpretation and statistical applications.

Method blank determinations were performed with each analytical sample batch for each analyte under investigation. These blanks were evaluated during data review to determine their potential impact on individual data points, if any. Review action levels are set at 5x the reporting level for all analytes, except those designated as common laboratory contaminants (methylene chloride, acetone, toluene, 2-butanone, and phthalate compounds) with action levels set at 10x reporting levels. During data review, reported sample concentrations are assessed against method blank action levels, and the following qualifications are made when reportable quantities of analytes were observed in the associated method blank:

- When the analyte sample concentration is above 5 or 10x the action level, the data are not qualified and it is considered a positive value.
- When inorganic analyte sample concentrations are determined to be below 5 or 10x the action level, the data are considered impacted by the method blank and the value reported is qualified as a non-detectable concentration at the analyte value reported. These data are then qualified as "U."
- When organic analyte sample concentrations are determined to be below 5 or 10x the action level, the data are considered impacted by the method blank and the value reported is qualified as a non-detectable concentration. If the reported value is below the reporting level, the result is qualified as a non-detectable concentration at the reporting level. If the result is above the reporting limit, it is qualified as a non-detectable concentration at the analyte value reported. These data are then qualified as "U."

No data were rejected as a result of method blank contamination; however, various analytes were qualified as non-detectable concentration "U" according to the validation in Table C-5.

There were three instances of VOCs acetone and methylene chloride detected in project trip blanks. In PBA08-6016-QC, acetone was detected at 6.4ug/L and methylene chloride was detected at 0.34ug/L, and acetone was detected at 4.3ug/L in project trip blank PBA08-QC-6012-TB. The concentrations observed were less than the reporting levels of 10 µg/L for acetone and 5ug/L for methylene chloride. The impact of these values has been assessed during data review and methylene chloride value has been qualified in surface water sample L10SW-094-5535-SW. It is, therefore, determined that VOC analyses were not affected through the transportation and storage process, and that the procedures and precautions employed were effective in preserving the integrity of the sample analysis.

Table C-7. Field Duplicate Pair Comparisons for Analytes Detected in Samples from Load Line 10

Sample ID	Chemical	Regular Result	Duplicate Result	RPD % or (Absolute Difference)[a]	Test[b]
Soil					
Metals (mg/kg)					
L10SB-070-5509-SO/ L10SB-070-6174-FD	Aluminum	8910	6320	34%	RPD
L10SB-070-5509-SO/ L10SB-070-6174-FD	Antimony	0.15 J	0.4 J	-0.43	D
L10SB-070-5509-SO/ L10SB-070-6174-FD	Arsenic	12.8	9.3	32%	RPD
L10SB-070-5509-SO/ L10SB-070-6174-FD	Barium	29.4	27.2 J	8%	RPD
L10SB-070-5509-SO/ L10SB-070-6174-FD	Beryllium	0.43	0.32	-0.92	D
L10SB-070-5509-SO/ L10SB-070-6174-FD	Cadmium	0.048 J	0.057 J	-0.04	D
L10SB-070-5509-SO/ L10SB-070-6174-FD	Calcium	2090	1110	-4.2	D *
L10SB-070-5509-SO/ L10SB-070-6174-FD	Chromium	12.7	10	24%	RPD
L10SB-070-5509-SO/ L10SB-070-6174-FD	Cobalt	9.1	6.9	28%	RPD
L10SB-070-5509-SO/ L10SB-070-6174-FD	Copper	17.2	14	21%	RPD
L10SB-070-5509-SO/ L10SB-070-6174-FD	Iron	22700	18100	23%	RPD
L10SB-070-5509-SO/ L10SB-070-6174-FD	Lead	10	8.9	12%	RPD
L10SB-070-5509-SO/ L10SB-070-6174-FD	Magnesium	3010	2240 J	29%	RPD
L10SB-070-5509-SO/ L10SB-070-6174-FD	Manganese	352	306	14%	RPD
L10SB-070-5509-SO/ L10SB-070-6174-FD	Nickel	20.9	16.3 J	25%	RPD
L10SB-070-5509-SO/ L10SB-070-6174-FD	Potassium	1180	875	30%	RPD
L10SB-070-5509-SO/ L10SB-070-6174-FD	Selenium	0.82	0.74 J	-0.14	D
L10SB-070-5509-SO/ L10SB-070-6174-FD	Silver	0.013 J	0.016 UJ	-0.01	D
L10SB-070-5509-SO/ L10SB-070-6174-FD	Sodium	40.2 J	46.4 J	-0.05	D
L10SB-070-5509-SO/ L10SB-070-6174-FD	Thallium	0.12 J	0.095 J	-0.11	D
L10SB-070-5509-SO/ L10SB-070-6174-FD	Vanadium	13.8	10.7	25%	RPD

Table C-7. Field Duplicate Pair Comparisons for Analytes Detected in Samples from Load Line 10 (continued)

Sample ID	Chemical	Regular Result	Duplicate Result	RPD % or (Absolute Difference)[a]	Test[b]
L10SB-070-5509-SO/ L10SB-070-6174-FD	Zinc	58.5	42.8	31%	RPD
Explosives (mg/kg)					
L10SB-070-5509-SO/ L10SB-070-6174-FD	2,4-Dinitrotoluene	0.24 U	0.0058 J	-0.94	D
L10SB-070-5509-SO/ L10SB-070-6174-FD	2-Amino-4,6-dinitrotoluene	0.04 J	0.035 J	-0.02	D
L10SB-070-5509-SO/ L10SB-070-6174-FD	4-Amino-2,6-Dinitrotoluene	0.039 J	0.039 J	0	D
Metals (mg/kg)					
L10SB-072-5515-SO/ L10SB-072-6173-FD	Aluminum	7710	11800	42%	RPD
L10SB-072-5515-SO/ L10SB-072-6173-FD	Antimony	0.27 J	0.083 J	-0.3	D
L10SB-072-5515-SO/ L10SB-072-6173-FD	Arsenic	11.4 J	8.6	28%	RPD
L10SB-072-5515-SO/ L10SB-072-6173-FD	Barium	49.1	89.2 J	58%	RPD*
L10SB-072-5515-SO/ L10SB-072-6173-FD	Beryllium	0.45	0.73	-2.3	D *
L10SB-072-5515-SO/ L10SB-072-6173-FD	Cadmium	0.25	0.13 J	-0.49	D
L10SB-072-5515-SO/ L10SB-072-6173-FD	Calcium	2830	1830	43%	RPD
L10SB-072-5515-SO/ L10SB-072-6173-FD	Chromium	10.5	14	29%	RPD
L10SB-072-5515-SO/ L10SB-072-6173-FD	Cobalt	7.5 J	12.3	48%	RPD
L10SB-072-5515-SO/ L10SB-072-6173-FD	Copper	13.9	9.6	37%	RPD
L10SB-072-5515-SO/ L10SB-072-6173-FD	Iron	17400	18000	3%	RPD
L10SB-072-5515-SO/ L10SB-072-6173-FD	Lead	38.7 J	26.9	36%	RPD
L10SB-072-5515-SO/ L10SB-072-6173-FD	Magnesium	2140	2040 J	5%	RPD
L10SB-072-5515-SO/ L10SB-072-6173-FD	Manganese	740	1280	53%	RPD*
L10SB-072-5515-SO/ L10SB-072-6173-FD	Mercury	0.019 J	0.038 J	-0.16	D
L10SB-072-5515-SO/ L10SB-072-6173-FD	Nickel	13.1	14.7 J	12%	RPD
L10SB-072-5515-SO/ L10SB-072-6173-FD	Potassium	674	649	4%	RPD
L10SB-072-5515-SO/ L10SB-072-6173-FD	Selenium	0.86 J	1.4 J	-0.88	D
L10SB-072-5515-SO/ L10SB-072-6173-FD	Silver	0.024 J	0.043 UJ	-0.03	D

Table C-7. Field Duplicate Pair Comparisons for Analytes Detected in Samples from Load Line 10 (continued)

Sample ID	Chemical	Regular Result	Duplicate Result	RPD % or (Absolute Difference)[a]	Test[b]
L10SB-072-5515-SO/ L10SB-072-6173-FD	Sodium	31.7 J	23.9 J	-0.06	D
L10SB-072-5515-SO/ L10SB-072-6173-FD	Thallium	0.12 J	0.18 J	-0.24	D
L10SB-072-5515-SO/ L10SB-072-6173-FD	Vanadium	14.7	23	44%	RPD
L10SB-072-5515-SO/ L10SB-072-6173-FD	Zinc	64.5	56.6	13%	RPD
PAHs (mg/kg)					
L10SB-072-5515-SO/ L10SB-072-6173-FD	Acenaphthene	0.054	0.046	16%	RPD
L10SB-072-5515-SO/ L10SB-072-6173-FD	Anthracene	0.099	0.088	12%	RPD
L10SB-072-5515-SO/ L10SB-072-6173-FD	Benz[a]anthracene	0.26	0.2 J	26%	RPD
L10SB-072-5515-SO/ L10SB-072-6173-FD	Benzo[a]pyrene	0.24	0.18 J	29%	RPD
L10SB-072-5515-SO/ L10SB-072-6173-FD	Benzo[b]fluoranthene	0.32	0.27 J	17%	RPD
L10SB-072-5515-SO/ L10SB-072-6173-FD	Benzo[g,h,i]perylene	0.17	0.12	34%	RPD
L10SB-072-5515-SO/ L10SB-072-6173-FD	Benzo[k]fluoranthene	0.13	0.089	37%	RPD
L10SB-072-5515-SO/ L10SB-072-6173-FD	Chrysene	0.26	0.19 J	31%	RPD
L10SB-072-5515-SO/ L10SB-072-6173-FD	Fluoranthene	0.67	0.48 J	33%	RPD
L10SB-072-5515-SO/ L10SB-072-6173-FD	Fluorene	0.05	0.047	6%	RPD
L10SB-072-5515-SO/ L10SB-072-6173-FD	Indeno[1,2,3-cd]pyrene	0.14	0.12	15%	RPD
L10SB-072-5515-SO/ L10SB-072-6173-FD	Naphthalene	0.02	0.038	-2.2	D *
L10SB-072-5515-SO/ L10SB-072-6173-FD	Phenanthrene	0.4	0.34 J	16%	RPD
L10SB-072-5515-SO/ L10SB-072-6173-FD	Pyrene	0.48	0.35 J	31%	RPD
L10SB-072-5515-SO/ L10SB-072-6173-FD	dibenz[a,h]anthracene	0.045	0.046	2%	RPD
Metals (mg/kg)					
L10SB-073-5519-SO/ L10SB-073-6172-FD	Aluminum	10800	11100	3%	RPD
L10SB-073-5519-SO/ L10SB-073-6172-FD	Antimony	0.14 J	0.14 J	0	D
L10SB-073-5519-SO/ L10SB-073-6172-FD	Arsenic	12.8 J	12.6	2%	RPD
L10SB-073-5519-SO/ L10SB-073-6172-FD	Barium	55.6 J	60.3 J	8%	RPD
L10SB-073-5519-SO/ L10SB-073-6172-FD	Beryllium	0.53	0.61	-0.64	D

Table C-7. Field Duplicate Pair Comparisons for Analytes Detected in Samples from Load Line 10 (continued)

Sample ID	Chemical	Regular Result	Duplicate Result	RPD % or (Absolute Difference)[a]	Test[b]
L10SB-073-5519-SO/ L10SB-073-6172-FD	Cadmium	0.14 J	0.21 J	-0.28	D
L10SB-073-5519-SO/ L10SB-073-6172-FD	Calcium	2080	2560	21%	RPD
L10SB-073-5519-SO/ L10SB-073-6172-FD	Chromium	13.4	14.4	7%	RPD
L10SB-073-5519-SO/ L10SB-073-6172-FD	Cobalt	9.5	8.8	8%	RPD
L10SB-073-5519-SO/ L10SB-073-6172-FD	Copper	14.1	14.3	1%	RPD
L10SB-073-5519-SO/ L10SB-073-6172-FD	Iron	22500	25600	13%	RPD
L10SB-073-5519-SO/ L10SB-073-6172-FD	Lead	22 J	25.2	14%	RPD
L10SB-073-5519-SO/ L10SB-073-6172-FD	Magnesium	2260	2240 J	1%	RPD
L10SB-073-5519-SO/ L10SB-073-6172-FD	Manganese	907	846	7%	RPD
L10SB-073-5519-SO/ L10SB-073-6172-FD	Mercury	0.041 J	0.04 J	-0.01	D
L10SB-073-5519-SO/ L10SB-073-6172-FD	Nickel	16.3 J	16.9 J	4%	RPD
L10SB-073-5519-SO/ L10SB-073-6172-FD	Potassium	766	895	16%	RPD
L10SB-073-5519-SO/ L10SB-073-6172-FD	Selenium	0.94 J	1.3 J	-0.58	D
L10SB-073-5519-SO/ L10SB-073-6172-FD	Silver	0.024 J	0.035 UJ	-0.02	D
L10SB-073-5519-SO/ L10SB-073-6172-FD	Sodium	49.9 J	31 J	-0.15	D
L10SB-073-5519-SO/ L10SB-073-6172-FD	Thallium	0.16 J	0.17 J	-0.04	D
L10SB-073-5519-SO/ L10SB-073-6172-FD	Vanadium	20.2	21.4	6%	RPD
L10SB-073-5519-SO/ L10SB-073-6172-FD	Zinc	54.2	68.9	24%	RPD
Propellants (mg/kg)					
L10SB-073-5519-SO/ L10SB-073-6172-FD	Nitrocellulose	1.1 J	1.1 J	0	D
PAHs (mg/kg)					
L10SB-073-5519-SO/ L10SB-073-6172-FD	Benz[a]anthracene	0.026 J	0.021 J	-0.08	D
L10SB-073-5519-SO/ L10SB-073-6172-FD	Benzo[a]pyrene	0.027 J	0.017 J	-0.16	D
L10SB-073-5519-SO/ L10SB-073-6172-FD	Benzo[b]fluoranthene	0.046 J	0.025 J	-0.34	D
L10SB-073-5519-SO/ L10SB-073-6172-FD	Benzo[g,h,i]perylene	0.019 J	0.011 J	-0.13	D
L10SB-073-5519-SO/ L10SB-073-6172-FD	Benzo[k]fluoranthene	0.018 J	0.015 J	-0.05	D

Table C-7. Field Duplicate Pair Comparisons for Analytes Detected in Samples from Load Line 10 (continued)

Sample ID	Chemical	Regular Result	Duplicate Result	RPD % or (Absolute Difference)[a]	Test[b]
L10SB-073-5519-SO/ L10SB-073-6172-FD	Chrysene	0.028 J	0.022 J	-0.1	D
L10SB-073-5519-SO/ L10SB-073-6172-FD	Fluoranthene	0.064	0.048 J	-0.26	D
L10SB-073-5519-SO/ L10SB-073-6172-FD	Indeno[1,2,3-cd]pyrene	0.017 J	0.0097 J	-0.12	D
L10SB-073-5519-SO/ L10SB-073-6172-FD	Phenanthrene	0.019 J	0.021 J	-0.03	D
L10SB-073-5519-SO/ L10SB-073-6172-FD	Pyrene	0.047 J	0.035 J	-0.19	D
Semi-volatile Organic Compounds (mg/kg)					
L10SB-073-5519-SO/ L10SB-073-6172-FD	bis(2-Ethylhexyl) phthalate	0.03 J	0.41 U	-0.92	D
Metals (mg/kg)					
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Aluminum	11500	11300	2%	RPD
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Antimony	0.11 J	0.12 J	-0.02	D
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Arsenic	11.1	10.6	5%	RPD
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Barium	62.2	65.9	6%	RPD
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Beryllium	0.64	0.62	3%	RPD
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Cadmium	0.23	0.21	-0.1	D
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Calcium	2100	1620	-0.47	D
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Chromium	19.2	20.7	8%	RPD
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Cobalt	9	9.1	1%	RPD
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Copper	16.5	14.2	15%	RPD
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Iron	22300	21000	6%	RPD
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Lead	17.1 J	17.7 J	3%	RPD
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Magnesium	2360	2190	8%	RPD
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Manganese	663	722	9%	RPD
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Mercury	0.04 J	0.041 J	-0.01	D
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Nickel	17.6	18.6	6%	RPD
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Potassium	885 J	899 J	-0.03	D
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Selenium	0.85 J	0.88 J	-0.06	D

Table C-7. Field Duplicate Pair Comparisons for Analytes Detected in Samples from Load Line 10 (continued)

Sample ID	Chemical	Regular Result	Duplicate Result	RPD % or (Absolute Difference)[a]	Test[b]
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Silver	0.033 UJ	0.036 J	-0.01	D
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Sodium	37.7 J	38 J	0	D
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Thallium	0.15 J	0.15 J	0	D
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Vanadium	20.8	20.3	2%	RPD
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Zinc	81.6	64.7	23%	RPD
PAHs (mg/kg)					
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Anthracene	0.0073	0.0068 U	-0.07	D
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Benz[a]anthracene	0.025	0.022	-0.44	D
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Benzo[a]pyrene	0.026	0.024	-0.29	D
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Benzo[b]fluoranthene	0.043	0.044	2%	RPD
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Benzo[g,h,i]perylene	0.018	0.018	0	D
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Benzo[k]fluoranthene	0.017	0.017	0	D
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Chrysene	0.028	0.03	-0.29	D
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Fluoranthene	0.065	0.06	8%	RPD
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Fluorene	0.0089	0.0068 U	-0.31	D
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Indeno[1,2,3-cd]pyrene	0.017	0.016	-0.15	D
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Naphthalene	0.019	0.015	-0.59	D
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Phenanthrene	0.044	0.035	23%	RPD
L10SS-085M-5542-SO/ L10SS-085M-6169-FD	Pyrene	0.043	0.041	5%	RPD
Metals (mg/kg)					
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Aluminum	13400	13800	3%	RPD
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Antimony	0.22 J	0.24 J	-0.04	D
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Arsenic	11.8	11.6	2%	RPD
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Barium	69.6	66.5	5%	RPD
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Beryllium	0.68	0.71	4%	RPD
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Cadmium	0.14 J	0.17 J	-0.15	D

Table C-7. Field Duplicate Pair Comparisons for Analytes Detected in Samples from Load Line 10 (continued)

Sample ID	Chemical	Regular Result	Duplicate Result	RPD % or (Absolute Difference)[a]	Test[b]
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Calcium	1980	1860	6%	RPD
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Chromium	20.1	21.4	6%	RPD
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Cobalt	9.9	10.8	9%	RPD
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Copper	15.8	16.1	2%	RPD
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Iron	26000	23900	8%	RPD
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Lead	23 J	26.4 J	14%	RPD
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Magnesium	2910	3050	5%	RPD
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Manganese	625	509	20%	RPD
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Mercury	0.042 J	0.044 J	-0.02	D
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Nickel	20.2	21.8	8%	RPD
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Potassium	988 J	1200 J	19%	RPD
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Selenium	0.92 J	1 J	-0.16	D
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Sodium	45 J	46.1 J	-0.01	D
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Thallium	0.17 J	0.17 J	0	D
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Vanadium	24.4	23.6	3%	RPD
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Zinc	54.9	68.8	22%	RPD
PAHs (mg/kg)					
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Acenaphthene	0.032	0.12	-13	D *
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Anthracene	0.082	0.3	110%	RPD*
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Benz[a]anthracene	0.22	0.55	86%	RPD*
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Benzo[a]pyrene	0.21	0.49	80%	RPD*
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Benzo[b]fluoranthene	0.29	0.68	80%	RPD*
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Benzo[g,h,i]perylene	0.14	0.33	81%	RPD*
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Benzo[k]fluoranthene	0.12	0.27	77%	RPD*
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Chrysene	0.24	0.53	75%	RPD*
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Fluoranthene	0.66	1.7	88%	RPD*

Table C-7. Field Duplicate Pair Comparisons for Analytes Detected in Samples from Load Line 10 (continued)

Sample ID	Chemical	Regular Result	Duplicate Result	RPD % or (Absolute Difference)[a]	Test[b]
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Fluorene	0.024	0.1	-11	D *
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Indeno[1,2,3-cd]pyrene	0.12	0.3	86%	RPD*
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Naphthalene	0.014	0.026	-1.8	D *
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Phenanthrene	0.3	1.1	110%	RPD*
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	Pyrene	0.45	1.1	84%	RPD*
L10SS-089M-5546-SO/ L10SS-089M-6171-FD	dibenz[a,h]anthracene	0.032	0.08	-7.1	D *

[a] RPD is calculated as 100x |R-D|/(R-D)/2, where R is the concentration of the regular sample and D is the concentration of the duplicate. The absolute difference is calculated as |R-D|/L, where L is the average reporting limit of the two samples. Values followed by a "%" are RPD values. Values in parentheses are absolute difference values.

[b] The test used to evaluate the duplicate comparison is the RPD if both sample results were more than 5x the reporting limit or the absolute difference (D) if any result was less than 5x the reporting limit.

*RPD or D outside criteria.

Validation Qualifiers: J = estimated; U = not detected; and UJ = not detected and reporting limit estimated.

D = Duplicate

PAH = Polycyclic Aromatic Hydrocarbon

RPD = Relative Percent Difference

C.4.10 Representativeness and Comparability

Representativeness expresses the degree to which data accurately reflect the analyte or parameter of interest for the environmental AOC and is the qualitative term most concerned with the proper design of the sampling program. Factors that affect the representativeness of analytical data include proper preservation, holding times, use of standard sampling and analytical methods, and determination of matrix or analyte interferences. Samples were hand-delivered to the laboratory by the TestAmerica courier and were received within temperature specifications and in good condition. Holding times were exceeded for one explosives soil sample and one SVOC soil sample; however, they were extracted within 2x the holding time and the data is considered usable, but estimated. No other holding time deviations were observed.

Comparability, like representativeness, is a qualitative term relative to an individual project data set. The RI employed appropriate sampling methodologies, sample containers and preservation, site surveillance, use of standard sampling devices, uniform training, documentation of sampling, standard analytical protocols/procedures, QC checks with standard control limits, and universally accepted data reporting units to ensure comparability to other data sets. Through the proper implementation and documentation of these standard practices, the project has established the confidence that the data will be comparable to other project and programmatic information. Tables C-8 and C-9 present the standardized parameter groups, sample containers, preservation techniques, and associated holding times for environmental media.

C.4.11 Completeness

Usable data are defined as those data that pass individual scrutiny during the verification and validation process and are accepted for unrestricted application to the human health risk assessment evaluation or equivalent-type applications. Estimated data have been determined to be acceptable for RVAAP project objectives.

The completeness goal for analytical data is 90% as defined in Tables 3-1 and Table 3-2 of the FWQAPP. The project achieved this goal by collecting all samples presented in the PBA08 SAP and producing usable results for 99.9% of all samples performed.

C.5 DATA QUALITY ASSESSMENT SUMMARY

In concurrence with the USACE Chemical Data Quality Assessment presented in Attachment 2, the overall quality of the Load line 10 RI information meets or exceeds the established project objectives. Through proper implementation of the project data verification and assessment process, project information has been determined to be acceptable for use.

Data, as presented, have been qualified as usable or estimated “J” or “UJ,” or rejected “R.” Data that have been estimated provide indications of accuracy, precision, or sensitivity being less than desired but adequate for interpretation. Rejected data were relegated to one non-detectable concentration

antimony soil result due to poor matrix spike recoveries, thereby indicating complex matrix to be the cause. Qualifiers have been applied to data when necessary.

Data produced for this project demonstrate they can withstand scientific scrutiny; are appropriate for its intended purpose; are technically defensible; and are of known and acceptable sensitivity, precision, and accuracy. Data integrity has been documented through proper implementation of QA and QC measures. The environmental information presented has an established confidence that allows utilization for the project objectives and provides data for future needs.

Table C-8. Container Requirements for Soil and Sediment Samples

Analyte Group	Container	Minimum Sample Size	Preservative	Holding Time
Volatile Organic Compounds	1 – 2 oz glass jar with septum cap (no headspace)	20 grams	Cool, 4°C	14 d
Semi-volatile Organic Compounds	4 oz glass	30 grams	Cool, 4°C	14 d (extraction) 40 d (analysis)
Pesticide Compounds	4 oz glass	30 grams	Cool, 4°C	14 d (extraction) 40 d (analysis)
PCBs	4 oz glass	30 grams	Cool, 4°C	14 d (extraction) 40 d (analysis)
PAH Compounds	4 oz glass	30 grams	Cool, 4°C	14 d (extraction) 40 d (analysis)
Explosive Compounds	4 oz glass	10 grams	Cool, 4°C	14 d (extraction) 40 d (analysis)
Nitroguanidine	4 oz glass	10 grams	Cool, 4°C	14 d (extraction) 40 d (analysis)
Nitrocellulose	4 oz glass	10 grams	Cool, 4°C	14 d (extraction) 40 d (analysis)
Metals (TAL)	4 oz glass or plastic	20 grams	Cool, 4°C	180 d; Hg @ 28 d
Hexavalent Chromium	4 oz glass	20 grams	Cool, 4°C	24hr (extraction) 24 hr (analysis)
Geotechnical parameters	Moisture/Density/Porosity/K – Shelby tube TOC – no special container Grain Size Fraction - no special container	Various 100 grams 5000 grams	Air tight, cool Cool N/A	N/A

PCB = Polychlorinated Biphenyl
PAH = Polycyclic Aromatic Hydrocarbon
TAL = Target Analyte List
TOC= Total Organic Content
N/A = Not Applicable
K= Permeability

Table C-9. Container Requirements for Surface Water Samples

Analyte Group	Container	Minimum Sample Size	Preservative	Holding Time
Volatile Organic Compounds	(3) 40ml Glass Vial	(2) 40 ml	HCl to pH <2 Cool, 4°C	14 days
Semi-volatile Organic Compounds	(2) 1 L Amber Glass	1 L	Cool, 4°C	7 days (extraction) 40 days (analysis)
Pesticide Compounds	(2) 1 L Amber Glass	1 L	Cool, 4°C	7 days (extraction) 40 days (analysis)
PCBs	(2) 1 L Amber Glass	1 L	Cool, 4°C	7 days (extraction) 40 days (analysis)
PAH Compounds	(2) 1 L Amber Glass	1 L	Cool, 4°C	7 days (extraction) 40 days (analysis)
Explosive Compounds	(2) 1 L Amber Glass	1 L	Cool, 4°C	7 days (extraction) 40 days (analysis)
Nitroguanidine	500 ml Amber Glass	10 ml	Cool, 4°C	7days (extraction) 40 days (analysis)
Nitrocellulose	500 ml Amber Glass	100 ml	Cool, 4°C	7 days (extraction) 40 days (analysis)
Nitrate	250 ml poly	50 ml	Cool, 4°C	48 hrs
Metals (TAL)	1 L HNO3 Poly	300 ml	HNO3 to pH <2 Cool, 4°C	180 days; Hg @ 28 days

PCB = Polychlorinated Biphenyl
PAH = Polycyclic Aromatic Hydrocarbon
TAL = Target Analyte List

C.6 REFERENCES

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ATTACHMENT 1

Automated Data Review Outlier Reports

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QC Outlier Report: Holding Times

Lab Report Batch: A0B190524 **Lab ID:** TALCAN

					Actual Holding Time			Criteria				Reported Dates (and Times)		
Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Prep Method	Coll To Prep	Prep To Ana	Coll To Ana	Coll To Prep	Prep To Ana	Coll To Ana	Unit of Meas	Collection Date	Preparation Date	Analysis Date
LL9SD-113-5471-SD	A0B190524002	8081A	SO	3540C	23.0	3.0		14	40		Days	02/18/2010	03/13/2010	03/16/2010

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0053030 **Analysis Method :** 6020 **Analysis Date :** 02/25/2010

Preparation Batch : 0053030 **Preparation Type :** 3050B **Preparation Date :** 02/24/2010

Lab Reporting Batch : A0B190524 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
LL9SD-111-5469-SDMS	A0B190524001S	SO	Antimony	29		30.00	75.00	125.00	20.00
LL9SD-111-5469-SDMS	A0B190524001D		Antimony	29		30.00	75.00	125.00	20.00

Associated Samples: All samples in Method Batch

Client Sample ID	Lab Sample ID
FWSSD-103-5013-SD	A0B190524010
L10SD-094-5531-SD	A0B190524013
LL6SD-081-5243-SD	A0B190524009
LL9SD-111-5469-SD	A0B190524001
LL9SD-113-5471-SD	A0B190524002
LL9SD-113-6147-FD	A0B190524003
LL9SD-114-5472-SD	A0B190524004

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0054027 **Analysis Method :** 8270C **Analysis Date :** 03/02/2010

Preparation Batch : 0054027 **Preparation Type :** 3540C **Preparation Date :** 02/23/2010

Lab Reporting Batch : A0B190524 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
LL9SD-111-5469-SDMS	A0B190524001S	SO	3,3'-Dichlorobenzidine	0.0		0.00	10.00	130.00	56.00
			3-Nitroaniline	21		0.00	25.00	110.00	45.00
			4-Nitroaniline	26		0.00	35.00	115.00	30.00
LL9SD-111-5469-SDMS	A0B190524001D		3,3'-Dichlorobenzidine	0.0		0.00	10.00	130.00	56.00
			3-Nitroaniline	20		0.00	25.00	110.00	45.00
			4-Chloroaniline		80	0.00	10.00	95.00	30.00
			4-Nitroaniline	22		0.00	35.00	115.00	30.00

Associated Samples: Parent sample only

Client Sample ID	Lab Sample ID
LL9SD-111-5469-SD	A0B190524001

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Laboratory Control Sample / Laboratory Control Sample Duplicate Outlier Report

Method Batch : 0054246 **Analysis Method :** 8260B **Analysis Date :** 02/23/2010

Preparation Batch : 0054246 **Preparation Type :** 5030B **Preparation Date :** 02/23/2010

Lab Reporting Batch : A0B190524 **Lab ID:** TALCAN

			Reported Values		Project Limits (Percent)			
LCS Lab Sample ID	**Matrix**	**Analyte Name**	**Percent Recovery**	**RPD**	**Rejection Point**	**Lower Limit**	**Upper Limit**	**RPD**
A0B230000246C	AQ	Chloroethane	52		10.00	60.00	135.00	30.00
A0B230000246L		Chloroethane	51	1.4	10.00	60.00	135.00	30.00

Associated Samples

Client Sample ID	Lab Sample ID
FWSSW-103-5012-SW	A0B190524011
LL9SW-111-5489-SW	A0B190524005
PBA08-QC-6000-FB	A0B190524007
PBA08-QC-6001-ER	A0B190524008
PBA08-QC-6010-TB	A0B190524012
PBA08-QC-6011-TB	A0B190524006

Scope of Data Qualification: The outlier in the LCS qualifies that analyte in all samples with the same Preparation Batch ID as the LCS

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0B190524 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
FWSSD-103-5013-SD	A0B190524010	353.2 Modified	SO	Nitrocellulose	U	6.1	6.09756098	mg/kg
		6020		Antimony	U	0.61	0.6097561	mg/kg
		8081A		4,4'-DDE	U	2.1	2.07317073	ug/kg
				Dieldrin	U	2.1	2.07317073	ug/kg
				Endosulfan I	U	2.1	2.07317073	ug/kg
				Endrin	U	2.1	2.07317073	ug/kg
				gamma-Chlordane	U	2.1	2.07317073	ug/kg
				Methoxychlor	U	6.1	6.09756098	ug/kg
		8260B		1,1,1-Trichloroethane	U	6.1	6.09756098	ug/kg
				1,1,2,2-Tetrachloroethane	U	6.1	6.09756098	ug/kg
				1,1,2-Trichloroethane	U	6.1	6.09756098	ug/kg
				1,1-Dichloroethane	U	6.1	6.09756098	ug/kg
				1,1-Dichloroethene	U	6.1	6.09756098	ug/kg
				1,2-Dibromoethane (Ethylene Dibro	U	6.1	6.09756098	ug/kg
				1,2-Dichloroethane	U	6.1	6.09756098	ug/kg
				1,2-Dichloroethene (total)	U	6.1	6.09756098	ug/kg
				1,2-Dichloropropane	U	6.1	6.09756098	ug/kg
				Benzene	U	6.1	6.09756098	ug/kg
				Bromochloromethane	U	6.1	6.09756098	ug/kg
				Bromodichloromethane	U	6.1	6.09756098	ug/kg
				Bromoform	U	6.1	6.09756098	ug/kg
				Bromomethane (Methyl bromide)	U	6.1	6.09756098	ug/kg
				Carbon disulfide	U	6.1	6.09756098	ug/kg
				Carbon tetrachloride	U	6.1	6.09756098	ug/kg
				Chlorobenzene	U	6.1	6.09756098	ug/kg
				Chlorodibromomethane	U	6.1	6.09756098	ug/kg
				Chloroethane	U	6.1	6.09756098	ug/kg
				Chloroform	U	6.1	6.09756098	ug/kg
				Chloromethane	U	6.1	6.09756098	ug/kg
				cis-1,3-Dichloropropene	U	6.1	6.09756098	ug/kg
				Ethylbenzene	U	6.1	6.09756098	ug/kg
				Methylene chloride	U	6.1	6.09756098	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0B190524 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
FWSSD-103-5013-SD	A0B190524010	8260B	SO	Styrene	U	6.1	6.09756098	ug/kg
				Tetrachloroethene	U	6.1	6.09756098	ug/kg
				trans-1,3-Dichloropropene	U	6.1	6.09756098	ug/kg
				Trichloroethene	U	6.1	6.09756098	ug/kg
				Vinyl chloride	U	6.1	6.09756098	ug/kg
		8270C		Acenaphthene	U	61	60.9756098	ug/kg
				Acenaphthylene	U	61	60.9756098	ug/kg
				Anthracene	U	61	60.9756098	ug/kg
				Benz[a]anthracene	U	61	60.9756098	ug/kg
				Benzo[a]pyrene	U	61	60.9756098	ug/kg
				Benzo[b]fluoranthene	U	61	60.9756098	ug/kg
				Benzo[g,h,i]perylene	U	61	60.9756098	ug/kg
				Benzo[k]fluoranthene	U	61	60.9756098	ug/kg
				Carbazole	U	61	60.9756098	ug/kg
				Chrysene	U	61	60.9756098	ug/kg
				dibenz[a,h]anthracene	U	61	60.9756098	ug/kg
				Fluoranthene	U	61	60.9756098	ug/kg
				Fluorene	U	61	60.9756098	ug/kg
				Indeno[1,2,3-cd]pyrene	U	61	60.9756098	ug/kg
				Naphthalene	U	61	60.9756098	ug/kg
				Phenanthrene	U	61	60.9756098	ug/kg
				Pyrene	U	61	402.439024	ug/kg
		8330B		1,3,5-Trinitrobenzene	U	0.25	0.01207317	mg/kg
				1,3-Dinitrobenzene	U	0.25	0.30182927	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.25	0.30182927	mg/kg
				2,4-Dinitrotoluene	U	0.25	0.30182927	mg/kg
				2,6-Dinitrotoluene	U	0.25	0.30182927	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.25	0.30182927	mg/kg
				2-Nitrotoluene	U	0.25	0.30182927	mg/kg
				3-Nitrotoluene	U	0.25	0.30182927	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.25	0.30182927	mg/kg
				4-Nitrotoluene	U	0.50	0.60365854	mg/kg
				Nitrobenzene	U	0.25	0.30182927	mg/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0B190524 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
FWSSW-103-5012-SW	A0B190524011	8330B	AQ	1,3,5-Trinitrobenzene	U	0.11	0.108	ug/L
				4-Nitrotoluene	U	1.1	1.08	ug/L
				Nitroglycerin	U	1.1	1.08	ug/L
				PETN	U	1.1	1.08	ug/L
L10SD-094-5531-SD	A0B190524013	353.2 Modified	SO	Nitrocellulose	U	7.6	7.57575758	mg/kg
		8081A		4,4'-DDE	U	2.6	2.57575758	ug/kg
				Aldrin	U	6.1	6.06060606	ug/kg
				alpha-BHC	U	3.8	3.78787879	ug/kg
				alpha-Chordane	U	4.6	4.54545455	ug/kg
				delta-BHC	U	6.1	6.06060606	ug/kg
				Dieldrin	U	2.6	2.57575758	ug/kg
				Endosulfan I	U	2.6	2.57575758	ug/kg
				Endosulfan II	U	3.8	3.78787879	ug/kg
				Endosulfan sulfate	U	4.6	4.54545455	ug/kg
				Endrin	U	2.6	2.57575758	ug/kg
				Endrin aldehyde	U	4.6	4.54545455	ug/kg
				gamma-BHC (Lindane)	U	3.8	3.78787879	ug/kg
				gamma-Chlordane	U	2.6	2.57575758	ug/kg
				Heptachlor epoxide	U	3.8	3.78787879	ug/kg
				Methoxychlor	U	7.6	7.57575758	ug/kg
		8260B		1,1,1-Trichloroethane	U	7.6	7.57575758	ug/kg
				1,1,2,2-Tetrachloroethane	U	7.6	7.57575758	ug/kg
				1,1,2-Trichloroethane	U	7.6	7.57575758	ug/kg
				1,1-Dichloroethane	U	7.6	7.57575758	ug/kg
				1,1-Dichloroethene	U	7.6	7.57575758	ug/kg
				1,2-Dibromoethane (Ethylene Dibro	U	7.6	7.57575758	ug/kg
				1,2-Dichloroethane	U	7.6	7.57575758	ug/kg
				1,2-Dichloroethene (total)	U	7.6	7.57575758	ug/kg
				1,2-Dichloropropane	U	7.6	7.57575758	ug/kg
				Benzene	U	7.6	7.57575758	ug/kg
				Bromochloromethane	U	7.6	7.57575758	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0B190524 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SD-094-5531-SD	A0B190524013	8260B	SO	Bromodichloromethane	U	7.6	7.57575758	ug/kg
				Bromoform	U	7.6	7.57575758	ug/kg
				Bromomethane (Methyl bromide)	U	7.6	7.57575758	ug/kg
				Carbon disulfide	U	7.6	7.57575758	ug/kg
				Carbon tetrachloride	U	7.6	7.57575758	ug/kg
				Chlorobenzene	U	7.6	7.57575758	ug/kg
				Chlorodibromomethane	U	7.6	7.57575758	ug/kg
				Chloroethane	U	7.6	7.57575758	ug/kg
				Chloroform	U	7.6	7.57575758	ug/kg
				Chloromethane	U	7.6	7.57575758	ug/kg
				cis-1,3-Dichloropropene	U	7.6	7.57575758	ug/kg
				Ethylbenzene	U	7.6	7.57575758	ug/kg
				Methylene chloride	U	7.6	7.57575758	ug/kg
				Styrene	U	7.6	7.57575758	ug/kg
				Tetrachloroethene	U	7.6	7.57575758	ug/kg
				trans-1,3-Dichloropropene	U	7.6	7.57575758	ug/kg
				Trichloroethene	U	7.6	7.57575758	ug/kg
				Vinyl chloride	U	7.6	7.57575758	ug/kg
		8270C		Acenaphthene	U	76	75.7575758	ug/kg
				Acenaphthylene	U	76	75.7575758	ug/kg
				Anthracene	U	76	75.7575758	ug/kg
				Benzo[g,h,i]perylene	U	76	75.7575758	ug/kg
				Benzo[k]fluoranthene	U	76	75.7575758	ug/kg
				Carbazole	U	76	75.7575758	ug/kg
				dibenz[a,h]anthracene	U	76	75.7575758	ug/kg
				Fluorene	U	76	75.7575758	ug/kg
				Indeno[1,2,3-cd]pyrene	U	76	75.7575758	ug/kg
				Naphthalene	U	76	75.7575758	ug/kg
				Phenanthrene	U	76	75.7575758	ug/kg
		8330B		1,3,5-Trinitrobenzene	U	0.25	0.015	mg/kg
				1,3-Dinitrobenzene	U	0.25	0.375	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.25	0.375	mg/kg
				2,4-Dinitrotoluene	U	0.25	0.375	mg/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0B190524 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SD-094-5531-SD	A0B190524013	8330B	SO	2,6-Dinitrotoluene	U	0.25	0.375	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.25	0.375	mg/kg
				2-Nitrotoluene	U	0.25	0.375	mg/kg
				3-Nitrotoluene	U	0.25	0.375	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.25	0.375	mg/kg
				4-Nitrotoluene	U	0.50	0.75	mg/kg
				Nitrobenzene	U	0.25	0.375	mg/kg
LL6SD-081-5243-SD	A0B190524009	8330B	SO	1,3,5-Trinitrobenzene	U	0.25	0.020625	mg/kg
				1,3-Dinitrobenzene	U	0.25	0.515625	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.25	0.515625	mg/kg
				2,4-Dinitrotoluene	U	0.25	0.515625	mg/kg
				2,6-Dinitrotoluene	U	0.25	0.515625	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.25	0.515625	mg/kg
				2-Nitrotoluene	U	0.25	0.515625	mg/kg
				3-Nitrotoluene	U	0.25	0.515625	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.25	0.515625	mg/kg
				4-Nitrotoluene	U	0.50	1.03125	mg/kg
				Nitrobenzene	U	0.25	0.515625	mg/kg
LL9SD-111-5469-SD	A0B190524001	8270C	SO	2,4-Dinitrophenol	U	1300	1290.32258	ug/kg
				2-Nitroaniline	U	1300	1290.32258	ug/kg
				3-Nitroaniline	U	1300	1290.32258	ug/kg
				4,6-Dinitro-2-methylphenol	U	1300	1290.32258	ug/kg
				4-Nitroaniline	U	1300	1290.32258	ug/kg
				4-Nitrophenol	U	1300	1290.32258	ug/kg
				Benzoic acid	U	1300	1290.32258	ug/kg
LL9SD-113-5471-SD	A0B190524002	8081A	SO	4,4'-DDE	U	14	13.7096774	ug/kg
				Dieldrin	U	14	13.7096774	ug/kg
				Endosulfan I	U	14	13.7096774	ug/kg
				Endrin	U	14	13.7096774	ug/kg
				gamma-Chlordane	U	14	13.7096774	ug/kg
		8270C		2,4-Dinitrophenol	U	1300	1290.32258	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0B190524 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
LL9SD-113-5471-SD	A0B190524002	8270C	SO	2-Nitroaniline	U	1300	1290.32258	ug/kg
				3-Nitroaniline	U	1300	1290.32258	ug/kg
				4,6-Dinitro-2-methylphenol	U	1300	1290.32258	ug/kg
				4-Nitroaniline	U	1300	1290.32258	ug/kg
				4-Nitrophenol	U	1300	1290.32258	ug/kg
				Benzoic acid	U	1300	1290.32258	ug/kg
		8330B		1,3,5-Trinitrobenzene	U	0.25	0.01596774	mg/kg
				1,3-Dinitrobenzene	U	0.25	0.39919355	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.25	0.39919355	mg/kg
				2,4-Dinitrotoluene	U	0.25	0.39919355	mg/kg
				2,6-Dinitrotoluene	U	0.25	0.39919355	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.25	0.39919355	mg/kg
				2-Nitrotoluene	U	0.25	0.39919355	mg/kg
				3-Nitrotoluene	U	0.25	0.39919355	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.25	0.39919355	mg/kg
				4-Nitrotoluene	U	0.50	0.7983871	mg/kg
				Nitrobenzene	U	0.25	0.39919355	mg/kg
LL9SD-113-6147-FD	A0B190524003	8081A	SO	4,4'-DDD	U	17	16.6666667	ug/kg
				4,4'-DDT	U	17	16.6666667	ug/kg
				alpha-BHC	U	21	20.8333333	ug/kg
				Endosulfan II	U	21	20.8333333	ug/kg
				Endrin ketone	U	17	16.6666667	ug/kg
				gamma-BHC (Lindane)	U	21	20.8333333	ug/kg
				Heptachlor epoxide	U	21	20.8333333	ug/kg
				Methoxychlor	U	42	41.6666667	ug/kg
				Toxaphene	U	560	558.333333	ug/kg
		8260B		1,1,1-Trichloroethane	U	8.4	8.33333333	ug/kg
				1,1,2,2-Tetrachloroethane	U	8.4	8.33333333	ug/kg
				1,1,2-Trichloroethane	U	8.4	8.33333333	ug/kg
				1,1-Dichloroethane	U	8.4	8.33333333	ug/kg
				1,1-Dichloroethene	U	8.4	8.33333333	ug/kg
				1,2-Dibromoethane (Ethylene Dibro	U	8.4	8.33333333	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0B190524 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
LL9SD-113-6147-FD	A0B190524003	8260B	SO	1,2-Dichloroethane	U	8.4	8.33333333	ug/kg
				1,2-Dichloroethene (total)	U	8.4	8.33333333	ug/kg
				1,2-Dichloropropane	U	8.4	8.33333333	ug/kg
				Benzene	U	8.4	8.33333333	ug/kg
				Bromochloromethane	U	8.4	8.33333333	ug/kg
				Bromodichloromethane	U	8.4	8.33333333	ug/kg
				Bromoform	U	8.4	8.33333333	ug/kg
				Bromomethane (Methyl bromide)	U	8.4	8.33333333	ug/kg
				Carbon disulfide	U	8.4	8.33333333	ug/kg
				Carbon tetrachloride	U	8.4	8.33333333	ug/kg
				Chlorobenzene	U	8.4	8.33333333	ug/kg
				Chlorodibromomethane	U	8.4	8.33333333	ug/kg
				Chloroethane	U	8.4	8.33333333	ug/kg
				Chloroform	U	8.4	8.33333333	ug/kg
				Chloromethane	U	8.4	8.33333333	ug/kg
				cis-1,3-Dichloropropene	U	8.4	8.33333333	ug/kg
				Ethylbenzene	U	8.4	8.33333333	ug/kg
				Methylene chloride	U	8.4	8.33333333	ug/kg
				Styrene	U	8.4	8.33333333	ug/kg
				Tetrachloroethene	U	8.4	8.33333333	ug/kg
				Toluene	U	8.4	8.33333333	ug/kg
				trans-1,3-Dichloropropene	U	8.4	8.33333333	ug/kg
				Trichloroethene	U	8.4	8.33333333	ug/kg
				Vinyl chloride	U	8.4	8.33333333	ug/kg
				Xylene (Total)	U	17	16.6666667	ug/kg
		8270C		Acenaphthene	U	84	83.3333333	ug/kg
				Acenaphthylene	U	84	83.3333333	ug/kg
				Anthracene	U	84	83.3333333	ug/kg
				Carbazole	U	84	83.3333333	ug/kg
				dibenz[a,h]anthracene	U	84	83.3333333	ug/kg
				Fluorene	U	84	83.3333333	ug/kg
				Naphthalene	U	84	83.3333333	ug/kg
		8330B		1,3,5-Trinitrobenzene	U	0.25	0.0165	mg/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0B190524 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
LL9SD-113-6147-FD	A0B190524003	8330B	SO	1,3-Dinitrobenzene	U	0.25	0.4125	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.25	0.4125	mg/kg
				2,4-Dinitrotoluene	U	0.25	0.4125	mg/kg
				2,6-Dinitrotoluene	U	0.25	0.4125	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.25	0.4125	mg/kg
				2-Nitrotoluene	U	0.25	0.4125	mg/kg
				3-Nitrotoluene	U	0.25	0.4125	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.25	0.4125	mg/kg
				4-Nitrotoluene	U	0.50	0.825	mg/kg
				Nitrobenzene	U	0.25	0.4125	mg/kg
LL9SD-114-5472-SD	A0B190524004	8270C	SO	1,2,4-Trichlorobenzene	U	450	445.945946	ug/kg
				1,2-Dichlorobenzene	U	450	445.945946	ug/kg
				1,3-Dichlorobenzene	U	450	445.945946	ug/kg
				1,4-Dichlorobenzene	U	450	445.945946	ug/kg
				2,4,5-Trichlorophenol	U	450	445.945946	ug/kg
				2,4,6-Trichlorophenol	U	450	445.945946	ug/kg
				2,4-Dichlorophenol	U	450	445.945946	ug/kg
				2,4-Dimethylphenol	U	450	445.945946	ug/kg
				2,4-Dinitrophenol	U	1100	1081.08108	ug/kg
				2,4-Dinitrotoluene	U	450	445.945946	ug/kg
				2,6-Dinitrotoluene	U	450	445.945946	ug/kg
				2-Chloronaphthalene	U	450	445.945946	ug/kg
				2-Chlorophenol	U	450	445.945946	ug/kg
				2-Methylphenol	U	450	445.945946	ug/kg
				2-Nitroaniline	U	1100	1081.08108	ug/kg
				2-Nitrophenol	U	450	445.945946	ug/kg
				3,3'-Dichlorobenzidine	U	450	445.945946	ug/kg
				3-methylphenol/4-methylphenol	U	450	#Error	ug/kg
				3-Nitroaniline	U	1100	1081.08108	ug/kg
				4,6-Dinitro-2-methylphenol	U	1100	1081.08108	ug/kg
				4-Bromophenyl phenyl ether	U	450	445.945946	ug/kg
				4-Chloro-3-methylphenol	U	450	445.945946	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0B190524 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
LL9SD-114-5472-SD	A0B190524004	8270C	SO	4-Chloroaniline	U	450	445.945946	ug/kg
				4-Chlorophenyl phenyl ether	U	450	445.945946	ug/kg
				4-Nitroaniline	U	1100	1081.08108	ug/kg
				4-Nitrophenol	U	1100	1081.08108	ug/kg
				Acenaphthene	U	68	67.5675676	ug/kg
				Acenaphthylene	U	68	67.5675676	ug/kg
				Anthracene	U	68	67.5675676	ug/kg
				Benzoic acid	U	1100	1081.08108	ug/kg
				bis(2-Chloroethoxy)methane	U	450	445.945946	ug/kg
				bis(2-Chloroethyl) ether	U	450	445.945946	ug/kg
				Bis(2-chloroisopropyl) ether	U	450	445.945946	ug/kg
				bis(2-Ethylhexyl) phthalate	U	450	445.945946	ug/kg
				Butyl benzyl phthalate	U	450	445.945946	ug/kg
				Carbazole	U	68	67.5675676	ug/kg
				dibenz[a,h]anthracene	U	68	67.5675676	ug/kg
				Dibenzofuran	U	450	445.945946	ug/kg
				Diethyl phthalate	U	450	445.945946	ug/kg
				Dimethyl phthalate	U	450	445.945946	ug/kg
				Di-n-butyl phthalate	U	450	445.945946	ug/kg
				Di-n-octyl phthalate	U	450	445.945946	ug/kg
				Fluorene	U	68	67.5675676	ug/kg
				Hexachlorobenzene	U	450	445.945946	ug/kg
				Hexachlorobutadiene	U	450	445.945946	ug/kg
				HEXACHLOROCYCLOPENTADIE	U	450	#Error	ug/kg
				Hexachloroethane	U	450	445.945946	ug/kg
				Isophorone	U	450	445.945946	ug/kg
				Nitrobenzene	U	450	445.945946	ug/kg
				N-Nitrosodi-n-propylamine	U	450	445.945946	ug/kg
				N-Nitrosodiphenylamine	U	450	445.945946	ug/kg
				Pentachlorophenol	U	450	445.945946	ug/kg
				Phenol	U	450	445.945946	ug/kg
LL9SW-111-5489-SW	A0B190524005	8330B	AQ	1,3-Dinitrobenzene	U	0.15	0.1485	ug/L

