



LABORATORY DATA CONSULTANTS, INC.

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Northgate Environmental Management, Inc.
1100 Quail Street Ste. 102
Newport Beach, CA 92660
ATTN: Ms. Cindy Arnold

December 23, 2009

SUBJECT: Tronox LLC Facility, 2009 Phase B Investigation, Henderson,
Nevada, Data Validation

Dear Ms. Arnold,

Enclosed are the final validation reports for the fractionS listed below. These SDGs were received on December 2, 2009. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 22192:

<u>SDG #</u>	<u>Fraction</u>
8304642, 8304643 8304644	Arsenic & Selenium, Organophosphorus Pesticides

The data validation was performed under Stage 2B guidelines. The analyses were validated using the following documents, as applicable to each method:

- Standard Operating Procedures (SOP) 40, Data Review/Validation, BRC 2009
- Quality Assurance Project Plan Tronox LLC Facility, Henderson Nevada, June 2009
- NDEP Guidance, May 2006
- USEPA, Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004
- USEPA, Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, June 2008

Please feel free to contact us if you have any questions.

Sincerely,

Erlinda T. Rauto
Operations Manager/Senior Chemist

EDD CHECKLIST

LDC #: 22192
 SDG #: 8304642, 8304643, 8304644

Page: 1 of 1
 Reviewer: JE
 2nd Reviewer: BC

Tronox Northgate Henderson Worksheet

EDD Area	Yes	No	NA	Findings/Comments
I. Completeness				
Is there an EDD for the associated Tronox validation report?	X			
II. EDD Qualifier Population				
Were all qualifiers from the validation report populated into the EDD?	X			
III. EDD Lab Anomalies				
Were EDD anomalies identified?	X			
If yes, were they corrected or documented for the client?	X			See EDD_discrepancy_form LDC22192 122209.doc
IV. EDD Delivery				
Was the final EDD sent to the client?	X			

**Tronox LLC Facility, 2009 Phase B Investigation, Henderson, Nevada
Data Validation Reports
LDC #22192**

Arsenic & Selenium

LDC

**Laboratory Data Consultants, Inc.
Data Validation Report**

Project/Site Name: Tronox LLC Facility, 2009 Phase B Investigation,
Henderson, Nevada

Collection Date: November 2, 2009

LDC Report Date: December 21, 2009

Matrix: Water

Parameters: Arsenic & Selenium

Validation Level: Stage 2B

Laboratory: TestAmerica, Inc.

Sample Delivery Group (SDG): 8304643

Sample Identification

EB110209-GWA3
M-147B
M-147009B
EB110209-GWA3MS
EB110209-GWA3MSD

Introduction

This data review covers 5 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6020 for Arsenic and Selenium.

This review follows the Standard Operating Procedures (SOP) 40, Data Review/Validation (BRC 2009), the Quality Assurance Project Plan Tronox LLC Facility, Henderson, Nevada (June 2009), NDEP guidance (May 2006), and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2004) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blanks are summarized in Section IV.

Field duplicates are summarized in Section XIV.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

- J+ Data are qualified as estimated, with a high bias likely to occur. False positives or false negatives are unlikely to have been reported.
- J- Data are qualified as estimated, with a low bias likely to occur. False positives or false negatives are unlikely to have been reported.
- J Data are qualified as estimated; it is not possible to assess the direction of the potential bias. False positives or false negatives are unlikely to have been reported.
- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- R Data are qualified as rejected. There is a significant potential for the reporting of false negatives or false positives.
- UU Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- B The analytical result may be a false positive totally attributable to blank contamination. This qualifier is applicable to radiochemistry analysis only.
- JB The analytical result may be biased high and partially attributable to blank contamination. This qualifier is applicable to radiochemistry analysis only.
- JK The analytical result is an estimated maximum possible concentration (EMPC).
- X The analytical result is not used for reporting because a more accurate and precise result is reported in its place.
- J-TDS The analytical result is estimated based on failure of the Total Dissolved Solids (TDS) correctness check performed in accordance with the Standard Method 1030E.
- J-CAB The analytical result is estimated based on failure of the cation-anion balance correctness check performed in accordance with Standard Method 1030E.
- J-TDS & CAB The analytical result is unreliable based on the failure of the cation-anion balance and TDS correctness check performed in accordance with standard Method 1030E.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

The mass calibration was within 0.1 AMU and the percent relative standard deviation (%RSD) was less than or equal to 5% .

III. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

Sample EB110209-GWA3 was identified as an equipment blank. No metal contaminants were found in this blank.

Sample PB102309-A3 (from SDG 8304640) was identified as a pump blank. No metal contaminants were found in this blank with the following exceptions:

Pump Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
PB102309-A3	10/23/09	Selenium	1.1 ug/L	M-147B M-147009B

Sample concentrations were compared to concentrations detected in the pump blanks as required by the QAPP. No sample data was qualified.

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike Analysis

Matrix spike (MS) samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VII. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Internal Standards

Raw data were not reviewed for this SDG.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met.

XII. Sample Result Verification and Project Quantitation Limit

All analytes reported below the PQL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 8304643	All analytes reported below the PQL.	J (all detects)	A

Raw data were not reviewed for this SDG.

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

Samples M-147B and M-147009B were identified as field duplicates. No metals were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L)		RPD (Limits)	Difference (Limits)	Flags	A or P
	M-147B	M-147009B				
Arsenic	170	180	6 (≤ 30)	-	-	-
Selenium	7.3	7.8	7 (≤ 30)	-	-	-

**Tronox LLC Facility, 2009 Phase B Investigation, Henderson, Nevada
 Arsenic & Selenium - Data Qualification Summary - SDG 8304643**

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
8304643	EB110209-GWA3 M-147B M-147009B	All analytes reported below the PQL.	J (all detects)	A	Sample result verification (PQL) (sp)

**Tronox LLC Facility, 2009 Phase B Investigation, Henderson, Nevada
 Arsenic & Selenium - Laboratory Blank Data Qualification Summary - SDG 8304643**

No Sample Data Qualified in this SDG

**Tronox LLC Facility, 2009 Phase B Investigation, Henderson, Nevada
 Arsenic & Selenium - Equipment Blank Data Qualification Summary - SDG 8304643**

No Sample Data Qualified in this SDG

**Tronox LLC Facility, 2009 Phase B Investigation, Henderson, Nevada
 Arsenic & Selenium - Pump Blank Data Qualification Summary - SDG 8304643**

No Sample Data Qualified in this SDG

Tronox Northgate Henderson

VALIDATION COMPLETENESS WORKSHEET

Stage 2B

LDC #: 22192B4
 SDG #: 8304643
 Laboratory: Test America

Date: 12-12-09
 Page: 1 of 1
 Reviewer: [Signature]
 2nd Reviewer: [Signature]

METHOD: As & Se (EPA SW 846 Method 6020)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

Validation Area		Comments	
I.	Technical holding times	A	Sampling dates: 11/2/09
II.	ICP/MS Tune	A	
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	A	
VI.	Matrix Spike Analysis	A	MS/D
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	A	LCS
IX.	Internal Standard (ICP-MS)	N	Not reviewed
X.	Furnace Atomic Absorption QC	N	Not reviewed
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	A	
XIV.	Field Duplicates	SW	(2,3)
XV.	Field Blanks	SW	EB=1, Pump Blank = PB102309-A3 (SDG# 8304643)

Note: A = Acceptable
 N = Not provided/applicable
 SW = See worksheet
 ND = No compounds detected
 R = Rinsate
 FB = Field blank
 D = Duplicate
 TB = Trip blank
 EB = Equipment blank

Validated Samples: water

1	EB110209-GWA3	11	PBW	21		31	
2	M-147B	12		22		32	
3	M-147009B	13		23		33	
4	EB110209-GWA3MS	14		24		34	
5	EB110209-GWA3MSD	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes: _____

LDC_22192B4
SDG#: See Cover

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer: [Signature]
2nd Reviewer: [Signature]

METHOD: Metals (EPA Method 6020/6010/7000)

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Compound	Concentration (ug/L)		(<30) RPD	Difference	Limits	Qualifications (Parent Only)
	2	3				
Arsenic	170	180	6			
Selenium	7.3	7.8	7			

V:\FIELD DUPLICATES\FD_inorganic\22192B4.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Tronox LLC Facility, 2009 Phase B Investigation,
Henderson, Nevada

Collection Date: November 11, 2009

LDC Report Date: December 21, 2009

Matrix: Water

Parameters: Arsenic & Selenium

Validation Level: Stage 2B

Laboratory: TestAmerica, Inc.

Sample Delivery Group (SDG): 8304644

Sample Identification

M-122B
M-122BDISS
M-122BMS
M-122BMSD
M-122BDISSMS
M-122BDISSMSD

Introduction

This data review covers 6 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6020 for Arsenic and Selenium.

This review follows the Standard Operating Procedures (SOP) 40, Data Review/Validation (BRC 2009), the Quality Assurance Project Plan Tronox LLC Facility, Henderson, Nevada (June 2009), NDEP guidance (May 2006), and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2004) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blanks are summarized in Section IV.

Field duplicates are summarized in Section XIV.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

- J+ Data are qualified as estimated, with a high bias likely to occur. False positives or false negatives are unlikely to have been reported.
- J- Data are qualified as estimated, with a low bias likely to occur. False positives or false negatives are unlikely to have been reported.
- J Data are qualified as estimated; it is not possible to assess the direction of the potential bias. False positives or false negatives are unlikely to have been reported.
- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- R Data are qualified as rejected. There is a significant potential for the reporting of false negatives or false positives.
- UU Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- B The analytical result may be a false positive totally attributable to blank contamination. This qualifier is applicable to radiochemistry analysis only.
- JB The analytical result may be biased high and partially attributable to blank contamination. This qualifier is applicable to radiochemistry analysis only.
- JK The analytical result is an estimated maximum possible concentration (EMPC).
- X The analytical result is not used for reporting because a more accurate and precise result is reported in its place.
- J-TDS The analytical result is estimated based on failure of the Total Dissolved Solids (TDS) correctness check performed in accordance with the Standard Method 1030E.
- J-CAB The analytical result is estimated based on failure of the cation-anion balance correctness check performed in accordance with Standard Method 1030E.
- J-TDS & CAB The analytical result is unreliable based on the failure of the cation-anion balance and TDS correctness check performed in accordance with standard Method 1030E.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

The mass calibration was within 0.1 AMU and the percent relative standard deviation (%RSD) was less than or equal to 5% .

III. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

Sample PB102309-A3 (from SDG 8304640) was identified as a pump blank. No metal contaminants were found in this blank with the following exceptions:

Pump Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
PB102309-A3	10/23/09	Selenium	1.1 ug/L	M-122B

Sample concentrations were compared to concentrations detected in the pump blanks as required by the QAPP. No sample data was qualified.

Sample FILTB092509-A2 (from SDG 8304632) was identified as a filter blank. No metal contaminants were found in this blank with the following exceptions:

Filter Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
FILTB092509-A2	9/25/09	Selenium	2.0 ug/L	M-122BDISS

Sample concentrations were compared to concentrations detected in the filter blanks as required by the QAPP. No sample data was qualified.

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
M-122BMS/MSD (M-122B)	Selenium	-	132 (75-125)	-	J+ (all detects)	A
M-122BDISSMS/MSD (M-122BDISS)	Selenium	137 (75-125)	149 (75-125)	-	J+ (all detects)	A

VII. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Internal Standards

Raw data were not reviewed for this SDG.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met.

XII. Sample Result Verification and Project Quantitation Limit

All analytes reported below the PQL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 8304644	All analytes reported below the PQL.	J (all detects)	A

Raw data were not reviewed for this SDG.

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

No field duplicates were identified in this SDG.

**Tronox LLC Facility, 2009 Phase B Investigation, Henderson, Nevada
 Arsenic & Selenium - Data Qualification Summary - SDG 8304644**

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
8304644	M-122B M-122BDISS	Selenium	J+ (all detects)	A	Matrix spike/Matrix spike duplicates (%R) (m)
8304644	M-122B M-122BDISS	All analytes reported below the PQL.	J (all detects)	A	Sample result verification (PQL) (sp)

**Tronox LLC Facility, 2009 Phase B Investigation, Henderson, Nevada
 Arsenic & Selenium - Laboratory Blank Data Qualification Summary - SDG 8304644**

No Sample Data Qualified in this SDG

**Tronox LLC Facility, 2009 Phase B Investigation, Henderson, Nevada
 Arsenic & Selenium - Pump Blank Data Qualification Summary - SDG 8304644**

No Sample Data Qualified in this SDG

**Tronox LLC Facility, 2009 Phase B Investigation, Henderson, Nevada
 Arsenic & Selenium - Filter Blank Data Qualification Summary - SDG 8304644**

No Sample Data Qualified in this SDG

Tronox Northgate Henderson

VALIDATION COMPLETENESS WORKSHEET

Stage 2B

LDC #: 22192C4
 SDG #: 8304644
 Laboratory: Test America

Date: 12-12-09
 Page: 1 of 1
 Reviewer: [Signature]
 2nd Reviewer: [Signature]