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0B190524 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
LL9SW-111-5489-SW	A0B190524005	8330B	AQ	2,4,6-Trinitrotoluene (TNT)	U	0.15	0.1485	ug/L
				2,4-Dinitrotoluene	U	0.15	0.1485	ug/L
				2,6-Dinitrotoluene	U	0.15	0.1485	ug/L
				2-Amino-4,6-dinitrotoluene	U	0.30	0.297	ug/L
				2-Nitrotoluene	U	0.15	0.1485	ug/L
				3-Nitrotoluene	U	0.50	0.495	ug/L
				4-Amino-2,6-Dinitrotoluene	U	0.15	0.1485	ug/L
				Hexahydro-1,3,5-Trinitro-1,3,5-Triaz	U	0.25	0.2475	ug/L
				Methyl-2,4,6-Trinitrophenylnitramin	U	0.15	0.1485	ug/L
				Nitrobenzene	U	0.15	0.1485	ug/L
				Octahydro-1,3,5,7-tetranitro-1,3,5,7	U	0.15	0.1485	ug/L
PBA08-QC-6000-FB	A0B190524007	8330B	AQ	1,3-Dinitrobenzene	U	0.15	0.147	ug/L
				2,4,6-Trinitrotoluene (TNT)	U	0.15	0.147	ug/L
				2,4-Dinitrotoluene	U	0.15	0.147	ug/L
				2,6-Dinitrotoluene	U	0.15	0.147	ug/L
				2-Nitrotoluene	U	0.15	0.147	ug/L
				4-Amino-2,6-Dinitrotoluene	U	0.15	0.147	ug/L
				Methyl-2,4,6-Trinitrophenylnitramin	U	0.15	0.147	ug/L
				Nitrobenzene	U	0.15	0.147	ug/L
				Octahydro-1,3,5,7-tetranitro-1,3,5,7	U	0.15	0.147	ug/L
PBA08-QC-6001-ER	A0B190524008	8330B	AQ	1,3-Dinitrobenzene	U	0.15	0.1485	ug/L
				2,4,6-Trinitrotoluene (TNT)	U	0.15	0.1485	ug/L
				2,4-Dinitrotoluene	U	0.15	0.1485	ug/L
				2,6-Dinitrotoluene	U	0.15	0.1485	ug/L
				2-Amino-4,6-dinitrotoluene	U	0.30	0.297	ug/L
				2-Nitrotoluene	U	0.15	0.1485	ug/L
				3-Nitrotoluene	U	0.50	0.495	ug/L
				4-Amino-2,6-Dinitrotoluene	U	0.15	0.1485	ug/L
				Hexahydro-1,3,5-Trinitro-1,3,5-Triaz	U	0.25	0.2475	ug/L
				Methyl-2,4,6-Trinitrophenylnitramin	U	0.15	0.1485	ug/L
				Nitrobenzene	U	0.15	0.1485	ug/L

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0B190524 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
PBA08-QC-6001-ER	A0B190524008	8330B	AQ	Octahydro-1,3,5,7-tetranitro-1,3,5,7	U	0.15	0.1485	ug/L

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

Continuing Calibration (CCV) Outlier Report (Organics)

There are no Organic Continuing Calibrations with outliers

Continuing Calibration (CCAL) Outlier Report (Inorganics)

There are no Inorganic Continuing Calibrations with outliers

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: A0B190524 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
FWSSD-103-5013-SD	A0B190524010	6020	SO	Cadmium	J	0.078	0.24	mg/kg
				Silver	J	0.042	0.61	mg/kg
				Sodium	J	50.6	121	mg/kg
				Thallium	J	0.13	0.24	mg/kg
		8260B		Toluene	J	0.41	6.1	ug/kg
FWSSW-103-5012-SW	A0B190524011	6020	AQ	Cobalt	J	0.11	5.0	ug/L
				Nickel	J	0.63	10.0	ug/L
				Selenium	J	0.22	5.0	ug/L
		8270C		bis(2-Ethylhexyl) phthalate	J B	3.2	10	ug/L
L10SD-094-5531-SD	A0B190524013	6020	SO	Antimony	J	0.12	0.76	mg/kg
				Silver	J	0.048	0.76	mg/kg
				Sodium	J	29.8	152	mg/kg
				Thallium	J	0.17	0.30	mg/kg
		7471A		Mercury	J	0.049	0.15	mg/kg
		8260B		Toluene	J	0.42	7.6	ug/kg
		8270C		3-methylphenol/4-methylphenol	J	32	500	ug/kg
				Benz[a]anthracene	J	10	76	ug/kg
				Benzo[a]pyrene	J	12	76	ug/kg
				Benzo[b]fluoranthene	J	21	76	ug/kg
				Chrysene	J	15	76	ug/kg
				Fluoranthene	J	20	76	ug/kg
				Pyrene	J	13	76	ug/kg
LL6SD-081-5243-SD	A0B190524009	6020		Antimony	J	0.48	1.0	mg/kg
				Silver	J	0.30	1.0	mg/kg
				Sodium	J	72.6	209	mg/kg
				Thallium	J	0.32	0.42	mg/kg
		7471A		Mercury	J	0.14	0.21	mg/kg
LL9SD-111-5469-SD	A0B190524001	6020		Antimony	J	0.14	0.80	mg/kg
				Silver	J	0.056	0.80	mg/kg
				Sodium	J	32.1	161	mg/kg
				Thallium	J	0.16	0.32	mg/kg
		7471A		Mercury	J	0.086	0.16	mg/kg
		8270C		Benzo[b]fluoranthene	J	13	80	ug/kg
				Fluoranthene	J	18	80	ug/kg
				Pyrene	J	14	80	ug/kg
LL9SD-113-5471-SD	A0B190524002	6020		Antimony	J	0.16	0.80	mg/kg

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: A0B190524 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
LL9SD-113-5471-SD	A0B190524002	6020	SO	Silver	J	0.066	0.80	mg/kg
				Sodium	J	43.6	160	mg/kg
				Thallium	J	0.24	0.32	mg/kg
		8260B		Toluene	J	0.44	8.0	ug/kg
		8270C		Benz[a]anthracene	J	25	80	ug/kg
				Benzo[a]pyrene	J	26	80	ug/kg
				Benzo[b]fluoranthene	J	42	80	ug/kg
				Benzo[g,h,i]perylene	J	22	80	ug/kg
				Benzyl alcohol	J	36	530	ug/kg
				Chrysene	J	31	80	ug/kg
				Fluoranthene	J	57	80	ug/kg
				Indeno[1,2,3-cd]pyrene	J	19	80	ug/kg
				Phenanthrene	J	22	80	ug/kg
				Pyrene	J	44	80	ug/kg
LL9SD-113-6147-FD	A0B190524003	353.2 Modified		Nitrocellulose	B J	1.4	8.4	mg/kg
		6020		Antimony	J	0.16	0.84	mg/kg
				Silver	J	0.059	0.84	mg/kg
				Sodium	J	38.7	167	mg/kg
				Thallium	J	0.22	0.33	mg/kg
		7471A		Mercury	J	0.14	0.17	mg/kg
		8270C		Benz[a]anthracene	J	25	84	ug/kg
				Benzo[a]pyrene	J	26	84	ug/kg
				Benzo[b]fluoranthene	J	45	84	ug/kg
				Benzo[g,h,i]perylene	J	21	84	ug/kg
				Benzo[k]fluoranthene	J	17	84	ug/kg
				Chrysene	J	28	84	ug/kg
				Fluoranthene	J	57	84	ug/kg
				Indeno[1,2,3-cd]pyrene	J	18	84	ug/kg
				Phenanthrene	J	19	84	ug/kg
				Pyrene	J	41	84	ug/kg
		8330B		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetr	J PG	0.026	0.25	mg/kg
LL9SD-114-5472-SD	A0B190524004	6020		Antimony	J	0.16	0.68	mg/kg
				Silver	J	0.056	0.68	mg/kg
				Sodium	J	41.5	136	mg/kg
				Thallium	J	0.20	0.27	mg/kg
		8270C		2-Methylnaphthalene	J	14	450	ug/kg

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: A0B190524 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
LL9SD-114-5472-SD	A0B190524004	8270C	SO	Benz[a]anthracene	J	36	68	ug/kg
				Benzo[a]pyrene	J	39	68	ug/kg
				Benzo[b]fluoranthene	J	58	68	ug/kg
				Benzo[g,h,i]perylene	J	27	68	ug/kg
				Benzo[k]fluoranthene	J	19	68	ug/kg
				Benzyl alcohol	J	35	450	ug/kg
				Chrysene	J	40	68	ug/kg
				Indeno[1,2,3-cd]pyrene	J	24	68	ug/kg
				Naphthalene	J	9.2	68	ug/kg
				Phenanthrene	J	39	68	ug/kg
				Pyrene	J	67	68	ug/kg
		8330B		PETN	J	0.13	0.49	mg/kg
LL9SW-111-5489-SW	A0B190524005	6020	AQ	Cadmium	J	0.044	2.0	ug/L
				Cobalt	J	0.074	5.0	ug/L
				Lead	J	0.22	3.0	ug/L
				Nickel	J	1.5	10.0	ug/L
				Potassium	J	971	1000	ug/L
				Vanadium	J	0.81	10.0	ug/L
				Zinc	J	21.1	40.0	ug/L
		8270C		bis(2-Ethylhexyl) phthalate	J B	1.0	10	ug/L
PBA08-QC-6000-FB	A0B190524007	8260B		Toluene	J	0.53	1.0	ug/L
		8270C		bis(2-Ethylhexyl) phthalate	J B	3.5	10	ug/L
PBA08-QC-6001-ER	A0B190524008	6020		Vanadium	J	0.53	10.0	ug/L
				Zinc	J	10.4	40.0	ug/L
		8260B		2-Butanone (MEK)	J	0.72	10	ug/L
				Acetone	J	4.0	10	ug/L
				Toluene	J	0.42	1.0	ug/L
		8270C		bis(2-Ethylhexyl) phthalate	J B	1.2	10	ug/L
PBA08-QC-6010-TB	A0B190524012	8260B		Acetone	J	4.6	10	ug/L
PBA08-QC-6011-TB	A0B190524006			Acetone	J	4.6	10	ug/L

Method Blank Outlier Report

Lab Reporting Batch : A0B190524
Lab ID: TALCAN
Analysis Method : 8270C
Analysis Date : 02/23/2010
Preparation Type : 3520C
Preparation Date : 02/20/2010
Method Blank Lab Sample ID : A0B200000014B
Preparation Batch : 0051014

bis(2-Ethylhexyl) phthalate	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**1.9**	**10**	**ug/L**	**J**	**Common Contaminant**

bis(2-Ethylhexyl) phthalate was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
FWSSW-103-5012-SW	A0B190524011	1	3.2	J B	ug/L
LL9SW-111-5489-SW	A0B190524005	1	1.0	J B	ug/L
PBA08-QC-6000-FB	A0B190524007	1	3.5	J B	ug/L
PBA08-QC-6001-ER	A0B190524008	1	1.2	J B	ug/L

Method Blank Outlier Report

Lab Reporting Batch : A0B190524
Lab ID: TALCAN
Analysis Method : 6020
Analysis Date : 02/25/2010
Preparation Type : 3050B
Preparation Date : 02/24/2010
Method Blank Lab Sample ID : A0B220000030B
Preparation Batch : 0053030

Manganese	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**1.2**	**1.0**	**mg/kg**		

Manganese contamination found in the method blank did not qualify any samples.

Potassium	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**4.2**	**100**	**mg/kg**	**J**	

Potassium contamination found in the method blank did not qualify any samples.

Method Blank Outlier Report

Lab Reporting Batch : A0B190524
Lab ID: TALCAN
Analysis Method : 353.2 Modified
Analysis Date : 03/01/2010
Preparation Type : Gen Prep
Preparation Date : 02/25/2010
Method Blank Lab Sample ID : G0B250000149B
Preparation Batch : 0056149

Nitrocellulose	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**0.80**	**5.0**	**mg/kg**	**B**	

Nitrocellulose was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
LL9SD-113-6147-FD	A0B190524003	1	1.4	B J	mg/kg

Method Blank Outlier Report

Lab Reporting Batch : A0B190524 **Lab ID:** TALCAN

Analysis Method : 8260B **Analysis Date :** 02/26/2010

Preparation Type : 5030B **Preparation Date :** 02/26/2010

Method Blank Lab Sample ID : A0C010000098B **Preparation Batch :** 0060098

2-Butanone (MEK)	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	3.4	20	ug/kg	J	Common Contaminant

2-Butanone (MEK) contamination found in the method blank did not qualify any samples.

2-Hexanone	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	1.7	20	ug/kg	J	

2-Hexanone contamination found in the method blank did not qualify any samples.

Acetone	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	11	20	ug/kg	J	Common Contaminant

Acetone contamination found in the method blank did not qualify any samples.

Method Blank Outlier Report

Lab Reporting Batch : A0B190524
Lab ID: TALCAN
Analysis Method : 8260B
Analysis Date : 03/01/2010
Preparation Type : 5030B
Preparation Date : 03/01/2010
Method Blank Lab Sample ID : A0C020000193B
Preparation Batch : 0061193

2-Butanone (MEK)	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	3.2	20	ug/kg	J	Common Contaminant

2-Butanone (MEK) contamination found in the method blank did not qualify any samples.

2-Hexanone	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	2.0	20	ug/kg	J	

2-Hexanone contamination found in the method blank did not qualify any samples.

Acetone	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	8.2	20	ug/kg	J	Common Contaminant

Acetone contamination found in the method blank did not qualify any samples.

Surrogate Recovery Outlier Report

Lab Report Batch: A0B190524 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Dilution	Matrix	Surrogate	Percent Recovery	Criteria (percent) Lower Limit	Upper Limit	Reject Point	Associated Target Analytes
PBA08-QC-6001-ER	A0B190524008	8082	1	AQ	Decachlorobiphenyl	35	40.0	135.0	10.0	All Target

QC Outlier Report: Field Duplicates (Non-qualified Outliers)

Lab Report Batch: **Lab ID:**

			Field Sample				Field Sample Duplicate						
Analysis Method	Matrix	Analyte Name	Client Sample ID	Ana Type	Result	Lab Qualifier	Client Sample Duplicate ID	Ana Type	Result	Lab Qualifiers	RPD Dup* (%)	RPD Criteria (%)	Result Units

*Note: Outlier report also includes analytes detected in one sample but not in the related sample, i.e., analyte was detected in the field sample but not in the field duplicate sample, or vice versa. In this case, RPD value assigned to the field duplicate sample is 200.

QC Outlier Report: Temperature (Non-qualified Outliers)

Lab Report Batch: A0C100541 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Sample Temperature (C)	Criteria	
					Lower Limit	Upper Limit
LL7SB-060-5177-SO	A0C100541001	353.2 Modified	SO	1.1	2.0	6.0
LL7SB-060-5178-SO	A0C100541002	353.2 Modified	SO	1.1	2.0	6.0
LL7SB-060-5180-SO	A0C100541003	353.2 Modified	SO	1.1	2.0	6.0
LL7SB-060-6085-FD	A0C100541007	353.2 Modified	SO	1.1	2.0	6.0
NTASD-143-5343-SD	A0C100541010	353.2 Modified	SO	1.1	2.0	6.0
NTASD-144-5344-SD	A0C100541011	353.2 Modified	SO	1.1	2.0	6.0
LL7SB-060-5177-SO	A0C100541001	8081A	SO	1.1	2.0	
LL7SB-060-5178-SO	A0C100541002	8081A	SO	1.1	2.0	
LL7SB-060-5178-SOMS	A0C100541002S	8081A	SO	1.1	2.0	
LL7SB-060-5178-SOMSD	A0C100541002D	8081A	SO	1.1	2.0	
LL7SB-060-5180-SO	A0C100541003	8081A	SO	1.1	2.0	
LL7SB-060-6085-FD	A0C100541007	8081A	SO	1.1	2.0	
NTASD-143-5343-SD	A0C100541010	8081A	SO	1.1	2.0	
NTASD-144-5344-SD	A0C100541011	8081A	SO	1.1	2.0	
LL7SB-060-5177-SO	A0C100541001	8082	SO	1.1	2.0	
LL7SB-060-5178-SO	A0C100541002	8082	SO	1.1	2.0	
LL7SB-060-5180-SO	A0C100541003	8082	SO	1.1	2.0	
LL7SB-060-6085-FD	A0C100541007	8082	SO	1.1	2.0	
NTASD-143-5343-SD	A0C100541010	8082	SO	1.1	2.0	
NTASD-144-5344-SD	A0C100541011	8082	SO	1.1	2.0	
LL7SB-060-5177-SO	A0C100541001	8260B	SO	1.1	2.0	
LL7SB-060-5178-SO	A0C100541002	8260B	SO	1.1	2.0	
LL7SB-060-5178-SOMS	A0C100541002S	8260B	SO	1.1	2.0	
LL7SB-060-5178-SOMSD	A0C100541002D	8260B	SO	1.1	2.0	
LL7SB-060-5180-SO	A0C100541003	8260B	SO	1.1	2.0	
LL7SB-060-6085-FD	A0C100541007	8260B	SO	1.1	2.0	
NTASD-143-5343-SD	A0C100541010	8260B	SO	1.1	2.0	
NTASD-144-5344-SD	A0C100541011	8260B	SO	1.1	2.0	
LL7SB-060-5177-SO	A0C100541001	8270C	SO	1.1	2.0	
LL7SB-060-5178-SO	A0C100541002	8270C	SO	1.1	2.0	
LL7SB-060-5180-SO	A0C100541003	8270C	SO	1.1	2.0	

Project Number and Name: ***172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI***

QC Outlier Report: Temperature (Non-qualified Outliers)

Lab Report Batch: A0C100541 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Sample Temperature (C)	Criteria	
					Lower Limit	Upper Limit
LL7SB-060-6085-FD	A0C100541007	8270C	SO	1.1	2.0	
LL7SB-061-5181-SO	A0C100541004	8270C	SO	1.1	2.0	
LL7SB-061-5181-SOMS	A0C100541004S	8270C	SO	1.1	2.0	
LL7SB-061-5181-SOMSD	A0C100541004D	8270C	SO	1.1	2.0	
LL7SB-061-5182-SO	A0C100541005	8270C	SO	1.1	2.0	
LL7SB-061-6084-FD	A0C100541006	8270C	SO	1.1	2.0	
NTASD-143-5343-SD	A0C100541010	8270C	SO	1.1	2.0	
NTASD-144-5344-SD	A0C100541011	8270C	SO	1.1	2.0	
LL7SB-060-5177-SO	A0C100541001	8330B	SO	1.1	2.0	
LL7SB-060-5178-SO	A0C100541002	8330B	SO	1.1	2.0	
LL7SB-060-5180-SO	A0C100541003	8330B	SO	1.1	2.0	
LL7SB-060-6085-FD	A0C100541007	8330B	SO	1.1	2.0	
LL7SB-061-5181-SO	A0C100541004	8330B	SO	1.1	2.0	
LL7SB-061-5181-SOMS	A0C100541004S	8330B	SO	1.1	2.0	
LL7SB-061-5181-SOMSD	A0C100541004D	8330B	SO	1.1	2.0	
LL7SB-061-5182-SO	A0C100541005	8330B	SO	1.1	2.0	
LL7SB-061-6084-FD	A0C100541006	8330B	SO	1.1	2.0	
NTASD-143-5343-SD	A0C100541010	8330B	SO	1.1	2.0	
NTASD-144-5344-SD	A0C100541011	8330B	SO	1.1	2.0	
LL7SB-060-5177-SO	A0C100541001	8330M	SO	1.1	2.0	
LL7SB-060-5178-SO	A0C100541002	8330M	SO	1.1	2.0	
LL7SB-060-5180-SO	A0C100541003	8330M	SO	1.1	2.0	
LL7SB-060-6085-FD	A0C100541007	8330M	SO	1.1	2.0	
NTASD-143-5343-SD	A0C100541010	8330M	SO	1.1	2.0	
NTASD-144-5344-SD	A0C100541011	8330M	SO	1.1	2.0	

Temperature Outlier Report

Lab Report Batch: **Lab ID:**

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Sample Temp (C)	Temperature Criteria (C)			Between High and Gross Exceedence			Above Gross Exceedence		
								Detect Quals		Non-Detect Qual(s)	Detect Quals		Non-Detect Qual(s)
					Low	High	Gross Exceed	Non-Biased	Biased		Non-Biased	Biased	

Continuing Calibration (CCV) Outlier Report (Organics)

There are no Organic Continuing Calibrations with outliers

Continuing Calibration (CCAL) Outlier Report (Inorganics)

There are no Inorganic Continuing Calibrations with outliers

QC Outlier Report: Holding Times

Lab Report Batch: A0C100541 **Lab ID:** TALCAN

					Actual Holding Time			Criteria				Reported Dates (and Times)		
Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Prep Method	Coll To Prep	Prep To Ana	Coll To Ana	Coll To Prep	Prep To Ana	Coll To Ana	Unit of Meas	Collection Date	Preparation Date	Analysis Date
LL7SB-060-5177-SO	A0C100541001	8270C	SO	3540C	23.0	5.0		14	40		Days	03/09/2010	04/01/2010	04/06/2010
LL7SB-060-5178-SO	A0C100541002	8081A	SO	3540C	24.0	4.0		14	40		Days	03/09/2010	04/02/2010	04/06/2010
		8270C	SO	3540C	23.0	5.0		14	40		Days	03/09/2010	04/01/2010	04/06/2010
		8330B	SO	8330B	22.0	3.0		14	40		Days	03/09/2010	03/31/2010	04/03/2010
LL7SB-060-5180-SO	A0C100541003	8270C	SO	3540C	23.0	5.0		14	40		Days	03/09/2010	04/01/2010	04/06/2010
LL7SB-060-6085-FD	A0C100541007	8270C	SO	3540C	23.0	5.0		14	40		Days	03/09/2010	04/01/2010	04/06/2010
		8330B	SO	8330B	22.0	3.0		14	40		Days	03/09/2010	03/31/2010	04/03/2010
LL7SB-061-5182-SO	A0C100541005	8330B	SO	8330B	22.0	3.0		14	40		Days	03/09/2010	03/31/2010	04/03/2010
LL7SB-061-6084-FD	A0C100541006	8330B	SO	8330B	22.0	3.0		14	40		Days	03/09/2010	03/31/2010	04/03/2010
NTASD-143-5343-SD	A0C100541010	8270C	SO	3540C	23.0	5.0		14	40		Days	03/09/2010	04/01/2010	04/06/2010
		8330B	SO	8330B	17.0	4.0		14	40		Days	03/09/2010	03/26/2010	03/30/2010
NTASD-144-5344-SD	A0C100541011	8270C	SO	3540C	23.0	6.0		14	40		Days	03/09/2010	04/01/2010	04/07/2010
		8330B	SO	8330B	22.0	3.0		14	40		Days	03/09/2010	03/31/2010	04/03/2010

Laboratory Control Sample / Laboratory Control Sample Duplicate Outlier Report

Method Batch : 0075136 **Analysis Method :** 8081A **Analysis Date :** 03/18/2010

Preparation Batch : 0075136 **Preparation Type :** 3540C **Preparation Date :** 03/16/2010

Lab Reporting Batch : A0C100541 **Lab ID:** TALCAN

			Reported Values		Project Limits (Percent)			
LCS Lab Sample ID	**Matrix**	**Analyte Name**	**Percent Recovery**	**RPD**	**Rejection Point**	**Lower Limit**	**Upper Limit**	**RPD**
A0C160000136C	SO	4,4'-DDE	45		10.00	70.00	125.00	39.00
		alpha-BHC	41		10.00	60.00	125.00	40.00
		alpha-Chordane	41		10.00	65.00	120.00	65.00
		beta-BHC	40		10.00	60.00	125.00	43.00
		delta-BHC	45		10.00	55.00	130.00	34.00
		Dieldrin	41		10.00	65.00	125.00	33.00
		Endosulfan sulfate	43		10.00	60.00	135.00	34.00
		Endrin	45		10.00	60.00	135.00	38.00
		Endrin ketone	41		10.00	65.00	135.00	32.00
		gamma-BHC (Lindane)	41		10.00	60.00	125.00	36.00
		gamma-Chlordane	43		10.00	65.00	125.00	36.00
		Heptachlor	43		10.00	50.00	140.00	44.00
		Heptachlor epoxide	42		10.00	65.00	130.00	43.00
		Methoxychlor	52		10.00	55.00	145.00	41.00

Associated Samples

Client Sample ID	Lab Sample ID
LL7SB-060-5178-SO	A0C100541002

Scope of Data Qualification: The outlier in the LCS qualifies that analyte in all samples with the same Preparation Batch ID as the LCS

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0071020 **Analysis Method :** 6020 **Analysis Date :** 03/17/2010

Preparation Batch : 0071020 **Preparation Type :** 3050B **Preparation Date :** 03/12/2010

Lab Reporting Batch : A0C100541 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
LL7SB-061-5181-SOMS	A0C100541004S	SO	Antimony	34		30.00	75.00	125.00	20.00
			Calcium	179		30.00	70.00	130.00	20.00
LL7SB-061-5181-SOMS	A0C100541004D		Antimony	30		30.00	75.00	125.00	20.00
			Calcium		26	30.00	70.00	130.00	20.00

Associated Samples: All samples in Method Batch

Client Sample ID	Lab Sample ID
LL7SB-060-5177-SO	A0C100541001
LL7SB-060-5178-SO	A0C100541002
LL7SB-060-5180-SO	A0C100541003
LL7SB-060-6085-FD	A0C100541007
LL7SB-061-5181-SO	A0C100541004
LL7SB-061-5182-SO	A0C100541005
LL7SB-061-6084-FD	A0C100541006
NTASD-143-5343-SD	A0C100541010
NTASD-144-5344-SD	A0C100541011

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0072015 **Analysis Method :** 8270C **Analysis Date :** 03/30/2010

Preparation Batch : 0072015 **Preparation Type :** 3540C **Preparation Date :** 03/13/2010

Lab Reporting Batch : A0C100541 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
LL7SB-061-5181-SOMS	A0C100541004D	SO	4-Nitrophenol		76	0.00	15.00	140.00	30.00
			Pentachlorophenol	16		0.00	25.00	120.00	87.00

Associated Samples: Parent sample only

Client Sample ID	Lab Sample ID
LL7SB-061-5181-SO	A0C100541004

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0074412 **Analysis Method :** 8260B **Analysis Date :** 03/12/2010

Preparation Batch : 0074412 **Preparation Type :** 5030B **Preparation Date :** 03/12/2010

Lab Reporting Batch : A0C100541 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
LL7SB-060-5178-SOMS	A0C100541002S	SO	cis-1,3-Dichloropropene	66		0.00	70.00	125.00	40.00
LL7SB-060-5178-SOMS	A0C100541002D		Bromomethane (Methyl bromide)		36	0.00	30.00	160.00	30.00

Associated Samples: Parent sample only

Client Sample ID	Lab Sample ID
LL7SB-060-5178-SO	A0C100541002

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0075136 **Analysis Method :** 8081A **Analysis Date :** 03/18/2010

Preparation Batch : 0075136 **Preparation Type :** 3540C **Preparation Date :** 03/16/2010

Lab Reporting Batch : A0C100541 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
LL7SB-060-5178-SOMS	A0C100541002S	SO	4,4'-DDD	26		0.00	30.00	135.00	35.00
			4,4'-DDE	27		0.00	70.00	125.00	39.00
			4,4'-DDT	27		0.00	45.00	140.00	42.00
			Aldrin	27		0.00	45.00	140.00	40.00
			alpha-BHC	23		0.00	60.00	125.00	40.00
			alpha-Chordane	23		0.00	65.00	120.00	65.00
			beta-BHC	23		0.00	60.00	125.00	43.00
			delta-BHC	24		0.00	55.00	130.00	34.00
			Dieldrin	23		0.00	65.00	125.00	33.00
			Endosulfan II	20		0.00	35.00	140.00	27.00
			Endosulfan sulfate	23		0.00	60.00	135.00	34.00
			Endrin	26		0.00	60.00	135.00	38.00
			Endrin aldehyde	17		0.00	35.00	145.00	29.00
			Endrin ketone	24		0.00	65.00	135.00	32.00
			gamma-BHC (Lindane)	23		0.00	60.00	125.00	36.00
			gamma-Chlordane	24		0.00	65.00	125.00	36.00
			Heptachlor	26		0.00	50.00	140.00	44.00
			Heptachlor epoxide	23		0.00	65.00	130.00	43.00
			Methoxychlor	31		0.00	55.00	145.00	41.00
LL7SB-060-5178-SOMS	A0C100541002D		4,4'-DDE	39		0.00	70.00	125.00	39.00
			4,4'-DDT	36		0.00	45.00	140.00	42.00
			Aldrin	37		0.00	45.00	140.00	40.00
			alpha-BHC	32		0.00	60.00	125.00	40.00
			alpha-Chordane	32		0.00	65.00	120.00	65.00
			beta-BHC	30		0.00	60.00	125.00	43.00
			delta-BHC	34		0.00	55.00	130.00	34.00
			Dieldrin	32		0.00	65.00	125.00	33.00
			Endosulfan II	27	31	0.00	35.00	140.00	27.00
			Endosulfan sulfate	32		0.00	60.00	135.00	34.00
			Endrin	37		0.00	60.00	135.00	38.00
			Endrin aldehyde	24	32	0.00	35.00	145.00	29.00
			Endrin ketone	32		0.00	65.00	135.00	32.00
			gamma-BHC (Lindane)	31		0.00	60.00	125.00	36.00
			gamma-Chlordane	33		0.00	65.00	125.00	36.00
			Heptachlor	35		0.00	50.00	140.00	44.00
			Heptachlor epoxide	34		0.00	65.00	130.00	43.00
			Methoxychlor	41		0.00	55.00	145.00	41.00

Associated Samples: Parent sample only

Client Sample ID	Lab Sample ID
LL7SB-060-5178-SO	A0C100541002

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0078314 **Analysis Method :** 8330B **Analysis Date :** 03/27/2010

Preparation Batch : 0078314 **Preparation Type :** 8330B **Preparation Date :** 03/19/2010

Lab Reporting Batch : A0C100541 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
LL7SB-061-5181-SOMS	A0C100541004S	SO	4-Amino-2,6-Dinitrotoluene	79		0.00	80.00	125.00	30.00
			Hexahydro-1,3,5-Trinitro-1,3,5-Tria	68		0.00	70.00	135.00	30.00
			Octahydro-1,3,5,7-tetranitro-1,3,5,7	71		0.00	75.00	125.00	30.00

Associated Samples: Parent sample only

Client Sample ID	Lab Sample ID
LL7SB-061-5181-SO	A0C100541004

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Method Blank Outlier Report

Lab Reporting Batch : A0C100541
Lab ID: TALCAN
Analysis Method : 6020
Analysis Date : 03/23/2010
Preparation Type : 3005A
Preparation Date : 03/11/2010
Method Blank Lab Sample ID : A0C110000020B
Preparation Batch : 0070020

Aluminum	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**36.8**	**100**	**ug/L**	**J**	

Aluminum contamination found in the method blank did not qualify any samples.

Manganese	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**2.2**	**10.0**	**ug/L**	**J**	

Manganese contamination found in the method blank did not qualify any samples.

Potassium	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**22.2**	**1000**	**ug/L**	**J**	

Potassium contamination found in the method blank did not qualify any samples.

Zinc	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**15.2**	**40.0**	**ug/L**	**J**	

Zinc was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
L10SW-094-5535-SW	A0C100541013	1	23.1	J B	ug/L

Method Blank Outlier Report

Lab Reporting Batch : A0C100541
Lab ID: TALCAN
Analysis Method : 8270C
Analysis Date : 03/26/2010
Preparation Type : 3520C
Preparation Date : 03/11/2010
Method Blank Lab Sample ID : A0C110000038B
Preparation Batch : 0070038

Benzyl alcohol	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**1.7**	**10**	**ug/L**	**J**	

Benzyl alcohol contamination found in the method blank did not qualify any samples.

bis(2-Ethylhexyl) phthalate	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**2.2**	**10**	**ug/L**	**J**	**Common Contaminant**

bis(2-Ethylhexyl) phthalate was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
L10SW-094-5535-SW	A0C100541013	1	2.5	J B	ug/L
NTASW-143-5340-SW	A0C100541008	1	2.0	J B	ug/L
NTASW-144-5341-SW	A0C100541009	1	3.7	J B	ug/L

Method Blank Outlier Report

Lab Reporting Batch : A0C100541 **Lab ID:** TALCAN

Analysis Method : 6020 **Analysis Date :** 03/17/2010

Preparation Type : 3050B **Preparation Date :** 03/12/2010

Method Blank Lab Sample ID : A0C120000020B **Preparation Batch :** 0071020

Aluminum	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**6.1**	**10.0**	**mg/kg**	**J**	

Aluminum contamination found in the method blank did not qualify any samples.

Calcium	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**45.1**	**200**	**mg/kg**	**J**	

Calcium contamination found in the method blank did not qualify any samples.

Sodium	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**15.9**	**100**	**mg/kg**	**J**	

Sodium was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
LL7SB-060-5177-SO	A0C100541001	1	56.2	J B	mg/kg
LL7SB-060-5178-SO	A0C100541002	1	45.6	J B	mg/kg
LL7SB-060-5180-SO	A0C100541003	1	54.2	J B	mg/kg
LL7SB-061-5181-SO	A0C100541004	1	47.2	J B	mg/kg
LL7SB-061-5182-SO	A0C100541005	1	68.9	J B	mg/kg
LL7SB-061-6084-FD	A0C100541006	1	68.7	J B	mg/kg
NTASD-143-5343-SD	A0C100541010	1	32.1	J B	mg/kg
NTASD-144-5344-SD	A0C100541011	1	40.8	J B	mg/kg

Method Blank Outlier Report

Lab Reporting Batch : A0C100541 **Lab ID:** TALCAN

Analysis Method : 8260B **Analysis Date :** 03/11/2010

Preparation Type : 5030B **Preparation Date :** 03/11/2010

Method Blank Lab Sample ID : A0C150000412B **Preparation Batch :** 0074412

Methylene chloride	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**2.4**	**5.0**	**ug/kg**	**J**	**Common Contaminant**

Methylene chloride was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
LL7SB-060-5177-SO	A0C100541001	1	5.8	J B	ug/kg
LL7SB-060-5178-SO	A0C100541002	1	6.0	J B	ug/kg
LL7SB-060-5180-SO	A0C100541003	1	4.4	J B	ug/kg
LL7SB-060-6085-FD	A0C100541007	1	5.5	J B	ug/kg
NTASD-143-5343-SD	A0C100541010	1	5.5	J B	ug/kg
NTASD-144-5344-SD	A0C100541011	1	5.1	J B	ug/kg

Method Blank Outlier Report

Lab Reporting Batch : A0C100541 **Lab ID:** TALCAN

Analysis Method : 353.2 Modified **Analysis Date :** 03/18/2010

Preparation Type : Gen Prep **Preparation Date :** 03/17/2010

Method Blank Lab Sample ID : G0C170000246B **Preparation Batch :** 0076246

Nitrocellulose	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**1.6**	**5.0**	**mg/kg**	**B**	

Nitrocellulose was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
LL7SB-060-5177-SO	A0C100541001	1	1.8	B J	mg/kg
LL7SB-060-5178-SO	A0C100541002	1	1.7	B J	mg/kg
LL7SB-060-5180-SO	A0C100541003	1	1.5	B J	mg/kg
LL7SB-060-6085-FD	A0C100541007	1	1.7	B J	mg/kg
NTASD-143-5343-SD	A0C100541010	1	2.0	B J	mg/kg
NTASD-144-5344-SD	A0C100541011	1	2.0	B J	mg/kg

Method Blank Outlier Report

Lab Reporting Batch : A0C100541
Lab ID: TALCAN
Analysis Method : 8270C
Analysis Date : 04/06/2010
Preparation Type : 3540C
Preparation Date : 04/01/2010
Method Blank Lab Sample ID : A0C310000309B
Preparation Batch : 0090309

Di-n-butyl phthalate	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**20**	**330**	**ug/kg**	**J**	**Common Contaminant**

Di-n-butyl phthalate was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
LL7SB-060-5177-SO	A0C100541001	1	26	J B	ug/kg
LL7SB-060-6085-FD	A0C100541007	1	20	J B	ug/kg

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C100541 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
LL7SB-060-5177-SO	A0C100541001	8081A	SO	4,4'-DDD	U	26	25.6410256	ug/kg
				4,4'-DDE	U	22	21.7948718	ug/kg
				4,4'-DDT	U	26	25.6410256	ug/kg
				beta-BHC	U	45	44.8717949	ug/kg
				Dieldrin	U	22	21.7948718	ug/kg
				Endosulfan I	U	22	21.7948718	ug/kg
				Endrin	U	22	21.7948718	ug/kg
				Endrin ketone	U	26	25.6410256	ug/kg
				gamma-Chlordane	U	22	21.7948718	ug/kg
				Heptachlor	U	45	44.8717949	ug/kg
		8260B		2-Butanone (MEK)	U	26	25.6410256	ug/kg
				2-Hexanone	U	26	25.6410256	ug/kg
				4-methyl-2-pentanone (MIBK)	U	26	25.6410256	ug/kg
				Acetone	U	26	25.6410256	ug/kg
				Xylene (Total)	U	13	12.8205128	ug/kg
LL7SB-060-5178-SO	A0C100541002	8081A	SO	beta-BHC	U	4.4	4.375	ug/kg
				beta-BHC	U	4.4	4.375	ug/kg
				Heptachlor	U	4.4	4.375	ug/kg
				Heptachlor	U	4.4	4.375	ug/kg
		8330B		1,3,5-Trinitrobenzene	U	0.25	0.309375	mg/kg
				1,3-Dinitrobenzene	U	0.25	0.309375	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.25	0.309375	mg/kg
				2,4-Dinitrotoluene	U	0.25	0.309375	mg/kg
				2,6-Dinitrotoluene	U	0.25	0.309375	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.25	0.309375	mg/kg
				2-Nitrotoluene	U	0.25	0.309375	mg/kg
				3-Nitrotoluene	U	0.25	0.309375	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.25	0.309375	mg/kg
				4-Nitrotoluene	U	0.50	0.61875	mg/kg
				Nitrobenzene	U	0.25	0.309375	mg/kg
LL7SB-060-5180-SO	A0C100541003	7471A	SO	Mercury	U	0.12	0.11494253	mg/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C100541 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
LL7SB-060-5180-SO	A0C100541003	8081A	SO	4,4'-DDD	U	2.3	2.29885057	ug/kg
				4,4'-DDE	U	2.0	1.95402299	ug/kg
				4,4'-DDT	U	2.3	2.29885057	ug/kg
				Aldrin	U	4.6	4.59770115	ug/kg
				alpha-BHC	U	2.9	2.87356322	ug/kg
				alpha-Chordane	U	3.5	3.44827586	ug/kg
				delta-BHC	U	4.6	4.59770115	ug/kg
				Dieldrin	U	2.0	1.95402299	ug/kg
				Endosulfan I	U	2.0	1.95402299	ug/kg
				Endosulfan II	U	2.9	2.87356322	ug/kg
				Endosulfan sulfate	U	3.5	3.44827586	ug/kg
				Endrin	U	2.0	1.95402299	ug/kg
				Endrin aldehyde	U	3.5	3.44827586	ug/kg
				Endrin ketone	U	2.3	2.29885057	ug/kg
				gamma-BHC (Lindane)	U	2.9	2.87356322	ug/kg
				gamma-Chlordane	U	2.0	1.95402299	ug/kg
				Heptachlor epoxide	U	2.9	2.87356322	ug/kg
				Methoxychlor	U	5.8	5.74712644	ug/kg
		8082		Aroclor 1016	U	38	37.9310345	ug/kg
				Aroclor 1221	U	38	37.9310345	ug/kg
				Aroclor 1232	U	38	37.9310345	ug/kg
				Aroclor 1242	U	38	37.9310345	ug/kg
				Aroclor 1248	U	38	37.9310345	ug/kg
				Aroclor 1254	U	38	37.9310345	ug/kg
				Aroclor 1260	U	38	37.9310345	ug/kg
		8260B		1,1,1-Trichloroethane	U	5.8	5.74712644	ug/kg
				1,1,2,2-Tetrachloroethane	U	5.8	5.74712644	ug/kg
				1,1,2-Trichloroethane	U	5.8	5.74712644	ug/kg
				1,1-Dichloroethane	U	5.8	5.74712644	ug/kg
				1,1-Dichloroethene	U	5.8	5.74712644	ug/kg
				1,2-Dibromoethane (Ethylene Dibro	U	5.8	5.74712644	ug/kg
				1,2-Dichloroethane	U	5.8	5.74712644	ug/kg
				1,2-Dichloroethene (total)	U	5.8	5.74712644	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C100541 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
LL7SB-060-5180-SO	A0C100541003	8260B	SO	1,2-Dichloropropane	U	5.8	5.74712644	ug/kg
				2-Butanone (MEK)	U	23	22.9885057	ug/kg
				2-Hexanone	U	23	22.9885057	ug/kg
				4-methyl-2-pentanone (MIBK)	U	23	22.9885057	ug/kg
				Acetone	U	23	22.9885057	ug/kg
				Benzene	U	5.8	5.74712644	ug/kg
				Bromochloromethane	U	5.8	5.74712644	ug/kg
				Bromodichloromethane	U	5.8	5.74712644	ug/kg
				Bromoform	U	5.8	5.74712644	ug/kg
				Bromomethane (Methyl bromide)	U	5.8	5.74712644	ug/kg
				Carbon disulfide	U	5.8	5.74712644	ug/kg
				Carbon tetrachloride	U	5.8	5.74712644	ug/kg
				Chlorobenzene	U	5.8	5.74712644	ug/kg
				Chlorodibromomethane	U	5.8	5.74712644	ug/kg
				Chloroethane	U	5.8	5.74712644	ug/kg
				Chloroform	U	5.8	5.74712644	ug/kg
				Chloromethane	U	5.8	5.74712644	ug/kg
				cis-1,3-Dichloropropene	U	5.8	5.74712644	ug/kg
				Ethylbenzene	U	5.8	5.74712644	ug/kg
				Styrene	U	5.8	5.74712644	ug/kg
				Tetrachloroethene	U	5.8	5.74712644	ug/kg
				Toluene	U	5.8	5.74712644	ug/kg
				trans-1,3-Dichloropropene	U	5.8	5.74712644	ug/kg
				Trichloroethene	U	5.8	5.74712644	ug/kg
				Vinyl chloride	U	5.8	5.74712644	ug/kg
				Xylene (Total)	U	12	11.4942529	ug/kg
		8270C		1,2,4-Trichlorobenzene	U	380	379.310345	ug/kg
				1,2-Dichlorobenzene	U	380	379.310345	ug/kg
				1,3-Dichlorobenzene	U	380	379.310345	ug/kg
				1,4-Dichlorobenzene	U	380	379.310345	ug/kg
				2,4,5-Trichlorophenol	U	380	379.310345	ug/kg
				2,4,6-Trichlorophenol	U	380	379.310345	ug/kg
				2,4-Dichlorophenol	U	380	379.310345	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C100541 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
LL7SB-060-5180-SO	A0C100541003	8270C	SO	2,4-Dimethylphenol	U	380	379.310345	ug/kg
				2,4-Dinitrophenol	U	920	919.54023	ug/kg
				2,4-Dinitrotoluene	U	380	379.310345	ug/kg
				2,6-Dinitrotoluene	U	380	379.310345	ug/kg
				2-Chloronaphthalene	U	380	379.310345	ug/kg
				2-Chlorophenol	U	380	379.310345	ug/kg
				2-Methylnaphthalene	U	380	379.310345	ug/kg
				2-Methylphenol	U	380	379.310345	ug/kg
				2-Nitroaniline	U	920	919.54023	ug/kg
				2-Nitrophenol	U	380	379.310345	ug/kg
				3,3'-Dichlorobenzidine	U	380	379.310345	ug/kg
				3-methylphenol/4-methylphenol	U	380	379.310345	ug/kg
				3-Nitroaniline	U	920	919.54023	ug/kg
				4,6-Dinitro-2-methylphenol	U	920	919.54023	ug/kg
				4-Bromophenyl phenyl ether	U	380	379.310345	ug/kg
				4-Chloro-3-methylphenol	U	380	379.310345	ug/kg
				4-Chloroaniline	U	380	379.310345	ug/kg
				4-Chlorophenyl phenyl ether	U	380	379.310345	ug/kg
				4-Nitroaniline	U	920	919.54023	ug/kg
				4-Nitrophenol	U	920	919.54023	ug/kg
				Benzoic acid	U	920	919.54023	ug/kg
				Benzyl alcohol	U	380	379.310345	ug/kg
				bis(2-Chloroethoxy)methane	U	380	379.310345	ug/kg
				bis(2-Chloroethyl) ether	U	380	379.310345	ug/kg
				Bis(2-chloroisopropyl) ether	U	380	379.310345	ug/kg
				bis(2-Ethylhexyl) phthalate	U	380	379.310345	ug/kg
				Butyl benzyl phthalate	U	380	379.310345	ug/kg
				Carbazole	U	58	57.4712644	ug/kg
				Dibenzofuran	U	380	379.310345	ug/kg
				Diethyl phthalate	U	380	379.310345	ug/kg
				Dimethyl phthalate	U	380	379.310345	ug/kg
				Di-n-butyl phthalate	U	380	379.310345	ug/kg
				Di-n-octyl phthalate	U	380	379.310345	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C100541 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
LL7SB-060-5180-SO	A0C100541003	8270C	SO	Hexachlorobenzene	U	380	379.310345	ug/kg
				Hexachlorobutadiene	U	380	379.310345	ug/kg
				HEXACHLOROCYCLOPENTADIE	U	380	379.310345	ug/kg
				Hexachloroethane	U	380	379.310345	ug/kg
				Isophorone	U	380	379.310345	ug/kg
				Nitrobenzene	U	380	379.310345	ug/kg
				N-Nitrosodi-n-propylamine	U	380	379.310345	ug/kg
				N-Nitrosodiphenylamine	U	380	379.310345	ug/kg
				Pentachlorophenol	U	380	379.310345	ug/kg
				Phenol	U	380	379.310345	ug/kg
LL7SB-060-6085-FD	A0C100541007	8081A	SO	4,4'-DDE	U	23	22.972973	ug/kg
				alpha-BHC	U	34	33.7837838	ug/kg
				Dieldrin	U	23	22.972973	ug/kg
				Endosulfan I	U	23	22.972973	ug/kg
				Endosulfan II	U	34	33.7837838	ug/kg
				Endrin	U	23	22.972973	ug/kg
				gamma-BHC (Lindane)	U	34	33.7837838	ug/kg
				gamma-Chlordane	U	23	22.972973	ug/kg
				Heptachlor epoxide	U	34	33.7837838	ug/kg
		8270C		2,4-Dinitrophenol	U	1100	1081.08108	ug/kg
				2-Nitroaniline	U	1100	1081.08108	ug/kg
				3-Nitroaniline	U	1100	1081.08108	ug/kg
				4,6-Dinitro-2-methylphenol	U	1100	1081.08108	ug/kg
				4-Nitroaniline	U	1100	1081.08108	ug/kg
				4-Nitrophenol	U	1100	1081.08108	ug/kg
				Benzoic acid	U	1100	1081.08108	ug/kg
LL7SB-061-5182-SO	A0C100541005	7471A	SO	Mercury	U	0.12	0.11764706	mg/kg
		8330B		1,3,5-Trinitrobenzene	U	0.25	0.29117647	mg/kg
				1,3,5-Trinitrobenzene	U	0.24	0.27647059	mg/kg
				1,3-Dinitrobenzene	U	0.24	0.27647059	mg/kg
				1,3-Dinitrobenzene	U	0.25	0.29117647	mg/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C100541 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
LL7SB-061-5182-SO	A0C100541005	8330B	SO	2,4,6-Trinitrotoluene (TNT)	U	0.24	0.27647059	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.25	0.29117647	mg/kg
				2,4-Dinitrotoluene	U	0.25	0.29117647	mg/kg
				2,4-Dinitrotoluene	U	0.24	0.27647059	mg/kg
				2,6-Dinitrotoluene	U	0.25	0.29117647	mg/kg
				2,6-Dinitrotoluene	U	0.24	0.27647059	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.24	0.27647059	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.25	0.29117647	mg/kg
				2-Nitrotoluene	U	0.25	0.29117647	mg/kg
				2-Nitrotoluene	U	0.24	0.27647059	mg/kg
				3-Nitrotoluene	U	0.25	0.29117647	mg/kg
				3-Nitrotoluene	U	0.24	0.27647059	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.24	0.27647059	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.25	0.29117647	mg/kg
				4-Nitrotoluene	U	0.50	0.58235294	mg/kg
				Nitrobenzene	U	0.25	0.29117647	mg/kg
				Nitrobenzene	U	0.24	0.27647059	mg/kg
LL7SB-061-6084-FD	A0C100541006	8330B	SO	1,3,5-Trinitrobenzene	U	0.24	0.26388889	mg/kg
				1,3,5-Trinitrobenzene	U	0.25	0.275	mg/kg
				1,3-Dinitrobenzene	U	0.25	0.275	mg/kg
				1,3-Dinitrobenzene	U	0.24	0.26388889	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.25	0.275	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.24	0.26388889	mg/kg
				2,4-Dinitrotoluene	U	0.25	0.275	mg/kg
				2,4-Dinitrotoluene	U	0.24	0.26388889	mg/kg
				2,6-Dinitrotoluene	U	0.24	0.26388889	mg/kg
				2,6-Dinitrotoluene	U	0.25	0.275	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.24	0.26388889	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.25	0.275	mg/kg
				2-Nitrotoluene	U	0.25	0.275	mg/kg
				2-Nitrotoluene	U	0.24	0.26388889	mg/kg
				3-Nitrotoluene	U	0.25	0.275	mg/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C100541 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
LL7SB-061-6084-FD	A0C100541006	8330B	SO	3-Nitrotoluene	U	0.24	0.26388889	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.24	0.26388889	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.25	0.275	mg/kg
				4-Nitrotoluene	U	0.48	0.52777778	mg/kg
				4-Nitrotoluene	U	0.50	0.55	mg/kg
				Nitrobenzene	U	0.25	0.275	mg/kg
				Nitrobenzene	U	0.24	0.26388889	mg/kg
NTASD-143-5343-SD	A0C100541010	8330B	SO	1,3,5-Trinitrobenzene	U	0.26	0.36785714	mg/kg
				1,3-Dinitrobenzene	U	0.26	0.36785714	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.26	0.36785714	mg/kg
				2,4-Dinitrotoluene	U	0.26	0.36785714	mg/kg
				2,6-Dinitrotoluene	U	0.26	0.36785714	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.26	0.36785714	mg/kg
				2-Nitrotoluene	U	0.26	0.36785714	mg/kg
				3-Nitrotoluene	U	0.26	0.36785714	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.26	0.36785714	mg/kg
				4-Nitrotoluene	U	0.52	0.73571429	mg/kg
				Nitrobenzene	U	0.26	0.36785714	mg/kg
NTASD-144-5344-SD	A0C100541011	6020	SO	Antimony	U	0.72	0.71428571	mg/kg
		8081A		4,4'-DDE	U	4.9	4.85714286	ug/kg
				alpha-BHC	U	7.2	7.14285714	ug/kg
				alpha-Chordane	U	8.6	8.57142857	ug/kg
				Dieldrin	U	4.9	4.85714286	ug/kg
				Endosulfan I	U	4.9	4.85714286	ug/kg
				Endosulfan II	U	7.2	7.14285714	ug/kg
				Endosulfan sulfate	U	8.6	8.57142857	ug/kg
				Endrin	U	4.9	4.85714286	ug/kg
				Endrin aldehyde	U	8.6	8.57142857	ug/kg
				gamma-BHC (Lindane)	U	7.2	7.14285714	ug/kg
				gamma-Chlordane	U	4.9	4.85714286	ug/kg
				Heptachlor epoxide	U	7.2	7.14285714	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C100541 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
NTASD-144-5344-SD	A0C100541011	8260B	SO	1,1,1-Trichloroethane	U	7.2	7.14285714	ug/kg
				1,1,2,2-Tetrachloroethane	U	7.2	7.14285714	ug/kg
				1,1,2-Trichloroethane	U	7.2	7.14285714	ug/kg
				1,1-Dichloroethane	U	7.2	7.14285714	ug/kg
				1,1-Dichloroethene	U	7.2	7.14285714	ug/kg
				1,2-Dibromoethane (Ethylene Dibro	U	7.2	7.14285714	ug/kg
				1,2-Dichloroethane	U	7.2	7.14285714	ug/kg
				1,2-Dichloroethene (total)	U	7.2	7.14285714	ug/kg
				1,2-Dichloropropane	U	7.2	7.14285714	ug/kg
				2-Hexanone	U	29	28.5714286	ug/kg
				4-methyl-2-pentanone (MIBK)	U	29	28.5714286	ug/kg
				Benzene	U	7.2	7.14285714	ug/kg
				Bromochloromethane	U	7.2	7.14285714	ug/kg
				Bromodichloromethane	U	7.2	7.14285714	ug/kg
				Bromoform	U	7.2	7.14285714	ug/kg
				Bromomethane (Methyl bromide)	U	7.2	7.14285714	ug/kg
				Carbon disulfide	U	7.2	7.14285714	ug/kg
				Carbon tetrachloride	U	7.2	7.14285714	ug/kg
				Chlorobenzene	U	7.2	7.14285714	ug/kg
				Chlorodibromomethane	U	7.2	7.14285714	ug/kg
				Chloroethane	U	7.2	7.14285714	ug/kg
				Chloroform	U	7.2	7.14285714	ug/kg
				Chloromethane	U	7.2	7.14285714	ug/kg
				cis-1,3-Dichloropropene	U	7.2	7.14285714	ug/kg
				Styrene	U	7.2	7.14285714	ug/kg
				Tetrachloroethene	U	7.2	7.14285714	ug/kg
				trans-1,3-Dichloropropene	U	7.2	7.14285714	ug/kg
				Trichloroethene	U	7.2	7.14285714	ug/kg
				Vinyl chloride	U	7.2	7.14285714	ug/kg
		8270C		Carbazole	U	72	71.4285714	ug/kg
		8330B		1,3,5-Trinitrobenzene	U	0.25	0.35357143	mg/kg
				1,3-Dinitrobenzene	U	0.25	0.35357143	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.25	0.35357143	mg/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C100541 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
NTASD-144-5344-SD	A0C100541011	8330B	SO	2,4-Dinitrotoluene	U	0.25	0.35357143	mg/kg
				2,6-Dinitrotoluene	U	0.25	0.35357143	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.25	0.35357143	mg/kg
				2-Nitrotoluene	U	0.25	0.35357143	mg/kg
				3-Nitrotoluene	U	0.25	0.35357143	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.25	0.35357143	mg/kg
				4-Nitrotoluene	U	0.50	0.70714286	mg/kg
				Nitrobenzene	U	0.25	0.35357143	mg/kg
NTASW-143-5340-SW	A0C100541008	8330B	AQ	1,3-Dinitrobenzene	U	0.15	0.1485	ug/L
				2,4,6-Trinitrotoluene (TNT)	U	0.15	0.1485	ug/L
				2,4-Dinitrotoluene	U	0.15	0.1485	ug/L
				2,6-Dinitrotoluene	U	0.15	0.1485	ug/L
				2-Amino-4,6-dinitrotoluene	U	0.30	0.297	ug/L
				2-Nitrotoluene	U	0.15	0.1485	ug/L
				3-Nitrotoluene	U	0.50	0.495	ug/L
				4-Amino-2,6-Dinitrotoluene	U	0.15	0.1485	ug/L
				Hexahydro-1,3,5-Trinitro-1,3,5-Triaz	U	0.25	0.2475	ug/L
				Methyl-2,4,6-Trinitrophenylnitramin	U	0.15	0.1485	ug/L
				Nitrobenzene	U	0.15	0.1485	ug/L
				Octahydro-1,3,5,7-tetranitro-1,3,5,7	U	0.15	0.1485	ug/L
NTASW-144-5341-SW	A0C100541009	8330B	AQ	1,3,5-Trinitrobenzene	U	0.11	0.106	ug/L
				1,3-Dinitrobenzene	U	0.16	0.159	ug/L
				2,4,6-Trinitrotoluene (TNT)	U	0.16	0.159	ug/L
				2,4-Dinitrotoluene	U	0.16	0.159	ug/L
				2,6-Dinitrotoluene	U	0.16	0.159	ug/L
				2-Amino-4,6-dinitrotoluene	U	0.32	0.318	ug/L
				2-Nitrotoluene	U	0.16	0.159	ug/L
				4-Amino-2,6-Dinitrotoluene	U	0.16	0.159	ug/L
				4-Nitrotoluene	U	1.1	1.06	ug/L
				Methyl-2,4,6-Trinitrophenylnitramin	U	0.16	0.159	ug/L
				Nitrobenzene	U	0.16	0.159	ug/L

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C100541 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
NTASW-144-5341-SW	A0C100541009	8330B	AQ	Nitroglycerin	U	1.1	1.06	ug/L
				Octahydro-1,3,5,7-tetranitro-1,3,5,7	U	0.16	0.159	ug/L
				PETN	U	1.1	1.06	ug/L

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: A0C100541 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
L10SW-094-5535-SW	A0C100541013	6020	AQ	Antimony	J	0.26	5.0	ug/L
				Arsenic	J	0.87	5.0	ug/L
				Cadmium	J	0.039	2.0	ug/L
				Chromium	J	1.6	5.0	ug/L
				Cobalt	J	0.27	5.0	ug/L
				Copper	J	3.0	5.0	ug/L
				Lead	J	1.2	3.0	ug/L
				Nickel	J	1.5	10.0	ug/L
				Sodium	J	742	1000	ug/L
				Vanadium	J	2.3	10.0	ug/L
				Zinc	J B	23.1	40.0	ug/L
		8081A		beta-BHC	J	0.0095	0.050	ug/L
		8260B		Methylene chloride	J	0.34	1.0	ug/L
		8270C		bis(2-Ethylhexyl) phthalate	J B	2.5	10	ug/L
LL7SB-060-5177-SO	A0C100541001	353.2 Modified	SO	Nitrocellulose	B J	1.8	6.4	mg/kg
		6020		Antimony	J	0.13	0.64	mg/kg
				Cadmium	J	0.10	0.26	mg/kg
				Silver	J	0.028	0.64	mg/kg
				Sodium	J B	56.2	128	mg/kg
				Thallium	J	0.17	0.26	mg/kg
		7471A		Mercury	J	0.028	0.13	mg/kg
		8260B		Methylene chloride	J B	5.8	6.4	ug/kg
		8270C		Di-n-butyl phthalate	J B	26	420	ug/kg
LL7SB-060-5178-SO	A0C100541002	353.2 Modified		Nitrocellulose	B J	1.7	6.2	mg/kg
		6020		Antimony	J	0.11	0.62	mg/kg
				Cadmium	J	0.036	0.25	mg/kg
				Silver	J	0.029	0.62	mg/kg
				Sodium	J B	45.6	124	mg/kg
				Thallium	J	0.18	0.25	mg/kg
		7471A		Mercury	J	0.024	0.12	mg/kg
		8260B		Methylene chloride	J B	6.0	6.2	ug/kg
LL7SB-060-5180-SO	A0C100541003	353.2 Modified		Nitrocellulose	B J	1.5	5.8	mg/kg
		6020		Antimony	J	0.10	0.58	mg/kg
				Cadmium	J	0.099	0.23	mg/kg
				Silver	J	0.028	0.58	mg/kg
				Sodium	J B	54.2	116	mg/kg

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: A0C100541 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
LL7SB-060-5180-SO	A0C100541003	6020	SO	Thallium	J	0.15	0.23	mg/kg
		8260B		Methylene chloride	J B	4.4	5.8	ug/kg
LL7SB-060-6085-FD	A0C100541007	353.2 Modified		Nitrocellulose	B J	1.7	6.7	mg/kg
		6020		Antimony	J	0.14	0.67	mg/kg
				Cadmium	J	0.12	0.27	mg/kg
				Silver	J	0.034	0.67	mg/kg
				Thallium	J	0.15	0.27	mg/kg
		7471A		Mercury	J	0.027	0.13	mg/kg
		8260B		Methylene chloride	J B	5.5	6.7	ug/kg
		8270C		Di-n-butyl phthalate	J B	20	440	ug/kg
LL7SB-061-5181-SO	A0C100541004	6020		Antimony	J	0.11	0.60	mg/kg
				Cadmium	J	0.13	0.24	mg/kg
				Silver	J	0.022	0.60	mg/kg
				Sodium	J B	47.2	120	mg/kg
				Thallium	J	0.14	0.24	mg/kg
LL7SB-061-5182-SO	A0C100541005			Antimony	J	0.15	0.59	mg/kg
				Cadmium	J	0.11	0.24	mg/kg
				Silver	J	0.017	0.59	mg/kg
				Sodium	J B	68.9	118	mg/kg
				Thallium	J	0.12	0.24	mg/kg
		8330B		Methyl-2,4,6-Trinitrophenylnitramine (T	J PG	0.019	0.25	mg/kg
				Methyl-2,4,6-Trinitrophenylnitramine (T	J PG	0.020	0.24	mg/kg
				Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetr	J PG	0.020	0.24	mg/kg
				PETN	J PG	0.043	0.47	mg/kg
LL7SB-061-6084-FD	A0C100541006	6020		Cadmium	J	0.042	0.22	mg/kg
				Silver	J	0.024	0.56	mg/kg
				Sodium	J B	68.7	112	mg/kg
				Thallium	J	0.14	0.22	mg/kg
NTASD-143-5343-SD	A0C100541010	353.2 Modified		Nitrocellulose	B J	2.0	7.1	mg/kg
		6020		Selenium	J	0.68	0.71	mg/kg
				Silver	J	0.031	0.71	mg/kg
				Sodium	J B	32.1	142	mg/kg
				Thallium	J	0.10	0.28	mg/kg
		7471A		Mercury	J	0.032	0.14	mg/kg
		8260B		2-Butanone (MEK)	J	6.4	28	ug/kg
				Acetone	J	24	28	ug/kg

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: A0C100541 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
NTASD-143-5343-SD	A0C100541010	8260B	SO	Methylene chloride	J B	5.5	7.1	ug/kg
		8330B		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetr	J PG	0.015	0.24	mg/kg
				Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetr	J PG	0.013	0.26	mg/kg
NTASD-144-5344-SD	A0C100541011	353.2 Modified		Nitrocellulose	B J	2.0	7.2	mg/kg
		6020		Cadmium	J	0.10	0.29	mg/kg
				Selenium	J	0.52	0.72	mg/kg
				Silver	J	0.031	0.72	mg/kg
				Sodium	J B	40.8	143	mg/kg
				Thallium	J	0.14	0.29	mg/kg
		7471A		Mercury	J	0.023	0.14	mg/kg
		8260B		2-Butanone (MEK)	J	4.4	29	ug/kg
				Acetone	J	13	29	ug/kg
				Ethylbenzene	J	1.5	7.2	ug/kg
				Methylene chloride	J B	5.1	7.2	ug/kg
NTASW-143-5340-SW	A0C100541008	6020	AQ	Arsenic	J	0.65	5.0	ug/L
				Cobalt	J	0.46	5.0	ug/L
				Lead	J	0.23	3.0	ug/L
				Nickel	J	0.86	10.0	ug/L
				Vanadium	J	0.52	10.0	ug/L
		8260B		Acetone	J	3.9	10	ug/L
		8270C		bis(2-Ethylhexyl) phthalate	J B	2.0	10	ug/L
NTASW-144-5341-SW	A0C100541009	6020		Arsenic	J	0.72	5.0	ug/L
				Cobalt	J	0.63	5.0	ug/L
				Lead	J	0.20	3.0	ug/L
				Nickel	J	0.98	10.0	ug/L
				Thallium	J	0.37	2.0	ug/L
		8260B		Acetone	J	4.8	10	ug/L
				Methylene chloride	J	0.34	1.0	ug/L
				Toluene	J	0.35	1.0	ug/L
		8270C		bis(2-Ethylhexyl) phthalate	J B	3.7	10	ug/L
PBA08-6017-QC	A0C100541012	8260B		Acetone	J	6.4	10	ug/L
				Methylene chloride	J	0.34	1.0	ug/L

Surrogate Recovery Outlier Report

Lab Report Batch: A0C100541 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Dilution	Matrix	Surrogate	Percent Recovery	Criteria (percent) Lower Limit	Upper Limit	Reject Point	Associated Target Analytes
LL7SB-060-5177-SO	A0C100541001	8260B	1	SO	4-Bromofluorobenzene	80	85.0	120.0	10.0	All Target
LL7SB-060-5178-SO	A0C100541002	8330B	0.99	SO	3,4-Dinitrotoluene	72	81.0	127.0	10.0	All Target
LL7SB-060-5178-SOMS	A0C100541002S	8081A	1	SO	Decachlorobiphenyl	37	55.0	130.0	10.0	All Target
					TETRACHLORO-M-XYLENE	36	55.0	130.0	10.0	All Target
		8260B			4-Bromofluorobenzene	84	85.0	120.0	10.0	All Target
LL7SB-060-5178-SOMSD	A0C100541002D	8081A	1	SO	Decachlorobiphenyl	50	55.0	130.0	10.0	All Target
					TETRACHLORO-M-XYLENE	44	55.0	130.0	10.0	All Target
LL7SB-060-5180-SO	A0C100541003	8260B	1	SO	4-Bromofluorobenzene	83	85.0	120.0	10.0	All Target
LL7SB-060-6085-FD	A0C100541007	8260B	1	SO	4-Bromofluorobenzene	83	85.0	120.0	10.0	All Target
		8330B			3,4-Dinitrotoluene	59	81.0	127.0	10.0	All Target
LL7SB-061-5182-SO	A0C100541005	8330B	0.99	SO	3,4-Dinitrotoluene	75	81.0	127.0	10.0	All Target
LL7SB-061-6084-FD	A0C100541006	8330B	0.99	SO	3,4-Dinitrotoluene	72	81.0	127.0	10.0	All Target
NTASD-143-5343-SD	A0C100541010	8260B	1	SO	4-Bromofluorobenzene	75	85.0	120.0	10.0	All Target
					Toluene-d8	81	85.0	115.0	10.0	All Target
		8330B	0.97		3,4-Dinitrotoluene	71	81.0	127.0	10.0	All Target
NTASD-144-5344-SD	A0C100541011	8260B	1	SO	4-Bromofluorobenzene	79	85.0	120.0	10.0	All Target
		8330B	0.93		3,4-Dinitrotoluene	48	81.0	127.0	10.0	All Target

Project Number and Name: ***172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI***

QC Outlier Report: Trip Blank

Lab Reporting Batch :
Lab ID:
Method/Preparation Batch :
Analysis Date :
Client Sample ID :
Preparation Date :
Lab Sample ID :
Preparation Type :

Analysis Method :

No contamination was found.

QC Outlier Report: Field Duplicates (Non-qualified Outliers)

Lab Report Batch: **Lab ID:**

			Field Sample				Field Sample Duplicate						
Analysis Method	Matrix	Analyte Name	Client Sample ID	Ana Type	Result	Lab Qualifier	Client Sample Duplicate ID	Ana Type	Result	Lab Qualifiers	RPD Dup* (%)	RPD Criteria (%)	Result Units

*Note: Outlier report also includes analytes detected in one sample but not in the related sample, i.e., analyte was detected in the field sample but not in the field duplicate sample, or vice versa. In this case, RPD value assigned to the field duplicate sample is 200.

QC Outlier Report: Temperature (Non-qualified Outliers)

Lab Report Batch: A0C170527 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Sample Temperature (C)	Criteria	
					Lower Limit	Upper Limit
L10SB-066-5495-SO	A0C170527001	8270C	SO	1.4	2.0	
L10SB-067-5499-SO	A0C170527002	8270C	SO	1.4	2.0	
L10SB-069-5505-SO	A0C170527003	8270C	SO	1.4	2.0	
L10SB-070-5509-SO	A0C170527004	8270C	SO	1.4	2.0	

Temperature Outlier Report

Lab Report Batch: **Lab ID:**

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Sample Temp (C)	Temperature Criteria (C)			Between High and Gross Exceedence			Above Gross Exceedence		
								Detect Quals		Non-Detect Qual(s)	Detect Quals		Non-Detect Qual(s)
					Low	High	Gross Exceed	Non-Biased	Biased		Non-Biased	Biased	

Laboratory Control Sample / Laboratory Control Sample Duplicate Outlier Report

Method Batch : 0077053 **Analysis Method :** 8270C **Analysis Date :** 03/24/2010

Preparation Batch : 0077053 **Preparation Type :** 3540C **Preparation Date :** 03/18/2010

Lab Reporting Batch : A0C170527 **Lab ID:** TALCAN

			Reported Values		Project Limits (Percent)			
LCS Lab Sample ID	**Matrix**	**Analyte Name**	**Percent Recovery**	**RPD**	**Rejection Point**	**Lower Limit**	**Upper Limit**	**RPD**
A0C180000053C	SO	Carbazole	31		10.00	45.00	115.00	20.00

Associated Samples

Client Sample ID	**Lab Sample ID**
L10SB-073-5521-SO	A0C170527006

Scope of Data Qualification: The outlier in the LCS qualifies that analyte in all samples with the same Preparation Batch ID as the LCS

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Laboratory Control Sample / Laboratory Control Sample Duplicate Outlier Report

Method Batch : 0084046 **Analysis Method :** 8270C **Analysis Date :** 03/26/2010

Preparation Batch : 0084046 **Preparation Type :** 3540C **Preparation Date :** 03/25/2010

Lab Reporting Batch : A0C170527 **Lab ID:** TALCAN

			Reported Values		Project Limits (Percent)			
LCS Lab Sample ID	**Matrix**	**Analyte Name**	**Percent Recovery**	**RPD**	**Rejection Point**	**Lower Limit**	**Upper Limit**	**RPD**
A0C250000046C	SO	Carbazole	18		10.00	45.00	115.00	20.00

Associated Samples

Client Sample ID	Lab Sample ID
L10SB-066-5495-SO	A0C170527001
L10SB-067-5499-SO	A0C170527002
L10SB-069-5505-SO	A0C170527003
L10SB-070-5509-SO	A0C170527004
L10SB-072-5517-SO	A0C170527005
L10SB-075-5529-SO	A0C170527007

Scope of Data Qualification: The outlier in the LCS qualifies that analyte in all samples with the same Preparation Batch ID as the LCS

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C170527 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SB-066-5495-SO	A0C170527001	7471A	SO	Mercury	U	0.12	0.11627907	mg/kg
L10SB-067-5499-SO	A0C170527002	7471A	SO	Mercury	U	0.12	0.11764706	mg/kg
L10SB-069-5505-SO	A0C170527003	7471A	SO	Mercury	U	0.12	0.11764706	mg/kg
L10SB-070-5509-SO	A0C170527004	7471A	SO	Mercury	U	0.12	0.11764706	mg/kg
L10SB-072-5517-SO	A0C170527005	6020	SO	Silver	U	0.57	0.56818182	mg/kg
L10SB-073-5521-SO	A0C170527006	7471A	SO	Mercury	U	0.12	0.11627907	mg/kg
		8081A		4,4'-DDE	U	2.0	1.97674419	ug/kg
				alpha-Chordane	U	3.5	3.48837209	ug/kg
				beta-BHC	U	4.1	4.06976744	ug/kg
				Dieldrin	U	2.0	1.97674419	ug/kg
				Endosulfan I	U	2.0	1.97674419	ug/kg
				Endosulfan sulfate	U	3.5	3.48837209	ug/kg
				Endrin	U	2.0	1.97674419	ug/kg
				Endrin aldehyde	U	3.5	3.48837209	ug/kg
				gamma-Chlordane	U	2.0	1.97674419	ug/kg
				Heptachlor	U	4.1	4.06976744	ug/kg
				Toxaphene	U	78	77.9069767	ug/kg
		8260B		Xylene (Total)	U	12	11.627907	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: A0C170527 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
L10SB-066-5495-SO	A0C170527001	6020	SO	Cadmium	J	0.13	0.23	mg/kg
				Silver	J	0.020	0.58	mg/kg
				Sodium	J	61.9	116	mg/kg
				Thallium	J	0.14	0.23	mg/kg
L10SB-067-5499-SO	A0C170527002			Antimony	J	0.15	0.59	mg/kg
				Cadmium	J	0.042	0.24	mg/kg
				Silver	J	0.010	0.59	mg/kg
				Sodium	J	59.8	118	mg/kg
				Thallium	J	0.14	0.24	mg/kg
L10SB-069-5505-SO	A0C170527003			Antimony	J	0.091	0.59	mg/kg
				Cadmium	J	0.038	0.24	mg/kg
				Silver	J	0.0099	0.59	mg/kg
				Sodium	J	46.0	118	mg/kg
				Thallium	J	0.13	0.24	mg/kg
L10SB-070-5509-SO	A0C170527004			Antimony	J	0.15	0.59	mg/kg
				Cadmium	J	0.048	0.23	mg/kg
				Silver	J	0.013	0.59	mg/kg
				Sodium	J	40.2	117	mg/kg
				Thallium	J	0.12	0.23	mg/kg
L10SB-072-5517-SO	A0C170527005			Antimony	J	0.095	0.57	mg/kg
				Cadmium	J	0.032	0.23	mg/kg
				Sodium	J	29.3	114	mg/kg
				Thallium	J	0.11	0.23	mg/kg
L10SB-073-5521-SO	A0C170527006			Antimony	J	0.084	0.58	mg/kg
				Cadmium	J	0.032	0.23	mg/kg
				Silver	J	0.0060	0.58	mg/kg
				Sodium	J	32.6	116	mg/kg
				Thallium	J	0.13	0.23	mg/kg
		8260B		2-Butanone (MEK)	J	2.8	23	ug/kg
		8270C		Benz[a]anthracene	J	7.7	58	ug/kg
				Benzo[g,h,i]perylene	J	9.9	58	ug/kg
				bis(2-Ethylhexyl) phthalate	J	33	380	ug/kg
				dibenz[a,h]anthracene	J	9.8	58	ug/kg
				Di-n-butyl phthalate	J	27	380	ug/kg
				Fluoranthene	J	21	58	ug/kg
				Indeno[1,2,3-cd]pyrene	J	11	58	ug/kg

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: A0C170527 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
L10SB-073-5521-SO	A0C170527006	8270C	SO	Pyrene	J	16	58	ug/kg
L10SB-075-5529-SO	A0C170527007	6020		Cadmium	J	0.041	0.23	mg/kg
				Silver	J	0.010	0.57	mg/kg
				Sodium	J	36.0	115	mg/kg
				Thallium	J	0.10	0.23	mg/kg

Method Blank Outlier Report

Lab Reporting Batch : A0C170527
Lab ID: TALCAN
Analysis Method : 8260B
Analysis Date : 03/18/2010
Preparation Type : 5030B
Preparation Date : 03/18/2010
Method Blank Lab Sample ID : A0C190000153B
Preparation Batch : 0078153

Acetone	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**16**	**20**	**ug/kg**	**J**	**Common Contaminant**

Acetone was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
L10SB-073-5521-SO	A0C170527006	1	24	B	ug/kg

Methylene chloride	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**1.1**	**5.0**	**ug/kg**	**J**	**Common Contaminant**

Methylene chloride contamination found in the method blank did not qualify any samples.