METHOD: As & Se (EPA SW 846 Method 6020)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/11/09
II.	ICP/MS Tune	A	
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	A	
VI.	Matrix Spike Analysis	SW	MS/D
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	A	LCS
IX.	Internal Standard (ICP-MS)	N	Not reviewed
X.	Furnace Atomic Absorption QC	N	Not utilized
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	A	
XIV.	Field Duplicates	N	
XV.	Field Blanks	SW	Pump Blank = PB102309-A3, FILTER 2589-A2 (SDG# 8304640) (SDG# 8304632)

Note: A = Acceptable
 N = Not provided/applicable
 SW = See worksheet
 ND = No compounds detected
 R = Rinsate
 FB = Field blank
 D = Duplicate
 TB = Trip blank
 EB = Equipment blank

Validated Samples: water

1	M-122B	11	PBW	21		31	
2	M-122BDISS	12	PBWD	22		32	
3	M-122BMS	13		23		33	
4	M-122BMSD	14		24		34	
5	M-122BDISSMS	15		25		35	
6	M-122BDISSMSD	16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes: _____

**Tronox LLC Facility, 2009 Phase B Investigation, Henderson, Nevada
Data Validation Reports
LDC #22192**

Organophosphorus Pesticides

LDC

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name: Tronox LLC Facility, 2009 Phase B Investigation,
Henderson, Nevada

Collection Date: October 27, 2009

LDC Report Date: December 17, 2009

Matrix: Soil/Water

Parameters: Organophosphorus Pesticides

Validation Level: Stage 2B

Laboratory: TestAmerica, Inc.

Sample Delivery Group (SDG): 8304642

Sample Identification

RSAP7-0.0B
RSAP7-0.5B
RSAP7-14B
RSAP7-41B
EB102709-SO1A3
RSAP7-0.0BMS
RSAP7-0.0BMSD
RSAP7-0.5BMS
RSAP7-0.5BMSD

Introduction

This data review covers 8 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8141A for Organophosphorus Pesticides.

This review follows the Standard Operating Procedures (SOP) 40, Data Review/Validation (BRC 2009), the Quality Assurance Project Plan Tronox LLC Facility, Henderson, Nevada (June 2009), NDEP guidance (May 2006), and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

- J+ Data are qualified as estimated, with a high bias likely to occur. False positives or false negatives are unlikely to have been reported.
- J- Data are qualified as estimated, with a low bias likely to occur. False positives or false negatives are unlikely to have been reported.
- J Data are qualified as estimated; it is not possible to assess the direction of the potential bias. False positives or false negatives are unlikely to have been reported.
- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- R Data are qualified as rejected. There is a significant potential for the reporting of false negatives or false positives.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- B The analytical result may be a false positive totally attributable to blank contamination. This qualifier is applicable to radiochemistry analysis only.
- JB The analytical result may be biased high and partially attributable to blank contamination. This qualifier is applicable to radiochemistry analysis only.
- JK The analytical result is an estimated maximum possible concentration (EMPC).
- X The analytical result is not used for reporting because a more accurate and precise result is reported in its place.
- J-TDS The analytical result is estimated based on failure of the Total Dissolved Solids (TDS) correctness check performed in accordance with the Standard Method 1030E.
- J-CAB The analytical result is estimated based on failure of the cation-anion balance correctness check performed in accordance with Standard Method 1030E.
- J-TDS & CAB The analytical result is unreliable based on the failure of the cation-anion balance and TDS correctness check performed in accordance with standard Method 1030E.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

Initial calibration of compounds was performed for the primary (quantitation) column and confirmation column as required by this method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for selected compounds.

A curve fit, based on the initial calibration, was established for quantitation for selected compounds. The coefficient of determination (r^2) was greater than or equal to 0.990 .

b. Calibration Verification

Calibration verification was performed at the required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were less than or equal to 20.0% with the following exceptions:

Date	Standard	Column	Compound	%D	Associated Samples	Flag	A or P
11/6/09	012F1201	1	Dichlorvos Mevinphos	25.8 27.7	RSAP7-0.5B RSAP7-14B RSAP7-41B RSAP7-0.5BMS RSAP7-0.5BMSD 9306461-MB	J+ (all detects) J+ (all detects)	A
11/6/09	012F1201	2	Dichlorvos Sulfotep	24.6 31.5	RSAP7-0.5B RSAP7-14B RSAP7-41B RSAP7-0.5BMS RSAP7-0.5BMSD 9306461-MB	J+ (all detects) J+ (all detects)	A
10/30/09	003F0301	1	Naled Fensulfothion	20.7 21.0	All water samples in SDG 8304642	J- (all detects) UJ (all non-detects) J- (all detects) UJ (all non-detects)	A

Date	Standard	Column	Compound	%D	Associated Samples	Flag	A or P
10/30/09	003F0301	2	Naled	27.7	All water samples in SDG 8304642	J- (all detects)	A
			Fensulfothion	28.8		UJ (all non-detects)	
						J- (all detects)	
						UJ (all non-detects)	

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds with the following exceptions:

Date	Standard	Column	Compound	%D	Associated Samples	Flag	A or P
9/29/09	010F1001	1	Mevinphos	30.8	RSAP7-0.5B RSAP7-14B RSAP7-41B EB102709-SO1A3 RSAP7-0.5BMS RSAP7-0.5BMSD 9306461-MB 9301551-MB	J- (all detects) UJ (all non-detects)	A
9/29/09	010F1001	2	Mevinphos	21.7	RSAP7-0.5B RSAP7-14B RSAP7-41B EB102709-SO1A3 RSAP7-0.5BMS RSAP7-0.5BMSD 9306461-MB 9301551-MB	J- (all detects) UJ (all non-detects)	A

III. Blanks

Method blanks were reviewed for each matrix as applicable. No organophosphorus pesticide contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Extraction Date	Compound	Concentration	Associated Samples
9306461-MB	11/2/09	Dimethoate	7.6 ug/Kg	RSAP7-0.5B RSAP7-14B RSAP7-41B

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound	Reported Concentration	Modified Final Concentration
RSAP7-0.5B	Dimethoate	9.1 ug/Kg	9.1U ug/Kg
RSAP7-14B	Dimethoate	9.4 ug/Kg	9.4U ug/Kg
RSAP7-41B	Dimethoate	13 ug/Kg	13U ug/Kg

Sample EB102709-SO1A3 was identified as an equipment blank. No organophosphorus pesticide contaminants were found in this blank.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. The percent recoveries (%R) were within QC limits.

b. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

c. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

V. Target Compound Identification

Raw data were not reviewed for this SDG.

VI. Project Quantitation Limit

All compounds reported below the PQL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 8304642	All compounds reported below the PQL.	J (all detects)	A

Raw data were not reviewed for this SDG.

VII. System Performance

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

IX. Field Duplicates

No field duplicates were identified in this SDG.

**Tronox LLC Facility, 2009 Phase B Investigation, Henderson, Nevada
Organophosphorus Pesticides - Data Qualification Summary - SDG 8304642**

SDG	Sample	Compound	Flag	A or P	Reason (Code)
8304642	RSAP7-0.5B RSAP7-14B RSAP7-41B	Dichlorvos Mevinphos Sulfotep	J+ (all detects) J+ (all detects) J+ (all detects)	A	Continuing calibration (%D) (c)
8304642	EB102709-SO1A3	Naled Fensulfothion	J- (all detects) UJ (all non-detects) J- (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (c)
8304642	RSAP7-0.5B RSAP7-14B RSAP7-41B EB102709-SO1A3	Mevinphos	J- (all detects) UJ (all non-detects)	A	Continuing calibration (ICV %D) (c)
8304642	RSAP7-0.0B RSAP7-0.5B RSAP7-14B RSAP7-41B EB102709-SO1A3	All compounds reported below the PQL.	J (all detects)	A	Project Quantitation Limit (sp)

**Tronox LLC Facility, 2009 Phase B Investigation, Henderson, Nevada
Organophosphorus Pesticides - Laboratory Blank Data Qualification Summary - SDG 8304642**

SDG	Sample	Compound	Modified Final Concentration	A or P	Code
8304642	RSAP7-0.5B	Dimethoate	9.1U ug/Kg	A	bl
8304642	RSAP7-14B	Dimethoate	9.4U ug/Kg	A	bl
8304642	RSAP7-41B	Dimethoate	13U ug/Kg	A	bl

**Tronox LLC Facility, 2009 Phase B Investigation, Henderson, Nevada
Organophosphorus Pesticides - Equipment Blank Data Qualification Summary - SDG 8304642**