Surrogate Recovery Outlier Report

Lab Report Batch: **Lab ID:**

Client Sample ID	Lab Sample ID	Analysis Method	Dilution	Matrix	Surrogate	Percent Recovery	Criteria (percent) Lower Limit	Criteria (percent) Upper Limit	Criteria (percent) Reject Point	Associated Target Analytes

Project Number and Name: ***172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI***

QC Outlier Report: Temperature (Non-qualified Outliers)

Lab Report Batch: A0C170534 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Sample Temperature (C)	Criteria	
					Lower Limit	Upper Limit
L10SB-066-5495-SO	A0C170534001	8330B	SO	1.4	2.0	
L10SB-066-5495-SOMS	A0C170534001S	8330B	SO	1.4	2.0	
L10SB-066-5495-SOMSD	A0C170534001D	8330B	SO	1.4	2.0	
L10SB-067-5499-SO	A0C170534002	8330B	SO	1.4	2.0	
L10SB-069-5505-SO	A0C170534003	8330B	SO	1.4	2.0	
L10SB-070-5509-SO	A0C170534004	8330B	SO	1.4	2.0	

Temperature Outlier Report

Lab Report Batch: **Lab ID:**

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Sample Temp (C)	Temperature Criteria (C)			Between High and Gross Exceedence			Above Gross Exceedence		
								Detect Quals		Non-Detect Qual(s)	Detect Quals		Non-Detect Qual(s)
					Low	High	Gross Exceed	Non-Biased	Biased		Non-Biased	Biased	

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C170534 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SB-075-5529-SO	A0C170534007	8330B	SO	1,3,5-Trinitrobenzene	U	0.25	0.01137931	mg/kg
				1,3-Dinitrobenzene	U	0.25	0.28448276	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.25	0.28448276	mg/kg
				2,4-Dinitrotoluene	U	0.25	0.28448276	mg/kg
				2,6-Dinitrotoluene	U	0.25	0.28448276	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.25	0.28448276	mg/kg
				2-Nitrotoluene	U	0.25	0.28448276	mg/kg
				3-Nitrotoluene	U	0.25	0.28448276	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.25	0.28448276	mg/kg
				4-Nitrotoluene	U	0.50	0.56896552	mg/kg
				Nitrobenzene	U	0.25	0.28448276	mg/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

Continuing Calibration (CCV) Outlier Report (Organics)

There are no Organic Continuing Calibrations with outliers

Continuing Calibration (CCAL) Outlier Report (Inorganics)

There are no Inorganic Continuing Calibrations with outliers

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: A0C170534 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
L10SB-070-5509-SO	A0C170534004	8330B	SO	2-Amino-4,6-dinitrotoluene	J PG	0.040	0.24	mg/kg
				4-Amino-2,6-Dinitrotoluene	J	0.039	0.24	mg/kg

QC Outlier Report: Temperature (Non-qualified Outliers)

Lab Report Batch: A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Sample Temperature (C)	Criteria	
					Lower Limit	Upper Limit
L10SB-066-5493-SO	A0C170537001	8270C PAH	SO	1.4	2.0	
L10SB-066-5494-SO	A0C170537002	8270C PAH	SO	1.4	2.0	
L10SB-067-5497-SO	A0C170537003	8270C PAH	SO	1.4	2.0	
L10SB-067-5498-SO	A0C170537004	8270C PAH	SO	1.4	2.0	
L10SB-069-5503-SO	A0C170537005	8270C PAH	SO	1.4	2.0	
L10SB-069-5504-SO	A0C170537006	8270C PAH	SO	1.4	2.0	
L10SB-070-5507-SO	A0C170537007	8270C PAH	SO	1.4	2.0	
L10SB-070-5508-SO	A0C170537008	8270C PAH	SO	1.4	2.0	
L10SB-070-5510-SO	A0C170537009	8270C PAH	SO	1.4	2.0	
L10SB-071-5511-SO	A0C170537010	8270C PAH	SO	1.4	2.0	
L10SB-071-5512-SO	A0C170537011	8270C PAH	SO	1.4	2.0	
L10SB-071-5513-SO	A0C170537012	8270C PAH	SO	1.4	2.0	
L10SB-066-5493-SO	A0C170537001	8330B	SO	1.4	2.0	
L10SB-066-5494-SO	A0C170537002	8330B	SO	1.4	2.0	
L10SB-067-5497-SO	A0C170537003	8330B	SO	1.4	2.0	
L10SB-067-5498-SO	A0C170537004	8330B	SO	1.4	2.0	
L10SB-069-5503-SO	A0C170537005	8330B	SO	1.4	2.0	
L10SB-069-5504-SO	A0C170537006	8330B	SO	1.4	2.0	
L10SB-070-5507-SO	A0C170537007	8330B	SO	1.4	2.0	
L10SB-070-5508-SO	A0C170537008	8330B	SO	1.4	2.0	
L10SB-070-5510-SO	A0C170537009	8330B	SO	1.4	2.0	
L10SB-071-5511-SO	A0C170537010	8330B	SO	1.4	2.0	
L10SB-071-5512-SO	A0C170537011	8330B	SO	1.4	2.0	
L10SB-071-5513-SO	A0C170537012	8330B	SO	1.4	2.0	

Temperature Outlier Report

Lab Report Batch: **Lab ID:**

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Sample Temp (C)	Temperature Criteria (C)			Between High and Gross Exceedence			Above Gross Exceedence		
								Detect Quals		Non-Detect Qual(s)	Detect Quals		Non-Detect Qual(s)
					Low	High	Gross Exceed	Non-Biased	Biased		Non-Biased	Biased	

QC Outlier Report: Holding Times

Lab Report Batch: A0C170537 **Lab ID:** TALCAN

					Actual Holding Time			Criteria				Reported Dates (and Times)		
Client Sample ID	**Lab Sample ID**	**Analysis Method**	**Matrix**	**Prep Method**	**Coll To Prep**	**Prep To Ana**	**Coll To Ana**	**Coll To Prep**	**Prep To Ana**	**Coll To Ana**	**Unit of Meas**	**Collection Date**	**Preparation Date**	**Analysis Date**
L10SB-072-6173-FD	A0C170537023S	8270C	SO	3540C	16.0	4.0		14	40		Days	03/16/2010	04/01/2010	04/05/2010
L10SB-072-6173-FD	A0C170537023D	8270C	SO	3540C	16.0	4.0		14	40		Days	03/16/2010	04/01/2010	04/05/2010
L10SB-073-6172-FD	A0C170537022	8270C	SO	3540C	27.0	2.0		14	40		Days	03/16/2010	04/12/2010	04/14/2010
L10SB-074-5524-SO	A0C170537018	8330B	SO	8330B	15.0	5.0		14	40		Days	03/16/2010	03/31/2010	04/05/2010

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0077025 **Analysis Method :** 6020 **Analysis Date :** 03/30/2010

Preparation Batch : 0077025 **Preparation Type :** 3050B **Preparation Date :** 03/18/2010

Lab Reporting Batch : A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
L10SB-074-5525-SOMS	A0C170537019S	SO	Antimony	34		30.00	75.00	125.00	20.00
			Cobalt	121		30.00	55.00	110.00	20.00
			Magnesium	142		30.00	70.00	130.00	20.00
L10SB-074-5525-SOMS	A0C170537019D		Antimony	28		30.00	75.00	125.00	20.00

Associated Samples: All samples in Method Batch

Client Sample ID	Lab Sample ID
L10SB-066-5493-SO	A0C170537001
L10SB-066-5494-SO	A0C170537002
L10SB-067-5497-SO	A0C170537003
L10SB-067-5498-SO	A0C170537004
L10SB-069-5503-SO	A0C170537005
L10SB-069-5504-SO	A0C170537006
L10SB-070-5507-SO	A0C170537007
L10SB-070-5508-SO	A0C170537008
L10SB-070-6174-FD	A0C170537024
L10SB-071-5511-SO	A0C170537010
L10SB-071-5512-SO	A0C170537011
L10SB-071-5513-SO	A0C170537012
L10SB-072-6173-FD	A0C170537023
L10SB-073-5520-SO	A0C170537016
L10SB-073-6172-FD	A0C170537022
L10SB-074-5523-SO	A0C170537017
L10SB-074-5524-SO	A0C170537018
L10SB-074-5525-SO	A0C170537019
L10SB-075-5527-SO	A0C170537020
L10SB-075-5528-SO	A0C170537021

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0077026 **Analysis Method :** 6020 **Analysis Date :** 03/19/2010

Preparation Batch : 0077026 **Preparation Type :** 3050B **Preparation Date :** 03/18/2010

Lab Reporting Batch : A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
L10SB-072-5516-SOMS	A0C170537014S	SO	Antimony	30		30.00	75.00	125.00	20.00
			Cobalt	45		30.00	55.00	110.00	20.00
L10SB-072-5516-SOMS	A0C170537014D		Antimony	32		30.00	75.00	125.00	20.00
			Cobalt	50		30.00	55.00	110.00	20.00

Associated Samples: All samples in Method Batch

Client Sample ID	Lab Sample ID
L10SB-072-5515-SO	A0C170537013
L10SB-072-5516-SO	A0C170537014
L10SB-073-5519-SO	A0C170537015

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0077051 **Analysis Method :** 8270C **Analysis Date :** 03/25/2010

Preparation Batch : 0077051 **Preparation Type :** 3540C **Preparation Date :** 03/18/2010

Lab Reporting Batch : A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
L10SB-075-5527-SOMS	A0C170537020S	SO	Benzyl alcohol	0.0		0.00	20.00	125.00	30.00
L10SB-075-5527-SOMS	A0C170537020D		Benzyl alcohol	0.0		0.00	20.00	125.00	30.00

Associated Samples: Parent sample only

Client Sample ID	Lab Sample ID
L10SB-075-5527-SO	A0C170537020

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0081370 **Analysis Method :** 8330B **Analysis Date :** 03/30/2010

Preparation Batch : 0081370 **Preparation Type :** 8330B **Preparation Date :** 03/22/2010

Lab Reporting Batch : A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
L10SB-072-5516-SOMS	A0C170537014D	SO	2-Nitrotoluene	75		0.00	80.00	125.00	30.00
			4-Amino-2,6-Dinitrotoluene	79		0.00	80.00	125.00	30.00
			Nitrobenzene	69	37	0.00	75.00	125.00	30.00

Associated Samples: Parent sample only

Client Sample ID	Lab Sample ID
L10SB-072-5516-SO	A0C170537014

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0084048 **Analysis Method :** 8270C **Analysis Date :** 04/05/2010

Preparation Batch : 0084048 **Preparation Type :** 3540C **Preparation Date :** 03/25/2010

Lab Reporting Batch : A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
L10SB-072-5516-SOMS	A0C170537014S	SO	Pentachlorophenol	15		0.00	25.00	120.00	87.00
L10SB-072-5516-SOMS	A0C170537014D		Pentachlorophenol	21		0.00	25.00	120.00	87.00

Associated Samples: Parent sample only

Client Sample ID	Lab Sample ID
L10SB-072-5516-SO	A0C170537014

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0091261 **Analysis Method :** 8270C **Analysis Date :** 04/05/2010

Preparation Batch : 0091261 **Preparation Type :** 3540C **Preparation Date :** 04/01/2010

Lab Reporting Batch : A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
L10SB-072-6173-FDMS	A0C170537023S	SO	3,3'-Dichlorobenzidine	6.7		0.00	10.00	130.00	56.00
L10SB-072-6173-FDMSD	A0C170537023D		3,3'-Dichlorobenzidine		100	0.00	10.00	130.00	56.00
			Benzoic acid		28	0.00	0.00	110.00	20.00

Associated Samples: Parent sample only

Client Sample ID	Lab Sample ID
L10SB-072-6173-FD	A0C170537023

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Laboratory Control Sample / Laboratory Control Sample Duplicate Outlier Report

Method Batch : 0077053 **Analysis Method :** 8270C **Analysis Date :** 03/24/2010

Preparation Batch : 0077053 **Preparation Type :** 3540C **Preparation Date :** 03/18/2010

Lab Reporting Batch : A0C170537 **Lab ID:** TALCAN

			Reported Values		Project Limits (Percent)			
LCS Lab Sample ID	**Matrix**	**Analyte Name**	**Percent Recovery**	**RPD**	**Rejection Point**	**Lower Limit**	**Upper Limit**	**RPD**
A0C180000053C	SO	Carbazole	31		10.00	45.00	115.00	20.00

Associated Samples

Client Sample ID	Lab Sample ID
L10SB-073-5519-SO	A0C170537015
L10SB-073-5520-SO	A0C170537016
L10SB-073-6172-FD	A0C170537022
L10SB-074-5523-SO	A0C170537017
L10SB-074-5524-SO	A0C170537018
L10SB-074-5525-SO	A0C170537019

Scope of Data Qualification: The outlier in the LCS qualifies that analyte in all samples with the same Preparation Batch ID as the LCS

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Laboratory Control Sample / Laboratory Control Sample Duplicate Outlier Report

Method Batch : 0096044 **Analysis Method :** 8270C **Analysis Date :** 04/08/2010

Preparation Batch : 0096044 **Preparation Type :** 3540C **Preparation Date :** 04/06/2010

Lab Reporting Batch : A0C170537 **Lab ID:** TALCAN

			Reported Values		Project Limits (Percent)			
LCS Lab Sample ID	**Matrix**	**Analyte Name**	**Percent Recovery**	**RPD**	**Rejection Point**	**Lower Limit**	**Upper Limit**	**RPD**
A0D060000044C	SO	2,4,6-Trichlorophenol	43		10.00	45.00	110.00	29.00

Associated Samples

Client Sample ID	**Lab Sample ID**
L10SB-070-5510-SO	A0C170537009

Scope of Data Qualification: The outlier in the LCS qualifies that analyte in all samples with the same Preparation Batch ID as the LCS

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Laboratory Control Sample / Laboratory Control Sample Duplicate Outlier Report

Method Batch : 0102315 **Analysis Method :** 8270C **Analysis Date :** 04/14/2010

Preparation Batch : 0102315 **Preparation Type :** 3540C **Preparation Date :** 04/12/2010

Lab Reporting Batch : A0C170537 **Lab ID:** TALCAN

			Reported Values		Project Limits (Percent)			
LCS Lab Sample ID	**Matrix**	**Analyte Name**	**Percent Recovery**	**RPD**	**Rejection Point**	**Lower Limit**	**Upper Limit**	**RPD**
A0D120000315C	SO	Di-n-butyl phthalate	113		10.00	55.00	110.00	24.00

Associated Samples

Client Sample ID	**Lab Sample ID**
L10SB-073-6172-FD	A0C170537022

Scope of Data Qualification: The outlier in the LCS qualifies that analyte in all samples with the same Preparation Batch ID as the LCS

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SB-066-5493-SO	A0C170537001	7471A	SO	Mercury	U	0.12	0.11627907	mg/kg
L10SB-066-5494-SO	A0C170537002	7471A	SO	Mercury	U	0.12	0.11764706	mg/kg
		8330B		1,3,5-Trinitrobenzene	U	0.26	0.012	mg/kg
				1,3-Dinitrobenzene	U	0.26	0.3	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.26	0.3	mg/kg
				2,4-Dinitrotoluene	U	0.26	0.3	mg/kg
				2,6-Dinitrotoluene	U	0.26	0.3	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.26	0.3	mg/kg
				2-Nitrotoluene	U	0.26	0.3	mg/kg
				3-Nitrotoluene	U	0.26	0.3	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.26	0.3	mg/kg
				Nitrobenzene	U	0.26	0.3	mg/kg
L10SB-067-5498-SO	A0C170537004	7471A	SO	Mercury	U	0.12	0.11627907	mg/kg
L10SB-070-5510-SO	A0C170537009	6020	SO	Antimony	U	0.58	0.57471264	mg/kg
		7471A		Mercury	U	0.12	0.11494253	mg/kg
L10SB-070-6174-FD	A0C170537024	7471A	SO	Mercury	U	0.12	0.11494253	mg/kg
		8330B		1,3,5-Trinitrobenzene	U	0.26	0.01172414	mg/kg
				1,3-Dinitrobenzene	U	0.26	0.29310345	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.26	0.29310345	mg/kg
				2,6-Dinitrotoluene	U	0.26	0.29310345	mg/kg
				2-Nitrotoluene	U	0.26	0.29310345	mg/kg
				3-Nitrotoluene	U	0.26	0.29310345	mg/kg
				Nitrobenzene	U	0.26	0.29310345	mg/kg
L10SB-071-5511-SO	A0C170537010	8330B	SO	1,3,5-Trinitrobenzene	U	0.26	0.01275	mg/kg
				1,3-Dinitrobenzene	U	0.26	0.31875	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.26	0.31875	mg/kg
				2,4-Dinitrotoluene	U	0.26	0.31875	mg/kg
				2,6-Dinitrotoluene	U	0.26	0.31875	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.26	0.31875	mg/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SB-071-5511-SO	A0C170537010	8330B	SO	2-Nitrotoluene	U	0.26	0.31875	mg/kg
				3-Nitrotoluene	U	0.26	0.31875	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.26	0.31875	mg/kg
				Nitrobenzene	U	0.26	0.31875	mg/kg
L10SB-072-5516-SO	A0C170537014	7471A	SO	Mercury	U	0.12	0.11627907	mg/kg
		8330B		1,3,5-Trinitrobenzene	U	0.26	0.01186047	mg/kg
				1,3-Dinitrobenzene	U	0.26	0.29651163	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.26	0.29651163	mg/kg
				2,4-Dinitrotoluene	U	0.26	0.29651163	mg/kg
				2,6-Dinitrotoluene	U	0.26	0.29651163	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.26	0.29651163	mg/kg
				2-Nitrotoluene	U	0.26	0.29651163	mg/kg
				3-Nitrotoluene	U	0.26	0.29651163	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.26	0.29651163	mg/kg
				Nitrobenzene	U	0.26	0.29651163	mg/kg
L10SB-072-6173-FD	A0C170537023	8330B	SO	1,3,5-Trinitrobenzene	U	0.26	0.01240964	mg/kg
				1,3-Dinitrobenzene	U	0.26	0.31024096	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.26	0.31024096	mg/kg
				2,4-Dinitrotoluene	U	0.26	0.31024096	mg/kg
				2,6-Dinitrotoluene	U	0.26	0.31024096	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.26	0.31024096	mg/kg
				2-Nitrotoluene	U	0.26	0.31024096	mg/kg
				3-Nitrotoluene	U	0.26	0.31024096	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.26	0.31024096	mg/kg
				4-Nitrotoluene	U	0.52	0.62048193	mg/kg
				Nitrobenzene	U	0.26	0.31024096	mg/kg
L10SB-073-5519-SO	A0C170537015	8081A	SO	4,4'-DDD	U	13	12.6582278	ug/kg
				4,4'-DDE	U	11	10.7594937	ug/kg
				4,4'-DDT	U	13	12.6582278	ug/kg
				alpha-BHC	U	16	15.8227848	ug/kg
				alpha-Chordane	U	19	18.9873418	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SB-073-5519-SO	A0C170537015	8081A	SO	Dieldrin	U	11	10.7594937	ug/kg
				Endosulfan I	U	11	10.7594937	ug/kg
				Endosulfan II	U	16	15.8227848	ug/kg
				Endosulfan sulfate	U	19	18.9873418	ug/kg
				Endrin	U	11	10.7594937	ug/kg
				Endrin aldehyde	U	19	18.9873418	ug/kg
				Endrin ketone	U	13	12.6582278	ug/kg
				gamma-BHC (Lindane)	U	16	15.8227848	ug/kg
				gamma-Chlordane	U	11	10.7594937	ug/kg
				Heptachlor epoxide	U	16	15.8227848	ug/kg
				Methoxychlor	U	32	31.6455696	ug/kg
		8082		Aroclor 1016	U	42	2.15189873	ug/kg
				Aroclor 1221	U	42	2.15189873	ug/kg
				Aroclor 1232	U	42	2.15189873	ug/kg
				Aroclor 1242	U	42	2.15189873	ug/kg
				Aroclor 1248	U	42	2.15189873	ug/kg
				Aroclor 1254	U	42	2.15189873	ug/kg
				Aroclor 1260	U	42	2.15189873	ug/kg
		8260B		Xylene (Total)	U	13	12.6582278	ug/kg
		8270C		1,2,4-Trichlorobenzene	U	420	417.721519	ug/kg
				1,2-Dichlorobenzene	U	420	417.721519	ug/kg
				1,3-Dichlorobenzene	U	420	417.721519	ug/kg
				1,4-Dichlorobenzene	U	420	417.721519	ug/kg
				2,4,5-Trichlorophenol	U	420	417.721519	ug/kg
				2,4,6-Trichlorophenol	U	420	417.721519	ug/kg
				2,4-Dichlorophenol	U	420	417.721519	ug/kg
				2,4-Dimethylphenol	U	420	417.721519	ug/kg
				2,4-Dinitrotoluene	U	420	417.721519	ug/kg
				2,6-Dinitrotoluene	U	420	417.721519	ug/kg
				2-Chloronaphthalene	U	420	417.721519	ug/kg
				2-Chlorophenol	U	420	417.721519	ug/kg
				2-Methylnaphthalene	U	420	417.721519	ug/kg
				2-Methylphenol	U	420	417.721519	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SB-073-5519-SO	A0C170537015	8270C	SO	2-Nitrophenol	U	420	417.721519	ug/kg
				3,3'-Dichlorobenzidine	U	420	417.721519	ug/kg
				3-methylphenol/4-methylphenol	U	420	#Error	ug/kg
				4-Bromophenyl phenyl ether	U	420	417.721519	ug/kg
				4-Chloro-3-methylphenol	U	420	417.721519	ug/kg
				4-Chloroaniline	U	420	417.721519	ug/kg
				4-Chlorophenyl phenyl ether	U	420	417.721519	ug/kg
				Benzyl alcohol	U	420	417.721519	ug/kg
				bis(2-Chloroethoxy)methane	U	420	417.721519	ug/kg
				bis(2-Chloroethyl) ether	U	420	417.721519	ug/kg
				Bis(2-chloroisopropyl) ether	U	420	417.721519	ug/kg
				Butyl benzyl phthalate	U	420	417.721519	ug/kg
				Dibenzofuran	U	420	417.721519	ug/kg
				Diethyl phthalate	U	420	417.721519	ug/kg
				Dimethyl phthalate	U	420	417.721519	ug/kg
				Di-n-butyl phthalate	U	420	417.721519	ug/kg
				Di-n-octyl phthalate	U	420	417.721519	ug/kg
				Hexachlorobenzene	U	420	417.721519	ug/kg
				Hexachlorobutadiene	U	420	417.721519	ug/kg
				HEXACHLOROCYCLOPENTADIE	U	420	#Error	ug/kg
				Hexachloroethane	U	420	417.721519	ug/kg
				Isophorone	U	420	417.721519	ug/kg
				Nitrobenzene	U	420	417.721519	ug/kg
				N-Nitrosodi-n-propylamine	U	420	417.721519	ug/kg
				N-Nitrosodiphenylamine	U	420	417.721519	ug/kg
				Pentachlorophenol	U	420	417.721519	ug/kg
				Phenol	U	420	417.721519	ug/kg
L10SB-073-5520-SO	A0C170537016	8081A	SO	Aldrin	U	23	22.9885057	ug/kg
				delta-BHC	U	23	22.9885057	ug/kg
				Methoxychlor	U	29	28.7356322	ug/kg
		8082		Aroclor 1016	U	38	1.95402299	ug/kg
				Aroclor 1221	U	38	1.95402299	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SB-073-5520-SO	A0C170537016	8082	SO	Aroclor 1232	U	38	1.95402299	ug/kg
				Aroclor 1242	U	38	1.95402299	ug/kg
				Aroclor 1248	U	38	1.95402299	ug/kg
				Aroclor 1254	U	38	1.95402299	ug/kg
				Aroclor 1260	U	38	1.95402299	ug/kg
		8260B		2-Butanone (MEK)	U	23	22.9885057	ug/kg
				2-Hexanone	U	23	22.9885057	ug/kg
				4-methyl-2-pentanone (MIBK)	U	23	22.9885057	ug/kg
		8270C		1,2,4-Trichlorobenzene	U	380	379.310345	ug/kg
				1,2-Dichlorobenzene	U	380	379.310345	ug/kg
				1,3-Dichlorobenzene	U	380	379.310345	ug/kg
				1,4-Dichlorobenzene	U	380	379.310345	ug/kg
				2,4,5-Trichlorophenol	U	380	379.310345	ug/kg
				2,4,6-Trichlorophenol	U	380	379.310345	ug/kg
				2,4-Dichlorophenol	U	380	379.310345	ug/kg
				2,4-Dimethylphenol	U	380	379.310345	ug/kg
				2,4-Dinitrophenol	U	920	919.54023	ug/kg
				2,4-Dinitrotoluene	U	380	379.310345	ug/kg
				2,6-Dinitrotoluene	U	380	379.310345	ug/kg
				2-Chloronaphthalene	U	380	379.310345	ug/kg
				2-Chlorophenol	U	380	379.310345	ug/kg
				2-Methylnaphthalene	U	380	379.310345	ug/kg
				2-Methylphenol	U	380	379.310345	ug/kg
				2-Nitroaniline	U	920	919.54023	ug/kg
				2-Nitrophenol	U	380	379.310345	ug/kg
				3,3'-Dichlorobenzidine	U	380	379.310345	ug/kg
				3-methylphenol/4-methylphenol	U	380	#Error	ug/kg
				3-Nitroaniline	U	920	919.54023	ug/kg
				4,6-Dinitro-2-methylphenol	U	920	919.54023	ug/kg
				4-Bromophenyl phenyl ether	U	380	379.310345	ug/kg
				4-Chloro-3-methylphenol	U	380	379.310345	ug/kg
				4-Chloroaniline	U	380	379.310345	ug/kg
				4-Chlorophenyl phenyl ether	U	380	379.310345	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SB-073-5520-SO	A0C170537016	8270C	SO	4-Nitroaniline	U	920	919.54023	ug/kg
				4-Nitrophenol	U	920	919.54023	ug/kg
				Benzoic acid	U	920	919.54023	ug/kg
				Benzyl alcohol	U	380	379.310345	ug/kg
				bis(2-Chloroethoxy)methane	U	380	379.310345	ug/kg
				bis(2-Chloroethyl) ether	U	380	379.310345	ug/kg
				Bis(2-chloroisopropyl) ether	U	380	379.310345	ug/kg
				Butyl benzyl phthalate	U	380	379.310345	ug/kg
				Diethyl phthalate	U	380	379.310345	ug/kg
				Dimethyl phthalate	U	380	379.310345	ug/kg
				Di-n-butyl phthalate	U	380	379.310345	ug/kg
				Di-n-octyl phthalate	U	380	379.310345	ug/kg
				Hexachlorobenzene	U	380	379.310345	ug/kg
				Hexachlorobutadiene	U	380	379.310345	ug/kg
				HEXACHLOROCYCLOPENTADIE	U	380	#Error	ug/kg
				Hexachloroethane	U	380	379.310345	ug/kg
				Isophorone	U	380	379.310345	ug/kg
				Nitrobenzene	U	380	379.310345	ug/kg
				N-Nitrosodi-n-propylamine	U	380	379.310345	ug/kg
				N-Nitrosodiphenylamine	U	380	379.310345	ug/kg
				Pentachlorophenol	U	380	379.310345	ug/kg
				Phenol	U	380	379.310345	ug/kg
L10SB-073-6172-FD	A0C170537022	8081A	SO	Aldrin	U	25	24.6913580	ug/kg
				beta-BHC	U	22	21.6049383	ug/kg
				delta-BHC	U	25	24.6913580	ug/kg
				Heptachlor	U	22	21.6049383	ug/kg
				Methoxychlor	U	31	30.8641975	ug/kg
		8082		Aroclor 1016	U	41	2.09876543	ug/kg
				Aroclor 1221	U	41	2.09876543	ug/kg
				Aroclor 1232	U	41	2.09876543	ug/kg
				Aroclor 1242	U	41	2.09876543	ug/kg
				Aroclor 1248	U	41	2.09876543	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SB-073-6172-FD	A0C170537022	8082	SO	Aroclor 1254	U	41	2.09876543	ug/kg
				Aroclor 1260	U	41	2.09876543	ug/kg
		8260B		1,1,1-Trichloroethane	U	6.2	6.17283951	ug/kg
				1,1,2,2-Tetrachloroethane	U	6.2	6.17283951	ug/kg
				1,1,2-Trichloroethane	U	6.2	6.17283951	ug/kg
				1,1-Dichloroethane	U	6.2	6.17283951	ug/kg
				1,1-Dichloroethene	U	6.2	6.17283951	ug/kg
				1,2-Dibromoethane (Ethylene Dibro	U	6.2	6.17283951	ug/kg
				1,2-Dichloroethane	U	6.2	6.17283951	ug/kg
				1,2-Dichloroethene (total)	U	6.2	6.17283951	ug/kg
				1,2-Dichloropropane	U	6.2	6.17283951	ug/kg
				2-Butanone (MEK)	U	25	24.6913580	ug/kg
				2-Hexanone	U	25	24.6913580	ug/kg
				4-methyl-2-pentanone (MIBK)	U	25	24.6913580	ug/kg
				Acetone	U	25	24.6913580	ug/kg
				Benzene	U	6.2	6.17283951	ug/kg
				Bromochloromethane	U	6.2	6.17283951	ug/kg
				Bromodichloromethane	U	6.2	6.17283951	ug/kg
				Bromoform	U	6.2	6.17283951	ug/kg
				Bromomethane (Methyl bromide)	U	6.2	6.17283951	ug/kg
				Carbon disulfide	U	6.2	6.17283951	ug/kg
				Carbon tetrachloride	U	6.2	6.17283951	ug/kg
				Chlorobenzene	U	6.2	6.17283951	ug/kg
				Chlorodibromomethane	U	6.2	6.17283951	ug/kg
				Chloroethane	U	6.2	6.17283951	ug/kg
				Chloroform	U	6.2	6.17283951	ug/kg
				Chloromethane	U	6.2	6.17283951	ug/kg
				cis-1,3-Dichloropropene	U	6.2	6.17283951	ug/kg
				Ethylbenzene	U	6.2	6.17283951	ug/kg
				Methylene chloride	U	6.2	6.17283951	ug/kg
				Styrene	U	6.2	6.17283951	ug/kg
				Tetrachloroethene	U	6.2	6.17283951	ug/kg
				Toluene	U	6.2	6.17283951	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SB-073-6172-FD	A0C170537022	8260B	SO	trans-1,3-Dichloropropene	U	6.2	6.17283951	ug/kg
				Trichloroethene	U	6.2	6.17283951	ug/kg
				Vinyl chloride	U	6.2	6.17283951	ug/kg
		8270C		1,2,4-Trichlorobenzene	U	410	407.407407	ug/kg
				1,2,4-Trichlorobenzene	U	410	407.407407	ug/kg
				1,2-Dichlorobenzene	U	410	407.407407	ug/kg
				1,2-Dichlorobenzene	U	410	407.407407	ug/kg
				1,3-Dichlorobenzene	U	410	407.407407	ug/kg
				1,3-Dichlorobenzene	U	410	407.407407	ug/kg
				1,4-Dichlorobenzene	U	410	407.407407	ug/kg
				1,4-Dichlorobenzene	U	410	407.407407	ug/kg
				2,4,5-Trichlorophenol	U	410	407.407407	ug/kg
				2,4,5-Trichlorophenol	U	410	407.407407	ug/kg
				2,4,6-Trichlorophenol	U	410	407.407407	ug/kg
				2,4,6-Trichlorophenol	U	410	407.407407	ug/kg
				2,4-Dichlorophenol	U	410	407.407407	ug/kg
				2,4-Dichlorophenol	U	410	407.407407	ug/kg
				2,4-Dimethylphenol	U	410	407.407407	ug/kg
				2,4-Dimethylphenol	U	410	407.407407	ug/kg
				2,4-Dinitrophenol	U	990	987.654321	ug/kg
				2,4-Dinitrophenol	U	990	987.654321	ug/kg
				2,4-Dinitrotoluene	U	410	407.407407	ug/kg
				2,4-Dinitrotoluene	U	410	407.407407	ug/kg
				2,6-Dinitrotoluene	U	410	407.407407	ug/kg
				2,6-Dinitrotoluene	U	410	407.407407	ug/kg
				2-Chloronaphthalene	U	410	407.407407	ug/kg
				2-Chloronaphthalene	U	410	407.407407	ug/kg
				2-Chlorophenol	U	410	407.407407	ug/kg
				2-Chlorophenol	U	410	407.407407	ug/kg
				2-Methylnaphthalene	U	410	407.407407	ug/kg
				2-Methylnaphthalene	U	410	407.407407	ug/kg
				2-Methylphenol	U	410	407.407407	ug/kg
				2-Methylphenol	U	410	407.407407	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SB-073-6172-FD	A0C170537022	8270C	SO	2-Nitroaniline	U	990	987.654321	ug/kg
				2-Nitroaniline	U	990	987.654321	ug/kg
				2-Nitrophenol	U	410	407.407407	ug/kg
				2-Nitrophenol	U	410	407.407407	ug/kg
				3,3'-Dichlorobenzidine	U	410	407.407407	ug/kg
				3,3'-Dichlorobenzidine	U	410	407.407407	ug/kg
				3-methylphenol/4-methylphenol	U	410	#Error	ug/kg
				3-methylphenol/4-methylphenol	U	410	#Error	ug/kg
				3-Nitroaniline	U	990	987.654321	ug/kg
				3-Nitroaniline	U	990	987.654321	ug/kg
				4,6-Dinitro-2-methylphenol	U	990	987.654321	ug/kg
				4,6-Dinitro-2-methylphenol	U	990	987.654321	ug/kg
				4-Bromophenyl phenyl ether	U	410	407.407407	ug/kg
				4-Bromophenyl phenyl ether	U	410	407.407407	ug/kg
				4-Chloro-3-methylphenol	U	410	407.407407	ug/kg
				4-Chloro-3-methylphenol	U	410	407.407407	ug/kg
				4-Chloroaniline	U	410	407.407407	ug/kg
				4-Chloroaniline	U	410	407.407407	ug/kg
				4-Chlorophenyl phenyl ether	U	410	407.407407	ug/kg
				4-Chlorophenyl phenyl ether	U	410	407.407407	ug/kg
				4-Nitroaniline	U	990	987.654321	ug/kg
				4-Nitroaniline	U	990	987.654321	ug/kg
				4-Nitrophenol	U	990	987.654321	ug/kg
				4-Nitrophenol	U	990	987.654321	ug/kg
				Benzoic acid	U	990	987.654321	ug/kg
				Benzoic acid	U	990	987.654321	ug/kg
				Benzyl alcohol	U	410	407.407407	ug/kg
				Benzyl alcohol	U	410	407.407407	ug/kg
				bis(2-Chloroethoxy)methane	U	410	407.407407	ug/kg
				bis(2-Chloroethoxy)methane	U	410	407.407407	ug/kg
				bis(2-Chloroethyl) ether	U	410	407.407407	ug/kg
				bis(2-Chloroethyl) ether	U	410	407.407407	ug/kg
				Bis(2-chloroisopropyl) ether	U	410	407.407407	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SB-073-6172-FD	A0C170537022	8270C	SO	Bis(2-chloroisopropyl) ether	U	410	407.407407	ug/kg
				bis(2-Ethylhexyl) phthalate	U	410	407.407407	ug/kg
				Butyl benzyl phthalate	U	410	407.407407	ug/kg
				Butyl benzyl phthalate	U	410	407.407407	ug/kg
				Carbazole	U	62	61.7283951	ug/kg
				Carbazole	U	62	61.7283951	ug/kg
				Dibenzofuran	U	410	407.407407	ug/kg
				Dibenzofuran	U	410	407.407407	ug/kg
				Diethyl phthalate	U	410	407.407407	ug/kg
				Diethyl phthalate	U	410	407.407407	ug/kg
				Dimethyl phthalate	U	410	407.407407	ug/kg
				Dimethyl phthalate	U	410	407.407407	ug/kg
				Di-n-butyl phthalate	U	410	407.407407	ug/kg
				Di-n-octyl phthalate	U	410	407.407407	ug/kg
				Di-n-octyl phthalate	U	410	407.407407	ug/kg
				Hexachlorobenzene	U	410	407.407407	ug/kg
				Hexachlorobenzene	U	410	407.407407	ug/kg
				Hexachlorobutadiene	U	410	407.407407	ug/kg
				Hexachlorobutadiene	U	410	407.407407	ug/kg
				HEXACHLOROCYCLOPENTADIE	U	410	#Error	ug/kg
				HEXACHLOROCYCLOPENTADIE	U	410	#Error	ug/kg
				Hexachloroethane	U	410	407.407407	ug/kg
				Hexachloroethane	U	410	407.407407	ug/kg
				Isophorone	U	410	407.407407	ug/kg
				Isophorone	U	410	407.407407	ug/kg
				Nitrobenzene	U	410	407.407407	ug/kg
				Nitrobenzene	U	410	407.407407	ug/kg
				N-Nitrosodi-n-propylamine	U	410	407.407407	ug/kg
				N-Nitrosodi-n-propylamine	U	410	407.407407	ug/kg
				N-Nitrosodiphenylamine	U	410	407.407407	ug/kg
				N-Nitrosodiphenylamine	U	410	407.407407	ug/kg
				Pentachlorophenol	U	410	407.407407	ug/kg
				Pentachlorophenol	U	410	407.407407	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SB-073-6172-FD	A0C170537022	8270C	SO	Phenol	U	410	407.407407	ug/kg
				Phenol	U	410	407.407407	ug/kg
L10SB-074-5523-SO	A0C170537017	8081A	SO	4,4'-DDE	U	4.4	4.35897436	ug/kg
				alpha-Chordane	U	7.7	7.69230769	ug/kg
				beta-BHC	U	9.0	8.97435897	ug/kg
				Dieldrin	U	4.4	4.35897436	ug/kg
				Endosulfan I	U	4.4	4.35897436	ug/kg
				Endosulfan sulfate	U	7.7	7.69230769	ug/kg
				Endrin	U	4.4	4.35897436	ug/kg
				Endrin aldehyde	U	7.7	7.69230769	ug/kg
				gamma-Chlordane	U	4.4	4.35897436	ug/kg
				Heptachlor	U	9.0	8.97435897	ug/kg
				Methoxychlor	U	13	12.8205128	ug/kg
		8260B		2-Butanone (MEK)	U	26	25.6410256	ug/kg
				2-Hexanone	U	26	25.6410256	ug/kg
				4-methyl-2-pentanone (MIBK)	U	26	25.6410256	ug/kg
				Acetone	U	26	25.6410256	ug/kg
				Xylene (Total)	U	13	12.8205128	ug/kg
		8270C		1,2,4-Trichlorobenzene	U	850	846.153846	ug/kg
				1,2-Dichlorobenzene	U	850	846.153846	ug/kg
				1,3-Dichlorobenzene	U	850	846.153846	ug/kg
				1,4-Dichlorobenzene	U	850	846.153846	ug/kg
				2,4,5-Trichlorophenol	U	850	846.153846	ug/kg
				2,4,6-Trichlorophenol	U	850	846.153846	ug/kg
				2,4-Dichlorophenol	U	850	846.153846	ug/kg
				2,4-Dimethylphenol	U	850	846.153846	ug/kg
				2,4-Dinitrophenol	U	2100	2051.28205	ug/kg
				2,4-Dinitrotoluene	U	850	846.153846	ug/kg
				2,6-Dinitrotoluene	U	850	846.153846	ug/kg
				2-Chloronaphthalene	U	850	846.153846	ug/kg
				2-Chlorophenol	U	850	846.153846	ug/kg
				2-Methylnaphthalene	U	850	846.153846	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SB-074-5523-SO	A0C170537017	8270C	SO	2-Methylphenol	U	850	846.153846	ug/kg
				2-Nitroaniline	U	2100	2051.28205	ug/kg
				2-Nitrophenol	U	850	846.153846	ug/kg
				3,3'-Dichlorobenzidine	U	850	846.153846	ug/kg
				3-methylphenol/4-methylphenol	U	850	#Error	ug/kg
				3-Nitroaniline	U	2100	2051.28205	ug/kg
				4,6-Dinitro-2-methylphenol	U	2100	2051.28205	ug/kg
				4-Bromophenyl phenyl ether	U	850	846.153846	ug/kg
				4-Chloro-3-methylphenol	U	850	846.153846	ug/kg
				4-Chloroaniline	U	850	846.153846	ug/kg
				4-Chlorophenyl phenyl ether	U	850	846.153846	ug/kg
				4-Nitroaniline	U	2100	2051.28205	ug/kg
				4-Nitrophenol	U	2100	2051.28205	ug/kg
				bis(2-Chloroethoxy)methane	U	850	846.153846	ug/kg
				bis(2-Chloroethyl) ether	U	850	846.153846	ug/kg
				Bis(2-chloroisopropyl) ether	U	850	846.153846	ug/kg
				bis(2-Ethylhexyl) phthalate	U	850	846.153846	ug/kg
				Butyl benzyl phthalate	U	850	846.153846	ug/kg
				Carbazole	U	130	128.205128	ug/kg
				Dibenzofuran	U	850	846.153846	ug/kg
				Diethyl phthalate	U	850	846.153846	ug/kg
				Dimethyl phthalate	U	850	846.153846	ug/kg
				Di-n-butyl phthalate	U	850	846.153846	ug/kg
				Di-n-octyl phthalate	U	850	846.153846	ug/kg
				Hexachlorobenzene	U	850	846.153846	ug/kg
				Hexachlorobutadiene	U	850	846.153846	ug/kg
				HEXACHLOROCYCLOPENTADIE	U	850	#Error	ug/kg
				Hexachloroethane	U	850	846.153846	ug/kg
				Isophorone	U	850	846.153846	ug/kg
				Nitrobenzene	U	850	846.153846	ug/kg
				N-Nitrosodi-n-propylamine	U	850	846.153846	ug/kg
				N-Nitrosodiphenylamine	U	850	846.153846	ug/kg
				Pentachlorophenol	U	850	846.153846	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SB-074-5523-SO	A0C170537017	8270C	SO	Phenol	U	850	846.153846	ug/kg
		8330M		Nitroguanidine	U	0.25	0.31730769	mg/kg
L10SB-074-5524-SO	A0C170537018	8081A	SO	beta-BHC	U	4.4	4.375	ug/kg
				Heptachlor	U	4.4	4.375	ug/kg
		8330M		Nitroguanidine	U	0.25	0.309375	mg/kg
L10SB-074-5525-SO	A0C170537019	353.2 Modified	SO	Nitrocellulose	U	5.9	5.88235294	mg/kg
		6020		Antimony	U	0.59	0.58823529	mg/kg
		7471A		Mercury	U	0.12	0.11764706	mg/kg
		8081A		4,4'-DDD	U	2.4	2.35294118	ug/kg
				4,4'-DDT	U	2.4	2.35294118	ug/kg
				alpha-BHC	U	3.0	2.94117647	ug/kg
				Endosulfan II	U	3.0	2.94117647	ug/kg
				Endrin ketone	U	2.4	2.35294118	ug/kg
				gamma-BHC (Lindane)	U	3.0	2.94117647	ug/kg
				Heptachlor epoxide	U	3.0	2.94117647	ug/kg
				Methoxychlor	U	5.9	5.88235294	ug/kg
				Toxaphene	U	79	78.8235294	ug/kg
		8082		Aroclor 1016	U	39	2	ug/kg
				Aroclor 1221	U	39	2	ug/kg
				Aroclor 1232	U	39	2	ug/kg
				Aroclor 1242	U	39	2	ug/kg
				Aroclor 1248	U	39	2	ug/kg
				Aroclor 1254	U	39	2	ug/kg
				Aroclor 1260	U	39	2	ug/kg
		8260B		1,1,1-Trichloroethane	U	5.9	5.88235294	ug/kg
				1,1,2,2-Tetrachloroethane	U	5.9	5.88235294	ug/kg
				1,1,2-Trichloroethane	U	5.9	5.88235294	ug/kg
				1,1-Dichloroethane	U	5.9	5.88235294	ug/kg
				1,1-Dichloroethene	U	5.9	5.88235294	ug/kg
				1,2-Dibromoethane (Ethylene Dibro	U	5.9	5.88235294	ug/kg
				1,2-Dichloroethane	U	5.9	5.88235294	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SB-074-5525-SO	A0C170537019	8260B	SO	1,2-Dichloroethene (total)	U	5.9	5.88235294	ug/kg
				1,2-Dichloropropane	U	5.9	5.88235294	ug/kg
				2-Butanone (MEK)	U	24	23.5294118	ug/kg
				2-Hexanone	U	24	23.5294118	ug/kg
				4-methyl-2-pentanone (MIBK)	U	24	23.5294118	ug/kg
				Benzene	U	5.9	5.88235294	ug/kg
				Bromochloromethane	U	5.9	5.88235294	ug/kg
				Bromodichloromethane	U	5.9	5.88235294	ug/kg
				Bromoform	U	5.9	5.88235294	ug/kg
				Bromomethane (Methyl bromide)	U	5.9	5.88235294	ug/kg
				Carbon disulfide	U	5.9	5.88235294	ug/kg
				Carbon tetrachloride	U	5.9	5.88235294	ug/kg
				Chlorobenzene	U	5.9	5.88235294	ug/kg
				Chlorodibromomethane	U	5.9	5.88235294	ug/kg
				Chloroethane	U	5.9	5.88235294	ug/kg
				Chloroform	U	5.9	5.88235294	ug/kg
				Chloromethane	U	5.9	5.88235294	ug/kg
				cis-1,3-Dichloropropene	U	5.9	5.88235294	ug/kg
				Ethylbenzene	U	5.9	5.88235294	ug/kg
				Methylene chloride	U	5.9	5.88235294	ug/kg
				Styrene	U	5.9	5.88235294	ug/kg
				Tetrachloroethene	U	5.9	5.88235294	ug/kg
				Toluene	U	5.9	5.88235294	ug/kg
				trans-1,3-Dichloropropene	U	5.9	5.88235294	ug/kg
				Trichloroethene	U	5.9	5.88235294	ug/kg
				Vinyl chloride	U	5.9	5.88235294	ug/kg
				Xylene (Total)	U	12	11.7647059	ug/kg
		8270C		1,2,4-Trichlorobenzene	U	390	388.235294	ug/kg
				1,2-Dichlorobenzene	U	390	388.235294	ug/kg
				1,3-Dichlorobenzene	U	390	388.235294	ug/kg
				1,4-Dichlorobenzene	U	390	388.235294	ug/kg
				2,4,5-Trichlorophenol	U	390	388.235294	ug/kg
				2,4,6-Trichlorophenol	U	390	388.235294	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SB-074-5525-SO	A0C170537019	8270C	SO	2,4-Dichlorophenol	U	390	388.235294	ug/kg
				2,4-Dimethylphenol	U	390	388.235294	ug/kg
				2,4-Dinitrotoluene	U	390	388.235294	ug/kg
				2,6-Dinitrotoluene	U	390	388.235294	ug/kg
				2-Chloronaphthalene	U	390	388.235294	ug/kg
				2-Chlorophenol	U	390	388.235294	ug/kg
				2-Methylnaphthalene	U	390	388.235294	ug/kg
				2-Methylphenol	U	390	388.235294	ug/kg
				2-Nitrophenol	U	390	388.235294	ug/kg
				3,3'-Dichlorobenzidine	U	390	388.235294	ug/kg
				3-methylphenol/4-methylphenol	U	390	#Error	ug/kg
				4-Bromophenyl phenyl ether	U	390	388.235294	ug/kg
				4-Chloro-3-methylphenol	U	390	388.235294	ug/kg
				4-Chloroaniline	U	390	388.235294	ug/kg
				4-Chlorophenyl phenyl ether	U	390	388.235294	ug/kg
				Benzyl alcohol	U	390	388.235294	ug/kg
				bis(2-Chloroethoxy)methane	U	390	388.235294	ug/kg
				bis(2-Chloroethyl) ether	U	390	388.235294	ug/kg
				Bis(2-chloroisopropyl) ether	U	390	388.235294	ug/kg
				Butyl benzyl phthalate	U	390	388.235294	ug/kg
				Carbazole	U	59	58.8235294	ug/kg
				Dibenzofuran	U	390	388.235294	ug/kg
				Diethyl phthalate	U	390	388.235294	ug/kg
				Dimethyl phthalate	U	390	388.235294	ug/kg
				Di-n-butyl phthalate	U	390	388.235294	ug/kg
				Di-n-octyl phthalate	U	390	388.235294	ug/kg
				Hexachlorobenzene	U	390	388.235294	ug/kg
				Hexachlorobutadiene	U	390	388.235294	ug/kg
				HEXACHLOROCYCLOPENTADIE	U	390	#Error	ug/kg
				Hexachloroethane	U	390	388.235294	ug/kg
				Isophorone	U	390	388.235294	ug/kg
				Nitrobenzene	U	390	388.235294	ug/kg
				N-Nitrosodi-n-propylamine	U	390	388.235294	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SB-074-5525-SO	A0C170537019	8270C	SO	N-Nitrosodiphenylamine	U	390	388.235294	ug/kg
				Pentachlorophenol	U	390	388.235294	ug/kg
				Phenol	U	390	388.235294	ug/kg
		8330M		Nitroguanidine	U	0.25	0.29117647	mg/kg
L10SB-075-5528-SO	A0C170537021	6020	SO	Antimony	U	0.57	0.56818182	mg/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

Continuing Calibration (CCV) Outlier Report (Organics)

There are no Organic Continuing Calibrations with outliers

Continuing Calibration (CCAL) Outlier Report (Inorganics)

There are no Inorganic Continuing Calibrations with outliers

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
L10SB-066-5493-SO	A0C170537001	6020	SO	Silver	J	0.021	0.58	mg/kg
				Sodium	J	88.7	117	mg/kg
				Thallium	J	0.14	0.23	mg/kg
L10SB-066-5494-SO	A0C170537002			Cadmium	J	0.087	0.24	mg/kg
				Silver	J	0.018	0.59	mg/kg
				Sodium	J	52.8	118	mg/kg
				Thallium	J	0.12	0.24	mg/kg
L10SB-067-5497-SO	A0C170537003			Antimony	J	0.12	0.61	mg/kg
				Cadmium	J	0.078	0.24	mg/kg
				Silver	J	0.018	0.61	mg/kg
				Sodium	J	78.5	122	mg/kg
				Thallium	J	0.17	0.24	mg/kg
L10SB-067-5498-SO	A0C170537004			Antimony	J	0.11	0.58	mg/kg
				Cadmium	J	0.097	0.23	mg/kg
				Silver	J	0.015	0.58	mg/kg
				Sodium	J	66.8	117	mg/kg
				Thallium	J	0.18	0.23	mg/kg
L10SB-069-5503-SO	A0C170537005			Silver	J	0.018	0.60	mg/kg
				Sodium	J	51.5	119	mg/kg
				Thallium	J	0.13	0.24	mg/kg
		7471A		Mercury	J	0.028	0.12	mg/kg
L10SB-069-5504-SO	A0C170537006	6020		Antimony	J	0.099	0.57	mg/kg
				Cadmium	J	0.088	0.23	mg/kg
				Silver	J	0.010	0.57	mg/kg
				Sodium	J	44.0	115	mg/kg
				Thallium	J	0.12	0.23	mg/kg
		8330B		PETN	J PG	0.029	0.50	mg/kg
L10SB-070-5507-SO	A0C170537007	6020		Silver	J	0.030	0.59	mg/kg
				Thallium	J	0.11	0.24	mg/kg
		7471A		Mercury	J	0.029	0.12	mg/kg
L10SB-070-5508-SO	A0C170537008	6020		Antimony	J	0.34	0.57	mg/kg
				Cadmium	J	0.12	0.23	mg/kg
				Silver	J	0.022	0.57	mg/kg
				Sodium	J	45.4	113	mg/kg
				Thallium	J	0.093	0.23	mg/kg
L10SB-070-5510-SO	A0C170537009			Cadmium	J	0.039	0.23	mg/kg

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
L10SB-070-5510-SO	A0C170537009	6020	SO	Silver	J	0.015	0.58	mg/kg
				Sodium	J	36.1	115	mg/kg
				Thallium	J	0.12	0.23	mg/kg
		8330B		4-Amino-2,6-Dinitrotoluene	J	0.022	0.25	mg/kg
L10SB-070-6174-FD	A0C170537024	6020		Antimony	J	0.40	0.58	mg/kg
				Cadmium	J	0.057	0.23	mg/kg
				Silver	J	0.016	0.58	mg/kg
				Sodium	J	46.4	115	mg/kg
				Thallium	J	0.095	0.23	mg/kg
		8330B		2,4-Dinitrotoluene	J	0.0058	0.26	mg/kg
				2-Amino-4,6-dinitrotoluene	J	0.035	0.26	mg/kg
				4-Amino-2,6-Dinitrotoluene	J	0.039	0.26	mg/kg
L10SB-071-5511-SO	A0C170537010	6020		Antimony	J	0.18	0.63	mg/kg
				Silver	J	0.028	0.63	mg/kg
				Sodium	J	37.7	126	mg/kg
				Thallium	J	0.15	0.25	mg/kg
		7471A		Mercury	J	0.032	0.13	mg/kg
L10SB-071-5512-SO	A0C170537011	6020		Antimony	J	0.16	0.58	mg/kg
				Silver	J	0.022	0.58	mg/kg
				Sodium	J	83.5	115	mg/kg
				Thallium	J	0.14	0.23	mg/kg
		7471A		Mercury	J	0.021	0.12	mg/kg
		8330B		4-Amino-2,6-Dinitrotoluene	J PG	0.16	0.25	mg/kg
				PETN	J PG	0.30	0.50	mg/kg
L10SB-071-5513-SO	A0C170537012	6020		Antimony	J	0.082	0.61	mg/kg
				Silver	J	0.016	0.61	mg/kg
		7471A		Mercury	J	0.017	0.12	mg/kg
L10SB-072-5515-SO	A0C170537013	6020		Antimony	J	0.27	0.62	mg/kg
				Silver	J	0.024	0.62	mg/kg
				Sodium	J	31.7	124	mg/kg
				Thallium	J	0.12	0.25	mg/kg
		7471A		Mercury	J	0.019	0.12	mg/kg
L10SB-072-5516-SO	A0C170537014	6020		Antimony	J	0.12	0.58	mg/kg
				Cadmium	J	0.023	0.23	mg/kg
				Silver	J	0.0078	0.58	mg/kg
				Sodium	J	28.6	117	mg/kg

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
L10SB-072-5516-SO	A0C170537014	6020	SO	Thallium	J	0.16	0.23	mg/kg
L10SB-072-6173-FD	A0C170537023			Antimony	J	0.083	0.61	mg/kg
				Cadmium	J	0.13	0.24	mg/kg
				Silver	J	0.043	0.61	mg/kg
				Sodium	J	23.9	121	mg/kg
				Thallium	J	0.18	0.24	mg/kg
		7471A		Mercury	J	0.038	0.12	mg/kg
L10SB-073-5519-SO	A0C170537015	353.2 Modified		Nitrocellulose	B	1.1	6.3	mg/kg
		6020		Antimony	J	0.14	0.63	mg/kg
				Cadmium	J	0.14	0.25	mg/kg
				Silver	J	0.024	0.63	mg/kg
				Sodium	J	49.9	126	mg/kg
				Thallium	J	0.16	0.25	mg/kg
		7471A		Mercury	J	0.041	0.13	mg/kg
		8270C		bis(2-Ethylhexyl) phthalate	J	30	420	ug/kg
L10SB-073-5520-SO	A0C170537016	6020		Antimony	J	0.094	0.57	mg/kg
				Cadmium	J	0.14	0.23	mg/kg
				Silver	J	0.023	0.57	mg/kg
				Sodium	J	40.4	115	mg/kg
				Thallium	J	0.13	0.23	mg/kg
		7471A		Mercury	J	0.031	0.11	mg/kg
		8260B		Acetone	J B	16	23	ug/kg
				Bromomethane (Methyl bromide)	J	1.3	5.7	ug/kg
		8270C		bis(2-Ethylhexyl) phthalate	J	24	380	ug/kg
				Dibenzofuran	J	23	380	ug/kg
L10SB-073-6172-FD	A0C170537022	353.2 Modified		Nitrocellulose	B	1.1	6.2	mg/kg
		6020		Antimony	J	0.14	0.62	mg/kg
				Cadmium	J	0.21	0.25	mg/kg
				Silver	J	0.035	0.62	mg/kg
				Sodium	J	31.0	123	mg/kg
				Thallium	J	0.17	0.25	mg/kg
		7471A		Mercury	J	0.040	0.12	mg/kg
		8270C		bis(2-Ethylhexyl) phthalate	J	36	410	ug/kg
				Di-n-butyl phthalate	J	26	410	ug/kg
L10SB-074-5523-SO	A0C170537017	6020		Antimony	J	0.087	0.64	mg/kg
				Cadmium	J	0.068	0.26	mg/kg

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
L10SB-074-5523-SO	A0C170537017	6020	SO	Silver	J	0.030	0.64	mg/kg
				Sodium	J	30.6	129	mg/kg
				Thallium	J	0.12	0.26	mg/kg
		7471A		Mercury	J	0.019	0.13	mg/kg
		8270C		Benzyl alcohol	J	130	420	ug/kg
				Benzyl alcohol	J	140	850	ug/kg
				bis(2-Ethylhexyl) phthalate	J	31	420	ug/kg
L10SB-074-5524-SO	A0C170537018	6020		Antimony	J	0.10	0.62	mg/kg
				Cadmium	J	0.034	0.25	mg/kg
				Silver	J	0.035	0.62	mg/kg
				Sodium	J	49.0	125	mg/kg
				Thallium	J	0.13	0.25	mg/kg
		7471A		Mercury	J	0.019	0.12	mg/kg
		8260B		Acetone	J B	8.8	25	ug/kg
		8270C		bis(2-Ethylhexyl) phthalate	J	27	410	ug/kg
		8330B		1,3,5-Trinitrobenzene	J	0.037	0.24	mg/kg
L10SB-074-5525-SO	A0C170537019	6020		Cadmium	J	0.053	0.24	mg/kg
				Silver	J	0.0047	0.59	mg/kg
				Sodium	J	36.0	118	mg/kg
				Thallium	J	0.093	0.24	mg/kg
		8260B		Acetone	J B	8.8	24	ug/kg
		8270C		bis(2-Ethylhexyl) phthalate	J	27	390	ug/kg
L10SB-075-5527-SO	A0C170537020	6020		Antimony	J	0.20	0.70	mg/kg
				Silver	J	0.034	0.70	mg/kg
				Sodium	J	42.5	141	mg/kg
				Thallium	J	0.19	0.28	mg/kg
L10SB-075-5528-SO	A0C170537021			Cadmium	J	0.059	0.23	mg/kg
				Silver	J	0.018	0.57	mg/kg
				Sodium	J	41.0	114	mg/kg
				Thallium	J	0.12	0.23	mg/kg

Method Blank Outlier Report

Lab Reporting Batch : A0C170537
Lab ID: TALCAN
Analysis Method : 8260B
Analysis Date : 03/18/2010
Preparation Type : 5030B
Preparation Date : 03/18/2010
Method Blank Lab Sample ID : A0C190000153B
Preparation Batch : 0078153

Acetone	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**16**	**20**	**ug/kg**	**J**	**Common Contaminant**

Acetone was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
L10SB-073-5520-SO	A0C170537016	1	16	J B	ug/kg
L10SB-074-5524-SO	A0C170537018	1	8.8	J B	ug/kg
L10SB-074-5525-SO	A0C170537019	1	8.8	J B	ug/kg

Methylene chloride	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**1.1**	**5.0**	**ug/kg**	**J**	**Common Contaminant**

Methylene chloride contamination found in the method blank did not qualify any samples.

Method Blank Outlier Report

Lab Reporting Batch : A0C170537
Lab ID: TALCAN
Analysis Method : 6020
Analysis Date : 03/30/2010
Preparation Type : 3050B
Preparation Date : 03/25/2010
Method Blank Lab Sample ID : A0C250000021B
Preparation Batch : 0084021

Nickel	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**0.18**	**1.0**	**mg/kg**	**J**	

Nickel contamination found in the method blank did not qualify any samples.

Method Blank Outlier Report

Lab Reporting Batch : A0C170537 **Lab ID:** TALCAN

Analysis Method : 8270C **Analysis Date :** 04/14/2010

Preparation Type : 3540C **Preparation Date :** 04/12/2010

Method Blank Lab Sample ID : A0D120000315B **Preparation Batch :** 0102315

2-Methylnaphthalene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**31**	**330**	**ug/kg**	**J**	

2-Methylnaphthalene contamination found in the method blank did not qualify any samples.

Surrogate Recovery Outlier Report

Lab Report Batch: A0C170537 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Dilution	Matrix	Surrogate	Percent Recovery	Criteria (percent) Lower Limit	Upper Limit	Reject Point	Associated Target Analytes
L10SB-067-5498-SO	A0C170537004	8270C	1	SO	2,4,6-Tribromophenol	6.5	35.0	125.0	10.0	Acid
L10SB-071-5513-SO	A0C170537012	8270C	2.5	SO	2,4,6-Tribromophenol	11	35.0	125.0	10.0	Acid
					2-Fluorophenol	33	35.0	105.0	10.0	Acid
L10SB-074-5524-SO	A0C170537018	8330B	1.01	SO	3,4-Dinitrotoluene	79	81.0	127.0	10.0	All Target

QC Outlier Report: Field Duplicates (Non-qualified Outliers)

Lab Report Batch: **Lab ID:**

			Field Sample				Field Sample Duplicate						
Analysis Method	Matrix	Analyte Name	Client Sample ID	Ana Type	Result	Lab Qualifier	Client Sample Duplicate ID	Ana Type	Result	Lab Qualifiers	RPD Dup* (%)	RPD Criteria (%)	Result Units

*Note: Outlier report also includes analytes detected in one sample but not in the related sample, i.e., analyte was detected in the field sample but not in the field duplicate sample, or vice versa. In this case, RPD value assigned to the field duplicate sample is 200.

QC Outlier Report: Temperature (Non-qualified Outliers)

Lab Report Batch: A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Sample Temperature (C)	Criteria	
					Lower Limit	Upper Limit
WSASW-038-5657-SW	A0C250407026	353.2 Modified	AQ	1.5	2.0	6.0
		8081A	AQ	1.5	2.0	
		8082	AQ	1.5	2.0	
PBA08-QC-6018-TB	A0C250407028	8260B	AQ	1.5	2.0	
WSASW-038-5657-SW	A0C250407026	8260B	AQ	1.5	2.0	
		8270C	AQ	1.5	2.0	
		8270C PAH	AQ	1.5	2.0	
		8330B	AQ	1.5	2.0	
		8330M	AQ	1.5	2.0	

Temperature Outlier Report

Lab Report Batch: **Lab ID:**

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Sample Temp (C)	Temperature Criteria (C)			Between High and Gross Exceedence			Above Gross Exceedence		
								Detect Quals		Non-Detect Qual(s)	Detect Quals		Non-Detect Qual(s)
					Low	High	Gross Exceed	Non-Biased	Biased		Non-Biased	Biased	

QC Outlier Report: Holding Times

Lab Report Batch: A0C250407 **Lab ID:** TALCAN

					Actual Holding Time			Criteria				Reported Dates (and Times)		
Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Prep Method	Coll To Prep	Prep To Ana	Coll To Ana	Coll To Prep	Prep To Ana	Coll To Ana	Unit of Meas	Collection Date	Preparation Date	Analysis Date
WSASW-037-5656-S	A0C250407025	8330M	AQ	Gen Prep	21.0	1.0		14	40		Days	03/23/2010	04/13/2010	04/14/2010
WSASW-037-5656-S	A0C250407025S	8330M	AQ	Gen Prep	21.0	1.0		14	40		Days	03/23/2010	04/13/2010	04/14/2010
WSASW-037-5656-S	A0C250407025D	8330M	AQ	Gen Prep	21.0	1.0		14	40		Days	03/23/2010	04/13/2010	04/14/2010
WSASW-038-5657-S	A0C250407026	8330M	AQ	Gen Prep	21.0	1.0		14	40		Days	03/23/2010	04/13/2010	04/14/2010
WSASW-039-5658-S	A0C250407027	8330M	AQ	Gen Prep	21.0	1.0		14	40		Days	03/23/2010	04/13/2010	04/14/2010

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0085022 **Analysis Method :** 6020 **Analysis Date :** 03/29/2010

Preparation Batch : 0085022 **Preparation Type :** 3050B **Preparation Date :** 03/26/2010

Lab Reporting Batch : A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
WSASB-024-6203-FDMS	A0C250407021S	SO	Antimony	25		30.00	75.00	125.00	20.00
			Potassium	48		30.00	70.00	130.00	20.00
WSASB-024-6203-FDMS	A0C250407021D		Antimony	27		30.00	75.00	125.00	20.00
			Magnesium	141		30.00	70.00	130.00	20.00

Associated Samples: All samples in Method Batch

Client Sample ID	Lab Sample ID
L10SB-066-5496-SO	A0C250407035
LL8SB-060-5349-SO	A0C250407029
WSASB-024-6203-FD	A0C250407021
WSASD-037-5649-SD	A0C250407022
WSASD-038-5650-SD	A0C250407023
WSASD-039-5651-SD	A0C250407024

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

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Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0085024 **Analysis Method :** 6020 **Analysis Date :** 04/05/2010

Preparation Batch : 0085024 **Preparation Type :** 3050B **Preparation Date :** 03/26/2010

Lab Reporting Batch : A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
WSASB-027-5633-SOMS	A0C250407012S	SO	Antimony	26		30.00	75.00	125.00	20.00
			Potassium	64		30.00	70.00	130.00	20.00
WSASB-027-5633-SOMS	A0C250407012D		Antimony	24		30.00	75.00	125.00	20.00
			Barium			30.00	10.00	199.00	20.00
			Magnesium	53		30.00	70.00	130.00	20.00
			Potassium	60		30.00	70.00	130.00	20.00

Associated Samples: All samples in Method Batch

Client Sample ID	Lab Sample ID
WSASB-021-5611-SO	A0C250407001
WSASB-021-5612-SO	A0C250407002
WSASB-021-6201-FD	A0C250407020
WSASB-022-5615-SO	A0C250407003
WSASB-022-5616-SO	A0C250407004
WSASB-022-6200-FD	A0C250407019
WSASB-023-5619-SO	A0C250407005
WSASB-023-5620-SO	A0C250407006
WSASB-024-5623-SO	A0C250407007
WSASB-024-5624-SO	A0C250407008
WSASB-024-5626-SO	A0C250407009
WSASB-026-5629-SO	A0C250407010
WSASB-026-5630-SO	A0C250407011
WSASB-027-5633-SO	A0C250407012
WSASB-027-5634-SO	A0C250407013
WSASB-028-5637-SO	A0C250407014
WSASB-028-5638-SO	A0C250407015
WSASB-028-5640-SO	A0C250407016
WSASB-029-5641-SO	A0C250407017
WSASB-029-5642-SO	A0C250407018

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0088046 **Analysis Method :** 8270C **Analysis Date :** 04/12/2010

Preparation Batch : 0088046 **Preparation Type :** 3540C **Preparation Date :** 03/29/2010

Lab Reporting Batch : A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
WSASB-027-5633-SOMS	A0C250407012D	SO	3,3'-Dichlorobenzidine		67	0.00	10.00	130.00	56.00
			Benzoic acid		30	0.00	0.00	110.00	20.00
			Carbazole	146	28	0.00	45.00	115.00	20.00
			Dibenzofuran	106		0.00	50.00	105.00	30.00

Associated Samples: Parent sample only

Client Sample ID	Lab Sample ID
WSASB-027-5633-SO	A0C250407012

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0089037 **Analysis Method :** 8081A **Analysis Date :** 04/12/2010

Preparation Batch : 0089037 **Preparation Type :** 3540C **Preparation Date :** 03/30/2010

Lab Reporting Batch : A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
WSASB-022-5615-SOMS	A0C250407003S	SO	beta-BHC	142		0.00	60.00	125.00	43.00
			Endrin	151		0.00	60.00	135.00	38.00

Associated Samples: Parent sample only

Client Sample ID	Lab Sample ID
WSASB-022-5615-SO	A0C250407003

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0099345 **Analysis Method :** 353.2 Modified **Analysis Date :** 04/12/2010

Preparation Batch : 0099345 **Preparation Type :** Gen Prep **Preparation Date :** 04/09/2010

Lab Reporting Batch : A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
WSASB-022-5616-SOMS	A0C250407004S	SO	Nitrocellulose	12		10.00	34.00	115.00	71.00
WSASB-022-5616-SOMS	A0C250407004D		Nitrocellulose	14		10.00	34.00	115.00	71.00

Associated Samples: All samples in Method Batch

Client Sample ID	Lab Sample ID
WSASB-022-5615-SO	A0C250407003
WSASB-022-5616-SO	A0C250407004
WSASB-022-6200-FD	A0C250407019
WSASB-028-5637-SO	A0C250407014
WSASB-028-5638-SO	A0C250407015
WSASB-028-5640-SO	A0C250407016
WSASD-037-5649-SD	A0C250407022

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0103203 **Analysis Method :** 353.2 Modified **Analysis Date :** 04/14/2010

Preparation Batch : 0103203 **Preparation Type :** 3535 **Preparation Date :** 04/13/2010

Lab Reporting Batch : A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
WSASW-037-5656-SWM	A0C250407025D	AQ	Nitrocellulose		77		26.00	144.00	45.00

Associated Samples: All samples in Method Batch

Client Sample ID	Lab Sample ID
WSASW-037-5656-SW	A0C250407025
WSASW-038-5657-SW	A0C250407026
WSASW-039-5658-SW	A0C250407027

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Laboratory Control Sample / Laboratory Control Sample Duplicate Outlier Report

Method Batch : 0084148 **Analysis Method :** 8081A **Analysis Date :** 04/05/2010

Preparation Batch : 0084148 **Preparation Type :** 3520C **Preparation Date :** 03/25/2010

Lab Reporting Batch : A0C250407 **Lab ID:** TALCAN

			Reported Values		Project Limits (Percent)			
LCS Lab Sample ID	**Matrix**	**Analyte Name**	**Percent Recovery**	**RPD**	**Rejection Point**	**Lower Limit**	**Upper Limit**	**RPD**
A0C250000148C	AQ	Endrin ketone	70		10.00	75.00	125.00	50.00
A0C250000148L		gamma-BHC (Lindane)	91	25	10.00	25.00	135.00	22.00

Associated Samples

Client Sample ID	**Lab Sample ID**
WSASW-037-5656-SW	A0C250407025
WSASW-038-5657-SW	A0C250407026
WSASW-039-5658-SW	A0C250407027

Scope of Data Qualification: The outlier in the LCS qualifies that analyte in all samples with the same Preparation Batch ID as the LCS

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
LL8SB-060-5349-SO	A0C250407029	7471A	SO	Mercury	U	0.12	0.11764706	mg/kg
WSASB-021-5611-SO	A0C250407001	8330B	SO	1,3,5-Trinitrobenzene	U	0.25	0.01222222	mg/kg
				1,3-Dinitrobenzene	U	0.25	0.30555556	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.25	0.30555556	mg/kg
				2,4-Dinitrotoluene	U	0.25	0.30555556	mg/kg
				2,6-Dinitrotoluene	U	0.25	0.30555556	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.25	0.30555556	mg/kg
				2-Nitrotoluene	U	0.25	0.30555556	mg/kg
				3-Nitrotoluene	U	0.25	0.30555556	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.25	0.30555556	mg/kg
				4-Nitrotoluene	U	0.50	0.61111111	mg/kg
				Nitrobenzene	U	0.25	0.30555556	mg/kg
WSASB-021-6201-FD	A0C250407020	8330B	SO	1,3,5-Trinitrobenzene	U	0.24	0.01160494	mg/kg
				1,3-Dinitrobenzene	U	0.24	0.29012346	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.24	0.29012346	mg/kg
				2,4-Dinitrotoluene	U	0.24	0.29012346	mg/kg
				2,6-Dinitrotoluene	U	0.24	0.29012346	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.24	0.29012346	mg/kg
				2-Nitrotoluene	U	0.24	0.29012346	mg/kg
				3-Nitrotoluene	U	0.24	0.29012346	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.24	0.29012346	mg/kg
				Nitrobenzene	U	0.24	0.29012346	mg/kg
WSASB-022-5615-SO	A0C250407003	8081A	SO	beta-BHC	U	44	43.75	ug/kg
				Heptachlor	U	44	43.75	ug/kg
		8330B		1,3,5-Trinitrobenzene	U	0.24	0.011875	mg/kg
				1,3-Dinitrobenzene	U	0.24	0.296875	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.24	0.296875	mg/kg
				2,4-Dinitrotoluene	U	0.24	0.296875	mg/kg
				2,6-Dinitrotoluene	U	0.24	0.296875	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.24	0.296875	mg/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
WSASB-022-5615-SO	A0C250407003	8330B	SO	2-Nitrotoluene	U	0.24	0.296875	mg/kg
				3-Nitrotoluene	U	0.24	0.296875	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.24	0.296875	mg/kg
				4-Nitrotoluene	U	0.48	0.59375	mg/kg
				Nitrobenzene	U	0.24	0.296875	mg/kg
WSASB-022-5616-SO	A0C250407004	353.2 Modified	SO	Nitrocellulose	U	6.2	6.17283951	mg/kg
		8081A		4,4'-DDD	U	2.5	2.46913580	ug/kg
				4,4'-DDE	U	2.1	2.09876543	ug/kg
				4,4'-DDT	U	2.5	2.46913580	ug/kg
				alpha-BHC	U	3.1	3.08641975	ug/kg
				Dieldrin	U	2.1	2.09876543	ug/kg
				Endosulfan I	U	2.1	2.09876543	ug/kg
				Endosulfan II	U	3.1	3.08641975	ug/kg
				Endrin	U	2.1	2.09876543	ug/kg
				Endrin ketone	U	2.5	2.46913580	ug/kg
				gamma-BHC (Lindane)	U	3.1	3.08641975	ug/kg
				gamma-Chlordane	U	2.1	2.09876543	ug/kg
				Heptachlor epoxide	U	3.1	3.08641975	ug/kg
				Methoxychlor	U	6.2	6.17283951	ug/kg
				Toxaphene	U	83	82.7160494	ug/kg
		8082		Aroclor 1016	U	41	2.09876543	ug/kg
				Aroclor 1221	U	41	2.09876543	ug/kg
				Aroclor 1232	U	41	2.09876543	ug/kg
				Aroclor 1242	U	41	2.09876543	ug/kg
				Aroclor 1248	U	41	2.09876543	ug/kg
				Aroclor 1254	U	41	2.09876543	ug/kg
				Aroclor 1260	U	41	2.09876543	ug/kg
		8260B		1,1,1-Trichloroethane	U	6.2	6.17283951	ug/kg
				1,1,2,2-Tetrachloroethane	U	6.2	6.17283951	ug/kg
				1,1,2-Trichloroethane	U	6.2	6.17283951	ug/kg
				1,1-Dichloroethane	U	6.2	6.17283951	ug/kg
				1,1-Dichloroethene	U	6.2	6.17283951	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
WSASB-022-5616-SO	A0C250407004	8260B	SO	1,2-Dibromoethane (Ethylene Dibro	U	6.2	6.17283951	ug/kg
				1,2-Dichloroethane	U	6.2	6.17283951	ug/kg
				1,2-Dichloroethene (total)	U	6.2	6.17283951	ug/kg
				1,2-Dichloropropane	U	6.2	6.17283951	ug/kg
				2-Butanone (MEK)	U	25	24.6913580	ug/kg
				2-Hexanone	U	25	24.6913580	ug/kg
				4-methyl-2-pentanone (MIBK)	U	25	24.6913580	ug/kg
				Acetone	U	25	24.6913580	ug/kg
				Benzene	U	6.2	6.17283951	ug/kg
				Bromochloromethane	U	6.2	6.17283951	ug/kg
				Bromodichloromethane	U	6.2	6.17283951	ug/kg
				Bromoform	U	6.2	6.17283951	ug/kg
				Bromomethane (Methyl bromide)	U	6.2	6.17283951	ug/kg
				Carbon disulfide	U	6.2	6.17283951	ug/kg
				Carbon tetrachloride	U	6.2	6.17283951	ug/kg
				Chlorobenzene	U	6.2	6.17283951	ug/kg
				Chlorodibromomethane	U	6.2	6.17283951	ug/kg
				Chloroethane	U	6.2	6.17283951	ug/kg
				Chloroform	U	6.2	6.17283951	ug/kg
				Chloromethane	U	6.2	6.17283951	ug/kg
				cis-1,3-Dichloropropene	U	6.2	6.17283951	ug/kg
				Ethylbenzene	U	6.2	6.17283951	ug/kg
				Styrene	U	6.2	6.17283951	ug/kg
				Tetrachloroethene	U	6.2	6.17283951	ug/kg
				Toluene	U	6.2	6.17283951	ug/kg
				trans-1,3-Dichloropropene	U	6.2	6.17283951	ug/kg
				Trichloroethene	U	6.2	6.17283951	ug/kg
				Vinyl chloride	U	6.2	6.17283951	ug/kg
		8270C		1,2,4-Trichlorobenzene	U	410	407.407407	ug/kg
				1,2-Dichlorobenzene	U	410	407.407407	ug/kg
				1,3-Dichlorobenzene	U	410	407.407407	ug/kg
				1,4-Dichlorobenzene	U	410	407.407407	ug/kg
				2,4,5-Trichlorophenol	U	410	407.407407	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
WSASB-022-5616-SO	A0C250407004	8270C	SO	2,4,6-Trichlorophenol	U	410	407.407407	ug/kg
				2,4-Dichlorophenol	U	410	407.407407	ug/kg
				2,4-Dimethylphenol	U	410	407.407407	ug/kg
				2,4-Dinitrophenol	U	990	987.654321	ug/kg
				2,4-Dinitrotoluene	U	410	407.407407	ug/kg
				2,6-Dinitrotoluene	U	410	407.407407	ug/kg
				2-Chloronaphthalene	U	410	407.407407	ug/kg
				2-Chlorophenol	U	410	407.407407	ug/kg
				2-Methylnaphthalene	U	410	407.407407	ug/kg
				2-Methylphenol	U	410	407.407407	ug/kg
				2-Nitroaniline	U	990	987.654321	ug/kg
				2-Nitrophenol	U	410	407.407407	ug/kg
				3,3'-Dichlorobenzidine	U	410	407.407407	ug/kg
				3-methylphenol/4-methylphenol	U	410	#Error	ug/kg
				3-Nitroaniline	U	990	987.654321	ug/kg
				4,6-Dinitro-2-methylphenol	U	990	987.654321	ug/kg
				4-Bromophenyl phenyl ether	U	410	407.407407	ug/kg
				4-Chloro-3-methylphenol	U	410	407.407407	ug/kg
				4-Chloroaniline	U	410	407.407407	ug/kg
				4-Chlorophenyl phenyl ether	U	410	407.407407	ug/kg
				4-Nitroaniline	U	990	987.654321	ug/kg
				4-Nitrophenol	U	990	987.654321	ug/kg
				Benzoic acid	U	990	987.654321	ug/kg
				Benzyl alcohol	U	410	407.407407	ug/kg
				bis(2-Chloroethoxy)methane	U	410	407.407407	ug/kg
				bis(2-Chloroethyl) ether	U	410	407.407407	ug/kg
				Bis(2-chloroisopropyl) ether	U	410	407.407407	ug/kg
				bis(2-Ethylhexyl) phthalate	U	410	407.407407	ug/kg
				Butyl benzyl phthalate	U	410	407.407407	ug/kg
				Carbazole	U	62	61.7283951	ug/kg
				Dibenzofuran	U	410	407.407407	ug/kg
				Diethyl phthalate	U	410	407.407407	ug/kg
				Dimethyl phthalate	U	410	407.407407	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
WSASB-022-5616-SO	A0C250407004	8270C	SO	Di-n-octyl phthalate	U	410	407.407407	ug/kg
				Hexachlorobenzene	U	410	407.407407	ug/kg
				Hexachlorobutadiene	U	410	407.407407	ug/kg
				HEXACHLOROCYCLOPENTADIE	U	410	#Error	ug/kg
				Hexachloroethane	U	410	407.407407	ug/kg
				Isophorone	U	410	407.407407	ug/kg
				Nitrobenzene	U	410	407.407407	ug/kg
				N-Nitrosodi-n-propylamine	U	410	407.407407	ug/kg
				N-Nitrosodiphenylamine	U	410	407.407407	ug/kg
				Pentachlorophenol	U	410	407.407407	ug/kg
				Phenol	U	410	407.407407	ug/kg
WSASB-022-6200-FD	A0C250407019	353.2 Modified	SO	Nitrocellulose	U	5.9	5.88235294	mg/kg
		7471A		Mercury	U	0.12	0.11764706	mg/kg
		8081A		4,4'-DDD	U	2.4	2.35294118	ug/kg
				4,4'-DDT	U	2.4	2.35294118	ug/kg
				alpha-BHC	U	3.0	2.94117647	ug/kg
				Endosulfan II	U	3.0	2.94117647	ug/kg
				Endrin ketone	U	2.4	2.35294118	ug/kg
				gamma-BHC (Lindane)	U	3.0	2.94117647	ug/kg
				Heptachlor epoxide	U	3.0	2.94117647	ug/kg
				Methoxychlor	U	5.9	5.88235294	ug/kg
				Toxaphene	U	79	78.8235294	ug/kg
		8082		Aroclor 1016	U	39	2	ug/kg
				Aroclor 1221	U	39	2	ug/kg
				Aroclor 1232	U	39	2	ug/kg
				Aroclor 1242	U	39	2	ug/kg
				Aroclor 1248	U	39	2	ug/kg
				Aroclor 1254	U	39	2	ug/kg
				Aroclor 1260	U	39	2	ug/kg
		8260B		1,1,1-Trichloroethane	U	5.9	5.88235294	ug/kg
				1,1,2,2-Tetrachloroethane	U	5.9	5.88235294	ug/kg
				1,1,2-Trichloroethane	U	5.9	5.88235294	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
WSASB-022-6200-FD	A0C250407019	8260B	SO	1,1-Dichloroethane	U	5.9	5.88235294	ug/kg
				1,1-Dichloroethene	U	5.9	5.88235294	ug/kg
				1,2-Dibromoethane (Ethylene Dibro	U	5.9	5.88235294	ug/kg
				1,2-Dichloroethane	U	5.9	5.88235294	ug/kg
				1,2-Dichloroethene (total)	U	5.9	5.88235294	ug/kg
				1,2-Dichloropropane	U	5.9	5.88235294	ug/kg
				2-Butanone (MEK)	U	24	23.5294118	ug/kg
				2-Hexanone	U	24	23.5294118	ug/kg
				4-methyl-2-pentanone (MIBK)	U	24	23.5294118	ug/kg
				Acetone	U	24	23.5294118	ug/kg
				Benzene	U	5.9	5.88235294	ug/kg
				Bromochloromethane	U	5.9	5.88235294	ug/kg
				Bromodichloromethane	U	5.9	5.88235294	ug/kg
				Bromoform	U	5.9	5.88235294	ug/kg
				Bromomethane (Methyl bromide)	U	5.9	5.88235294	ug/kg
				Carbon disulfide	U	5.9	5.88235294	ug/kg
				Carbon tetrachloride	U	5.9	5.88235294	ug/kg
				Chlorobenzene	U	5.9	5.88235294	ug/kg
				Chlorodibromomethane	U	5.9	5.88235294	ug/kg
				Chloroethane	U	5.9	5.88235294	ug/kg
				Chloroform	U	5.9	5.88235294	ug/kg
				Chloromethane	U	5.9	5.88235294	ug/kg
				cis-1,3-Dichloropropene	U	5.9	5.88235294	ug/kg
				Ethylbenzene	U	5.9	5.88235294	ug/kg
				Styrene	U	5.9	5.88235294	ug/kg
				Tetrachloroethene	U	5.9	5.88235294	ug/kg
				Toluene	U	5.9	5.88235294	ug/kg
				trans-1,3-Dichloropropene	U	5.9	5.88235294	ug/kg
				Trichloroethene	U	5.9	5.88235294	ug/kg
				Vinyl chloride	U	5.9	5.88235294	ug/kg
				Xylene (Total)	U	12	11.7647059	ug/kg
		8270C		1,2,4-Trichlorobenzene	U	390	388.235294	ug/kg
				1,2-Dichlorobenzene	U	390	388.235294	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
WSASB-022-6200-FD	A0C250407019	8270C	SO	1,3-Dichlorobenzene	U	390	388.235294	ug/kg
				1,4-Dichlorobenzene	U	390	388.235294	ug/kg
				2,4,5-Trichlorophenol	U	390	388.235294	ug/kg
				2,4,6-Trichlorophenol	U	390	388.235294	ug/kg
				2,4-Dichlorophenol	U	390	388.235294	ug/kg
				2,4-Dimethylphenol	U	390	388.235294	ug/kg
				2,4-Dinitrotoluene	U	390	388.235294	ug/kg
				2,6-Dinitrotoluene	U	390	388.235294	ug/kg
				2-Chloronaphthalene	U	390	388.235294	ug/kg
				2-Chlorophenol	U	390	388.235294	ug/kg
				2-Methylnaphthalene	U	390	388.235294	ug/kg
				2-Methylphenol	U	390	388.235294	ug/kg
				2-Nitrophenol	U	390	388.235294	ug/kg
				3,3'-Dichlorobenzidine	U	390	388.235294	ug/kg
				3-methylphenol/4-methylphenol	U	390	#Error	ug/kg
				4-Bromophenyl phenyl ether	U	390	388.235294	ug/kg
				4-Chloro-3-methylphenol	U	390	388.235294	ug/kg
				4-Chloroaniline	U	390	388.235294	ug/kg
				4-Chlorophenyl phenyl ether	U	390	388.235294	ug/kg
				Benzyl alcohol	U	390	388.235294	ug/kg
				bis(2-Chloroethoxy)methane	U	390	388.235294	ug/kg
				bis(2-Chloroethyl) ether	U	390	388.235294	ug/kg
				Bis(2-chloroisopropyl) ether	U	390	388.235294	ug/kg
				bis(2-Ethylhexyl) phthalate	U	390	388.235294	ug/kg
				Butyl benzyl phthalate	U	390	388.235294	ug/kg
				Carbazole	U	59	58.8235294	ug/kg
				Dibenzofuran	U	390	388.235294	ug/kg
				Diethyl phthalate	U	390	388.235294	ug/kg
				Dimethyl phthalate	U	390	388.235294	ug/kg
				Di-n-butyl phthalate	U	390	388.235294	ug/kg
				Di-n-octyl phthalate	U	390	388.235294	ug/kg
				Hexachlorobenzene	U	390	388.235294	ug/kg
				Hexachlorobutadiene	U	390	388.235294	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
WSASB-022-6200-FD	A0C250407019	8270C	SO	HEXACHLOROCYCLOPENTADIE	U	390	#Error	ug/kg
				Hexachloroethane	U	390	388.235294	ug/kg
				Isophorone	U	390	388.235294	ug/kg
				Nitrobenzene	U	390	388.235294	ug/kg
				N-Nitrosodi-n-propylamine	U	390	388.235294	ug/kg
				N-Nitrosodiphenylamine	U	390	388.235294	ug/kg
				Pentachlorophenol	U	390	388.235294	ug/kg
				Phenol	U	390	388.235294	ug/kg
WSASB-023-5619-SO	A0C250407005	8330B	SO	1,3,5-Trinitrobenzene	U	0.25	0.012375	mg/kg
				1,3-Dinitrobenzene	U	0.25	0.309375	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.25	0.309375	mg/kg
				2,4-Dinitrotoluene	U	0.25	0.309375	mg/kg
				2,6-Dinitrotoluene	U	0.25	0.309375	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.25	0.309375	mg/kg
				2-Nitrotoluene	U	0.25	0.309375	mg/kg
				3-Nitrotoluene	U	0.25	0.309375	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.25	0.309375	mg/kg
				4-Nitrotoluene	U	0.50	0.61875	mg/kg
				Nitrobenzene	U	0.25	0.309375	mg/kg
WSASB-023-5620-SO	A0C250407006	8330B	SO	1,3,5-Trinitrobenzene	U	0.24	0.01132530	mg/kg
				1,3-Dinitrobenzene	U	0.24	0.28313253	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.24	0.28313253	mg/kg
				2,4-Dinitrotoluene	U	0.24	0.28313253	mg/kg
				2,6-Dinitrotoluene	U	0.24	0.28313253	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.24	0.28313253	mg/kg
				2-Nitrotoluene	U	0.24	0.28313253	mg/kg
				3-Nitrotoluene	U	0.24	0.28313253	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.24	0.28313253	mg/kg
				Nitrobenzene	U	0.24	0.28313253	mg/kg
WSASB-024-5624-SO	A0C250407008	7471A	SO	Mercury	U	0.13	0.12820513	mg/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
WSASB-024-5626-SO	A0C250407009	7471A	SO	Mercury	U	0.12	0.11627907	mg/kg
		8330B		1,3,5-Trinitrobenzene	U	0.25	0.01151163	mg/kg
				1,3-Dinitrobenzene	U	0.25	0.2877907	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.25	0.2877907	mg/kg
				2,4-Dinitrotoluene	U	0.25	0.2877907	mg/kg
				2,6-Dinitrotoluene	U	0.25	0.2877907	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.25	0.2877907	mg/kg
				2-Nitrotoluene	U	0.25	0.2877907	mg/kg
				3-Nitrotoluene	U	0.25	0.2877907	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.25	0.2877907	mg/kg
				4-Nitrotoluene	U	0.50	0.5755814	mg/kg
				Nitrobenzene	U	0.25	0.2877907	mg/kg
WSASB-024-6203-FD	A0C250407021	7471A	SO	Mercury	U	0.13	0.12820513	mg/kg
		8330B		1,3,5-Trinitrobenzene	U	0.26	0.01320513	mg/kg
				1,3-Dinitrobenzene	U	0.26	0.33012821	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.26	0.33012821	mg/kg
				2,4-Dinitrotoluene	U	0.26	0.33012821	mg/kg
				2,6-Dinitrotoluene	U	0.26	0.33012821	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.26	0.33012821	mg/kg
				2-Nitrotoluene	U	0.26	0.33012821	mg/kg
				3-Nitrotoluene	U	0.26	0.33012821	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.26	0.33012821	mg/kg
				4-Nitrotoluene	U	0.52	0.66025641	mg/kg
				Nitrobenzene	U	0.26	0.33012821	mg/kg
WSASB-026-5629-SO	A0C250407010	7471A	SO	Mercury	U	0.14	0.13698630	mg/kg
WSASB-026-5630-SO	A0C250407011	6020	SO	Antimony	U	0.67	0.66666667	mg/kg
WSASB-027-5633-SO	A0C250407012	8330B	SO	1,3,5-Trinitrobenzene	U	0.25	0.012375	mg/kg
				1,3-Dinitrobenzene	U	0.25	0.309375	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.25	0.309375	mg/kg
				2,4-Dinitrotoluene	U	0.25	0.309375	mg/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
WSASB-027-5633-SO	A0C250407012	8330B	SO	2,6-Dinitrotoluene	U	0.25	0.309375	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.25	0.309375	mg/kg
				2-Nitrotoluene	U	0.25	0.309375	mg/kg
				3-Nitrotoluene	U	0.25	0.309375	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.25	0.309375	mg/kg
				4-Nitrotoluene	U	0.50	0.61875	mg/kg
				Nitrobenzene	U	0.25	0.309375	mg/kg
WSASB-027-5634-SO	A0C250407013	7471A	SO	Mercury	U	0.13	0.12987013	mg/kg
WSASB-028-5637-SO	A0C250407014	8081A	SO	Aldrin	U	55	54.7945205	ug/kg
				beta-BHC	U	48	47.9452055	ug/kg
				delta-BHC	U	55	54.7945205	ug/kg
				Heptachlor	U	48	47.9452055	ug/kg
				Toxaphene	U	920	917.808219	ug/kg
		8260B		Xylene (Total)	U	14	13.6986301	ug/kg
		8270C		1,2,4-Trichlorobenzene	U	2300	2260.27397	ug/kg
				1,2-Dichlorobenzene	U	2300	2260.27397	ug/kg
				1,3-Dichlorobenzene	U	2300	2260.27397	ug/kg
				1,4-Dichlorobenzene	U	2300	2260.27397	ug/kg
				2,4,5-Trichlorophenol	U	2300	2260.27397	ug/kg
				2,4,6-Trichlorophenol	U	2300	2260.27397	ug/kg
				2,4-Dichlorophenol	U	2300	2260.27397	ug/kg
				2,4-Dimethylphenol	U	2300	2260.27397	ug/kg
				2,4-Dinitrophenol	U	5500	5479.45205	ug/kg
				2,4-Dinitrotoluene	U	2300	2260.27397	ug/kg
				2,6-Dinitrotoluene	U	2300	2260.27397	ug/kg
				2-Chloronaphthalene	U	2300	2260.27397	ug/kg
				2-Chlorophenol	U	2300	2260.27397	ug/kg
				2-Methylnaphthalene	U	2300	2260.27397	ug/kg
				2-Methylphenol	U	2300	2260.27397	ug/kg
				2-Nitroaniline	U	5500	5479.45205	ug/kg
				2-Nitrophenol	U	2300	2260.27397	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
WSASB-028-5637-SO	A0C250407014	8270C	SO	3,3'-Dichlorobenzidine	U	2300	2260.27397	ug/kg
				3-methylphenol/4-methylphenol	U	2300	#Error	ug/kg
				3-Nitroaniline	U	5500	5479.45205	ug/kg
				4,6-Dinitro-2-methylphenol	U	5500	5479.45205	ug/kg
				4-Bromophenyl phenyl ether	U	2300	2260.27397	ug/kg
				4-Chloro-3-methylphenol	U	2300	2260.27397	ug/kg
				4-Chloroaniline	U	2300	2260.27397	ug/kg
				4-Chlorophenyl phenyl ether	U	2300	2260.27397	ug/kg
				4-Nitroaniline	U	5500	5479.45205	ug/kg
				4-Nitrophenol	U	5500	5479.45205	ug/kg
				Benzoic acid	U	5500	5479.45205	ug/kg
				Benzyl alcohol	U	2300	2260.27397	ug/kg
				bis(2-Chloroethoxy)methane	U	2300	2260.27397	ug/kg
				bis(2-Chloroethyl) ether	U	2300	2260.27397	ug/kg
				Bis(2-chloroisopropyl) ether	U	2300	2260.27397	ug/kg
				bis(2-Ethylhexyl) phthalate	U	2300	2260.27397	ug/kg
				Butyl benzyl phthalate	U	2300	2260.27397	ug/kg
				Diethyl phthalate	U	2300	2260.27397	ug/kg
				Dimethyl phthalate	U	2300	2260.27397	ug/kg
				Di-n-butyl phthalate	U	2300	2260.27397	ug/kg
				Di-n-octyl phthalate	U	2300	2260.27397	ug/kg
				Hexachlorobenzene	U	2300	2260.27397	ug/kg
				Hexachlorobutadiene	U	2300	2260.27397	ug/kg
				HEXACHLOROCYCLOPENTADIE	U	2300	#Error	ug/kg
				Hexachloroethane	U	2300	2260.27397	ug/kg
				Isophorone	U	2300	2260.27397	ug/kg
				Nitrobenzene	U	2300	2260.27397	ug/kg
				N-Nitrosodi-n-propylamine	U	2300	2260.27397	ug/kg
				N-Nitrosodiphenylamine	U	2300	2260.27397	ug/kg
				Pentachlorophenol	U	2300	2260.27397	ug/kg
				Phenol	U	2300	2260.27397	ug/kg
WSASB-028-5638-SO	A0C250407015	353.2 Modified	SO	Nitrocellulose	U	6.2	6.17283951	mg/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
WSASB-028-5638-SO	A0C250407015	6020	SO	Antimony	U	0.62	0.61728395	mg/kg
		8081A		4,4'-DDD	U	2.5	2.46913580	ug/kg
				4,4'-DDE	U	2.1	2.09876543	ug/kg
				4,4'-DDT	U	2.5	2.46913580	ug/kg
				Aldrin	U	5.0	4.93827160	ug/kg
				alpha-BHC	U	3.1	3.08641975	ug/kg
				delta-BHC	U	5.0	4.93827160	ug/kg
				Dieldrin	U	2.1	2.09876543	ug/kg
				Endosulfan I	U	2.1	2.09876543	ug/kg
				Endosulfan II	U	3.1	3.08641975	ug/kg
				Endrin	U	2.1	2.09876543	ug/kg
				Endrin ketone	U	2.5	2.46913580	ug/kg
				gamma-BHC (Lindane)	U	3.1	3.08641975	ug/kg
				gamma-Chlordane	U	2.1	2.09876543	ug/kg
				Heptachlor epoxide	U	3.1	3.08641975	ug/kg
				Methoxychlor	U	6.2	6.17283951	ug/kg
				Toxaphene	U	83	82.7160494	ug/kg
		8082		Aroclor 1016	U	41	2.09876543	ug/kg
				Aroclor 1221	U	41	2.09876543	ug/kg
				Aroclor 1232	U	41	2.09876543	ug/kg
				Aroclor 1242	U	41	2.09876543	ug/kg
				Aroclor 1248	U	41	2.09876543	ug/kg
				Aroclor 1254	U	41	2.09876543	ug/kg
				Aroclor 1260	U	41	2.09876543	ug/kg
		8260B		1,1,1-Trichloroethane	U	6.2	6.17283951	ug/kg
				1,1,2,2-Tetrachloroethane	U	6.2	6.17283951	ug/kg
				1,1,2-Trichloroethane	U	6.2	6.17283951	ug/kg
				1,1-Dichloroethane	U	6.2	6.17283951	ug/kg
				1,1-Dichloroethene	U	6.2	6.17283951	ug/kg
				1,2-Dibromoethane (Ethylene Dibro	U	6.2	6.17283951	ug/kg
				1,2-Dichloroethane	U	6.2	6.17283951	ug/kg
				1,2-Dichloroethene (total)	U	6.2	6.17283951	ug/kg
				1,2-Dichloropropane	U	6.2	6.17283951	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
WSASB-028-5638-SO	A0C250407015	8260B	SO	2-Butanone (MEK)	U	25	24.6913580	ug/kg
				2-Hexanone	U	25	24.6913580	ug/kg
				4-methyl-2-pentanone (MIBK)	U	25	24.6913580	ug/kg
				Acetone	U	25	24.6913580	ug/kg
				Benzene	U	6.2	6.17283951	ug/kg
				Bromochloromethane	U	6.2	6.17283951	ug/kg
				Bromodichloromethane	U	6.2	6.17283951	ug/kg
				Bromoform	U	6.2	6.17283951	ug/kg
				Bromomethane (Methyl bromide)	U	6.2	6.17283951	ug/kg
				Carbon disulfide	U	6.2	6.17283951	ug/kg
				Carbon tetrachloride	U	6.2	6.17283951	ug/kg
				Chlorobenzene	U	6.2	6.17283951	ug/kg
				Chlorodibromomethane	U	6.2	6.17283951	ug/kg
				Chloroethane	U	6.2	6.17283951	ug/kg
				Chloroform	U	6.2	6.17283951	ug/kg
				Chloromethane	U	6.2	6.17283951	ug/kg
				cis-1,3-Dichloropropene	U	6.2	6.17283951	ug/kg
				Ethylbenzene	U	6.2	6.17283951	ug/kg
				Styrene	U	6.2	6.17283951	ug/kg
				Tetrachloroethene	U	6.2	6.17283951	ug/kg
				trans-1,3-Dichloropropene	U	6.2	6.17283951	ug/kg
				Trichloroethene	U	6.2	6.17283951	ug/kg
				Vinyl chloride	U	6.2	6.17283951	ug/kg
		8270C		1,2,4-Trichlorobenzene	U	410	407.407407	ug/kg
				1,2-Dichlorobenzene	U	410	407.407407	ug/kg
				1,3-Dichlorobenzene	U	410	407.407407	ug/kg
				1,4-Dichlorobenzene	U	410	407.407407	ug/kg
				2,4,5-Trichlorophenol	U	410	407.407407	ug/kg
				2,4,6-Trichlorophenol	U	410	407.407407	ug/kg
				2,4-Dichlorophenol	U	410	407.407407	ug/kg
				2,4-Dimethylphenol	U	410	407.407407	ug/kg
				2,4-Dinitrophenol	U	990	987.654321	ug/kg
				2,4-Dinitrotoluene	U	410	407.407407	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
WSASB-028-5638-SO	A0C250407015	8270C	SO	2,6-Dinitrotoluene	U	410	407.407407	ug/kg
				2-Chloronaphthalene	U	410	407.407407	ug/kg
				2-Chlorophenol	U	410	407.407407	ug/kg
				2-Methylnaphthalene	U	410	407.407407	ug/kg
				2-Methylphenol	U	410	407.407407	ug/kg
				2-Nitroaniline	U	990	987.654321	ug/kg
				2-Nitrophenol	U	410	407.407407	ug/kg
				3,3'-Dichlorobenzidine	U	410	407.407407	ug/kg
				3-methylphenol/4-methylphenol	U	410	#Error	ug/kg
				3-Nitroaniline	U	990	987.654321	ug/kg
				4,6-Dinitro-2-methylphenol	U	990	987.654321	ug/kg
				4-Bromophenyl phenyl ether	U	410	407.407407	ug/kg
				4-Chloro-3-methylphenol	U	410	407.407407	ug/kg
				4-Chloroaniline	U	410	407.407407	ug/kg
				4-Chlorophenyl phenyl ether	U	410	407.407407	ug/kg
				4-Nitroaniline	U	990	987.654321	ug/kg
				4-Nitrophenol	U	990	987.654321	ug/kg
				Benzoic acid	U	990	987.654321	ug/kg
				Benzyl alcohol	U	410	407.407407	ug/kg
				bis(2-Chloroethoxy)methane	U	410	407.407407	ug/kg
				bis(2-Chloroethyl) ether	U	410	407.407407	ug/kg
				Bis(2-chloroisopropyl) ether	U	410	407.407407	ug/kg
				bis(2-Ethylhexyl) phthalate	U	410	407.407407	ug/kg
				Butyl benzyl phthalate	U	410	407.407407	ug/kg
				Carbazole	U	62	61.7283951	ug/kg
				Dibenzofuran	U	410	407.407407	ug/kg
				Diethyl phthalate	U	410	407.407407	ug/kg
				Dimethyl phthalate	U	410	407.407407	ug/kg
				Di-n-butyl phthalate	U	410	407.407407	ug/kg
				Di-n-octyl phthalate	U	410	407.407407	ug/kg
				Hexachlorobenzene	U	410	407.407407	ug/kg
				Hexachlorobutadiene	U	410	407.407407	ug/kg
				HEXACHLOROCYCLOPENTADIE	U	410	#Error	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
WSASB-028-5638-SO	A0C250407015	8270C	SO	Hexachloroethane	U	410	407.407407	ug/kg
				Isophorone	U	410	407.407407	ug/kg
				Nitrobenzene	U	410	407.407407	ug/kg
				N-Nitrosodi-n-propylamine	U	410	407.407407	ug/kg
				N-Nitrosodiphenylamine	U	410	407.407407	ug/kg
				Pentachlorophenol	U	410	407.407407	ug/kg
				Phenol	U	410	407.407407	ug/kg
		8330B		1,3,5-Trinitrobenzene	U	0.25	0.01222222	mg/kg
				1,3-Dinitrobenzene	U	0.25	0.30555556	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.25	0.30555556	mg/kg
				2,4-Dinitrotoluene	U	0.25	0.30555556	mg/kg
				2,6-Dinitrotoluene	U	0.25	0.30555556	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.25	0.30555556	mg/kg
				2-Nitrotoluene	U	0.25	0.30555556	mg/kg
				3-Nitrotoluene	U	0.25	0.30555556	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.25	0.30555556	mg/kg
				4-Nitrotoluene	U	0.50	0.61111111	mg/kg
				Nitrobenzene	U	0.25	0.30555556	mg/kg
WSASB-028-5640-SO	A0C250407016	8081A	SO	4,4'-DDD	U	2.3	2.29885057	ug/kg
				Aldrin	U	4.6	4.59770115	ug/kg
				alpha-BHC	U	2.9	2.87356322	ug/kg
				delta-BHC	U	4.6	4.59770115	ug/kg
				Endosulfan II	U	2.9	2.87356322	ug/kg
				Endrin ketone	U	2.3	2.29885057	ug/kg
				gamma-BHC (Lindane)	U	2.9	2.87356322	ug/kg
				Heptachlor epoxide	U	2.9	2.87356322	ug/kg
		8082		Aroclor 1016	U	38	1.95402299	ug/kg
				Aroclor 1221	U	38	1.95402299	ug/kg
				Aroclor 1232	U	38	1.95402299	ug/kg
				Aroclor 1242	U	38	1.95402299	ug/kg
				Aroclor 1248	U	38	1.95402299	ug/kg
				Aroclor 1254	U	38	1.95402299	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
WSASB-028-5640-SO	A0C250407016	8082	SO	Aroclor 1260	U	38	1.95402299	ug/kg
		8260B		2-Butanone (MEK)	U	23	22.9885057	ug/kg
				2-Hexanone	U	23	22.9885057	ug/kg
				4-methyl-2-pentanone (MIBK)	U	23	22.9885057	ug/kg
				Acetone	U	23	22.9885057	ug/kg
		8270C		1,2,4-Trichlorobenzene	U	380	379.310345	ug/kg
				1,2-Dichlorobenzene	U	380	379.310345	ug/kg
				1,3-Dichlorobenzene	U	380	379.310345	ug/kg
				1,4-Dichlorobenzene	U	380	379.310345	ug/kg
				2,4,5-Trichlorophenol	U	380	379.310345	ug/kg
				2,4,6-Trichlorophenol	U	380	379.310345	ug/kg
				2,4-Dichlorophenol	U	380	379.310345	ug/kg
				2,4-Dimethylphenol	U	380	379.310345	ug/kg
				2,4-Dinitrophenol	U	920	919.54023	ug/kg
				2,4-Dinitrotoluene	U	380	379.310345	ug/kg
				2,6-Dinitrotoluene	U	380	379.310345	ug/kg
				2-Chloronaphthalene	U	380	379.310345	ug/kg
				2-Chlorophenol	U	380	379.310345	ug/kg
				2-Methylnaphthalene	U	380	379.310345	ug/kg
				2-Methylphenol	U	380	379.310345	ug/kg
				2-Nitroaniline	U	920	919.54023	ug/kg
				2-Nitrophenol	U	380	379.310345	ug/kg
				3,3'-Dichlorobenzidine	U	380	379.310345	ug/kg
				3-methylphenol/4-methylphenol	U	380	#Error	ug/kg
				3-Nitroaniline	U	920	919.54023	ug/kg
				4,6-Dinitro-2-methylphenol	U	920	919.54023	ug/kg
				4-Bromophenyl phenyl ether	U	380	379.310345	ug/kg
				4-Chloro-3-methylphenol	U	380	379.310345	ug/kg
				4-Chloroaniline	U	380	379.310345	ug/kg
				4-Chlorophenyl phenyl ether	U	380	379.310345	ug/kg
				4-Nitroaniline	U	920	919.54023	ug/kg
				4-Nitrophenol	U	920	919.54023	ug/kg
				Benzoic acid	U	920	919.54023	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
WSASB-028-5640-SO	A0C250407016	8270C	SO	Benzyl alcohol	U	380	379.310345	ug/kg
				bis(2-Chloroethoxy)methane	U	380	379.310345	ug/kg
				bis(2-Chloroethyl) ether	U	380	379.310345	ug/kg
				Bis(2-chloroisopropyl) ether	U	380	379.310345	ug/kg
				bis(2-Ethylhexyl) phthalate	U	380	379.310345	ug/kg
				Butyl benzyl phthalate	U	380	379.310345	ug/kg
				Dibenzofuran	U	380	379.310345	ug/kg
				Diethyl phthalate	U	380	379.310345	ug/kg
				Dimethyl phthalate	U	380	379.310345	ug/kg
				Di-n-butyl phthalate	U	380	379.310345	ug/kg
				Di-n-octyl phthalate	U	380	379.310345	ug/kg
				Hexachlorobenzene	U	380	379.310345	ug/kg
				Hexachlorobutadiene	U	380	379.310345	ug/kg
				HEXACHLOROCYCLOPENTADIE	U	380	#Error	ug/kg
				Hexachloroethane	U	380	379.310345	ug/kg
				Isophorone	U	380	379.310345	ug/kg
				Nitrobenzene	U	380	379.310345	ug/kg
				N-Nitrosodi-n-propylamine	U	380	379.310345	ug/kg
				N-Nitrosodiphenylamine	U	380	379.310345	ug/kg
				Pentachlorophenol	U	380	379.310345	ug/kg
				Phenol	U	380	379.310345	ug/kg
		8330B		1,3,5-Trinitrobenzene	U	0.24	0.0108046	mg/kg
				1,3-Dinitrobenzene	U	0.24	0.27011494	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.24	0.27011494	mg/kg
				2,4-Dinitrotoluene	U	0.24	0.27011494	mg/kg
				2,6-Dinitrotoluene	U	0.24	0.27011494	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.24	0.27011494	mg/kg
				2-Nitrotoluene	U	0.24	0.27011494	mg/kg
				3-Nitrotoluene	U	0.24	0.27011494	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.24	0.27011494	mg/kg
				Nitrobenzene	U	0.24	0.27011494	mg/kg
WSASD-037-5649-SD	A0C250407022	6020	SO	Thallium	U	0.30	0.29850746	mg/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
WSASD-037-5649-SD	A0C250407022	7471A	SO	Mercury	U	0.15	0.14925373	mg/kg
		8081A		Aldrin	U	120	119.402985	ug/kg
				delta-BHC	U	120	119.402985	ug/kg
				Methoxychlor	U	150	149.253731	ug/kg
		8260B		2-Hexanone	U	30	29.8507463	ug/kg
				4-methyl-2-pentanone (MIBK)	U	30	29.8507463	ug/kg
				Acetone	U	30	29.8507463	ug/kg
				Xylene (Total)	U	15	14.9253731	ug/kg
		8270C		2,4-Dinitrophenol	U	1200	1194.02985	ug/kg
				2-Nitroaniline	U	1200	1194.02985	ug/kg
				3-Nitroaniline	U	1200	1194.02985	ug/kg
				4,6-Dinitro-2-methylphenol	U	1200	1194.02985	ug/kg
				4-Nitroaniline	U	1200	1194.02985	ug/kg
				4-Nitrophenol	U	1200	1194.02985	ug/kg
				Benzoic acid	U	1200	1194.02985	ug/kg
WSASD-038-5650-SD	A0C250407023	7471A	SO	Mercury	U	0.12	0.11627907	mg/kg
WSASD-039-5651-SD	A0C250407024	6020	SO	Antimony	U	0.63	0.625	mg/kg
		8270C		Carbazole	U	63	62.5	ug/kg
WSASW-037-5656-SW	A0C250407025	8330B	AQ	3-Nitrotoluene	U	0.48	0.475	ug/L
				Hexahydro-1,3,5-Trinitro-1,3,5-Triaz	U	0.24	0.2375	ug/L

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Trip Blank

Lab Reporting Batch :
Lab ID:
Method/Preparation Batch :
Analysis Date :
Client Sample ID :
Preparation Date :
Lab Sample ID :
Preparation Type :

Analysis Method :

No contamination was found.

Continuing Calibration (CCV) Outlier Report (Organics)

There are no Organic Continuing Calibrations with outliers

Continuing Calibration (CCAL) Outlier Report (Inorganics)

There are no Inorganic Continuing Calibrations with outliers

Continuing Calibration (CCV) Outlier Report (Organics)

There are no Organic Continuing Calibrations with outliers

Continuing Calibration (CCAL) Outlier Report (Inorganics)

There are no Inorganic Continuing Calibrations with outliers

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
L10SB-066-5496-SO	A0C250407035	6020	SO	Antimony	J	0.12	0.56	mg/kg
				Cadmium	J	0.073	0.22	mg/kg
				Silver	J	0.016	0.56	mg/kg
				Sodium	J	29.5	112	mg/kg
				Thallium	J	0.080	0.22	mg/kg
LL8SB-060-5349-SO	A0C250407029			Antimony	J	0.075	0.59	mg/kg
				Cadmium	J	0.066	0.23	mg/kg
				Silver	J	0.029	0.59	mg/kg
				Thallium	J	0.21	0.23	mg/kg
PBA08-QC-6018-TB	A0C250407028	8260B	AQ	Acetone	J	2.8	10	ug/L
WSASB-021-5611-SO	A0C250407001	6020	SO	Antimony	J	0.19	0.62	mg/kg
				Silver	J	0.070	0.62	mg/kg
				Sodium	J	29.7	123	mg/kg
				Thallium	J	0.18	0.25	mg/kg
		7471A		Mercury	J	0.076	0.12	mg/kg
WSASB-021-5612-SO	A0C250407002	6020		Antimony	J	0.084	0.62	mg/kg
				Cadmium	J	0.071	0.25	mg/kg
				Silver	J	0.016	0.62	mg/kg
				Sodium	J	49.8	125	mg/kg
				Thallium	J	0.17	0.25	mg/kg
WSASB-021-6201-FD	A0C250407020			Antimony	J	0.093	0.62	mg/kg
				Cadmium	J	0.049	0.25	mg/kg
				Silver	J	0.033	0.62	mg/kg
				Sodium	J	74.6	124	mg/kg
				Thallium	J	0.18	0.25	mg/kg
WSASB-022-5615-SO	A0C250407003			Antimony	J	0.098	0.62	mg/kg
				Cadmium	J	0.12	0.25	mg/kg
				Silver	J	0.018	0.62	mg/kg
				Sodium	J	33.0	125	mg/kg
				Thallium	J	0.14	0.25	mg/kg
		8260B		Methylene chloride	J B	3.8	6.2	ug/kg
		8270C		2-Methylnaphthalene	J	22	820	ug/kg
				bis(2-Ethylhexyl) phthalate	J	84	820	ug/kg
				Dibenzofuran	J	70	820	ug/kg
WSASB-022-5616-SO	A0C250407004	6020		Antimony	J	0.087	0.62	mg/kg
				Cadmium	J	0.062	0.25	mg/kg

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
WSASB-022-5616-SO	A0C250407004	6020	SO	Silver	J	0.014	0.62	mg/kg
				Sodium	J	44.9	124	mg/kg
				Thallium	J	0.17	0.25	mg/kg
		8260B		Methylene chloride	J B	4.0	6.2	ug/kg
		8270C		Di-n-butyl phthalate	J	22	410	ug/kg
WSASB-022-6200-FD	A0C250407019	6020		Antimony	J	0.079	0.59	mg/kg
				Cadmium	J	0.052	0.24	mg/kg
				Silver	J	0.013	0.59	mg/kg
				Sodium	J	50.6	118	mg/kg
				Thallium	J	0.15	0.24	mg/kg
		8260B		Methylene chloride	J B	4.4	5.9	ug/kg
WSASB-023-5619-SO	A0C250407005	6020		Antimony	J	0.081	0.62	mg/kg
				Cadmium	J	0.064	0.25	mg/kg
				Silver	J	0.019	0.62	mg/kg
				Sodium	J	45.1	125	mg/kg
				Thallium	J	0.18	0.25	mg/kg
WSASB-023-5620-SO	A0C250407006			Antimony	J	0.096	0.60	mg/kg
				Cadmium	J	0.050	0.24	mg/kg
				Silver	J	0.013	0.60	mg/kg
				Sodium	J	42.5	120	mg/kg
				Thallium	J	0.17	0.24	mg/kg
WSASB-024-5623-SO	A0C250407007			Antimony	J	0.090	0.64	mg/kg
				Silver	J	0.026	0.64	mg/kg
				Sodium	J	35.8	128	mg/kg
				Thallium	J	0.15	0.26	mg/kg
WSASB-024-5624-SO	A0C250407008			Antimony	J	0.083	0.64	mg/kg
				Cadmium	J	0.046	0.26	mg/kg
				Silver	J	0.017	0.64	mg/kg
				Sodium	J	59.2	129	mg/kg
				Thallium	J	0.17	0.26	mg/kg
WSASB-024-5626-SO	A0C250407009			Cadmium	J	0.067	0.23	mg/kg
				Silver	J	0.030	0.58	mg/kg
				Sodium	J	60.3	116	mg/kg
				Thallium	J	0.12	0.23	mg/kg
WSASB-024-6203-FD	A0C250407021			Antimony	J	0.088	0.64	mg/kg
				Cadmium	J	0.052	0.26	mg/kg

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
WSASB-024-6203-FD	A0C250407021	6020	SO	Silver	J	0.016	0.64	mg/kg
				Sodium	J	62.7	129	mg/kg
				Thallium	J	0.17	0.26	mg/kg
WSASB-026-5629-SO	A0C250407010			Cadmium	J	0.058	0.27	mg/kg
				Silver	J	0.018	0.68	mg/kg
				Sodium	J	38.6	136	mg/kg
				Thallium	J	0.17	0.27	mg/kg
WSASB-026-5630-SO	A0C250407011			Cadmium	J	0.043	0.27	mg/kg
				Silver	J	0.036	0.67	mg/kg
				Sodium	J	62.4	134	mg/kg
				Thallium	J	0.22	0.27	mg/kg
WSASB-027-5633-SO	A0C250407012			Antimony	J	0.079	0.62	mg/kg
				Cadmium	J	0.099	0.25	mg/kg
				Silver	J	0.021	0.62	mg/kg
				Sodium	J	37.7	125	mg/kg
				Thallium	J	0.16	0.25	mg/kg
WSASB-027-5634-SO	A0C250407013			Antimony	J	0.091	0.65	mg/kg
				Cadmium	J	0.048	0.26	mg/kg
				Silver	J	0.019	0.65	mg/kg
				Sodium	J	59.7	130	mg/kg
				Thallium	J	0.20	0.26	mg/kg
WSASB-028-5637-SO	A0C250407014			Antimony	J	0.10	0.68	mg/kg
				Cadmium	J	0.26	0.27	mg/kg
				Silver	J	0.028	0.68	mg/kg
				Sodium	J	29.1	137	mg/kg
				Thallium	J	0.13	0.27	mg/kg
		8260B		Methylene chloride	J B	3.4	6.8	ug/kg
		8270C		Dibenzofuran	J	190	2300	ug/kg
		8330B		Methyl-2,4,6-Trinitrophenylnitramine (T	J PG	0.026	0.25	mg/kg
WSASB-028-5638-SO	A0C250407015	6020		Cadmium	J	0.039	0.25	mg/kg
				Silver	J	0.013	0.62	mg/kg
				Sodium	J	49.8	124	mg/kg
				Thallium	J	0.17	0.25	mg/kg
		7471A		Mercury	J	0.025	0.12	mg/kg
		8260B		Methylene chloride	J B	3.7	6.2	ug/kg
				Toluene	J	0.34	6.2	ug/kg

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
WSASB-028-5640-SO	A0C250407016	6020	SO	Cadmium	J	0.052	0.23	mg/kg
				Silver	J	0.025	0.57	mg/kg
				Sodium	J	56.6	115	mg/kg
				Thallium	J	0.10	0.23	mg/kg
		8081A		4,4'-DDT	J	0.85	2.3	ug/kg
		8260B		Methylene chloride	J B	3.6	5.7	ug/kg
WSASB-029-5641-SO	A0C250407017	6020		Antimony	J	0.088	0.66	mg/kg
				Cadmium	J	0.10	0.27	mg/kg
				Silver	J	0.013	0.66	mg/kg
				Sodium	J	32.9	133	mg/kg
				Thallium	J	0.15	0.27	mg/kg
		7471A		Mercury	J	0.027	0.13	mg/kg
WSASB-029-5642-SO	A0C250407018	6020		Antimony	J	0.080	0.62	mg/kg
				Cadmium	J	0.050	0.25	mg/kg
				Silver	J	0.010	0.62	mg/kg
				Sodium	J	37.2	125	mg/kg
				Thallium	J	0.16	0.25	mg/kg
WSASD-037-5649-SD	A0C250407022			Antimony	J	0.095	0.74	mg/kg
				Cadmium	J	0.15	0.30	mg/kg
				Selenium	J	0.68	0.74	mg/kg
				Silver	J	0.027	0.74	mg/kg
				Sodium	J	35.7	148	mg/kg
		8260B		2-Butanone (MEK)	J	2.1	30	ug/kg
				Methylene chloride	J B	4.5	7.4	ug/kg
		8270C		2-Methylnaphthalene	J	80	490	ug/kg
WSASD-038-5650-SD	A0C250407023	6020		Cadmium	J	0.11	0.23	mg/kg
				Selenium	J	0.46	0.58	mg/kg
				Silver	J	0.012	0.58	mg/kg
				Sodium	J	28.8	116	mg/kg
				Thallium	J	0.078	0.23	mg/kg
		8270C		2-Methylnaphthalene	J	8.4	380	ug/kg
WSASD-039-5651-SD	A0C250407024	6020		Silver	J	0.017	0.63	mg/kg
				Sodium	J	23.9	125	mg/kg
				Thallium	J	0.10	0.25	mg/kg
		7471A		Mercury	J	0.045	0.13	mg/kg
WSASW-037-5656-SW	A0C250407025	6020	AQ	Arsenic	J	0.51	5.0	ug/L

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
WSASW-037-5656-SW	A0C250407025	6020	AQ	Cobalt	J B	0.16	5.0	ug/L
				Lead	J	0.25	3.0	ug/L
				Nickel	J	0.80	10.0	ug/L
		8260B		Acetone	J	1.4	10	ug/L
		8270C		bis(2-Ethylhexyl) phthalate	J B	2.9	10	ug/L
				Di-n-butyl phthalate	J B	1.6	10	ug/L
WSASW-038-5657-SW	A0C250407026	6020		Antimony	J	0.28	5.0	ug/L
				Arsenic	J	0.58	5.0	ug/L
				Cobalt	J B	0.16	5.0	ug/L
				Lead	J	0.26	3.0	ug/L
				Nickel	J	0.85	10.0	ug/L
				Selenium	J	0.22	5.0	ug/L
				Vanadium	J	0.63	10.0	ug/L
		8270C		bis(2-Ethylhexyl) phthalate	J B	2.4	10	ug/L
				Di-n-butyl phthalate	J B	1.3	10	ug/L
WSASW-039-5658-SW	A0C250407027	6020		Arsenic	J	0.82	5.0	ug/L
				Chromium	J	0.76	5.0	ug/L
				Cobalt	J B	0.22	5.0	ug/L
				Copper	J	1.8	5.0	ug/L
				Lead	J	0.46	3.0	ug/L
				Nickel	J	1.3	10.0	ug/L
				Selenium	J	0.26	5.0	ug/L
				Vanadium	J	1.0	10.0	ug/L
		8260B		Acetone	J	1.5	10	ug/L
		8270C		bis(2-Ethylhexyl) phthalate	J B	2.9	10	ug/L
				Di-n-butyl phthalate	J B	1.1	10	ug/L

Method Blank Outlier Report

Lab Reporting Batch : A0C250407
Lab ID: TALCAN
Analysis Method : 8270C
Analysis Date : 04/12/2010
Preparation Type : 3520C
Preparation Date : 03/25/2010
Method Blank Lab Sample ID : A0C250000140B
Preparation Batch : 0084140

bis(2-Ethylhexyl) phthalate	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**8.2**	**10**	**ug/L**	**J**	**Common Contaminant**

bis(2-Ethylhexyl) phthalate was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
WSASW-037-5656-SW	A0C250407025	1	2.9	J B	ug/L
WSASW-038-5657-SW	A0C250407026	1	2.4	J B	ug/L
WSASW-039-5658-SW	A0C250407027	1	2.9	J B	ug/L

Di-n-butyl phthalate	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**0.71**	**10**	**ug/L**	**J**	**Common Contaminant**

Di-n-butyl phthalate was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
WSASW-037-5656-SW	A0C250407025	1	1.6	J B	ug/L
WSASW-038-5657-SW	A0C250407026	1	1.3	J B	ug/L
WSASW-039-5658-SW	A0C250407027	1	1.1	J B	ug/L

Method Blank Outlier Report

Lab Reporting Batch : A0C250407
Lab ID: TALCAN
Analysis Method : 8260B
Analysis Date : 03/25/2010
Preparation Type : 5030B
Preparation Date : 03/25/2010
Method Blank Lab Sample ID : A0C250000407B
Preparation Batch : 0084407

Methylene chloride	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**2.5**	**5.0**	**ug/kg**	**J**	**Common Contaminant**

Methylene chloride was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
WSASB-022-5615-SO	A0C250407003	1	3.8	J B	ug/kg
WSASB-022-5616-SO	A0C250407004	1	4.0	J B	ug/kg
WSASB-028-5637-SO	A0C250407014	1	3.4	J B	ug/kg
WSASB-028-5638-SO	A0C250407015	1	3.7	J B	ug/kg
WSASB-028-5640-SO	A0C250407016	1	3.6	J B	ug/kg

Method Blank Outlier Report

Lab Reporting Batch : A0C250407
Lab ID: TALCAN
Analysis Method : 6020
Analysis Date : 04/02/2010
Preparation Type : 3005A
Preparation Date : 03/26/2010
Method Blank Lab Sample ID : A0C260000016B
Preparation Batch : 0085016

Cobalt	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**0.062**	**5.0**	**ug/L**	**J**	

Cobalt was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
WSASW-037-5656-SW	A0C250407025	1	0.16	J B	ug/L
WSASW-038-5657-SW	A0C250407026	1	0.16	J B	ug/L
WSASW-039-5658-SW	A0C250407027	1	0.22	J B	ug/L

Manganese	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**1.9**	**10.0**	**ug/L**	**J**	

Manganese contamination found in the method blank did not qualify any samples.

Method Blank Outlier Report

Lab Reporting Batch : A0C250407 **Lab ID:** TALCAN

Analysis Method : 6020 **Analysis Date :** 03/29/2010

Preparation Type : 3050B **Preparation Date :** 03/26/2010

Method Blank Lab Sample ID : A0C260000022B **Preparation Batch :** 0085022

Cobalt	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**0.0047**	**0.50**	**mg/kg**	**J**	

Cobalt contamination found in the method blank did not qualify any samples.

Method Blank Outlier Report

Lab Reporting Batch : A0C250407
Lab ID: TALCAN
Analysis Method : 8260B
Analysis Date : 03/26/2010
Preparation Type : 5030B
Preparation Date : 03/26/2010
Method Blank Lab Sample ID : A0C290000407B
Preparation Batch : 0088407

Methylene chloride	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**3.3**	**5.0**	**ug/kg**	**J**	**Common Contaminant**

Methylene chloride was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
WSASB-022-6200-FD	A0C250407019	1	4.4	J B	ug/kg
WSASD-037-5649-SD	A0C250407022	1	4.5	J B	ug/kg

Surrogate Recovery Outlier Report

Lab Report Batch: A0C250407 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Dilution	Matrix	Surrogate	Percent Recovery	Criteria (percent) Lower Limit	Upper Limit	Reject Point	Associated Target Analytes
WSASB-022-5615-SO	A0C250407003	8260B	1	SO	4-Bromofluorobenzene	77	85.0	120.0	10.0	All Target
					Toluene-d8	84	85.0	115.0	10.0	All Target
WSASB-022-5615-SOMS	A0C250407003S	8081A	10	SO	Decachlorobiphenyl	236	55.0	130.0	10.0	All Target
WSASB-022-5615-SOMSD	A0C250407003D	8081A	10	SO	Decachlorobiphenyl	286	55.0	130.0	10.0	All Target
WSASB-022-5616-SO	A0C250407004	8260B	1	SO	4-Bromofluorobenzene	80	85.0	120.0	10.0	All Target
					Toluene-d8	84	85.0	115.0	10.0	All Target
WSASB-022-6200-FD	A0C250407019	8260B	1	SO	Toluene-d8	84	85.0	115.0	10.0	All Target
WSASB-028-5637-SO	A0C250407014	8081A	10	SO	Decachlorobiphenyl	200	55.0	130.0	10.0	All Target
		8260B	1		4-Bromofluorobenzene	75	85.0	120.0	10.0	All Target
					Toluene-d8	82	85.0	115.0	10.0	All Target
WSASB-028-5638-SO	A0C250407015	8260B	1	SO	4-Bromofluorobenzene	79	85.0	120.0	10.0	All Target
WSASB-028-5640-SO	A0C250407016	8260B	1	SO	4-Bromofluorobenzene	76	85.0	120.0	10.0	All Target
WSASD-037-5649-SD	A0C250407022	8081A	20	SO	Decachlorobiphenyl	180	55.0	130.0	10.0	All Target
		8260B	1		4-Bromofluorobenzene	77	85.0	120.0	10.0	All Target
					Toluene-d8	80	85.0	115.0	10.0	All Target
WSASW-039-5658-SW	A0C250407027	8082	1	AQ	Decachlorobiphenyl	24	40.0	135.0	10.0	All Target

Project Number and Name: ***172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI***

QC Outlier Report: Field Duplicates (Non-qualified Outliers)

Lab Report Batch: **Lab ID:**

			Field Sample				Field Sample Duplicate						
Analysis Method	Matrix	Analyte Name	Client Sample ID	Ana Type	Result	Lab Qualifier	Client Sample Duplicate ID	Ana Type	Result	Lab Qualifiers	RPD Dup* (%)	RPD Criteria (%)	Result Units

*Note: Outlier report also includes analytes detected in one sample but not in the related sample, i.e., analyte was detected in the field sample but not in the field duplicate sample, or vice versa. In this case, RPD value assigned to the field duplicate sample is 200.

QC Outlier Report: Temperature (Non-qualified Outliers)

Lab Report Batch: A0D130516 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Sample Temperature (C)	Criteria	
					Lower Limit	Upper Limit
LL11SS-079-5605-SO	A0D130516011	353.2 Modified	SO	1.3	2.0	6.0
LL11SS-079-5605-SOMS	A0D130516011S	353.2 Modified	SO	1.3	2.0	6.0
LL11SS-079-5605-SOMSD	A0D130516011D	353.2 Modified	SO	1.3	2.0	6.0
LL11SS-079-5605-SO	A0D130516011	8081A	SO	1.3	2.0	
LL11SS-079-5605-SOMS	A0D130516011S	8081A	SO	1.3	2.0	
LL11SS-079-5605-SOMSD	A0D130516011D	8081A	SO	1.3	2.0	
LL11SS-070-5596-SO	A0D130516001	8082	SO	1.3	2.0	
LL11SS-071-5597-SO	A0D130516002	8082	SO	1.3	2.0	
LL11SS-074-5600-SO	A0D130516005	8082	SO	1.3	2.0	
LL11SS-076-5602-SO	A0D130516007	8082	SO	1.3	2.0	
LL11SS-076-6183-FD	A0D130516008	8082	SO	1.3	2.0	
LL11SS-077-5603-SO	A0D130516009	8082	SO	1.3	2.0	
LL11SS-078-5604-SO	A0D130516010	8082	SO	1.3	2.0	
LL11SS-079-5605-SO	A0D130516011	8082	SO	1.3	2.0	
LL11SS-079-5605-SOMS	A0D130516011S	8082	SO	1.3	2.0	
LL11SS-079-5605-SOMSD	A0D130516011D	8082	SO	1.3	2.0	
LL11SS-080-5606-SO	A0D130516012	8082	SO	1.3	2.0	
LL11SS-081-5607-SO	A0D130516013	8082	SO	1.3	2.0	
LL11SS-079-5605-SO	A0D130516011	8260B	SO	1.3	2.0	
LL11SS-079-5605-SOMS	A0D130516011S	8260B	SO	1.3	2.0	
LL11SS-079-5605-SOMSD	A0D130516011D	8260B	SO	1.3	2.0	
LL11SS-079-5605-SO	A0D130516011	8270C	SO	1.3	2.0	
LL11SS-079-5605-SOMS	A0D130516011S	8270C	SO	1.3	2.0	
LL11SS-079-5605-SOMSD	A0D130516011D	8270C	SO	1.3	2.0	
LL11SS-070-5596-SO	A0D130516001	8270C PAH	SO	1.3	2.0	
LL11SS-071-5597-SO	A0D130516002	8270C PAH	SO	1.3	2.0	
LL11SS-074-5600-SO	A0D130516005	8270C PAH	SO	1.3	2.0	
LL11SS-076-5602-SO	A0D130516007	8270C PAH	SO	1.3	2.0	
LL11SS-076-6183-FD	A0D130516008	8270C PAH	SO	1.3	2.0	

QC Outlier Report: Temperature (Non-qualified Outliers)

Lab Report Batch: A0D130516 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Sample Temperature (C)	Criteria	
					Lower Limit	Upper Limit
LL11SS-077-5603-SO	A0D130516009	8270C PAH	SO	1.3	2.0	
LL11SS-078-5604-SO	A0D130516010	8270C PAH	SO	1.3	2.0	
LL11SS-079-5605-SO	A0D130516011	8270C PAH	SO	1.3	2.0	
LL11SS-079-5605-SOMS	A0D130516011S	8270C PAH	SO	1.3	2.0	
LL11SS-079-5605-SOMSD	A0D130516011D	8270C PAH	SO	1.3	2.0	
LL11SS-080-5606-SO	A0D130516012	8270C PAH	SO	1.3	2.0	
LL11SS-081-5607-SO	A0D130516013	8270C PAH	SO	1.3	2.0	
LL11SS-070-5596-SO	A0D130516001	8330B	SO	1.3	2.0	
LL11SS-071-5597-SO	A0D130516002	8330B	SO	1.3	2.0	
LL11SS-074-5600-SO	A0D130516005	8330B	SO	1.3	2.0	
LL11SS-076-5602-SO	A0D130516007	8330B	SO	1.3	2.0	
LL11SS-076-6183-FD	A0D130516008	8330B	SO	1.3	2.0	
LL11SS-077-5603-SO	A0D130516009	8330B	SO	1.3	2.0	
LL11SS-078-5604-SO	A0D130516010	8330B	SO	1.3	2.0	
LL11SS-079-5605-SO	A0D130516011	8330B	SO	1.3	2.0	
LL11SS-079-5605-SOMS	A0D130516011S	8330B	SO	1.3	2.0	
LL11SS-079-5605-SOMSD	A0D130516011D	8330B	SO	1.3	2.0	
LL11SS-080-5606-SO	A0D130516012	8330B	SO	1.3	2.0	
LL11SS-081-5607-SO	A0D130516013	8330B	SO	1.3	2.0	
LL11SS-079-5605-SO	A0D130516011	8330M	SO	1.3	2.0	
LL11SS-079-5605-SOMS	A0D130516011S	8330M	SO	1.3	2.0	
LL11SS-079-5605-SOMSD	A0D130516011D	8330M	SO	1.3	2.0	

Temperature Outlier Report

Lab Report Batch: **Lab ID:**

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Sample Temp (C)	Temperature Criteria (C)			Between High and Gross Exceedence			Above Gross Exceedence		
								Detect Quals		Non-Detect Qual(s)	Detect Quals		Non-Detect Qual(s)
					Low	High	Gross Exceed	Non-Biased	Biased		Non-Biased	Biased	

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0104017 **Analysis Method :** 6020 **Analysis Date :** 04/27/2010

Preparation Batch : 0104017 **Preparation Type :** 3050B **Preparation Date :** 04/14/2010

Lab Reporting Batch : A0D130516 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
LL11SS-079-5605-SOMS	A0D130516011S	SO	Antimony	25		30.00	75.00	125.00	20.00
			Zinc	205		30.00	10.00	199.00	20.00
LL11SS-079-5605-SOMS	A0D130516011D		Antimony	27		30.00	75.00	125.00	20.00
			Zinc	202		30.00	10.00	199.00	20.00

Associated Samples: All samples in Method Batch

Client Sample ID	Lab Sample ID
L10SS-076-5532-SO	A0D130516014
L10SS-077-5533-SO	A0D130516015
L10SS-078-5534-SO	A0D130516016
LL11SS-070-5596-SO	A0D130516001
LL11SS-071-5597-SO	A0D130516002
LL11SS-072-5598-SO	A0D130516003
LL11SS-073-5599-SO	A0D130516004
LL11SS-074-5600-SO	A0D130516005
LL11SS-075-5601-SO	A0D130516006
LL11SS-076-5602-SO	A0D130516007
LL11SS-076-6183-FD	A0D130516008
LL11SS-077-5603-SO	A0D130516009
LL11SS-078-5604-SO	A0D130516010
LL11SS-079-5605-SO	A0D130516011
LL11SS-080-5606-SO	A0D130516012
LL11SS-081-5607-SO	A0D130516013

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0104028 **Analysis Method :** 8081A **Analysis Date :** 05/05/2010

Preparation Batch : 0104028 **Preparation Type :** 3540C **Preparation Date :** 04/14/2010

Lab Reporting Batch : A0D130516 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
LL11SS-079-5605-SOMS	A0D130516011S	SO	4,4'-DDD	143		0.00	30.00	135.00	35.00
			Endosulfan II	0.0		0.00	35.00	140.00	27.00
LL11SS-079-5605-SOMS	A0D130516011D		Endosulfan II		200	0.00	35.00	140.00	27.00

Associated Samples: Parent sample only

Client Sample ID	Lab Sample ID
LL11SS-079-5605-SO	A0D130516011

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0113226 **Analysis Method :** 8270C **Analysis Date :** 05/03/2010

Preparation Batch : 0113226 **Preparation Type :** 3540C **Preparation Date :** 04/23/2010

Lab Reporting Batch : A0D130516 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
LL11SS-079-5605-SOMS	A0D130516011S	SO	1,2-Dichlorobenzene	44		0.00	45.00	95.00	25.00
			3,3'-Dichlorobenzidine	0.0		0.00	10.00	130.00	56.00
LL11SS-079-5605-SOMS	A0D130516011D		1,2-Dichlorobenzene		35	0.00	45.00	95.00	25.00
			1,3-Dichlorobenzene		35	0.00	40.00	100.00	30.00
			1,4-Dichlorobenzene		34	0.00	35.00	105.00	30.00
			3,3'-Dichlorobenzidine	0.0		0.00	10.00	130.00	56.00
			4-Chloroaniline		48	0.00	10.00	95.00	30.00
			Bis(2-chloroisopropyl) ether		32	0.00	20.00	115.00	30.00
			Hexachloroethane		34	0.00	35.00	110.00	29.00

Associated Samples: Parent sample only

Client Sample ID	Lab Sample ID
LL11SS-079-5605-SO	A0D130516011

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Laboratory Control Sample / Laboratory Control Sample Duplicate Outlier Report

Method Batch : 0104034 **Analysis Method :** 8270C **Analysis Date :** 04/22/2010

Preparation Batch : 0104034 **Preparation Type :** 3540C **Preparation Date :** 04/14/2010

Lab Reporting Batch : A0D130516 **Lab ID:** TALCAN

			Reported Values		Project Limits (Percent)			
LCS Lab Sample ID	**Matrix**	**Analyte Name**	**Percent Recovery**	**RPD**	**Rejection Point**	**Lower Limit**	**Upper Limit**	**RPD**
A0D140000034C	SO	Pentachlorophenol	18		10.00	25.00	120.00	87.00

Associated Samples

Client Sample ID	**Lab Sample ID**
LL11SS-070-5596-SO	A0D130516001
LL11SS-071-5597-SO	A0D130516002
LL11SS-074-5600-SO	A0D130516005
LL11SS-076-5602-SO	A0D130516007
LL11SS-080-5606-SO	A0D130516012
LL11SS-081-5607-SO	A0D130516013

Scope of Data Qualification: The outlier in the LCS qualifies that analyte in all samples with the same Preparation Batch ID as the LCS

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0D130516 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
LL11SS-070-5596-SO	A0D130516001	8082	SO	Aroclor 1016	U	39	2	ug/kg
				Aroclor 1221	U	39	2	ug/kg
				Aroclor 1232	U	39	2	ug/kg
				Aroclor 1242	U	39	2	ug/kg
				Aroclor 1248	U	39	2	ug/kg
				Aroclor 1254	U	39	2	ug/kg
				Aroclor 1260	U	39	2	ug/kg
		8330B		1,3,5-Trinitrobenzene	U	0.24	0.01117647	mg/kg
				1,3-Dinitrobenzene	U	0.24	0.27941176	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.24	0.27941176	mg/kg
				2,4-Dinitrotoluene	U	0.24	0.27941176	mg/kg
				2,6-Dinitrotoluene	U	0.24	0.27941176	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.24	0.27941176	mg/kg
				2-Nitrotoluene	U	0.24	0.27941176	mg/kg
				3-Nitrotoluene	U	0.24	0.27941176	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.24	0.27941176	mg/kg
				4-Nitrotoluene	U	0.48	0.55882353	mg/kg
				Nitrobenzene	U	0.24	0.27941176	mg/kg
LL11SS-071-5597-SO	A0D130516002	8082	SO	Aroclor 1016	U	41	2.09876543	ug/kg
				Aroclor 1221	U	41	2.09876543	ug/kg
				Aroclor 1232	U	41	2.09876543	ug/kg
				Aroclor 1242	U	41	2.09876543	ug/kg
				Aroclor 1248	U	41	2.09876543	ug/kg
				Aroclor 1254	U	41	2.09876543	ug/kg
				Aroclor 1260	U	41	2.09876543	ug/kg
		8330B		1,3,5-Trinitrobenzene	U	0.26	0.01271605	mg/kg
				1,3-Dinitrobenzene	U	0.26	0.31790123	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.26	0.31790123	mg/kg
				2,4-Dinitrotoluene	U	0.26	0.31790123	mg/kg
				2,6-Dinitrotoluene	U	0.26	0.31790123	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.26	0.31790123	mg/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0D130516 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
LL11SS-071-5597-SO	A0D130516002	8330B	SO	2-Nitrotoluene	U	0.26	0.31790123	mg/kg
				3-Nitrotoluene	U	0.26	0.31790123	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.26	0.31790123	mg/kg
				4-Nitrotoluene	U	0.52	0.63580247	mg/kg
				Nitrobenzene	U	0.26	0.31790123	mg/kg
LL11SS-074-5600-SO	A0D130516005	8082	SO	Aroclor 1016	U	39	1.97674419	ug/kg
				Aroclor 1221	U	39	1.97674419	ug/kg
				Aroclor 1232	U	39	1.97674419	ug/kg
				Aroclor 1242	U	39	1.97674419	ug/kg
				Aroclor 1248	U	39	1.97674419	ug/kg
				Aroclor 1260	U	39	1.97674419	ug/kg
LL11SS-076-5602-SO	A0D130516007	8082	SO	Aroclor 1016	U	42	2.15189873	ug/kg
				Aroclor 1221	U	42	2.15189873	ug/kg
				Aroclor 1232	U	42	2.15189873	ug/kg
				Aroclor 1242	U	42	2.15189873	ug/kg
				Aroclor 1248	U	42	2.15189873	ug/kg
				Aroclor 1254	U	42	2.15189873	ug/kg
				Aroclor 1260	U	42	2.15189873	ug/kg
LL11SS-077-5603-SO	A0D130516009	6020	SO	Antimony	U	0.62	0.61728395	mg/kg
		8082		Aroclor 1016	U	41	2.09876543	ug/kg
				Aroclor 1221	U	41	2.09876543	ug/kg
				Aroclor 1232	U	41	2.09876543	ug/kg
				Aroclor 1242	U	41	2.09876543	ug/kg
				Aroclor 1248	U	41	2.09876543	ug/kg
				Aroclor 1254	U	41	2.09876543	ug/kg
				Aroclor 1260	U	41	2.09876543	ug/kg
LL11SS-078-5604-SO	A0D130516010	8082	SO	Aroclor 1016	U	41	2.09876543	ug/kg
				Aroclor 1221	U	41	2.09876543	ug/kg
				Aroclor 1232	U	41	2.09876543	ug/kg
				Aroclor 1242	U	41	2.09876543	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0D130516 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
LL11SS-078-5604-SO	A0D130516010	8082	SO	Aroclor 1248	U	41	2.09876543	ug/kg
				Aroclor 1260	U	41	2.09876543	ug/kg
LL11SS-079-5605-SO	A0D130516011	8081A	SO	4,4'-DDD	U	12	11.9047619	ug/kg
				4,4'-DDT	U	12	11.9047619	ug/kg
				Aldrin	U	24	23.8095238	ug/kg
				alpha-BHC	U	15	14.8809524	ug/kg
				alpha-Chordane	U	18	17.8571429	ug/kg
				beta-BHC	U	21	20.8333333	ug/kg
				delta-BHC	U	24	23.8095238	ug/kg
				Endosulfan II	U	15	14.8809524	ug/kg
				Endosulfan sulfate	U	18	17.8571429	ug/kg
				Endrin aldehyde	U	18	17.8571429	ug/kg
				Endrin ketone	U	12	11.9047619	ug/kg
				gamma-BHC (Lindane)	U	15	14.8809524	ug/kg
				Heptachlor	U	21	20.8333333	ug/kg
				Heptachlor epoxide	U	15	14.8809524	ug/kg
				Methoxychlor	U	30	29.7619048	ug/kg
				Toxaphene	U	400	398.809524	ug/kg
		8260B		2-Butanone (MEK)	U	24	23.8095238	ug/kg
				2-Hexanone	U	24	23.8095238	ug/kg
				4-methyl-2-pentanone (MIBK)	U	24	23.8095238	ug/kg
				Acetone	U	24	23.8095238	ug/kg
				Xylene (Total)	U	12	11.9047619	ug/kg
LL11SS-080-5606-SO	A0D130516012	6020	SO	Antimony	U	0.72	0.71428571	mg/kg
		8330B		1,3,5-Trinitrobenzene	U	0.26	0.01457143	mg/kg
				1,3-Dinitrobenzene	U	0.26	0.36428571	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.26	0.36428571	mg/kg
				2,4-Dinitrotoluene	U	0.26	0.36428571	mg/kg
				2,6-Dinitrotoluene	U	0.26	0.36428571	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.26	0.36428571	mg/kg
				2-Nitrotoluene	U	0.26	0.36428571	mg/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0D130516 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
LL11SS-080-5606-SO	A0D130516012	8330B	SO	3-Nitrotoluene	U	0.26	0.36428571	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.26	0.36428571	mg/kg
				Nitrobenzene	U	0.26	0.36428571	mg/kg
LL11SS-081-5607-SO	A0D130516013	8082	SO	Aroclor 1016	U	56	2.88135593	ug/kg
				Aroclor 1221	U	56	2.88135593	ug/kg
				Aroclor 1232	U	56	2.88135593	ug/kg
				Aroclor 1242	U	56	2.88135593	ug/kg
				Aroclor 1248	U	56	2.88135593	ug/kg
				Aroclor 1254	U	56	2.88135593	ug/kg
				Aroclor 1260	U	56	2.88135593	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

Continuing Calibration (CCV) Outlier Report (Organics)

There are no Organic Continuing Calibrations with outliers

Continuing Calibration (CCAL) Outlier Report (Inorganics)

There are no Inorganic Continuing Calibrations with outliers

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: A0D130516 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
L10SS-076-5532-SO	A0D130516014	7196A	SO	Chromium, hexavalent	J	0.69	0.95	mg/kg
LL11SS-070-5596-SO	A0D130516001	6020		Cadmium	J	0.17	0.24	mg/kg
				Silver	J	0.029	0.59	mg/kg
				Sodium	J	85.9	118	mg/kg
				Thallium	J	0.15	0.24	mg/kg
		7471A		Mercury	J	0.044	0.12	mg/kg
LL11SS-071-5597-SO	A0D130516002	6020		Antimony	J	0.10	0.62	mg/kg
				Cadmium	J	0.13	0.25	mg/kg
				Silver	J	0.028	0.62	mg/kg
				Sodium	J	34.5	124	mg/kg
				Thallium	J	0.16	0.25	mg/kg
		7471A		Mercury	J	0.031	0.12	mg/kg
LL11SS-072-5598-SO	A0D130516003	7196A		Chromium, hexavalent	J	0.44	0.98	mg/kg
LL11SS-074-5600-SO	A0D130516005	6020		Antimony	J	0.12	0.58	mg/kg
				Cadmium	J	0.17	0.23	mg/kg
				Silver	J	0.027	0.58	mg/kg
				Sodium	J	36.2	117	mg/kg
				Thallium	J	0.15	0.23	mg/kg
		7471A		Mercury	J	0.018	0.12	mg/kg
		8082		Aroclor 1254	J	20	39	ug/kg
LL11SS-075-5601-SO	A0D130516006	7196A		Chromium, hexavalent	J	0.71	0.95	mg/kg
LL11SS-076-5602-SO	A0D130516007	6020		Antimony	J	0.26	0.64	mg/kg
				Cadmium	J	0.071	0.25	mg/kg
				Silver	J	0.024	0.64	mg/kg
				Sodium	J	36.0	127	mg/kg
				Thallium	J	0.16	0.25	mg/kg
		7471A		Mercury	J	0.039	0.13	mg/kg
LL11SS-076-6183-FD	A0D130516008	6020		Antimony	J	0.15	0.63	mg/kg
				Cadmium	J	0.080	0.25	mg/kg
				Silver	J	0.024	0.63	mg/kg
				Sodium	J	33.2	125	mg/kg
				Thallium	J	0.16	0.25	mg/kg
		7471A		Mercury	J	0.034	0.13	mg/kg
LL11SS-077-5603-SO	A0D130516009	6020		Cadmium	J	0.057	0.25	mg/kg
				Silver	J	0.032	0.62	mg/kg
				Sodium	J	35.2	124	mg/kg

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: A0D130516 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
LL11SS-077-5603-SO	A0D130516009	6020	SO	Thallium	J	0.21	0.25	mg/kg
LL11SS-078-5604-SO	A0D130516010			Antimony	J	0.16	0.62	mg/kg
				Silver	J	0.035	0.62	mg/kg
				Sodium	J	40.6	124	mg/kg
				Thallium	J	0.16	0.25	mg/kg
		7471A		Mercury	J	0.031	0.12	mg/kg
		8082		Aroclor 1254	J	35	41	ug/kg
LL11SS-079-5605-SO	A0D130516011	6020		Antimony	J	0.084	0.59	mg/kg
				Cadmium	J	0.092	0.24	mg/kg
				Calcium	J B	113	238	mg/kg
				Silver	J	0.021	0.59	mg/kg
				Sodium	J	22.5	119	mg/kg
				Thallium	J	0.11	0.24	mg/kg
		7471A		Mercury	J	0.020	0.12	mg/kg
LL11SS-080-5606-SO	A0D130516012	6020		Silver	J	0.053	0.72	mg/kg
				Sodium	J	38.5	143	mg/kg
				Thallium	J	0.16	0.29	mg/kg
		7471A		Mercury	J	0.037	0.14	mg/kg
LL11SS-081-5607-SO	A0D130516013	6020		Antimony	J	0.12	0.85	mg/kg
				Silver	J	0.060	0.85	mg/kg
				Sodium	J	48.2	170	mg/kg
				Thallium	J	0.21	0.34	mg/kg
		7471A		Mercury	J	0.040	0.17	mg/kg
		8330B		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetr	J	0.013	0.25	mg/kg

Method Blank Outlier Report

Lab Reporting Batch : A0D130516
Lab ID: TALCAN
Analysis Method : 6020
Analysis Date : 04/27/2010
Preparation Type : 3050B
Preparation Date : 04/14/2010
Method Blank Lab Sample ID : A0D140000017B
Preparation Batch : 0104017

Aluminum	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**8.3**	**10.0**	**mg/kg**	**J**	

Aluminum contamination found in the method blank did not qualify any samples.

Calcium	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**43.2**	**200**	**mg/kg**	**J**	

Calcium was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
LL11SS-079-5605-SO	A0D130516011	1	113	J B	mg/kg

Copper	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**0.13**	**0.50**	**mg/kg**	**J**	

Copper contamination found in the method blank did not qualify any samples.

Potassium	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**3.8**	**100**	**mg/kg**	**J**	

Potassium contamination found in the method blank did not qualify any samples.

QC Outlier Report: Field Duplicates (Non-qualified Outliers)

Lab Report Batch: **Lab ID:**

			Field Sample				Field Sample Duplicate						
Analysis Method	Matrix	Analyte Name	Client Sample ID	Ana Type	Result	Lab Qualifier	Client Sample Duplicate ID	Ana Type	Result	Lab Qualifiers	RPD Dup* (%)	RPD Criteria (%)	Result Units

*Note: Outlier report also includes analytes detected in one sample but not in the related sample, i.e., analyte was detected in the field sample but not in the field duplicate sample, or vice versa. In this case, RPD value assigned to the field duplicate sample is 200.

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QC Outlier Report: Temperature (Non-qualified Outliers)

Lab Report Batch: A0D140520 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Sample Temperature (C)	Criteria	
					Lower Limit	Upper Limit
L10SS-080M-5537-SO	A0D140520005	353.2 Modified	SO	1.9	2.0	6.0
L10SS-080M-5537-SOMS	A0D140520005S	353.2 Modified	SO	1.9	2.0	6.0
L10SS-080M-5537-SOMSD	A0D140520005D	353.2 Modified	SO	1.9	2.0	6.0
L10SS-088M-5545-SO	A0D140520015	353.2 Modified	SO	1.9	2.0	6.0
L10SS-080M-5537-SO	A0D140520005	8081A	SO	1.9	2.0	
L10SS-080M-5537-SOMS	A0D140520005S	8081A	SO	1.9	2.0	
L10SS-080M-5537-SOMSD	A0D140520005D	8081A	SO	1.9	2.0	
L10SS-088M-5545-SO	A0D140520015	8081A	SO	1.9	2.0	
L10SS-080M-5537-SO	A0D140520005	8082	SO	1.9	2.0	
L10SS-080M-5537-SOMS	A0D140520005S	8082	SO	1.9	2.0	
L10SS-080M-5537-SOMSD	A0D140520005D	8082	SO	1.9	2.0	
L10SS-088M-5545-SO	A0D140520015	8082	SO	1.9	2.0	
L10SS-080M-5537-SO	A0D140520005	8270C	SO	1.9	2.0	
L10SS-080M-5537-SOMS	A0D140520005S	8270C	SO	1.9	2.0	
L10SS-080M-5537-SOMSD	A0D140520005D	8270C	SO	1.9	2.0	
L10SS-088M-5545-SO	A0D140520015	8270C	SO	1.9	2.0	
L10SS-079M-5536-SO	A0D140520004	8270C PAH	SO	1.9	2.0	
L10SS-080M-5537-SO	A0D140520005	8270C PAH	SO	1.9	2.0	
L10SS-080M-5537-SOMS	A0D140520005S	8270C PAH	SO	1.9	2.0	
L10SS-080M-5537-SOMSD	A0D140520005D	8270C PAH	SO	1.9	2.0	
L10SS-081M-5538-SO	A0D140520007	8270C PAH	SO	1.9	2.0	
L10SS-082M-5539-SO	A0D140520008	8270C PAH	SO	1.7	2.0	
L10SS-083M-5540-SO	A0D140520009	8270C PAH	SO	1.7	2.0	
L10SS-084M-5541-SO	A0D140520010	8270C PAH	SO	1.7	2.0	
L10SS-085M-5542-SO	A0D140520011	8270C PAH	SO	1.7	2.0	
L10SS-085M-6169-FD	A0D140520013	8270C PAH	SO	1.7	2.0	
L10SS-086M-5543-SO	A0D140520012	8270C PAH	SO	1.9	2.0	
L10SS-087M-5544-SO	A0D140520014	8270C PAH	SO	1.9	2.0	
L10SS-088M-5545-SO	A0D140520015	8270C PAH	SO	1.9	2.0	

QC Outlier Report: Temperature (Non-qualified Outliers)

Lab Report Batch: A0D140520 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Sample Temperature (C)	Criteria	
					Lower Limit	Upper Limit
L10SS-090M-5547-SO	A0D140520019	8270C PAH	SO	1.9	2.0	
L10SS-079M-5536-SO	A0D140520004	8330B	SO	1.9	2.0	
L10SS-080M-5537-SO	A0D140520005	8330B	SO	1.9	2.0	
L10SS-080M-5537-SOMS	A0D140520005S	8330B	SO	1.9	2.0	
L10SS-080M-5537-SOMSD	A0D140520005D	8330B	SO	1.9	2.0	
L10SS-081M-5538-SO	A0D140520007	8330B	SO	1.9	2.0	
L10SS-082M-5539-SO	A0D140520008	8330B	SO	1.7	2.0	
L10SS-083M-5540-SO	A0D140520009	8330B	SO	1.7	2.0	
L10SS-084M-5541-SO	A0D140520010	8330B	SO	1.7	2.0	
L10SS-085M-5542-SO	A0D140520011	8330B	SO	1.7	2.0	
L10SS-085M-6169-FD	A0D140520013	8330B	SO	1.7	2.0	
L10SS-086M-5543-SO	A0D140520012	8330B	SO	1.9	2.0	
L10SS-087M-5544-SO	A0D140520014	8330B	SO	1.9	2.0	
L10SS-088M-5545-SO	A0D140520015	8330B	SO	1.9	2.0	
L10SS-090M-5547-SO	A0D140520019	8330B	SO	1.9	2.0	
L10SS-080M-5537-SO	A0D140520005	8330M	SO	1.9	2.0	
L10SS-080M-5537-SOMS	A0D140520005S	8330M	SO	1.9	2.0	
L10SS-080M-5537-SOMSD	A0D140520005D	8330M	SO	1.9	2.0	
L10SS-088M-5545-SO	A0D140520015	8330M	SO	1.9	2.0	

Temperature Outlier Report

Lab Report Batch: **Lab ID:**

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Sample Temp (C)	Temperature Criteria (C)			Between High and Gross Exceedence			Above Gross Exceedence		
								Detect Quals		Non-Detect Qual(s)	Detect Quals		Non-Detect Qual(s)
					Low	High	Gross Exceed	Non-Biased	Biased		Non-Biased	Biased	

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0109439 **Analysis Method :** 8330B **Analysis Date :** 05/04/2010

Preparation Batch : 0109439 **Preparation Type :** 3535 **Preparation Date :** 04/19/2010

Lab Reporting Batch : A0D140520 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
LL5SW-078-5796-SWMS	A0D140520002D	AQ	1,3,5-Trinitrobenzene	64		0.00	65.00	140.00	30.00
			2,4,6-Trinitrotoluene (TNT)		33	0.00	50.00	145.00	30.00

Associated Samples: Parent sample only

Client Sample ID	Lab Sample ID
LL5SW-078-5796-SW	A0D140520002

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0112027 **Analysis Method :** 6020 **Analysis Date :** 04/27/2010

Preparation Batch : 0112027 **Preparation Type :** 3050B **Preparation Date :** 04/22/2010

Lab Reporting Batch : A0D140520 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
L10SS-080M-5537-SOM	A0D140520005S	SO	Antimony	25		30.00	75.00	125.00	20.00
L10SS-080M-5537-SOM	A0D140520005D		Antimony	27		30.00	75.00	125.00	20.00

Associated Samples: All samples in Method Batch

Client Sample ID	Lab Sample ID
L10SS-079M-5536-SO	A0D140520004
L10SS-080M-5537-SO	A0D140520005
L10SS-081M-5538-SO	A0D140520007
L10SS-082M-5539-SO	A0D140520008
L10SS-083M-5540-SO	A0D140520009
L10SS-084M-5541-SO	A0D140520010
L10SS-085M-5542-SO	A0D140520011
L10SS-085M-6169-FD	A0D140520013
L10SS-086M-5543-SO	A0D140520012
L10SS-087M-5544-SO	A0D140520014
L10SS-088M-5545-SO	A0D140520015
L10SS-089M-5546-SO	A0D140520017
L10SS-089M-6171-FD	A0D140520018
L10SS-090M-5547-SO	A0D140520019
L10SS-091M-5548-SO	A0D140520020
L10SS-092M-5549-SO	A0D140520021
L10SS-093M-5550-SO	A0D140520023
LL5SD-078-5797-SD	A0D140520001

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0112036 **Analysis Method :** 8081A **Analysis Date :** 04/27/2010

Preparation Batch : 0112036 **Preparation Type :** 3540C **Preparation Date :** 04/22/2010

Lab Reporting Batch : A0D140520 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
L10SS-080M-5537-SOM	A0D140520005S	SO	beta-BHC	0.0		0.00	60.00	125.00	43.00
			Endrin ketone	213		0.00	65.00	135.00	32.00
L10SS-080M-5537-SOM	A0D140520005D		beta-BHC	0.0		0.00	60.00	125.00	43.00
			Endrin ketone	154		0.00	65.00	135.00	32.00

Associated Samples: Parent sample only

Client Sample ID	Lab Sample ID
L10SS-080M-5537-SO	A0D140520005

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0112049 **Analysis Method :** 8270C **Analysis Date :** 04/28/2010

Preparation Batch : 0112049 **Preparation Type :** 3540C **Preparation Date :** 04/22/2010

Lab Reporting Batch : A0D140520 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
L10SS-080M-5537-SOM	A0D140520005S	SO	2,4-Dinitrophenol	0.0		0.00	15.00	130.00	30.00
L10SS-080M-5537-SOM	A0D140520005D		2,4-Dinitrophenol	0.0		0.00	15.00	130.00	30.00

Associated Samples: Parent sample only

Client Sample ID	Lab Sample ID
L10SS-080M-5537-SO	A0D140520005

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 0117208 **Analysis Method :** 353.2 Modified **Analysis Date :** 04/28/2010

Preparation Batch : 0117208 **Preparation Type :** Gen Prep **Preparation Date :** 04/27/2010

Lab Reporting Batch : A0D140520 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
L10SS-080M-5537-SOM	A0D140520005S	SO	Nitrocellulose	29		10.00	34.00	115.00	71.00
L10SS-080M-5537-SOM	A0D140520005D		Nitrocellulose	30		10.00	34.00	115.00	71.00

Associated Samples: All samples in Method Batch

Client Sample ID	Lab Sample ID
L10SS-080M-5537-SO	A0D140520005
L10SS-088M-5545-SO	A0D140520015
L10SS-092M-5549-SO	A0D140520021

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

Laboratory Control Sample / Laboratory Control Sample Duplicate Outlier Report

Method Batch : 0105039 **Analysis Method :** 8270C **Analysis Date :** 05/03/2010

Preparation Batch : 0105039 **Preparation Type :** 3520C **Preparation Date :** 04/15/2010

Lab Reporting Batch : A0D140520 **Lab ID:** TALCAN

			Reported Values		Project Limits (Percent)			
LCS Lab Sample ID	**Matrix**	**Analyte Name**	**Percent Recovery**	**RPD**	**Rejection Point**	**Lower Limit**	**Upper Limit**	**RPD**
A0D150000039C	AQ	2,4-Dinitrophenol	0.0		10.00	15.00	140.00	34.00
		4,6-Dinitro-2-methylphenol	24		10.00	40.00	130.00	80.00
		Pentachlorophenol	35		10.00	40.00	115.00	56.00
A0D150000039L		2,4-Dinitrophenol	0.0	0.0	10.00	15.00	140.00	34.00
		4,6-Dinitro-2-methylphenol	27	8.6	10.00	40.00	130.00	80.00
		Pentachlorophenol	33	6.3	10.00	40.00	115.00	56.00

Associated Samples

Client Sample ID	**Lab Sample ID**
LL5SW-078-5796-SW	A0D140520002

Scope of Data Qualification: The outlier in the LCS qualifies that analyte in all samples with the same Preparation Batch ID as the LCS

Project Number and Name: 172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0D140520 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SS-080M-5537-SO	A0D140520005	8081A	SO	4,4'-DDD	U	41	40.7747197	ug/kg
				4,4'-DDE	U	35	34.6585117	ug/kg
				4,4'-DDT	U	41	40.7747197	ug/kg
				Aldrin	U	82	81.5494393	ug/kg
				alpha-BHC	U	51	50.9683996	ug/kg
				delta-BHC	U	82	81.5494393	ug/kg
				Dieldrin	U	35	34.6585117	ug/kg
				Endosulfan I	U	35	34.6585117	ug/kg
				Endosulfan II	U	51	50.9683996	ug/kg
				Endrin	U	35	34.6585117	ug/kg
				Endrin ketone	U	41	40.7747197	ug/kg
				gamma-BHC (Lindane)	U	51	50.9683996	ug/kg
				gamma-Chlordane	U	35	34.6585117	ug/kg
				Heptachlor epoxide	U	51	50.9683996	ug/kg
				Toxaphene	U	1400	1365.95311	ug/kg
		8082		Aroclor 1016	U	34	1.73292559	ug/kg
				Aroclor 1221	U	34	1.73292559	ug/kg
				Aroclor 1232	U	34	1.73292559	ug/kg
				Aroclor 1242	U	34	1.73292559	ug/kg
				Aroclor 1248	U	34	1.73292559	ug/kg
				Aroclor 1260	U	34	1.73292559	ug/kg
		8270C		1,2,4-Trichlorobenzene	U	3400	3363.91437	ug/kg
				1,2-Dichlorobenzene	U	3400	3363.91437	ug/kg
				1,3-Dichlorobenzene	U	3400	3363.91437	ug/kg
				1,4-Dichlorobenzene	U	3400	3363.91437	ug/kg
				2,4,5-Trichlorophenol	U	3400	3363.91437	ug/kg
				2,4,6-Trichlorophenol	U	3400	3363.91437	ug/kg
				2,4-Dichlorophenol	U	3400	3363.91437	ug/kg
				2,4-Dimethylphenol	U	3400	3363.91437	ug/kg
				2,4-Dinitrophenol	U	8200	8154.94393	ug/kg
				2,4-Dinitrotoluene	U	3400	3363.91437	ug/kg
				2,6-Dinitrotoluene	U	3400	3363.91437	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0D140520 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SS-080M-5537-SO	A0D140520005	8270C	SO	2-Chloronaphthalene	U	3400	3363.91437	ug/kg
				2-Chlorophenol	U	3400	3363.91437	ug/kg
				2-Methylphenol	U	3400	3363.91437	ug/kg
				2-Nitroaniline	U	8200	8154.94393	ug/kg
				2-Nitrophenol	U	3400	3363.91437	ug/kg
				3,3'-Dichlorobenzidine	U	3400	3363.91437	ug/kg
				3-methylphenol/4-methylphenol	U	3400	#Error	ug/kg
				3-Nitroaniline	U	8200	8154.94393	ug/kg
				4,6-Dinitro-2-methylphenol	U	8200	8154.94393	ug/kg
				4-Bromophenyl phenyl ether	U	3400	3363.91437	ug/kg
				4-Chloro-3-methylphenol	U	3400	3363.91437	ug/kg
				4-Chloroaniline	U	3400	3363.91437	ug/kg
				4-Chlorophenyl phenyl ether	U	3400	3363.91437	ug/kg
				4-Nitroaniline	U	8200	8154.94393	ug/kg
				4-Nitrophenol	U	8200	8154.94393	ug/kg
				Benzoic acid	U	8200	8154.94393	ug/kg
				Benzyl alcohol	U	3400	3363.91437	ug/kg
				bis(2-Chloroethoxy)methane	U	3400	3363.91437	ug/kg
				bis(2-Chloroethyl) ether	U	3400	3363.91437	ug/kg
				Bis(2-chloroisopropyl) ether	U	3400	3363.91437	ug/kg
				bis(2-Ethylhexyl) phthalate	U	3400	3363.91437	ug/kg
				Butyl benzyl phthalate	U	3400	3363.91437	ug/kg
				Diethyl phthalate	U	3400	3363.91437	ug/kg
				Dimethyl phthalate	U	3400	3363.91437	ug/kg
				Di-n-butyl phthalate	U	3400	3363.91437	ug/kg
				Di-n-octyl phthalate	U	3400	3363.91437	ug/kg
				Hexachlorobenzene	U	3400	3363.91437	ug/kg
				Hexachlorobutadiene	U	3400	3363.91437	ug/kg
				HEXACHLOROCYCLOPENTADIE	U	3400	#Error	ug/kg
				Hexachloroethane	U	3400	3363.91437	ug/kg
				Isophorone	U	3400	3363.91437	ug/kg
				Nitrobenzene	U	3400	3363.91437	ug/kg
				N-Nitrosodi-n-propylamine	U	3400	3363.91437	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0D140520 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SS-080M-5537-SO	A0D140520005	8270C	SO	N-Nitrosodiphenylamine	U	3400	3363.91437	ug/kg
				Pentachlorophenol	U	3400	3363.91437	ug/kg
				Phenol	U	3400	3363.91437	ug/kg
		8330M		Nitroguanidine	U	0.25	0.25229358	mg/kg
L10SS-080M-5537-SOVO	A0D140520006	8260B	SO	1,1,1-Trichloroethane	U	6.2	6.17283951	ug/kg
				1,1,2,2-Tetrachloroethane	U	6.2	6.17283951	ug/kg
				1,1,2-Trichloroethane	U	6.2	6.17283951	ug/kg
				1,1-Dichloroethane	U	6.2	6.17283951	ug/kg
				1,1-Dichloroethene	U	6.2	6.17283951	ug/kg
				1,2-Dibromoethane (Ethylene Dibro	U	6.2	6.17283951	ug/kg
				1,2-Dichloroethane	U	6.2	6.17283951	ug/kg
				1,2-Dichloroethene (total)	U	6.2	6.17283951	ug/kg
				1,2-Dichloropropane	U	6.2	6.17283951	ug/kg
				2-Butanone (MEK)	U	25	24.6913580	ug/kg
				2-Hexanone	U	25	24.6913580	ug/kg
				4-methyl-2-pentanone (MIBK)	U	25	24.6913580	ug/kg
				Acetone	U	25	24.6913580	ug/kg
				Benzene	U	6.2	6.17283951	ug/kg
				Bromochloromethane	U	6.2	6.17283951	ug/kg
				Bromodichloromethane	U	6.2	6.17283951	ug/kg
				Bromoform	U	6.2	6.17283951	ug/kg
				Bromomethane (Methyl bromide)	U	6.2	6.17283951	ug/kg
				Carbon disulfide	U	6.2	6.17283951	ug/kg
				Carbon tetrachloride	U	6.2	6.17283951	ug/kg
				Chlorobenzene	U	6.2	6.17283951	ug/kg
				Chlorodibromomethane	U	6.2	6.17283951	ug/kg
				Chloroethane	U	6.2	6.17283951	ug/kg
				Chloroform	U	6.2	6.17283951	ug/kg
				Chloromethane	U	6.2	6.17283951	ug/kg
				cis-1,3-Dichloropropene	U	6.2	6.17283951	ug/kg
				Ethylbenzene	U	6.2	6.17283951	ug/kg
				Styrene	U	6.2	6.17283951	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0D140520 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SS-080M-5537-SOVO	A0D140520006	8260B	SO	Tetrachloroethene	U	6.2	6.17283951	ug/kg
				Toluene	U	6.2	6.17283951	ug/kg
				trans-1,3-Dichloropropene	U	6.2	6.17283951	ug/kg
				Trichloroethene	U	6.2	6.17283951	ug/kg
				Vinyl chloride	U	6.2	6.17283951	ug/kg
L10SS-084M-5541-SO	A0D140520010	8330B	SO	1,3,5-Trinitrobenzene	U	0.25	0.01008147	mg/kg
				1,3-Dinitrobenzene	U	0.25	0.25203666	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.25	0.25203666	mg/kg
				2,4-Dinitrotoluene	U	0.25	0.25203666	mg/kg
				2,6-Dinitrotoluene	U	0.25	0.25203666	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.25	0.25203666	mg/kg
				2-Nitrotoluene	U	0.25	0.25203666	mg/kg
				3-Nitrotoluene	U	0.25	0.25203666	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.25	0.25203666	mg/kg
				4-Nitrotoluene	U	0.50	0.50407332	mg/kg
				Nitrobenzene	U	0.25	0.25203666	mg/kg
L10SS-085M-6169-FD	A0D140520013	8330B	SO	1,3,5-Trinitrobenzene	U	0.25	0.01008147	mg/kg
				1,3-Dinitrobenzene	U	0.25	0.25203666	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.25	0.25203666	mg/kg
				2,4-Dinitrotoluene	U	0.25	0.25203666	mg/kg
				2,6-Dinitrotoluene	U	0.25	0.25203666	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.25	0.25203666	mg/kg
				2-Nitrotoluene	U	0.25	0.25203666	mg/kg
				3-Nitrotoluene	U	0.25	0.25203666	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.25	0.25203666	mg/kg
				4-Nitrotoluene	U	0.50	0.50407332	mg/kg
				Nitrobenzene	U	0.25	0.25203666	mg/kg
L10SS-088M-5545-SO	A0D140520015	8081A	SO	Aldrin	U	41	40.8997955	ug/kg
				alpha-BHC	U	26	25.5623722	ug/kg
				alpha-Chordane	U	31	30.6748466	ug/kg
				beta-BHC	U	36	35.7873211	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0D140520 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SS-088M-5545-SO	A0D140520015	8081A	SO	delta-BHC	U	41	40.8997955	ug/kg
				Endosulfan II	U	26	25.5623722	ug/kg
				Endosulfan sulfate	U	31	30.6748466	ug/kg
				Endrin aldehyde	U	31	30.6748466	ug/kg
				gamma-BHC (Lindane)	U	26	25.5623722	ug/kg
				Heptachlor	U	36	35.7873211	ug/kg
				Heptachlor epoxide	U	26	25.5623722	ug/kg
				Toxaphene	U	690	685.071575	ug/kg
		8082		Aroclor 1016	U	34	1.73824131	ug/kg
				Aroclor 1221	U	34	1.73824131	ug/kg
				Aroclor 1232	U	34	1.73824131	ug/kg
				Aroclor 1242	U	34	1.73824131	ug/kg
				Aroclor 1248	U	34	1.73824131	ug/kg
				Aroclor 1254	U	34	1.73824131	ug/kg
				Aroclor 1260	U	34	1.73824131	ug/kg
		8270C		2,4-Dinitrophenol	U	3300	3271.98364	ug/kg
				2-Nitroaniline	U	3300	3271.98364	ug/kg
				3-Nitroaniline	U	3300	3271.98364	ug/kg
				4,6-Dinitro-2-methylphenol	U	3300	3271.98364	ug/kg
				4-Nitroaniline	U	3300	3271.98364	ug/kg
				4-Nitrophenol	U	3300	3271.98364	ug/kg
				Benzoic acid	U	3300	3271.98364	ug/kg
L10SS-088M-5545-SOVO	A0D140520016	8260B	SO	1,1,1-Trichloroethane	U	6.5	6.49350649	ug/kg
				1,1,2,2-Tetrachloroethane	U	6.5	6.49350649	ug/kg
				1,1,2-Trichloroethane	U	6.5	6.49350649	ug/kg
				1,1-Dichloroethane	U	6.5	6.49350649	ug/kg
				1,1-Dichloroethene	U	6.5	6.49350649	ug/kg
				1,2-Dibromoethane (Ethylene Dibro	U	6.5	6.49350649	ug/kg
				1,2-Dichloroethane	U	6.5	6.49350649	ug/kg
				1,2-Dichloroethene (total)	U	6.5	6.49350649	ug/kg
				1,2-Dichloropropane	U	6.5	6.49350649	ug/kg
				2-Butanone (MEK)	U	26	25.974026	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0D140520 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SS-088M-5545-SOVO	A0D140520016	8260B	SO	2-Hexanone	U	26	25.974026	ug/kg
				4-methyl-2-pentanone (MIBK)	U	26	25.974026	ug/kg
				Acetone	U	26	25.974026	ug/kg
				Benzene	U	6.5	6.49350649	ug/kg
				Bromochloromethane	U	6.5	6.49350649	ug/kg
				Bromodichloromethane	U	6.5	6.49350649	ug/kg
				Bromoform	U	6.5	6.49350649	ug/kg
				Bromomethane (Methyl bromide)	U	6.5	6.49350649	ug/kg
				Carbon disulfide	U	6.5	6.49350649	ug/kg
				Carbon tetrachloride	U	6.5	6.49350649	ug/kg
				Chlorobenzene	U	6.5	6.49350649	ug/kg
				Chlorodibromomethane	U	6.5	6.49350649	ug/kg
				Chloroethane	U	6.5	6.49350649	ug/kg
				Chloroform	U	6.5	6.49350649	ug/kg
				Chloromethane	U	6.5	6.49350649	ug/kg
				cis-1,3-Dichloropropene	U	6.5	6.49350649	ug/kg
				Ethylbenzene	U	6.5	6.49350649	ug/kg
				Styrene	U	6.5	6.49350649	ug/kg
				Tetrachloroethene	U	6.5	6.49350649	ug/kg
				Toluene	U	6.5	6.49350649	ug/kg
				trans-1,3-Dichloropropene	U	6.5	6.49350649	ug/kg
				Trichloroethene	U	6.5	6.49350649	ug/kg
				Vinyl chloride	U	6.5	6.49350649	ug/kg
				Xylene (Total)	U	13	12.987013	ug/kg
L10SS-089M-5546-SO	A0D140520017	8330B	SO	1,3,5-Trinitrobenzene	U	0.25	0.01010204	mg/kg
				1,3-Dinitrobenzene	U	0.25	0.25255102	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.25	0.25255102	mg/kg
				2,4-Dinitrotoluene	U	0.25	0.25255102	mg/kg
				2,6-Dinitrotoluene	U	0.25	0.25255102	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.25	0.25255102	mg/kg
				2-Nitrotoluene	U	0.25	0.25255102	mg/kg
				3-Nitrotoluene	U	0.25	0.25255102	mg/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0D140520 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SS-089M-5546-SO	A0D140520017	8330B	SO	4-Amino-2,6-Dinitrotoluene	U	0.25	0.25255102	mg/kg
				4-Nitrotoluene	U	0.50	0.50510204	mg/kg
				Nitrobenzene	U	0.25	0.25255102	mg/kg
L10SS-089M-6171-FD	A0D140520018	8330B	SO	1,3,5-Trinitrobenzene	U	0.25	0.01010204	mg/kg
				1,3-Dinitrobenzene	U	0.25	0.25255102	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.25	0.25255102	mg/kg
				2,4-Dinitrotoluene	U	0.25	0.25255102	mg/kg
				2,6-Dinitrotoluene	U	0.25	0.25255102	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.25	0.25255102	mg/kg
				2-Nitrotoluene	U	0.25	0.25255102	mg/kg
				3-Nitrotoluene	U	0.25	0.25255102	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.25	0.25255102	mg/kg
				4-Nitrotoluene	U	0.50	0.50510204	mg/kg
				Nitrobenzene	U	0.25	0.25255102	mg/kg
L10SS-090M-5547-SO	A0D140520019	8330B	SO	1,3,5-Trinitrobenzene	U	0.25	0.01009174	mg/kg
				1,3-Dinitrobenzene	U	0.25	0.25229358	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.25	0.25229358	mg/kg
				2,4-Dinitrotoluene	U	0.25	0.25229358	mg/kg
				2,6-Dinitrotoluene	U	0.25	0.25229358	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.25	0.25229358	mg/kg
				2-Nitrotoluene	U	0.25	0.25229358	mg/kg
				3-Nitrotoluene	U	0.25	0.25229358	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.25	0.25229358	mg/kg
				4-Nitrotoluene	U	0.50	0.50458716	mg/kg
				Nitrobenzene	U	0.25	0.25229358	mg/kg
L10SS-091M-5548-SO	A0D140520020	8330B	SO	1,3,5-Trinitrobenzene	U	0.25	0.01008147	mg/kg
				1,3-Dinitrobenzene	U	0.25	0.25203666	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.25	0.25203666	mg/kg
				2,4-Dinitrotoluene	U	0.25	0.25203666	mg/kg
				2,6-Dinitrotoluene	U	0.25	0.25203666	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.25	0.25203666	mg/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0D140520 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SS-091M-5548-SO	A0D140520020	8330B	SO	2-Nitrotoluene	U	0.25	0.25203666	mg/kg
				3-Nitrotoluene	U	0.25	0.25203666	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.25	0.25203666	mg/kg
				4-Nitrotoluene	U	0.50	0.50407332	mg/kg
				Nitrobenzene	U	0.25	0.25203666	mg/kg
L10SS-092M-5549-SO	A0D140520021	8081A	SO	Aldrin	U	41	40.8997955	ug/kg
				alpha-BHC	U	26	25.5623722	ug/kg
				beta-BHC	U	36	35.7873211	ug/kg
				delta-BHC	U	41	40.8997955	ug/kg
				Endosulfan II	U	26	25.5623722	ug/kg
				Endosulfan sulfate	U	31	30.6748466	ug/kg
				Endrin aldehyde	U	31	30.6748466	ug/kg
				gamma-BHC (Lindane)	U	26	25.5623722	ug/kg
				Heptachlor	U	36	35.7873211	ug/kg
		8082		Aroclor 1016	U	170	8.69120654	ug/kg
				Aroclor 1221	U	170	8.69120654	ug/kg
				Aroclor 1232	U	170	8.69120654	ug/kg
				Aroclor 1242	U	170	8.69120654	ug/kg
				Aroclor 1248	U	170	8.69120654	ug/kg
				Aroclor 1254	U	170	8.69120654	ug/kg
				Aroclor 1260	U	170	8.69120654	ug/kg
		8270C		1,2,4-Trichlorobenzene	U	340	337.423313	ug/kg
				1,2-Dichlorobenzene	U	340	337.423313	ug/kg
				1,3-Dichlorobenzene	U	340	337.423313	ug/kg
				1,4-Dichlorobenzene	U	340	337.423313	ug/kg
				2,4,5-Trichlorophenol	U	340	337.423313	ug/kg
				2,4,6-Trichlorophenol	U	340	337.423313	ug/kg
				2,4-Dichlorophenol	U	340	337.423313	ug/kg
				2,4-Dimethylphenol	U	340	337.423313	ug/kg
				2,4-Dinitrophenol	U	820	817.995910	ug/kg
				2,4-Dinitrotoluene	U	340	337.423313	ug/kg
				2,6-Dinitrotoluene	U	340	337.423313	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0D140520 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SS-092M-5549-SO	A0D140520021	8270C	SO	2-Chloronaphthalene	U	340	337.423313	ug/kg
				2-Chlorophenol	U	340	337.423313	ug/kg
				2-Methylphenol	U	340	337.423313	ug/kg
				2-Nitroaniline	U	820	817.995910	ug/kg
				2-Nitrophenol	U	340	337.423313	ug/kg
				3,3'-Dichlorobenzidine	U	340	337.423313	ug/kg
				3-methylphenol/4-methylphenol	U	340	#Error	ug/kg
				3-Nitroaniline	U	820	817.995910	ug/kg
				4,6-Dinitro-2-methylphenol	U	820	817.995910	ug/kg
				4-Bromophenyl phenyl ether	U	340	337.423313	ug/kg
				4-Chloro-3-methylphenol	U	340	337.423313	ug/kg
				4-Chloroaniline	U	340	337.423313	ug/kg
				4-Chlorophenyl phenyl ether	U	340	337.423313	ug/kg
				4-Nitroaniline	U	820	817.995910	ug/kg
				4-Nitrophenol	U	820	817.995910	ug/kg
				Benzoic acid	U	820	817.995910	ug/kg
				Benzyl alcohol	U	340	337.423313	ug/kg
				bis(2-Chloroethoxy)methane	U	340	337.423313	ug/kg
				bis(2-Chloroethyl) ether	U	340	337.423313	ug/kg
				Bis(2-chloroisopropyl) ether	U	340	337.423313	ug/kg
				Butyl benzyl phthalate	U	340	337.423313	ug/kg
				Dibenzofuran	U	340	337.423313	ug/kg
				Dimethyl phthalate	U	340	337.423313	ug/kg
				Di-n-octyl phthalate	U	340	337.423313	ug/kg
				Hexachlorobenzene	U	340	337.423313	ug/kg
				Hexachlorobutadiene	U	340	337.423313	ug/kg
				HEXACHLOROCYCLOPENTADIE	U	340	#Error	ug/kg
				Hexachloroethane	U	340	337.423313	ug/kg
				Isophorone	U	340	337.423313	ug/kg
				Nitrobenzene	U	340	337.423313	ug/kg
				N-Nitrosodi-n-propylamine	U	340	337.423313	ug/kg
				N-Nitrosodiphenylamine	U	340	337.423313	ug/kg
				Pentachlorophenol	U	340	337.423313	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0D140520 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SS-092M-5549-SO	A0D140520021	8270C	SO	Phenol	U	340	337.423313	ug/kg
L10SS-092M-5549-SOVO	A0D140520022	8260B	SO	1,1,1-Trichloroethane	U	6.1	6.09756098	ug/kg
				1,1,2,2-Tetrachloroethane	U	6.1	6.09756098	ug/kg
				1,1,2-Trichloroethane	U	6.1	6.09756098	ug/kg
				1,1-Dichloroethane	U	6.1	6.09756098	ug/kg
				1,1-Dichloroethene	U	6.1	6.09756098	ug/kg
				1,2-Dibromoethane (Ethylene Dibro	U	6.1	6.09756098	ug/kg
				1,2-Dichloroethane	U	6.1	6.09756098	ug/kg
				1,2-Dichloroethene (total)	U	6.1	6.09756098	ug/kg
				1,2-Dichloropropane	U	6.1	6.09756098	ug/kg
				2-Butanone (MEK)	U	25	24.3902439	ug/kg
				2-Hexanone	U	25	24.3902439	ug/kg
				4-methyl-2-pentanone (MIBK)	U	25	24.3902439	ug/kg
				Benzene	U	6.1	6.09756098	ug/kg
				Bromochloromethane	U	6.1	6.09756098	ug/kg
				Bromodichloromethane	U	6.1	6.09756098	ug/kg
				Bromoform	U	6.1	6.09756098	ug/kg
				Bromomethane (Methyl bromide)	U	6.1	6.09756098	ug/kg
				Carbon disulfide	U	6.1	6.09756098	ug/kg
				Carbon tetrachloride	U	6.1	6.09756098	ug/kg
				Chlorobenzene	U	6.1	6.09756098	ug/kg
				Chlorodibromomethane	U	6.1	6.09756098	ug/kg
				Chloroethane	U	6.1	6.09756098	ug/kg
				Chloroform	U	6.1	6.09756098	ug/kg
				Chloromethane	U	6.1	6.09756098	ug/kg
				cis-1,3-Dichloropropene	U	6.1	6.09756098	ug/kg
				Ethylbenzene	U	6.1	6.09756098	ug/kg
				Styrene	U	6.1	6.09756098	ug/kg
				Tetrachloroethene	U	6.1	6.09756098	ug/kg
				Toluene	U	6.1	6.09756098	ug/kg
				trans-1,3-Dichloropropene	U	6.1	6.09756098	ug/kg
				Trichloroethene	U	6.1	6.09756098	ug/kg

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Non-Qualified Outliers for Reporting Limits
(Sample is non-detect but reported result exceeds project requirements for reporting limit)

Lab Report Batch: A0D140520 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	Reporting Limit Criteria*	Units
L10SS-092M-5549-SOVO	A0D140520022	8260B	SO	Vinyl chloride	U	6.1	6.09756098	ug/kg
LL5SD-078-5797-SD	A0D140520001	8330B	SO	1,3,5-Trinitrobenzene	U	0.24	0.01507937	mg/kg
				1,3-Dinitrobenzene	U	0.24	0.37698413	mg/kg
				2,4,6-Trinitrotoluene (TNT)	U	0.24	0.37698413	mg/kg
				2,4-Dinitrotoluene	U	0.24	0.37698413	mg/kg
				2,6-Dinitrotoluene	U	0.24	0.37698413	mg/kg
				2-Amino-4,6-dinitrotoluene	U	0.24	0.37698413	mg/kg
				2-Nitrotoluene	U	0.24	0.37698413	mg/kg
				3-Nitrotoluene	U	0.24	0.37698413	mg/kg
				4-Amino-2,6-Dinitrotoluene	U	0.24	0.37698413	mg/kg
				4-Nitrotoluene	U	0.48	0.75396825	mg/kg
				Nitrobenzene	U	0.24	0.37698413	mg/kg
LL5SW-078-5796-SW	A0D140520002	8330B	AQ	2-Amino-4,6-dinitrotoluene	U	0.29	0.288	ug/L

* Reporting Limit Criteria = (Dilution Factor) * (Reporting Limit from the reference project library) * (Percent Moisture Correction)
Percent Moisture Correction:
Soil: 100 / (100 - Percent Moisture)
Water: 1

Project Number and Name: **172819.00.09456.00.9200.02.200 - RVAAP PBA2008 17 AOCs RI**

QC Outlier Report: Trip Blank

Lab Reporting Batch :
Lab ID:
Method/Preparation Batch :
Analysis Date :
Client Sample ID :
Preparation Date :
Lab Sample ID :
Preparation Type :

Analysis Method :

No contamination was found.

Continuing Calibration (CCV) Outlier Report (Organics)

There are no Organic Continuing Calibrations with outliers

Continuing Calibration (CCAL) Outlier Report (Inorganics)

There are no Inorganic Continuing Calibrations with outliers

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: A0D140520 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
L10SS-079M-5536-SO	A0D140520004	6020	SO	Antimony	J	0.18	0.51	mg/kg
				Silver	J	0.038	0.51	mg/kg
				Sodium	J	49.5	102	mg/kg
				Thallium	J	0.16	0.20	mg/kg
		7471A		Mercury	J	0.046	0.10	mg/kg
		8330B		Methyl-2,4,6-Trinitrophenylnitramine (T	J	0.023	0.24	mg/kg
L10SS-080M-5537-SO	A0D140520005	353.2 Modified		Nitrocellulose	B J	2.5	5.1	mg/kg
		6020		Antimony	J	0.39	0.51	mg/kg
				Cadmium	J	0.19	0.20	mg/kg
				Silver	J	0.032	0.51	mg/kg
				Sodium	J	79.2	102	mg/kg
				Thallium	J	0.17	0.20	mg/kg
		7471A		Mercury	J	0.027	0.10	mg/kg
		8082		Aroclor 1254	J	24	34	ug/kg
		8270C		2-Methylnaphthalene	J	410	3400	ug/kg
				Dibenzofuran	J	970	3400	ug/kg
		8330B		3-Nitrotoluene	J PG	0.025	0.24	mg/kg
				Methyl-2,4,6-Trinitrophenylnitramine (T	J PG	0.035	0.24	mg/kg
L10SS-080M-5537-SOVO	A0D140520006	8260B		Methylene chloride	J	0.96	6.2	ug/kg
L10SS-081M-5538-SO	A0D140520007	6020		Antimony	J	0.37	0.51	mg/kg
				Silver	J	0.030	0.51	mg/kg
				Sodium	J	39.1	102	mg/kg
				Thallium	J	0.16	0.20	mg/kg
		7471A		Mercury	J	0.037	0.10	mg/kg
L10SS-082M-5539-SO	A0D140520008	6020		Antimony	J	0.11	0.51	mg/kg
				Cadmium	J	0.15	0.20	mg/kg
				Silver	J	0.036	0.51	mg/kg
				Sodium	J	32.0	102	mg/kg
				Thallium	J	0.17	0.20	mg/kg
		7471A		Mercury	J	0.043	0.10	mg/kg
L10SS-083M-5540-SO	A0D140520009	6020		Antimony	J	0.14	0.51	mg/kg
				Cadmium	J	0.16	0.20	mg/kg
				Silver	J	0.032	0.51	mg/kg
				Sodium	J	33.5	102	mg/kg
				Thallium	J	0.15	0.20	mg/kg
		7471A		Mercury	J	0.036	0.10	mg/kg

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: A0D140520 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
L10SS-084M-5541-SO	A0D140520010	6020	SO	Antimony	J	0.12	0.51	mg/kg
				Cadmium	J	0.13	0.20	mg/kg
				Silver	J	0.037	0.51	mg/kg
				Sodium	J	38.8	102	mg/kg
				Thallium	J	0.17	0.20	mg/kg
		7471A		Mercury	J	0.036	0.10	mg/kg
L10SS-085M-5542-SO	A0D140520011	6020		Antimony	J	0.11	0.51	mg/kg
				Silver	J	0.033	0.51	mg/kg
				Sodium	J	37.7	102	mg/kg
				Thallium	J	0.15	0.20	mg/kg
		7471A		Mercury	J	0.040	0.10	mg/kg
L10SS-085M-6169-FD	A0D140520013	6020		Antimony	J	0.12	0.51	mg/kg
				Silver	J	0.036	0.51	mg/kg
				Sodium	J	38.0	102	mg/kg
				Thallium	J	0.15	0.20	mg/kg
		7471A		Mercury	J	0.041	0.10	mg/kg
L10SS-086M-5543-SO	A0D140520012	6020		Antimony	J	0.11	0.51	mg/kg
				Cadmium	J	0.15	0.20	mg/kg
				Silver	J	0.033	0.51	mg/kg
				Sodium	J	35.5	102	mg/kg
				Thallium	J	0.15	0.20	mg/kg
		7471A		Mercury	J	0.039	0.10	mg/kg
L10SS-087M-5544-SO	A0D140520014	6020		Antimony	J	0.16	0.51	mg/kg
				Cadmium	J	0.17	0.20	mg/kg
				Silver	J	0.038	0.51	mg/kg
				Sodium	J	33.1	102	mg/kg
				Thallium	J	0.17	0.20	mg/kg
		7471A		Mercury	J	0.046	0.10	mg/kg
L10SS-088M-5545-SO	A0D140520015	353.2 Modified		Nitrocellulose	B J	2.8	5.1	mg/kg
		6020		Antimony	J	0.22	0.51	mg/kg
				Cadmium	J	0.18	0.20	mg/kg
				Silver	J	0.029	0.51	mg/kg
				Sodium	J	71.2	102	mg/kg
				Thallium	J	0.16	0.20	mg/kg
		7471A		Mercury	J	0.034	0.10	mg/kg
		8270C		2-Methylnaphthalene	J	63	1300	ug/kg

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: A0D140520 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
L10SS-088M-5545-SO	A0D140520015	8270C	SO	Dibenzofuran	J	160	1300	ug/kg
		8330B		Methyl-2,4,6-Trinitrophenylnitramine (T	J PG	0.028	0.24	mg/kg
L10SS-088M-5545-SOVO	A0D140520016	8260B		Methylene chloride	J	1.3	6.5	ug/kg
L10SS-089M-5546-SO	A0D140520017	6020		Antimony	J	0.22	0.51	mg/kg
				Cadmium	J	0.14	0.20	mg/kg
				Silver	J	0.035	0.51	mg/kg
				Sodium	J	45.0	102	mg/kg
				Thallium	J	0.17	0.20	mg/kg
		7471A		Mercury	J	0.042	0.10	mg/kg
L10SS-089M-6171-FD	A0D140520018	6020		Antimony	J	0.24	0.51	mg/kg
				Cadmium	J	0.17	0.20	mg/kg
				Silver	J	0.034	0.51	mg/kg
				Sodium	J	46.1	102	mg/kg
				Thallium	J	0.17	0.20	mg/kg
		7471A		Mercury	J	0.044	0.10	mg/kg
L10SS-090M-5547-SO	A0D140520019	6020		Antimony	J	0.19	0.51	mg/kg
				Silver	J	0.033	0.51	mg/kg
				Sodium	J	64.7	102	mg/kg
				Thallium	J	0.16	0.20	mg/kg
		7471A		Mercury	J	0.037	0.10	mg/kg
		8330B		Methyl-2,4,6-Trinitrophenylnitramine (T	J PG	0.024	0.25	mg/kg
L10SS-091M-5548-SO	A0D140520020	6020		Antimony	J	0.34	0.51	mg/kg
				Cadmium	J	0.18	0.20	mg/kg
				Silver	J	0.028	0.51	mg/kg
				Sodium	J	42.9	102	mg/kg
				Thallium	J	0.15	0.20	mg/kg
		7471A		Mercury	J	0.033	0.10	mg/kg
L10SS-092M-5549-SO	A0D140520021	353.2 Modified		Nitrocellulose	B J	1.9	5.1	mg/kg
		6020		Antimony	J	0.18	0.51	mg/kg
				Cadmium	J	0.17	0.20	mg/kg
				Silver	J	0.039	0.51	mg/kg
				Sodium	J	38.9	102	mg/kg
				Thallium	J	0.16	0.20	mg/kg
		7471A		Mercury	J	0.041	0.10	mg/kg
		8081A		Heptachlor epoxide	J	25	26	ug/kg
		8270C		2-Methylnaphthalene	J	24	340	ug/kg

Reporting Limits Outlier Report (detected results reported below the reporting limit)

Lab Report Batch: A0D140520 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Analyte Name	Lab Qualifier	Result	EDD Reporting Limit	Units
L10SS-092M-5549-SO	A0D140520021	8270C	SO	bis(2-Ethylhexyl) phthalate	J B	32	340	ug/kg
				Diethyl phthalate	J	25	340	ug/kg
				Di-n-butyl phthalate	J	30	340	ug/kg
L10SS-092M-5549-SOVO	A0D140520022	8260B		Acetone	J	16	25	ug/kg
				Methylene chloride	J	1.3	6.1	ug/kg
L10SS-093M-5550-SO	A0D140520023	6020		Antimony	J	0.14	0.51	mg/kg
				Silver	J	0.033	0.51	mg/kg
				Sodium	J	40.5	102	mg/kg
				Thallium	J	0.16	0.20	mg/kg
		7471A		Mercury	J	0.045	0.10	mg/kg
LL5SD-078-5797-SD	A0D140520001	6020		Antimony	J	0.15	0.79	mg/kg
				Cadmium	J	0.24	0.32	mg/kg
				Silver	J	0.078	0.79	mg/kg
				Sodium	J	40.6	159	mg/kg
				Thallium	J	0.26	0.32	mg/kg
		7471A		Mercury	J	0.075	0.16	mg/kg
LL5SW-078-5796-SW	A0D140520002	6020	AQ	Arsenic	J	1.8	5.0	ug/L
				Cobalt	J	0.54	5.0	ug/L
				Copper	J	1.6	5.0	ug/L
				Lead	J	0.54	3.0	ug/L
				Nickel	J	1.4	10.0	ug/L
				Sodium	J	781	1000	ug/L
				Vanadium	J	0.54	10.0	ug/L
		8260B		Acetone	J	4.7	10	ug/L
				Toluene	J	0.22	1.0	ug/L
		8270C		bis(2-Ethylhexyl) phthalate	J B	1.1	10	ug/L
PBA08-QC-6024-TB	A0D140520003	8260B		Acetone	J	5.8	10	ug/L
				Methylene chloride	J	0.33	1.0	ug/L

Method Blank Outlier Report

Lab Reporting Batch : A0D140520
Lab ID: TALCAN
Analysis Method : 6020
Analysis Date : 04/21/2010
Preparation Type : 3005A
Preparation Date : 04/15/2010
Method Blank Lab Sample ID : A0D150000016B
Preparation Batch : 0105016

Aluminum	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**22.3**	**100**	**ug/L**	**J**	

Aluminum contamination found in the method blank did not qualify any samples.

Method Blank Outlier Report

Lab Reporting Batch : A0D140520
Lab ID: TALCAN
Analysis Method : 8270C
Analysis Date : 05/03/2010
Preparation Type : 3520C
Preparation Date : 04/15/2010
Method Blank Lab Sample ID : A0D150000039B
Preparation Batch : 0105039

bis(2-Ethylhexyl) phthalate	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**1.0**	**10**	**ug/L**	**J**	**Common Contaminant**

bis(2-Ethylhexyl) phthalate was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
LL5SW-078-5796-SW	A0D140520002	1	1.1	J B	ug/L

Di-n-butyl phthalate	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**0.73**	**10**	**ug/L**	**J**	**Common Contaminant**

Di-n-butyl phthalate contamination found in the method blank did not qualify any samples.

Method Blank Outlier Report

Lab Reporting Batch : A0D140520 **Lab ID:** TALCAN

Analysis Method : 8260B **Analysis Date :** 04/20/2010

Preparation Type : 5030B **Preparation Date :** 04/20/2010

Method Blank Lab Sample ID : A0D200000251B **Preparation Batch :** 0110251

Ethylbenzene	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**0.41**	**1.0**	**ug/L**	**J**	

Ethylbenzene contamination found in the method blank did not qualify any samples.

Xylene (Total)	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**0.94**	**2.0**	**ug/L**	**J**	

Xylene (Total) contamination found in the method blank did not qualify any samples.

Method Blank Outlier Report

Lab Reporting Batch : A0D140520
Lab ID: TALCAN
Analysis Method : 8270C
Analysis Date : 04/28/2010
Preparation Type : 3540C
Preparation Date : 04/22/2010
Method Blank Lab Sample ID : A0D220000049B
Preparation Batch : 0112049

bis(2-Ethylhexyl) phthalate	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**20**	**330**	**ug/kg**	**J**	**Common Contaminant**

bis(2-Ethylhexyl) phthalate was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
L10SS-092M-5549-SO	A0D140520021	1	32	J B	ug/kg

Method Blank Outlier Report

Lab Reporting Batch : A0D140520
Lab ID: TALCAN
Analysis Method : 353.2 Modified
Analysis Date : 04/28/2010
Preparation Type : Gen Prep
Preparation Date : 04/27/2010
Method Blank Lab Sample ID : G0D270000208B
Preparation Batch : 0117208

Nitrocellulose	Result	Reporting Limit	Units	Lab Qual	Comments
Method Blank Result:	**0.99**	**5.0**	**mg/kg**	**B**	

Nitrocellulose was qualified due to method blank contamination in the following associated samples:

Client Sample ID	Lab Sample ID	Dilution	Result	Lab Qual	Result Units
L10SS-080M-5537-SO	A0D140520005	1	2.5	B J	mg/kg
L10SS-088M-5545-SO	A0D140520015	1	2.8	B J	mg/kg
L10SS-092M-5549-SO	A0D140520021	1	1.9	B J	mg/kg

Surrogate Recovery Outlier Report

Lab Report Batch: A0D140520 **Lab ID:** TALCAN

Client Sample ID	Lab Sample ID	Analysis Method	Dilution	Matrix	Surrogate	Percent Recovery	Criteria (percent) Lower Limit	Upper Limit	Reject Point	Associated Target Analytes
L10SS-080M-5537-SOMS	A0D140520005S	8081A	20	SO	Decachlorobiphenyl	173	55.0	130.0	10.0	All Target
					TETRACHLORO-M-XYLENE	140	55.0	130.0	10.0	All Target
L10SS-080M-5537-SOMSD	A0D140520005D	8081A	20	SO	Decachlorobiphenyl	248	55.0	130.0	10.0	All Target
L10SS-092M-5549-SO	A0D140520021	8081A	10	SO	TETRACHLORO-M-XYLENE	607	55.0	130.0	10.0	All Target
LL5SW-078-5796-SW	A0D140520002	8082	1	AQ	Decachlorobiphenyl	28	40.0	135.0	10.0	All Target

QC Outlier Report: Field Duplicates (Non-qualified Outliers)

Lab Report Batch: **Lab ID:**

			Field Sample				Field Sample Duplicate						
Analysis Method	Matrix	Analyte Name	Client Sample ID	Ana Type	Result	Lab Qualifier	Client Sample Duplicate ID	Ana Type	Result	Lab Qualifiers	RPD Dup* (%)	RPD Criteria (%)	Result Units

Note: Outlier report also includes analytes detected in one sample but not in the related sample, i.e., analyte was detected in the field sample but not in the field duplicate sample, or vice versa. In this case, RPD value assigned to the field duplicate sample is 200.

ATTACHMENT 2

Chemical Data Quality Assessment Report

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MEMORANDUM FOR RECORD 14 November 2012
Revised 12 November 2013

SUBJECT: FINAL CHEMICAL DATA USABILITY ASSESSMENT

PROJECT: Ravenna Army Ammunition Plant, Ravenna, Ohio
18 Areas of Concern (PBA08)
Load Line 10 Remedial Investigation

1. Purpose:

   This memorandum represents and documents the evaluation of the quality and usability of the analytical data obtained during the Remedial Investigation (RI) at Load Line 10 including determination of contract compliance, data usability, and data quality objective attainment in accordance with EM 200-1-6, Chapter 5 (October 2006).

2. References:

   2.1 Data Quality Control Summary Report, Appendix C of the *Draft Remedial Investigation/Feasibility Study Report for Soil, Sediment, and Surface Water at RVAAP-43 Load Line 10*, prepared by SAIC, October 25, 2011.

   2.2 *Draft Data Validation Report, Ravenna Army Ammunition Plant 18 Areas of Concern 2010 Sampling, Ravenna, Ohio*, prepared by MEC^{x}, LP, June 2012.

   2.3 The QAPP for the *PBA 2008 Supplemental Investigation Sampling and Analysis Plan Addendum No. 1* (PBA08 SAP) prepared by SAIC, December 2009.

   2.4 *Facility-Wide Quality Assurance Project Plan for Environmental Investigations at the Ravenna Army Ammunition Plant, Appendix , Ravenna, Ohio* (FWQAPP), prepared by SAIC, March 2001.

   2.5 *DoD Quality Systems Manual for Environmental Laboratories*, Department of Defense (DoD QSM), Environmental Data Quality Workgroup, Version 3, January 2006.

   2.6 *Louisville DoD Quality Systems Manual Supplement, Version 1,* prepared by USACE –Louisville District, March 2007.

   2.7 EM 200-1-6, Chapter 5, Chemical Quality Assurance for Hazardous, Toxic and Radioactive Waste (HIRW) Projects, October 1997.

3. Project Description:

   The purpose of the PBA08 RI at Load Line 10 was to supplement the data from previous sampling events to delineate the nature and extent of contamination, evaluate contaminant fate and transport, and complete a human health risk assessment (HHRA) and ecological risk assessment (ERA) to support remedial decisions. Depending on the results of the RI, a recommendation would be provided for either no further action (NFA) or a Feasibility Study (FS) that would evaluate potential remedies and future actions.

   Sampling was conducted by Science Applications International Corporation (SAIC) from February to April 2010. Fifty-one environmental sediment, soil, and surface water samples were collected and

analyzed for one or more of the following parameters: metals, explosives, propellants, pesticides, polychlorinated biphenyls (PCBs), semivolatile organic compounds (SVOCs), polychlorinated aromatic hydrocarbons (PAHs), volatiles (VOCs), hexavalent chromium, and total chromium. Analytical services were provided by TestAmerica (TA-North Canton, OH and TA-West Sacramento, CA).

4. Analytical Program Overview:
Below are excerpts from Section 4.5 of the PBA08 SAP.

4.1 Data Quality Objectives

Data quality objective (DQO) summaries for this investigation will follow Tables 3-1 and 3-2 in the Facility-Wide QAPP. All QC parameters stated in the specific U.S. Environmental Protection Agency (USEPA) SW-846 methods will be adhered to for each chemical listed. The SW-846 method references found in the Facility-Wide QAPP have been revised to the Update III methods, as appropriate. Laboratories are required to comply with all methods as written; recommendations are considered requirements. Concurrence with the DoD QSM for Environmental Laboratories (DoD, 2006), and the Louisville QSM Supplement is expected.

4.2 Level of Quality Control Effort

QC efforts will follow Section 3.2 of the Facility-Wide QAPP. Field QC measurements will include field source water blanks, trip blanks, field duplicates, surrogates, and equipment rinsate blanks. Laboratory QC measurements will include method blanks, laboratory control samples (LCSs), laboratory duplicates, and matrix spike/matrix spike duplicate (MS/MSD) samples. LCS measurements will include the standard mid-level analyte concentration, plus a QC/method reporting level (MRL) low-level concentration. It is recognized that the laboratory will routinely perform and monitor the QC/MRL; however, guidance check limits will be utilized, as advisory and corrective action will not be required for individual analyte variances. The QC/MRL will be successfully analyzed at the beginning of the analytical sequences as required by the QSM. Additionally, the lab will analyze the QC/MRL sample at the close of the analytical sequence.

4.3 Accuracy, Precision, and Sensitivity of Analysis

Accuracy, precision, and sensitivity goals identified in Section 3.3 and Tables 3-1 through 3-9 of the Facility-Wide QAPP will be imposed for this investigation. As stated above, some of the analytical methods numbers have been updated (refer to Table 2-1 of this QAPP). Quality objectives related to individual method QC protocol will also follow requirements given in the DoD QSM for Environmental Laboratories and the Louisville QSM Supplement. Laboratories will make all reasonable attempts to meet the program and project reporting levels in Tables 3-1 through 3-9 of the Facility-Wide QAPP for each individual sample analysis.

4.4 Completeness, Representativeness, and Comparability

Completeness, representativeness, and comparability goals identified in Section 3.4 and Tables 3-1 and 3-2 of the Facility-Wide QAPP will be imposed for this investigation. The completeness goal for analytical data is 90%, as defined in Tables 3-1 and 3-2 of the FWQAPP.

5. Chemical Data Quality and Usability Assessment:

This assessment of the overall quality and usability of project data is based upon a thorough review of the associated Data Quality Control Summary Report as presented in Appendix C of the *Draft Remedial Investigation/Feasibility Study Report for Soil, Sediment, and Surface Water at RVAAP-43 Load Line 10* (SAIC, 2011) and Section 15 of the *Final Data Validation Report, Ravenna Army Ammunition Plant 18 Areas of Concern 2010 Sampling* (MEC^{x}, 2012).

The Data Quality Control Summary Report represents the 100% data review conducted by the primary contractor, SAIC. As a result of this review process, the data are qualified based on the technical assessment of the verification criteria. The qualifiers indicate the usability of the data.

Data validation was performed by MEC^{x}, a USACE-Louisville District contracted third-party. The Data Validation Report details their findings from the validation of 10% of the primary sample data, analysis of field duplicate results, and the determination of data. This evaluation includes the same review of the same QC elements as the primary contractor's review in addition to an in-depth look into the verification of sample results, target compound identification, and raw data. The intent is to verify the quality and the reliability of the primary data for its intended use.

The data were evaluated in the context of the data quality objective (DQOs) and measurement quality objectives (MQOs) as specified in the PBA08 SAP and FWQAPP referenced in items 2 and 4 above.

The subsections below present results from USACE's evaluation of the chemical data quality for Load Line 10, including determination of contract compliance, data usability, and data quality objective attainment.

5.1 Contract Compliance

Samples were collected and analyzed in accordance with the procedures specified in the project QAPPs. With minor exceptions, data met the QC specifications outlined in the DoD QSM and project QAPPs. Nearly all of the analytical data are considered usable and have been appropriately qualified. Specific non-conformances and their impact on data usability are noted and described in the reports.

Some analytes had method detection levels (MDLs) and/or reporting limits (RLs) that exceeded the criteria in Table 3-1 of the SAP or in Table 3-3 of the FWQAPP, if no criteria were listed in the SAP. The failure to achieve reporting limits less than applicable criteria for some analyses was anticipated due to analytical limitations. Detections between the MDL and RL would have been reported as estimated (J). Overall, there were 12 pesticides, 6 SVOCs, 1 VOC and 16 metals with MDLs greater than the levels specified. Results with MDLs exceeding project criteria were still able to be used during risk assessment.

5.2 Data Quality Attainment

The quality of data generated for the Load Line 10 RI met the project DQOs. Usable definitive data of known and documented quality was produced for 99.9% of the sample analyses performed. This includes some data qualified as estimated (J) due to QC outliers indicating that

accuracy, precision, or sensitivity was less than desired. Estimated data are considered usable data.

During the contractor's 100% Level III evaluation, 1 non-detect result for antimony in soil sample L10SB-070-5510-SO was rejected due to poor matrix spike recoveries. No additional data were rejected during the 10% Level IV data validation performed by MEC[x].

Load Line 10

Rejected Data

Sample	SDG	Analyte	Reason	Review
L10SB-070-5510-SO	A0C17037	Antimony	MS Recovery (<30%)	Level III (100%)

5.3 Data Usability

Data were consistently reviewed and qualified by both the primary contractor and the third-party validator. Overall findings were similar. One result was rejected during the contractor's 100% Level III evaluation. No additional data were rejected or deemed unusable during the 10% Level IV data validation performed by MEC[x]. While differences in professional opinion may have resulted in some data being qualified as estimated (J) by one reviewer and not the other, this does not adversely impact the usability of the data. This primary difference was in regards to qualification of data due to MRL recovery outliers. Section 3.2 of the FWQAPP considers the QC limits "guidance". As such, SAIC notes outliers but doesn't qualify based upon them. Based upon professional opinion, MEC[x] qualifies data associated with missing MRL standards or those with recovery outliers as estimated (J).

6.0 Conclusion:

Through the proper implementation of the project data review, verification, and validation process that is outlined in the FWQAPP, the data for Load Line 10 RI are deemed acceptable for use with one exception. Rejected and unusable data are relegated to 1 non-detect result out of approximately 4,530 results. Based upon this assessment, all other analytical results (99.9%) are usable as qualified to meet the project DQOs; can withstand scientific scrutiny; are technically defensible; and are of known and acceptable quality in terms of sensitivity, precision, and accuracy.

Kathy Krantz
Project Chemist
USACE – Louisville District