No Sample Data Qualified in this SDG

Tronox Northgate Henderson

VALIDATION COMPLETENESS WORKSHEET

Stage 2B

LDC #: 22192A17
 SDG #: 8304642
 Laboratory: Test America

Date: 12/11/09
 Page: 1 of 1
 Reviewer: JVG
 2nd Reviewer: [Signature]

METHOD: GC Organophosphorus Pesticides (EPA SW 846 Method 8141A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 10/27/09
IIa.	Initial calibration	A	% RSD r ²
IIb.	Calibration verification/ICV	SW	COV/ICV ≤ 20%
III.	Blanks	SW	
IVa.	Surrogate recovery	A	
IVb.	Matrix spike/Matrix spike duplicates	A	
IVc.	Laboratory control samples	A	LCS
V.	Target compound identification	N	
VI.	Compound Quantitation and CRQLs	N	
VII.	System Performance	N	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	N	
X.	Field blanks	ND	EB = 5

Note: A = Acceptable
 N = Not provided/applicable
 SW = See worksheet
 ND = No compounds detected
 R = Rinsate
 FB = Field blank
 D = Duplicate
 TB = Trip blank
 EB = Equipment blank

Validated Samples: Soil + Water

1	RSAP7-0.0B	S	11	9313535-MB	21		31
2	RSAP7-0.5B	↓	12	9306461-MB	22		32
3	RSAP7-14B	↓	13	9301551-MB	23		33
4	RSAP7-41B	↓	14		24		34
5	EB102709-SO1A3	W	15		25		35
6	RSAP7-0.0BMS	S	16		26		36
7	RSAP7-0.0BMSD	↓	17		27		37
8	RSAP7-0.5BMS	↓	18		28		38
9	RSAP7-0.5BMSD	↓	19		29		39
10			20		30		40

Notes: _____

VALIDATION FINDINGS WORKSHEET

METHOD: GC HPLC

8310	8330	8151	8141	8141 (Con't)	8021B
A. Acenaphthene	A. HMX	A. 2,4-D	A. Dichlorvos	V. Fensulfothion	V. Benzene
B. Acenaphthylene	B. RDX	B. 2,4-DB	B. Mevinphos	W. Bolstar	CC. Toluene
C. Anthracene	C. 1,3,5-Trinitrobenzene	C. 2,4,5-T	C. Demeton-O	X. EPN	EE. Ethyl Benzene
D. Benzo(a)anthracene	D. 1,3-Dinitrobenzene	D. 2,4,5-TP	D. Demeton-S	Y. Azinphos-methyl	SSS. O-Xylene
E. Benzo(a)pyrene	E. Tetryl	E. Dinoseb	E. Ethoprop	Z. Coumaphos	RRR. MP-Xylene
F. Benzo(b)fluoranthene	F. Nitrobenzene	F. Dichlorprop	F. Naled	AA. Parathion	GG. Total Xylene
G. Benzo(g,h,i)perylene	G. 2,4,6-Trinitrotoluene	G. Dicamba	G. Sulfotep	BB. Trichloronate	
H. Benzo(k)fluoranthene	H. 4-Amino-2,6-dinitrotoluene	H. Dalapon	H. Phorate	CC. Trichlorinate	
I. Chrysene	I. 2-Amino-4,6-dinitrotoluene	I. MCPP	I. Dimethoate	DD. Trifluralin	
J. Dibenz(a,h)anthracene	J. 2,4-Dinitrotoluene	J. MCPA	J. Diazinon	EE. Def	
K. Fluoranthene	K. 2,6-Dinitrotoluene	K. Pentachlorophenol	K. Disulfoton	FF. Prowl	
L. Fluorene	L. 2-Nitrotoluene	L. 2,4,5-TP (silvex)	L. Parathion-methyl	GG. Ethion	
M. Indeno(1,2,3-cd)pyrene	M. 3-Nitrotoluene	M. Silvex	M. Ronnel	HH. Tetrachlorvinphos	
N. Naphthalene	N. 4-Nitrotoluene		N. Malathion	II. Sulprofos	
O. Phenanthrene	O.		O. Chlorpyrifos	JJ. Thionazin	
P. Pyrene	P.		P. Fenthion	KK. Phosmet	
Q.	Q		Q. Parathion-ethyl	LL. O,O,O-Triethylphosphorothioate	
R.			R. Trichloronate	MM. Famphur	
S.			S. Merphos	NN. Carbo phenethion	
			T. Sirofos	OO. Carbo phenethion - methyl	
			U. Tokuthion		

Notes:

