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Rt. 7 Dump / New Jersey Fireworks
ESI
Volume II

ORIGINAL

APPENDIX A

INORGANIC DATA VALIDATION PACKAGE

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
ENVIRONMENTAL SCIENCE CENTER
701 MAPES ROAD
FORT MEADE, MARYLAND 20755-5350

DATE : September 21, 2004

SUBJECT: Region III Data QA Review

FROM : Khin-Cho Thaung KCT
Region III ESAT RPO (3EA21)

TO : Lorie Baker
Regional Project Manager (3HS34)

Attached is the inorganic data validation report for the New Jersey Fireworks Site (Case#:33178, SDG#:MC0004, MC0022, MC0029, MC0073) completed by the Region III Environmental Services Assistance Team (ESAT) contractor under the direction of Region III EAID.

If you have any questions regarding this review, please call me at (410) 305-2743.

Attachments

cc: Peggy Smith (MDE)

TO File #: 0015 TDF#: 0890

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MAJOR PROBLEM

The matrix spike recovery was extremely low (<30%) for Sb in SDG MC0004. Positive results reported for this analyte in affected samples in this SDG may be biased extremely low. The "L" qualifier has been superseded by "J" or "B" on the DSFs. The quantitation limit for this analyte in sample MC0002 in this SDG has been rejected and qualified "R" on the DSF.

MINOR PROBLEMS

Unfiltered aqueous samples MC0042 and MC0052 in SDG MC0073 had CN^- aliquots for which pH values were less than twelve (pH<12) prior to the digestion process. The positive result reported for CN^- in sample MC0042 in this SDG may be biased low. The "L" qualifier has been superseded by "B" on the DSF. The quantitation limit for CN^- in sample MC0052 in this SDG may be biased low and has been qualified "UL" on the DSF.

Continuing Calibration (CCB), Preparation (PB) and/or Field (FB) Blanks had reported results greater than the Method Detection Limits (MDLs) for the analytes listed below. Positive results reported in affected samples which are less than or equal to five times (≤5X) the blank concentrations may be biased high and have been qualified "B" on the DSFs.

SDG	Blank	Affected Analytes
MC0004	CCB	Sb, cadmium (Cd)
	PB	selenium (Se), sodium (Na), CN^-
	FB	Cd, mercury (Hg)
MC0022	CCB	Sb, Cd
	PB	calcium (Ca), Na, CN^-
MC0029	CCB	copper (Cu), aluminum (Al)
	PB	arsenic (As), Ca, zinc (Zn)
	FB	Zn
MC0073	CCB	Al, Cd
	PB	iron (Fe), Zn, CN^-
	FB	chromium (Cr), Hg, Zn

CCBs and/or PBs had negative values greater than the absolute value of the MDLs regarding the analytes listed below. Positive results in affected samples which are less than two times (<2X) the absolute value of the blank concentrations may be biased low. The "L" qualifier has been superseded by "J" or "B" on the DSFs. Quantitation limits in affected samples may be biased low and have been qualified "UL" on the DSFs.

SDG	Affected Analytes
MC0004	Cd
MC0022	lead (Pb)
MC0029	barium (Ba), beryllium (Be), Cd, manganese (Mn), Se
MC0073	Ba, cobalt (Co), magnesium (Mg), Mn, Hg, potassium (K)

Matrix spike recoveries were low (<75% but >30%) for Sb, As and Se in SDG MC0022 and for silver (Ag) in SDG MC0029. Low recoveries may be attributed to matrix interferences or analyte lost during the digestion process. Positive results reported for these analytes in affected samples in these SDGs may be biased low. The "L" qualifier has been superseded by "J" or "B" on the DSFs. Quantitation limits for these analytes in affected samples in these SDGs may be biased low and have been qualified "UL" on the DSFs.

Relative Percent Differences (RPDs) for the laboratory duplicate analysis were outside control limits (35% RPD, ±2XCRDL) for Pb and Zn in SDG MC0004. Positive results reported for these analytes in this SDG are estimated and have been qualified "J" on the DSFs.

One of the aqueous laboratory control sample (LCS) result reported for Al in SDG MC0029 was outside the certified upper control limit (>120%). Per SOW, if the LCS exceeded the certified control limits, the analysis should be terminated, problem corrected and associated samples redigested and analyzed. The laboratory did not redigest and reanalyze the associated aqueous sample in this SDG for Al. The reported result for this analyte in sample MC0029 the only sample affected in this SDG may be biased high and has been qualified "K" on DSF.

Percent Differences (%D) for ICP serial dilution analyses were outside control limits (>10%) for the analytes listed below. Positive results reported in the affected samples are estimated due to possible matrix interferences and have been qualified "J" on the DSFs unless superseded by "B".

SDG	Affected Analytes
MC0004	Zn
MC0022	Ba
MC0029	Ba
MC0073	Mg, Mn, K

NOTES

Reported results between MDLs and Contract Required Quantitation Limits (CRQLs) were qualified "J" on the DSFs unless superseded by "B".

In SDGs MC0029 and MC0073 only one set of QC (matrix spike, laboratory duplicate and serial dilution analyses) was performed on the unfiltered samples. Therefore, the reviewer utilized the results for these analyses to qualify data for both the unfiltered and filtrate samples.

Some unfiltered samples in SDGs MC0029 and MC0073 had CN^- aliquots for which pH values were equal to twelve (pH=12) prior to the digestion process, which is outside the sample preservation criteria (pH>12) for CN^- analysis. No samples in these SDGs were qualified due to this slight discrepancy.

In SDG MC0073, one (1) of the CRQL check standard recoveries (CRI02) was high (>130%) for Hg. Therefore, the laboratory reanalyzed the CRQL check standard as CRI03, which was well inside the control limits.

RPDs for the laboratory duplicate analyses were outside contractual control limits (20% RPD, ±CRQL) for Ba, Cu and Mg in SDG MC0004 and for Pb in SDG MC0022. However, RPDs for these analytes in these SDGs were within Region 3 established control limits (35% RPD, ±2XCRQL) for soil analysis. No data were qualified for these analytes in these SDGs based on laboratory duplicate imprecision.

The Case Narrative for SDG MC0004 fails to mention that Ba, Cu, Pb, Mg and Zn were outside control limits for the laboratory duplicate analysis. However, Form Is were properly flagged with an "*" as required by the SOW.

Even though the matrix spike analysis was outside control limits for Sb in SDG MC0004 and the serial dilution analysis was outside the control limits for Zn in the same SDG, none of the Form Is were flagged with an "N" or "E", respectively, as required by the SOW. The reviewer added an "N" and an "E" next to the Sb and Zn, respectively, on each Form I in this SDG.

Even though the matrix spike analysis was outside control limits for Ag in SDG MC0029, only one (1) of the Form Is was flagged with an "N" as required by the SOW. The reviewer added an "N" next to the Ag on each Form I in this SDG.

Reported results for field duplicate pair MC0001/MC0005 in SDG MC0004 were within 35% RPD, ±2XCRQL for all analytes except Cu.

Reported results for field duplicate pair MC0007/MC0011 in SDG MC0004 were within 35% RPD, ±2XCRQL for all analytes except Al, Ba, Cd, Co and Fe.

Reported results for field duplicate pair MC0027/MC0028 in SDG MC0022 were within 35% RPD, ±2XCRQL for all analytes except Al, Ba, Cr, Fe, Pb, Mn and Zn.

Reported results for field duplicate pair MC0035/MC0036 in SDG MC0029 were within 20% RPD, ±CRQL for all analytes except Al, Fe and Mn.

Reported results for field duplicate pairs MC0060/MC0061 in SDG MC0029 and MC0045/MC0052 and MC0068/MC0071 in SDG MC0073 were within 20% RPD, ±CRQL for all analytes.

Post-digestion spike recoveries were low for Sb, As, and Se in SDG MC0022; however, data are not qualified based on the post-digestion spike recovery.

The following samples were reanalyzed at dilutions for the analytes listed below in order to bring concentrations within the linear range of the instrument. Results for these analytes in these samples were reported from the diluted analyses, annotated with a "+" on the DSFs and noted below.

SDG	Sample ID	Dilution Factor	Analyte
MC0004	MC0007, MC0011	15.0	Ba
	MC0008, MC0016	3.0	Ba
	MC0007	2.0	Fe
	MC0011	3.0	Fe
MC0073	MC0051, MC0053	2.0	Ba

Data for Case 33178, SDGs MC0004, MC0022, MC0029 and MC0073, were reviewed in accordance with National Functional Guidelines for Evaluating Inorganic Analyses with Modification for use within Region III.

ATTACHMENTS

INFORMATION REGARDING REPORT CONTENT

Table 1A is a summary of qualifiers applied to the laboratory-generated results during data validation.

TABLE 1A	SUMMARY OF QUALIFIERS ON DATA SUMMARY FORMS AFTER DATA VALIDATION
TABLE 1B	CODES USED IN COMMENTS COLUMN OF TABLE 1A
APPENDIX A	GLOSSARY OF DATA QUALIFIER CODES
APPENDIX B	DATA SUMMARY FORMS
APPENDIX C	CHAIN OF CUSTODY RECORDS
APPENDIX D	LABORATORY CASE NARRATIVE

DCN: 33178IM2.wpd

ORIGINAL

TABLE 1A
SUMMARY OF QUALIFIERS ON DATA SUMMARY FORM AFTER DATA VALIDATION

Case 33178, SDG MC0004

ANALYTE	SAMPLES AFFECTED	POSITIVE VALUES	NON-DETECTED VALUES	BIAS	COMMENTS*
Sb	MC0010, MC0012, MC0014, MC0015, MC0016, MC0017, MC0018, MC0019	B		High	CCB (10.001J µg/L) MSE (29%)
	MC0001, MC0003, MC0004, MC0005, MC0006, MC0008, MC0009	J			>MDL<CRQL MSE (29%)
	MC0002, MC0007, MC0011	L	R	Ext. Low	MSE (29%)
Cd	MC0006	B		High	FB (0.31J µg/L)
	MC0010, MC0014, MC0015, MC0017, MC0019	B		High	CCB (0.364J µg/L)
	MC0012	B		High	CCB (0.364J µg/L) PBN (-0.038J mg/Kg)
Pb	All Samples	J			DUP (108%)
Hg	All Samples Except MC0002, MC0007, MC0011, MC0015, MC0018	B		High	FB (0.12J µg/L)
Se	MC0001, MC0002, MC0004, MC0005, MC0006, MC0008, MC0009	B		High	PB (0.566J mg/Kg)

TABLE 1A
SUMMARY OF QUALIFIERS ON DATA SUMMARY FORM AFTER DATA VALIDATION

Case 33178, SDG MC0004

ANALYTE	SAMPLES AFFECTED	POSITIVE VALUES	NON-DETECTED VALUES	BIAS	COMMENTS*
Na	All Samples Except MC0007, MC0011	B		High	PB (95.628J mg/Kg)
Zn	All Samples	J			DUP (60%) ISD (10.4%)
CN^-	All Samples Except MC0010, MC0014, MC0018, MC0019	B		High	PB (0.428J mg/Kg)

* See explanation of comments in Table 1B

TABLE 1A
SUMMARY OF QUALIFIERS ON DATA SUMMARY FORM AFTER DATA VALIDATION

Case 33178, SDG MC0022

ANALYTE	SAMPLES AFFECTED	POSITIVE VALUES	NON-DETECTED VALUES	BIAS	COMMENTS*
Sb	MC0022, MC0023	B		High	CCB (6.243J µg/L) MSL (57%)
	MC0026	J			>MDL<CRQL MSL (57%)
	MC0021, MC0024, MC0025, MC0027, MC0028	L	UL	Low	MSL (57%)
As	MC0021, MC0023	J			>MDL<CRQL MSL (72%)
	MC0022, MC0024, MC0025, MC0026, MC0027, MC0028	L	UL	Low	MSL (72%)
Ba	All Samples	J			ISD (22%)
Cd	MC0023, MC0027	B		High	CCB (0.318J µg/L)
Ca	MC0024	B		High	PB (9.426J mg/Kg)
Pb	MC0024	J			>MDL<CRQL PBN (-0.517J mg/Kg)
Se	All Samples		UL	Low	MSL (66%)
Na	All Samples	B		High	PB (57.292J mg/Kg)
CN^-	All Samples Except MC0023	B		High	PB (0.125J mg/Kg)

* See explanation of comments in Table 1B

TABLE 1A
SUMMARY OF QUALIFIERS ON DATA SUMMARY FORM AFTER DATA VALIDATION

Case 33178, SDG MC0029

ANALYTE	SAMPLES AFFECTED	POSITIVE VALUES	NON-DETECTED VALUES	BIAS	COMMENTS*
Al	MC0033, MC0037, MC0054, MC0055, MC0056, MC0057, MC0059, MC0060, MC0061	B		High	CCB (26.973J µg/L)
	MC0029	K		High	LCH (121%)
As	MC0029, MC0036, MC0058	B		High	PB (3.032J µg/L)
Ba	All Samples Except MC0041, MC0064	J			ISD (39%)
	MC0041, MC0064		UL	Low	PBN (-2.117J µg/L)
Be	MC0029, MC0054, MC0055, MC0056, MC0057	J			>MDL<CRQL PBN (-0.045J µg/L)
	MC0033, MC0034, MC0035, MC0036, MC0037, MC0041, MC0058, MC0059, MC0060, MC0061, MC0062, MC0064		UL	Low	PBN (-0.045J µg/L)

ORIGINAL

TABLE 1A
SUMMARY OF QUALIFIERS ON DATA SUMMARY FORM AFTER DATA VALIDATION

Case 33178, SDG MC0029

ANALYTE	SAMPLES AFFECTED	POSITIVE VALUES	NON-DETECTED VALUES	BIAS	COMMENTS*
Cd	MC0029, MC0030, MC0031, MC0032, MC0033, MC0034, MC0035, MC0036, MC0037, MC0041		UL	Low	CBN (-0.408J µg/L)
	MC0054, MC0055, MC0056, MC0057, MC0058, MC0059, MC0060, MC0061, MC0062, MC0064		UL	Low	CBN (-0.345J µg/L)
Ca	MC0041, MC0064	B		High	PB (24.050J µg/L)
Cu	MC0030, MC0031, MC0032	B		High	CCB (0.808J µg/L)
Mn	MC0064	J			>MDL<CRQL PBN (-0.306J µg/L)
	MC0041		UL	Low	PBN (-0.306J µg/L)
Se	All Samples Except MC0029, MC0030, MC0031, MC0032		UL	Low	CBN (-4.850J µg/L)
Ag	MC0058	J			>MDL<CRQL MSL (69%)
	All Samples Except MC0058		UL	Low	MSL (69%)

TABLE 1A
SUMMARY OF QUALIFIERS ON DATA SUMMARY FORM AFTER DATA VALIDATION

Case 33178, SDG MC0029

ANALYTE	SAMPLES AFFECTED	POSITIVE VALUES	NON-DETECTED VALUES	BIAS	COMMENTS*
Zn	MC0029, MC0030, MC0031, MC0032, MC0033, MC0034, MC0035, MC0037	B		High	FB (4.3J µg/L)
	MC0041, MC0062, MC0064	B		High	PB (2.122J µg/L)
	MC0054, MC0055, MC0056, MC0057, MC0059, MC0060, MC0061, MC0062	B		High	FB (3.7J µg/L)

* See explanation of comments in Table 1B

ORIGINAL

TABLE 1A
SUMMARY OF QUALIFIERS ON DATA SUMMARY FORM AFTER DATA VALIDATION

Case 33178, SDG MC0073

ANALYTE	SAMPLES AFFECTED	POSITIVE VALUES	NON-DETECTED VALUES	BIAS	COMMENTS*
Al	MC0065, MC0066, MC0067, MC0068, MC0073	B		High	CCB (8.476J µg/L)
Ba	MC0039, MC0063		UL	Low	PBN (-1.332J µg/L)
Cd	MC0039, MC0043, MC0044, MC0045, MC0046, MC0049, MC0051, MC0052, MC0053	B		High	CCB (0.312J µg/L)
Cr	MC0044, MC0049	B		High	FB (1.0J µg/L)
	MC0066, MC0067, MC0068, MC0069, MC0070, MC0071, MC0073	B		High	FB (0.44J µg/L)
Co	MC0063		UL	Low	CBN (-0.979J µg/L)
Fe	MC0049, MC0063, MC0068, MC0071, MC0073	B		High	PB (4.248J µg/L)
Mg	MC0039, MC0063		UL	Low	PBN (-8.377J µg/L)
	All Samples Except MC0039, MC0063	J			ISD (11%)

TABLE 1A
SUMMARY OF QUALIFIERS ON DATA SUMMARY FORM AFTER DATA VALIDATION

Case 33178, SDG MC0073

ANALYTE	SAMPLES AFFECTED	POSITIVE VALUES	NON-DETECTED VALUES	BIAS	COMMENTS*
Mn	MC0039, MC0063		UL	Low	PBN (-0.710J µg/L)
	All Samples Except MC0039, MC0063	J			ISD (25%)
Hg	MC0042	B		High	FB (0.12J µg/L)
	MC0046, MC0047, MC0051	B		High	FB (0.12J µg/L) PBN (-0.101J µg/L)
	MC0039, MC0071	J			>MDL<CRQL PBN (-0.101J µg/L)
	All Samples Except MC0039, MC0042, MC0046, MC0047, MC0051, MC0071		UL	Low	PBN (-0.101J µg/L)
K	MC0039, MC0063		UL	Low	PBN (-76.993J µg/L)
	All Samples Except MC0039, MC0063	J			ISD (61%)
Zn	MC0047	B		High	FB (8.3J µg/L)
	All Samples Except MC0042, MC0046, MC0047, MC0051, MC0069	B		High	PB (7.457J µg/L)

ORIGINAL

TABLE 1A
SUMMARY OF QUALIFIERS ON DATA SUMMARY FORM AFTER DATA VALIDATION

Case 33178, SDG MC0073

ANALYTE	SAMPLES AFFECTED	POSITIVE VALUES	NON-DETECTED VALUES	BIAS	COMMENTS*
CN^-	MC0042	B		High	PB (3.040J µg/L) pH (11)
	MC0045, MC0047, MC0051	B		High	PB (3.040J µg/L)
	MC0052		UL	Low	pH (11)

* See explanation of comments in Table 1B

Appendix A

Glossary of Data Qualifier Codes

ORIGINAL

GLOSSARY OF DATA QUALIFIER CODES (INORGANIC)

CODES RELATED TO IDENTIFICATION
(confidence concerning presence or absence of analytes):

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

(NO CODE) = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unusable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

CODES RELATED TO QUANTITATION
(can be used for both positive results and sample quantitation limits):

J = Analyte Present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

[ ] = Analyte present. As values approach the IDL the quantitation may not be accurate.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

OTHER CODES

Q = No analytical result.

ORIGINAL

Appendix B

Data Summary Forms

ORIGINAL

DATA SUMMARY FORM: INORGANIC

Case #: 33178 | SDG : MC0004 | Number of Soil Samples : 18
Site : | NEW JERSEY FIREWORKS | Number of Water Samples : 0
Lab. : | BONNER

Sample Number :		MC0001		MC0002		MC0003		MC0004		MC0005	
Sampling Location :		S11		S12		S13		S14		S15	
Field QC :		Dup of MC0005								Dup of MC0001	
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :		8/3/2004		8/3/2004		8/3/2004		8/3/2004		8/3/2004	
Time Sampled :		12:30		14:16		12:05		11:30		12:35	
%Solids :		81.9 → 0.819		77.7 → 0.777		88.3 → 0.883		80.2 → 0.802		86.2 → 0.862	
Dilution Factor :		1.0		1.0		1.0		1.0		1.0	
ANALYTE	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
1 ALUMINUM	20	4280		5620		7490		7570		4400	
ANTIMONY	6	1.5	J	1.722	R	1.7	J	1.5	J	1.1	J
ARSENIC	1	3.2		6.1		2.9		6.0		3.5	
BARIUM	20	57.1		23.0	J	599		102		29.2	
BERYLLIUM	0.5	0.30	J	0.23	J	0.33	J	0.51	J	0.44	J
CADMIUM	0.5	0.21	J	0.25	J	0.44	J	0.61	J	0.27	J
CALCIUM	500	199	J	46300		23700		1540		92.7	J
7 CHROMIUM	1	14.9		21.8		20.7		28.3		18.2	
COBALT	5	3.0	J	3.6	J	3.4	J	4.1	J	4.8	J
COPPER	2.5	22.0		13.0		20.0		18.8		13.9	
IRON	10	7810		7310		11700		13000		10200	
10 LEAD	1	26.7	J	2.1	J	1.12	J	130	J	12.1	J
MAGNESIUM	500	337	J	6990		2690		1870		306	J
11 MANGANESE	1.5	34.4		72.1		1.13		77.2		38.8	
12 MERCURY	0.1	0.086	B	0.129	U	0.068	B	0.11	B	0.064	B
NICKEL	4	6.2		62.0		11.7		23.6		7.4	
POTASSIUM	500	358	J	142	J	1160		613	J	375	J
14 SELENIUM	3.5	1.0	B	0.72	B	3.96	U	1.3	B	0.72	B
SILVER	1	1.22	U	0.43	J	1.13	U	1.25	U	1.16	U
SODIUM	500	125	B	139	B	146	B	193	B	86.9	B
16 THALLIUM	2.5	0.66	J	3.22	U	2.83	U	3.12	U	2.90	U
VANADIUM	5	20.5		9.8		23.5		31.7		24.7	
ZINC	6	20.8	J	12.4	J	40.0	J	91.7	J	24.3	J
CYANIDE	2.5	0.28	B	0.20	B	0.20	B	0.28	B	0.17	B

CRQL = Contract Required Quantitation Limit | SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (%Solids/ 100) | Revised 09/99

ORIGINAL

DATA SUMMARY FORM: INORGANIC

Case #: 33178 SDG : MC0004
Site : NEW JERSEY FIREWORKS
Lab. : BONNER

Sample Number :		MC0006		MC0007		MC0008		MC0009		MC0010	
Sampling Location :		S16		S21		S22		S23		S24	
Field QC :				Dup of MC0011							
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :		8/3/2004		8/3/2004		8/3/2004		8/3/2004		8/3/2004	
Time Sampled :		14:06		09:55		10:20		11:05		10:45	
%Solids :		78.7 → .787		74.1 → .741		82.5 → 0.825		90.3 → 0.903		85.4 → 0.854	
Dilution Factor :		1.0		1.0 / 15.0 / 2.0		1.0 / 3.0		1.0		1.0	
ANALYTE	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	20	3300		40200		12300		9420		3980	
ANTIMONY	6	1.0	J	9.7	J	4.3	J	4.9	J	1.8	B
ARSENIC	1	2.1		14.2		5.3		4.0		2.6	
BARIUM	20	51.2		30500 +		5500 +		27.3		501	
BERYLLIUM	0.5	0.13	J	0.23	J	0.34	J	0.20	J	0.16	J
CADMIUM	0.5	0.15	B	2.8		0.68		0.40	J	0.11	B
CALCIUM	500	303	J	562	J	126	J	265	J	210	J
CHROMIUM	1	12.0		150		42.9		20.6		12.8	
COBALT	5	2.1	J	19.9		7.3		1.6	J	1.2	J
COPPER	2.5	6.2		162		31.3		7.0		5.5	
IRON	10	5060		49200 +		23200		14900		5980	
LEAD	1	16.6	J	40.3	J	20.8	J	7.6	J	13.1	J
MAGNESIUM	500	467	J	422	J	587	J	461	J	160	J
MANGANESE	1.5	63.6		693		455		47.0		8.7	
MERCURY	0.1	0.062	B	1.7		0.24	B	0.040	B	0.069	B
NICKEL	4	2.5	J	147		21.5		3.8	J	2.4	J
POTASSIUM	500	168	J	267	J	453	J	350	J	128	J
SELENIUM	3.5	0.59	B	6.7		2.3	B	1.2	B	4.10	U
SILVER	1	1.27	U	0.045	U	0.40	U	1.11	U	1.17	U
SODIUM	500	109	B	22.5	U	75.5	B	83.5	B	92.6	B
THALLIUM	2.5	3.10	U	1.3	J	0.57	J	2.77	U	2.93	U
VANADIUM	5	12.0		28.4		24.8		27.5		14.5	
ZINC	6	11.5	J	81.4	J	28.6	J	10.8	J	8.8	J
CYANIDE	2.5	0.17	B	0.87	B	0.37	B	0.13	B	9.7	

CRQL = Contract Required Quantitation Limit
To calculate sample quantitation limits: (CRQL * Dilution Factor) / (%Solids/ 100)
+ = Result reported from diluted analysis.

SEE NARRATIVE FOR CODE DEFINITIONS
Revised 09/99

ORIGINAL

DATA SUMMARY FORM: INORGANIC

Case #: 33178 SDG : MC0004
Site : NEW JERSEY FIREWORKS
Lab. : BONNER

Sample Number :		MC0011		MC0012		MC0014		MC0015		MC0016	
Sampling Location :		S25		SS11		SS13		SS14		SS21	
Field QC :		Dup of MC0007									
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :		8/3/2004		8/3/2004		8/3/2004		8/3/2004		8/3/2004	
Time Sampled :		10:00		12:40		12:10		11:35		10:05	
%Solids :		72.1 → 0.721		84.1 → 0.841		89.9 → .899		85.5 → 0.855		83.9 → 0.839	
Dilution Factor :		1.0 / 15.0 / 3.0		1.0		1.0		1.0		1.0 / 3.0	
ANALYTE	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	20	64000		6450		1350		8610		12400	
ANTIMONY	6	12.5	L	1.1	B	2.8	B	1.3	B	3.7	B
ARSENIC	1	18.9		1.8		6.4		3.9		6.2	
BARIUM	20	47600 +		47.0		37.5		33.8		5990 +	
BERYLLIUM	0.5	0.15	J	0.51	J	0.46	J	0.31	J	0.27	J
CADMIUM	0.5	1.8		0.071	B	0.17	B	0.15	B	0.26	J
CALCIUM	500	739		142	J	218	J	456	J	175	J
CHROMIUM	1	187		15.2		27.2		16.3		61.3	
COBALT	5	30.6		4.8	J	3.9	J	3.0	J	4.6	J
COPPER	2.5	200		5.9		8.4		6.2		31.4	
IRON	10	95500 +		8130		19300		11300		22600	
LEAD	1	42.0	J	6.3	J	4.2	J	13.7	J	12.4	J
MAGNESIUM	500	282	J	329	J	75.2	J	1080		421	J
MANGANESE	1.5	824		7.14		23.9		52.1		108	
MERCURY	0.1	1.4		0.057	B	0.047	B	0.117	U	0.20	B
NICKEL	4	147		6.8		4.3	J	7.2		27.0	
POTASSIUM	500	82.3	J	239	J	99.3	J	438	J	311	J
SELENIUM	3.5	0.108	U	9.16	U	3.85	U	4.09	U	1.39	U
SILVER	1	0.031	U	1.19	U	1.11	U	1.17	U	0.367	U
SODIUM	500	15.4	U	90.4	B	53.0	B	154	B	66.3	B
THALLIUM	2.5	0.66	J	2.97	U	2.78	U	2.92	U	0.993	U
VANADIUM	5	27.3		19.7		37.4		23.1		35.2	
ZINC	6	94.7	J	21.5	J	23.7	J	22.1	J	23.7	J
CYANIDE	2.5	0.97	B	0.16	B	2.78	U	0.14	B	0.23	B

CRQL = Contract Required Quantitation Limit
To calculate sample quantitation limits: (CRQL * Dilution Factor) / (%Solids/ 100)
+ = Result reported from diluted analysis.

SEE NARRATIVE FOR CODE DEFINITIONS
Revised 09/99

ORIGINAL

DATA SUMMARY FORM: INORGANIC

Case #: 33178 SDG : MC0004
Site : NEW JERSEY FIREWORKS
Lab. : BONNER

Sample Number :		MC0017		MC0018		MC0019					
Sampling Location :		SS22		SS23		SS24					
Matrix :		Soil		Soil		Soil					
Units :		mg/Kg		mg/Kg		mg/Kg					
Date Sampled :		8/3/2004		8/3/2004		8/3/2004					
Time Sampled :		10:25		11:10		10:50					
%Solids :		81.4 → 0.814		86.4 → 0.864		85.8 → 0.858					
Dilution Factor :		1.0		1.0		1.0					
ANALYTE	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	20	8620		4250		5630					
ANTIMONY	6	3.0	B	3.9	B	1.4	B				
ARSENIC	1	4.0		11.3		3.0					
BARIUM	20	866		10.1	J	85.4					
BERYLLIUM	0.5	0.49	J	0.38	J	0.23	J				
CADMIUM	0.5	0.18	B	0.27	J	0.11	B				
CALCIUM	500	130	J	50.1	J	1310					
CHROMIUM	1	28.0		77.6		25.9					
COBALT	5	2.1	J	3.0	J	1.5	J				
COPPER	2.5	5.8		13.6		6.9					
IRON	10	16400		27500		8940					
LEAD	1	5.6	J	7.3	J	5.7	J				
MAGNESIUM	500	433	J	195	J	871					
MANGANESE	1.5	92.6		32.4		19.2					
MERCURY	0.1	0.045	B	0.116	U	0.058	B				
NICKEL	4	4.6	J	2.3	J	3.1	J				
POTASSIUM	500	416	J	217	J	285	J				
SELENIUM	3.5	4.30	U	4.05	U	4.08	U				
SILVER	1	1.29	U	1.16	U	1.17	U				
SODIUM	500	72.4	B	41.9	B	76.2	B				
THALLIUM	2.5	3.07	U	2.89	U	2.91					
VANADIUM	5	34.2		64.9		19.5					
ZINC	6	15.0	J	9.6	J	9.6	J				
CYANIDE	2.5	0.17	B	2.51	U	2.91					

CRQL = Contract Required Quantitation Limit
SEE NARRATIVE FOR CODE DEFINITIONS
To calculate sample quantitation limits: (CRQL * Dilution Factor) / (%Solids/ 100)
Revised 09/99
+ = Result reported from diluted analysis.

ORIGINAL

DATA SUMMARY FORM: INORGANIC

Case #: 33178 | SDG : MC0022 | Number of Soil Samples : 8
Site : NEW JERSEY FIREWORKS | Number of Water Samples : 0
Lab. : BONNER

Sample Number :		MC0021		MC0022		MC0023		MC0024		MC0025	
Sampling Location :		SED1		SED2		SED3		SED4		SED5	
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :		8/5/2004		8/5/2004		8/5/2004		8/5/2004		8/5/2004	
Time Sampled :		11:25		11:45		11:20		10:25		09:50	
%Solids :		75.3 → 0.753		80.4 → 0.804		69.2 → 0.692		83.7 → 0.837		59.4 → 0.594	
Dilution Factor :		1.0		1.0		1.0		1.0		1.0	
ANALYTE	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	20	730		697		2020		278		6420	
ANTIMONY	6	1.97	UL	0.47	B	1.1	B	7.17	UL	103	L
ARSENIC	1	0.67	J	1.24	UL	1.2	J	1.19	UL	6.3	L
BARIUM	20	4.6	J	15.1	J	27.8	J	2.2	J	213	J
BERYLLIUM	0.5	0.066	J	0.11	J	0.38	J	0.046	J	0.45	J
CADMIUM	0.5	0.664		0.622	U	0.12	B	0.597	U	1.0	
CALCIUM	500	95.4	J	136	J	337	J	38.9	B	1560	
CHROMIUM	1	7.8		5.3		9.4		3.2		17.7	
COBALT	5	0.50	J	0.74	J	4.2	J	0.73	J	17.0	
COPPER	2.5	1.8	J	3.0	J	6.5		1.2	J	32.3	
IRON	10	1510		2500		4120		713		21300	
*LEAD	1	2.6		3.5		10.6		1.1	J	64.7	
MAGNESIUM	500	93.3	J	103	J	264	J	39.1	J	741	J
MANGANESE	1.5	7.7		5.6		31.3		10.1		2150	
MERCURY	0.1	0.133	U	0.124	U	0.084	J	0.079	J	0.22	
NICKEL	4	1.3	J	1.9	J	5.9		0.81	J	12.6	
POTASSIUM	500	47.2	J	50.2	J	113	J	19.0	J	290	J
SELENIUM	3.5	4.65	UL	4.35	UL	5.66	UL	4.18	UL	5.89	UL
SILVER	1	1.33	U	1.24	U	1.45	U	1.19	U	0.32	J
SODIUM	500	79.7	B	69.0	B	96.6	B	65.0	B	179	B
THALLIUM	2.5	3.32	U	3.11	U	3.61	U	2.97	U	4.2	
VANADIUM	5	5.0	J	5.3	J	9.9		2.3	J	21.1	
ZINC	6	4.9	J	5.5	J	23.7		4.5	J	153	
CYANIDE	2.5	0.17	B	0.14	B	3.61	U	0.15	B	0.55	B

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (%Solids/ 100)

Revised 09/99

ORIGINAL

DATA SUMMARY FORM: INORGANIC

Case #: 33178
Site :
Lab. :

SDG : MC0022
NEW JERSEY FIREWORKS
BONNER

Sample Number :		MC0026		MC0027		MC0028					
Sampling Location :		SED6		SED7		SED8					
Field QC :				Dup of MC0028		Dup of MC0027					
Matrix :		Soil		Soil		Soil					
Units :		mg/Kg		mg/Kg		mg/Kg					
Date Sampled :		8/5/2004		8/5/2004		8/5/2004					
Time Sampled :		09:35		08:50		08:55					
%Solids :		82.9 → 0.829		69.4 → 0.694		58.9 → 0.589					
Dilution Factor :		1.0		1.0		1.0					
ANALYTE	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	20	2990		3150		6060					
ANTIMONY	6	5.2	J	8.7	L	11.0	L				
ARSENIC	1	4.6	L	3.4	L	4.8	L				
BARIUM	20	562	J	925	J	1610	J				
BERYLLIUM	0.5	0.45	J	0.28	J	0.44	J				
CADMIUM	0.5	0.21	J	0.18	B	0.35	J				
CALCIUM	500	87.2	J	385	J	682	J				
CHROMIUM	1	17.7		15.0		25.5					
COBALT	5	3.5	J	2.9	J	7.8	J				
COPPER	2.5	4.3		13.5		19.2					
IRON	10	16600		11000		17400					
LEAD	1	7.0		23.3		41.0					
MAGNESIUM	500	171	J	224	J	446	J				
MANGANESE	1.5	315		213		850					
MERCURY	0.1	0.121	U	0.144	U	0.068	J				
NICKEL	4	2.1	J	3.6	J	7.9					
POTASSIUM	500	98.2	J	137	J	249	J				
SELENIUM	3.5	4.22	UL	5.04	UL	5.94	UL				
SILVER	1	1.21	U	1.44	U	1.70	U				
SODIUM	500	41.8	B	76.6	B	95.8	B				
THALLIUM	2.5	0.78	J	3.60	U	1.7	J				
VANADIUM	5	27.3		17.7		26.9					
ZINC	6	15.9		31.0		53.9					
CYANIDE	2.5	0.18	B	0.22	B	0.25	B				

CRQL = Contract Required Quantitation Limit
To calculate sample quantitation limits: (CRQL * Dilution Factor) / (%Solids/ 100)

SEE NARRATIVE FOR CODE DEFINITIONS
Revised 09/99

ORIGINAL

DATA SUMMARY FORM: INORGANIC

Case #: 33178
Site :
Lab. :

SDG : MC0029
NEW JERSEY FIREWORKS
BONNER

Number of Soil Samples : 0
Number of Water Samples : 20

ALL TOTAL METALS

Sample Number :		MC0029		MC0030		MC0031		MC0032		MC0033	
Sampling Location :		SW1		SW2		SW3		SW4		SW5	
Matrix :		Water		Water		Water		Water		Water	
Units :		ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :		8/5/2004		8/5/2004		8/5/2004		8/5/2004		8/5/2004	
Time Sampled :		11:20		11:40		11:15		10:20		09:45	
Dilution Factor :		1.0		1.0		1.0		1.0		1.0	
ANALYTE	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	200	372	K	558		359		359		79.5	B
ANTIMONY	60	60	U							8.1	J
*ARSENIC	10	4.9	B								
BARIUM	200	33.8	J	43.0	J	48.1	J	50.8	J	170	J
BERYLLIUM	5	0.087	J	0.18	J	0.13	J	0.11	J		UL
*CADMIUM	5	5	UL		UL		UL		UL		UL
CALCIUM	5000	7070		6780		6970		7220		23800	
*CHROMIUM	10	2.8	J	1.8	J	1.4	J	2.0	J	2.5	J
COBALT	50	2.3	J	3.6	J	3.6	J	3.3	J	22.5	J
COPPER	25	2.2	J	3.7	B	3.4	B	2.9	B	2.2	J
IRON	100	2600		1780		1480		2000		11100	
*LEAD	10	10	U								
MAGNESIUM	5000	2290	J	3280	J	3330	J	2870	J	6650	
MANGANESE	15	54.0		69.5		78.0		68.5		6150	
MERCURY	0.2	0.2	U								
*NICKEL	40	7.6	J	7.7	J	7.8	J	7.5	J	6.6	J
POTASSIUM	5000	1560	J	2370	J	2490	J	2120	J	5730	
SELENIUM	35	35	U								UL
SILVER	10	10	UL		UL		UL		UL		UL
SODIUM	5000	13000		17100		17500		16000		77900	
THALLIUM	25	25	U							8.5	J
VANADIUM	50	2.1	J	1.7	J	0.84	J	1.0	J		
ZINC	60	17.1	B	18.5	B	15.9	B	18.0	B	21.2	B
*CYANIDE	10	10	U	2.2	J					3.2	J

CRQL = Contract Required Quantitation Limit
*Action Level Exists
SEE NARRATIVE FOR CODE DEFINITIONS
To calculate sample quantitation limits: (CRQL * Dilution Factor)
Revised 09/99

ORIGINAL

DATA SUMMARY FORM: INORGANIC

Case #: 33178 SDG : MC0029
Site : NEW JERSEY FIREWORKS
Lab. : BONNER

ALL TOTAL METALS

Sample Number :		MC0034		MC0035		MC0036		MC0037		MC0041	
Sampling Location :		SW6		SW7		SW8		SW9		SW14	
Field QC :				Dup of MC0036		Dup of MC0035				Field Blank	
Matrix :		Water		Water		Water		Water		Water	
Units :		ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :		8/5/2004		8/5/2004		8/5/2004		8/5/2004		8/5/2004	
Time Sampled :		09:30		08:35		08:40		10:30		10:50	
Dilution Factor :		1.0		1.0		1.0		1.0		1.0	
ANALYTE	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	200	351		150	J	893		39.3	B		
ANTIMONY	60										
*ARSENIC	10					3.1	B				
BARIUM	200	2590	J	2030	J	2270	J	1840	J		UL
BERYLLIUM	5		UL		UL		UL		UL		UL
*CADMIUM	5		UL		UL		UL		UL		UL
CALCIUM	5000	21300		18400		19000		35800		29.6	B
*CHROMIUM	10	2.1	J	1.1	J	3.5	J	0.61	J		
COBALT	50	5.7	J	2.2	J	4.2	J	1.2	J		
COPPER	25	4.5	J	4.7	J	6.1	J	0.98	J		
IRON	100	3200		2360		4410		5340			
*LEAD	10					6.3	J				
MAGNESIUM	5000	5640		4560	J	4770	J	3710	J		
MANGANESE	15	1540		697		1080		332			UL
MERCURY	0.2										
*NICKEL	40	5.6	J	4.6	J	5.8	J	2.0	J		
POTASSIUM	5000	14600		11800		12100		5690			
SELENIUM	35		UL		UL		UL		UL		UL
SILVER	10		UL		UL		UL		UL		UL
SODIUM	5000	34400		27700		28400		4110	J		
THALLIUM	25	4.1	J								
VANADIUM	50	1.9	J	0.90	J	3.6	J				
ZINC	60	20.0	B	19.0	B	25.5	J	10.9	B	4.3	B
*CYANIDE	10	2.8	J	2.3	J	3.6	J				

CRQL = Contract Required Quantitation Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) Revised 09/99

ORIGINAL

DATA SUMMARY FORM: INORGANIC

Case #: 33178 SDG : MC0029
Site : NEW JERSEY FIREWORKS
Lab. : BONNER

ALL DISSOLVED METALS

Sample Number :		MC0054		MC0055		MC0056		MC0057		MC0058	
Sampling Location :		SW1DM		SW2DM		SW3DM		SW4DM		SW5DM	
Matrix :		Water		Water		Water		Water		Water	
Units :		ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :		8/5/2004		8/5/2004		8/5/2004		8/5/2004		8/5/2004	
Time Sampled :		11:20		11:40		11:15		10:20		09:45	
Dilution Factor :		1.0		1.0		1.0		1.0		1.0	
ANALYTE	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	200	127	B	87.1	B	82.2	B	127	B		
ANTIMONY	60									8.5	J
*ARSENIC	10									3.2	B
BARIUM	200	28.9	J	39.0	J	45.7	J	51.4	J	161	J
BERYLLIUM	5	0.037	J	0.085	J	0.067	J	0.060	J		UL
*CADMIUM	5		UL		UL		UL		UL		UL
CALCIUM	5000	6770		6800		6980		7370		23300	
*CHROMIUM	10	1.5	J	0.68	J	0.53	J	1.5	J	2.5	J
COBALT	50	6.6	J	7.1	J	7.4	J	7.3	J	25.6	J
COPPER*	25	2.0	J	2.4	J	3.4	J	2.5	J	1.5	J
IRON	100	1290		519		491		966		4720	
*LEAD	10										
MAGNESIUM	5000	2170	J	3210	J	3280	J	3010	J	6600	
MANGANESE	15	54.8		68.0		79.5		74.0		6020	
MERCURY	0.2										
*NICKEL	40	7.5	J	6.7	J	7.3	J	8.4	J	6.9	J
POTASSIUM	5000	1450	J	2350	J	2460	J	2190	J	5680	
SELENIUM	35		UL		UL		UL		UL		UL
SILVER	10		UL		UL		UL		UL	1.1	J
SODIUM	5000	12600		17000		17600		16500		77800	
THALLIUM	25									9.0	J
VANADIUM	50										
ZINC	60	12.9	B	14.0	B	15.1	B	15.7	B	18.6	J

CRQL = Contract Required Quantitation Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) Revised 09/99

ORIGINAL

DATA SUMMARY FORM: INORGANIC

Case #: 33178 SDG : MC0029
Site : NEW JERSEY FIREWORKS
Lab. : BONNER

ALL DISSOLVED METALS

Sample Number :		MC0059		MC0060		MC0061		MC0062		MC0064	
Sampling Location :		SW6DM		SW7DM		SW8DM		SW9DM		SW14DM	
Field QC :				Dup of MC0061		Dup of MC0060				Field Blank	
Matrix :		Water		Water		Water		Water		Water	
Units :		ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :		8/5/2004		8/5/2004		8/5/2004		8/5/2004		8/5/2004	
Time Sampled :		09:30		08:35		08:40		10:30		10:50	
Dilution Factor :		1.0		1.0		1.0		1.0		1.0	
ANALYTE	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	200	64.5	B	37.9	B	44.3	B				
ANTIMONY	60										
*ARSENIC	10										
BARIUM	200	2430	J	2030	J	2040	J	1830	J		UL
BERYLLIUM	5		UL		UL		UL		UL		UL
*CADMIUM	5		UL		UL		UL		UL		UL
CALCIUM	5000	21200		18200		18500		36100		39.2	B
*CHROMIUM	10	1.1	J	0.92	J	1.1	J	0.42	J		
COBALT	50	7.1	J	2.6	J	6.6	J	4.9	J		
COPPER	25	3.2	J	3.5	J	3.5	J				
IRON	100	1660		1350		1450		3380			
*LEAD	10										
MAGNESIUM	5000	5610		4590	J	4600	J	3760	J		
MANGANESE	15	802		661		769		309		0.45	J
MERCURY	0.2										
*NICKEL	40	5.9	J	4.3	J	4.7	J	2.3	J		
POTASSIUM	5000	14400		11600		11700		5680			
SELENIUM	35		UL		UL		UL		UL		UL
SILVER	10		UL		UL		UL		UL		UL
SODIUM	5000	34000		27400		27400		4160	J		
THALLIUM	25	3.1	J								
VANADIUM	50	0.68	J								
ZINC	60	11.1	B	13.7	B	15.5	B	5.9	B	3.7	B

CRQL = Contract Required Quantitation Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) Revised 09/99

ORIGINAL

DATA SUMMARY FORM: INORGANIC

Case #: 33178 | SDG : MC0073 | Number of Soil Samples : 0
Site : NEW JERSEY FIREWORKS | Number of Water Samples : 20
Lab. : BONNER

ALL TOTAL METALS

Sample Number :		MC0039		MC0042		MC0043		MC0044		MC0045	
Sampling Location :		SW12		MW1		MW1A		MW2		MW3	
Field QC :		Field Blank								Dup of MC0052	
Matrix :		Water		Water		Water		Water		Water	
Units :		ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :		8/4/2004		8/4/2004		8/4/2004		8/4/2004		8/4/2004	
Time Sampled :		12:15		10:30		11:10		12:20		13:25	
Dilution Factor :		1.0		1.0		1.0		1.0		1.0	
ANALYTE	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	200			88300		449		172	J	1030	
ANTIMONY	60										
*ARSENIC	10			77.5				3.3	J		
BARIUM	200		UL	31500		34.9	J	18.9	J	219	
BERYLLIUM	5			15.5		0.31	J	1.3	J	0.28	J
*CADMIUM	5	0.31	B	5.2		0.60	B	0.59	B	0.66	B
CALCIUM	5000			80700		2970	J	1510	J	15800	
*CHROMIUM	10	1.0	J	328		38.6		1.8	B	32.1	
COBALT	50			331		6.3	J	16.1	J	7.4	J
COPPER	25			322		6.4	J			10.7	J
IRON	100			392000		2030		4240		2620	
*LEAD	10			151							
MAGNESIUM	5000		UL	17100	J	1700	J	677	J	1090	J
MANGANESE	15		UL	1940	J	18.7	J	26.5	J	25.0	J
MERCURY	0.2	0.12	J	0.36	B		UL		UL		UL
*NICKEL	40			181		13.0	J	34.3	J	19.3	J
POTASSIUM	5000		UL	67500	J	1000	J	878	J	2950	J
SELENIUM	35			57.2							
SILVER	10										
SODIUM	5000			16700		14600		11700		11000	
THALLIUM	25			12.7	J						
VANADIUM	50			637		7.7	J	1.0	J	14.5	J
ZINC	60	8.3	B	620		17.9	B	12.7	B	15.6	B
*CYANIDE	10			3.0	B					2.0	B

CRQL = Contract Required Quantitation Limit | *Action Level Exists | SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor)

Revised 09/99

ORIGINAL

DATA SUMMARY FORM: INORGANIC

Case #: 33178 SDG : MC0073
Site : NEW JERSEY FIREWORKS
Lab. : BONNER

ALL TOTAL METALS

Sample Number :		MC0046		MC0047		MC0049		MC0051		MC0052	
Sampling Location :		MW3A		MW4		PW5		GW2		GW3	
Field QC :										Dup of MC0045	
Matrix :		Water		Water		Water		Water		Water	
Units :		ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :		8/4/2004		8/4/2004		8/3/2004		8/4/2004		8/4/2004	
Time Sampled :		14:00		10:45		11:40		09:00		13:25	
Dilution Factor :		1.0		1.0		1.0		1.0 / 2.0		1.0	
ANALYTE	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	200	9200		11000		14.2	J	23200		1010	
ANTIMONY	60										
*ARSENIC	10			41.1				20.0			
BARIUM	200	337		99.6	J	12.5	J	43700 +		230	
BERYLLIUM	5	3.3	J	0.96	J	0.25	J	1.6	J	0.31	J
*CADMIUM	5	0.94	B			0.52	B	1.4	B	0.47	B
CALCIUM	5000	5300		9060		1350	J	6580		16000	
*CHROMIUM	10	124		335		1.6	B	230		35.6	
COBALT	50	85.0		9.8	J	16.6	J	28.9	J	7.5	J
COPPER	25	234		82.9		16.8	J	57.9		11.4	J
IRON	100	46100		132000		19.4	B	82600		2820	
*LEAD	10	16.7		19.4				25.6			
MAGNESIUM	5000	2090	J	8260	J	509	J	1670	J	1120	J
MANGANESE	15	59.1	J	1520	J	10.7	J	185	J	27.0	J
MERCURY	0.2	0.12	B	0.11	B		UL	0.20	B		UL
*NICKEL	40	187		13.4	J	28.7	J	18.0	J	21.4	J
POTASSIUM	5000	3440	J	5040	J	521	J	6560	J	3090	J
SELENIUM	35			30.2	J			17.0	J		
SILVER	10										
SODIUM	5000	11200		36800		4950	J	3560	J	11600	
THALLIUM	25			5.1	J						
VANADIUM	50	120		218				204		15.9	J
ZINC	60	123		40.6	B	27.2	B	61.7		17.9	B
*CYANIDE	10			2.8	B			2.6	B		UL

CRQL = Contract Required Quantitation Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) Revised 09/99

+ = Result reported from diluted analysis.

ORIGINAL

DATA SUMMARY FORM: INORGANIC

Case #: 33178 SDG : MC0073
Site : NEW JERSEY FIREWORKS
Lab. : BONNER

ALL DISSOLVED METALS

Sample Number :		MC0053		MC0063		MC0065		MC0066		MC0067	
Sampling Location :		GW2DM		SW12DM		MW1DM		MW1A-DM		MW2DM	
Field QC :				Field Blank							
Matrix :		Water		Water		Water		Water		Water	
Units :		ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :		8/4/2004		8/4/2004		8/4/2004		8/4/2004		8/4/2004	
Time Sampled :		09:00		12:15		10:30		11:10		12:20	
Dilution Factor :		1.0 / 2.0		1.0		1.0		1.0		1.0	
ANALYTE	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	200					15.6	B	17.6	B	30.2	B
ANTIMONY	60										
*ARSENIC	10					8.2	J				
BARIUM	200	37800 +			UL	26000		31.8	J	50.6	J
BERYLLIUM	5							0.22	J	1.3	J
*CADMIUM	5	0.33	B					0.40	J	0.38	J
CALCIUM	5000	6220				74800		3260	J	1660	J
*CHROMIUM	10			0.44	J			0.61	B	0.91	B
COBALT	50	22.8	J		UL	17.2	J	9.2	J	18.3	J
COPPER	25							2.9	J		
IRON	100	510		5.4	B	50000		75.2	J	4100	
*LEAD	10										
MAGNESIUM	5000	660	J		UL	11100	J	1690	J	688	J
MANGANESE	15	100	J		UL	383	J	22.5	J	30.1	J
MERCURY	0.2		UL		UL		UL		UL		UL
*NICKEL	40	2.9	J			1.9	J	12.3	J	34.6	J
POTASSIUM	5000	5010	J		UL	57200		893	J	999	J
SELENIUM	35										
SILVER	10										
SODIUM	5000	3640	J			17200		15100		12200	
THALLIUM	25					4.6	J				
VANADIUM	50										
ZINC	60	6.7	B	6.5	B	10.6	B	18.7	B	14.4	B

CRQL = Contract Required Quantitation Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) Revised 09/99

+ = Result reported from diluted analysis.

ORIGINAL

DATA SUMMARY FORM: INORGANIC

Case #: 33178 SDG : MC0073
Site : NEW JERSEY FIREWORKS
Lab. : BONNER

ALL DISSOLVED METALS

Sample Number :		MC0068		MC0069		MC0070		MC0071		MC0073	
Sampling Location :		MW3DM		MW3A-DM		MW4DM		GW3DM		PW5DM	
Field QC :		Dup of MC0071						Dup of MC0068			
Matrix :		Water		Water		Water		Water		Water	
Units :		ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :		8/4/2004		8/4/2004		8/4/2004		8/4/2004		8/3/2004	
Time Sampled :		13:25		14:00		10:45		13:25		11:40	
Dilution Factor :		1.0		1.0		1.0		1.0		1.0	
ANALYTE	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	200	7.8	B	190	J					9.2	B
ANTIMONY	60										
*ARSENIC	10										
BARIUM	200	206		130	J	70.2	J	196	J	12.2	J
BERYLLIUM	5	0.085	J	1.7	J			0.054	J	0.24	J
*CADMIUM	5	0.56	J	0.88	J	0.64	J	0.56	J	2.2	J
CALCIUM	5000	14100		5000	J	9340		13900		1390	J
*CHROMIUM	10	1.9	B	1.1	B	0.73	B	2.2	B	1.7	B
COBALT	50	8.5	J	81.3		11.1	J	5.8	J	16.8	J
COPPER	25			173						17.0	J
IRON	100	8.7	B	576		15900		5.0	B	9.4	B
*LEAD	10										
MAGNESIUM	5000	872	J	1920	J	8270	J	809	J	505	J
MANGANESE	15	19.4	J	47.5	J	1540	J	14.2	J	11.0	J
MERCURY	0.2		UL		UL		UL	0.094	J		UL
*NICKEL	40	12.4	J	160		6.9	J	10.6	J	27.9	J
POTASSIUM	5000	2940	J	2660	J	4680	J	2880	J	527	J
*SELENIUM	35										
SILVER	10										
SODIUM	5000	11200		11300		38900		11100		5080	
THALLIUM	25					5.5	J			4.8	J
VANADIUM	50	0.95	J								
ZINC	60	16.0	B	100		11.6	B	12.8	B	31.5	B

CRQL = Contract Required Quantitation Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) Revised 09/99

ORIGINAL

Appendix C

Chain-of-Custody Records

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 33178
DAS No: R31935
R

Region:	3	**Date Shipped:**	8/3/2004	**Chain of Custody Record**	**Sampler Signature:**
Project Code:		**Carrier Name:**	FedEx	**Relinquished By** (Date / Time)	**Received By** (Date / Time)
Account Code:	T03W302DD2CE319LA00	**Airbill:**	843517786248	1	
CERCLIS ID:	MDSFN0305563	**Shipped to:**	Bonner Analytical Testing Co. 2703 Oak Grove Road Hattiesburg MS 39402 (601) 264-2854	2	
Spill ID:	E319			3	
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD			4	
Project Leader:	[redacted]				
Action:	Expanded Site Investigation/RI				
Sampling Co:	MDE-ERRP				

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		ORGANIC SAMPLE No.	QC Type
MC0001	Soil (0"-12")/ [redacted]	L/G	TM + CN + (21)	101 (Ice Only) (1)	S11	S: 8/3/2004	12:30	C0001	–
MC0003	Soil (0"-12")/ [redacted]	L/G	TM + CN + (21)	108 (Ice Only) (1)	S13	S: 8/3/2004	12:05	C0003	Solid Spike
MC0004	Soil (0"-12")/ [redacted]	L/G	TM + CN + (21)	121 (Ice Only) (1)	S14	S: 8/3/2004	11:30	C0004	–
MC0005	Soil (0"-12")/ [redacted]	L/G	TM + CN + (21)	125 (Ice Only) (1)	S15	S: 8/3/2004	12:35	C0005	Duplicate of S11
MC0006	Soil (0"-12")/ [redacted]	L/G	TM + CN + (21)	129 (Ice Only) (1)	S16	S: 8/3/2004	14:06	C0006	–
MC0008	Soil (0"-12")/ [redacted]	L/G	TM + CN + (21)	137 (Ice Only) (1)	S22	S: 8/3/2004	10:20	C0008	–
MC0009	Soil (0"-12")/ [redacted]	L/G	TM + CN + (21)	141 (Ice Only) (1)	S23	S: 8/3/2004	11:05	C0009	–
MC0010	Soil (0"-12")/ [redacted]	L/G	TM + CN + (21)	145 (Ice Only) (1)	S24	S: 8/3/2004	10:45	C0010	–
MC0012	Soil (>12")/ [redacted]	L/G	TM + CN + (21)	153 (Ice Only) (1)	SS11	S: 8/3/2004	12:40	C0012	–
MC0014	Soil (>12")/ [redacted]	L/G	TM + CN + (21)	161 (Ice Only) (1)	SS13	S: 8/3/2004	12:10	C0014	–
MC0015	Soil (>12")/ [redacted]	L/G	TM + CN + (21)	165 (Ice Only) (1)	SS14	S: 8/3/2004	11:35	C0015	–

Shipment for Case Complete? N	**Sample(s) to be used for laboratory QC:** MC0003, MC0049, MC0073	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____

CN = Cyanide, DM+HG = CLP Diss Metals + Hg ICP-AES, TM + CN + = CLP ICP-AES TM + CN + HG, TM + HG = CLP TM +HG

TR Number: 3-592370820-080304-0014

REGION COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

S[redacted]opy t[redacted]ple N[redacted]emen[redacted]e, Att[redacted]ther [redacted]CSC[redacted]0 Cor[redacted]ce Ce[redacted]r., Ch[redacted] VA 2[redacted]3819;[redacted]e 703[redacted]200; [redacted]3/81[redacted] [redacted] F2V[redacted] Pa[redacted]f 2 [redacted]

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 33178
DAS No: R31935
R

Region:	3	**Date Shipped:**	8/3/2004	**Chain of Custody Record**	**Sampler Signature:**
Project Code:		**Carrier Name:**	FedEx	**Relinquished By (Date / Time)**	**Received By (Date / Time)**
Account Code:	†03W302DD2CE319LA00	**Airbill:**	843517786248	1	
CERCLIS ID:	MDSFN0305563	**Shipped to:**	Bonner Analytical Testing Co. 2703 Oak Grove Road Hattiesburg MS 39402 (601) 264-2854	2	
Spill ID:	E319			3	
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD			4	
Project Leader:	[redacted]				
Action:	Expanded Site Investigation/RI				
Sampling Co:	MDE-ERRP				

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		ORGANIC SAMPLE No.	QC Type
MC0017	Soil (>12")/ [redacted]	L/G	TM + CN + (21)	174 (Ice Only) (1)	SS22	S: 8/3/2004	10:25	C0017	–
MC0019	Soil (>12")/ [redacted]	L/G	TM + CN + (21)	182 (Ice Only) (1)	SS24	S: 8/3/2004	10:50	C0019	–
MC0049	Ground Water/ [redacted]	L/G	CN (21), TM + HG (21)	309 (HNO3), 310 (HNO3), 311 (NaOH), 312 (NaOH) (4)	PW5	S: 8/3/2004	11:40	C0049	Spike
MC0073	Ground Water/ [redacted]	L/G	DM+HG (21)	345 (HNO3), 346 (HNO3) (2)	PW5DM	S: 8/3/2004	11:40		Spike
MC0002 PWS	Soil (<12") PWS Barbara Brooks		TM+CN(21) PWS	106 (ice only) PWS	512 PWS	8/3/04 PWS	1416 PWS	C0002 PWS	

Shipment for Case Complete? N	**Sample(s) to be used for laboratory QC:** MC0003, MC0049, MC0073	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____

CN = Cyanide, DM+HG = CLP Diss Metals + Hg ICP-AES, TM + CN + = CLP ICP-AES TM + CN + HG, TM + HG = CLP TM +HG

ORIGINAL

TR Number: 3-592370820-080304-0014

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Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No:	33178
DAS No:	R31935

R

Region:	3	Date Shipped:	8/3/2004
Project Code:		Carrier Name:	FedEx
Account Code:	T03W302DD2CE319LA00	Airbill:	843517786248
CERCLIS ID:	MDSFN0305563	Shipped to:	Bonner Analytical Testing Co. 2703 Oak Grove Road Hattiesburg MS 39402 (601) 264-2854
Spill ID:	E319		
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD		
Project Leader:	[redacted]		
Action:	Expanded Site Investigation/RI		
Sampling Co:	MDE-ERRP		

Chain of Custody Record

Sampler Signature:

Relinquished By	(Date / Time)	Received By	(Date / Time)
1			
2			
3			
4			

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		ORGANIC SAMPLE No.	QC Type
MC0007	Soil (0"-12")/ [redacted]	L/G	TM + CN + (21)	133 (Ice Only) (1)	S21	S: 8/3/2004	9:55	C0007	–
MC0011	Soil (0"-12")/ [redacted]	L/G	TM + CN + (21)	149 (Ice Only) (1)	S25	S: 8/3/2004	10:00	C0011	Duplicate of S21

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key: TM + CN + = CLP ICP-AES TM + CN + HG	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced? _____

TR Number: 3-592370820-080304-0015

REGION COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

S[redacted]opy t[redacted]ple M[redacted]emen[redacted]e, Attr[redacted]ther E[redacted]CSC,[redacted]0 Cor[redacted]e Ce[redacted]., Ch[redacted]VA 2[redacted]819;[redacted] 703[redacted]200; [redacted]3/818[redacted] [redacted] F2V5-1.043 Page 1 of 1 [redacted]

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 33178
DAS No: R31935
R

Region:	3	**Date Shipped:**	8/3/2004	**Chain of Custody Record**	**Sampler Signature:**
Project Code:		**Carrier Name:**	FedEx		
Account Code:	T03W302DD2CE319LA00	**Airbill:**	843517786248	**Relinquished By (Date / Time)**	**Received By (Date / Time)**
CERCLIS ID:	MDSFN0305563	**Shipped to:**	Bonner Analytical Testing Co. 2703 Oak Grove Road Hattiesburg MS 39402 (601) 264-2854	1	
Spill ID:	E319			2	
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD			3	
Project Leader:	[redacted]			4	
Action:	Expanded Site Investigation/RI				
Sampling Co:	MDE-ERRP				

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		ORGANIC SAMPLE No.	QC Type
MC0016	Soil (>12")/ [redacted]	L/G	TM + CN + (21)	169 (Ice Only) (1)	SS21	S: 8/3/2004	10:05	C0016	–
MC0018	Soil (>12")/ [redacted]	L/G	TM + CN + (21)	178 (Ice Only) (1)	SS23	S: 8/3/2004	11:10	C0018	–

Shipment for Case Complete? N	**Sample(s) to be used for laboratory QC:**	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key: TM + CN + = CLP ICP-AES TM + CN + HG	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____

ORIGINAL

TR Number: 3-592370820-080304-0016

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PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No:	33178
DAS No:	R31935

R

Region:	3	Date Shipped:	8/5/2004	Chain of Custody Record	Sampler Signature:
Project Code:		Carrier Name:	FedEx	Relinquished By (Date / Time)	Received By (Date / Time)
Account Code:	T03W302DD2CE319LA00	Airbill:	843517786204	1	
CERCLIS ID:	MDSFN0305563	Shipped to:	Bonner Analytical Testing Co. 2703 Oak Grove Road Hattiesburg MS 39402 (601) 264-2854	2	
Spill ID:	E319			3	
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD			4	
Project Leader:	[redacted]				
Action:	Expanded Site Investigation/RI				
Sampling Co:	MDE-ERRP				

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		ORGANIC SAMPLE No.	QC Type
MC0021	Sediment/ [redacted]	L/G	TM + CN + (21)	190 (Ice Only) (1)	SED1	S: 8/5/2004	11:25	C0021	--
MC0022	Sediment/ [redacted]	L/G	TM + CN + (21)	194 (Ice Only) (1)	SED2	S: 8/5/2004	11:45	C0022	--
MC0023	Sediment/ [redacted]	L/G	TM + CN + (21)	198 (Ice Only) (1)	SED3	S: 8/5/2004	11:20	C0023	--
MC0029	Surface Water/ [redacted]	L/G	CN (21), TM + HG (21)	225 (HNO3), 226 (NaOH) (2)	SW1	S: 8/5/2004	11:20	C0029	--
MC0030	Surface Water/ [redacted]	L/G	CN (21), TM + HG (21)	229 (HNO3), 230 (NaOH) (2)	SW2	S: 8/5/2004	11:40	C0030	--
MC0031	Surface Water/ [redacted]	L/G	CN (21), TM + HG (21)	234 (HNO3), 235 (NaOH) (2)	SW3	S: 8/5/2004	11:15	C0031	--
MC0054	Surface Water/ [redacted]	L/G	DM+HG (21)	326 (HNO3) (1)	SW1DM	S: 8/5/2004	11:20		--
MC0055	Surface Water/ [redacted]	L/G	DM+HG (21)	327 (HNO3) (1)	SW2DM	S: 8/5/2004	11:40		--
MC0056	Surface Water/ [redacted]	L/G	DM+HG (21)	328 (HNO3) (1)	SW3DM	S: 8/5/2004	11:15		--

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced? _____

CN = Cyanide, DM+HG = CLP Diss Metals + Hg ICP-AES, TM + CN + = CLP ICP-AES TM + CN + HG, TM + HG = CLP TM +HG

TR Number: 3-592370820-080504-0011

REGION COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

S[redacted]opy t[redacted]ple M[redacted]ment[redacted], Attr[redacted]her E[redacted]CSC,[redacted] Con[redacted]e Ce[redacted]., Ch[redacted]VA 2[redacted]819;[redacted] 703/[redacted]200; [redacted]3/818[redacted] [redacted] F2V5[redacted] Pag[redacted] 1 [redacted]

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 33178
DAS No: R31935
R

Region:	3	Date Shipped:	8/5/2004	Chain of Custody Record	Sampler Signature:
Project Code:		Carrier Name:	FedEx	Relinquished By (Date / Time)	Received By (Date / Time)
Account Code:	T03W302DD2CE319LA00	Airbill:	843517786204	1	
CERCLIS ID:	MDSFN0305563	Shipped to:	Bonner Analytical Testing Co. 2703 Oak Grove Road Hattiesburg MS 39402 (601) 264-2854	2	
Spill ID:	E319			3	
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD			4	
Project Leader:	[redacted]				
Action:	Expanded Site Investigation/RI				
Sampling Co:	MDE-ERRP				

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		ORGANIC SAMPLE No.	QC Type
MC0024	Sediment/ [redacted]	L/G	TM + CN + (21)	202 (Ice Only) (1)	SED4	S: 8/5/2004	10:25	C0024	--
MC0025	Sediment/ [redacted]	L/G	TM + CN + (21)	206 (Ice Only) (1)	SED5	S: 8/5/2004	9:50	C0025	--
MC0026	Sediment/ [redacted]	L/G	TM + CN + (21)	210 (Ice Only) (1)	SED6	S: 8/5/2004	9:35	C0026	--
MC0032	Surface Water/ [redacted]	L/G	CN (21), TM + HG (21)	238 (HNO3), 239 (NaOH) (2)	SW4	S: 8/5/2004	10:20	C0032	--
MC0033	Surface Water/ [redacted]	L/G	CN (21), TM + HG (21)	242 (HNO3), 243 (NaOH) (2)	SW5	S: 8/5/2004	9:45	C0033	--
MC0034	Surface Water/ [redacted]	L/G	CN (21), TM + HG (21)	246 (HNO3), 247 (NaOH) (2)	SW6	S: 8/5/2004	9:30	C0034	--
MC0057	Surface Water/ [redacted]	L/G	DM+HG (21)	329 (HNO3) (1)	SW4DM	S: 8/5/2004	10:20		--
MC0058	Surface Water/ [redacted]	L/G	DM+HG (21)	330 (HNO3) (1)	SW5DM	S: 8/5/2004	9:45		--
MC0059	Surface Water/ [redacted]	L/G	DM+HG (21)	331 (HNO3) (1)	SW6DM	S: 8/5/2004	9:30		--

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced?

CN = Cyanide, DM+HG = CLP Diss Metals + Hg ICP-AES, TM + CN + = CLP ICP-AES TM + CN + HG, TM + HG = CLP TM +HG

ORIGINAL

TR Number: 3-592370820-080504-0012

REGION COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 33178
DAS No: R31935
R

Region:	3	**Date Shipped:**	8/5/2004
Project Code:		**Carrier Name:**	FedEx
Account Code:	T03W302DD2CE319LA00	**Airbill:**	843517786204
CERCLIS ID:	MDSFN0305563	**Shipped to:**	Bonner Analytical Testing Co. 2703 Oak Grove Road Hattiesburg MS 39402 (601) 264-2854
Spill ID:	E319		
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD		
Project Leader:	[redacted]		
Action:	Expanded Site Investigation/RI		
Sampling Co:	MDE-ERRP		

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1			
2			
3			
4			

Sampler Signature:

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		ORGANIC SAMPLE No.	QC Type
MC0027	Sediment/ [redacted]	L/G	TM + CN + (21)	214 (Ice Only) (1)	SED7	S: 8/5/2004	8:50	C0027	--
MC0028	Sediment/ [redacted]	L/G	TM + CN + (21)	218 (Ice Only) (1)	SED8	S: 8/5/2004	8:55	C0028	Duplicate of SED7
MC0035	Surface Water/ Gifawossen Tefera	L/G	CN (21), TM + HG (21)	250 (HNO3), 251 (NaOH) (2)	SW7	S: 8/5/2004	8:35	C0035	--
MC0036	Surface Water/ [redacted]	L/G	CN (21), TM + HG (21)	254 (HNO3), 255 (NaOH) (2)	SW8	S: 8/5/2004	8:40	C0036	Duplicate of SW7
MC0037	Surface Water/ [redacted]	L/G	CN (21), TM + HG (21)	258 (HNO3), 259 (NaOH) (2)	SW9	S: 8/5/2004	10:30	C0037	--
MC0041	Surface Water/ [redacted]	L/G	CN (21), TM + HG (21)	270 (NaOH), 271 (HNO3) (2)	SW14	S: 8/5/2004	10:50	C0041	Field Blank
MC0060	Surface Water/ Gifawossen Tefera	L/G	DM+HG (21)	332 (HNO3) (1)	SW7DM	S: 8/5/2004	8:35		--
MC0061	Surface Water/ [redacted]	L/G	DM+HG (21)	333 (HNO3) (1)	SW8DM	S: 8/5/2004	8:40		Duplicate of SW7DM
MC0062	Surface Water/ [redacted]	L/G	DM+HG (21)	334 (HNO3) (1)	SW9DM	S: 8/5/2004	10:30		--
MC0064	Surface Water/ [redacted]	L/G	DM+HG (21)	336 (HNO3) (1)	SW14DM	S: 8/5/2004	10:50		-- Field Blank

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____

CN = Cyanide, DM+HG = CLP Diss Metals + Hg ICP-AES, TM + CN + = CLP ICP-AES TM + CN + HG, TM + HG = CLP TM +HG

TR Number: 3-592370820-080504-0013

REGION COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

S[redacted]opy t[redacted]ple M[redacted]men[redacted], Attr[redacted]her E[redacted]CSC,[redacted] Cor[redacted]e Ce[redacted]., Ch[redacted]VA 2[redacted]819;[redacted] 703[redacted]200; [redacted]3/818[redacted] [redacted] F2V[redacted] Pag[redacted] 1 [redacted]

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 33178
DAS No: R31935
R

Region:	3	Date Shipped:	8/4/2004
Project Code:		Carrier Name:	FedEx
Account Code:	†03W302DD2CE319LA00	Airbill:	843517786215
CERCLIS ID:	MDSFN0305563	Shipped to:	Bonner Analytical Testing Co. 2703 Oak Grove Road Hattiesburg MS 39402 (601) 264-2854
Spill ID:	E319		
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD		
Project Leader:	[redacted]		
Action:	Expanded Site Investigation/RI		
Sampling Co:	MDE-ERRP		

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1			
2			
3			
4			

Sampler Signature:

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		ORGANIC SAMPLE No.	QC Type
MC0039	Surface Water/ Gifawossen Tefera	L/G	CN (21), TM + HG (21)	264 (HNO3), 265 (NaOH) (2)	SW12	S: 8/4/2004	12:15	C0039	Field Blank
MC0043	Ground Water/ [redacted]	L/G	CN (21), TM + HG (21)	278 (HNO3), 279 (NaOH) (2)	MW1A	S: 8/4/2004	11:10	C0043	--
MC0044	Ground Water/ [redacted]	L/G	CN (21), TM + HG (21)	282 (HNO3), 283 (NaOH) (2)	MW2	S: 8/4/2004	12:20	C0044	--
MC0047	Ground Water/ [redacted]	L/G	CN (21), TM + HG (21)	294 (HNO3), 297 (NaOH) (2)	MW4	S: 8/4/2004	10:45	C0047	--
MC0053	Ground Water/ [redacted]	L/G	DM+HG (21)	348 (HNO3) (1)	GW2DM	S: 8/4/2004	9:00		--
MC0063	Surface Water/ Gifawossen Tefera	L/G	DM+HG (21)	335 (HNO3) (1)	SW12DM	S: 8/4/2004	12:15		-- Field Blank
MC0067	Ground Water/ [redacted]	L/G	DM+HG (21)	339 (HNO3) (1)	MW2DM	S: 8/4/2004	12:20		--
MC0070	Ground Water/ [redacted]	L/G	DM+HG (21)	342 (HNO3) (1)	MW4DM	S: 8/4/2004	10:45		--

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced?

CN = Cyanide, DM+HG = CLP Diss Metals + Hg ICP-AES, TM + HG = CLP TM +HG

ORIGINAL

TR Number: 3-592370820-080404-0007

REGION COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 33178
DAS No: R31935
R

Region:	3	**Date Shipped:**	8/4/2004	**Chain of Custody Record**	**Sampler Signature:**
Project Code:		**Carrier Name:**	FedEx	**Relinquished By (Date / Time)**	**Received By (Date / Time)**
Account Code:	†03W302DD2CE319LA00	**Airbill:**	843517786215	1	
CERCLIS ID:	MDSFN0305563	**Shipped to:**	Bonner Analytical Testing Co. 2703 Oak Grove Road Hattiesburg MS 39402 (601) 264-2854	2	
Spill ID:	E319			3	
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD			4	
Project Leader:	[redacted]				
Action:	Expanded Site Investigation/RI				
Sampling Co:	MDE-ERRP				

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		ORGANIC SAMPLE No.	QC Type
MC0042	Ground Water/ [redacted]	L/G	CN (21), TM + HG (21)	274 (HNO3), 275 (NaOH) (2)	MW1	S: 8/4/2004	10:30	C0042	--
MC0045	Ground Water/ [redacted]	L/G	CN (21), TM + HG (21)	286 (HNO3), 287 (NaOH) (2)	MW3	S: 8/4/2004	13:25	C0045	--
MC0046	Ground Water/ [redacted]	L/G	CN (21), TM + HG (21)	290 (HNO3), 291 (NaOH) (2)	MW3A	S: 8/4/2004	14:00	C0046	--
MC0051	Ground Water/ [redacted]	L/G	CN (21), TM + HG (21)	319 (HNO3), 320 (NaOH) (2)	GW2	S: 8/4/2004	9:00	C0051	--
MC0052	Ground Water/ [redacted]	L/G	CN (21), TM + HG (21)	323 (HNO3), 324 (NaOH) (2)	GW3	S: 8/4/2004	13:25	C0052	Duplicate of MW3
MC0065	Ground Water/ [redacted]	L/G	DM+HG (21)	337 (HNO3) (1)	MW1DM	S: 8/4/2004	10:30		--
MC0066	Ground Water/ [redacted]	L/G	DM+HG (21)	338 (HNO3) (1)	MW1A-DM	S: 8/4/2004	11:10		--
MC0068	Ground Water/ [redacted]	L/G	DM+HG (21)	340 (HNO3) (1)	MW3DM	S: 8/4/2004	13:25		--
MC0069	Ground Water/ [redacted]	L/G	DM+HG (21)	341 (HNO3) (1)	MW3A-DM	S: 8/4/2004	14:00		--
MC0071	Ground Water/ [redacted]	L/G	DM+HG (21)	349 (HNO3) (1)	GW3DM	S: 8/4/2004	13:25		Duplicate of MW3DM

Shipment for Case Complete? N	**Sample(s) to be used for laboratory QC:**	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____

CN = Cyanide, DM+HG = CLP Diss Metals + Hg ICP-AES, TM + HG = CLP TM +HG

TR Number: 3-592370820-080404-0008

REGION COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: [redacted] Sample [redacted]gemen[redacted]e, At[redacted]ther [redacted] CSC[redacted]00 Co[redacted]ce Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4[redacted]

F2V5.1.043 Page 1 of 1

MDE

MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Washington Boulevard, Suite 625 • Baltimore MD 21230-1719
410-537-3000 • 1-800-633-6101

ORIGINAL

Robert L. Ehrlich, Jr.
Governor

Michael S. Steele
Lt. Governor

Kendl P. Philbrick
Secretary

Jonas A. Jacobson
Deputy Secretary

VALIDATOR'S COPY

August 11, 2004

Ms. Betty Jeffery
U.S. Environmental Protection Agency
Region III
Environmental Science Center
701 Mapes Road
Fort Meade, Maryland 20755

Dear Ms. Jeffery:

Enclosed are Traffic Reports (TRs) and Chain of Custody Records for the Route 7 Dump/New Jersey Fireworks Site, DAS Case Number R31935/RAS Case Number 33178.

- TR # 3-592370820-080304-0001
- TR # 3-592370820-080304-0002
- TR # 3-592370820-080304-0003
- TR # 3-592370820-080304-0004
- TR # 3-592370820-080304-0005
- TR # 3-592370820-080304-0006
- TR # 3-592370820-080304-0007
- TR # 3-592370820-080304-0008
- TR # 3-592370820-080304-0009
- TR # 3-592370820-080304-0010
- TR # 3-592370820-080304-0011
- TR # 3-592370820-080304-0012
- TR # 3-592370820-080304-0013
- TR # 3-592370820-080304-0014
- TR # 3-592370820-080304-0015
- TR # 3-592370820-080304-0016
- TR # 3-592370820-080304-0017**
- TR # 3-592370820-080404-0001
- TR # 3-592370820-080404-0002
- TR # 3-592370820-080404-0003
- TR # 3-592370820-080404-0004
- TR # 3-592370820-080404-0005

- TR # 3-592370820-080404-0006
- TR # 3-592370820-080404-0007
- TR # 3-592370820-080404-0008
- TR # 3-592370820-080504-0001
- TR # 3-592370820-080504-0002
- TR # 3-592370820-080504-0003
- TR # 3-592370820-080504-0004
- TR # 3-592370820-080504-0005
- TR # 3-592370820-080504-0006
- TR # 3-592370820-080504-0007
- TR # 3-592370820-080504-0008
- TR # 3-592370820-080504-0009
- TR # 3-592370820-080504-0010
- TR # 3-592370820-080504-0011
- TR # 3-592370820-080504-0012
- TR # 3-592370820-080504-0013

For DAS Case Number R31935, on TR # 3-592370820-080304-0013, the sample date and time were missing from the laboratory copy of the TR for sample R31935-PW5 (sample collected by Eugene Dejoise). The correct sample date and time, respectively, are 8/3/04 and 1140. This information has been added to the Region TR and initialed.

On the same TR as above, the sample date and time for sample R31935-S15 (sample collected by [redacted]) were handwritten onto the lab TR, but there were no initials indicating who added the handwritten information. The information was added to the lab TR by the CLP coordinator in the field ([redacted] initials [redacted] when the information was observed to be missing. This information has been added to the enclosed Region TR and initialed.

For RAS Case Number 33178 on TR # 3-592370820-080404-0007, sample MC0063 had a sample tag and TR collection time of 1215 and a bottle collection time of 1220. The correct collection time for this sample is 1215. The bottle was mislabeled in the field.

Also, sample number MC0002 was inadvertently omitted from TR # 3-592370820-080304-0014 and was later electronically inserted onto a new TR by itself, TR # 3-592370820-080304-0017. However, field personnel were unable to print out a copy of this TR and improvised by adding (in handwriting) this sample onto the end of TR # 3-592370820-080304-0014 and shipping it out with the samples included with that TR. This information is included here to document why the electronic version of this case will have a TR # 3-592370820-080304-0017, but the hard-copies do not.**

ORIGINAL

Additionally, TRs # 3-592370820-080504-0001 thru –0005 indicate that the shipment is not complete. Since this was the last day of sampling, the shipment was in fact complete and the Region TRs have been revised and initialed to reflect this.

Lastly, due to a Forms II Lite issue specifically pertaining to adding and editing analyses, corresponding inorganic sample numbers did not appear on some of the TRs. The corresponding sample numbers have been added on the enclosed Region TRs and initialed. According to the Forms II Lite Help Desk, the "Make Analysis Permanent" box must be checked to rectify this problem. We have since put a checkmark in the box to ensure this does not present a problem in the future.

If you have any questions, please contact me at (410) 537-3493.

Sincerely,

Peggy Smith

Peggy Smith, Project Manager
CHS Enforcement/Fund Lead Site
Assessment Division

PS

Enclosure

cc: Mr. Horacio Tablada
Mr. Karl Kalbacher
Ms. Lorie Baker
Mr. Dan Slizys
Ms. Khin-Cho Thaung
Ms. Carroll Harris
Ms. Holly Sturdavant

U.S EPA Region III Analytical Request Form

RAS CASE #: CT3062 33178	DAS #:	NSF #:	
Date: 6/16/04	QAPP/SAP: 06/04	Data Validation Level: IM2, M3	
Site: ~~RT7/NJ FIREWORKS~~ New Jersey Fireworks			
Address: RT.7 OLD PHILADELPHIA RD	City: ELKTON	State: MD	
Latitude: 39 36 15	Longitude: 75 52 50		
Program: CERCLA	CERCLIS#: MDSFN0305563	Activity: ESI	
Account #: 2004T03N302DD2CE319LA00	Operable Unit: 00	Spill ID: E319	
Preparer: PHILL ANDERSON	Phone: 410 537-3440	Fax: 410 537-3472	E-mail: panderson@mde.state.md.us
OSC/RPM: LORIE BAKER	Phone: 215 814-3355	Fax:	E-mail: baker.lorie@epamail.gov
Site Leader: PHILL ANDERSON	Phone: 410 537-3440	Fax: 410 5337-3472	E-mail: panderson@mde.state.md.us
EPA CO: LORIE BAKER	Contract Type:	Prime: MDE	Sub:
Analytical TAT: 21 days		Analytical + Validation TAT: 42 days	
Ship Date From: Aug 3, 2004		Ship Date To: Aug 5, 2004	

Samples	Method	Parameter	Matrix	
27	OLM04.3	TCL VOCS Ceimic	SOIL/SEDIMENT	22392
27	OLM04.3	TCL SVOCS & TCL PESTICIDES Ceimic	SOIL/SEDIMENT	
27	ILM05.3 ICP-AES	TAL METALS & CYANIDE BONNER	SOIL/SEDIMENT	22396
3	OLM04.3	TCL VOCS Ceimic	WATER	22392
23	OLM04.3	TCL SVOCS & PESTICIDES Ceimic	WATER	22393, 2239
~~44~~ 21	ILM05.3 ICP-AES	~~TAL METALS~~ TAL Metals BONNER	WATER	22397
23	ILM05.3 ICP-AES	CYANIDE + Metals + Hg BONNER	WATER	22398
		Lanchester to Dissolved Metals + Hg		

Instruction: Please note; after final approval of the SAP, it was determined that an additional trip blank may be necessary. Therefore, this RAS request reflects (3) trips blanks compared to (2) that is outlined in the SAP.

Audited & entered: 8/26/04 DH

ORIGINAL

Appendix D

Laboratory Case Narrative

USEPA - CLP

001

COVER PAGE

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No: 33178 NRAS No.: SDG No: MC0004

SOW No.: ILM05.3

EPA Sample No.	Lab Sample ID
MC0001	BT05527
MC0002	BT05528
MC0003	BT05529
MC0003D	BT05529D
MC0003S	BT05529S
MC0004	BT05530
MC0005	BT05531
MC0006	BT05532
MC0007	BT05533
MC0008	BT05534
MC0009	BT05535
MC0010	BT05536
MC0011	BT05537
MC0012	BT05538
MC0014	BT05539
MC0015	BT05540
MC0016	BT05541
MC0017	BT05542
MC0018	BT05543
MC0019	BT05544

		ICP-AES	ICP-MS
Were ICP-AES and ICP-MS interelement corrections applied?	(Yes/No)	YES	YES
Were ICP-AES and ICP-MS background corrections applied?	(Yes/No)	YES	YES
If yes, were raw data generated before application of background corrections?	(Yes/No)	NO	NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette (or via an alternate means of electronic transmission, if approved in advance by USEPA) has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: [redacted]

Date: 8/25/4 Title: Inorganic Laboratory Manager

ORIGINAL

Bonner Analytical Testing Company

Testing Your World for a Safer Tomorrow

2703 Oak Grove Road, Hattiesburg, MS 39402
Phone: (601) 264-2854 Fax: (601) 268-7084

SDG NARRATIVE:

SDG Number: MC0004
Case Number: 33178
Contract Number: 68W02067

Sample Receipt:

On 8/4/04 we received 18 soil samples under Fed Ex air bill number 8435 1778 6248. Custody seals were present and intact. Cooler temp was determined to be 2°C. Samples MC0003, MC0049, and MC0073 were listed for QC. Samples were in good condition with no discrepancies.

ICP-Metals

The analytical run for metals began on 8/19/04 @ 0901 hrs. During the run, the matrix spike, MC0003S, failed for Sb. A post spike was analyzed at two times the CRQL for Sb. Samples MC0007, MC0008, MC0011, and MC0016 were over the linear range for Ba and Fe. The samples were diluted and reanalyzed. ICSA04 did not sample, the samples associated with this failure were Z'd out. Samples MC0001 thru MC0009 were reran on 8/24/04.

Dup out for Ba, Cu, Pb, mg & Zn

CV-AA Mercury

No Discrepancies

Cyanides

No Discrepancies

CSF:

No Discrepancies

Authorized by [redacted]

Quality Assurance Officer

USEPA - CLP

001

COVER PAGE

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No: 33178 NRAS No.: SDG No: MC0022

SOW No.: ILM05.3

EPA Sample No.	Lab Sample ID
MC0021	BT05545
MC0021D	BT05545D
MC0021S	BT05545S
MC0022	BT05546
MC0023	BT05547
MC0024	BT05548
MC0025	BT05549
MC0026	BT05550
MC0027	BT05551
MC0028	BT05552

		ICP-AES	ICP-MS
Were ICP-AES and ICP-MS interelement corrections applied?	(Yes/No)	YES	YES
Were ICP-AES and ICP-MS background corrections applied?	(Yes/No)	YES	YES
If yes, were raw data generated before application of background corrections?	(Yes/No)	NO	NO

Comments: Barium flagged as "E" estimated due to interferences occuring during the analysis of the Serial Dilution.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette (or via an alternate means of electronic transmission, if approved in advance by USEPA) has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: [redacted]

Date: 8/25/4 Title: Inorganic Laboratory Manager

Bonner Analytical Testing Company

ORIGINAL 002

2703 Oak Grove Road, Hattiesburg, MS 39402
Phone: (601) 264-2854 Fax: (601) 268-7084

SDG NARRATIVE:

SDG Number: MC0022
Case Number: 33178
Contract Number: 68W02067

Sample Receipt:

On 8/6/04 we received 8 soil samples in three coolers under Fed Ex air bill number 8435 1778 6204. Custody seals were present and intact. Cooler temps were determined to be 2°C, 2.5°C, and 3°C. Samples were in good condition except for the following discrepancies:

1. Samples MC0022, 26, 27, and 28 all had about 20 mls of standing water. Please advise on whether to decant or homogenize.

Resolution 1: Per Region 3, "the lab must prepare the samples by mixing tek samples thoroughly, take a sub-sample for digestion and proceed with the analysis of the digests."

2. There was no QC listed. We would like to use sample MC0021 for QC.

Resolution 2) In accordance with previous direction from Region 3, the laboratory will select a sample for laboratory QC as long as the sample is not a PE, blank, or rinsate sample. The laboratory will note the issue in the Case/SDG Narrative, notify the SMO coordinator of the sample selected for laboratory QC (MC0021-soil and MC0029-water), and proceed with the analysis of the samples.

ICP-Metals

The analytical run for metals began 8/18/04 @ 1617 hrs. During the run, the matrix spike failed for As, Se, and Sb. Corrective action calls for a post spike to be performed at two times the CRQL.

Also, the duplicate sample failed for Pb and the serial dilution failed for Ba. No corrective action is required. Data will be reported as is and flagged in the CSF.

CV-AA Mercury

The analytical run for mercury was performed on 8/10/04. The initial instrument calibration failed due to one of the calibration standards was out of acceptable range. The instrument was recalibrated and the analytical run was initiated at 1354 hrs.

Cyanides

No Discrepancies

CSF:

No Discrepancies

Authorized by [redacted]

Quality Assurance Officer

USEPA - CLP

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001 ORIGINAL

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No: 33178 NRAS No.: _____ SDG No: MC0029

SOW No.: ILM05.3

EPA Sample No.	Lab Sample ID
MC0029	BT05553
MC0029D	BT05553D
MC0029S	BT05553S
MC0030	BT05554
MC0031	BT05555
MC0032	BT05556
MC0033	BT05557
MC0034	BT05558
MC0035	BT05559
MC0036	BT05560
MC0037	BT05561
MC0041	BT05562
MC0054	BT05563
MC0055	BT05564
MC0056	BT05565
MC0057	BT05566
MC0058	BT05567
MC0059	BT05568
MC0060	BT05569
MC0061	BT05570

		ICP-AES	ICP-MS
Were ICP-AES and ICP-MS interelement corrections applied?	(Yes/No)	YES	YES
Were ICP-AES and ICP-MS background corrections applied?	(Yes/No)	YES	YES
If yes, were raw data generated before application of background corrections?	(Yes/No)	NO	NO

Comments: Barium flagged as "E" estimated due to interferences occurring during the analysis of the Serial Dilution.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette (or via an alternate means of electronic transmission, if approved in advance by USEPA) has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: [redacted]

Date: 08-25-2004 Title: Inorganic Laboratory Manager

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002

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Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No: 33178 NRAS No.: _____ SDG No: MC0029

SOW No.: ILM05.3

EPA Sample No.	Lab Sample ID
MC0062	BT05571
MC0064	BT05572

		ICP-AES	ICP-MS
Were ICP-AES and ICP-MS interelement corrections applied?	(Yes/No)	YES	YES
Were ICP-AES and ICP-MS background corrections applied?	(Yes/No)	YES	YES
If yes, were raw data generated before application of background corrections?	(Yes/No)	NO	NO

Comments: Barium flagged as "E" estimated due to interferences occurring during the analysis of the Serial Dilution.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette (or via an alternate means of electronic transmission, if approved in advance by USEPA) has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: [signature] Name: [redacted]

Date: 08-25-2004 Title: Inorganic Laboratory Manager

ORIGINAL

Bonner Analytical Testing Company

2703 Oak Grove Road, Hattiesburg, MS 39402
Phone: (601) 264-2854 Fax: (601) 268-7084

SDG NARRATIVE:

SDG Number: MC0029
Case Number: 33178
Contract Number: 68W02067

Sample Receipt:

On 8/6/04 we received 20 water samples in three coolers under Fed Ex air bill number 8435 1778 6204. Custody seals were present and intact. Cooler temps were determined to be 2°C, 2.5°C, and 3°C. Samples were in good condition except for the following discrepancies:

1. There was no QC listed. We would like to use sample MC0021 for QC. Resolution 1) In accordance with previous direction from Region 3, the laboratory will select a sample for laboratory QC as long as the sample is not a PE, blank, or rinsate sample. The laboratory will note the issue in the Case/SDG Narrative, notify the SMO coordinator of the sample selected for laboratory QC (MC0021-soil and MC0029-water), and proceed with the analysis of the samples.

ICP-Metals

The analytical run was began 8/13/04 @ 1528 hrs. During the run, Al was two fold different in concentration between the parent and its duplicate. Corrective action calls for the samples to be redigested and reanalyzed. On 8/19/04 @ 0901 hrs, another run began for the aforementioned samples.

Also, the matrix spike was reanalyzed on the second run. The matrix spike failed for Ag. Corrective action calls for a post spike to be analyzed two times the CRQL.

Barium was out for the serial dilution. No corrective action is required. Data will be reported as is and flagged in the CSF.

CV-AA Mercury

No Discrepancies

Cyanides

The analytical run for cyanide began 8/13/04 @ 1406 hrs. During the run, the FasPac software of the CN analyzer did not record the date and time of CCB01 on the raw data. Corrective action calls for the null time to be lined out, initialed and dated, and the correct date and time recorded on the raw data.

CSF:

No Discrepancies

Authorized by [redacted]

Quality Assurance Officer

USEPA - CLP

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001 ORIGINAL

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No: 33178 NRAS No.: SDG No: MC0073

SOW No.: ILM05.3

EPA Sample No.	Lab Sample ID
MC0039	BT05502
MC0042	BT05503
MC0043	BT05504
MC0044	BT05505
MC0045	BT05506
MC0046	BT05507
MC0047	BT05508
MC0049	BT05509
MC0049D	BT05509D
MC0049S	BT05509S
MC0051	BT05510
MC0052	BT05511
MC0053	BT05512
MC0063	BT05513
MC0065	BT05514
MC0066	BT05515
MC0067	BT05516
MC0068	BT05517
MC0069	BT05518
MC0070	BT05519

		ICP-AES	ICP-MS
Were ICP-AES and ICP-MS interelement corrections applied?	(Yes/No)	YES	YES
Were ICP-AES and ICP-MS background corrections applied?	(Yes/No)	YES	YES
If yes, were raw data generated before application of background corrections?	(Yes/No)	NO	NO

Comments: **Magnesium, manganese and potassium flagged as "E" estimated due to interferences occurring during the analysis of the Serial Dilution.**

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette (or via an alternate means of electronic transmission, if approved in advance by USEPA) has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: [redacted]

Date: 8/18/4 Title: Inorganic Laboratory Manager

USEPA - CLP

002

COVER PAGE

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No: 33178 NRAS No.: SDG No: MC0073

SOW No.: ILM05.3

EPA Sample No.	Lab Sample ID
MC0071	BT05520
MC0073	BT05521

		ICP-AES	ICP-MS
Were ICP-AES and ICP-MS interelement corrections applied?	(Yes/No)	YES	YES
Were ICP-AES and ICP-MS background corrections applied?	(Yes/No)	YES	YES
If yes, were raw data generated before application of background corrections?	(Yes/No)	NO	NO

Comments: Magnesium, manganese and potassium flagged as "E" estimated due to interferences occurring during the analysis of the Serial Dilution.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette (or via an alternate means of electronic transmission, if approved in advance by USEPA) has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: [illegible] Name: [redacted]

Date: 8/18/4 Title: Inorganic Laboratory Manager

ORIGINAL

Bonner Analytical Testing Company

2703 Oak Grove Road, Hattiesburg, MS 39402
Phone: (601) 264-2854 Fax: (601) 268-7084

SDG NARRATIVE:

SDG Number: MC0073
Case Number: 33178
Contract Number: 68W02067

Sample Receipt:

On 8/4/04 we received 2 water and 18 soil samples under Fed Ex air bill number 8435 1778 6248. Custody seals were present and intact. Cooler temp was determined to be 2°C. Samples MC0003, MC0049, and MC0073 were listed for QC. On 8/5/04 we received 18 water samples in two coolers under Fed Ex air bill number 8435 1778 6215. Custody seals were present and intact. Cooler temps were determined to be 3°C and 5.5°C. Samples were in good condition except for the following discrepancies:

1. SampleMC0063 had a sample tag and TR/COC collection time of 1215 and a bottle collection time of 1220. Please advise on the correct collection time.
2. Samples MC0042 and MC0052 (CN) had a pH of 11. Please advise on whether or not to adjust.

ICP-Metals

The analytical run for metals on 8/13/04 @ 1234 hrs. During the run, the serial dilution, MC0049L, failed for K, Mg, and Mn. The serial dilution results were flagged and reported as is. Samples MC0051 and MC0052 were over the linear range for Ba. A 1:2 dilution was prepared for MC0051 and MC0052 and analyzed.

CV-AA Mercury
The analytical run for mercury began on 8/13/04 @ 1652 hrs. During the run, CRI02, the second CRQL check standard was out. CRI02 was reanalyzed.
Cyanide
No Discrepancies
CSF
No Discrepancies

Authorized by [redacted]
Quality Assurance Officer

[redacted]

From: [redacted]
Sent: Friday, August 06, 2004 9:54 AM
To: sample receipt; [redacted]
Cc: [redacted] (E-mail); [redacted] (E-mail); [redacted] (E-mail); [redacted] (E-mail)
Subject: Region 03 | Case 33178 | Lab BONNER | Issue Insufficient/inappropriate designation of laboratory QC | FINAL

[redacted]

In accordance with previous direction from Region 3, the laboratory will select one of the designated samples per matrix for laboratory QC. The laboratory will note the issue in the Case/SDG Narrative, notify the SMO coordinator of the sample selected for laboratory QC, and proceed with the analysis of the samples.

SMO will record that the lab will use sample MC0049 for lab QC for this SDG.

Please let me know if you have any other questions or problems.

Thanks,
[redacted]

[redacted]
CSC
CLP Coordinator for Regions 3, 7, & 9
703-818-4214
[redacted]

This is a PRIVATE message. If you are not the intended recipient, please delete without copying and kindly advise us by e-mail of the mistake in delivery. NOTE: Regardless of content, this e-mail shall not operate to bind CSC to any order or other contract unless pursuant to explicit written agreement or government initiative expressly permitting the use of e-mail for such purpose.

-----Original Message-----
From: [redacted]
Sent: Thursday, August 05, 2004 3:52 PM
To: [redacted]
Cc: [redacted]
Subject: Region 3 | Case 33178 | QC

[redacted]

I am closing out an SDG for case 33178. This SDG had two QC's listed, MC0049 and MC0073. We would like to use sample MC0049 for QC.

Thanks,

[redacted]
Bonner Analytical
68W02067

174

ORIGINAL

[redacted]

From: [redacted]
Sent: Thursday, August 12, 2004 10:34 AM
To: sample receipt; [redacted]
Cc: [redacted] (E-mail); [redacted] (E-mail); [redacted] (E-mail); [redacted] (E-mail)
Subject: Region 03 | Case 33178 | Lab BONNER | Issue Multiple | FINAL

[redacted]

Issue 1: (Discrepancies with tags, jars, and/or TR/COC) Sample MC0063 had a sample tag and TR collection time of 1215 and a bottle collection time of 1220. The lab would like to know the correct collection time for this sample. Resolution 1: Per the Region, " the correct collection time for this sample is 1215. The bottle was mislabeled in the field." The lab will note the issue in the Case/SDG Narrative and proceed with the analysis of the samples.

Issue 2: (pH outside allowable limits) Samples Mc0042 and MC0052 (CN) had a pH of 11. The lab would like to know if they should adjust the pH. Resolution 2: Per the Region, "the pH can be adjusted and the lab can analyze the samples." The lab will note the issue in the Case/SDG Narrative and proceed with the analysis of the samples.

Please let me know if you have any other questions or problems.

Thanks,
[redacted]

[redacted]
CSC
CLP Coordinator for Regions 3, 7, & 9
703-818-4214
[redacted]

This is a PRIVATE message. If you are not the intended recipient, please delete without copying and kindly advise us by e-mail of the mistake in delivery. NOTE: Regardless of content, this e-mail shall not operate to bind CSC to any order or other contract unless pursuant to explicit written agreement or government initiative expressly permitting the use of e-mail for such purpose.

-----Original Message-----
From: Slizys.Dan@epamail.epa.gov [mailto:Slizys.Dan@epamail.epa.gov]
Sent: Thursday, August 12, 2004 10:23 AM
To: [redacted]
Subject: Re: NEW ISSUE | Region 03 | Case 33178 | Lab BONNER | Issue Multiple

FYI

----- Forwarded by Dan Slizys/ESC/R3/USEPA/US on 08/12/2004 10:25 AM-----
From: Peggy Smith <psmith@mde.state.md.us>

To: [redacted]
Phillip Anderson <panderson@mde.state.md.us>
cc: [redacted] Alex Cox

<mcox@mde.state.md.us>

Subject: Re: NEW ISSUE | Region 03 | Case 33178 | Lab BONNER | Issue Multiple
08/12/2004 10:18 AM

Sample MC0063 had a sample tag and TR collection time of 1215 and a bottle collection time

of 1220. The correct collection time for this sample is 1215. The bottle was mislabeled in the field.

>>> [redacted] 08/12/04 10:02AM >>> 175

We did not receive any response from the field.

[redacted] and [redacted]

The lab requested a time correction which was discrepant between the TR/COC and the container label. Please write memo to file as soon as possible.

From: [redacted]
To: [redacted]

cc:
Subject: NEW ISSUE | Region 03 | Case 33178 | Lab BONNER | Issue Multiple 08/12/2004 09:33 AM

Has the sampler provided a response to the issue below?

"Sample MC0063 had a sample tag and TR collection time of 1215 and a bottle collection time of 1220. The lab would like to know the correct collection time for this sample."

Please advise.

Thanks,
[redacted]

-----Original Message-----
From: Slizys.Dan@epamail.epa.gov
Sent: Friday, August 06, 2004 1:07 PM
To: [redacted]
Cc: [redacted]
(E-mail)
Subject: Re: NEW ISSUE | Region 03 | Case 33178 | Lab BONNER | Issue Multiple

[redacted]

The pH can be adjusted and the lab can analyze the samples.

From: [redacted]
To: [redacted]

cc:
Subject: NEW ISSUE | Region 03 | Case 33178 | Lab BONNER | Issue Multiple 08/06/2004 11:50 AM

[redacted] responded to the pH issue, however, per the ILM05.3 SOW, "Unless instructed by the USEPA Regional CLP Project Officer (CLP PO), the Contractor shall not perform any pH adjustment action if the sample has not been properly preserved."

Any direction regarding pH adjustments has to come from either the PO, or, in the PO's absence, the back-up PO.

[redacted] please advise regarding the pH.

Thanks,
[redacted]

-----Original Message-----
From: Jeffery.Betty@epamail.epa.gov
Sent: Friday, August 06, 2004 11:15 AM
To: [redacted]

Subject: Re: NEW ISSUE | Region 03 | Case 33178 | Lab BONNER | Issue Multiple

176

Issue 2 - Please have the lab document the issue in the case narrative, adjust the pH and continue with the analysis. Thanks. Issue 1 has been sent to the samplers to address.

ORIGINAL

From: [redacted]
To: [redacted]

cc:
Subject: NEW ISSUE | Region 03 | Case 33178 | Lab BONNER | Issue Multiple 08/06/2004 10:53 AM

[redacted]

Following is an email from BONNER regarding samples received for Case 33178. The lab has the following issues regarding these samples.

Issue 1: (Discrepancies with tags, jars, and/or TR/COC) Sample MC0063 had a sample tag and TR collection time of 1215 and a bottle collection time of 1220. The lab would like to know the correct collection time for this sample.

Issue 2: (pH outside allowable limits) Samples Mc0042 and MC0052 (CN) had a pH of 11. The lab would like to know if they should adjust the pH. Please advise.

Thanks,
[redacted]

-----Original Message-----
From: [redacted]
Sent: Thursday, August 05, 2004 3:40 PM
To: [redacted]
Cc: [redacted]
Subject: Region 3 | Case 33178 | Sample Receipt

[redacted]

Today we received 18 water samples in two coolers under Fed Ex air bill number 8435 1778 6215. Custody seals were present and intact. Cooler temps were determined to be 3°C and 5.5°C. Samples were in good condition except for the following discrepancies:

SampleMC0063 had a sample tag and TR/COC collection time of 1215 and a bottle collection time of 1220. Please advise on the correct collection time.

Samples MC0042 and MC0052 (CN) had a pH of 11. Please advise on whether or not to adjust.

Thanks,

[redacted]
Bonner Analytical
68W02067

ORIGINAL

APPENDIX B

ORGANIC DATA VALIDATION PACKAGE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
ENVIRONMENTAL SCIENCE CENTER
701 MAPES ROAD
FORT MEADE, MARYLAND 20755-5350

ORIGINAL

DATE : September 29, 2004

SUBJECT: Region III Data QA Review

FROM : Khin-Cho Thaung KCT
Region III ESAT RPO (3EA21)

TO : Lorie Baker
Regional Project Manager (3HS34)

Attached is the organic data validation report for the New Jersey Fireworks Site (Case#:33178, SDG#:C0001, C0021, C0032, C0038) completed by the Region III Environmental Services Assistance Team (ESAT) contractor under the direction of Region III EAID.

If you have any questions regarding this review, please call me at (410) 305-2743.

Attachments

cc: Peggy Smith (MDE)

TO File #: 0015 TDF#: 0904

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ESAT Region 3
US EPA Environmental Science Center
701 Mapes Road Ft. Meade, MD 20755-5350
Telephone 410-305-3037 Facsimile 410-305-3597

LOCKHEED MARTIN
We never forget who we're working for™

ORIGINAL

DATE: September 27, 2004

SUBJECT: Level M3 Organic Data Validation for Case 33178
SDG: C0001, C0021, C0032, C0038
Site: New Jersey Fireworks

FROM: [redacted]
Organic Data Reviewer

Through: [redacted]
Senior Oversight Chemist

TO: Khin-Cho Thaung
ESAT Region 3 Project Officer

OVERVIEW

Case 33178, Sample Delivery Group (SDG) C0001, C0021, C0032, and C0038 consisted of twenty six (26) soil samples analyzed for volatile (VOC), semivolatile (SVOC), pesticides, and PCB's and twenty three (23) aquous samples analyzed for SVOC, pesticides and PCB's. All samples were submitted to Ceimic Corporation (CEIMIC) for analyses. The sample set included three (3) trip blanks, one (1) field blank, three (3) soil and (1) aqueous field duplicate pairs. Samples were analyzed according to Contract Laboratory Program (CLP) Statement of Work (SOW) OLMO4.3 through Routine Analytical Services (RAS) program.

SUMMARY

Data were validated according to Region III Modifications to the National Functional Guidelines for Organic Data Review, Level M3. All samples were successfully analyzed for all target compounds except those qualified "R" as noted in "MAJOR PROBLEM" section.

MAJOR PROBLEMS:

- Response Factors (RFs) were less than 0.05 for 1,2-dibromo-3-chloropropane in the volatile continuing calibrations. No positive results were reported for this compound. Quantitation limits for 1,2-dibromo-3-chloropropane in affected samples were rejected and qualified "R" on Data Summary Forms (DSFs) in Appendix B.

MINOR PROBLEMS:

- Positive results for pesticide/PCB compounds with percent differences (%Ds) greater than twenty-five percent (>25%) between the two analytical columns were qualified "J" on Data Summery Forms (DSFs).

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- Several compounds failed precision criteria [Percent Relative Standard Deviation (%RSD) and/or Percent Difference (%D)] in the volatile and semivolatile initial and/or continuing calibrations. No positive results were reported for these compounds. Quantitation limits for compounds with %D > 50% were qualified "UJ" on DSFs.

NOTES

- Maximum concentrations of all target compounds found in the analysis of trip blank are listed below. Only compounds used to qualify data are listed. Samples with concentrations of these common laboratory contaminants less than ten times (<10X) blank concentration have been qualified "B" on DSFs.

SDG	Blank	Compound	Concentration (µg/L)	Affected samples
C0001	VHBLK01	Methylene Chloride*	8 B µg/Kg	All Samples
	Trip Blank (C0038)	Acetone*	5 B µg/L	C0009, C0016
C0021	VHBLK01	Methylene Chloride*	7 B µg/Kg	All Samples
C0038	VBLKPB	Methylene Chloride*	4 J µg/L	C0038
C0038	VBLKPB	Acetone*	5 J µg/L	C0038
C0038	Field Blank (C0039)	Diethylphthalate*	7 J µg/L	C0047

- Volatile Matrix Spike/Matrix Spike Duplicate (MS/MSD) analyses of sample C0003 reported recoveries of trichloroethene and chlorobenzene in the MSD analysis outside lower control limits. Additionally, Relative Percent Differences (RPDs) for trichloroethene, benzene, toluene and chlorobenzene were outside Quality Control (QC) limits. No data were qualified based on these QC outlier.

- Volatile MS/MSD analyses of sample C0026 reported recovery of 1,1-dichlroethene in the MS analysis outside the lower control limit. No data were qualified based on this QC outlier.

- Sample C0026 was used for MS/MSD analyses by the laboratory. Non-spiked compounds, other than blank contaminants, were reported in the analysis of this sample and the MS/MSD analyses of this sample. Results and precision estimate are listed below.

	Concentration (µg/Kg)			
Compound	C0026	C0026MS	C0026MSD	%RSD
1,1,1-trichloroethane	18	3 J	2 J	116
tetrachloroethene	15	5 J	3 J	83
bis(2-ethylhexyl)phthalate	380 J	510	540	13

%RSD = Percent Relative Standard Deviation

- Sample C02B8 was used for MS/MSD analyses by the laboratory. Non-spiked compounds, other than blank contaminants, were reported in the volatile analyses of sample C02B8 and the MS/MSD analyses of this sample. Results and precision estimate are listed below.

Compound	Concentration (µg/L) C02B8	C02B8MS	C02B8MSD	%RSD
chloromethane	35	6 J	6 J	107
acetone	ND	7 J	9 J	25*
methylene chloride	ND	5 J	5 J	IN

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* ND = Non-detect *IN = Indeterminate * = Relative Percent Difference instead of % RSD

- Volatile sample C0038 was used for MS/MSD analyses by the laboratory. Non-spiked compounds, other than blank contaminants, were reported in the sample C0038 and the MS/MSD analyses of this sample. Results and precision estimates.

Compound	Concentration (µg/L) C0038	C0038MS	C0038MSD	%RSD
chloromethane	4 J	5 J	5 J	12
2-butanone	4 J	ND	ND	IN

- The semivolatile MS/MSD analyses of sample C0003 reported recovery of pentochlorophenol in the MS/MSD analyses is 0%. No data were qualified based on MS/MSD recoveries.

- Sample C0003 (SDG C0001) was used for MS/MSD analyses by the laboratory. Non-spiked compounds, other than blank contaminants, were reported in semivolatile analyses of sample C0003 and the MS/MSD analyses of this sample. Results and precision estimate for samples C0003, C0003MS, and C0003MSD are listed below.

Compound	Concentration (µg/Kg) C0003	C0003MS	C0003MSD	%RSD
fluoranthene	280 J	150 J	180 J	33
benzo(a)anthracene	360 J	160 J	220 J	42
chrysene	460 J	270 J	320 J	28
benzo(b)fluoranthene	250 J	140 J	260 J	31
benzo(k)fluoranthene	280 J	190 J	140 J	35
benzo(a)pyrene	350 J	230 J	300 J	26
indeno(1,2,3-cd)pyrene	130 J	ND	ND	IN
benzo(g,h,i)perylene	160 J	ND	ND	IN

- Semivolatile MS/MSD analyses of sample C0026 reported recoveries of 4-nitrophenol, 2,4-dinitrotoluene, and pentachlorophenol in the MSD analyses, outside upper QC limits. Additionally, RPD for acenaphthene was outside the QC limit. No data were qualified based on these QC outlier.

- The MS/MSD analyses were performed on trip blank sample C02B8 (SDG C0032) and C0038 (SDG C0038).

- Semivolatile MS/MSD analyses of sample C0032 reported recovery of 4-nitrophenol outside upper QC limit in MS/MSD analyses. No data were qualified based on this QC outlier.

- Semivolatile MS/MSD analyses of sample C0049 (SDG C0038) reported recovery of 4-nitrophenol outside upper QC limit. Also, recovery of N-nitoso-di-n-propylamine outside lower QC limit in MSD analysis. Additionally, RPD for N-nitoso-di-n-propylmine. was outside QC limit. No data were qualified based on these QC outlier.

ORIGINAL

- Pesticide/PCB MS/MSD in SDG C0038 analyses of sample C0049 reported the RPD of 4,4'-DDT outside lower QC limit. No data were qualified based on this QC outlier.

- Semivolatile analysis of sample C0003 (SDG C0001) was performed at a three fold (3X) dilution. Contract Required Quantitation Limits (CRQLs) are elevated in this sample due to this dilution.

- Tentatively Identified Compounds (TICs) were reviewed during data validation. The laboratory reported several target compounds as TICs due to SOW requirements for reporting named compounds that have greater than eighty-five (>85%) purity. The retention times of these compounds did not compare well to the retention times of these compounds in the associated continuing calibration standards. Therefore, these TICs were changes to "unknowns" by the reviewer on the TICs Form Is. Compounds identified as blank contaminants or common laboratory artifacts were crossed off TIC Form Is by the reviewer. TIC Form Is for samples in which TICs were identified are included in Appendix C.

- Pesticide/PCB analysis for sample C0009 (SDG C0001) had recoveries of surrogate decachlorobiphenyl (DCB) outside the upper QC limit on both columns. No positive results were reported in sample. No data were qualified based on these surrogate recoveries.

- Semivolatile analyses for samples C0042, C0047, C0046, C0044, C0033, C0035, C0036, C0034, and C0037 in SDG C0038 had recoveries for surrogate terphenyl -d14 outside the lower QC limit. No data were qualified based on these single surrogate recovery outliers.

- Compounds detected below Contract Required Quantittaion Limits (CRQLs) were qualified "J" if not superseded by "B" on DSFs.

- For VOC analyses, field duplicate pair, samples C0001/C0005 and C0007/C0011 in SDG C0001 and C0027/C0028 in SDG C0021 had comparable concentration.

- For SVOC, Pesticides, and PCB's analyses, field duplicate pair, samples C0027/C0028 in SDG C0021 and C0035/C0036 and C0045/C0052 in SDG C0038 had comparable concentration.

- Sample mass other than five (5) grams in the volatile soil analyses and 30 grams in semivolatile and pesticide/PCB soil analyses were used for samples associated with this case. Dilution factors reported on DFSs reflect actual sample masses used.

All data for Case 33178, SDG C0001, C0021, C0032, and C0038, were reviewed in accordance with Innovative Approaches for Validation of Organic Data, Region III, June 1995.

ATTACHMENTS

1)	Appendix A	Glossary of Data Qualifier Terms
2)	Appendix B	Data Summary Forms
3)	Appendix C	Tentatively Identified Compounds (TICs)
4)	Appendix D	Chain-of-Custody Records
5)	Appendix E	Laboratory Case Narrative

[redacted]

ORIGINAL

From: [redacted]
Sent: Monday, August 09, 2004 3:05 PM
To: [redacted] mail)
Cc: Betty Ann Jeffery (E-mail); Dan Slizys (E-mail); John Kwedar (E-mail); Khin-Cho Thaung (E-mail)
Subject: Region 03 | Case 33178 | Lab CEIMIC | Issue Insufficient/inappropriate designation of laboratory QC | FINAL

[redacted]

In accordance with previous direction from Region 3, the laboratory will select a sample for laboratory QC as long as the sample is not a PE, blank, or rinsate sample. The laboratory will note the issue in the Case/SDG Narrative, notify the SMO coordinator of the sample selected for laboratory QC, and proceed with the analysis of the samples.

SMO will record that the laboratory will perform lab QC as follows:
VOA sample C0038 and BNA/PEST sample C0049 for lab QC for SDG C0038
VOA/BNA/PEST sample C0026 for lab QC for SDG C0021
VOA sample C02B8 and BNA/PEST sample C0032 for lab QC for SDG C0032.

Please let me know if you have any other questions or problems.

Thanks,
[redacted]

[redacted]
CSC
CLP Coordinator for Regions 3, 7, & 9
703-818-4214
[redacted]

This is a PRIVATE message. If you are not the intended recipient, please delete without copying and kindly advise us by e-mail of the mistake in delivery. NOTE: Regardless of content, this e-mail shall not operate to bind CSC to any order or other contract unless pursuant to explicit written agreement or government initiative expressly permitting the use of e-mail for such purpose.

-----Original Message-----
From: [redacted]
Sent: Monday, August 09, 2004 9:17 AM
To: [redacted]
Subject: Case 33178 insufficient Lab QC

Hi [redacted]

The following SDGs do not have sufficient Lab QC assignments; please let me know if the following assignments designated by CEIMIC are acceptable:

Aqueous SDG C0038: BNA/PEST to be performed on sample C0049 as indicated on the TR/COC. VOA Lab QC not designated; CEIMIC chooses sample C0038.

Soil SDG C0021: No Lab QC designated; CEIMIC chooses sample C0026 for all organic fractions.

Aqueous SDG C0032: No Lab QC designated; CEIMIC chooses sample C02B8 for VOA (this is the only VOA sample in this SDG), and sample C0032 for BNA/PEST.

Thanks! [redacted]

663

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Appendix A

Glossary of Data Quality Terms

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GLOSSARY OF DATA QUALIFIER CODES (ORGANIC)

CODES RELATED TO IDENTIFICATION

(confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

NO CODE = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unusable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

N = Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION

(can be used for both positive results and sample quantitation limits):

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

OTHER CODES

NJ = Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.

Q = No analytical result.

ORIGINAL

Appendix B

Data Summary Forms

DATA SUMMARY FORM: VOLATILES

Case #: 33178 | SDG : C0001 | Number of Soil Samples : 20
Site : NEW JERSEY FIREWORKS | Number of Water Samples : 0
Lab. : CEIMIC

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Sample Number :	C0001	C0002	C0003	C0004	C0005
Sampling Location :	S11	S12	S13	S14	S15
Field QC	Dup. of C0005				Dup. of C0001
Matrix :	Soil	Soil	Soil	Soil	Soil
Units :	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Date Sampled :	8/3/2004	8/3/2004	8/3/2004	8/3/2004	8/3/2004
Time Sampled :	12:30	14:16	12:05	11:30	12:35
%Moisture :	18 → 82	16 → 84	10 → 90	41 → 59	27 → 73
Dilution Factor :	2.6 x10 = 26	1.9 x10 = 19	1.25 x10 = 12.5	0.96 (10) = 9.6	1.0 = 10

Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	10	31.71		22.62		13.89		16.27		13.90	
Chloromethane	10										
Vinyl Chloride	10										
Bromomethane	10										
Chloroethane	10										
Trichlorofluoromethane	10										
1,1-Dichloroethene	10										
1,1,2-Trichloro-1,2,2-trifluoroethane	10										
Acetone	10										
Carbon Disulfide	10										
Methyl Acetate	10										
Methylene Chloride	10	13	B	17	B	11	B	15	B	5	B
trans-1,2-Dichloroethene	10										
tert-Butyl Methyl Ether	10										
1,1-Dichloroethane	10										
14 cis-1,2-Dichloroethene	10										
2-Butanone	10										
Chloroform	10										
1,1,1-Trichloroethane	10										
28 Cyclohexane	10										
Carbon Tetrachloride	10										
Benzene	10										
1,2-Dichloroethane	10										
Trichloroethene	10										
Methylcyclohexane	10										
1,2-Dichloropropane	10										
Bromodichloromethane	10										
cis-1,3-Dichloropropene	10										
4-Methyl-2-pentanone	10										
Toluene	10										
trans-1,3-Dichloropropene	10										
1,1,2-Trichloroethane	10										
33 Tetrachloroethene	10										

(CRQL x Dilution Factor) / (100 - % Moisture) / 100

(10)(2.6) / (100 - 18) / 100

⇓

26 / .82 → 31.71

ORIGINAL

DATA SUMMARY FORM: VOLATILES

Case #: 33178 SDG : C0001
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0001		C0002		C0003		C0004		C0005	
Sampling Location :		S11		S12		S13		S14		S15	
Field QC:		Dup. of C0005								Dup. of C0001	
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		8/3/2004		8/3/2004		8/3/2004		8/3/2004		8/3/2004	
Time Sampled :		12:30		14:16		12:05		11:30		12:35	
%Moisture :		18		16		10		41		27	
Dilution Factor :		2.6		1.9		1.25		0.96		1.0	
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
34 2-Hexanone	10	31.41		22.62		13.89		16.27		13.70	
Dibromochloromethane	10										
1,2-Dibromoethane	10										
Chlorobenzene	10										
Ethylbenzene	10										
39 Xylenes (total)	10										
Styrene	10										
Bromoform	10										
Isopropylbenzene	10										
1,1,2,2-Tetrachloroethane	10										
1,3-Dichlorobenzene	10										
1,4-Dichlorobenzene	10										
1,2-Dichlorobenzene	10										
1,2-Dibromo-3-chloropropane	10		R								
48 1,2,4-Trichlorobenzene	10										

CRQL = Contract Required Quantitation Limit SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100 Revised 09/99

DATA SUMMARY FORM: VOLATILES

ORIGINAL

Case #: 33178
Site :
Lab. :

SDG : C0001
NEW JERSEY FIREWORKS
CEIMIC

Sample Number :		C0006		C0007		C0008		C0009		C0010	
Sampling Location :		S16		S21		S22		S23		S24	
Field QC:				Dup. of C0011							
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		8/3/2004		8/3/2004		8/3/2004		8/3/2004		8/3/2004	
Time Sampled :		14:06		09:55		10:20		11:05		10:45	
%Moisture :		29 → 71		23 → 77		22 → 78		33 → 67		19 → 81	
Dilution Factor :		1.56 = 15.6		1.09 (10) = 10.9		1.04 (10) = 10.4		0.96 = 9.6		1.0 = 10	
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	10	21.97		14.16		13.83		14.33		12.35	
Chloromethane	10										
Vinyl Chloride	10										
Bromomethane	10										
Chloroethane	10										
Trichlorofluoromethane	10	3	J								
1,1-Dichloroethene	10										
1,1,2-Trichloro-1,2,2-trifluoroethane	10										
Acetone	10							5	B		
Carbon Disulfide	10										
Methyl Acetate	10										
Methylene Chloride	10	19	B	10	B	8	B	13	B	6	B
trans-1,2-Dichloroethene	10										
tert-Butyl Methyl Ether	10										
1,1-Dichloroethane	10										
cis-1,2-Dichloroethene	10										
2-Butanone	10										
Chloroform	10										
1,1,1-Trichloroethane	10										
Cyclohexane	10										
Carbon Tetrachloride	10										
Benzene	10										
1,2-Dichloroethane	10										
Trichloroethene	10										
Methylcyclohexane	10										
1,2-Dichloropropane	10										
Bromodichloromethane	10										
cis-1,3-Dichloropropene	10										
4-Methyl-2-pentanone	10										
Toluene	10										
trans-1,3-Dichloropropene	10										
1,1,2-Trichloroethane	10										
Tetrachloroethene	10										

DATA SUMMARY FORM: VOLATILES

ORIGINAL

Case #: 33178
Site :
Lab. :

SDG : C0001
NEW JERSEY FIREWORKS
CEIMIC

Sample Number :		C0006		C0007		C0008		C0009		C0010	
Sampling Location :		S16		S21		S22		S23		S24	
Field QC:				Dup. of C0011							
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		8/3/2004		8/3/2004		8/3/2004		8/3/2004		8/3/2004	
Time Sampled :		14:06		09:55		10:20		11:05		10:45	
%Moisture :		29		23		22		33		19	
Dilution Factor :		1.56		1.09		1.04		0.96		1.0	
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2-Hexanone	10	21.97		14.16		13.33		14.33		12.35	
Dibromochloromethane	10										
1,2-Dibromoethane	10										
Chlorobenzene	10										
Ethylbenzene	10										
Xylenes (total)	10										
Styrene	10										
Bromoform	10										
Isopropylbenzene	10										
1,1,2,2-Tetrachloroethane	10										
1,3-Dichlorobenzene	10										
1,4-Dichlorobenzene	10										
1,2-Dichlorobenzene	10										
1,2-Dibromo-3-chloropropane	10										
1,2,4-Trichlorobenzene	10										

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100

Revised 09/99

DATA SUMMARY FORM: VOLATILES

ORIGINAL

Case #: 33178 SDG : C0001
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0011		C0012		C0014		C0015		C0016	
Sampling Location :		S25		SS11		SS13		SS14		SS21	
Field QC:		Dup of C0007									
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		8/3/2004		8/3/2004		8/3/2004		8/3/2004		8/3/2004	
Time Sampled :		10:00		12:40		12:10		11:35		10:05	
%Moisture :		25 → 75		14 → 86		14 → 86		15 → 85		16 → 84	
Dilution Factor :		1.43 (10) = 14.3		0.94 (10) = 9.4		2.0 (10) = 20		0.93 (10) = 9.3		1.0 (10) = 10	
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	10	9.07		10.93		23.26		10.94		11.90	
Chloromethane	10										
Vinyl Chloride	10										
Bromomethane	10										
Chloroethane	10										
Trichlorofluoromethane	10										
1,1-Dichloroethene	10										
1,1,2-Trichloro-1,2,2-trifluoroethane	10										
Acetone	10									6	B
Carbon Disulfide	10										
Methyl Acetate	10										
Methylene Chloride	10	12	B	8	B	16	B	12	B	8	B
trans-1,2-Dichloroethene	10										
tert-Butyl Methyl Ether	10										
1,1-Dichloroethane	10									2	J
cis-1,2-Dichloroethene	10										
2-Butanone	10										
Chloroform	10										
1,1,1-Trichloroethane	10									2	J
Cyclohexane	10										
Carbon Tetrachloride	10										
Benzene	10										
1,2-Dichloroethane	10										
Trichloroethene	10										
Methylcyclohexane	10										
1,2-Dichloropropane	10										
Bromodichloromethane	10										
cis-1,3-Dichloropropene	10										
4-Methyl-2-pentanone	10										
Toluene	10										
trans-1,3-Dichloropropene	10										
1,1,2-Trichloroethane	10										
Tetrachloroethene	10									4	J

ORIGINAL

DATA SUMMARY FORM: VOLATILES

Case #: 33178 SDG : C0001
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0011		C0012		C0014		C0015		C0016	
Sampling Location :		S25		SS11		SS13		SS14		SS21	
Field QC:		Dup. of C0007									
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		8/3/2004		8/3/2004		8/3/2004		8/3/2004		8/3/2004	
Time Sampled :		10:00		12:40		12:10		11:35		10:05	
%Moisture :		25		14		14		15		16	
pH :		8.0		4.8		8.9		6.9		7.1	
Dilution Factor :		1.43		0.94		2.0		0.93		1.0	
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2-Hexanone	10	19.07		10.93		23.20		10.94		11.90	
Dibromochloromethane	10										
1,2-Dibromoethane	10										
Chlorobenzene	10										
Ethylbenzene	10										
Xylenes (total)	10										
Styrene	10										
Bromoform	10										
Isopropylbenzene	10										
1,1,2,2-Tetrachloroethane	10										
1,3-Dichlorobenzene	10										
1,4-Dichlorobenzene	10										
1,2-Dichlorobenzene	10										
1,2-Dibromo-3-chloropropane	10						R				
1,2,4-Trichlorobenzene	10										

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100

Revised 09/99

DATA SUMMARY FORM: VOLATILES

ORIGINAL

Case #: 33178
Site :
Lab. :

SDG : C0001
NEW JERSEY FIREWORKS
CEIMIC

Sample Number :		C0017		C0018		C0019		C0023		C0024	
Sampling Location :		SS22		SS23		SS24		SED3		SED4	
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		8/3/2004		8/3/2004		8/3/2004		8/5/2004		8/5/2004	
Time Sampled :		10:25		11:10		10:50		11:20		10:25	
%Moisture :		12 → 88		11 → 89		17 → 83		34 → 66		21 → 79	
Dilution Factor :		0.96 (10) = 9.6		1.19 (10) = 11.9		1.22 (10) = 12.2		0.94 (10) = 9.4		0.91 (10) = 9.1	
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	10	10.91		13.39		14.70		14.24		11.52	
Chloromethane	10										
Vinyl Chloride	10										
Bromomethane	10										
Chloroethane	10										
Trichlorofluoromethane	10										
1,1-Dichloroethene	10	1	J								
1,1,2-Trichloro-1,2,2-trifluoroethane	10										
Acetone	10										
Carbon Disulfide	10										
Methyl Acetate	10										
Methylene Chloride	10	11	B	8	B	9	B	11	B	3	B
trans-1,2-Dichloroethene	10										
tert-Butyl Methyl Ether	10										
1,1-Dichloroethane	10										
cis-1,2-Dichloroethene	10										
2-Butanone	10										
Chloroform	10										
1,1,1-Trichloroethane	10	1	J								
Cyclohexane	10										
Carbon Tetrachloride	10										
Benzene	10										
1,2-Dichloroethane	10										
Trichloroethene	10										
Methylcyclohexane	10										
1,2-Dichloropropane	10										
Bromodichloromethane	10										
cis-1,3-Dichloropropene	10										
4-Methyl-2-pentanone	10										
Toluene	10										
trans-1,3-Dichloropropene	10										
1,1,2-Trichloroethane	10										
Tetrachloroethene	10	3	J			3	J				

ORIGINAL

DATA SUMMARY FORM: VOLATILES

Case #: 33178 SDG : C0001
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0017		C0018		C0019		C0023		C0024	
Sampling Location :		SS22		SS23		SS24		SED3		SED4	
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		8/3/2004		8/3/2004		8/3/2004		8/5/2004		8/5/2004	
Time Sampled :		10:25		11:10		10:50		11:20		10:25	
%Moisture :		12		11		17		34		21	
Dilution Factor :		0.96		1.19		1.22		0.94		0.91	
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2-Hexanone	10	10.91		13.37		14.70		14.24		11.52	
Dibromochloromethane	10										
1,2-Dibromoethane	10										
Chlorobenzene	10										
Ethylbenzene	10										
Xylenes (total)	10										
Styrene	10										
Bromoform	10										
Isopropylbenzene	10										
1,1,2,2-Tetrachloroethane	10										
1,3-Dichlorobenzene	10										
1,4-Dichlorobenzene	10										
1,2-Dichlorobenzene	10										
1,2-Dibromo-3-chloropropane	10				R				R		R
1,2,4-Trichlorobenzene	10										

CRQL = Contract Required Quantitation Limit SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100 Revised 09/99

ORIGINAL

DATA SUMMARY FORM: VOLATILES

Case #: 33178 | SDG : C0021 | Number of Soil Samples : 6
Site : | NEW JERSEY FIREWORKS | Number of Water Samples : 0
Lab. : | CEIMIC

Sample Number :		C0021		C0022		C0025		C0026		C0027	
Sampling Location :		SED1		SED2		SED5		SED6		SED7	
Field QC:										DUP. OF C0028	
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		8/5/2004		8/5/2004		8/5/2004		8/5/2004		8/5/2004	
Time Sampled :		11:25		11:45		09:50		09:35		08:50	
%Moisture :		28 → 72		22 → 78		38 → 62		22 → 78		21 → 79	
Dilution Factor :		1.14 (10) = 11.4		1.09 (10) = 10.9		1.28 (10) = 12.8		0.91 (10) = 9.1		1.35 (10) = 13.5	
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	10	15.83		13.97		20.65		11.67		17.09	
Chloromethane	10										
Vinyl Chloride	10										
Bromomethane	10										
Chloroethane	10										
Trichlorofluoromethane	10										
1,1-Dichloroethene	10							3	J		
1,1,2-Trichloro-1,2,2-trifluoroethane	10										
Acetone	10										
Carbon Disulfide	10										
Methyl Acetate	10										
Methylene Chloride	10	4	B	4	B	14	B	3	B	5	B
trans-1,2-Dichloroethene	10										
tert-Butyl Methyl Ether	10										
1,1-Dichloroethane	10										
cis-1,2-Dichloroethene	10										
2-Butanone	10										
Chloroform	10										
1,1,1-Trichloroethane	10							18			
Cyclohexane	10										
Carbon Tetrachloride	10										
Benzene	10										
1,2-Dichloroethane	10										
Trichloroethene	10							1	J		
Methylcyclohexane	10										
1,2-Dichloropropane	10										
Bromodichloromethane	10										
cis-1,3-Dichloropropene	10										
4-Methyl-2-pentanone	10										
Toluene	10										
trans-1,3-Dichloropropene	10										
1,1,2-Trichloroethane	10										
Tetrachloroethene	10							15			

ORIGINAL

DATA SUMMARY FORM: VOLATILES

Case #: 33178
Site :
Lab. :

SDG : C0021
NEW JERSEY FIREWORKS
CEIMIC

Sample Number :		C0021		C0022		C0025		C0026		C0027	
Sampling Location :		SED1		SED2		SED5		SED6		SED7	
Field QC:										Dup. of C0028	
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		8/5/2004		8/5/2004		8/5/2004		8/5/2004		8/5/2004	
Time Sampled :		11:25		11:45		09:50		09:35		08:50	
%Moisture :		28		22		38		22		21	
Dilution Factor :		1.14		1.09		1.28		0.91		1.35	
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2-Hexanone	10										
Dibromochloromethane	10										
1,2-Dibromoethane	10										
Chlorobenzene	10										
Ethylbenzene	10										
Xylenes (total)	10										
Styrene	10										
Bromoform	10										
Isopropylbenzene	10										
1,1,2,2-Tetrachloroethane	10										
1,3-Dichlorobenzene	10										
1,4-Dichlorobenzene	10										
1,2-Dichlorobenzene	10										
1,2-Dibromo-3-chloropropane	10		R		R		R		R		R
1,2,4-Trichlorobenzene	10										

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100

Revised 09/99

ORIGINAL

DATA SUMMARY FORM: VOLATILES

Case #: 33178
Site :
Lab. :

SDG : C0021
NEW JERSEY FIREWORKS
CEIMIC

Sample Number :		C0028									
Sampling Location :		SED8									
Field QC:		Dup. of C0027									
Matrix :		Soil									
Units :		ug/Kg									
Date Sampled :		8/5/2004									
Time Sampled :		08:55									
%Moisture :		42 → 58									
Dilution Factor :		0.96 (10) = 9.6									
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	10	16.55									
Chloromethane	10										
Vinyl Chloride	10										
Bromomethane	10										
Chloroethane	10										
Trichlorofluoromethane	10										
1,1-Dichloroethene	10										
1,1,2-Trichloro-1,2,2-trifluoroethane	10										
Acetone	10										
Carbon Disulfide	10										
Methyl Acetate	10										
Methylene Chloride	10	5	B								
trans-1,2-Dichloroethene	10										
tert-Butyl Methyl Ether	10										
1,1-Dichloroethane	10										
cis-1,2-Dichloroethene	10										
2-Butanone	10										
Chloroform	10										
1,1,1-Trichloroethane	10										
Cyclohexane	10										
Carbon Tetrachloride	10										
Benzene	10										
1,2-Dichloroethane	10										
Trichloroethene	10										
Methylcyclohexane	10										
1,2-Dichloropropane	10										
Bromodichloromethane	10										
cis-1,3-Dichloropropene	10										
4-Methyl-2-pentanone	10										
Toluene	10										
trans-1,3-Dichloropropene	10										
1,1,2-Trichloroethane	10										
Tetrachloroethene	10										

ORIGINAL

DATA SUMMARY FORM: VOLATILES

Case #: 33178 SDG : C0021
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0028									
Sampling Location :		SED8									
Field QC:		Dup. of C0027									
Matrix :		Soil									
Units :		ug/Kg									
Date Sampled :		8/5/2004									
Time Sampled :		08:55									
%Moisture :		42									
Dilution Factor :		0.96									
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2-Hexanone	10										
Dibromochloromethane	10										
1,2-Dibromoethane	10										
Chlorobenzene	10										
Ethylbenzene	10										
Xylenes (total)	10										
Styrene	10										
Bromoform	10										
Isopropylbenzene	10										
1,1,2,2-Tetrachloroethane	10										
1,3-Dichlorobenzene	10										
1,4-Dichlorobenzene	10										
1,2-Dichlorobenzene	10										
1,2-Dibromo-3-chloropropane	10		R								
1,2,4-Trichlorobenzene	10										

CRQL = Contract Required Quantitation Limit SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100 Revised 09/99

DATA SUMMARY FORM: VOLATILES

ORIGINAL

Case #: 33178 | SDG : C0032 | Number of Soil Samples : 0
Site : NEW JERSEY FIREWORKS | Number of Water Samples : 1
Lab. : CEIMIC

Sample Number :		C02B8									
Sampling Location :		SW15									
Field QC:		Trip Blank									
Matrix :		Water									
Units :		ug/L									
Date Sampled :		8/5/2004									
Time Sampled :		09:00									
pH :		1.0									
Dilution Factor :		1.0									
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	10										
Chloromethane	10	35									
*Vinyl Chloride	10										
Bromomethane	10										
Chloroethane	10										
Trichlorofluoromethane	10										
*1,1-Dichloroethene	10										
1,1,2-Trichloro-1,2,2-trifluoroethane	10										
Acetone	10										
Carbon Disulfide	10										
Methyl Acetate	10										
*Methylene Chloride	10										
trans-1,2-Dichloroethene	10										
tert-Butyl Methyl Ether	10										
1,1-Dichloroethane	10										
cis-1,2-Dichloroethene	10										
*2-Butanone	10										
Chloroform	10										
*1,1,1-Trichloroethane	10										
Cyclohexane	10										
*Carbon Tetrachloride	10										
*Benzene	10										
*1,2-Dichloroethane	10										
Trichloroethene	10										
Methylcyclohexane	10										
*1,2-Dichloropropane	10										
Bromodichloromethane	10										
cis-1,3-Dichloropropene	10										
4-Methyl-2-pentanone	10										
*Toluene	10										
trans-1,3-Dichloropropene	10										
1,1,2-Trichloroethane	10										
*Tetrachloroethene	10										

ORIGINAL

DATA SUMMARY FORM: VOLATILES

Case #: 33178 SDG : C0032
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C02B8									
Sampling Location :		SW15									
Field QC:		Trip Blank									
Matrix :		Water									
Units :		ug/L									
Date Sampled :		8/5/2004									
Time Sampled :		09:00									
pH :		1.0									
Dilution Factor :		1.0									
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2-Hexanone	10										
Dibromochloromethane	10										
1,2-Dibromoethane	10										
*Chlorobenzene	10										
*Ethylbenzene	10										
Xylenes (total)	10										
*Styrene	10										
Bromoform	10										
Isopropylbenzene	10										
1,1,2,2-Tetrachloroethane	10										
*1,3-Dichlorobenzene	10										
*1,4-Dichlorobenzene	10										
1,2-Dichlorobenzene	10										
1,2-Dibromo-3-chloropropane	10										
1,2,4-Trichlorobenzene	10										

CRQL = Contract Required Quantitation Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) Revised 09/99

ORIGINAL

DATA SUMMARY FORM: VOLATILES (Lab Results)

Case #: 33178 | SDG : C0038 | Number of Soil Samples : 0
Site : NEW JERSEY FIREWORKS | Number of Water Samples : 2
Lab. : CEIMIC

Sample Number :		C0038		C0040							
Sampling Location :		SW11		SW13							
Field QC:		Trip Blank		Trip Blank							
Matrix :		Water		Water							
Units :		ug/L		ug/L							
Date Sampled :		8/3/2004		8/4/2004							
Time Sampled :		14:11		12:17							
pH :		1.0		1.0							
Dilution Factor :		1.0		1.0							
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	10		UJ								
Chloromethane	10	4	J								
*Vinyl Chloride	10										
Bromomethane	10										
Chloroethane	10										
Trichlorofluoromethane	10										
*1,1-Dichloroethene	10										
1,1,2-Trichloro-1,2,2-trifluoroethane	10										
Acetone	10	5	B								
Carbon Disulfide	10										
Methyl Acetate	10										
*Methylene Chloride	10	5	B	2	J						
trans-1,2-Dichloroethene	10										
tert-Butyl Methyl Ether	10										
1,1-Dichloroethane	10										
cis-1,2-Dichloroethene	10										
*2-Butanone	10	4	J								
Chloroform	10										
*1,1,1-Trichloroethane	10										
Cyclohexane	10										
*Carbon Tetrachloride	10										
*Benzene	10										
*1,2-Dichloroethane	10										
Trichloroethene	10										
Methylcyclohexane	10										
*1,2-Dichloropropane	10										
Bromodichloromethane	10										
cis-1,3-Dichloropropene	10										
4-Methyl-2-pentanone	10										
*Toluene	10										
trans-1,3-Dichloropropene	10										
1,1,2-Trichloroethane	10										
*Tetrachloroethene	10										

DATA SUMMARY FORM: VOLATILES

Case #: 33178 SDG : C0038
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0038		C0040							
Sampling Location :		SW11		SW13							
Field QC		Trip Blank		Trip Blank							
Matrix :		Water		Water							
Units :		ug/L		ug/L							
Date Sampled :		8/3/2004		8/4/2004							
Time Sampled :		14:11		12:17							
pH :		1.0		1.0							
Dilution Factor :		1.0		1.0							
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2-Hexanone	10										
Dibromochloromethane	10										
1,2-Dibromoethane	10										
*Chlorobenzene	10										
*Ethylbenzene	10										
Xylenes (total)	10										
*Styrene	10										
Bromoform	10										
Isopropylbenzene	10										
1,1,2,2-Tetrachloroethane	10										
*1,3-Dichlorobenzene	10										
*1,4-Dichlorobenzene	10										
1,2-Dichlorobenzene	10										
1,2-Dibromo-3-chloropropane	10										
1,2,4-Trichlorobenzene	10										

CRQL = Contract Required Quantitation Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) Revised 09/99

ORIGINAL

Case #: 33178 SDG : C0001 Number of Soil Samples : 20
Site : NEW JERSEY FIREWORKS Number of Water Samples : 0
Lab. : CEIMIC

Sample Number :		C0001		C0002		C0003		C0004		C0005	
Sampling Location :		S11		S12		S13		S14		S15	
Field QC:		Dup. of C0005								Dup. of C0001	
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		8/3/2004		8/3/2004		8/3/2004		8/3/2004		8/3/2004	
Time Sampled :		12:30		14:16		12:05		11:30		12:35	
Dilution Factor :		1.0 18		1.0 16		2.95 10		1.0 101		0.99 27	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	330	402.4		392.9		366.7		559.3		452	
Phenol	330										
bis-(2-Chloroethyl) ether	330										
2-Chlorophenol	330										
2-Methylphenol	330										
2,2'-oxybis(1-Chloropropane)	330										
Acetophenone	330										
4-Methylphenol	330										
N-Nitroso-di-n-propylamine	330										
Hexachloroethane	330										
Nitrobenzene	330										
Isophorone	330										
2-Nitrophenol	330										
2,4-Dimethylphenol	330										
bis(2-Chloroethoxy)methane	330										
2,4-Dichlorophenol	330										
Naphthalene	330										
4-Chloroaniline	330										
Hexachlorobutadiene	330										
Caprolactam	330										
4-Chloro-3-methylphenol	330										
2-Methylnaphthalene	330										
Hexachlorocyclopentadiene	330										
2,4,6-Trichlorophenol	330										
2,4,5-Trichlorophenol	830	1012		988		922.2		1407		1137	
1,1'-Biphenyl	330	.64									
2-Chloronaphthalene	330										
2-Nitroaniline	830	1012		988		922.2		1407		1137	
Dimethylphthalate	330										
2,6-Dinitrotoluene	330										
Acenaphthylene	330										
3-Nitroaniline	830	1012		988		922.2		1407		1137	

(CRQL x dilution Factor) | (100 - % Moisture) | 100

⇓

(330)(1.0) | (100 - 18) | 100 | 830 | .82

⇓ ↓

330 | .82 → 402.4 | 1012.2

ORIGINAL

DATA SUMMARY FORM: BNA

Case #: 33178 SDG : C0001
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0001		C0002		C0003		C0004		C0005	
Sampling Location :		S11		S12		S13		S14		S15	
Field QC:		Dup. of C0005								Dup. of C0001	
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		8/3/2004		8/3/2004		8/3/2004		8/3/2004		8/3/2004	
Time Sampled :		12:30		14:16		12:05		11:30		12:35	
Dilution Factor :		1.0		1.0		2.95		1.0		0.99	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Acenaphthene	330										
2,4-Dinitrophenol	830	1012		988		922.2		1407		1137	
4-Nitrophenol	830	1012		988		922.2		1407		1137	
Dibenzofuran	330										
2,4-Dinitrotoluene	330										
Diethylphthalate	330										
Fluorene	330										
4-Chlorophenyl-phenyl ether	330										
4-Nitroaniline	830	1012		988		922.2		1407		1137	
4,6-Dinitro-2-methylphenol	830	1012		988		922.2		1407		1137	
N-Nitrosodiphenylamine	330										
4-Bromophenyl-phenylether	330										
Hexachlorobenzene	330										
Atrazine	330										
Pentachlorophenol	830	1012		988		922.2		1407		1137	
Phenanthrene	330	43	J					79	J		
Anthracene	330										
Carbazole	330										
Di-n-butylphthalate	330										
Fluoranthene	330	72	J			280	J	180	J		
Pyrene	330	77	J			750	J	270	J		
Butylbenzylphthalate	330										
3,3'-Dichlorobenzidine	330										
Benzo(a)anthracene	330					360	J	99	J		
Chrysene	330	62	J			460	J	150	J		
bis(2-Ethylhexyl)phthalate	330	140	J							80	J
Di-n-octylphthalate	330										
Benzo(b)fluoranthene	330					250	J				
Benzo(k)fluoranthene	330	43	J			280	J				
Benzo(a)pyrene	330					350	J				
Indeno(1,2,3-cd)pyrene	330					130	J				
Dibenzo(a,h)anthracene	330										
Benzo(g,h,i)perylene	330					160	J				

CRQL = Contract Required Quantitation Limit SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100 Revised 09/99

ORIGINAL

DATA SUMMARY FORM: BNA

Case #: 33178 SDG : C0001
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0006		C0007		C0008		C0009		C0010	
Sampling Location :		S16		S21		S22		S23		S24	
Field QC:				Dup. of C0011							
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		8/3/2004		8/3/2004		8/3/2004		8/3/2004		8/3/2004	
Time Sampled :		14:06		09:55		10:20		11:05		10:45	
Dilution Factor :		1.0 29→71		0.99 23→77		0.98 22→78		1.0 33→67		0.99 19→81	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	330	4648		420		414.6		492.5		4403.3	
Phenol	330										
bis-(2-Chloroethyl) ether	330										
2-Chlorophenol	330										
2-Methylphenol	330										
2,2'-oxybis(1-Chloropropane)	330										
Acetophenone	330										
4-Methylphenol	330										
N-Nitroso-di-n-propylamine	330										
Hexachloroethane	330										
Nitrobenzene	330										
Isophorone	330										
2-Nitrophenol	330										
2,4-Dimethylphenol	330										
bis(2-Chloroethoxy)methane	330										
2,4-Dichlorophenol	330										
Naphthalene	330										
4-Chloroaniline	330										
Hexachlorobutadiene	330										
Caprolactam	330										
4-Chloro-3-methylphenol	330										
2-Methylnaphthalene	330										
Hexachlorocyclopentadiene	330										
2,4,6-Trichlorophenol	830										
2,4,5-Trichlorophenol	830	1169		1067		1043		1239		1014.5	
1,1'-Biphenyl	330										
2-Chloronaphthalene	330										
2-Nitroaniline	830	1169		1067		1043		1239		1014	
Dimethylphthalate	330										
2,6-Dinitrotoluene	330										
Acenaphthylene	330										
3-Nitroaniline	830	1169		1067		1043		1239		1014	

ORIGINAL

DATA SUMMARY FORM: BNA

Case #: 33178 SDG : C0001
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0006		C0007		C0008		C0009		C0010	
Sampling Location :		S16		S21		S22		S23		S24	
Field QC:				Dup of C0011							
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		8/3/2004		8/3/2004		8/3/2004		8/3/2004		8/3/2004	
Time Sampled :		14:06		09:55		10:20		11:05		10:45	
Dilution Factor :		1.0		0.99		0.98		1.0		0.99	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Acenaphthene	330										
2,4-Dinitrophenol	830	1169		1067		1043		1239		1014	
4-Nitrophenol	830	1169		1067		1043		1239		1014	
Dibenzofuran	330										
2,4-Dinitrotoluene	330										
Diethylphthalate	330										
Fluorene	330										
4-Chlorophenyl-phenyl ether	330										
4-Nitroaniline	830	1169		1067		1043		1239		1014	
4,6-Dinitro-2-methylphenol	830	1169		1067		1043		1239		1014	
N-Nitrosodiphenylamine	330										
4-Bromophenyl-phenylether	330										
Hexachlorobenzene	330										
Atrazine	330										
Pentachlorophenol	830	1169		1067		1043		1239		1014	
Phenanthrene	330					88	J				
Anthracene	330										
Carbazole	330										
Di-n-butylphthalate	330										
Fluoranthene	330					140	J				
Pyrene	330					210	J				
Butylbenzylphthalate	330										
3,3'-Dichlorobenzidine	330										
Benzo(a)anthracene	330					85	J				
Chrysene	330					140	J				
bis(2-Ethylhexyl)phthalate	330			760		210	J			100	J
Di-n-octylphthalate	330										
Benzo(b)fluoranthene	330					94	J				
Benzo(k)fluoranthene	330					84	J				
Benzo(a)pyrene	330					110	J				
Indeno(1,2,3-cd)pyrene	330					80	J				
Dibenzo(a,h)anthracene	330										
Benzo(g,h,i)perylene	330					84	J				

CRQL = Contract Required Quantitation Limit SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100 Revised 09/99

ORIGINAL

Case #: 33178 SDG : C0001
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0011		C0012		C0014		C0015		C0016	
Sampling Location :		S25		SS11		SS13		SS14		SS21	
Field QC:		Dup. of C0007									
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		8/3/2004		8/3/2004		8/3/2004		8/3/2004		8/3/2004	
Time Sampled :		10:00		12:40		12:10		11:35		10:05	
Dilution Factor :		0.99 25		0.98 14		0.98 14		0.99 15		0.99 16	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	330	435.6		376		376		384.3		388.9	
Phenol	330										
bis-(2-Chloroethyl) ether	330										
2-Chlorophenol	330										
2-Methylphenol	330										
2,2'-oxybis(1-Chloropropane)	330										
Acetophenone	330										
4-Methylphenol	330										
N-Nitroso-di-n-propylamine	330										
Hexachloroethane	330										
Nitrobenzene	330										
Isophorone	330										
2-Nitrophenol	330										
2,4-Dimethylphenol	330										
bis(2-Chloroethoxy)methane	330										
2,4-Dichlorophenol	330										
Naphthalene	330										
4-Chloroaniline	330										
Hexachlorobutadiene	330										
Caprolactam	330			40	J						
4-Chloro-3-methylphenol	330										
2-Methylnaphthalene	330										
Hexachlorocyclopentadiene	330										
2,4,6-Trichlorophenol	330										
2,4,5-Trichlorophenol	830	1096		945.8		945.8		966.7		978.2	
1,1'-Biphenyl	330										
2-Chloronaphthalene	330										
2-Nitroaniline	830	1096		945.8							
Dimethylphthalate	330										
2,6-Dinitrotoluene	330										
Acenaphthylene	330										
3-Nitroaniline	830	1096		945.8							

DATA SUMMARY FORM: BNA

ORIGINAL

Case #: 33178 SDG : C0001
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0011		C0012		C0014		C0015		C0016	
Sampling Location :		S25		SS11		SS13		SS14		SS21	
Field QC:		Dup. of C0007									
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		8/3/2004		8/3/2004		8/3/2004		8/3/2004		8/3/2004	
Time Sampled :		10:00		12:40		12:10		11:35		10:05	
Dilution Factor :		0.99		0.98		0.98		0.99		0.99	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Acenaphthene	330										
2,4-Dinitrophenol	830	1096		0.09		0.09		0.1		0.10	
4-Nitrophenol	830	1096		0.09		0.09		0.10		0.10	
Dibenzofuran	330										
2,4-Dinitrotoluene	330										
Diethylphthalate	330										
Fluorene	330										
4-Chlorophenyl-phenyl ether	330										
4-Nitroaniline	830	1096		0.09		0.09		0.10		0.10	
4,6-Dinitro-2-methylphenol	830	1096		0.1		0.09		0.1		0.10	
N-Nitrosodiphenylamine	330										
4-Bromophenyl-phenylether	330										
Hexachlorobenzene	330										
Atrazine	330										
Pentachlorophenol	830	1096		0.09		0.09		0.10		0.10	
Phenanthrene	330										
Anthracene	330										
Carbazole	330										
Di-n-butylphthalate	330										
Fluoranthene	330										
Pyrene	330										
Butylbenzylphthalate	330										
3,3'-Dichlorobenzidine	330										
Benzo(a)anthracene	330										
Chrysene	330										
bis(2-Ethylhexyl)phthalate	330	550		92	J					140	J
Di-n-octylphthalate	330										
Benzo(b)fluoranthene	330										
Benzo(k)fluoranthene	330										
Benzo(a)pyrene	330										
Indeno(1,2,3-cd)pyrene	330										
Dibenzo(a,h)anthracene	330										
Benzo(g,h,i)perylene	330										

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100

Revised 09/99

ORIGINAL

Case #: 33178 SDG : C0001
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0017		C0018		C0019		C0023		C0024	
Sampling Location :		SS22		SS23		SS24		SED3		SED4	
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		8/3/2004		8/3/2004		8/3/2004		8/5/2004		8/5/2004	
Time Sampled :		10:25		11:10		10:50		11:20		10:25	
Dilution Factor :		0.99 12		0.99 11→89		0.99 17→83		0.99 34→66		1.0 21→79	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	330	371.3		367.1		393.6		0495		417.7	
Phenol	330					393.6		495			
bis-(2-Chloroethyl) ether	330										
2-Chlorophenol	330										
2-Methylphenol	330										
2,2'-oxybis(1-Chloropropane)	330										
Acetophenone	330										
4-Methylphenol	330										
N-Nitroso-di-n-propylamine	330										
Hexachloroethane	330										
Nitrobenzene	330										
Isophorone	330										
2-Nitrophenol	330										
2,4-Dimethylphenol	330										
bis(2-Chloroethoxy)methane	330										
2,4-Dichlorophenol	330										
Naphthalene	330										
4-Chloroaniline	330										
Hexachlorobutadiene	330										
Caprolactam	330										
4-Chloro-3-methylphenol	330										
2-Methylnaphthalene	330										
Hexachlorocyclopentadiene	330										
2,4,6-Trichlorophenol	330										
2,4,5-Trichlorophenol	830	933.8		923.3		0.990		0245		1051	
1,1'-Biphenyl	330										
2-Chloronaphthalene	330							0.05			
2-Nitroaniline	830	933.8		923.3		990		1245		1051	
Dimethylphthalate	330										
2,6-Dinitrotoluene	330										
Acenaphthylene	330										
3-Nitroaniline	830	933.8		923.3		990		1245		1051	

ORIGINAL

DATA SUMMARY FORM: BNA

Case #: 33178 SDG : C0001
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0017		C0018		C0019		C0023		C0024	
Sampling Location :		SS22		SS23		SS24		SED3		SED4	
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		8/3/2004		8/3/2004		8/3/2004		8/5/2004		8/5/2004	
Time Sampled :		10:25		11:10		10:50		11:20		10:25	
Dilution Factor :		0.99		0.99		0.99		0.99		1.0	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Acenaphthene	330			0.04		0.04					
2,4-Dinitrophenol	830	0.09		0.09		0.099		0.12		0.11	
4-Nitrophenol	830	0.09		0.09		0.099		0.12		0.11	
Dibenzofuran	330										
2,4-Dinitrotoluene	330										
Diethylphthalate	330										
Fluorene	330										
4-Chlorophenyl-phenyl ether	330										
4-Nitroaniline	830	0.09		0.09		0.099		0.12		0.11	
4,6-Dinitro-2-methylphenol	830	0.09		0.09		0.099		0.12		0.11	
N-Nitrosodiphenylamine	330										
4-Bromophenyl-phenylether	330										
Hexachlorobenzene	330										
Atrazine	330										
Pentachlorophenol	830	0.09		0.09		0.099		0.12		0.11	
Phenanthrene	330										
Anthracene	330										
Carbazole	330										
Di-n-butylphthalate	330										
Fluoranthene	330							130	J		
Pyrene	330							130	J		
Butylbenzylphthalate	330										
3,3'-Dichlorobenzidine	330										
Benzo(a)anthracene	330							75	J		
Chrysene	330							110	J		
bis(2-Ethylhexyl)phthalate	330			89	J			150	J	130	J
Di-n-octylphthalate	330										
Benzo(b)fluoranthene	330							100	J		
Benzo(k)fluoranthene	330							79	J		
Benzo(a)pyrene	330							69	J		
Indeno(1,2,3-cd)pyrene	330							56	J		
Dibenzo(a,h)anthracene	330										
Benzo(g,h,i)perylene	330										

CRQL = Contract Required Quantitation Limit SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100 Revised 09/99

DATA SUMMARY FORM: BNA

ORIGINAL

Case #: 33178 SDG : C0021 Number of Soil Samples : 6
Site : NEW JERSEY FIREWORKS Number of Water Samples : 0
Lab. : CEIMIC

Sample Number :		C0021		C0022		C0025		C0026		C0027	
Sampling Location :		SED1		SED2		SED5		SED6		SED7	
Field QC:										Dup. of C0028	
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		8/5/2004		8/5/2004		8/5/2004		8/5/2004		8/5/2004	
Time Sampled :		11:25		11:45		09:50		09:35		08:50	
Dilution Factor :		1.0 28→72		0.98 22→78		0.99 38→62		0.98 22→78		0.99 21	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	330	458.3		414.6		526.9		414.6		74	J
Phenol	330									413.5	
bis-(2-Chloroethyl) ether	330										
2-Chlorophenol	330										
2-Methylphenol	330										
2,2'-oxybis(1-Chloropropane)	330										
Acetophenone	330										
4-Methylphenol	330									860	
N-Nitroso-di-n-propylamine	330										
Hexachloroethane	330										
Nitrobenzene	330										
Isophorone	330										
2-Nitrophenol	330										
2,4-Dimethylphenol	330										
bis(2-Chloroethoxy)methane	330										
2,4-Dichlorophenol	330										
Naphthalene	330										
4-Chloroaniline	330										
Hexachlorobutadiene	330										
Caprolactam	330										
4-Chloro-3-methylphenol	330										
2-Methylnaphthalene	330										
Hexachlorocyclopentadiene	330										
2,4,6-Trichlorophenol	330										
2,4,5-Trichlorophenol	830	1153		0.10		1325		0.10		0.10	
1,1'-Biphenyl	330										
2-Chloronaphthalene	330										
2-Nitroaniline	830	1153		0.10		0.13		0.10		0.10	
Dimethylphthalate	330										
2,6-Dinitrotoluene	330										
Acenaphthylene	330										
3-Nitroaniline	830	1153		0.10		0.13		0.10		[illegible]	

ORIGINAL

Case #: 33178 SDG : C0021
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0021		C0022		C0025		C0026		C0027	
Sampling Location :		SED1		SED2		SED5		SED6		SED7	
Field QC:										Dup. of C0028	
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		8/5/2004		8/5/2004		8/5/2004		8/5/2004		8/5/2004	
Time Sampled :		11:25		11:45		09:50		09:35		08:50	
Dilution Factor :		1.0		0.98		0.99		0.98		0.99	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Acenaphthene	330										
2,4-Dinitrophenol	830	0.12		0.10		0.13		0.10		0.10	
4-Nitrophenol	830	0.12		0.10		0.13		0.10		0.10	
Dibenzofuran	330										
2,4-Dinitrotoluene	330										
Diethylphthalate	330										
Fluorene	330										
4-Chlorophenyl-phenyl ether	330										
4-Nitroaniline	830	0.12		0.10		0.13		0.10		0.10	
4,6-Dinitro-2-methylphenol	830	0.12		0.10		0.13		0.10		0.10	
N-Nitrosodiphenylamine	330										
4-Bromophenyl-phenylether	330										
Hexachlorobenzene	330										
Atrazine	330										
Pentachlorophenol	830	0.12		0.10		0.13		0.10		0.10	
Phenanthrene	330										
Anthracene	330										
Carbazole	330										
Di-n-butylphthalate	330										
Fluoranthene	330					230	J				
Pyrene	330					260	J				
Butylbenzylphthalate	330										
3,3'-Dichlorobenzidine	330										
Benzo(a)anthracene	330					140	J				
Chrysene	330					190	J				
bis(2-Ethylhexyl)phthalate	330	500		570		550		380	J	600	
Di-n-octylphthalate	330										
Benzo(b)fluoranthene	330					230	J				
Benzo(k)fluoranthene	330					170	J				
Benzo(a)pyrene	330										
Indeno(1,2,3-cd)pyrene	330										
Dibenzo(a,h)anthracene	330										
Benzo(g,h,i)perylene	330										

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100

Revised 09/99

ORIGINAL

DATA SUMMARY FORM: BNA

Case #: 33178 SDG : C0021
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0028									
Sampling Location :		SED8									
Field QC:		Dup. of C0027									
Matrix :		Soil									
Units :		ug/Kg									
Date Sampled :		8/5/2004									
Time Sampled :		08:55									
Dilution Factor :		0.99 42									
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	330	54	J								
Phenol	330	563.3									
bis-(2-Chloroethyl) ether	330										
2-Chlorophenol	330										
2-Methylphenol	330										
2,2'-oxybis(1-Chloropropane)	330										
Acetophenone	330										
4-Methylphenol	330	280	J								
N-Nitroso-di-n-propylamine	330										
Hexachloroethane	330										
Nitrobenzene	330										
Isophorone	330										
2-Nitrophenol	330										
2,4-Dimethylphenol	330										
bis(2-Chloroethoxy)methane	330										
2,4-Dichlorophenol	330										
Naphthalene	330										
4-Chloroaniline	330										
Hexachlorobutadiene	330										
Caprolactam	330										
4-Chloro-3-methylphenol	330										
2-Methylnaphthalene	330										
Hexachlorocyclopentadiene	330										
2,4,6-Trichlorophenol	330										
2,4,5-Trichlorophenol	830	1417									
1,1'-Biphenyl	330										
2-Chloronaphthalene	330										
2-Nitroaniline	830	1417									
Dimethylphthalate	330										
2,6-Dinitrotoluene	330										
Acenaphthylene	330										
3-Nitroaniline	830	1417									

ORIGINAL

Case #: 33178 SDG : C0021
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0028									
Sampling Location :		SED8									
Field QC:		Dup. of C0027									
Matrix :		Soil									
Units :		ug/Kg									
Date Sampled :		8/5/2004									
Time Sampled :		08:55									
%Moisture :		27 → 73									
Dilution Factor :		0.99									
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Acenaphthene	330	447.5									
2,4-Dinitrophenol	830	1125.6									
4-Nitrophenol	830										
Dibenzofuran	330	447.5									
2,4-Dinitrotoluene	330										
Diethylphthalate	330										
Fluorene	330										
4-Chlorophenyl-phenyl ether	330										
4-Nitroaniline	830										
4,6-Dinitro-2-methylphenol	830										
N-Nitrosodiphenylamine	330										
4-Bromophenyl-phenylether	330										
Hexachlorobenzene	330										
Atrazine	330										
Pentachlorophenol	830										
Phenanthrene	330										
Anthracene	330										
Carbazole	330										
Di-n-butylphthalate	330										
Fluoranthene	330										
Pyrene	330										
Butylbenzylphthalate	330										
3,3'-Dichlorobenzidine	330										
Benzo(a)anthracene	330										
Chrysene	330										
bis(2-Ethylhexyl)phthalate	330	670									
Di-n-octylphthalate	330										
Benzo(b)fluoranthene	330										
Benzo(k)fluoranthene	330										
Benzo(a)pyrene	330										
Indeno(1,2,3-cd)pyrene	330										
Dibenzo(a,h)anthracene	330										
Benzo(g,h,i)perylene	330										

CRQL = Contract Required Quantitation Limit SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100 Revised 09/99

(330)(.99) / (100-27) / 100

⇓

447.5

DATA SUMMARY FORM: BNA

ORIGINAL

Case #: 33178 | SDG : C0032 | Number of Soil Samples : 0
Site : | NEW JERSEY FIREWORKS | Number of Water Samples : 2
Lab. : | CEIMIC

Sample Number :		C0032		C0041							
Sampling Location :		SW4		SW14							
Field QC:				Field Blank							
Matrix :		Water		Water							
Units :		ug/L		ug/L							
Date Sampled :		8/5/2004		8/5/2004							
Time Sampled :		10:20		10:50							
pH :		1.0		1.0							
Dilution Factor :		1.0		1.0							
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	10	10		10							
Phenol	10										
bis-(2-Chloroethyl) ether	10										
2-Chlorophenol	10										
2-Methylphenol	10										
2,2'-oxybis(1-Chloropropane)	10										
Acetophenone	10										
4-Methylphenol	10										
N-Nitroso-di-n-propylamine	10										
Hexachloroethane	10										
Nitrobenzene	10										
Isophorone	10										
2-Nitrophenol	10										
2,4-Dimethylphenol	10										
bis(2-Chloroethoxy)methane	10										
2,4-Dichlorophenol	10										
Naphthalene	10										
4-Chloroaniline	10										
Hexachlorobutadiene	10										
Caprolactam	10										
4-Chloro-3-methylphenol	10										
2-Methylnaphthalene	10										
Hexachlorocyclopentadiene	10										
2,4,6-Trichlorophenol	10										
2,4,5-Trichlorophenol	25	25		25		25		[illegible]		25	
1,1'-Biphenyl	10										
2-Chloronaphthalene	10										
2-Nitroaniline	25	25		25		25		[illegible]		25	
Dimethylphthalate	10										
2,6-Dinitrotoluene	10										
Acenaphthylene	10										
3-Nitroaniline	25	25		25							

ORIGINAL

Case #: 33178 SDG : C0032
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0032		C0041							
Sampling Location :		SW4		SW14							
Field QC:				Field Blank							
Matrix :		Water		Water							
Units :		ug/L		ug/L							
Date Sampled :		8/5/2004		8/5/2004							
Time Sampled :		10:20		10:50							
pH :		1.0		1.0							
Dilution Factor :		1.0		1.0							
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
33 Acenaphthene	10	10									
2,4-Dinitrophenol	25	25									
4-Nitrophenol	25	25									
Dibenzofuran	10	10									
2,4-Dinitrotoluene	10										
Diethylphthalate	10			19							
Fluorene	10										
40 4-Chlorophenyl-phenyl ether	10										
4-Nitroaniline	25	25									
4,6-Dinitro-2-methylphenol	25	25									
N-Nitrosodiphenylamine	10										
4-Bromophenyl-phenylether	10										
*Hexachlorobenzene	10										
Atrazine	10										
*Pentachlorophenol	25	25									
48 Phenanthrene	10										
Anthracene	10										
Carbazole	10										
Di-n-butylphthalate	10										
Fluoranthene	10										
Pyrene	10										
Butylbenzylphthalate	10										
3,3'-Dichlorobenzidine	10										
56 Benzo(a)anthracene	10										
Chrysene	10										
bis(2-Ethylhexyl)phthalate	10										
Di-n-octylphthalate	10										
Benzo(b)fluoranthene	10										
Benzo(k)fluoranthene	10										
Benzo(a)pyrene	10										
Indeno(1,2,3-cd)pyrene	10										
Dibenzo(a,h)anthracene	10										
65 Benzo(g,h,i)perylene	10										

CRQL = Contract Required Quantitation Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) Revised 09/99

ORIGINAL

DATA SUMMARY FORM: BNA

Case #: 33178
Site :
Lab. :

SDG : C0038
NEW JERSEY FIREWORKS
CEIMIC

Number of Soil Samples : 0
Number of Water Samples : 18

Sample Number :		C0029		C0030		C0031		C0033		C0034	
Sampling Location :		SW1		SW2		SW3		SW5		SW6	
Matrix :		Water		Water		Water		Water		Water	
Units :		ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :		8/5/2004		8/5/2004		8/5/2004		8/5/2004		8/5/2004	
Time Sampled :		11:20		11:40		11:15		09:45		09:30	
Dilution Factor :		1.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	10	10		10		10		10		10	
Phenol	10										
bis-(2-Chloroethyl) ether	10										
2-Chlorophenol	10										
2-Methylphenol	10										
2,2'-oxybis(1-Chloropropane)	10										
Acetophenone	10										
4-Methylphenol	10										
N-Nitroso-di-n-propylamine	10										
Hexachloroethane	10										
Nitrobenzene	10										
Isophorone	10										
2-Nitrophenol	10										
2,4-Dimethylphenol	10										
bis(2-Chloroethoxy)methane	10										
2,4-Dichlorophenol	10										
Naphthalene	10										
4-Chloroaniline	10										
Hexachlorobutadiene	10										
Caprolactam	10										
4-Chloro-3-methylphenol	10										
2-Methylnaphthalene	10										
Hexachlorocyclopentadiene	10										
2,4,6-Trichlorophenol	10										
2,4,5-Trichlorophenol	25	25		25		25		25		25	
1,1'-Biphenyl	10										
2-Chloronaphthalene	10										
2-Nitroaniline	25	25		25		25		25		25	
Dimethylphthalate	10										
2,6-Dinitrotoluene	10										
Acenaphthylene	10										
3-Nitroaniline	25	25		25		25		25		25	

ORIGINAL ORIGINAL

DATA SUMMARY FORM: BNA

Case #: 33178 SDG : C0038
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0029		C0030		C0031		C0033		C0034	
Sampling Location :		SW1		SW2		SW3		SW5		SW6	
Matrix :		Water		Water		Water		Water		Water	
Units :		ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :		8/5/2004		8/5/2004		8/5/2004		8/5/2004		8/5/2004	
Time Sampled :		11:20		11:40		11:15		09:45		09:30	
Dilution Factor :		1.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Acenaphthene	10	10		10		10		10		10	
2,4-Dinitrophenol	25	25		25		25		25		25	
4-Nitrophenol	25	25		25		25		25		25	
Dibenzofuran	10										
2,4-Dinitrotoluene	10										
Diethylphthalate	10										
Fluorene	10										
4-Chlorophenyl-phenyl ether	10										
4-Nitroaniline	25	25		25		25		25		25	
4,6-Dinitro-2-methylphenol	25	25		25		25		25		25	
N-Nitrosodiphenylamine	10										
4-Bromophenyl-phenylether	10										
*Hexachlorobenzene	10										
Atrazine	10										
*Pentachlorophenol	25	25		25		25		25		25	
Phenanthrene	10										
Anthracene	10										
Carbazole	10										
Di-n-butylphthalate	10										
Fluoranthene	10										
Pyrene	10										
Butylbenzylphthalate	10										
3,3'-Dichlorobenzidine	10										
Benzo(a)anthracene	10										
Chrysene	10										
bis(2-Ethylhexyl)phthalate	10										
Di-n-octylphthalate	10										
Benzo(b)fluoranthene	10										
Benzo(k)fluoranthene	10										
Benzo(a)pyrene	10										
Indeno(1,2,3-cd)pyrene	10										
Dibenzo(a,h)anthracene	10										
Benzo(g,h,i)perylene	10										

CRQL = Contract Required Quantitation Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) Revised 09/99

ORIGINAL

DATA SUMMARY FORM: BNA

Case #: 33178 SDG : C0038
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0035		C0036		C0037		C0039		C0042	
Sampling Location :		SW7		SW8		SW9		SW12		MW1	
Field QC:		Dup of C0036		Dup. of C0035				Field Blank			
Matrix :		Water		Water		Water		Water		Water	
Units :		ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :		8/5/2004		8/5/2004		8/5/2004		8/4/2004		8/4/2004	
Time Sampled :		08:35		08:40		10:30		12:15		10:30	
Dilution Factor :		1.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	10										
Phenol	10										
bis-(2-Chloroethyl) ether	10										
2-Chlorophenol	10										
2-Methylphenol	10										
2,2'-oxybis(1-Chloropropane)	10										
Acetophenone	10										
4-Methylphenol	10										
N-Nitroso-di-n-propylamine	10										
Hexachloroethane	10										
Nitrobenzene	10										
Isophorone	10										
2-Nitrophenol	10										
2,4-Dimethylphenol	10										
bis(2-Chloroethoxy)methane	10										
2,4-Dichlorophenol	10										
Naphthalene	10										
4-Chloroaniline	10										
Hexachlorobutadiene	10										
Caprolactam	10										
4-Chloro-3-methylphenol	10										
2-Methylnaphthalene	10										
Hexachlorocyclopentadiene	10										
2,4,6-Trichlorophenol	10										
2,4,5-Trichlorophenol	25	25		25		25				25	
1,1'-Biphenyl	10										
2-Chloronaphthalene	10										
2-Nitroaniline	25	25		25		25				25	
Dimethylphthalate	10										
2,6-Dinitrotoluene	10										
Acenaphthylene	10										
3-Nitroaniline	25	25		25		25				25	

ORIGINAL

DATA SUMMARY FORM: BNA

Case #: 33178 SDG : C0038
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0035		C0036		C0037		C0039		C0042	
Sampling Location :		SW7		SW8		SW9		SW12		MW1	
Field QC:		Dup. od C0036		Dup. of C0035				Field Blank			
Matrix :		Water		Water		Water		Water		Water	
Units :		ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :		8/5/2004		8/5/2004		8/5/2004		8/4/2004		8/4/2004	
Time Sampled :		08:35		08:40		10:30		12:15		10:30	
Dilution Factor :		1.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Acenaphthene	10										
2,4-Dinitrophenol	25	25		25		25				25	
4-Nitrophenol	25	25		25		25				25	
Dibenzofuran	10										
2,4-Dinitrotoluene	10										
Diethylphthalate	10							7	J		
Fluorene	10										
4-Chlorophenyl-phenyl ether	10										
4-Nitroaniline	25	25		25		25				25	
4,6-Dinitro-2-methylphenol	25	25		25		25				25	
N-Nitrosodiphenylamine	10										
4-Bromophenyl-phenylether	10										
*Hexachlorobenzene	10										
Atrazine	10										
*Pentachlorophenol	25	25		25		25				25	
Phenanthrene	10										
Anthracene	10										
Carbazole	10										
Di-n-butylphthalate	10			5	J						
Fluoranthene	10										
Pyrene	10										
Butylbenzylphthalate	10										
3,3'-Dichlorobenzidine	10										
Benzo(a)anthracene	10										
Chrysene	10										
bis(2-Ethylhexyl)phthalate	10										
Di-n-octylphthalate	10										
Benzo(b)fluoranthene	10										
Benzo(k)fluoranthene	10										
Benzo(a)pyrene	10										
Indeno(1,2,3-cd)pyrene	10										
Dibenzo(a,h)anthracene	10										
Benzo(g,h,i)perylene	10										

CRQL = Contract Required Quantitation Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS
To calculate sample quantitation limits: (CRQL * Dilution Factor) Revised 09/99

ORIGINAL

DATA SUMMARY FORM: BNA

Case #: 33178 SDG : C0038
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0043		C0044		C0045		C0046		C0047	
Sampling Location :		MW1A		MW2		MW3		MW3A		MW4	
Field QC:						Dup. of C0052					
Matrix :		Water		Water		Water		Water		Water	
Units :		ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :		8/4/2004		8/4/2004		8/4/2004		8/4/2004		8/4/2004	
Time Sampled :		11:10		12:20		13:25		14:00		10:45	
Dilution Factor :		1.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	10										
Phenol	10					6	J				
bis-(2-Chloroethyl) ether	10										
2-Chlorophenol	10										
2-Methylphenol	10										
2,2'-oxybis(1-Chloropropane)	10										
Acetophenone	10										
4-Methylphenol	10										
N-Nitroso-di-n-propylamine	10										
Hexachloroethane	10										
Nitrobenzene	10										
Isophorone	10										
2-Nitrophenol	10										
2,4-Dimethylphenol	10										
bis(2-Chloroethoxy)methane	10										
2,4-Dichlorophenol	10										
Naphthalene	10										
4-Chloroaniline	10										
Hexachlorobutadiene	10										
Caprolactam	10										
4-Chloro-3-methylphenol	10										
2-Methylnaphthalene	10										
Hexachlorocyclopentadiene	10										
2,4,6-Trichlorophenol	10										
2,4,5-Trichlorophenol	25	25		25		25		25		25	
1,1'-Biphenyl	10										
2-Chloronaphthalene	10										
2-Nitroaniline	25	25		25		25		25		25	
Dimethylphthalate	10										
2,6-Dinitrotoluene	10										
Acenaphthylene	10										
3-Nitroaniline	25	25		25		25		25		25	

ORIGINAL

Case #: 33178 SDG : C0038
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0043		C0044		C0045		C0046		C0047	
Sampling Location :		MW1A		MW2		MW3		MW3A		MW4	
Field QC:						Dup. od C0052					
Matrix :		Water		Water		Water		Water		Water	
Units :		ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :		8/4/2004		8/4/2004		8/4/2004		8/4/2004		8/4/2004	
Time Sampled :		11:10		12:20		13:25		14:00		10:45	
Dilution Factor :		1.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Acenaphthene	10										
2,4-Dinitrophenol	25										
4-Nitrophenol	25										
Dibenzofuran	10										
2,4-Dinitrotoluene	10										
Diethylphthalate	10									1	B
Fluorene	10										
4-Chlorophenyl-phenyl ether	10										
4-Nitroaniline	25										
4,6-Dinitro-2-methylphenol	25										
N-Nitrosodiphenylamine	10										
4-Bromophenyl-phenylether	10										
*Hexachlorobenzene	10										
Atrazine	10										
*Pentachlorophenol	25										
Phenanthrene	10										
Anthracene	10										
Carbazole	10										
Di-n-butylphthalate	10										
Fluoranthene	10										
Pyrene	10										
Butylbenzylphthalate	10										
3,3'-Dichlorobenzidine	10										
Benzo(a)anthracene	10										
Chrysene	10										
bis(2-Ethylhexyl)phthalate	10	2	J			4	J				
Di-n-octylphthalate	10										
Benzo(b)fluoranthene	10										
Benzo(k)fluoranthene	10										
Benzo(a)pyrene	10										
Indeno(1,2,3-cd)pyrene	10										
Dibenzo(a,h)anthracene	10										
Benzo(g,h,i)perylene	10										

CRQL = Contract Required Quantitation Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) Revised 09/99

DATA SUMMARY FORM: BNA

Case #: 33178 SDG : C0038
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0049		C0051		C0052					
Sampling Location :		PW5		GW2		GW3					
Field QC:						Dup. of C0045					
Matrix :		Water		Water		Water					
Units :		ug/L		ug/L		ug/L					
Date Sampled :		8/3/2004		8/4/2004		8/4/2004					
Time Sampled :		11:40		09:00		13:25					
Dilution Factor :		1.0		1.0		1.0					
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	10										
Phenol	10					4	J				
bis-(2-Chloroethyl) ether	10										
2-Chlorophenol	10										
2-Methylphenol	10										
2,2'-oxybis(1-Chloropropane)	10										
Acetophenone	10										
4-Methylphenol	10										
N-Nitroso-di-n-propylamine	10										
Hexachloroethane	10										
Nitrobenzene	10										
Isophorone	10										
2-Nitrophenol	10										
2,4-Dimethylphenol	10										
bis(2-Chloroethoxy)methane	10										
2,4-Dichlorophenol	10										
Naphthalene	10										
4-Chloroaniline	10										
Hexachlorobutadiene	10										
Caprolactam	10										
4-Chloro-3-methylphenol	10										
2-Methylnaphthalene	10										
Hexachlorocyclopentadiene	10										
2,4,6-Trichlorophenol	10										
2,4,5-Trichlorophenol	25										
1,1'-Biphenyl	10										
2-Chloronaphthalene	10										
2-Nitroaniline	25										
Dimethylphthalate	10										
2,6-Dinitrotoluene	10										
Acenaphthylene	10										
3-Nitroaniline	25										

ORIGINAL

DATA SUMMARY FORM: BNA

Case #: 33178 SDG : C0038
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0049		C0051		C0052					
Sampling Location :		PW5		GW2		GW3					
Field QC:						Dup. of C0045					
Matrix :		Water		Water		Water					
Units :		ug/L		ug/L		ug/L					
Date Sampled :		8/3/2004		8/4/2004		8/4/2004					
Time Sampled :		11:40		09:00		13:25					
Dilution Factor :		1.0		1.0		1.0					
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Acenaphthene	10										
2,4-Dinitrophenol	25										
4-Nitrophenol	25										
Dibenzofuran	10										
2,4-Dinitrotoluene	10										
Diethylphthalate	10										
Fluorene	10										
4-Chlorophenyl-phenyl ether	10										
4-Nitroaniline	25										
4,6-Dinitro-2-methylphenol	25										
N-Nitrosodiphenylamine	10										
4-Bromophenyl-phenylether	10										
*Hexachlorobenzene	10										
Atrazine	10										
*Pentachlorophenol	25										
Phenanthrene	10										
Anthracene	10										
Carbazole	10										
Di-n-butylphthalate	10										
Fluoranthene	10										
Pyrene	10										
Butylbenzylphthalate	10										
3,3'-Dichlorobenzidine	10										
Benzo(a)anthracene	10										
Chrysene	10										
bis(2-Ethylhexyl)phthalate	10					1	J				
Di-n-octylphthalate	10										
Benzo(b)fluoranthene	10										
Benzo(k)fluoranthene	10										
Benzo(a)pyrene	10										
Indeno(1,2,3-cd)pyrene	10										
Dibenzo(a,h)anthracene	10										
Benzo(g,h,i)perylene	10										

CRQL = Contract Required Quantitation Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) Revised 09/99

ORIGINAL

DATA SUMMARY FORM: PESTICIDES AND PCBS

Case #: 33178 | SDG : C0001 | Number of Soil Samples : 20
Site : NEW JERSEY FIREWORKS | Number of Water Samples : 0
Lab. : CEIMIC

Sample Number :		C0001		C0002		C0003		C0004		C0005	
Sampling Location :		S11		S12		S13		S14		S15	
Field QC:		Dup. of C0005								Dup. of C0001	
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg 84		ug/Kg 90		ug/Kg 54		ug/Kg 73	
Date Sampled :		8/3/2004		8/3/2004		8/3/2004		8/3/2004		8/3/2004	
Time Sampled :		12:30 82		14:16		12:05		11:30		12:35	
Dilution Factor :		0.99		1.0		0.98		0.98		0.99	
Pesticide/PCB Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	1.7	2.05		2.02		1.85		2.82		2.31	
beta-BHC	1.7										
delta-BHC	1.7										
gamma-BHC (Lindane)	1.7										
Heptachlor	1.7										
Aldrin	1.7										
Heptachlor epoxide	1.7										
Endosulfan I	1.7										
Dieldrin	3.3	3.98		3.93		3.59		5.48			
4,4'-DDE	3.3							19			
Endrin	3.3										
Endosulfan II	3.3										
4,4'-DDD	3.3										
Endosulfan sulfate	3.3										
4,4'-DDT	3.3							5.0	J		
Methoxychlor	17	20.5		20.2		18.5		28.2			
Endrin ketone	3.3	3.98		3.93		3.59		5.48			
Endrin aldehyde	3.3										
alpha-Chlordane	1.7	2.05		2.02		1.85		2.82			
gamma-Chlordane	1.7										
Toxaphene	170	205		202		185		282			
Aroclor-1016	33	39.8		39.3		35.9		54.8			
Aroclor-1221	67	80.9		79.8		73		111			
Aroclor-1232	33	39.8		39.3		35.9		54.8			
Aroclor-1242	33										
Aroclor-1248	33										
Aroclor-1254	33										
Aroclor-1260	33										

CRQL = Contract Required Quantitation Limit
To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100

SS11

SEE NARRATIVE FOR CODE DEFINITIONS
SED1
Revised 09/99

DATA SUMMARY FORM: PESTICIDES AND PCBS

ORIGINAL

Case #: 33178 SDG : C0001
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0006		C0007		C0008		C0009		C0010	
Sampling Location :		S16		S21		S22		S23		S24	
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		8/3/2004		8/3/2004		8/3/2004		8/3/2004		8/3/2004	
Time Sampled :		14:06		09:55		10:20		11:05		10:45	
%Moisture :		21-100=79		27 → 73		18 → 82		9 → 91		14 → 86	
Dilution Factor :		0.99		1.0		1.0		1.0		0.99	
Pesticide/PCB Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	1.7	02.13		02.33		02.07		01.87		01.96	
beta-BHC	1.7										
delta-BHC	1.7										
gamma-BHC (Lindane)	1.7										
5 Heptachlor	1.7										
Aldrin	1.7										
Heptachlor epoxide	1.7										
Endosulfan I	1.7										
Dieldrin	3.3	04.14		04.52		04.02		3.63		03.80	
10 4,4'-DDE	3.3										
Endrin	3.3										
Endosulfan II	3.3										
4,4'-DDD	3.3										
14 Endosulfan sulfate	3.3										
15 4,4'-DDT	3.3										
Methoxychlor	17	021.3		023.3		020.7		018.7		019.6	
Endrin ketone	3.3	04.14		04.52		04.02		3.63		3.80	
Endrin aldehyde	3.3										
18 alpha-Chlordane	1.7	02.13		2.33		02.07		01.87		01.96	
20 gamma-Chlordane	1.7										
Toxaphene	170	213		233		207		187		196	
22 Aroclor-1016	33	041.4		045.2		040.2		036.3		038	
Aroclor-1221	67	84		091.8		081.7		073.6		077.15	
Aroclor-1232	33	41.4		45.2		40.2		36.3		038	
Aroclor-1242	33										
Aroclor-1248	33										
Aroclor-1254	33										
28 Aroclor-1260	33										

CRQL = Contract Required Quantitation Limit SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100 Revised 09/99

ORIGINAL

DATA SUMMARY FORM: PESTICIDES AND PCBS

Case #: 33178 SDG : C0001
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0011		C0012		C0014		C0015		C0016	
Sampling Location :		S25		SS11		SS13		SS14		SS21	
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		8/3/2004		8/3/2004		8/3/2004		8/3/2004		8/3/2004	
Time Sampled :		10:00		12:40		12:10		11:35		10:05	
%Moisture :		27 → 73		16 → 84		7 → 93		13 → 87		18 → 82	
Dilution Factor :		1.0		1.0		1.0		1.0		1.0	
Pesticide/PCB Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	1.7	2.33		2.02		1.83		1.95		2.07	
beta-BHC	1.7										
delta-BHC	1.7										
gamma-BHC (Lindane)	1.7										
Heptachlor	1.7										
Aldrin	1.7										
Heptachlor epoxide	1.7										
Endosulfan I	1.7										
Dieldrin	3.3	4.52		3.93		3.55		3.79		4.02	
4,4'-DDE	3.3										
Endrin	3.3										
Endosulfan II	3.3										
4,4'-DDD	3.3										
Endosulfan sulfate	3.3										
4,4'-DDT	3.3										
Methoxychlor	17	23.3		20.2		18.3		19.5		20.7	
Endrin ketone	3.3	4.52		3.93		3.55		3.79		4.02	
Endrin aldehyde	3.3										
alpha-Chlordane	1.7	2.33		2.02		1.83		1.95		2.07	
gamma-Chlordane	1.7										
Toxaphene	170	233		202		183		195		207	
Aroclor-1016	33	45.2		39.3		35.5		37.9		40.2	
Aroclor-1221	67	91.8		79.8		72		77.3		81.7	
Aroclor-1232	33	45.2		39.3		35.5		37.9		40.2	
Aroclor-1242	33										
Aroclor-1248	33										
Aroclor-1254	33										
Aroclor-1260	33										

CRQL = Contract Required Quantitation Limit S21 SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100 S22 Revised 09/99

ORIGINAL

DATA SUMMARY FORM: PESTICIDES AND PCBS

Case #: 33178 SDG : C0001
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0017		C0018		C0019		C0023		C0024	
Sampling Location :		SS22		SS23		SS24		SED3		SED4	
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		8/3/2004		8/3/2004		8/3/2004		8/5/2004		8/5/2004	
Time Sampled :		10:25		11:10		10:50		11:20		10:25	
%Moisture :		18 → 82		13 → 87		15 → 85		31 → 69		18 → 82	
Dilution Factor :		1.0		0.99		1.0		0.99		0.98	
Pesticide/PCB Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	1.7	0.0002		0.0002		0.2		2.43		0.0002	
beta-BHC	1.7										
delta-BHC	1.7										
gamma-BHC (Lindane)	1.7										
Heptachlor	1.7										
Aldrin	1.7										
Heptachlor epoxide	1.7										
Endosulfan I	1.7										
Dieldrin	3.3	0.0004		0.0004		0.388		4.73		0.0004	
4,4'-DDE	3.3										
Endrin	3.3										
Endosulfan II	3.3										
4,4'-DDD	3.3										
Endosulfan sulfate	3.3										
4,4'-DDT	3.3										
Methoxychlor	17	0.002		0.002		0.20		24.3		0.002	
Endrin ketone	3.3	0.0004		0.0004		0.388		4.73		0.0004	
Endrin aldehyde	3.3										
alpha-Chlordane	1.7	0.0002		0.0002		0.2		2.43		0.0002	
gamma-Chlordane	1.7										
Toxaphene	170	0.02		0.02		2.00		243		0.02	
Aroclor-1016	33	0.004		0.004		0.38.8		47.3		0.004	
Aroclor-1221	67	0.008		0.008		0.78.8		96.1		0.008	
Aroclor-1232	33	0.004		0.004		0.38.8		47.3		0.004	
Aroclor-1242	33										
Aroclor-1248	33										
Aroclor-1254	33										
Aroclor-1260	33										

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100

Revised 09/99

ORIGINAL

DATA SUMMARY FORM: PESTICIDES AND PCBS

Case #: 33178 | SDG : C0021 | Number of Soil Samples : 6
Site : NEW JERSEY FIREWORKS | Number of Water Samples : 0
Lab. : CEIMIC

Sample Number :		C0021		C0022		C0025		C0026		C0027	
Sampling Location :		SED1		SED2		SED5		SED6		SED7	
Field QC:										Dup. of C0028	
Matrix :		Soil		Soil		Soil 62		Soil 78		Soil 79	
Units :		ug/Kg 72		ug/Kg 73		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		8/5/2004		8/5/2004		8/5/2004		8/5/2004		8/5/2004	
Time Sampled :		11:25		11:45		09:50		09:35		08:50	
Dilution Factor :		0.98		1.0		1.0		0.98		0.99	
Pesticide/PCB Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	1.7	2.31		2.18		2.74		2.13		2.13	
beta-BHC	1.7										
delta-BHC	1.7										
gamma-BHC (Lindane)	1.7										
Heptachlor	1.7										
Aldrin	1.7										
Heptachlor epoxide	1.7										
Endosulfan I	1.7										
Dieldrin	3.3	4.49		4.23		5.32		4.14		4.14	
4,4'-DDE	3.3										
Endrin	3.3										
Endosulfan II	3.3										
4,4'-DDD	3.3										
Endosulfan sulfate	3.3										
4,4'-DDT	3.3										
Methoxychlor	17	23.1		21.8		27.4		21.4		0.00	
Endrin ketone	3.3	4.49		4.23		5.32		4.14		0.004	
Endrin aldehyde	3.3										
alpha-Chlordane	1.7	2.31		2.18		2.74		2.14			
gamma-Chlordane	1.7										
Toxaphene	170	231		218		274		214		0.02	
Aroclor-1016	33	44.9		42.8		53.2		41.4		0.004	
Aroclor-1221	67	91.2		85.9		108		84.2		0.08	
Aroclor-1232	33	44.9		42.8		53.2		41.4		0.004	
Aroclor-1242	33										
Aroclor-1248	33										
Aroclor-1254	33										
Aroclor-1260	33										

CRQL = Contract Required Quantitation Limit | SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100 | Revised 09/99

ORIGINAL

DATA SUMMARY FORM: PESTICIDES AND PCBS

Case #: 33178 SDG : C0021
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0028									
Sampling Location :		SED8									
Field QC:		Dup. of C0027									
Matrix :		Soil									
Units :		ug/Kg									
Date Sampled :		8/5/2004 58									
Time Sampled :		08:55									
Dilution Factor :		0.98									
Pesticide/PCB Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	1.7	~~0.003~~									
beta-BHC	1.7	2.87									
delta-BHC	1.7										
gamma-BHC (Lindane)	1.7										
Heptachlor	1.7										
Aldrin	1.7										
Heptachlor epoxide	1.7										
Endosulfan I	1.7										
Dieldrin	3.3	~~0.0006~~									
4,4'-DDE	3.3	5.56									
Endrin	3.3										
Endosulfan II	3.3										
4,4'-DDD	3.3										
Endosulfan sulfate	3.3										
4,4'-DDT	3.3										
Methoxychlor	17	0.09									
Endrin ketone	3.3										
Endrin aldehyde	3.3										
alpha-Chlordane	1.7	0.03									
gamma-Chlordane	1.7										
Toxaphene	170										
Aroclor-1016	33	0.09									
Aroclor-1221	67	0.31									
Aroclor-1232	33	0.09									
Aroclor-1242	33										
Aroclor-1248	33										
Aroclor-1254	33										
Aroclor-1260	33										

CRQL = Contract Required Quantitation Limit SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100 Revised 09/99

DATA SUMMARY FORM: PESTICIDES AND PCBS

ORIGINAL

Case #: 33178
Site :
Lab. :

SDG : C0032
NEW JERSEY FIREWORKS
CEIMIC

Number of Soil Samples : 0
Number of Water Samples : 2

Sample Number :		C0032		C0041							
Sampling Location :		SW4		SW14							
Field QC:				Field Blank							
Matrix :		Water		Water							
Units :		ug/L		ug/L							
Date Sampled :		8/5/2004		8/5/2004							
Time Sampled :		10:20		10:50							
pH :		1.0		1.0							
Dilution Factor :		1.0		1.0							
Pesticide/PCB Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	0.050	0.050									
beta-BHC	0.050										
delta-BHC	0.050										
*gamma-BHC (Lindane)	0.050										
*Heptachlor	0.050										
Aldrin	0.050										
Heptachlor epoxide	0.050										
Endosulfan I	0.050										
Dieldrin	0.10	0.10									
4,4'-DDE	0.10										
*Endrin	0.10										
Endosulfan II	0.10										
4,4'-DDD	0.10										
Endosulfan sulfate	0.10										
4,4'-DDT	0.10										
*Methoxychlor	0.50	0.5									
Endrin ketone	0.10	0.1									
Endrin aldehyde	0.10										
alpha-Chlordane	0.050	0.05									
gamma-Chlordane	0.050										
*Toxaphene	5.0	5									
*Aroclor-1016	1.0	1									
*Aroclor-1221	2.0	2									
*Aroclor-1232	1.0	1									
*Aroclor-1242	1.0										
*Aroclor-1248	1.0										
*Aroclor-1254	1.0										
*Aroclor-1260	1.0										

CRQL = Contract Required Quantitation Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor)

Revised 09/99

ORIGINAL

DATA SUMMARY FORM: PESTICIDES AND PCBS

Case #: 33178 | SDG : C0038 | Number of Soil Samples : 0
Site : | NEW JERSEY FIREWORKS | Number of Water Samples : 18
Lab. : | CEIMIC

Sample Number :		C0029		C0030		C0031		C0033		C0034	
Sampling Location :		SW1		SW2		SW3		SW5		SW6	
Matrix :		Water		Water		Water		Water		Water	
Units :		ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :		8/5/2004		8/5/2004		8/5/2004		8/5/2004		8/5/2004	
Time Sampled :		11:20		11:40		11:15		09:45		09:30	
Dilution Factor :		1.0		1.0		1.0		1.0		1.0	
Pesticide/PCB Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	0.050	0.05		0.05		0.05		0.05		0.05	
beta-BHC	0.050										
delta-BHC	0.050										
*gamma-BHC (Lindane)	0.050										
*Heptachlor	0.050										
Aldrin	0.050										
Heptachlor epoxide	0.050										
Endosulfan I	0.050										
Dieldrin	0.10	0.1		0.1		0.1		0.1		0.1	
4,4'-DDE	0.10										
*Endrin	0.10										
Endosulfan II	0.10										
4,4'-DDD	0.10										
Endosulfan sulfate	0.10										
4,4'-DDT	0.10										
*Methoxychlor	0.50	0.5		0.5		0.5		0.5		0.5	
Endrin ketone	0.10	0.1		0.1		0.1		0.1		0.1	
Endrin aldehyde	0.10										
alpha-Chlordane	0.050	0.05		0.05		0.05		0.05		0.05	
gamma-Chlordane	0.050										
*Toxaphene	5.0	5		5		5		5		5	
*Aroclor-1016	1.0	1		1		1		1		1	
*Aroclor-1221	2.0	2		2		2		2		2	
*Aroclor-1232	1.0	1		1		1		1		1	
*Aroclor-1242	1.0										
*Aroclor-1248	1.0										
*Aroclor-1254	1.0										
*Aroclor-1260	1.0										

CRQL = Contract Required Quantitation Limit | *Action Level Exists | SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor)

Revised 09/99

ORIGINAL

DATA SUMMARY FORM: PESTICIDES AND PCBS

Case #: 33178 SDG : C0038
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0035		C0036		C0037		C0039		C0042	
Sampling Location :		SW7		SW8		SW9		SW12		MW1	
Field QC:		Dup. of C0036		Dup. of C0035				Field Blank			
Matrix :		Water		Water		Water		Water		Water	
Units :		ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :		8/5/2004		8/5/2004		8/5/2004		8/4/2004		8/4/2004	
Time Sampled :		08:35		08:40		10:30		12:15		10:30	
Dilution Factor :		1.0		1.0		1.0		1.0		1.0	
Pesticide/PCB Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	0.050	0.05		0.05		0.05				0.05	
beta-BHC	0.050										
delta-BHC	0.050										
*gamma-BHC (Lindane)	0.050										
*Heptachlor	0.050										
Aldrin	0.050										
Heptachlor epoxide	0.050										
Endosulfan I	0.050										
Dieldrin	0.10	0.1		0.1		0.1				0.1	
4,4'-DDE	0.10										
*Endrin	0.10										
Endosulfan II	0.10										
4,4'-DDD	0.10										
Endosulfan sulfate	0.10										
4,4'-DDT	0.10										
*Methoxychlor	0.50	0.5		0.5		0.5				0.5	
Endrin ketone	0.10	0.1		0.1		0.1				0.1	
Endrin aldehyde	0.10										
alpha-Chlordane	0.050	0.05		0.05		0.05				0.05	
gamma-Chlordane	0.050										
*Toxaphene	5.0	5		5		5				5	
*Aroclor-1016	1.0	1		1		1				1	
*Aroclor-1221	2.0	2		2		2				2	
*Aroclor-1232	1.0	1		1		1				1	
*Aroclor-1242	1.0										
*Aroclor-1248	1.0										
*Aroclor-1254	1.0										
*Aroclor-1260	1.0										

CRQL = Contract Required Quantitation Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) Revised 09/99

ORIGINAL

DATA SUMMARY FORM: PESTICIDES AND PCBS

Case #: 33178 SDG : C0038
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0043		C0044		C0045		C0046		C0047	
Sampling Location :		MW1A		MW2		MW3		MW3A		MW4	
Field QC:						Dup. of C0052					
Matrix :		Water		Water		Water		Water		Water	
Units :		ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :		8/4/2004		8/4/2004		8/4/2004		8/4/2004		8/4/2004	
Time Sampled :		11:10		12:20		13:25		14:00		10:45	
Dilution Factor :		1.0		1.0		1.0		1.0		1.0	
Pesticide/PCB Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	0.050	0.05		0.05		0.05		0.05		0.05	
beta-BHC	0.050										
delta-BHC	0.050										
*gamma-BHC (Lindane)	0.050										
*Heptachlor	0.050										
Aldrin	0.050										
Heptachlor epoxide	0.050										
Endosulfan I	0.050										
Dieldrin	0.10	0.1		0.1		0.1		0.1		0.1	
4,4'-DDE	0.10										
*Endrin	0.10										
Endosulfan II	0.10										
4,4'-DDD	0.10										
Endosulfan sulfate	0.10										
4,4'-DDT	0.10										
*Methoxychlor	0.50	0.5		0.5		0.5		0.5		0.5	
Endrin ketone	0.10	0.1		0.1		0.1		0.1		0.1	
Endrin aldehyde	0.10										
alpha-Chlordane	0.050	0.05		0.05		0.05		0.05		0.05	
gamma-Chlordane	0.050										
*Toxaphene	5.0	5		5		5		5		5	
*Aroclor-1016	1.0	1		1		1		1		1	
*Aroclor-1221	2.0	2		2		2		2		2	
*Aroclor-1232	1.0	1		1		1		1		1	
*Aroclor-1242	1.0										
*Aroclor-1248	1.0										
*Aroclor-1254	1.0										
*Aroclor-1260	1.0										

CRQL = Contract Required Quantitation Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) Revised 09/99

ORIGINAL

DATA SUMMARY FORM: PESTICIDES AND PCBS

Case #: 33178 SDG : C0038
Site : NEW JERSEY FIREWORKS
Lab. : CEIMIC

Sample Number :		C0049		C0051		C0052					
Sampling Location :		PW5		GW2		GW3					
Field QC:						Dup. of C0045					
Matrix :		Water		Water		Water					
Units :		ug/L		ug/L		ug/L					
Date Sampled :		8/3/2004		8/4/2004		8/4/2004					
Time Sampled :		11:40		09:00		13:25					
Dilution Factor :		1.0		1.0		1.0					
Pesticide/PCB Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	0.050	0.05		0.05		0.05					
beta-BHC	0.050										
delta-BHC	0.050										
*gamma-BHC (Lindane)	0.050										
*Heptachlor	0.050										
Aldrin	0.050										
Heptachlor epoxide	0.050										
Endosulfan I	0.050										
Dieldrin	0.10	0.1		0.1		0.1					
4,4'-DDE	0.10										
*Endrin	0.10										
Endosulfan II	0.10										
4,4'-DDD	0.10										
Endosulfan sulfate	0.10										
4,4'-DDT	0.10										
*Methoxychlor	0.50	0.5		0.5		0.5					
Endrin ketone	0.10	0.1		0.1		0.1					
Endrin aldehyde	0.10										
alpha-Chlordane	0.050	0.05		0.05		0.05					
gamma-Chlordane	0.050										
*Toxaphene	5.0	5		5		5					
*Aroclor-1016	1.0	1		1		1					
*Aroclor-1221	2.0	2		2		2					
*Aroclor-1232	1.0	1		1		1					
*Aroclor-1242	1.0										
*Aroclor-1248	1.0										
*Aroclor-1254	1.0										
*Aroclor-1260	1.0										

CRQL = Contract Required Quantitation Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) Revised 09/99

ORIGINAL

Appendix C

Tentatively Identified Compounds (TICs)

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C00 ORIGINAL

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0001

Matrix: (soil/water) SOIL Lab Sample ID: 040773-16

Sample wt/vol: 4.2 (g/mL) G Lab File ID: OH662

Level: (low/med) LOW Date Received: 08/04/04

% Moisture: not dec. 11 Date Analyzed: 08/05/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	3.54	7	J
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C02B8 ORIGINAL

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0032

Matrix: (soil/water) WATER Lab Sample ID: 040791-01

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: D0151

Level: (low/med) LOW Date Received: 08/06/04

% Moisture: not dec. _____ Date Analyzed: 08/09/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	15.70	10	J
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EPA SAMPLE NO.

C0001

ORIGINAL

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0001

Matrix: (soil/water) SOIL Lab Sample ID: 040773-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: JM037

Level: (low/med) LOW Date Received: 08/04/04

% Moisture: 22 Decanted: (Y/N) N Date Extracted:08/06/04

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/12/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 4.2 Extraction: (Type) SONC

Number TICs found: 27 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
~~1.~~	~~UNKNOWN~~	~~5.36~~	~~350~~	~~JB~~
2.	UNKNOWN	6.16	230	J
3.	UNKNOWN	7.62	330	J
~~4.~~	~~UNKNOWN~~	~~7.68~~	~~190~~	~~JB~~
5. 57-10-3	HEXADECANOIC ACID	12.26	300	NJ
6.	UNKNOWN	12.83	190	J
7.	UNKNOWN	12.93	150	J
8.	UNKNOWN	12.99	190	J
~~9. 123-95-5~~	~~OCTADECANOIC~~ ACID, BUTYL EST	~~13.75~~	910	NJ
10.	UNKNOWN	13.94	830	J
11. 506-52-5	1-HEXACOSANOL	14.16	440	NJ
12.	UNKNOWN	14.75	600	J
13.	UNKNOWN	15.03	210	J
~~14. 638-66-4~~	~~OCTADECANAL~~ unknown	15.76	650	NJ
15.	UNKNOWN	16.22	170	J
16.	UNKNOWN	16.92	200	J
~~17. 638-66-4~~	~~OCTADECANAL~~ unknown	17.09	840	NJ
18.	UNKNOWN	17.73	680	J
19.	UNKNOWN	17.94	130	J
20.	UNKNOWN	18.68	180	J
21.	UNKNOWN	18.92	440	J
22.	UNKNOWN	19.79	750	J
23.	UNKNOWN	20.27	200	J
24.	UNKNOWN	21.77	190	J
25.	UNKNOWN	22.09	220	J
26.	UNKNOWN	22.64	360	J
27.	UNKNOWN	23.02	440	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C0002 ORIGINAL

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0001

Matrix: (soil/water) SOIL Lab Sample ID: 040773-06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: K9677

Level: (low/med) LOW Date Received: 08/04/04

% Moisture: 25 Decanted: (Y/N) N Date Extracted:08/06/04

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/12/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.6 Extraction: (Type) SONC

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	10.12	360	J
2.	UNKNOWN	10.67	570	J
~~3.~~	~~UNKNOWN~~	~~11.30~~	~~300~~	~~JB~~
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EPA SAMPLE NO.

C0003 ORIGINAL

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0001

Matrix: (soil/water) SOIL Lab Sample ID: 040773-09

Sample wt/vol: 30.5 (g/mL) G Lab File ID: K9680

Level: (low/med) LOW Date Received: 08/04/04

% Moisture: 8 Decanted: (Y/N) N Date Extracted:08/06/04

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/12/04

Injection Volume: 2.0(uL) Dilution Factor: 3.0

GPC Cleanup: (Y/N) Y pH: 8.6 Extraction: (Type) SONC

Number TICs found: 2 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	10.68	830	J
~~2. 791-28-6~~	~~PHOSPHINE OXIDE, TRIPHENYL~~	~~11.31~~	~~970~~	~~NJB~~
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EPA SAMPLE NO.

C0004 ORIGINAL

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0001

Matrix: (soil/water) SOIL Lab Sample ID: 040773-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: K9675

Level: (low/med) LOW Date Received: 08/04/04

% Moisture: 22 Decanted: (Y/N) N Date Extracted:08/06/04

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/12/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0 Extraction: (Type) SONC

Number TICs found: 6

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	10.13	290	J
2.	UNKNOWN	10.68	530	J
3.	UNKNOWN	11.18	230	J
~~4.~~	~~UNKNOWN~~	~~11.32~~	~~350~~	~~JB~~
5.	UNKNOWN	12.02	310	J
6.	UNKNOWN	13.07	560	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C0009 ORIGINAL

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0001

Matrix: (soil/water) SOIL Lab Sample ID: 040773-17

Sample wt/vol: 30.3 (g/mL) G Lab File ID: JM050

Level: (low/med) LOW Date Received: 08/04/04

% Moisture: 13 Decanted: (Y/N) N Date Extracted:08/06/04

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/13/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 4.8 Extraction: (Type) SONC

Number TICs found: 10

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
~~1.~~	~~UNKNOWN~~	~~5.36~~	~~230~~	~~JB~~
2.	UNKNOWN	6.15	170	J
3. 112-34-5	ETHANOL, 2-(2-BUTOXYETHOXY)-	7.62	220	NJ
4.	UNKNOWN	13.08	520	J
5. 123-95-5	OCTADECANOIC ACID, BUTYL EST	13.78	630	NJ
6.	UNKNOWN	13.96	440	J
7.	UNKNOWN	14.21	100	J
8.	UNKNOWN	14.77	370	J
9.	UNKNOWN	15.07	200	J
10.	UNKNOWN	15.80	150	J
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EPA SAMPLE NO.

C0006 ORIGINAL

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0001

Matrix: (soil/water) SOIL Lab Sample ID: 040773-07

Sample wt/vol: 30.1 (g/mL) G Lab File ID: K9678

Level: (low/med) LOW Date Received: 08/04/04

% Moisture: 21 Decanted: (Y/N) N Date Extracted:08/06/04

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/12/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.3 Extraction: (Type) SONC

Number TICs found: 9

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	10.12	220	J
2.	UNKNOWN	10.68	410	J
3.	UNKNOWN	11.16	290	J
~~4.~~	~~UNKNOWN~~	~~11.31~~	~~390~~	~~JB~~
5.	UNKNOWN	12.02	590	J
6.	UNKNOWN	12.19	380	J
7.	UNKNOWN	14.22	330	J
8.	UNKNOWN	14.73	20000	J
9.	UNKNOWN	15.62	470	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

C0007#1 ORIGINAL

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0001

Matrix: (soil/water) SOIL Lab Sample ID: 040773-08

Sample wt/vol: 30.3 (g/mL) G Lab File ID: K9679

Level: (low/med) LOW Date Received: 08/04/04

% Moisture: 27 Decanted: (Y/N) N Date Extracted:08/06/04

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/12/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9 Extraction: (Type) SONC

Number TICs found: 12

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-08-0	BENZALDEHYDE, 4-HYDROXY-	6.67	500	NJ
2.	UNKNOWN	7.35	190	J
3.	UNKNOWN	10.12	240	J
4.	UNKNOWN	11.66	130	J
5.	UNKNOWN	12.04	800	J
6.	UNKNOWN	12.10	700	J
7.	UNKNOWN	12.43	450	J
8.	UNKNOWN	12.49	640	J
9.	UNKNOWN	12.86	410	J
10.	UNKNOWN	12.93	270	J
11.	UNKNOWN	13.37	440	J
12.	UNKNOWN	16.84	1000	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C0008 ORIGINAL

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0001

Matrix: (soil/water) SOIL Lab Sample ID: 040773-02

Sample wt/vol: 30.5 (g/mL) G Lab File ID: JM038

Level: (low/med) LOW Date Received: 08/04/04

% Moisture: 18 Decanted: (Y/N) N Date Extracted:08/06/04

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/12/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.2 Extraction: (Type) SONC

Number TICs found: 27

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
~~1.~~	~~UNKNOWN~~	~~5.37~~	~~400~~	~~JB~~
2.	UNKNOWN	6.16	240	J
3.	UNKNOWN	7.62	240	J
~~4.~~	~~UNKNOWN~~	~~7.68~~	~~180~~	~~JB~~
5.	UNKNOWN	8.13	130	J
6. 629-73-2	1-HEXADECENE	11.95	240	NJ
7. 57-10-3	HEXADECANOIC ACID	12.26	150	NJ
8.	UNKNOWN	12.36	110	J
9.	UNKNOWN	12.48	100	J
10. 84-65-1	9,10-ANTHRACENEDIONE	12.66	160	NJ
11.	UNKNOWN	13.94	480	J
12.	UNKNOWN	14.33	100	J
13.	UNKNOWN	14.75	130	J
14.	UNKNOWN	14.90	290	J
15.	UNKNOWN	15.20	180	J
16.	UNKNOWN	15.57	150	J
17.	UNKNOWN	15.79	92	J
18.	UNKNOWN	15.92	250	J
19.	UNKNOWN	16.13	100	J
20. 192-97-2	BENZO[E]PYRENE	16.95	250	NJ
21.	UNKNOWN	17.74	120	J
22.	UNKNOWN	19.80	110	J
23.	UNKNOWN	20.29	170	J
24.	UNKNOWN	21.09	120	J
25.	UNKNOWN	21.34	120	J
26.	UNKNOWN	22.65	130	J
27.	UNKNOWN	23.78	290	J
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EPA SAMPLE NO.

C0009 ORIGINAL

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0001

Matrix: (soil/water) SOIL Lab Sample ID: 040773-13

Sample wt/vol: 30.0 (g/mL) G Lab File ID: K9686

Level: (low/med) LOW Date Received: 08/04/04

% Moisture: 9 Decanted: (Y/N) N Date Extracted:08/06/04

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/12/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 4.6 Extraction: (Type) SONC

Number TICs found: 5

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	4.72	260	J
2.	UNKNOWN	5.71	230	J
3.	UNKNOWN	10.11	540	J
4. 646-13-9	OCTADECANOIC ACID, 2-METHYLP	10.65	890	NJ
~~5.~~	~~UNKNOWN~~	~~11.28~~	~~370~~	~~JB~~
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EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

C0010 ORIGINAL

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0001

Matrix: (soil/water) SOIL Lab Sample ID: 040773-14

Sample wt/vol: 30.4 (g/mL) G Lab File ID: JM047

Level: (low/med) LOW Date Received: 08/04/04

% Moisture: 14 Decanted: (Y/N) N Date Extracted:08/06/04

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/13/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.2 Extraction: (Type) SONC

Number TICs found: 14

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
~~1.~~	~~UNKNOWN~~	~~5.37~~	~~330~~	~~JB~~
2.	UNKNOWN	6.16	390	J
3.	UNKNOWN	7.63	360	J
~~4.~~	~~UNKNOWN~~	~~7.68~~	~~160~~	~~JB~~
5.	UNKNOWN	9.03	110	J
6. 57-10-3	HEXADECANOIC ACID	12.26	90	NJ
7.	UNKNOWN	12.87	180	J
8.	UNKNOWN	13.09	580	J
9. 123-95-5	OCTADECANOIC ACID, BUTYL EST	13.78	980	NJ
10.	UNKNOWN	13.97	590	J
11.	UNKNOWN	14.84	470	J
12.	UNKNOWN	15.08	160	J
13.	UNKNOWN	16.26	240	J
14.	UNKNOWN	20.33	1700	J
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EPA SAMPLE NO.

C0011

ORIGINAL

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0001

Matrix: (soil/water) SOIL Lab Sample ID: 040773-10

Sample wt/vol: 30.4 (g/mL) G Lab File ID: K9683

Level: (low/med) LOW Date Received: 08/04/04

% Moisture: 27 Decanted: (Y/N) N Date Extracted: 08/06/04

Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/12/04

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.0 Extraction: (Type) SONC

Number TICs found: 12

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	6.67	390	J
2.	UNKNOWN	7.35	180	J
3.	UNKNOWN	7.37	210	J
4.	UNKNOWN	10.12	240	J
5.	UNKNOWN	11.66	100	J
6.	UNKNOWN	12.04	980	J
7.	UNKNOWN	12.32	170	J
8.	UNKNOWN	12.50	1000	J
9.	UNKNOWN	12.86	380	J
10.	UNKNOWN	12.93	310	J
11.	UNKNOWN	13.11	180	J
12.	UNKNOWN	16.83	270	J
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EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

C001 ORIGINAL

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0001

Matrix: (soil/water) SOIL Lab Sample ID: 040773-18

Sample wt/vol: 30.5 (g/mL) G Lab File ID: JM051

Level: (low/med) LOW Date Received: 08/04/04

% Moisture: 16 Decanted: (Y/N) N Date Extracted:08/06/04

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/13/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 4.8 Extraction: (Type) SONC

Number TICs found: 13

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
~~1.~~	~~UNKNOWN~~	~~5.36~~	~~270~~	~~JB~~
2.	UNKNOWN	6.15	440	J
3.	UNKNOWN	7.63	530	J
4.	UNKNOWN	9.02	160	J
5.	UNKNOWN	12.86	120	J
6.	UNKNOWN	13.08	780	J
7. 57-11-4	OCTADECANOIC ACID	13.78	1000	NJ
8.	UNKNOWN	13.96	530	J
9.	UNKNOWN	14.77	400	J
10.	UNKNOWN	15.07	160	J
11.	UNKNOWN	15.79	110	J
12.	UNKNOWN	16.24	150	J
13.	UNKNOWN	20.30	120	J
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EPA SAMPLE NO.

C0014

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0001

ORIGINAL

Matrix: (soil/water) SOIL Lab Sample ID: 040773-05

Sample wt/vol: 30.5 (g/mL) G Lab File ID: K9676

Level: (low/med) LOW Date Received: 08/04/04

% Moisture: 7 Decanted: (Y/N) N Date Extracted:08/06/04

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/12/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.9 Extraction: (Type) SONC

Number TICs found: 4

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	10.12	400	J
2. 123-95-5	OCTADECANOIC ACID, BUTYL EST	10.67	470	NJ
3.	UNKNOWN	11.16	130	J
~~4.~~	~~UNKNOWN~~	~~11.31~~	~~240~~	~~JB~~
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EPA SAMPLE NO.

C0015

ORIGINAL

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0001

Matrix: (soil/water) SOIL Lab Sample ID: 040773-11

Sample wt/vol: 30.4 (g/mL) G Lab File ID: K9684

Level: (low/med) LOW Date Received: 08/04/04

% Moisture: 13 Decanted: (Y/N) N Date Extracted:08/06/04

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/12/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9 Extraction: (Type) SONC

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	10.10	260	J
2.	UNKNOWN	10.65	740	J
~~3.~~	~~UNKNOWN~~	~~11.27~~	~~340~~	~~JB~~
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EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

C0006

ORIGINAL

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0001

Matrix: (soil/water) SOIL Lab Sample ID: 040773-15

Sample wt/vol: 30.3 (g/mL) G Lab File ID: JM048

Level: (low/med) LOW Date Received: 08/04/04

% Moisture: 18 Decanted: (Y/N) N Date Extracted:08/06/04

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/13/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1 Extraction: (Type) SONC

Number TICs found: 9

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
~~1.~~	~~UNKNOWN~~	~~5.36~~	~~190~~	~~JB~~
2.	UNKNOWN	6.16	170	J
3.	UNKNOWN	7.62	220	J
4.	UNKNOWN	13.09	590	J
5. 123-95-5	OCTADECANOIC ACID, BUTYL EST	13.78	440	NJ
6.	UNKNOWN	13.96	450	J
7.	UNKNOWN	14.85	170	J
8.	UNKNOWN	15.32	160	J
9.	UNKNOWN	23.79	93	J
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EPA SAMPLE NO.

C001 ORIGINAL

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0001

Matrix: (soil/water) SOIL Lab Sample ID: 040773-12

Sample wt/vol: 30.3 (g/mL) G Lab File ID: K9685

Level: (low/med) LOW Date Received: 08/04/04

% Moisture: 18 Decanted: (Y/N) N Date Extracted:08/06/04

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/12/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.5 Extraction: (Type) SONC

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	10.11	250	J
2.	UNKNOWN	10.65	830	J
~~3.~~	~~UNKNOWN~~	~~11.28~~	~~540~~	~~JB~~
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EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

C0018 ORIGINAL

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0001

Matrix: (soil/water) SOIL Lab Sample ID: 040773-16

Sample wt/vol: 30.2 (g/mL) G Lab File ID: JM049

Level: (low/med) LOW Date Received: 08/04/04

% Moisture: 13 Decanted: (Y/N) N Date Extracted:08/06/04

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/13/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 4.8 Extraction: (Type) SONC

Number TICs found: 13

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
~~1.~~	~~UNKNOWN~~	~~5.36~~	~~220~~	~~JB~~
2.	UNKNOWN	6.16	150	J
3.	UNKNOWN	7.62	170	J
~~4.~~	~~UNKNOWN~~	~~7.68~~	~~110~~	~~JB~~
5.	UNKNOWN	11.98	99	J
6.	UNKNOWN	12.85	190	J
7.	UNKNOWN	13.03	200	J
8.	UNKNOWN	13.08	340	J
9.	UNKNOWN	13.77	840	J
10.	UNKNOWN	13.98	690	J
11.	UNKNOWN	14.79	410	J
12.	UNKNOWN	15.10	260	J
13.	UNKNOWN	16.20	170	J
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EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

C009

ORIGINAL

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0001

Matrix: (soil/water) SOIL Lab Sample ID: 040773-03

Sample wt/vol: 30.4 (g/mL) G Lab File ID: K9674

Level: (low/med) LOW Date Received: 08/04/04

% Moisture: 15 Decanted: (Y/N) N Date Extracted:08/06/04

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/12/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 4.9 Extraction: (Type) SONC

Number TICs found: 6

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	7.38	270	J
2.	UNKNOWN	10.14	410	J
3.	UNKNOWN	10.71	440	J
4.	UNKNOWN	11.21	150	J
~~5.~~	~~UNKNOWN~~	~~11.35~~	~~240~~	~~JB~~
6.	UNKNOWN	14.77	290	J
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EPA SAMPLE NO.

C002 ORIGINAL

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0001

Matrix: (soil/water) SOIL Lab Sample ID: 040773-19

Sample wt/vol: 30.4 (g/mL) G Lab File ID: JM039

Level: (low/med) LOW Date Received: 08/06/04

% Moisture: 31 Decanted: (Y/N) Y Date Extracted:08/09/04

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/12/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 4.8 Extraction: (Type) SONC

Number TICs found: 29 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
~~1.~~	~~UNKNOWN~~	~~5.36~~	~~500~~	~~JB~~
2.	UNKNOWN	6.16	390	J
3.	UNKNOWN	7.63	500	J
4.	UNKNOWN	7.68	230	J
5.	UNKNOWN	9.02	160	J
6. 120-40-1	DODECANAMIDE, N,N-BIS(2-HYDR	11.37	110	NJ
7. 57-10-3	HEXADECANOIC ACID	12.27	310	NJ
8.	UNKNOWN	12.37	99	J
9.	UNKNOWN	13.53	110	J
10. 123-95-5	OCTADECANOIC ACID, BUTYL EST	13.79	1900	NJ
11.	UNKNOWN	13.87	120	J
12.	UNKNOWN	13.98	750	J
13.	UNKNOWN	14.20	320	J
14.	UNKNOWN	14.36	150	J
15.	UNKNOWN	14.79	320	J
16.	UNKNOWN	15.41	260	J
17.	UNKNOWN	15.74	120	J
18.	UNKNOWN	15.83	380	J
19.	UNKNOWN	15.95	140	J
20.	UNKNOWN	16.58	180	J
21.	UNKNOWN	16.98	210	J
22.	UNKNOWN	17.78	190	J
23.	UNKNOWN	18.16	130	J
24.	UNKNOWN	18.77	150	J
25.	UNKNOWN	19.45	290	J
26.	UNKNOWN	20.35	390	J
27.	UNKNOWN	21.02	200	J
28.	UNKNOWN	21.82	190	J
29.	UNKNOWN	23.07	520	J
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EPA SAMPLE NO.

C002 ORIGINAL

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0001

Matrix: (soil/water) SOIL Lab Sample ID: 040773-20

Sample wt/vol: 30.0 (g/mL) G Lab File ID: JM040

Level: (low/med) LOW Date Received: 08/06/04

% Moisture: 18 Decanted: (Y/N) Y Date Extracted:08/09/04

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/12/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.7 Extraction: (Type) SONC

Number TICs found: 29

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
~~1.~~	~~UNKNOWN~~	~~5.36~~	~~270~~	~~JB~~
2.	UNKNOWN	6.16	380	J
3.	UNKNOWN	7.62	510	J
4.	UNKNOWN	7.68	140	J
5.	UNKNOWN	9.68	170	J
6.	UNKNOWN	9.75	150	J
7. 0-00-0	DECAHYDRO-4,4,8,9,10-PENTAME	9.95	310	NJ
8.	UNKNOWN	10.03	130	J
9.	UNKNOWN	10.51	170	J
10.	UNKNOWN	10.60	260	J
11.	UNKNOWN	11.55	350	J
12.	UNKNOWN	12.04	350	J
13. 57-10-3	HEXADECANOIC ACID	12.26	230	NJ
14.	UNKNOWN	12.36	600	J
15.	UNKNOWN	12.46	130	J
16.	UNKNOWN	12.76	1400	J
17.	UNKNOWN	13.08	600	J
18. 123-95-5	OCTADECANOIC ACID, BUTYL EST	13.76	880	NJ
19.	UNKNOWN	13.94	360	J
20.	UNKNOWN	14.76	140	J
21.	UNKNOWN	15.31	170	J
22.	UNKNOWN	15.45	230	J
23.	UNKNOWN	15.79	320	J
24.	UNKNOWN	16.55	130	J
25.	UNKNOWN	17.10	220	J
26.	UNKNOWN	17.71	170	J
27.	UNKNOWN	18.93	180	J
28.	UNKNOWN	21.49	170	J
29.	UNKNOWN	23.01	140	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C0021

ORIGINAL

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0021

Matrix: (soil/water) SOIL Lab Sample ID: 040790-04

Sample wt/vol: 30.1 (g/mL) G Lab File ID: K9764

Level: (low/med) LOW Date Received: 08/06/04

% Moisture: 23 Decanted: (Y/N) Y Date Extracted:08/09/04

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/17/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.2 Extraction: (Type) SONC

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	10.09	160	J
2.	UNKNOWN	10.64	230	J
3.	UNKNOWN	12.13	270	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C0022 ORIGINAL

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0021

Matrix: (soil/water) SOIL Lab Sample ID: 040790-05

Sample wt/vol: 30.5 (g/mL) G Lab File ID: K9765

Level: (low/med) LOW Date Received: 08/06/04

% Moisture: 24 Decanted: (Y/N) Y Date Extracted:08/09/04

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/17/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.5 Extraction: (Type) SONC

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN ALCOHOL/ALKENE	10.09	380	J
2.	UNKNOWN ALCOHOL/ALKENE	10.64	510	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C002 ORIGINAL

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0021

Matrix: (soil/water) SOIL Lab Sample ID: 040790-01

Sample wt/vol: 30.4 (g/mL) G Lab File ID: K9761

Level: (low/med) LOW Date Received: 08/06/04

% Moisture: 41 Decanted: (Y/N) Y Date Extracted:08/09/04

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/17/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.6 Extraction: (Type) SONC

Number TICs found: 10

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	10.44	210	J
2.	UNKNOWN	10.69	320	J
3.	UNKNOWN	10.82	800	J
4. 6971-40-0	17-PENTATRIACONTENE	11.00	960	NJ
5.	UNKNOWN	11.10	290	J
6.	UNKNOWN	11.38	260	J
7.	UNKNOWN	11.54	250	J
8.	UNKNOWN	11.57	1000	J
9.	UNKNOWN	12.03	540	J
10.	UNKNOWN	13.91	830	J
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EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

C0026 ORIGINAL

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0021

Matrix: (soil/water) SOIL Lab Sample ID: 040790-06

Sample wt/vol: 30.5 (g/mL) G Lab File ID: K9766

Level: (low/med) LOW Date Received: 08/06/04

% Moisture: 23 Decanted: (Y/N) Y Date Extracted:08/09/04

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/17/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.3 Extraction: (Type) SONC

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	10.68	320	J
2.				
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C0027 ORIGINAL

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0021

Matrix: (soil/water) SOIL Lab Sample ID: 040790-02

Sample wt/vol: 30.2 (g/mL) G Lab File ID: K9762

Level: (low/med) LOW Date Received: 08/06/04

% Moisture: 31 Decanted: (Y/N) Y Date Extracted:08/09/04

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/17/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.5 Extraction: (Type) SONC

Number TICs found: 9

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	10.10	250	J
2.	UNKNOWN	10.66	440	J
3.	UNKNOWN	10.81	630	J
4.	UNKNOWN	11.54	460	J
5.	UNKNOWN	11.98	320	J
6.	UNKNOWN	13.02	2100	J
7.	UNKNOWN	13.88	1300	J
8.	UNKNOWN	15.08	1200	J
9.	UNKNOWN	16.28	1900	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C0028

ORIGINAL

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0021

Matrix: (soil/water) SOIL Lab Sample ID: 040790-03

Sample wt/vol: 30.3 (g/mL) G Lab File ID: K9763

Level: (low/med) LOW Date Received: 08/06/04

% Moisture: 27 Decanted: (Y/N) Y Date Extracted:08/09/04

Concentrated Extract Volume: 500(uL) Date Analyzed: 08/17/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.0 Extraction: (Type) SONC

Number TICs found: 13

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	7.49	190	J
2.	UNKNOWN	8.46	230	J
3.	UNKNOWN	8.85	200	J
4.	UNKNOWN	9.93	150	J
5.	UNKNOWN	10.10	290	J
6.	UNKNOWN	10.58	240	J
7.	UNKNOWN	10.66	330	J
8.	UNKNOWN ALCOHOL/ALKENE	11.54	360	J
9.	UNKNOWN	11.99	450	J
10.	UNKNOWN ALDEHYDE	13.87	1400	J
11.	UNKNOWN	14.16	1200	J
12.	UNKNOWN	15.08	5400	J
13.	UNKNOWN	16.28	1600	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C0041 ORIGINAL

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0032

Matrix: (soil/water) WATER Lab Sample ID: 040791-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: K9772

Level: (low/med) LOW Date Received: 08/06/04

% Moisture: _____ Decanted: (Y/N)___ Date Extracted:08/10/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/17/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Extraction: (Type) CONT

Number TICs found: 6

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	~~UNKNOWN SILOXANE~~	~~11.13~~	~~8~~	~~J~~
2.	~~UNKNOWN SILOXANE~~	~~11.52~~	~~10~~	~~J~~
3.	~~UNKNOWN SILOXANE~~	~~11.95~~	~~9~~	~~J~~
4.	~~UNKNOWN SILOXANE~~	~~12.44~~	~~14~~	~~J~~
5.	~~UNKNOWN SILOXANE~~	~~13.03~~	~~10~~	~~J~~
6.	~~UNKNOWN SILOXANE~~	~~13.73~~	~~6~~	~~J~~
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C0036

ORIGINAL

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0038

Matrix: (soil/water) WATER Lab Sample ID: 040774-16

Sample wt/vol: 1000 (g/mL) ML Lab File ID: K9741

Level: (low/med) LOW Date Received: 08/06/04

% Moisture: _____ Decanted: (Y/N)___ Date Extracted:08/10/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/16/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Extraction: (Type) CONT

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	13.03	9	J
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EPA SAMPLE NO.

C0039

ORIGINAL

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0038

Matrix: (soil/water) WATER Lab Sample ID: 040774-10

Sample wt/vol: 1000 (g/mL) ML Lab File ID: JM061

Level: (low/med) LOW Date Received: 08/05/04

% Moisture: _____ Decanted: (Y/N)___ Date Extracted:08/09/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/13/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Extraction: (Type) CONT

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 134-62-3	DIETHYLTOLUAMIDE	10.57	2	NJ
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EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

C0034 ORIGINAL

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0038

Matrix: (soil/water) WATER Lab Sample ID: 040774-12

Sample wt/vol: 1000 (g/mL) ML Lab File ID: JM063

Level: (low/med) LOW Date Received: 08/05/04

% Moisture: _____ Decanted: (Y/N)___ Date Extracted:08/09/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/13/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Extraction: (Type) CONT

Number TICs found: 5

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 143-07-7	DODECANOIC ACID	10.27	11	NJ
2. 0-00-0	6-HEXYLHEXAN-6-OLIDE	12.09	8	NJ
3.	UNKNOWN	13.85	3	J
4.	UNKNOWN	14.98	5	J
5.	UNKNOWN	16.45	6	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C0046

ORIGINAL

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0038

Matrix: (soil/water) WATER Lab Sample ID: 040774-09

Sample wt/vol: 1000 (g/mL) ML Lab File ID: JM060

Level: (low/med) LOW Date Received: 08/05/04

% Moisture: _____ Decanted: (Y/N)___ Date Extracted:08/09/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/13/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Extraction: (Type) CONT

Number TICs found: 5

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	12.24	2	J
2.	UNKNOWN	12.85	6	J
3.	UNKNOWN	13.83	16	J
4.	UNKNOWN	14.94	23	J
5.	UNKNOWN	16.42	16	J
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EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

C004 ORIGINAL

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0038

Matrix: (soil/water) WATER Lab Sample ID: 040774-06

Sample wt/vol: 1000 (g/mL) ML Lab File ID: JM058

Level: (low/med) LOW Date Received: 08/05/04

% Moisture: _____ Decanted: (Y/N)___ Date Extracted:08/09/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/13/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Extraction: (Type) CONT

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 111-82-0	DODECANOIC ACID, METHYL ESTE	10.05	3	NJ
2. 143-07-7	DODECANOIC ACID	10.28	13	NJ
3. 28994-41-4	PHENOL, 2-(PHENYLMETHYL)-	11.20	3	NJ
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C0052

ORIGINAL

Lab Name: CEIMIC CORP Contract: 68-W-03-018

Lab Code: CEIMIC Case No.: 33178 SAS No.: SDG No.: C0038

Matrix: (soil/water) WATER Lab Sample ID: 040774-04

Sample wt/vol: 1000 (g/mL) ML Lab File ID: JM056

Level: (low/med) LOW Date Received: 08/05/04

% Moisture: _____ Decanted: (Y/N)___ Date Extracted:08/09/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/13/04

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Extraction: (Type) CONT

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
~~1.~~	~~UNKNOWN SILOXANE~~	~~13.83~~	~~2~~	~~J~~
~~2.~~	~~UNKNOWN SILOXANE~~	~~14.94~~	~~3~~	~~J~~
~~3.~~	~~UNKNOWN SILOXANE~~	~~16.41~~	~~4~~	~~J~~
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Su 09/22/04.

ORIGINAL

Appendix D

Chain-of-Custody Records

USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 33178
DAS No: R31935
R

Region:	3	**Date Shipped:**	8/3/2004	**Chain of Custody Record**	**Sampler Signature:**
Project Code:		**Carrier Name:**	FedEx	**Relinquished By** (Date / Time)	**Received By** (Date / Time)
Account Code:	†03W302DD2CE319LA00	**Airbill:**	843517786259	1	
CERCLIS ID:	MDSFN0305563	**Shipped to:**	Ceimic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900	2	
Spill ID:	E319			3	
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD .			4	
Project Leader:	[redacted]				
Action:	Expanded Site Investigation/RI				
Sampling Co:	MDE-ERRP				

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	QC Type
C0004	Soil (0"-12")/ [redacted]	L/G	BNA/Pests (21), VOA S (21)	122 (Ice Only), 123 (Ice Only), 124 (Ice Only) (3)	S14	S: 8/3/2004	11:30	MC0004 PWS	–
C0014	Soil (>12")/ [redacted]	L/G	BNA/Pests (21), VOA S (21)	162 (Ice Only), 163 (Ice Only), 164 (Ice Only) (3)	SS13	S: 8/3/2004	12:10	MC0014 PWS	–

Shipment for Case Complete? N	**Sample(s) to be used for laboratory QC:**	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?**

BNA/Pests = CLP SVOCs + Pest, VOA S = CLP VOCs (SOLIDS)

TR Number: 3-592370820-080304-0006

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Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4

USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 33178
DAS No: R31935
R

Region:	3	**Date Shipped:**	8/3/2004	**Chain of Custody Record**	**Sampler Signature:**
Project Code:		**Carrier Name:**	FedEx	**Relinquished By** (Date / Time)	**Received By** (Date / Time)
Account Code:	†03W302DD2CE319LA00	**Airbill:**	843517786259	1	
CERCLIS ID:	MDSFN0305563	**Shipped to:**	Ceimic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900	2	
Spill ID:	E319			3	
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD			4	
Project Leader:	[redacted]				
Action:	Expanded Site Investigation/RI				
Sampling Co:	MDE-ERRP				

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	QC Type
C0001	Soil (0"-12")/ [redacted]	L/G	BNA/Pests (21), VOA S (21)	100 (Ice Only), 111 (Ice Only), 112 (Ice Only) (3)	S11	S: 8/3/2004 12:30	MC0001 PWS	–
C0008	Soil (0"-12")/ [redacted]	L/G	BNA/Pests (21), VOA S (21)	138 (Ice Only), 139 (Ice Only), 140 (Ice Only) (3)	S22	S: 8/3/2004 10:20	MC0008 PWS	–
C0019	Soil (>12")/ [redacted]	L/G	BNA/Pests (21), VOA S (21)	183 (Ice Only), 184 (Ice Only), 185 (Ice Only) (3)	SS24	S: 8/3/2004 10:50	MC0019 PWS	–

Shipment for Case Complete? N	**Sample(s) to be used for laboratory QC:**	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____

BNA/Pests = CLP SVOCs + Pest, VOA S = CLP VOCs (SOLIDS)

TR Number: 3-592370820-080304-0008

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USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 33178
DAS No: R31935
R

Region:	3	**Date Shipped:**	8/3/2004	**Chain of Custody Record**	**Sampler Signature:**
Project Code:		**Carrier Name:**	FedEx	**Relinquished By (Date / Time)**	**Received By (Date / Time)**
Account Code:	T03W302DD2CE319LA00	**Airbill:**	843517786259	1	
CERCLIS ID:	MDSFN0305563	**Shipped to:**	Ceimic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900	2	
Spill ID:	E319			3	
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD			4	
Project Leader:	[redacted]				
Action:	Expanded Site Investigation/RI				
Sampling Co:	MDE-ERRP				

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	QC Type
C0003	Soil (0"-12")/ [redacted]	L/G	BNA/Pests (21), VOA S (21)	109 (Ice Only), 110 (Ice Only), 115 (Ice Only), 116 (Ice Only), 117 (Ice Only), 118 (Ice Only), 119 (Ice Only), 120 (Ice Only) (8)	S13	S: 8/3/2004	12:05	MC0003 PWS	Solid Spike
C0011	Soil (0"-12")/ [redacted]	L/G	BNA/Pests (21), VOA S (21)	150 (Ice Only), 151 (Ice Only), 152 (Ice Only) (3)	S25	S: 8/3/2004	10:00	MC0011 PWS ~~MC0010~~	Duplicate of S21
C0015	Soil (>12")/ [redacted]	L/G	BNA/Pests (21), VOA S (21)	166 (Ice Only), 167 (Ice Only), 168 (Ice Only) (3)	SS14	S: 8/3/2004	11:35	MC0015 PWS	–
C0017	Soil (>12")/ [redacted]	L/G	BNA/Pests (21), VOA S (21)	175 (Ice Only), 176 (Ice Only), 177 (Ice Only) (3)	SS22	S: 8/3/2004	10:25	MC0017 PWS	–

Shipment for Case Complete? N	**Sample(s) to be used for laboratory QC:** C0003	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key: BNA/Pests = CLP SVOCs + Pest, VOA S = CLP VOCs (SOLIDS)	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?**

TR Number: 3-592370820-080304-0012

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USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 33178
DAS No: R31935
R

Region:	3	Date Shipped:	8/5/2004	Chain of Custody Record	Sampler Signature:
Project Code:		Carrier Name:	FedEx	Relinquished By (Date / Time)	Received By (Date / Time)
Account Code:	T03W302DD2CE319LA00	Airbill:	843517786226	1	
CERCLIS ID:	MDSFN0305563	Shipped to:	Ceimic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900	2	
Spill ID:	E319			3	
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD			4	
Project Leader:	[redacted]				
Action:	Expanded Site Investigation/RI				
Sampling Co:	MDE-ERRP				

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	QC Type
C0021	Sediment/ [redacted]	L/G	BNA/Pests (21), VOA S (21)	191 (Ice Only), 192 (Ice Only), 193 (Ice Only) (3)	SED1	S: 8/5/2004	11:25	MC0021 pws	--
C0022	Sediment/ [redacted]	L/G	BNA/Pests (21), VOA S (21)	195 (Ice Only), 196 (Ice Only), 197 (Ice Only) (3)	SED2	S: 8/5/2004	11:45	MC0022 pws	--
C0029	Surface Water/ [redacted]	L/G	BNAs (21), Pesticides (21)	223 (Ice Only), 224 (Ice Only) (2)	SW1	S: 8/5/2004	11:20	MC0029	--
C0030	Surface Water/ [redacted]	L/G	BNAs (21), Pesticides (21)	227 (Ice Only), 228 (Ice Only) (2)	SW2	S: 8/5/2004	11:40	MC0030	--

Shipment for Case Complete? ~~N~~ Y pws	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced?

BNA/Pests = CLP SVOCs + Pest, BNAs = CLP SVOCs, Pesticides = CLP Pest, VOA S = CLP VOCs (SOLIDS)

TR Number: 3-592370820-080504-0005

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USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 33178
DAS No: R31935

R

Region:	3	Date Shipped:	8/5/2004	Chain of Custody Record	Sampler Signature:
Project Code:		Carrier Name:	FedEx	Relinquished By (Date / Time)	Received By (Date / Time)
Account Code:	T03W302DD2CE319LA00	Airbill:	843517786226	1	
CERCLIS ID:	MDSFN0305563	Shipped to:	Ceimic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900	2	
Spill ID:	E319			3	
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD			4	
Project Leader:	[redacted]				
Action:	Expanded Site Investigation/RI				
Sampling Co:	MDE-ERRP				

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	QC Type
C0023	Sediment/ [redacted]	L/G	BNA/Pests (21), VOA S (21)	199 (Ice Only), 200 (Ice Only), 201 (Ice Only) (3)	SED3	S: 8/5/2004	11:20	MC0023 PWS	--
C0024	Sediment/ [redacted]	L/G	BNA/Pests (21), VOA S (21)	203 (Ice Only), 204 (Ice Only), 205 (Ice Only) (3)	SED4	S: 8/5/2004	10:25	MC0024 PWS	--
C0025	Sediment/ [redacted]	L/G	BNA/Pests (21), VOA S (21)	207 (Ice Only), 208 (Ice Only), 209 (Ice Only) (3)	SED5	S: 8/5/2004	9:50	MC0025 PWS	--
C0031	Surface Water/ [redacted]	L/G	BNAs (21), Pesticides (21)	232 (Ice Only), 233 (Ice Only) (2)	SW3	S: 8/5/2004	11:15	MC0031	--
C0033	Surface Water/ [redacted]	L/G	BNAs (21), Pesticides (21)	240 (Ice Only), 241 (Ice Only) (2)	SW5	S: 8/5/2004	9:45	MC0033	--

Shipment for Case Complete? ~~N~~ Y PWS	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced? _____

BNA/Pests = CLP SVOCs + Pest, BNAs = CLP SVOCs, Pesticides = CLP Pest, VOA S = CLP VOCs (SOLIDS)

TR Number: 3-592370820-080504-0002

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USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 33178
DAS No: R31935

R

Region:	3	Date Shipped:	8/5/2004
Project Code:		Carrier Name:	FedEx
Account Code:	†03W302DD2CE319LA00	Airbill:	843517786226
CERCLIS ID:	MDSFN0305563	Shipped to:	Ceimic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900
Spill ID:	E319		
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD		
Project Leader:	[redacted]		
Action:	Expanded Site Investigation/RI		
Sampling Co:	MDE-ERRP		

Chain of Custody Record

Sampler Signature:

Relinquished By	(Date / Time)	Received By	(Date / Time)
1			
2			
3			
4			

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	QC Type
C0034	Surface Water/ [redacted]	L/G	BNAs (21), Pesticides (21)	244 (Ice Only), 245 (Ice Only) (2)	SW6	S: 8/5/2004	9:30	MC0034	--
C0037	Surface Water/ [redacted]	L/G	BNAs (21), Pesticides (21)	256 (Ice Only), 257 (Ice Only) (2)	SW9	S: 8/5/2004	10:30	MC0037	--
C02B8	Surface Water/ [redacted]	L/G	VOA A (21)	2229 (HCL), 2230 (HCL) (2)	SW15	S: 8/5/2004	9:00		Trip Blank

Shipment for Case Complete? ~~N~~ Y pws	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced?

BNAs = CLP SVOCs, Pesticides = CLP Pest, VOA A = CLP VOCs (AQUEOUS)

TR Number: 3-592370820-080504-0003

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USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 33178
DAS No: R31935

R

Region:	3	Date Shipped:	8/5/2004	Chain of Custody Record	Sampler Signature:
Project Code:		Carrier Name:	FedEx	Relinquished By (Date / Time)	Received By (Date / Time)
Account Code:	T03W302DD2CE319LA00	Airbill:	843517786226	1	
CERCLIS ID:	MDSFN0305563	Shipped to:	Ceimic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900	2	
Spill ID:	E319			3	
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD			4	
Project Leader:	[redacted]				
Action:	Expanded Site Investigation/RI				
Sampling Co:	MDE-ERRP				

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	QC Type
C0027	Sediment/ [redacted]	L/G	BNA/Pests (21), VOA S (21)	215 (Ice Only), 216 (Ice Only), 217 (Ice Only) (3)	SED7	S: 8/5/2004	8:50	MC0027 PWS	–
C0028	Sediment/ [redacted]	L/G	BNA/Pests (21), VOA S (21)	219 (Ice Only), 220 (Ice Only), 221 (Ice Only) (3)	SED8	S: 8/5/2004	8:55	MC0028 PWS	Duplicate of SED7
C0035	Surface Water/ [redacted]	L/G	BNAs (21), Pesticides (21)	248 (Ice Only), 249 (Ice Only) (2)	SW7	S: 8/5/2004	8:35	MC0035	–
C0036	Surface Water/ [redacted]	L/G	BNAs (21), Pesticides (21)	252 (Ice Only), 253 (Ice Only) (2)	SW8	S: 8/5/2004	8:40	MC0036	Duplicate of SW7

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced?

BNA/Pests = CLP SVOCs + Pest, BNAs = CLP SVOCs, Pesticides = CLP Pest, VOA S = CLP VOCs (SOLIDS)

TR Number: 3-592370820-080504-0009

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USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 33178
DAS No: R31935

R

Region:	3	Date Shipped:	8/4/2004
Project Code:		Carrier Name:	FedEx
Account Code:	T03W302DD2CE319LA00	Airbill:	843517786237
CERCLIS ID:	MDSFN0305563	Shipped to:	Ceimic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900
Spill ID:	E319		
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD		
Project Leader:	[redacted]		
Action:	Expanded Site Investigation/RI		
Sampling Co:	MDE-ERRP		

Chain of Custody Record

Sampler Signature:

Relinquished By	(Date / Time)	Received By	(Date / Time)
1			
2			
3			
4			

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	QC Type
C0039	Surface Water/ [redacted]	L/G	BNAs (21), Pesticides (21)	262 (Ice Only), 263 (Ice Only) (2)	SW12	S: 8/4/2004 12:15	MC0039	Field Blank

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced?

BNAs = CLP SVOCs, Pesticides = CLP Pest

ORIGINAL

TR Number: 3-592370820-080404-0005

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USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 33178
DAS No: R31935

R

Region:	3	Date Shipped:	8/4/2004	Chain of Custody Record	Sampler Signature:
Project Code:		Carrier Name:	FedEx	Relinquished By (Date / Time)	Received By (Date / Time)
Account Code:	T03W302DD2CE319LA00	Airbill:	843517786237	1	
CERCLIS ID:	MDSFN0305563	Shipped to:	Ceimic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900	2	
Spill ID:	E319			3	
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD			4	
Project Leader:	[redacted]				
Action:	Expanded Site Investigation/RI				
Sampling Co:	MDE-ERRP				

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	QC Type
C0042	Ground Water/ [redacted]	L/G	BNAs (21), Pesticides (21)	272 (Ice Only), 273 (Ice Only) (2)	MW1	S: 8/4/2004	10:30	MC0042	--
C0047	Ground Water/ [redacted]	L/G	BNAs (21), Pesticides (21)	292 (Ice Only), 293 (Ice Only) (2)	MW4	S: 8/4/2004	10:45	MC0047	--

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced?

BNAs = CLP SVOCs, Pesticides = CLP Pest

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USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 33178
DAS No: R31935
R

Region:	3	Date Shipped:	8/4/2004	Chain of Custody Record	Sampler Signature:
Project Code:		Carrier Name:	FedEx	Relinquished By (Date / Time)	Received By (Date / Time)
Account Code:	T03W302DD2CE319LA00	Airbill:	843517786237	1	
CERCLIS ID:	MDSFN0305563	Shipped to:	Ceimic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900	2	
Spill ID:	E319			3	
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD			4	
Project Leader:	[redacted]				
Action:	Expanded Site Investigation/RI				
Sampling Co:	MDE-ERRP				

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	QC Type
C0043	Ground Water/ [redacted]	L/G	BNAs (21), Pesticides (21)	276 (Ice Only), 277 (Ice Only) (2)	MW1A	S: 8/4/2004	11:10	MC0043	–
C0044	Ground Water/ [redacted]	L/G	BNAs (21), Pesticides (21)	280 (Ice Only), 281 (Ice Only) (2)	MW2	S: 8/4/2004	12:20	MC0044	–

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced?
BNAs = CLP SVOCs, Pesticides = CLP Pest			

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USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 33178
DAS No: R31935
R

Region:	3	**Date Shipped:**	8/4/2004
Project Code:		**Carrier Name:**	FedEx
Account Code:	†03W302DD2CE319LA00	**Airbill:**	843517786237
CERCLIS ID:	MDSFN0305563	**Shipped to:**	Ceimic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900
Spill ID:	E319		
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD		
Project Leader:	[redacted]		
Action:	Expanded Site Investigation/RI		
Sampling Co:	MDE-ERRP		

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1			
2			
3			
4			

Sampler Signature:

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	QC Type
C0040	Surface Water/ [redacted]	L/G	VOA A (21)	266 (HCL), 267 (HCL) (2)	SW13	S: 8/4/2004	12:17		Trip Blank
C0045	Ground Water/ [redacted]	L/G	BNAs (21), Pesticides (21)	284 (Ice Only), 285 (Ice Only) (2)	MW3	S: 8/4/2004	13:25	MC0045	--
C0046	Ground Water/ [redacted]	L/G	BNAs (21), Pesticides (21)	288 (Ice Only), 289 (Ice Only) (2)	MW3A	S: 8/4/2004	14:00	MC0046	--

Shipment for Case Complete? N	**Sample(s) to be used for laboratory QC:**	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____

BNAs = CLP SVOCs, Pesticides = CLP Pest, VOA A = CLP VOCs (AQUEOUS)

TR Number: 3-592370820-080404-0001

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USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 33178
DAS No: R31935

R

Region:	3	Date Shipped:	8/5/2004	Chain of Custody Record	Sampler Signature:
Project Code:		Carrier Name:	FedEx	Relinquished By (Date / Time)	Received By (Date / Time)
Account Code:	T03W302DD2CE319LA00	Airbill:	843517786226	1	
CERCLIS ID:	MDSFN0305563	Shipped to:	Ceimic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900	2	
Spill ID:	E319			3	
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD			4	
Project Leader:	[redacted]				
Action:	Expanded Site Investigation/RI				
Sampling Co:	MDE-ERRP				

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	QC Type
C0026	Sediment/ [redacted]	L/G	BNA/Pests (21), VOA S (21)	211 (Ice Only), 212 (Ice Only), 213 (Ice Only) (3)	SED6	S: 8/5/2004	9:35	MC0026	--
C0032	Surface Water/ [redacted]	L/G	BNAs (21), Pesticides (21)	236 (Ice Only), 237 (Ice Only) (2)	SW4	S: 8/5/2004	10:20	MC0032	--
C0041	Surface Water/ [redacted]	L/G	BNAs (21), Pesticides (21)	268 (Ice Only), 269 (Ice Only) (2)	SW14	S: 8/5/2004	10:50	MC0041	Field Blank

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced?

BNA/Pests = CLP SVOCs + Pest, BNAs = CLP SVOCs, Pesticides = CLP Pest, VOA S = CLP VOCs (SOLIDS)

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USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 33178
DAS No: R31935
R

Region:	3	Date Shipped:	8/3/2004
Project Code:		Carrier Name:	FedEx
Account Code:	T03W302DD2CE319LA00	Airbill:	843517786259
CERCLIS ID:	MDSFN0305563	Shipped to:	Ceimic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900
Spill ID:	E319		
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD		
Project Leader:	[redacted]		
Action:	Expanded Site Investigation/RI		
Sampling Co:	MDE-ERRP		

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1			
2			
3			
4			

Sampler Signature:

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	QC Type
C0002	Soil (0"-12")/ [redacted]	L/G	BNA/Pests (21), VOA S (21)	107 (Ice Only), 113 (Ice Only), 114 (Ice Only) (3)	S12	S: 8/3/2004	14:16	MC0002 PWS	–
C0006	Soil (0"-12")/ [redacted]	L/G	BNA/Pests (21), VOA S (21)	130 (Ice Only), 131 (Ice Only), 132 (Ice Only) (3)	S16	S: 8/3/2004	14:06	MC0006 PWS	–
C0007	Soil (0"-12")/ [redacted]	L/G	BNA/Pests (21), VOA S (21)	134 (Ice Only), 135 (Ice Only), 136 (Ice Only) (3)	S21	S: 8/3/2004	9:55	MC0007 PWS	–
C0049	Ground Water/ [redacted]	L/G	BNAs (21)	306 (Ice Only), 307 (Ice Only), 308 (Ice Only) (3)	PW5	S: 8/3/2004	11:40	MC0049	Spike

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC: C0049	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced?

BNA/Pests = CLP SVOCs + Pest, BNAs = CLP SVOCs, VOA S = CLP VOCs (SOLIDS)

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USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 33178
DAS No: R31935
R

Region:	3	**Date Shipped:**	8/3/2004	**Chain of Custody Record**	**Sampler Signature:**
Project Code:		**Carrier Name:**	FedEx	**Relinquished By (Date / Time)**	**Received By (Date / Time)**
Account Code:	T03W302DD2CE319LA00	**Airbill:**	843517786259	1	
CERCLIS ID:	MDSFN0305563	**Shipped to:**	Ceimic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900	2	
Spill ID:	E319			3	
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD			4	
Project Leader:	[redacted]				
Action:	Expanded Site Investigation/RI				
Sampling Co:	MDE-ERRP				

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	QC Type
C0005	Soil (0"-12")/ [redacted]	L/G	BNA/Pests (21), VOA S (21)	126 (Ice Only), 127 (Ice Only), 128 (Ice Only) (3)	S15	S: 8/3/2004 12:35	MC0005 PWS	Duplicate of S11
C0012	Soil (>12")/ [redacted]	L/G	BNA/Pests (21), VOA S (21)	154 (Ice Only), 155 (Ice Only), 156 (Ice Only) (3)	SS11	S: 8/3/2004 12:40	MC0012 PWS	–
C0049	Ground Water/ [redacted]	L/G	Pesticides (21)	302 (Ice Only), 303 (Ice Only), 304 (Ice Only) (3)	PW5	S: 8/3/2004 11:40	MC0049	Spike

Shipment for Case Complete? N	**Sample(s) to be used for laboratory QC:** C0049	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?**

BNA/Pests = CLP SVOCs + Pest, Pesticides = CLP Pest, VOA S = CLP VOCs (SOLIDS)

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USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 33178
DAS No: R31935

R

Region:	3	Date Shipped:	8/4/2004	**Chain of Custody Record**	Sampler Signature:
Project Code:		Carrier Name:	FedEx	Relinquished By (Date / Time)	Received By (Date / Time)
Account Code:	T03W302DD2CE319LA00	Airbill:	843517786237	1	
CERCLIS ID:	MDSFN0305563	Shipped to:	Ceimic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900	2	
Spill ID:	E319			3	
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD			4	
Project Leader:	[redacted]				
Action:	Expanded Site Investigation/RI				
Sampling Co:	MDE-ERRP				

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	QC Type
C0051	Ground Water/ [redacted]	L/G	BNAs (21), Pesticides (21)	317 (Ice Only), 318 (Ice Only) (2)	GW2	S: 8/4/2004	9:00	MC0051	--
C0052	Ground Water/ [redacted]	L/G	BNAs (21), Pesticides (21)	321 (Ice Only), 322 (Ice Only) (2)	GW3	S: 8/4/2004	13:25	MC0052	Duplicate of MW3

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced?
BNAs = CLP SVOCs, Pesticides = CLP Pest			

TR Number: 3-592370820-080404-0002

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USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 33178
DAS No: R31935
R

Region:	3	**Date Shipped:**	8/3/2004	**Chain of Custody Record**	**Sampler Signature:**
Project Code:		**Carrier Name:**	FedEx	**Relinquished By** (Date / Time)	**Received By** (Date / Time)
Account Code:	†03W302DD2CE319LA00	**Airbill:**	843517786259	1	
CERCLIS ID:	MDSFN0305563	**Shipped to:**	Ceimic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900	2	
Spill ID:	E319			3	
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD			4	
Project Leader:	[redacted]				
Action:	Expanded Site Investigation/RI				
Sampling Co:	MDE-ERRP				

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	QC Type
C0009	Soil (0"-12")/ [redacted]	L/G	BNA/Pests (21), VOA S (21)	142 (Ice Only), 143 (Ice Only), 144 (Ice Only) (3)	S23	S: 8/3/2004 11:05	MC0009 PWS	–
C0010	Soil (0"-12")/ [redacted]	L/G	BNA/Pests (21), VOA S (21)	146 (Ice Only), 147 (Ice Only), 148 (Ice Only) (3)	S24	S: 8/3/2004 10:45	MC0010 PWS	–
C0016	Soil (>12")/ [redacted]	L/G	BNA/Pests (21), VOA S (21)	171 (Ice Only), 172 (Ice Only), 173 (Ice Only) (3)	SS21	S: 8/3/2004 10:05	MC0016 PWS	–
C0018	Soil (>12")/ [redacted]	L/G	BNA/Pests (21), VOA S (21)	179 (Ice Only), 180 (Ice Only), 181 (Ice Only) (3)	SS23	S: 8/3/2004 11:10	MC0018 PWS	–
C0038	Surface Water/ [redacted]	L/G	VOA A (21)	260 (HCL), 261 (HCL) (2)	SW11	S: 8/3/2004 14:11		Trip Blank

Shipment for Case Complete? N	**Sample(s) to be used for laboratory QC:**	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?**

BNA/Pests = CLP SVOCs + Pest, VOA A = CLP VOCs (AQUEQUS), VOA S = CLP VOCs (SOLIDS)

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USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case: 33178
Client No: R31935

R

Region:	3	**Date Shipped:**	8/3/2004
Project Code:		**Carrier Name:**	FedEx
Account Code:	T03W302DD2CE319LA00	**Airbill:**	843517786259
CERCLIS ID:	MDSFN0305563	**Shipped to:**	Ceimic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900
Spill ID:	E319		
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD		
Project Leader:	[redacted]		
Action:	Expanded Site Investigation/RI		
Sampling Co:	MDE-ERRP		

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1			
2			
3			
4			

Sampler Signature:

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		QC Type
S11 C0001	Soil (0"-12")/ [redacted]	L/G	Moisture (21)	2202 (Ice Only) (1)	S11	S: 8/3/2004	12:30	–
S22 C0008	Soil (0"-12")/ [redacted]	L/G	Moisture (21)	2209 (Ice Only) (1)	S22	S: 8/3/2004	10:20	–
SS24 C0019	Soil (>12")/ [redacted]	L/G	Moisture (21)	2228 (Ice Only) (1)	SS24	S: 8/3/2004	10:50	–

Shipment for Case Complete? N	**Sample(s) to be used for laboratory QC:**	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key: Moisture = Moisture analysis	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____

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USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case: 33178
Client No: R31935

R

Region:	3	Date Shipped:	8/3/2004	**Chain of Custody Record**	Sampler Signature:
Project Code:		Carrier Name:	FedEx	Relinquished By (Date / Time)	Received By (Date / Time)
Account Code:	T03W302DD2CE319LA00	Airbill:	843517786259	1	
CERCLIS ID:	MDSFN0305563	Shipped to:	Ceimic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900	2	
Spill ID:	E319			3	
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD			4	
Project Leader:	[redacted]				
Action:	Expanded Site Investigation/RI				
Sampling Co:	MDE-ERRP				

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		QC Type
S23 C0009	Soil (0"-12")/ [redacted]	L/G	Moisture (21)	2210 (Ice Only) (1)	S23	S: 8/3/2004	11:05	–
S24 C0010	Soil (0"-12")/ [redacted]	L/G	Moisture (21)	2211 (Ice Only) (1)	S24	S: 8/3/2004	10:45	–
SS21 C0016	Soil (>12")/ [redacted]	L/G	Moisture (21)	2225 (Ice Only) (1)	SS21	S: 8/3/2004	10:05	–
SS23 C0018	Soil (>12")/ [redacted]	L/G	Moisture (21)	2227 (Ice Only) (1)	SS23	S: 8/3/2004	11:10	–

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced?
Moisture = Moisture analysis			

ORIGINAL

TR Number: 3-592370820-080304-0009

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USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case: 33178
Client No: R31935

R

Region:	3	**Date Shipped:**	8/3/2004	**Chain of Custody Record**	**Sampler Signature:**
Project Code:		**Carrier Name:**	FedEx	**Relinquished By (Date / Time)**	**Received By (Date / Time)**
Account Code:	T03W302DD2CE319LA00	**Airbill:**	843517786259	1	
CERCLIS ID:	MDSFN0305563	**Shipped to:**	Ceimic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900	2	
Spill ID:	E319			3	
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD			4	
Project Leader:	[redacted]				
Action:	Expanded Site Investigation/RI				
Sampling Co:	MDE-ERRP				

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	QC Type
S12 C0002	Soil (0"-12")/ [redacted]	L/G	Moisture (21)	2203 (Ice Only) (1)	S12	S: 8/3/2004 14:16	–
S16 C0006	Soil (0"-12")/ [redacted]	L/G	Moisture (21)	2207 (Ice Only) (1)	S16	S: 8/3/2004 14:06	–
S21 C0007	Soil (0"-12")/ [redacted]	L/G	Moisture (21)	2208 (Ice Only) (1)	S21	S: 8/3/2004 9:55	–

Shipment for Case Complete? N	**Sample(s) to be used for laboratory QC:**	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key: Moisture = Moisture analysis	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____

ORIGINAL

TR Number: 3-592370820-080304-0001

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USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case: 33178
Client No: R31935
R

Region:	3	**Date Shipped:**	8/3/2004	**Chain of Custody Record**	**Sampler Signature:**
Project Code:		**Carrier Name:**	FedEx	**Relinquished By (Date / Time)**	**Received By (Date / Time)**
Account Code:	T03W302DD2CE319LA00	**Airbill:**	843517786259	1	
CERCLIS ID:	MDSFN0305563	**Shipped to:**	Ceimic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900	2	
Spill ID:	E319			3	
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD			4	
Project Leader:	[redacted]				
Action:	Expanded Site Investigation/RI				
Sampling Co:	MDE-ERRP				

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		QC Type
S13 C0003	Soil (0"-12")/ [redacted]	L/G	Moisture (21)	2204 (Ice Only) (1)	S13	S: 8/3/2004	12:05	Solid Spike
S25 C0011	Soil (0"-12")/ [redacted]	L/G	Moisture (21)	2212 (Ice Only) (1)	S25	S: 8/3/2004	10:00	Duplicate of S21
SS14 C0015	Soil (>12")/ [redacted]	L/G	Moisture (21)	2224 (Ice Only) (1)	SS14	S: 8/3/2004	11:35	–
SS22 C0017	Soil (>12")/ [redacted]	L/G	Moisture (21)	2226 (Ice Only) (1)	SS22	S: 8/3/2004	10:25	–

Shipment for Case Complete? N	**Sample(s) to be used for laboratory QC:**	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key: Moisture = Moisture analysis	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?**

ORIGINAL

TR Number: 3-592370820-080304-0011

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USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case: 33178
Client No: R31935
R

Region:	3	**Date Shipped:**	8/3/2004	**Chain of Custody Record**	**Sampler Signature:**
Project Code:		**Carrier Name:**	FedEx	**Relinquished By (Date / Time)**	**Received By (Date / Time)**
Account Code:	T03W302DD2CE319LA00	**Airbill:**	843517786259	1	
CERCLIS ID:	MDSFN0305563	**Shipped to:**	Ceimic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900	2	
Spill ID:	E319			3	
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD			4	
Project Leader:	[redacted]				
Action:	Expanded Site Investigation/RI				
Sampling Co:	MDE-ERRP				

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		QC Type
S15 C0005	Soil (0"-12")/ [redacted]	L/G	Moisture (21)	2206 (Ice Only) (1)	S15	S: 8/3/2004	12:35	Duplicate of S11
SS11 C0012	Soil (>12")/ [redacted]	L/G	Moisture (21)	2221 (Ice Only) (1)	SS11	S: 8/3/2004	12:40	–

Shipment for Case Complete? N	**Sample(s) to be used for laboratory QC:**	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key: Moisture = Moisture analysis	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?**

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TR Number: 3-592370820-080304-0003

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USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case: 33178
Client No: R31935

R

Region:	3	**Date Shipped:**	8/3/2004	**Chain of Custody Record**	**Sampler Signature:**
Project Code:		**Carrier Name:**	FedEx	**Relinquished By (Date / Time)**	**Received By (Date / Time)**
Account Code:	T03W302DD2CE319LA00	**Airbill:**	843517786259	1	
CERCLIS ID:	MDSFN0305563	**Shipped to:**	Ceimic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900	2	
Spill ID:	E319			3	
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD			4	
Project Leader:	[redacted]				
Action:	Expanded Site Investigation/RI				
Sampling Co:	MDE-ERRP				

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		QC Type
S14 C0004	Soil (0"-12")/ [redacted]	L/G	Moisture (21)	2205 (Ice Only) (1)	S14	S: 8/3/2004	11:30	--
SS13 C0014	Soil (>12")/ [redacted]	L/G	Moisture (21)	2223 (Ice Only) (1)	SS13	S: 8/3/2004	12:10	--

Shipment for Case Complete? N	**Sample(s) to be used for laboratory QC:**	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:** ORIGINAL
Analysis Key: Moisture = Moisture analysis	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____

TR Number: 3-592370820-080304-0005

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USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case: 33178
Client No: R31935

R

Region:	3	Date Shipped:	8/5/2004
Project Code:		Carrier Name:	FedEx
Account Code:	T03W302DD2CE319LA00	Airbill:	843517786226
CERCLIS ID:	MDSFN0305563	Shipped to:	Ceimic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900
Spill ID:	E319		
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD		
Project Leader:	[redacted]		
Action:	Expanded Site Investigation/RI		
Sampling Co:	MDE-ERRP		

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1			
2			
3			
4			

Sampler Signature:

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		QC Type
SED3 C0023	Sediment/ [redacted]	L/G	Moisture (21)	2215 (Ice Only) (1)	SED3	S: 8/5/2004	11:20	--
SED4 C0024	Sediment/ [redacted]	L/G	Moisture (21)	2216 (Ice Only) (1)	SED4	S: 8/5/2004	10:25	--
SED5 C0025	Sediment/ [redacted]	L/G	Moisture (21)	2217 (Ice Only) (1)	SED5	S: 8/5/2004	9:50	--

JS, ESAT 8-31-04

Shipment for Case Complete? N Y PWS	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number: ORIGINAL
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced?
Moisture = Moisture analysis			

TR Number: 3-592370820-080504-0001

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USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case: 33178
Client No: R31935

R

Region:	3	**Date Shipped:**	8/5/2004	**Chain of Custody Record**	**Sampler Signature:**
Project Code:		**Carrier Name:**	FedEx	**Relinquished By (Date / Time)**	**Received By (Date / Time)**
Account Code:	T03W302DD2CE319LA00	**Airbill:**	843517786226	1	
CERCLIS ID:	MDSFN0305563	**Shipped to:**	Ceimic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900	2	
Spill ID:	E319			3	
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD			4	
Project Leader:	[redacted]				
Action:	Expanded Site Investigation/RI				
Sampling Co:	MDE-ERRP				

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		QC Type
SED7	Sediment/ [redacted]	L/G	Moisture (21)	2219 (Ice Only) (1)	SED7	S: 8/5/2004	8:50	--
SED8	Sediment/ [redacted]	L/G	Moisture (21)	2220 (Ice Only) (1)	SED8	S: 8/5/2004	8:55	Duplicate of SED7

Shipment for Case Complete? Y	**Sample(s) to be used for laboratory QC:**	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:** ORIGINAL
Analysis Key: Moisture = Moisture analysis	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?**

TR Number: 3-592370820-080504-0008

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USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case: 33178
Client No: R31935

R

Region:	3	**Date Shipped:**	8/5/2004	**Chain of Custody Record**	**Sampler Signature:**
Project Code:		**Carrier Name:**	FedEx	**Relinquished By (Date / Time)**	**Received By (Date / Time)**
Account Code:	T03W302DD2CE319LA00	**Airbill:**	843517786226	1	
CERCLIS ID:	MDSFN0305563	**Shipped to:**	Ceimic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900	2	
Spill ID:	E319			3	
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD			4	
Project Leader:	[redacted]				
Action:	Expanded Site Investigation/RI				
Sampling Co:	MDE-ERRP				

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	QC Type
SED1	Sediment/ [redacted]	L/G	Moisture (21)	2213 (Ice Only) (1)	SED1	S: 8/5/2004 11:25	--
SED2	Sediment/ [redacted]	L/G	Moisture (21)	2214 (Ice Only) (1)	SED2	S: 8/5/2004 11:45	--

Shipment for Case Complete? ~~N~~ Y pws	**Sample(s) to be used for laboratory QC:**	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key: Moisture = Moisture analysis	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?**

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TR Number: 3-592370820-080504-0004

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USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case: 33178
Client No: R31935

R

Region:	3	**Date Shipped:**	8/5/2004
Project Code:		**Carrier Name:**	FedEx
Account Code:	T03W302DD2CE319LA00	**Airbill:**	843517786226
CERCLIS ID:	MDSFN0305563	**Shipped to:**	Ceimic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900
Spill ID:	E319		
Site Name/State:	Route 7 Dump/New Jersey Fireworks/MD		
Project Leader:	[redacted]		
Action:	Expanded Site Investigation/RI		
Sampling Co:	MDE-ERRP		

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1			
2			
3			
4			

Sampler Signature:

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	QC Type
SED6	Sediment/ [redacted]	L/G	Moisture (21)	2218 (Ice Only) (1)	SED6	S: 8/5/2004 9:35	--

Shipment for Case Complete? Y	**Sample(s) to be used for laboratory QC:**	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number**
Analysis Key: Moisture = Moisture analysis	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?**

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TR Number: 3-592370820-080504-0006

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U.S EPA Region III Analytical Request Form

RAS CASE #: CT3062 33178	DAS #:	NSF #:
Date: 6/16/04	QAPP/SAP: 06/04	Data Validation Level: IM2, M3
Site: ~~RENNI FIREWORKS~~ New Jersey Fireworks		
Address: RT.7 OLD PHILADELPHIA RD	City: ELKTON	State: MD
Latitude: 39 36 15	Longitude: 75 52 50	
Program: CERCLA	CERCLIS#: MDSFN0305563	Activity: ESI
Account #: 2004T03N302DD2CE319LA00	Operable Unit: 00	Spill ID: E319

Preparer: PHILL ANDERSON	Phone: 410 537-3440	Fax: 410 537-3472	E-mail: panderson@mde.state.md.us
OSC/RPM: LORIE BAKER	Phone: 215 814-3355	Fax:	E-mail: baker.lorie@epamail.gov
Site Leader: PHILL ANDERSON	Phone: 410 537-3440	Fax: 410 5337-3472	E-mail: panderson@mde.state.md.us
EPA CO: LORIE BAKER	Contract Type:	Prime: MDE	Sub:
Analytical TAT: 21 days		Analytical + Validation TAT: 42 days	
Ship Date From: Aug 3, 2004		Ship Date To: Aug 5, 2004	

Samples	Method	Parameter	Matrix	
27	OLM04.3	TCL VOCS Ceimic	SOIL/SEDIMENT	22392
27	OLM04.3	TCL SVOCS & TCL PESTICIDES Ceimic	SOIL/SEDIMENT	
27	ILM05.3 ICP-AES	TAL METALS & CYANIDE BONNER	SOIL/SEDIMENT	22396
3	OLM04.3	TCL VOCS Ceimic	WATER	22392
23	OLM04.3	TCL SVOCS & PESTICIDES Ceimic	WATER	22393, 22394
~~44~~ 21	ILM05.3 ICP-AES	~~TAL METALS~~ TALMetals BONNER	WATER	22397
23	ILM05.3 ICP-AES	CYANIDE + Metals + Hg BONNER	WATER	22398
		Limited to Bonner Metals + Hg		

Instruction: Please note; after final approval of the SAP, it was determined that an additional trip blank may be necessary. Therefore, this RAS request reflects (3) trips blanks compared to (2) that is outlined in the SAP.

Audited & entered: 8/26/04 DH

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Appendix E

Laboratory Case Narrative

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SDG Narrative

The enclosed data package is in response to USEPA, Region III, Case No. 33178, and SDG No. C0001, Contract No. 68-W-03-018. Under this SDG there are 22 VOA, 22 SVOA and 22 PEST/PCB samples received at Ceimic Corporation on August 4 and 6, 2003.

EPA ID:	CEIMIC ID:	Analysis
C0001	040773-01	VOA, SVOA, PEST/PCB
C0008	040773-02	VOA, SVOA, PEST/PCB
C0019	040773-03	VOA, SVOA, PEST/PCB
C0004	040773-04	VOA, SVOA, PEST/PCB
C0014	040773-05	VOA, SVOA, PEST/PCB
C0002	040773-06	VOA, SVOA, PEST/PCB
C0006	040773-07	VOA, SVOA, PEST/PCB
C0007	040773-08	VOA, SVOA, PEST/PCB
C0003	040773-09	VOA, SVOA, PEST/PCB
C0003MS	040773-09MS	VOA, SVOA, PEST/PCB
C0003MSD	040773-09MSD	VOA, SVOA, PEST/PCB
C0011	040773-10	VOA, SVOA, PEST/PCB
C0015	040773-11	VOA, SVOA, PEST/PCB
C0017	040773-12	VOA, SVOA, PEST/PCB
C0009	040773-13	VOA, SVOA, PEST/PCB
C0010	040773-14	VOA, SVOA, PEST/PCB
C0016	040773-15	VOA, SVOA, PEST/PCB
C0018	040773-16	VOA, SVOA, PEST/PCB
C0005	040773-17	VOA, SVOA, PEST/PCB
C0012	040773-18	VOA, SVOA, PEST/PCB
C0023	040773-19	VOA, SVOA, PEST/PCB
C0024	040773-20	VOA, SVOA, PEST/PCB

(1) Sample Receipt

Cooler Temperatures upon receipt were 2°C, 3°C, 4°C and 5°C.

(2) Instrumentation and Column Identification

The following instruments were used for the analyses:

GC/ECD Analysis

A. VOA

MS15 HP5972 GC/MS, 30m, 0.25mm ID, 1.4 um, DB-624 capillary column.
OI trap #10 (8cm Tenax, 8cm silica gel, 8cm carbon molecular sieve)

B. SVOA

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MS10 HP5890SeriesII GC, HP5970BMS,30 m,25 mm ID, ZB-5 fused silica capillary column

MS11 HP6890 GC, HP5973MS,30 m,25 mm ID, ZB-5 fused silica capillary column

C. PEST/PCB

AD6: HP5890II (GC8) using 30m x 0.53mm ID, DB5 megabore column

AD7: HP5890II (GC8) using 30m x 0.53mm ID, DB35 megabore column

(3) Sample Information

An "x" qualifier is flagged by Target Thru-put software whenever the data is manually edited. The letter "M" for GC/MS and for GC is used on the raw data of the quantitation report whenever a manual integration is performed. Manual integrations are performed on GC/MS and GC standards and samples when computer generated integration picks up only a portion of the chromatographic peak, due to software limitations. When manual integrations are required, these integrations are performed using sound defensible professional judgment, in order to report accurate data. Each manual integration is signed and dated, and reviewed by both the lab supervisor and the GC/MS Interpretation Specialist for GC/MS or the Organic Lab Manager for Pest/PCB.

A. VOA Fraction (Method CLP SOW OLM04.3)

The %moistures of the soil samples were:

Client ID:	Ceimic ID:	%M:
C0001	040773-01	18
C0002	040773-06	16
C0003	040773-09	10
C0004	040773-04	41
C0005	040773-17	27
C0006	040773-07	29
C0007	040773-08	23
C0008	040773-02	22
C0009	040773-13	33
C0010	040773-14	19
C0011	040773-10	25
C0012	040773-18	14
C0014	040773-05	14
C0015	040773-11	15
C0016	040773-15	16

C0017	040773-12	12
C0018	040773-16	11
C0019	040773-03	17
C0023	040773-19	34
C0024	040773-20	21

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The recoveries of the spike compounds trichloroethene and chlorobenzene were flagged as outliers in the matrix spike duplicate. The majority of the Relative Percent Differences (RPDs) failed quality control criteria in the comparison of the duplicate matrix spikes. In accordance with the Statement of Work (SOW), we have reported the data without further analysis.

B. SVOA Fraction (Method CLP SOW OLM04.3)

The pH and %moisture of the soil samples were:

Client ID:	Ceimic ID:	pH	%M
C0001	040773-01	4.2	22
C0002	040773-06	8.6	25
C0003	040773-09	8.6	8
C0004	040773-04	7.0	22
C0005	040773-17	4.8	13
C0006	040773-07	6.3	21
C0007	040773-08	7.9	27
C0008	040773-02	7.2	18
C0009	040773-13	4.6	9
C0010	040773-14	5.2	14
C0011	040773-10	8.0	27
C0012	040773-18	4.8	16
C0014	040773-05	8.9	7
C0015	040773-11	6.9	13
C0016	040773-15	7.1	18
C0017	040773-12	5.5	18
C0018	040773-16	4.8	13
C0019	040773-03	4.9	15
C0023	040773-19	4.8	31
C0024	040773-20	5.7	18

Due to the results of a screen, the following sample was analyzed at a dilution:

Client ID:	Ceimic ID:	Dilution:
C0003	040773-09	3:1

Manual quantitations were performed on one or more of the process files associated with this SDG, including samples C0003, C0008, and C0023. The

ORIGINAL

SDG Narrative

The enclosed data package is in response to USEPA, Region III, Case No. 33178, and SDG No. C0021, Contract No. 68-W-03-018. Under this SDG there are 8 VOA, 8 SVOA and 8 PEST/PCB samples received at Ceimic Corporation on August 6, 2004.

EPA ID:	CEIMIC ID:	Analysis
C0025	040790-01	VOA, SVOA, PEST/PCB
C0027	040790-02	VOA, SVOA, PEST/PCB
C0028	040790-03	VOA, SVOA, PEST/PCB
C0021	040790-04	VOA, SVOA, PEST/PCB
C0022	040790-05	VOA, SVOA, PEST/PCB
C0026	040790-06	VOA, SVOA, PEST/PCB
C0026MS	040790-06MS	VOA, SVOA, PEST/PCB
C0026MSD	040790-06MSD	VOA, SVOA, PEST/PCB

(1) Sample Receipt

Cooler Temperatures upon receipt were 3°C, 4°C and 6°C.

(2) Instrumentation and Column Identification

The following instruments were used for the analyses:

GC/ECD Analysis

A. VOA

MS15 HP5972 GC/MS, 30m, 0.25mm ID, 1.4 um, DB-624 capillary column.
OI trap #10 (8cm Tenax, 8cm silica gel, 8cm carbon molecular sieve)

B. SVOA

MS11 HP6890 GC, HP5973MS,30 m,25 mm ID, ZB-5 fused silica capillary column

C. PEST/PCB

AD8: HP5890II (GC7) using 30m x 0.53mm ID, DB5 megabore column
AD9: HP5890II (GC7) using 30m x 0.53mm ID, DB1701 megabore column

(3) Sample Information

An "x" qualifier is flagged by Target Thru-put software whenever the data is manually edited. The letter "M" for GC/MS and for GC is used on the raw data of the quantitation report whenever a manual integration is performed. Manual integrations are performed on

GC/MS and GC standards and samples when computer generated integration picks up only a portion of the chromatographic peak, due to software limitations. When manual integrations are required, these integrations are performed using sound defensible professional judgment, in order to report accurate data. Each manual integration is signed and dated, and reviewed by both the lab supervisor and the GC/MS Interpretation Specialist for GC/MS or the Organic Lab Manager for Pest/PCB.

ORIGINAL

A. VOA Fraction (Method CLP SOW OLM04.3)

The %moistures of the soil samples were:

Client ID:	Ceimic ID:	%M:
C0021	040790-04	28
C0022	040790-05	22
C0025	040790-01	38
C0026	040790-06	22
C0027	040790-02	21
C0028	040790-03	42

No sample was designated for QC. The Region was contacted and agreed with Ceimic's request to use sample C0026 for QC.

The recovery of the spike compound 1,1-dichloroethene was flagged as an outlier in the matrix spike.

B. SVOA Fraction (Method CLP SOW OLM04.3)

The pH and %moisture of the soil samples were:

Client ID:	Ceimic ID:	pH	%M
C0021	040790-04	5.5	23
C0022	040790-05	5.3	24
C0025	040790-01	5.6	41
C0026	040790-06	5.3	23
C0027	040790-02	5.5	31
C0028	040790-03	6.0	27

Manual quantitations were performed on one or more of the process files associated with this SDG, including samples C0025 and C0026. The recoveries of the spike compounds 4-nitrophenol and pentachlorophenol were flagged as outliers in the matrix spike duplicates. The Relative Percent Difference (RPD) of acenaphthene was flagged as an outlier in the comparison of the duplicate matrix spikes.

C. PEST/PCB Fraction (Method CLP SOW OLM04.3)

No non-compliances noted.

ORIGINAL

Deviations from the SOW

None other than specified above.

End of SDG Narrative

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the laboratory manager or his/her designee, as verified by the following signature.

[redacted]

Laboratory Manager

08/26/04

Date

ALKANE NARRATIVE REPORT
Report date : 08/25/2004
SDG: C0021

ORIGINAL

Client Sample ID: C0025 Lab Sample ID: 040790-01 File ID: K9761

Compound	RT	Est. Conc.	Q
Unknown Straight Chain Alkane	12.21	3900	J
Unknown Straight Chain Alkane	13.06	3500	J

Client Sample ID: C0027 Lab Sample ID: 040790-02 File ID: K9762

Compound	RT	Est. Conc.	Q
Unknown Straight Chain Alkane	11.50	320	J
Unknown Straight Chain Alkane	12.17	1800	J

Client Sample ID: C0028 Lab Sample ID: 040790-03 File ID: K9763

Compound	RT	Est. Conc.	Q
Unknown Straight Chain Alkane	8.01	230	J
Unknown Branched Alkane	9.54	160	J
Unknown Branched Alkane	9.84	210	J
Unknown Branched Alkane	10.41	230	J
Unknown Straight Chain Alkane	11.50	350	J
Unknown Straight Chain Alkane	12.17	3900	J
Unknown Straight Chain Alkane	13.02	3100	J

ORIGINAL

SDG Narrative

The enclosed data package is in response to USEPA, Region III, Case No. 33178, and SDG No. C0032, Contract No. 68-W-03-018. Under this SDG there are 3 VOA, 4 SVOA and 4 PEST/PCB samples received at Ceimic Corporation on August 6, 2004.

EPA ID:	CEIMIC ID:	Analysis
C02B8	040791-01	VOA
C02B8MS	040791-01MS	VOA
C02B8MSD	040791-01MSD	VOA
C0032	040791-02	SVOA, PEST/PCB
C0032MS	040791-02MS	SVOA, PEST/PCB
C0032MSD	040791-02MSD	SVOA, PEST/PCB
C0041	040791-03	SVOA, PEST/PCB

(1) Sample Receipt

Cooler Temperatures upon receipt were 4°C and 6°C.

(2) Instrumentation and Column Identification

The following instruments were used for the analyses:

GC/ECD Analysis

A. VOA

MS4 HP5972 GC/MS, 30m, 0.25mm ID, 1.4 um, DB-624 capillary column. OI trap #10 (8cm Tenax, 8cm silica gel, 8cm carbon molecular sieve)

B. SVOA

MS11 HP6890 GC, HP5973MS,30 m,25 mm ID, ZB-5 fused silica capillary column

C. PEST/PCB

AD8: HP5890II (GC7) using 30m x 0.53mm ID, DB5 megabore column

AD9: HP5890II (GC7) using 30m x 0.53mm ID, DB1701 megabore column

(3) Sample Information

An "x" qualifier is flagged by Target Thru-put software whenever the data is manually edited. The letter "M" for GC/MS and for GC is used on the raw data of the quantitation report whenever a manual integration is performed. Manual integrations are performed on

GC/MS and GC standards and samples when computer generated integration picks up only a portion of the chromatographic peak, due to software limitations. When manual integrations are required, these integrations are performed using sound defensible professional judgment, in order to report accurate data. Each manual integration is signed and dated, and reviewed by both the lab supervisor and the GC/MS Interpretation Specialist for GC/MS or the Organic Lab Manager for Pest/PCB.

ORIGINAL

A. VOA Fraction (Method CLP SOW OLM04.3)

The pH of the water sample was:

Client ID:	Ceimic ID:	pH:
C02B8	040791-01	1

No sample was designated for QC. The Region was contacted and agreed with Ceimic's request to use sample C02B8 for VOA QC.

B. SVOA Fraction (Method CLP SOW OLM04.3)

Aqueous Sample Reference Table:

Client ID	Ceimic ID
C0032	040791-02
C0041	040791-03

No sample was designated for QC. The Region was contacted and agreed with Ceimic's request to use sample C0032 for BNA/PEST QC.
500 mL of raw sample were used to extract the matrix spike duplicates, rather than the method-specified amount of 1000 mL. Low sample volume was received for the original sample. The recovery of the spike compound 4-nitrophenol was flagged as an outlier in the matrix spike and matrix spike duplicate.

C. PEST/PCB Fraction (Method CLP SOW OLM04.3)

No non-compliances noted.

Deviations from the SOW

None other than specified above.

End of SDG Narrative

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette

has been authorized by the laboratory manager or his/her designee, as verified by the following signature.

ORIGINAL

[redacted]

Laboratory Manager

08/26/04

Date

ORIGINAL

SDG Narrative

The enclosed data package is in response to USEPA, Region III, Case No.33178, and SDG No. C0038, Contract No. 68-W-03-018. Under this SDG there are 4 VOA, 20 SVOA and 20 PEST/PCB samples received at Ceimic Corporation on August 4, 5 and 6, 2004.

EPA ID:	CEIMIC ID:	Analysis
C0049	040774-01	SVOA, PEST/PCB
C0049MS	040774-01MS	SVOA, PEST/PCB
C0049MSD	040774-01MSD	SVOA, PEST/PCB
C0038	040774-02	VOA
C0038MS	040774-02MS	VOA
C0038MSD	040774-02MSD	VOA
C0051	040774-03	SVOA, PEST/PCB
C0052	040774-04	SVOA, PEST/PCB
C0042	040774-05	SVOA, PEST/PCB
C0047	040774-06	SVOA, PEST/PCB
C0040	040774-07	VOA
C0045	040774-08	SVOA, PEST/PCB
C0046	040774-09	SVOA, PEST/PCB
C0039	040774-10	SVOA, PEST/PCB
C0043	040774-11	SVOA, PEST/PCB
C0044	040774-12	SVOA, PEST/PCB
C0031	040774-13	SVOA, PEST/PCB
C0033	040774-14	SVOA, PEST/PCB
C0035	040774-15	SVOA, PEST/PCB
C0036	040774-16	SVOA, PEST/PCB
C0029	040774-17	SVOA, PEST/PCB
C0030	040774-18	SVOA, PEST/PCB
C0034	040774-19	SVOA, PEST/PCB
C0037	040774-20	SVOA, PEST/PCB

(1) Sample Receipt

Cooler Temperatures upon receipt were 3°C, 4°C and 5°C.

(2) Instrumentation and Column Identification

The following instruments were used for the analyses:

GC/ECD Analysis

A. VOA

MS4 HP5972 GC/MS, 30m, 0.25mm ID, 1.4 um, DB-624 capillary column.

OI trap #10 (8cm Tenax, 8cm silica gel, 8cm carbon molecular sieve)
MS16 HP5972 GC/MS, 30m, 0.25mm ID, 1.4 um, DB-624 capillary column.
OI trap #10 (8cm Tenax, 8cm silica gel, 8cm carbon molecular sieve)

ORIGINAL

B. SVOA

MS10 HP5890SeriesII GC, HP5970BMS,30 m,0.25 mm ID, ZB-5 fused silica capillary column
MS11 HP6890 GC, HP5973MS,30 m,0.25 mm ID, ZB-5 fused silica capillary column

C. PEST/PCB

AD8: HP5890II (GC7) using 30m x 0.53mm ID, DB5 megabore column
AD9: HP5890II (GC7) using 30m x 0.53mm ID, DB1701 megabore column

(3) Sample Information

An "x" qualifier is flagged by Target Thru-put software whenever the data is manually edited. The letter "M" for GC/MS and for GC is used on the raw data of the quantitation report whenever a manual integration is performed. Manual integrations are performed on GC/MS and GC standards and samples when computer generated integration picks up only a portion of the chromatographic peak, due to software limitations. When manual integrations are required, these integrations are performed using sound defensible professional judgment, in order to report accurate data. Each manual integration is signed and dated, and reviewed by both the lab supervisor and the GC/MS Interpretation Specialist for GC/MS or the Organic Lab Manager for Pest/PCB.

A. VOA Fraction (Method CLP SOW OLM04.3)

The pHs of the water samples were:

Client ID:	Ceimic ID:	pH:
C0038	040774-02	1
C0040	040774-07	1

No sample was designated for QC. The Region was contacted and agreed with Ceimic's request to use sample C0038 for VOA QC.

B. SVOA Fraction (Method CLP SOW OLM04.3)

Aqueous Sample Reference Table:

Client ID	Ceimic ID
C0029	040774-17
C0030	040774-18

C0031	040774-13
C0033	040774-14
C0034	040774-19
C0035	040774-15
C0036	040774-16
C0037	040774-20
C0039	040774-10
C0042	040774-05
C0043	040774-11
C0044	040774-12
C0045	040774-08
C0046	040774-09
C0047	040774-06
C0049	040774-01
C0051	040774-03
C0052	040774-04

ORIGINAL

No sample was designated for QC. The Region was contacted and agreed with Ceimic's request to use sample C0049 for BNA/PEST QC.

Manual quantitations were performed on one or more of the process files associated with this SDG, including sample C0052. One base surrogate failed quality control criteria in C0033, C0034, C0035, C0036, C0037, C0042, C0044, C0046, and C0047. The recovery of the spike compound 4-nitrophenol was flagged as an outlier in the matrix spike. The recoveries of the spike compounds N-nitroso-di-n-propylamine and 4-nitrophenol were flagged as outliers in the matrix spike duplicate. The Relative Percent Difference (RPD) of N-nitroso-di-n-propylamine was flagged as an outlier in the comparison of the duplicate matrix spikes.

C. PEST/PCB Fraction (Method CLP SOW OLM04.3)

All samples were extracted and analyzed within their respective holding times.

The following recoveries were outside the QC limits in C0049MS/MSD:

Analyte	**% MS**	**% MSD**	**%RPD**
4,4'-DDT			32

No other non-compliances were noted.

Deviations from the SOW

None other than specified above.

End of SDG Narrative

ORIGINAL

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the laboratory manager or his/her designee, as verified by the following signature.

[redacted]

Laboratory Manager

08/26/04

Date

ALKANE NARRATIVE REPORT
Report date : 08/24/2004
SDG: C0038

ORIGINAL

Client Sample ID: C0036 Lab Sample ID: 040774-16 File ID: K9741

Compound	RT	Est. Conc.	Q
Unknown Straight Chain Alkane	11.52	6	J
Unknown Branched Alkane	11.83	7	J
Unknown Straight Chain Alkane	12.18	13	J
Unknown Straight Chain Alkane	12.58	10	J

[redacted]

ORIGINAL

From: [redacted]
Sent: Monday, August 09, 2004 3:05 PM
To: [redacted] mail)
Cc: [redacted] mail)
Subject: Region 03 | Case 33178 | Lab CEIMIC | Issue Insufficient/inappropriate designation of laboratory QC | FINAL

[redacted]

In accordance with previous direction from Region 3, the laboratory will select a sample for laboratory QC as long as the sample is not a PE, blank, or rinsate sample. The laboratory will note the issue in the Case/SDG Narrative, notify the SMO coordinator of the sample selected for laboratory QC, and proceed with the analysis of the samples.

SMO will record that the laboratory will perform lab QC as follows:
VOA sample C0038 and BNA/PEST sample C0049 for lab QC for SDG C0038
VOA/BNA/PEST sample C0026 for lab QC for SDG C0021
VOA sample C02B8 and BNA/PEST sample C0032 for lab QC for SDG C0032.

Please let me know if you have any other questions or problems.

Thanks,
[redacted]

[redacted]
CSC
CLP Coordinator for Regions 3, 7, & 9
703-818-4214
[redacted]

This is a PRIVATE message. If you are not the intended recipient, please delete without copying and kindly advise us by e-mail of the mistake in delivery. NOTE: Regardless of content, this e-mail shall not operate to bind CSC to any order or other contract unless pursuant to explicit written agreement or government initiative expressly permitting the use of e-mail for such purpose.

-----Original Message-----
From: [redacted] [mailto:[redacted]
Sent: Monday, August 09, 2004 9:17 AM
To: [redacted] (E-mail)
Subject: Case 33178 insufficient Lab QC

Hi [redacted]

The following SDGs do not have sufficient Lab QC assignments; please let me know if the following assignments designated by CEIMIC are acceptable:

Aqueous SDG C0038: BNA/PEST to be performed on sample C0049 as indicated on the TR/COC. VOA Lab QC not designated; CEIMIC chooses sample C0038.

Soil SDG C0021: No Lab QC designated; CEIMIC chooses sample C0026 for all organic fractions.

Aqueous SDG C0032: No Lab QC designated; CEIMIC chooses sample C02B8 for VOA (this is the only VOA sample in this SDG), and sample C0032 for BNA/PEST.

Thanks! [redacted]

[redacted]

From: [redacted]
Sent: Monday, August 09, 2004 3:05 PM
To: [redacted] mail)
Cc: [redacted] mail)
Subject: Region 03 | Case 33178 | Lab CEIMIC | Issue Insufficient/inappropriate designation of laboratory QC | FINAL

ORIGINAL

[redacted]

In accordance with previous direction from Region 3, the laboratory will select a sample for laboratory QC as long as the sample is not a PE, blank, or rinsate sample. The laboratory will note the issue in the Case/SDG Narrative, notify the SMO coordinator of the sample selected for laboratory QC, and proceed with the analysis of the samples.

SMO will record that the laboratory will perform lab QC as follows:
VOA sample C0038 and BNA/PEST sample C0049 for lab QC for SDG C0038
VOA/BNA/PEST sample C0026 for lab QC for SDG C0021
VOA sample C02B8 and BNA/PEST sample C0032 for lab QC for SDG C0032.

Please let me know if you have any other questions or problems.

Thanks,
[redacted]

[redacted]
CSC
CLP Coordinator for Regions 3, 7, & 9
703-818-4214
holly.sturdavant@dyncorp.com or holly.rogers@dyncorp.com

This is a PRIVATE message. If you are not the intended recipient, please delete without copying and kindly advise us by e-mail of the mistake in delivery. NOTE: Regardless of content, this e-mail shall not operate to bind CSC to any order or other contract unless pursuant to explicit written agreement or government initiative expressly permitting the use of e-mail for such purpose.

-----Original Message-----
From: [redacted] [mailto: [redacted]
Sent: Monday, August 09, 2004 9:17 AM
To: [redacted] (E-mail)
Subject: Case 33178 insufficient Lab QC

Hi [redacted]

The following SDGs do not have sufficient Lab QC assignments; please let me know if the following assignments designated by CEIMIC are acceptable:

Aqueous SDG C0038: BNA/PEST to be performed on sample C0049 as indicated on the TR/COC. VOA Lab QC not designated; CEIMIC chooses sample C0038.

Soil SDG C0021: No Lab QC designated; CEIMIC chooses sample C0026 for all organic fractions.

Aqueous SDG C0032: No Lab QC designated; CEIMIC chooses sample C02B8 for VOA (this is the only VOA sample in this SDG), and sample C0032 for BNA/PEST.

hanks! [redacted]

[redacted]

09/01/2004 12:18 PM

To: panderson@mde.state.md.us, psmith@mde.state.md.us
cc: [redacted]
cc:
Subject: 33178, New Jersey Fireworks

ORIGINAL

Please issue a memo to file adding the sample collection time to the tags for sample C0014. The COC states that the samples were collected at 12:10 but the time was missing from the tags. Also, in the future, all samples going to CLP labs (RAS or routine analytical services booked through Clients Team and Sample Management Office (Holly) must use CLP sample numbers. You used station locations for the sample numbers on the aliquots of samples for % moisture. This causes a lot of extra work for the labs and for the validators and auditors. These samples should have been an additional aliquot (with a tag number) of the CLP sample. In other words, sample C0004 should have been listed on the COC with its 3 tags for voa, bna, pest/pcb and a fourth tag should have been listed for % moisture. If the samples must be split on the COC's because they are in different coolers, the same sample number should be used.

****

[redacted]
ESAT Auditor, Region 3
Lockheed Martin Environmental Services
701 Mapes Road
Ft. Meade, MD 20755-5350
Phone 410-305-3015
Fax 410-305-3095

[redacted]

08/31/2004 01:03 PM

To: [redacted]
cc:
Subject: Re: Case 33178, New Jersey Fireworks, lab-CEIMIC.

ORIGINAL

[redacted]

They were requested to collect additional sample volume. In the past, they did not collect sufficient sample volume which resulted in compromising re-analysis of samples. I do not know why they did not use the CLP numbers for the %moisture samples.

[redacted]

[redacted]

08/31/2004 12:42 PM

To: [redacted]
cc:
Subject: Case 33178, New Jersey Fireworks, lab-CEIMIC.

[redacted]

For case 33178, New Jersey Fireworks, MDE collected 3 sample containers each for the soil/sediment sample analyses (organics) and named the samples per the CLP nomenclature (C0001, C0002, etc.) They also collected a fourth container of soil/sediment for each sample for which they used the station location as the sample number (SED3, SED 4, etc.) These samples were designated for moisture analysis on the COC and were listed on separate COC's. The moisture samples were collected at the same time as the organic samples and had the same station locations but had different sample numbers. I don't believe it was necessary to collect these moisture samples, let alone ship them to CEIMIC. There were 26 of them.
Would you please confirm that the shipment of these moisture samples was not necessary. FYI: the lab reported the % moisture by CLP sample number in the narrative and did not mention the incorrectly numbered % moisture samples.

****

[redacted]
ESAT Auditor, Region 3
Lockheed Martin Environmental Services
701 Mapes Road
Ft. Meade, MD 20755-5350
Phone 410-305-3015
Fax 410-305-3095

MDE

MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Washington Boulevard, Suite 625 • Baltimore MD 21230
410-537-3000 • 1-800-633-6101

ORIGINAL

Robert L. Ehrlich, Jr.
Governor

Michael S. Steele
Lt. Governor

Kendl P. Philbrick
Secretary

Jonas A. Jacobson
Deputy Secretary

September 10, 2004

VALIDATOR'S COPY

[redacted]
Ceimic Corporation
10 Dean Knauss Drive
Narragansett, R.I. 02882

Dear [redacted]

This letter documents an error that was made in the field for Region III Case # 33178. It is my understanding that sample times are missing from the tags for sample number C0014 (Station Location SS13). These tags should have had a sample time of 1210 as is indicated on Traffic Report# 3-592370820-080304-0006.

If you have any questions, please contact me at (410) 537-3493.

Sincerely,

Peggy Smith

Peggy Smith, CLP Coordinator
CHS Enforcement/Fund Lead Site
Assessment Division

PS

cc: [redacted]
Ms. Lorie Baker
[redacted]

ORIGINAL

APPENDIX C

PERCHLORATE RESULTS AND SUPPLEMENTAL REPORT

ORIGINAL

U.S. EPA REGION III
Analytical Services & Quality Assurance Branch
Fort Meade, Maryland

ASQAB LABORATORY REPORT
FINAL DATA

NEW JERSEY FIREWORKS

Lab Request #: REQ04200
Request Form #: DAS R31935

Report prepared on: September 13, 2004

RECEIVED
SEP 1 2004
ERRP

Approval for release:

ASQAB Representative

Site contact(s): Lorie Baker (3HS34)
Phill Anderson

U.S. EPA REGION III ANALYTICAL SERVICES & QUALITY ASSURANCE BRANCH

SITE NAME: NEW JERSEY FIREWORKS

LAB REQUEST # REQ04200

SAMPLE DESCRIPTIONS

Sample #	Station	Description	Matrix	Type	End Collection Date	Time
04080401	S24	R31935-S24	Other Solid Matrices	GRAB	08/03/2004	10:45
04080402	S25	R31935-S25	Other Solid Matrices	GRAB	08/03/2004	10:00
04080403	SS11	R31935-SS11	Other Solid Matrices	GRAB	08/03/2004	12:40
04080404	SS13	R31935-SS13	Other Solid Matrices	GRAB	08/03/2004	12:10
04080405	SS14	R31935-SS14	Other Solid Matrices	GRAB	08/03/2004	11:35
04080406	SS21	R31935-SS21	Other Solid Matrices	GRAB	08/03/2004	10:05
04080407	SS22	R31935-SS22	Other Solid Matrices	GRAB	08/03/2004	10:25
04080408	SS23	R31935-SS23	Other Solid Matrices	GRAB	08/03/2004	11:10
04080409	SS24	R31935-SS24	Other Solid Matrices	GRAB	08/03/2004	10:50
04080410	PW5	R31935-PW5	Ground Water	GRAB	08/03/2004	11:40
04080411	S11	R31935-S11	Other Solid Matrices	GRAB	08/03/2004	12:30
04080412	S12	R31935-S12	Other Solid Matrices	GRAB	08/03/2004	14:16
04080413	S13	R31935-S13	Other Solid Matrices	GRAB	08/03/2004	12:05
04080414	S14	R31935-S14	Other Solid Matrices	GRAB	08/03/2004	11:30
04080415	S15	R31935-S15	Other Solid Matrices	GRAB	08/03/2004	12:35
04080416	S16	R31935-S16	Other Solid Matrices	GRAB	08/03/2004	14:06
04080417	S21	R31935-S21	Other Solid Matrices	GRAB	08/03/2004	09:55
04080418	S22	R31935-S22	Other Solid Matrices	GRAB	08/03/2004	10:20
04080419	S23	R31935-S23	Other Solid Matrices	GRAB	08/03/2004	11:05
04080506	GW1	R31935-GW1	Ground Water	GRAB	08/04/2004	09:40
04080507	GW2	R31935-GW2	Ground Water	GRAB	08/04/2004	09:00
04080508	GW3	R31935-GW3	Ground Water	GRAB	08/04/2004	13:25
04080509	MW1	R31935-MW1	Ground Water	GRAB	08/04/2004	10:30
04080510	MW1A	R31935-MW1A	Water - Type Unspecified	GRAB	08/04/2004	11:10
04080511	MW2	R31935-MW2	Water - Type Unspecified	GRAB	08/04/2004	12:20
04080512	MW3	R31935-MW3	Water - Type Unspecified	GRAB	08/04/2004	13:25
04080513	MW3A	R31935-MW3A	Water - Type Unspecified	GRAB	08/04/2004	14:00
04080514	MW4	R31935-MW4	Water - Type Unspecified	GRAB	08/04/2004	10:45
04080610	SED1	R31935-SED1	Other Solid Matrices	GRAB	08/05/2004	11:25
04080611	SED2	R31935-SED2	Other Solid Matrices	GRAB	08/05/2004	11:45
04080612	SED3	R31935-SED3	Other Solid Matrices	GRAB	08/05/2004	11:20
04080613	SED4	R31935-SED4	Other Solid Matrices	GRAB	08/05/2004	10:25
04080614	SED5	R31935-SED5	Other Solid Matrices	GRAB	08/05/2004	09:50

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U.S. EPA REGION III ANALYTICAL SERVICES & QUALITY ASSURANCE BRANCH

SITE NAME: NEW JERSEY FIREWORKS

LAB REQUEST # REQ04200

SAMPLE DESCRIPTIONS

Sample #	Station	Description		Type	Date	Time
04080615	SED6	R31935-SED6	Other Solid Matrices	GRAB	08/05/2004	09:35
04080616	SED7	R31935-SED7	Other Solid Matrices	GRAB	08/05/2004	08:50
04080617	SED8	R31935-SED8	Other Solid Matrices	GRAB	08/05/2004	08:55
04080618	SW1	R31935-SW1	Surface Water	GRAB	08/05/2004	11:20
04080619	SW2	R31935-SW2	Surface Water	GRAB	08/05/2004	11:40
04080620	SW3	R31935-SW3	Surface Water	GRAB	08/05/2004	11:15
04080621	SW4	R31935-SW4	Surface Water	GRAB	08/05/2004	10:20
04080622	SW5	R31935-SW5	Surface Water	GRAB	08/05/2004	09:45
04080623	SW6	R31935-SW6	Surface Water	GRAB	08/05/2004	09:30
04080624	SW7	R31935-SW7	Surface Water	GRAB	08/05/2004	08:35
04080625	SW8	R31935-SW8	Surface Water	GRAB	08/05/2004	08:40
04080626	SW9	R31935-SW9	Surface Water	GRAB	08/05/2004	10:30

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U.S. EPA REGION III ANALYTICAL SERVICES & QUALITY ASSURANCE BRANCH

SITE NAME : NEW JERSEY FIREWORKS

LAB REQUEST #: REQ04200

TESTS REQUESTED

INORGANICS 040804

	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
Percent Dry Weight	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
Perchlorate by IC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

INORGANICS 040805

	06	07	08	09	10	11	12	13	14
Perchlorate by IC	X	X	X	X	X	X	X	X	X

INORGANICS 040806

	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Percent Dry Weight	X	X	X	X	X	X	X	X									
Perchlorate by IC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

(X = Test Requested)

ORIGINAL

SITE NAME: NEW JERSEY FIREWORKS
LAB REQUEST #: REQ04200

QUALIFIER CODE AND GLOSSARY DEFINITIONS

Qualifier Codes Applied to Sample Results (NOTE: for organic analyses only detected target compounds are reported)

B Not detected substantially above (10 times) the level reported in the laboratory or field blanks (includes field, trip, rinsate, and equipment blanks).
C See report narrative for analyst's comments and observations concerning this result.
E Value exceeds a theoretically greater value (e.g., dissolved>total, orthophosphate>total phosphorus). However, the difference is within the expected precision of the analytical techniques and is not statistically significant.
J The identification of the analyte is acceptable; the reported value is an estimate.
K The identification of the analyte is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.
L The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
N There is presumptive evidence that the analyte is present; the analyte is reported as a tentative identification.
NJ There is presumptive evidence that the analyte is present; the analyte is reported as a tentative identification. The reported value is an estimate.
NA Not analyzed - analysis not performed.
NR Not requested - analysis not requested.
R The presence or absence of the analyte can not be determined from the data due to severe quality control problems. The data are rejected and considered unusable.
T Tentatively Identified Compound. Identified as a result of a library search using the EPA/NIST Mass Spectral Library. Standards were not used to verify the identity and quantity of the compound. The reported value is an estimate.
U The analyte was not detected at or above the reporting limit.
UJ The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
UL The analyte was not detected. The reporting limit is probably higher due to indications of a low bias.
< Less than.

Qualifier Codes Applied to Quality Control Results

A Quality control value is outside acceptance limits.
D Sample and/or laboratory duplicate values are below the reporting limit. No precision data reported.
TD Spike recovery too dilute for accurate quantitation.

Qualifier Codes Applied to Microbiology Results

< Less than.
<= Less than or equal to.
>= Greater than or equal to.
> Greater than.

Glossary:

( ) Numbers in parentheses are analytical spike recoveries (e.g., post-digestion spikes).
[ ] Numbers in brackets are matrix spike recoveries (e.g., pre-digestion spikes).
CFU Colony Forming Unit.
ISF A prepared sample aliquot fortified with a known concentration of target analyte(s) or a representative subset of target analytes and analyzed. Its purpose is to determine whether the sample matrix contributes bias to the analytical results.
LSF A sample aliquot fortified with a known concentration of analyte(s) or a representative subset of target analytes and carried throughout the entire lab method. It is analyzed to determine whether the sample matrix contributes bias to the analytical results.
MS/MSD Matrix spike/matrix spike duplicate; a known increment of target analyte added to a sample before preparation or analyses.
MSA Value obtained by Method of Standard Additions in which calibration standards are prepared in the sample matrix (see EPA method 200.9).
RPD Relative Percent Difference (RPD) is used to measure precision when duplicates are analyzed.
%Rec Percent Recovery (%Rec) is an expression of accuracy.

SITE NAME : NEW JERSEY FIREWORKS

LAB REQUEST #: REQ04200

INORGANIC ANALYTICAL SAMPLE RESULTS

SAMPLE NUMBER:	04080401	04080402	04080403	04080404	04080405
STATION ID:	S24	S25	SS11	SS13	SS14
	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE
Percent Dry Weight					
Percent Dry Weight (105C)	86.5 %	70.3 %	84.9 %	89.8 %	85.7 %
Perchlorate by IC					
Perchlorate	<0.005 mg/Kg	0.045 N mg/Kg	<0.005 mg/Kg	<0.005 mg/Kg	<0.005 mg/Kg

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SITE NAME : NEW JERSEY FIREWORKS

LAB REQUEST #: REQ04200

INORGANIC ANALYTICAL SAMPLE RESULTS

SAMPLE NUMBER:	04080406	04080407	04080408	04080409	04080410
STATION ID:	SS21	SS22	SS23	SS24	PW5
	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE
Percent Dry Weight					
Percent Dry Weight (105C)	84.9 %	79.4 %	84.7 %	84.6 %	
Perchlorate by IC					
Perchlorate	0.036 N mg/Kg	2.09 N mg/Kg	<0.005 mg/Kg	<0.005 mg/Kg	21.0 N ug/L

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SITE NAME : NEW JERSEY FIREWORKS

LAB REQUEST #: REQ04200

INORGANIC ANALYTICAL SAMPLE RESULTS

SAMPLE NUMBER:	04080411	04080412	04080413	04080414	04080415
STATION ID:	S11	S12	S13	S14	S15
	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE
Percent Dry Weight					
Percent Dry Weight (105C)	72.3 %	78.4 %	89.4 %	82.6 %	83.5 %
Perchlorate by IC					
Perchlorate	<0.005 mg/Kg	0.006 N mg/Kg	0.025 N mg/Kg	0.018 N mg/Kg	0.009 N mg/Kg

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SITE NAME : NEW JERSEY FIREWORKS

LAB REQUEST #: REQ04200

INORGANIC ANALYTICAL SAMPLE RESULTS

SAMPLE NUMBER:	04080416	04080417	04080418	04080419	04080506
STATION ID:	S16	S21	S22	S23	GW1
	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE
Percent Dry Weight					
Percent Dry Weight (105C)	78.5 %	71.9 %	80.9 %	89.1 %	
Perchlorate by IC					
Perchlorate	<0.005 mg/Kg	0.062 N mg/Kg	0.007 N mg/Kg	<0.005 mg/Kg	<1.00 ug/L

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SITE NAME : NEW JERSEY FIREWORKS

LAB REQUEST #: REQ04200

INORGANIC ANALYTICAL SAMPLE RESULTS

SAMPLE NUMBER:	04080507	04080508	04080509	04080510	04080511
STATION ID:	GW2	GW3	MW1	MW1A	MW2
	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE
Percent Dry Weight					
Percent Dry Weight (105C)					
Perchlorate by IC					
Perchlorate	385 N ug/L	4.79 N ug/L	<1.00 ug/L	<1.00 ug/L	<1.00 ug/L

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SITE NAME : NEW JERSEY FIREWORKS

LAB REQUEST #: REQ04200

INORGANIC ANALYTICAL SAMPLE RESULTS

SAMPLE NUMBER:	04080512	04080513	04080514	04080610	04080611
STATION ID:	MW3	MW3A	MW4	SED1	SED2
	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE
Percent Dry Weight					
Percent Dry Weight (105C)				79.7 %	79.8 %
Perchlorate by IC					
Perchlorate	<1.00 ug/L	5.07 N ug/L	22.6 N ug/L	<0.005 mg/Kg	<0.005 mg/Kg

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SITE NAME : NEW JERSEY FIREWORKS

LAB REQUEST #: REQ04200

INORGANIC ANALYTICAL SAMPLE RESULTS

SAMPLE NUMBER:	04080612	04080613	04080614	04080615	04080616
STATION ID:	SED3	SED4	SED5	SED6	SED7
	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE
Percent Dry Weight					
Percent Dry Weight (105C)	64.8 %	80.1 %	61.0 %	74.0 %	63.6 %
Perchlorate by IC					
Perchlorate	<0.005 mg/Kg	<0.005 mg/Kg	<0.005 mg/Kg	0.103 N mg/Kg	<0.005 mg/Kg

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SITE NAME : NEW JERSEY FIREWORKS

LAB REQUEST #: REQ04200

INORGANIC ANALYTICAL SAMPLE RESULTS

SAMPLE NUMBER:	04080617	04080618	04080619	04080620	04080621
STATION ID:	SED8	SW1	SW2	SW3	SW4
	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE
Percent Dry Weight					
Percent Dry Weight (105C)	68.0 %				
Perchlorate by IC					
Perchlorate	<0.005 mg/Kg	<1.00 ug/L	<1.00 ug/L	<1.00 ug/L	<1.00 ug/L

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U.S EPA REGION III ANALYTICAL SERVICES & QUALITY ASSURANCE BRANCH

SITE NAME : NEW JERSEY FIREWORKS

LAB REQUEST #: REQ04200

INORGANIC ANALYTICAL SAMPLE RESULTS

SAMPLE NUMBER:	04080622	04080623	04080624	04080625	04080626
STATION ID:	SW5	SW6	SW7	SW8	SW9
	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE
Percent Dry Weight					
Percent Dry Weight (105C)					
Perchlorate by IC					
Perchlorate	<1.00 ug/L	8.51 N ug/L	7.65 N ug/L	7.52 N ug/L	<1.00 ug/L

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SITE NAME: NEW JERSEY FIREWORKS

LAB REQUEST #: REQ04200

INORGANIC QUALITY CONTROL RESULTS

SAMPLE NUMBER:	04080406		04080411	04080417		04080419
STATION ID:	SS21		S11	S21		S23
Units:	% REC	RPD	RPD	% REC	RPD	RPD
Percent Dry Weight						
Percent Dry Weight (105c)			2			1
Perchlorate by IC						
Perchlorate	[90]	19		[92]	5	

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SITE NAME: NEW JERSEY FIREWORKS

LAB REQUEST #: REQ04200

INORGANIC QUALITY CONTROL RESULTS

SAMPLE NUMBER:	04080514		04080610	04080617		04080626
STATION ID:	MW4		SED1	SED8		SW9
Units:	% REC	RPD	RPD	% REC	RPD	% REC
Percent Dry Weight						
Percent Dry Weight (105c)			0			
Perchlorate by IC						
Perchlorate	[94]	5		[89]	D	[94]

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SITE NAME: NEW JERSEY FIREWORKS

LAB REQUEST #: REQ04200

INORGANIC QUALITY CONTROL RESULTS

SAMPLE NUMBER:	04080626
STATION ID:	SW9
Units:	RPD
Percent Dry Weight	
Percent Dry Weight (105c)	
Perchlorate by IC	
Perchlorate	D

[] = LSF
() = ISF

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U.S. EPA REGION III ANALYTICAL SERVICES & QUALITY ASSURANCE BRANCH

Site Name : NEW JERSEY FIREWORKS

Lab Request #: REQ04200

Wet Dry Conversion Table

The wet/dry weight conversion table is presented for the convenience of the data user. The attached analyst narratives state whether a test was determined on a wet or dry weight basis. Any difference in significant figures between the two columns is an artifact of the reporting function and does not imply that the calculated value has greater precision than the measured value.

Sample Number	Station ID						Units	Wet	Dry
04080401	S24	SAM	Percent Dry Weight (105C)	86.5	Perchlorate by IC	Perchlorate	mg/Kg	< 0.005	< 0.006
04080402	S25	SAM	Percent Dry Weight (105C)	70.3	Perchlorate by IC	Perchlorate	mg/Kg	0.045 N	0.064 N
04080403	SS11	SAM	Percent Dry Weight (105C)	84.9	Perchlorate by IC	Perchlorate	mg/Kg	< 0.005	< 0.006
04080404	SS13	SAM	Percent Dry Weight (105C)	89.8	Perchlorate by IC	Perchlorate	mg/Kg	< 0.005	< 0.006
04080405	SS14	SAM	Percent Dry Weight (105C)	85.7	Perchlorate by IC	Perchlorate	mg/Kg	< 0.005	< 0.006
04080406	SS21	SAM	Percent Dry Weight (105C)	84.9	Perchlorate by IC	Perchlorate	mg/Kg	0.036 N	0.042 N
04080407	SS22	SAM	Percent Dry Weight (105C)	79.4	Perchlorate by IC	Perchlorate	mg/Kg	2.09 N	2.63 N
04080408	SS23	SAM	Percent Dry Weight (105C)	84.7	Perchlorate by IC	Perchlorate	mg/Kg	< 0.005	< 0.006
04080409	SS24	SAM	Percent Dry Weight (105C)	84.6	Perchlorate by IC	Perchlorate	mg/Kg	< 0.005	< 0.006
04080411	S11	SAM	Percent Dry Weight (105C)	72.3	Perchlorate by IC	Perchlorate	mg/Kg	< 0.005	< 0.007
04080412	S12	SAM	Percent Dry Weight (105C)	78.4	Perchlorate by IC	Perchlorate	mg/Kg	0.006 N	0.008 N
04080413	S13	SAM	Percent Dry Weight (105C)	89.4	Perchlorate by IC	Perchlorate	mg/Kg	0.025 N	0.028 N
04080414	S14	SAM	Percent Dry Weight (105C)	82.6	Perchlorate by IC	Perchlorate	mg/Kg	0.018 N	0.022 N
04080415	S15	SAM	Percent Dry Weight (105C)	83.5	Perchlorate by IC	Perchlorate	mg/Kg	0.009 N	0.011 N
04080416	S16	SAM	Percent Dry Weight (105C)	78.5	Perchlorate by IC	Perchlorate	mg/Kg	< 0.005	< 0.006
04080417	S21	SAM	Percent Dry Weight (105C)	71.9	Perchlorate by IC	Perchlorate	mg/Kg	0.062 N	0.086 N
04080418	S22	SAM	Percent Dry Weight (105C)	80.9	Perchlorate by IC	Perchlorate	mg/Kg	0.007 N	0.009 N
04080419	S23	SAM	Percent Dry Weight (105C)	89.1	Perchlorate by IC	Perchlorate	mg/Kg	< 0.005	< 0.006
04080610	SED1	SAM	Percent Dry Weight (105C)	79.7	Perchlorate by IC	Perchlorate	mg/Kg	< 0.005	< 0.006
04080611	SED2	SAM	Percent Dry Weight (105C)	79.8	Perchlorate by IC	Perchlorate	mg/Kg	< 0.005	< 0.006
04080612	SED3	SAM	Percent Dry Weight (105C)	64.8	Perchlorate by IC	Perchlorate	mg/Kg	< 0.005	< 0.008
04080613	SED4	SAM	Percent Dry Weight (105C)	80.1	Perchlorate by IC	Perchlorate	mg/Kg	< 0.005	< 0.006
04080614	SED5	SAM	Percent Dry Weight (105C)	61	Perchlorate by IC	Perchlorate	mg/Kg	< 0.005	< 0.008
04080615	SED6	SAM	Percent Dry Weight (105C)	74	Perchlorate by IC	Perchlorate	mg/Kg	0.103 N	0.139 N
04080616	SED7	SAM	Percent Dry Weight (105C)	63.6	Perchlorate by IC	Perchlorate	mg/Kg	< 0.005	< 0.008
04080617	SED8	SAM	Percent Dry Weight (105C)	68	Perchlorate by IC	Perchlorate	mg/Kg	< 0.005	< 0.007

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Perchlorate Determinations

Analyst:

Ronald H. Altman
Chemist

Method:

The NEW JERSEY FIREWORKS water samples (REQ04200) were analyzed for Perchlorate using EPA Method 314.0[1] (Determination of Perchlorate in Drinking Water using Ion Chromatography). The water samples were filtered through a 0.45µm syringe filter. In addition, a laboratory reagent (LRB), laboratory fortified blank (LFB), laboratory fortified blank at the maximum conductivity threshold (LFB at MCT), a matrix duplicate (LD2) and a matrix spike (LSF) were also prepared through the process. The soil samples were prepared for inorganic analysis by weighing approximately four grams of the wet soil sample. 20 mL of Milli-Q water was added to the samples and the slurry was vortexed for one minute. The prepared samples were centrifuged for 10 minutes at 2000 rpm. The liquid phase was filtered through a 0.45µm syringe filter prior to inorganic analyses using EPA Method 314.0 (Determination of Perchlorate in Drinking Water Using Ion Chromatography) on the Dionex DX-600. A laboratory reagent blank (LRB), laboratory fortified blank (LFB) and a laboratory fortified blank at the maximum conductivity threshold (LFB at MCT) were prepared and taken through the process. In addition a matrix duplicate (LD2) and a matrix spike (LSF) were also prepared for each set of 10 samples and taken through the process.

The following water samples 04080410, 04080507, 04080508, 04080513, 04080514, 04080623, 04080624, 04080625 and soil samples 04080402, 04080406, 04080407, 04080412, 04080413, 04080414, 04080415, 04080417, 04080418 and 04080615 are reported with qualifier "N" for tentative identification. A new rule effective December 2004 requires all positive results to be confirmed by MS or MS/MS. The following subset of samples (samples 04080507, 04080514, 04080410, 04080407 and 04080615) were sent to a contract lab for confirmation. Results from the contract lab should be available in early October 2004. The results from the contract lab will be reviewed promptly and the final report will be amended for these five samples based on the confirmation of perchlorate by MS.

[1] US EPA Method 314.0, Determination of Perchlorate in Drinking Water Using Ion Chromatography, Revision 1.0, November 1999

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Percent Dry Weight Determinations

Analyst:

Thomas Reppert
Environmental Scientist

Method:

The soil/solid samples from the NEW JERSEY FIREWORKS (REQ04200) site were analyzed for Percent Dry Weight as required by EPA analytical methods. The samples were dried at 105°C following the procedure outlined in the Region III ASQAB laboratory SOP #R3QA056.1.

These results are to be used to convert analyte concentrations to a dry weight basis for organic and non-metal analyses. Normally, analytical values are reported on a wet weight basis for organics and non-metals.

USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case 33178
Client No: R31935
SDG No:

L

Date Shipped:	8/3/2004
Carrier Name:	FedEx
Airbill:	843517786260
Shipped to:	ASQAB USEPA Region III 701 Mapes Road Fort Meade MD 20755 (410) 305-2667

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1 [illegible]	8/3/04 1830	Carroll Harris @	10:45-8.4.04
2			
3			
4			

Sampler Signature: [illegible]

For Lab Use Only
Lab Contract No:
Unit Price:
Transfer To:
Lab Contract No:
Unit Price:

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT. DATE/TIME	FOR LAB USE ONLY Sample Condition On Receipt
R31935-S24	Soil (0"-12")/ Dixon Wood DW	L/G	Percl (21)	361 (Ice Only) (1)	R31935-S24	S: 8/3/2004 10:45	040804-01
R31935-S25	Soil (0"-12")/ Dixon Wood DW	L/G	Percl (21)	362 (Ice Only) (1)	R31935-S25	S: 8/3/2004 10:00	-02
R31935-SS11	Soil (>12")/ Barbara Brocks BB	L/G	Percl (21)	371 (Ice Only) (1)	R31935-SS11	S: 8/3/2004 12:40	-03
R31935-SS13	Soil (>12")/ Barbara Brocks BB	L/G	Percl (21)	373 (Ice Only) (1)	R31935-SS13	S: 8/3/2004 12:10	-04
R31935-SS14	Soil (>12")/ Barbara Brocks BB	L/G	Percl (21)	374 (Ice Only) (1)	R31935-SS14	S: 8/3/2004 11:35	-05
R31935-SS21	Soil (>12")/ Dixon Wood DW	L/G	Percl (21)	375 (Ice Only) (1)	R31935-SS21	S: 8/3/2004 10:05	-06
R31935-SS22	Soil (>12")/ Dixon Wood DW	L/G	Percl (21)	376 (Ice Only) (1)	R31935-SS22	S: 8/3/2004 10:25	-07
R31935-SS23	Soil (>12")/ Barbara Brocks BB	L/G	Percl (21)	378 (Ice Only) (1)	R31935-SS23	S: 8/3/2004 11:10	-08
R31935-SS24	Soil (>12")/ Barbara Brocks BB	L/G	Percl (21)	377 (Ice Only) (1)	R31935-SS24	S: 8/3/2004 10:50	-09

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC: R31935-PW5, R31935-S13	Additional Sampler Signature(s): Barbara Brocks [illegible]	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
Analysis Key: Percl = Perchlorates	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact?	Shipment Iced?

TR Number: 3-592370820-080304-0013

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PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-

28

28

FedEx Express USA Airbill

FedEx Tracking Number 8435 1778 6260

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1 From This portion can be removed for Recipient's records.

Date 8/3/04 FedEx Tracking Number 843517786260

Sender's Name Peggy Smith Phone 410 537 3493

Company MARYLAND DEPT OF ENVIRONMENT

Address 1800 WASHINGTON BLVD

Dept./Floor/Suite/Room

City BALTIMORE State MD ZIP 21230-1701

2 Your Internal Billing Reference 65651

3 To

Recipient's Name Carroll Harris Phone 410 305 2625

Company EPA Environmental Science Ctr - OASQA

Address 701 Mapes Rd.

To "HOLD" at FedEx location, print FedEx address. We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Dept./Floor/Suite/Room

City Ft. Meade State MD ZIP 20755

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See back for peel and stick application instructions.

RECIPIENT: PEEL HERE

8435 1778 6260

0258658734

4a Express Package Service *Packages up to 150 lbs.* Delivery commitment may be later in some areas.

- [x] FedEx Priority Overnight — Next business morning
- [ ] FedEx Standard Overnight — Next business afternoon
- [x] FedEx First Overnight — Earliest next business morning delivery to select locations
- [ ] FedEx 2Day — Second business day
- [ ] FedEx Express Saver — Third business day

FedEx Envelope rate not available. Minimum charge: One-pound rate

4b Express Freight Service *Packages over 150 lbs.* Delivery commitment may be later in some areas.

- [ ] FedEx 1Day Freight* — Next business day
- [ ] FedEx 2Day Freight — Second business day
- [ ] FedEx 3Day Freight — Third business day

* Call for Confirmation:

5 Packaging * Declared value limit $500

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak
- [x] Other

6 Special Handling Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — Available only for FedEx Priority Overnight and FedEx 2Day to select ZIP codes
- [ ] HOLD Weekday at FedEx Location — Not available for FedEx First Overnight
- [ ] HOLD Saturday at FedEx Location — Available only for FedEx Priority Overnight and FedEx 2Day to select locations

Does this shipment contain dangerous goods? One box must be checked.

- [x] No
- [ ] Yes — As per attached Shipper's Declaration
- [ ] Yes — Shipper's Declaration not required
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous Goods (including Dry Ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [x] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Obtain Recip. Acct. No.
- [ ] Cash/Check

Total Packages	Total Weight	Total Charges
1	48	Credit Card Auth.

†Our liability is limited to $100 unless you declare a higher value. See the *FedEx Service Guide* for details.

8 Release Signature *Sign to authorize delivery without obtaining signature.*

By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

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447

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USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case 33178
Client No: R31935
SDG No:

L

Date Shipped:	8/3/2004
Carrier Name:	FedEx
Airbill:	843517786260
Shipped to:	ASQAB USEPA Region III 701 Mapes Road Fort Meade MD 20755 (410) 305-2667

Chain of Custody Record

Sampler Signature: [signature]

	Relinquished By	(Date / Time)	Received By	(Date / Time)
1	[signature]	8/3/04 1830	Carrie Heim	8-4-04 @ 1045
2				
3				
4				

For Lab Use Only

Lab Contract No:
Unit Price:
Transfer To:
Lab Contract No:
Unit Price:

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	FOR LAB USE ONLY Sample Condition On Receipt
R31935-PW5	Ground Water	L/G	Percl (21)	2195 (Ice Only) (1)	R31935-PW5		040804-10
R31935-S11	Soil (0"-12")/ Dixon Wood DW	L/G	Percl (21)	350 (Ice Only) (1)	R31935-S11	S: 8/3/2004 12:30	-11
R31935-S12	Soil (0"-12")/ Barbara Brocks BB	L/G	Percl (21)	351 (Ice Only) (1)	R31935-S12	S: 8/3/2004 14:16	-12
R31935-S13	Soil (0"-12")/ Dixon Wood DW	L/G	Percl (21)	352 (Ice Only) (1)	R31935-S13	S: 8/3/2004 12:05	-13
R31935-S14	Soil (0"-12")/ Dixon Wood DW	L/G	Percl (21)	353 (Ice Only) (1)	R31935-S14	S: 8/3/2004 11:30	-14
R31935-S15	Soil (0"-12") Dixon Wood DW	L/G	Percl (21)	354 (Ice Only) (1)	R31935-S15	8/3/04 1235	-15
R31935-S16	Soil (0"-12")/ Barbara Brocks BB	L/G	Percl (21)	357 (Ice Only) (1)	R31935-S16	S: 8/3/2004 14:06	-16
R31935-S21	Soil (0"-12")/ Dixon Wood DW	L/G	Percl (21)	358 (Ice Only) (1)	R31935-S21	S: 8/3/2004 9:55	-17
R31935-S22	Soil (0"-12")/ Barbara Brocks BB	L/G	Percl (21)	359 (Ice Only) (1)	R31935-S22	S: 8/3/2004 10:20	-18
R31935-S23	Soil (0"-12")/ Dixon Wood DW	L/G	Percl (21)	360 (Ice Only) (1)	R31935-S23	S: 8/3/2004 11:05	-19

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC: R31935-PW5, R31935-S13	Additional Sampler Signature(s): Becka Brocks [signature]	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
Analysis Key: Percl = Perchlorates	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact?	Shipment Iced?

TR Number: 3-592370820-080304-0013

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PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-

DEPARTMENT OF HEALTH AND MENTAL HYGIENE 04204529

Laboratories Administration
201 W. Preston Street
P.O. Box 2355, Baltimore, Maryland 21203
J. Mehsen Joseph, Ph.D., Director

LAB. NO. _____ ORIGINAL

AIR QUALITY LABORATORY
BULK ASBESTOS MICROSCOPIC ANALYSIS

COUNTY N/A DATE COLLECTED 1/28/04

SOURCE OF SAMPLE Vermiculite

SUBMITTED BY Peggy Smith SAMPLE IDEN. NO.: Vermiculite #1

SUBMIT RESULTS TO: (NAME/ADDRESS/TELEPHONE) Peggy Smith, MDE, 1800 Washington Blvd Ste 625 Baltimore MD 21230 410-537-3493

NATURE OF MATERIAL Vermiculite

CHAIN OF CUSTODY SAMPLE POSSESSION

FROM _____ NAME/DATE/TIME TO _____ NAME/DATE/TIME

FROM _____ NAME/DATE/TIME TO _____ NAME/DATE/TIME

FROM _____ NAME/DATE/TIME TO _____ NAME/DATE/TIME

RESULTS:

SAMPLE COLOR: Tan / green.

LAYERED: YES ( ) NO (X)

ASBESTOS FIBERS	AREA Layer 1	PERCENT Layer 2	Total	NON-ASBESTOS FIBERS	AREA Layer 1	PERCENT Layer 2	Total
CHRYSOTILE				ORGANIC			<1
AMOSITE				SYNTHETIC			
CROCIDOLITE				GLASS WOOL/ROCK WOOL			
OTHER				OTHERS:			
NON-FIBROUS PARTICULATE Vermiculite			>99	LAYER 1:			
				LAYER 2:			

ANALYTICAL METHOD: EPA 600/m4-82-020 & EPA 600/R-93-116

DATE COMPLETED 2/5/04

ANALYST(S)/DATE K. Hegde
Sadia Mureem
410-767-5899

LAB. SUPERVISOR/DATE Y. Lai-Sin-Choy 2/5/2004

RECEIVED
FEB 11 2004
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RESULTS ONLY VALID FOR SAMPLE RECEIVED

DHMH-3102 (1/98) 15M

USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case 33178
Client No: R31935
SDG No:

L

Date Shipped:	8/4/2004
Carrier Name:	FedEx
Airbill:	843517786190
Shipped to:	ASQAB USEPA Region III 701 Mapes Road Fort Meade MD 20755 (410) 305-2667

Chain of Custody Record

Sampler Signature: Phillip Anderson

Relinquished By	(Date / Time)	Received By	(Date / Time)
1 [signature]	8/4/04 1830	Carroll Harris	8.5.04 10:15
2			
3			
4			

For Lab Use Only

Lab Contract No:
Unit Price:
Transfer To:
Lab Contract No:
Unit Price:

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	FOR LAB USE ONLY Sample Condition On Receipt
R31935-GW1	Ground Water/ Dixon Wood DW	L/G	Percl (21)	2196 (Ice Only) (1)	R31935-GW1	S: 8/4/2004 9:40	040805-06
R31935-GW2	Ground Water/ Dixon Wood DW	L/G	Percl (21)	2197 (Ice Only) (1)	R31935-GW2	S: 8/4/2004 9:00	-07
R31935-GW3	Ground Water/ Dixon Wood DW	L/G	Percl (21)	2198 (Ice Only) (1)	R31935-GW3	S: 8/4/2004 13:25	-08
R31935-MW1	Ground Water/ Dixon Wood DW	L/G	Percl (21)	2188 (Ice Only) (1)	R31935-MW1	S: 8/4/2004 10:30	-09
R31935-MW1A	Ground Water/ Jeff Harp JH	L/G	Percl (21)	2189 (Ice Only) (1)	R31935-MW1A	S: 8/4/2004 11:10	-10
R31935-MW2	Ground Water/ Barbara Brocks BLB	L/G	Percl (21)	2190 (Ice Only) (1)	R31935-MW2	S: 8/4/2004 12:20	-11
R31935-MW3	Ground Water/ Jeff Harp JH	L/G	Percl (21)	2191 (Ice Only) (1)	R31935-MW3	S: 8/4/2004 13:25	-12
R31935-MW3A	Ground Water/ Jeff Harp JH	L/G	Percl (21)	2192 (Ice Only) (1)	R31935-MW3A	S: 8/4/2004 14:00	-13
R31935-MW4	Ground Water/ Barbara Brocks BLB	L/G	Percl (21)	2193 (Ice Only) (1)	R31935-MW4	S: 8/4/2004 10:45	-14

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s): Barbara Brocks, Jeff Harp [signature]	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
Analysis Key: Percl = Perchlorates	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? ___	Shipment Intact? ___

ORIGINAL

TR Number: 3-592370820-080404-0006

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DEPARTMENT OF HEALTH AND MENTAL HYGIENE 0040204 429

Laboratories Administration
201 W. Preston Street
P.O. Box 2355, Baltimore, Maryland 21203
J. Mehsen Joseph, Ph.D., Director

LAB. NO. _____ ORIGINAL

AIR QUALITY LABORATORY
BULK ASBESTOS MICROSCOPIC ANALYSIS

COUNTY N/A DATE COLLECTED 1/28/04

SOURCE OF SAMPLE Vermiculite

SUBMITTED BY Peggy Smith SAMPLE IDEN. NO.: Vermiculite #1

SUBMIT RESULTS TO: (NAME/ADDRESS/TELEPHONE) Peggy Smith, MDE, 1800 Washington Blvd Ste 625 Baltimore MD 21230 410-537-3493

NATURE OF MATERIAL Vermiculite

CHAIN OF CUSTODY SAMPLE POSSESSION

FROM _____ NAME/DATE/TIME TO _____ NAME/DATE/TIME

FROM _____ NAME/DATE/TIME TO _____ NAME/DATE/TIME

FROM _____ NAME/DATE/TIME TO _____ NAME/DATE/TIME

RESULTS:

SAMPLE COLOR: Tan / green.

LAYERED: YES ( ) NO (X)

ASBESTOS FIBERS	AREA PERCENT Layer 1	Layer 2	Total	NON-ASBESTOS FIBERS	AREA PERCENT Layer 1	Layer 2	Total
CHRYSOTILE				ORGANIC			<1
AMOSITE				SYNTHETIC			
CROCIDOLITE				GLASS WOOL/ROCK WOOL			
OTHER				OTHERS:			
NON-FIBROUS PARTICULATE Vermiculite			>99	LAYER 1:			
				LAYER 2:			

ANALYTICAL METHOD: EPA 600/M4-82-020 & EPA 600/R-93-116

DATE COMPLETED 2/5/04

ANALYST(S)/DATE K. Hegde
Sadia Mureen
410-767-5899

LAB. SUPERVISOR/DATE Y. Lai-Sen-Choy 2/5/2004

RECEIVED
FEB 11 2004
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RESULTS ONLY VALID FOR SAMPLE RECEIVED

DHMH-3102 (1/98) 15M

21

28

FedEx Express *USA Airbill*

FedEx Tracking Number 8435 1778 6190

Form I.D. No. 0215 **Recipient's Copy**

1 From This portion can be removed for Recipient's records.

Date 8/4/07 FedEx Tracking Number 843517786190

Sender's Name Peggy Smith Phone 410 5373493

Company MARYLAND DEPT OF ENVIRONMENT

Address 1800 WASHINGTON BLVD

Dept./Floor/Suite/Room

City BALTIMORE State MD ZIP 21230-1701

2 Your Internal Billing Reference 65651

3 To

Recipient's Name Carroll Harris Phone 410 305 2625

Company EPA Environmental Science Ctr - OASQA

Address 701 Mapes Rd

To "HOLD" at FedEx location, print FedEx address. We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Dept./Floor/Suite/Room

City Ft. Meade State MD ZIP 20755

8435 1778 6190

0258658734

NO POUCH NEEDED.

See back for peel and stick application instructions.

RECIPIENT: PEEL HERE

4a Express Package Service *Packages up to 150 lbs.* Delivery commitment may be later in some areas.

- [x] FedEx Priority Overnight — Next business morning
- [ ] FedEx Standard Overnight — Next business afternoon
- [x] FedEx First Overnight — Earliest next business morning delivery to select locations
- [ ] FedEx 2Day — Second business day
- [ ] FedEx Express Saver — Third business day

FedEx Envelope rate not available. Minimum charge: One-pound rate

4b Express Freight Service *Packages over 150 lbs.* Delivery commitment may be later in some areas.

- [ ] FedEx 1Day Freight* — Next business day
- [ ] FedEx 2Day Freight — Second business day
- [ ] FedEx 3Day Freight — Third business day

* Call for Confirmation:

5 Packaging * Declared value limit $500

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak
- [x] Other

6 Special Handling Include FedEx address in Section 3.

- [ ] **SATURDAY Delivery** — Available only for FedEx Priority Overnight and FedEx 2Day to select ZIP codes
- [ ] **HOLD Weekday** at FedEx Location — Not available for FedEx First Overnight
- [ ] **HOLD Saturday** at FedEx Location — Available only for FedEx Priority Overnight and FedEx 2Day to select locations

Does this shipment contain dangerous goods? One box must be checked.

- [x] No
- [ ] Yes — As per attached Shipper's Declaration
- [ ] Yes — Shipper's Declaration not required
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous Goods (including Dry Ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [x] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check
- [ ] Obtain Recip. Acct. No.

[redacted]

Total Packages	Total Weight		Total Charges
1	58	[redacted]	Credit Card Auth.

†Our liability is limited to $100 unless you declare a higher value. See the *FedEx Service Guide* for details.

8 Release Signature *Sign to authorize delivery without obtaining signature.*

By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

Questions? Visit our Web site at fedex.com or call 1.800.Go.FedEx® 800.463.3339.

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447

ORIGINAL

USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case 33178
Client No: R31935
SDG No:

L

Date Shipped:	8/5/2004
Carrier Name:	FedEx
Airbill:	843517786189
Shipped to:	ASQAB USEPA Region III 701 Mapes Road Fort Meade MD 20755 (410) 305-2667

Chain of Custody Record

Sampler Signature: Philip Anderson

	Relinquished By	(Date / Time)	Received By	(Date / Time)
1	[illegible]	8/5/04 1730	Thomas Grant	8.6.04 1030
2				
3				
4				

For Lab Use Only

Lab Contract No:
Unit Price:
Transfer To:
Lab Contract No:
Unit Price:

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		FOR LAB USE ONLY Sample Condition On Receipt
R31935-SED1	Sediment/ Barbara Brocks BB	L/G	Percl (21)	363 (Ice Only) (1)	R31935-SED1	S: 8/5/2004	11:25	04080610
R31935-SED2	Sediment/ Dixon Wood DW	L/G	Percl (21)	364 (Ice Only) (1)	R31935-SED2	S: 8/5/2004	11:45	11
R31935-SED3	Sediment/ Dixon Wood DW	L/G	Percl (21)	365 (Ice Only) (1)	R31935-SED3	S: 8/5/2004	11:20	12
R31935-SED4	Sediment/ Barbara Brocks BB	L/G	Percl (21)	366 (Ice Only) (1)	R31935-SED4	S: 8/5/2004	10:25	13
R31935-SED5	Sediment/ Barbara Brocks BB	L/G	Percl (21)	367 (Ice Only) (1)	R31935-SED5	S: 8/5/2004	9:50	14
R31935-SED6	Sediment/ Barbara Brocks BB	L/G	Percl (21)	368 (Ice Only) (1)	R31935-SED6	S: 8/5/2004	9:35	15
R31935-SED7	Sediment/ Philip Anderson PA	L/G	Percl (21)	369 (Ice Only) (1)	R31935-SED7	S: 8/5/2004	8:50	16
R31935-SED8	Sediment/ Philip Anderson PA	L/G	Percl (21)	370 (Ice Only) (1)	R31935-SED8	S: 8/5/2004	8:55	17
R31935-SW1	Surface Water/ Barbara Brocks BB	L/G	Percl (21)	379 (Ice Only) (1)	R31935-SW1	S: 8/5/2004	11:20	18
R31935-SW2	Surface Water/ Dixon Wood DW	L/G	Percl (21)	380 (Ice Only) (1)	R31935-SW2	S: 8/5/2004	11:40	19

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s): Barbara Brocks	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
Analysis Key: Percl = Perchlorates	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? ___ Shipment Iced? ___

ORIGINAL

TR Number: 3-592370820-080504-0010

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DEPARTMENT OF HEALTH AND MENTAL HYGIENE 0 4 0 2 0 4 5 2 9

Laboratories Administration
201 W. Preston Street
P.O. Box 2355, Baltimore, Maryland 21203
J. Mehsen Joseph, Ph.D., Director

LAB. NO. _____ ORIGINAL

AIR QUALITY LABORATORY
BULK ASBESTOS MICROSCOPIC ANALYSIS

COUNTY N/A DATE COLLECTED 1/28/04

SOURCE OF SAMPLE Vermiculite

SUBMITTED BY Peggy Smith SAMPLE IDEN. NO.: Vermiculite #1

SUBMIT RESULTS TO: (NAME/ADDRESS/TELEPHONE) Peggy Smith, MDE, 1800 Washington Blvd Ste 625 Baltimore MD 21230 410-537-3493

NATURE OF MATERIAL Vermiculite

CHAIN OF CUSTODY SAMPLE POSSESSION

FROM _____ NAME/DATE/TIME TO _____ NAME/DATE/TIME

FROM _____ NAME/DATE/TIME TO _____ NAME/DATE/TIME

FROM _____ NAME/DATE/TIME TO _____ NAME/DATE/TIME

RESULTS:

SAMPLE COLOR: Tan / green.

LAYERED: YES ( ) NO (X)

ASBESTOS FIBERS	AREA PERCENT			NON-ASBESTOS FIBERS	AREA PERCENT		
	Layer 1	Layer 2	Total		Layer 1	Layer 2	Total
CHRYSOTILE				ORGANIC			<1
AMOSITE				SYNTHETIC			
CROCIDOLITE				GLASS WOOL/ROCK WOOL			
OTHER				OTHERS:			
NON-FIBROUS PARTICULATE Vermiculite			>99	LAYER 1:			
				LAYER 2:			

ANALYTICAL METHOD: EPA 600/M4-82-020 & EPA 600/R-93-116

DATE COMPLETED 2/5/04

ANALYST(S)/DATE K. Hegde
Sadia Mureen
410-767-5899

LAB. SUPERVISOR/DATE Y. Lai-Sen-Choy 2/5/2004

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RESULTS ONLY VALID FOR SAMPLE RECEIVED

DHMH-3102 (1/98) 15M

USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case 33178
Client No: R31935
SDG No:

Date Shipped:	8/5/2004
Carrier Name:	FedEx
Airbill:	843517786189
Shipped to:	ASQAB USEPA Region III 701 Mapes Road Fort Meade MD 20755 (410) 305-2667

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1	8/5/04 1730	Thomas Grant	8.6.04 1030
2			
3			
4			

Sampler Signature:

For Lab Use Only
Lab Contract No:
Unit Price:
Transfer To:
Lab Contract No:
Unit Price:

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		FOR LAB USE ONLY Sample Condition On Receipt
R31935-SW3	Surface Water/ Jeff Harp JH	L/G	Percl (21)	381 (Ice Only) (1)	R31935-SW3	S: 8/5/2004	11:15	04080620
R31935-SW4	Surface Water/ Dixon Wood DW	L/G	Percl (21)	382 (Ice Only) (1)	R31935-SW4	S: 8/5/2004	10:20	21
R31935-SW5	Surface Water/ Dixon Wood DW	L/G	Percl (21)	383 (Ice Only) (1)	R31935-SW5	S: 8/5/2004	9:45	22
R31935-SW6	Surface Water/ Dixon Wood DW	L/G	Percl (21)	384 (Ice Only) (1)	R31935-SW6	S: 8/5/2004	9:30	23
R31935-SW7	Surface Water/ Gifawossen Tefera	L/G	Percl (21)	385 (Ice Only) (1)	R31935-SW7	S: 8/5/2004	8:35	24
R31935-SW8	Surface Water/ Dixon Wood DW	L/G	Percl (21)	386 (Ice Only) (1)	R31935-SW8	S: 8/5/2004	8:40	25
R31935-SW9	Surface Water/ Dixon Wood DW	L/G	Percl (21)	387 (Ice Only) (1)	R31935-SW9	S: 8/5/2004	10:30	26

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number: ORIGINAL
Analysis Key: Percl = Perchlorates	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? ___ Shipment Iced? ___

TR Number: 3-592370820-080504-0010

LABORATORY COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

[redacted] FedEx Express [redacted] Tracking Number [redacted] 8435 [redacted] 78 [redacted] 18 [redacted] Form No. [redacted] 0215 [redacted] Recipient's Copy [redacted]

1 From This portion can be removed for Recipient's records.

Date 8/5/04 FedEx Tracking Number 843517786189

Sender's Name Peggy Smith Phone 410 537 3493

Company MARYLAND DEPT OF ENVIRONMENT

Address 1800 WASHINGTON BLVD

Dept./Floor/Suite/Room

City BALTIMORE State MD ZIP 21230-1701

2 Your Internal Billing Reference 65651

3 To

Recipient's Name Carroll Harris Phone 410 305 2625

Company EPA Environmental Science Ctr - OASQA

Address 701 Mapes Rd

To "HOLD" at FedEx location, print FedEx address. We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Dept./Floor/Suite/Room

City Ft. Meade State MD ZIP 20755

8435 1778 6189

0258658734

RECIPIENT: PEEL HERE

NO POUCH NEEDED.
See back for peel and stick application instructions.

4a Express Package Service *Packages up to 150 lbs.* Delivery commitment may be later in some areas.

- [x] FedEx Priority Overnight — Next business morning
- [ ] FedEx Standard Overnight — Next business afternoon
- [x] FedEx First Overnight — Earliest next business morning delivery to select locations
- [ ] FedEx 2Day — Second business day
- [ ] FedEx Express Saver — Third business day

FedEx Envelope rate not available. Minimum charge: One-pound rate

4b Express Freight Service *Packages over 150 lbs.* Delivery commitment may be later in some areas.

- [ ] FedEx 1Day Freight* — Next business day
- [ ] FedEx 2Day Freight — Second business day
- [ ] FedEx 3Day Freight — Third business day

* Call for Confirmation:

5 Packaging * Declared value limit $500

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak
- [x] Other

6 Special Handling Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — Available only for FedEx Priority Overnight and FedEx 2Day to select ZIP codes
- [ ] HOLD Weekday at FedEx Location — Not available for FedEx First Overnight
- [ ] HOLD Saturday at FedEx Location — Available only for FedEx Priority Overnight and FedEx 2Day to select locations

Does this shipment contain dangerous goods? One box must be checked.

- [x] No
- [ ] Yes — As per attached Shipper's Declaration
- [ ] Yes — Shipper's Declaration not required
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg
- [ ] Cargo Aircraft Only

Dangerous Goods (including Dry Ice) cannot be shipped in FedEx packaging.

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below. Obtain Recip. Acct. No. [ ]

- [x] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

[redacted]

Total Packages	Total Weight	[redacted]	Total Charges
1	10		Credit Card Auth.

†Our liability is limited to $100 unless you declare a higher value. See the *FedEx Service Guide* for details.

8 Release Signature *Sign to authorize delivery without obtaining signature.*

By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

Questions? Visit our Web site at fedex.com or call 1.800.Go.FedEx® 800.463.3339.

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447

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Analytical Services and Quality Assurance Branch
Environmental Science Center
701 Mapes Road
Fort Meade, MD 20755-5350

RECEIVED
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Date: November 4, 2004

Subject: Supplement to Test Report
R31935; New Jersey Fireworks (REQ04200)

To: Analytical Case File REQ04200

Thru: Patricia Krantz, Director

From: Patricia Sosinski, Chemist
Sample Scheduling Coordinator

This is a Supplement to the Final Data Report for the ASQAB Final Data Report for R31935; New Jersey Fireworks (REQ04200). The EPA Region III Analytical Services and Quality Assurance Branch released a Final Data Report for R31935; New Jersey Fireworks (REQ04200) on September 13, 2004. The analyses provided were Percent Dry Weight for soils and Perchlorates for soils and waters by EPA Method 314, Determination of Perchlorate in Drinking Water Using Ion Chromatography (IC). This Supplement to Test Report for R31935; New Jersey Fireworks (REQ04200) consists of this Memo to Case File REQ04200, a the Table of Sample Results of the re-issued perchlorate data, and the Data Validation Report for the confirmatory analyses by LC-MS.

Background Information

Recent information from EPA, DOD and DOE indicates that interference effects are possible for some sample matrices, which can result in false positives for perchlorates by IC. A soon to be issued proposed rule from the Office of Groundwater and Drinking Water is expected to be effective in December of 2004; this rule will require confirmation of positive perchlorate results by EPA 314 (IC) LC/MS, IC/MS, or LC/MS/MS. Liquid Chromatography/Mass Spectrophotometry (LC/MS) has been selected by ASQAB for use in confirming positive perchlorate results, and the decision was made to send samples with quantitative values for perchlorate by EPA 314 to an external lab for confirmation. This information was shared with the EPA SAM, Lorie Baker, along with 2 options for reporting the data from R31935; New Jersey Fireworks (REQ04200):

1. The Due Date for the Final Data Report could be extended to allow time for some of the samples with quantitative perchlorate values by EPA 314 to be sent for confirmation by LC/MS, received, validated, and compared to the IC data. The Final Data Report would be based on the outcome of the comparison.
2. The Final Data Report could be issued in September 2004 with the quantitative perchlorate

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values flagged "N" to indicate the presumptive presence and tentative identification of perchlorate. After the data from the samples sent for confirmation by LC/MS were received, validated, and compared to the IC data, Supplement to the Final Data Report for R31935; New Jersey Fireworks (REQ04200) could be created and sent to the customers.

Ms. Baker requested the second option, and the Final Data Report for R31935; New Jersey Fireworks (REQ04200) was mailed on September 13, 2004.

Five samples from R31935; New Jersey Fireworks (REQ04200), 3 soils and 2 waters with the highest values for perchlorates, were shipped to Datachem Laboratories on September 2, 2004. The Station Locations submitted for confirmation analysis of perchlorate by LC/MS were R31935-SS22, R31935-PW5, R31935-GW2, R31935-MW4, and R31935-SED6. The validated confirmation data were made available to ASQAB scientists on October 21, 2004 for comparison to the EPA 314 data. After validation, 4 of the 5 samples had usable data for comparison, and all 4 were positive for perchlorate. The group agreed that the data by IC should be considered quantitative data, and the "N" flag for tentative identification was no longer appropriate.

ASQAB is proposing that confirmation of IC perchlorate data be performed once per site. Having this confirmation on record will allow us to provide perchlorate analyses by IC for future requests for New Jersey Fireworks. If this is contradicted by the Rule that is expected December of 2004, ASQAB will advise our customers of the requirements in the Rule, and change ASQAB's process to be compliant with the Rule.

Please contact Pat Sosinski at 410/305-2667 if you have additional questions.

cc: Joseph Slayton, ASQAB Technical Director

Lockheed Martin Information Technology
ESAT Region 3
US EPA Environmental Science Center
701 Mapes Road Ft. Meade, MD 20755-5350
Telephone 410-305-3037 Facsimile 410-305-3597

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LOCKHEED MARTIN

We never forget who we're working for™

DATE: October 19, 2004

SUBJECT: Organic Data Validation (M3 Level)
Case: R31935 SDG: R31935
Site: New Jersey Fireworks

FROM: [redacted] Senior Data Reviewer [redacted] Senior Oversight Chemist

TO: [redacted]
ESAT Region 3 Project Officer

OVERVIEW

DAS R31935, Sample Delivery Group (SDG) R31935, from the New Jersey Fireworks site consisted of three (3) aqueous and two (2) soil samples submitted to Datachem Laboratories (DATAC) for perchlorate analyses. The sample set contained no field Quality Control (QC) samples. The samples were analyzed for this analyte in accordance with EPA Test Methods for Evaluating Solid Waste, SW-846 Method 6850 (Draft) through the Delivery of Analytical Services (DAS) program.

SUMMARY

All samples were successfully analyzed for the target parameter except sample R31935-SED6. All other instrument and method sensitivities were according to the above referenced method. Areas of concern with respect to data usability are listed below. Analytical results for all samples are reported on a single Data Summary Form (DSF) in Appendix B.

MAJOR PROBLEM

- The ion ratio for the ions (83/85) monitored for perchlorate was outside the control limits (2.2 - 3.3) in sample R31935-SED6. The quantitation limit for this sample was rejected and qualified "R" on the DSF.

MINOR PROBLEM

- All samples were collected 8/3/04 to 8/5/04 and were analyzed 9/29/04 or 9/30/04. The aqueous technical holding time of twenty-eight (28) days for perchlorate in these samples was exceeded by twenty-eight (28) to thirty (30) days. The aqueous holding times was also applied to the soil samples. Positive results for these samples were qualified "L" on the DSFs unless superseded by "J". The "UL" qualifier in sample R31935-SED6 has been superseded by "R on the DSF.

NOTES

- The Internal Standard (IS) recovery was outside the lower QC limit (<70%) in sample R31935-GW2 in the initial undiluted analysis possibly due to matrix effect. The sample was re-analyzed at a one hundred fold (100X) dilution and the IS recovery was within control limits. The result from the diluted analysis is reported on the DSF.

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No positive results were reported in the analyses of the method blanks associated with this data case.

- All recoveries and Relative Percent Differences (RPDs) in the Matrix Spike/Matrix Spike Duplicate (MS/MSD) analyses were within QC limits.
- Based on the preparation log, it appears that for the soil MS/MSD analyses the laboratory used the sample extract from the parent sample to prepare the spiked samples instead of extracting separate MS/MSD samples.
- All recoveries in the Laboratory Control Sample (LCS) analyses were within QC limits.
- Samples R31935-GW2, R31935-PW5 and R31935-SS22 were re-analyzed at 100X, 10X and 100X dilutions, respectively, due to the high concentration of perchlorate in these samples. The reporting limits are elevated in these samples due to the dilutions.
- Sample volume (9.93 mL) and glacial acetic acid volume (20 µL) used by the laboratory varied slightly from the volumes specified in the method (10 mL and 50 µL, respectively).
- The reporting limit is based on the lowest calibration standard (0.2 µ/L).

All data for DAS R31935, SDG R31935, were reviewed in accordance with the National Functional Guidelines for Evaluating Organic Analyses with Modification for use within Region III.

ATTACHMENTS

INFORMATION REGARDING REPORT CONTENT

APPENDIX A	GLOSSARY OF DATA QUALIFIER CODES
APPENDIX B	DATA SUMMARY FORMS
APPENDIX C	CHAIN OF CUSTODY (COC) RECORDS
APPENDIX D	LABORATORY CASE NARRATIVES

DCN:R31935M3.wpd

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DATA SUMMARY FORM: INORGANIC

Case #: R31935 SDG : R31935 Number of Soil Samples : 2
Site : New Jersey Fireworks Number of Water Samples : 3
Lab. : DATAC

Sample Number :		R31935-GW2		R31935-MW4		R31935-PW5					
Sampling Location :		R31935-GW2		R31935-MW4		R31935-PW5					
Laboratory Sample ID:		04C02553		04C02554		04C02552					
Field QC											
Matrix :		Water		Water		Water					
Units :		ug/L		ug/L		ug/L					
Date Sampled :		8/4/2004		8/4/2004		8/3/2004					
Time Sampled :		09:00		10:45		11:40					
Dilution Factor :		100.0		1.0		10.0					
ANALYTE	RL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Perchlorate	0.2	438	L	9.35	L	27.7	L				

RL = Reporting Limit SEE NARRATIVE FOR CODE DEFINITIONS

Sample Number :		R31935-SS22		R31935-SED6							
Sampling Location :		R31935-SS22		R31935-SED6							
Laboratory Sample ID:		04C02550		04C025551							
Field QC											
Matrix :		Soil		Soil							
Units :		ug/Kg		ug/Kg							
Date Sampled :		8/3/2004		8/5/2004							
Time Sampled :		10:25		09:35							
Percent Solids:		82.0		80.2							
Dilution Factor :		100.0		1.0							
ANALYTE	RL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Perchlorate	2.0	1790	L		R						

RL = Reporting Limit SEE NARRATIVE FOR CODE DEFINITIONS

SITE NAME : NEW JERSEY FIREWORKS

LAB REQUEST #: REQ04200

INORGANIC ANALYTICAL SAMPLE RESULTS

SAMPLE NUMBER:	04080401	04080402	04080403	04080404	04080405
STATION ID:	S24	S25	SS11	SS13	SS14
	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE
Percent Dry Weight					
Percent Dry Weight (105C)	86.5 %	70.3 %	84.9 %	89.8 %	85.7 %
Perchlorate by IC					
Perchlorate	<0.005 mg/Kg	0.045 mg/Kg	<0.005 mg/Kg	<0.005 mg/Kg	<0.005 mg/Kg

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SITE NAME : NEW JERSEY FIREWORKS

LAB REQUEST #: REQ04200

INORGANIC ANALYTICAL SAMPLE RESULTS

SAMPLE NUMBER:	04080406	04080407	04080408	04080409	04080410
STATION ID:	SS21	SS22	SS23	SS24	PW5
	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE
Percent Dry Weight					
Percent Dry Weight (105C)	84.9 %	79.4 %	84.7 %	84.6 %	
Perchlorate by IC					
Perchlorate	0.036 mg/Kg	2.09 mg/Kg	<0.005 mg/Kg	<0.005 mg/Kg	21.0 ug/L

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SITE NAME : NEW JERSEY FIREWORKS

LAB REQUEST #: REQ04200

INORGANIC ANALYTICAL SAMPLE RESULTS

SAMPLE NUMBER:	04080411	04080412	04080413	04080414	04080415
STATION ID:	S11	S12	S13	S14	S15
	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE
Percent Dry Weight					
Percent Dry Weight (105C)	72.3 %	78.4 %	89.4 %	82.6 %	83.5 %
Perchlorate by IC					
Perchlorate	<0.005 mg/Kg	0.006 mg/Kg	0.025 mg/Kg	0.018 mg/Kg	0.009 mg/Kg

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U.S EPA REGION III ANALYTICAL SERVICES & QUALITY ASSURANCE BRANCH

SITE NAME : NEW JERSEY FIREWORKS

LAB REQUEST #: REQ04200

INORGANIC ANALYTICAL SAMPLE RESULTS

SAMPLE NUMBER:	04080416	04080417	04080418	04080419	04080506
STATION ID:	S16	S21	S22	S23	GW1
	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE
Percent Dry Weight					
Percent Dry Weight (105C)	78.5 %	71.9 %	80.9 %	89.1 %	
Perchlorate by IC					
Perchlorate	<0.005 mg/Kg	0.062 mg/Kg	0.007 mg/Kg	<0.005 mg/Kg	<1.00 ug/L

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SITE NAME : NEW JERSEY FIREWORKS

LAB REQUEST #: REQ04200

INORGANIC ANALYTICAL SAMPLE RESULTS

SAMPLE NUMBER:	04080507	04080508	04080509	04080510	04080511
STATION ID:	GW2	GW3	MW1	MW1A	MW2
	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE
Percent Dry Weight					
Percent Dry Weight (105C)					
Perchlorate by IC					
Perchlorate	385 ug/L	4.79 ug/L	<1.00 ug/L	<1.00 ug/L	<1.00 ug/L

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SITE NAME : NEW JERSEY FIREWORKS

LAB REQUEST #: REQ04200

INORGANIC ANALYTICAL SAMPLE RESULTS

SAMPLE NUMBER:	04080512	04080513	04080514	04080610	04080611
STATION ID:	MW3	MW3A	MW4	SED1	SED2
	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE
Percent Dry Weight					
Percent Dry Weight (105C)				79.7 %	79.8 %
Perchlorate by IC					
Perchlorate	<1.00 ug/L	5.07 ug/L	22.6 ug/L	<0.005 mg/Kg	<0.005 mg/Kg

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SITE NAME : NEW JERSEY FIREWORKS

LAB REQUEST #: REQ04200

INORGANIC ANALYTICAL SAMPLE RESULTS

SAMPLE NUMBER:	04080612	04080613	04080614	04080615	04080616
STATION ID:	SED3	SED4	SED5	SED6	SED7
	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE
Percent Dry Weight					
Percent Dry Weight (105C)	64.8 %	80.1 %	61.0 %	74.0 %	63.6 %
Perchlorate by IC					
Perchlorate	<0.005 mg/Kg	<0.005 mg/Kg	<0.005 mg/Kg	0.103 mg/Kg	<0.005 mg/Kg

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SITE NAME : NEW JERSEY FIREWORKS

LAB REQUEST #: REQ04200

INORGANIC ANALYTICAL SAMPLE RESULTS

SAMPLE NUMBER:	04080617	04080618	04080619	04080620	04080621
STATION ID:	SED8	SW1	SW2	SW3	SW4
	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE
Percent Dry Weight					
Percent Dry Weight (105C)	68.0 %				
Perchlorate by IC					
Perchlorate	<0.005 mg/Kg	<1.00 ug/L	<1.00 ug/L	<1.00 ug/L	<1.00 ug/L

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U.S EPA REGION III ANALYTICAL SERVICES & QUALITY ASSURANCE BRANCH

SITE NAME : NEW JERSEY FIREWORKS

LAB REQUEST #: REQ04200

INORGANIC ANALYTICAL SAMPLE RESULTS

SAMPLE NUMBER:	04080622	04080623	04080624	04080625	04080626
STATION ID:	SW5	SW6	SW7	SW8	SW9
	SAMPLE	SAMPLE	SAMPLE	SAMPLE	SAMPLE
Percent Dry Weight					
Percent Dry Weight (105C)					
Perchlorate by IC					
Perchlorate	<1.00 ug/L	8.51 ug/L	7.65 ug/L	7.52 ug/L	<1.00 ug/L

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APPENDIX D

MDE TOXICOLOGICAL EVALUATION

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Maryland Department of the Environment
Waste Management Administration
Environmental Restoration and Redevelopment Program

MEMORANDUM

TO: Phil Anderson, Project Manager
Brownfields/Site Assessment Section

THROUGH: Patti Davis, Section Head
Brownfields/Site Assessment Section

FROM: Nicole Allen, Toxicologist
Environmental Restoration and Redevelopment Program

THROUGH: Mark A. Mank, Toxicologist
Environmental Restoration and Redevelopment Program

SUBJECT: Toxicological Evaluation – New Jersey Fireworks/ Rt. 7 Dump, Elkton, Cecil County, Maryland

DATE: January 24, 2005

The toxicological evaluation for the New Jersey Fireworks property in Elkton, Cecil County, Maryland is attached. Soil and sediment samples were analyzed for VOCs, sVOCs, PCBs, metals, select pesticides and herbicides and perchlorate. Groundwater and surface water samples were analyzed for sVOCs, PCBs, metals, select pesticides and herbicides and perchlorate. The toxicological evaluation assumed the future use of the site to be commercial.

The estimated risks from the incidental ingestion of detected noncarcinogenic surface soil contaminants exceeded MDE and EPA recommended risk levels for the child visitor and construction worker commercial populations utilizing both the maximum detected concentration and the 95% UCL concentration as the site-wide average concentration. Risk estimates for the incidental ingestion of detected noncarcinogenic surface soil contaminants were below MDE and EPA recommended risk levels for the youth visitor and adult worker commercial populations. Risk estimates for the incidental ingestion of detected carcinogenic surface soil contaminants exceeded MDE recommended risk levels for the child visitor commercial population utilizing the maximum detected concentration as the site-wide average concentration. Carcinogenic risk estimates for the incidental ingestion of detected surface soil contaminants were within MDE recommend risk levels for the youth visitor, adult worker and construction worker commercial populations and EPA recommended risk levels for all commercial populations utilizing the maximum detected concentration as the site-wide average concentration. Carcinogenic risk estimates for the incidental ingestion of detected and nondetected surface soil contaminants were within MDE and EPA recommended risk levels for all commercial populations utilizing the 95% UCL concentration as the site-wide average concentration. The estimated risks from the

incidental ingestion of detected noncarcinogenic and carcinogenic subsurface soil contaminants were within MDE and EPA recommended risk levels for all commercial populations utilizing the maximum detected concentration as the site-wide average concentration.

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The estimated noncarcinogenic and carcinogenic risk from the inhalation of detected and nondetected volatiles and fugitive dust from surface and subsurface soils were within acceptable levels as recommended by MDE and EPA for all commercial populations utilizing the maximum detected concentration as the site-wide average concentration.

Risk estimates for dermal exposure to detected noncarcinogenic surface soil contaminants exceeded MDE and EPA recommended levels for the child visitor commercial population utilizing both the maximum detected concentration and the 95% UCL concentration as the site-wide average concentration. Noncarcinogenic risk estimates for dermal exposure to detected surface soil contaminants were below MDE and EPA recommend risk levels for the youth visitor, adult worker and construction worker commercial populations. Risk estimates for dermal exposure to detected and nondetected carcinogenic surface soil contaminants were within MDE and EPA recommended ranges for all commercial population utilizing both the maximum detected concentration and the 95% UCL concentration as the site-wide average concentration. Risk estimates for dermal exposure to detected noncarcinogenic subsurface soil contaminants exceeded MDE and EPA recommended risk levels for the child visitor commercial population utilizing the maximum detected concentration as the site-wide average concentration. Noncarcinogenic risk estimates for dermal exposure to detected subsurface soil contaminants were below MDE and EPA recommend risk levels for the youth visitor, adult worker and construction worker commercial populations. Risk estimates for dermal exposure to detected and nondetected carcinogenic subsurface soil contaminants were within MDE and EPA recommended risk levels for all commercial population. Dermal risk estimates should be viewed with caution, as there is a relatively high degree of uncertainty associated with some of the chemical constants used. The concentrations of lead detected in soils on site were less than the recommended 400 mg/kg screening level. Perchlorate was detected at the site but limited toxicological data was available for this compound. The lack of toxicological data adds a degree of uncertainty to the analysis. Based upon historical site operations and the detection of this chemical, it may represent a potential risk in specific locations across the site. Perchlorate, a primary component in solid propellant for rockets, was detected in subsurface soils on site.

Risk estimates from the incidental ingestion of detected and nondetected noncarcinogenic and carcinogenic sediment contaminants were within MDE and EPA recommended risk levels for all commercial populations. Risk estimates for dermal exposure to detected and nondetected noncarcinogenic and carcinogenic sediment contaminants were within MDE and EPA recommended risk levels for all commercial populations. The maximum concentration of lead detected in sediment did not exceed the 400 mg/kg residential soil screening value. Based on the available data, the concentration of lead in sediment should not pose a threat to human health under a commercial use scenario. Perchlorate was detected at the site but limited toxicological data was available for this compound. The lack of toxicological data adds a degree of uncertainty to the analysis. Based upon historical site operations and the detection of this chemical, it may represent a potential risk in specific locations across the site. Perchlorate, a primary component in solid propellant for rockets, was not detected in sediment on site.

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Additionally, comparisons of sediment data to NOAA ERM values were performed. No detected sediment contaminants exceeded their respective NOAA ERM value. One nondetected compound, dibenzo [a,h] anthracene, exceeded the respective NOAA ERM value but this contaminant was not detected on site. Based on the available data, the concentration of lead in sediment should not pose a threat to sediment dwelling animal and plant species under a residential use scenario.

Potential adverse effects from groundwater exposure were evaluated using total and dissolved metals concentration data on site. Risk estimates from the incidental ingestion of detected noncarcinogenic groundwater contaminants exceeded MDE and EPA recommended risk levels for all commercial populations using total and dissolved metals data. Risk estimates from the incidental ingestion of detected carcinogenic groundwater contaminants exceeded MDE recommended risk ranges for all commercial populations and EPA risk ranges for the child visitor, youth visitor and adult worker commercial populations using total metal data. Risk estimates from the incidental ingestion of detected carcinogenic contaminants were within EPA recommended risk levels for the construction worker commercial population using total metals data. Carcinogenic risk estimates for the incidental ingestion of detected groundwater contaminants exceeded MDE recommended risk ranges for the child visitor, youth visitor and adult worker commercial populations using dissolved metal data. Risk estimates from the incidental ingestion of detected carcinogenic contaminants were within MDE recommended risk ranges for the construction worker and EPA recommended risk ranges for all commercial populations using dissolved metals data. Risk estimates for dermal contact with detected noncarcinogenic groundwater contaminants exceeded MDE and EPA recommended risk levels for the child visitor, adult worker and construction worker commercial populations using total metals data. Risk estimates for dermal contact with detected noncarcinogenic groundwater contaminants were below MDE and EPA recommended risk levels for the youth visitor commercial population using total metals data and all commercial populations using dissolved metals data. Risk estimates for dermal contact with detected carcinogenic groundwater contaminants were within MDE and EPA recommended risk levels for all commercial populations using both total and dissolved metal data. The lack of critical physical constants and the methods for derivation of dermal exposures lead to a high degree of uncertainty associated with this route of exposure. This high degree of uncertainty should be considered when evaluating the hazards of dermal exposure to groundwater. Perchlorate was detected at the site but limited toxicological data was available for this compound. The lack of toxicological data adds a degree of uncertainty to the analysis. Based upon historical site operations and the detection of this chemical, it may represent a potential risk in specific locations across the site. Perchlorate, a primary component in solid propellant for rockets, was detected in groundwater on site.

Two detected contaminants, barium and manganese exceeded their respective MCL and six nondetected compounds exceeded their respective MCL using dissolved metals data. Groundwater contaminant concentrations (dissolved metals data) were also compared to available Maryland ambient water quality standards (AWQS) or EPA recommended ambient water quality criteria (AWQC). Two detected groundwater contaminants (cadmium and copper) exceeded the AWQS or AWQC for the protection of aquatic life (acute or chronic) and two

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detected contaminants (arsenic and beryllium) exceeded their EPA recommended AWQC for the protection of human health through fish consumption.

Noncarcinogenic and carcinogenic risk estimates for the incidental ingestion of detected and nondetected surface water contaminants while swimming were below MDE and EPA recommended risk levels for all commercial populations. Surface water contaminant concentrations (dissolved metals data) were also compared to available Maryland AWQS or EPA recommended AWQC for freshwater environments. One detected surface water contaminant, silver, exceeded the freshwater AWQS or AWQC for the protection of aquatic life (acute or chronic) and two detected contaminants, arsenic and thallium, exceeded EPA fish consumption AWQC. The magnitude of these exceedances and the potential impact to receptors cannot be determined from the data available at this time.

No detected contaminant in groundwater on site exceeded a hazard index (HI) of 1 or a cancer risk of greater than 1×10^{-5} for commercial populations from vapor intrusion. Vapor intrusion from mercury contamination in soil exceeded a hazard index (HI) of 1 for commercial populations. No detected contaminants in surface or subsurface soil exceeded a cancer risk of greater than 1×10^{-5} for commercial populations from vapor intrusion.

Thirteen detected groundwater contaminants, aluminum, arsenic, barium, beryllium, cadmium, chromium, cobalt, lead, manganese, nickel, selenium, thallium and vanadium and seven nondetected contaminants exceeded their corresponding MDE groundwater cleanup standard. Three detected surface water contaminants, aluminum, barium and manganese exceeded the corresponding MDE groundwater cleanup standard. Three detected surface soil contaminants, arsenic, barium and mercury, and two detected subsurface soil contaminants, arsenic and mercury exceeded their recommended MDE non-residential soil cleanup standard. No nondetected surface or subsurface soil contaminant exceeded recommended MDE non-residential soil cleanup standards.

Please contact me (x3436) if you have any questions.
/MAM
attachment

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4.0 References

1. EPA. 1989. *Risk Assessment Guidance for Superfund Volume I Human Health Evaluation Manual (Part A) Interim Final.* Office of Emergency and Remedial Response. EPA/540/1-89/002.

2. EPA. 1991. *Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual Supplemental Guidance "Standard Default Exposure Factors" Interim Final.* Office of Emergency and Remedial Response. OSWER Directive: 9285.6-03.

3. EPA. 1991. *Risk Assessment Guidance for Superfund: Volume I - Human Health Evaluation Manual (Part B, Development of Risk/based Preliminary Remediation Goals) Interim.* Office of Emergency and Remedial Response. EPA/540/R-92/003.

4. EPA, Region III. Risk-Based Concentration Table, April 14, 2004.

5. EPA. *Memorandum: Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities.* Office of Solid Waste and Emergency Response. OSWER Directive # 9355.4-12.

6. EPA. Integrated Risk Information System. 2000.

7. EPA. 1997. *Exposure Factors Handbook, Volume I, General Factors.* Office of Research and Development. EPA/600/P-95/002Fa.

8. EPA. 1992. *Dermal Exposure Assessment: Principles and Applications.* EPA/600/8-91/011B.

9. EPA. Region III, 1995. *Technical Guidance Manual, Risk Assessment, Assessing Dermal Exposure from Soil.* EPA/903-K-95-003.

10. Long, E.R., MacDonald, D.D., Smith, S.L., Calder, F.D., 1995. Incidence of Adverse Biological Effects Within Ranges of Chemical Concentrations in Marine and Estuarine Sediments. Environmental Management Vol 19, No. 1, pp. 81-97.

11. EPA. *User's Guide for the Johnson and Ettinger (1991) Model for subsurface Vapor Intrusion into Buildings.* June, 2003.

12. Maryland Department of the Environment. *State of Maryland Department of the Environment Cleanup Standards for Soil and Groundwater.* Interim Final Guidance. August 2001.

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Table 1. Quantitative Risk Assessment - Noncarcinogenic
Commercial Use - Incidental Ingestion/Surface Soil.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

Analyte	Concentration (mg/kg)	Qualifier	Reference Dose (mg/kg/d)	Adult Worker		Construction Worker		Youth Visitor		Child Visitor	
				ADD	HQ	ADD	HQ	ADD	HQ	ADD	HQ
ALUMINUM	64000		1E+00	3E-02	3E-02	3E-01	3E-01	6E-02	6E-02	3E-01	3E-01
ANTIMONY	12.5	L	4E-04	6E-06	2E-02	6E-05	1E-01	1E-05	3E-02	6E-05	2E-01
ARSENIC	18.9		3E-04	9E-06	3E-02	9E-05	3E-01	2E-05	6E-02	9E-05	3E-01
BARIUM	47600		7E-02	2E-02	3E-01	2E-01	3E+00 *	4E-02	6E-01	2E-01	3E+00 *
CHROMIUM	187		3E-03	9E-05	3E-02	9E-04	3E-01	2E-04	6E-02	9E-04	3E-01
MANGANESE	824		2E-02	4E-04	2E-02	4E-03	2E-01	7E-04	4E-02	4E-03	2E-01
VANADIUM	31.7		1E-03	2E-05	2E-02	1E-04	1E-01	3E-05	3E-02	2E-04	2E-01
thallium	1.61	U	7E-05	8E-07	1E-02	8E-06	1E-01	1E-06	2E-02	8E-06	1E-01
Hazard Index for Detected Compounds Only:				**Sum =**	**4.8E-01**	**Sum =**	**4.6E+00 ***	**Sum =**	**8.8E-01**	**Sum =**	**4.7E+00 ***
Hazard Index for Nondetected Compounds Only:				**Sum =**	**1.1E-02**	**Sum =**	**1.1E-01**	**Sum =**	**2.1E-02**	**Sum =**	**1.1E-01**
Hazard Index for Detected and Nondetected Compounds:				**Sum =**	**4.9E-01**	**Sum =**	**4.7E+00 ***	**Sum =**	**9.0E-01**	**Sum =**	**4.8E+00 ***

ADD = average daily dose (mg/kg/d). HQ = Hazard Quotient (unitless). Compounds printed in lowercase letters were not detected in any sample.

* Hazard quotient or hazard index exceeds 1.5.

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Table 1UCL. Quantitative Risk Assessment - Noncarcinogenic
Commercial Use - Incidental Ingestion/Surface Soil.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

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Analyte	Concentration (mg/kg)	Qualifier	Reference Dose (mg/kg/d)	Adult Worker		Construction Worker		Youth Visitor		Child Visitor	
				ADD	HQ	ADD	HQ	ADD	HQ	ADD	HQ
ALUMINUM	25374	UCL	1E+00	1E-02	1E-02	1E-01	1E-01	2E-02	2E-02	1E-01	1E-01
ANTIMONY	9.8	UCL	4E-04	5E-06	1E-02	5E-05	1E-01	9E-06	2E-02	5E-05	1E-01
ARSENIC	10.6	UCL	3E-04	5E-06	2E-02	5E-05	2E-01	1E-05	3E-02	5E-05	2E-01
BARIUM	32233	UCL	7E-02	2E-02	2E-01	2E-01	2E+00 *	3E-02	4E-01	2E-01	2E+00 *
CHROMIUM	81.3	UCL	3E-03	4E-05	1E-02	4E-04	1E-01	7E-05	2E-02	4E-04	1E-01
MANGANESE	645.2	UCL	2E-02	3E-04	2E-02	3E-03	2E-01	6E-04	3E-02	3E-03	2E-01
VANADIUM	26.2	UCL	1E-03	1E-05	1E-02	1E-04	1E-01	2E-05	2E-02	1E-04	1E-01
thallium	1.61	U	7E-05	8E-07	1E-02	8E-06	1E-01	1E-06	2E-02	8E-06	1E-01
Hazard Index for Detected Compounds Only:				**Sum =**	**3.1E-01**	**Sum =**	**3.0E+00 ***	**Sum =**	**5.7E-01**	**Sum =**	**3.0E+00 ***
Hazard Index for Nondetected Compounds Only:				**Sum =**	**1.1E-02**	**Sum =**	**1.1E-01**	**Sum =**	**2.1E-02**	**Sum =**	**1.1E-01**
Hazard Index for Detected and Nondetected Compounds:				**Sum =**	**3.2E-01**	**Sum =**	**3.1E+00 ***	**Sum =**	**5.9E-01**	**Sum =**	**3.2E+00 ***

ADD = average daily dose (mg/kg/d). HQ = Hazard Quotient (unitless). Compounds printed in lowercase letters were not detected in any sample.

* Hazard quotient or hazard index exceeds 1.5.

Table 2. Quantitative Risk Assessment - Carcinogenic
Commercial Use - Incidental Ingestion/Surface soil.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

Analyte	Concentration (mg/kg)	Qualifier	Slope Factor (1/mg/kg/d)	Adult Worker		Construction Worker		Youth Visitor		Child Visitor	
				LADD	CR	LADD	CR	LADD	CR	LADD	CR
ARSENIC	18.9		2E+00	3E-06	5E-06	1E-06	2E-06	3E-06	4E-06	8E-06	1E-05
BENZO[A]PYRENE	0.35	J	7E+00	6E-08	4E-07	2E-08	2E-07	5E-08	4E-07	1E-07	1E-06
1,2-dibromoethane	0.015855	U	9E+01	3E-09	2E-07	1E-09	9E-08	2E-09	2E-07	7E-09	6E-07
dibenzo[a,h]anthracene	0.27965	U	7E+00	5E-08	4E-07	2E-08	1E-07	4E-08	3E-07	1E-07	8E-07
n-nitrosodinpropylamine	0.27965	U	7E+00	5E-08	3E-07	2E-08	1E-07	4E-08	3E-07	1E-07	8E-07
Cancer Risk for Detected Compounds Only:				**Sum =**	**5.4E-06**	**Sum =**	**2.1E-06**	**Sum =**	**4.8E-06**	**Sum =**	**1.3E-05**
Cancer Risk for Nondetected Compounds Only:				**Sum =**	**9.3E-07**	**Sum =**	**3.6E-07**	**Sum =**	**8.3E-07**	**Sum =**	**2.2E-06**
Cancer Risk for Detected and Nondetected Compounds:				**Sum =**	**6.3E-06**	**Sum =**	**2.4E-06**	**Sum =**	**5.6E-06**	**Sum =**	**1.5E-05**

LADD = lifetime average daily dose (mg/kg/d). CR = Cancer risk. Compounds printed in lowercase letters were not detected in any sample.

* Cancer risk exceeds 10E-4.

ORIGINAL

Table 2UCL. Quantitative Risk Assessment - Carcinogenic
Commercial Use - Incidental Ingestion/Surface soil.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

ORIGINAL

Analyte	Concentration (mg/kg)	Qualifier	Slope Factor (1/mg/kg/d)	Adult Worker		Construction Worker		Youth Visitor		Child Visitor	
				LADD	CR	LADD	CR	LADD	CR	LADD	CR
ARSENIC	10.6	UCL	2E+00	2E-06	3E-06	7E-07	1E-06	2E-06	2E-06	4E-06	7E-06
BENZO[A]PYRENE	0.35	J	7E+00	6E-08	4E-07	2E-08	2E-07	5E-08	4E-07	1E-07	1E-06
1,2-dibromoethane	0.015855	U	9E+01	3E-09	2E-07	1E-09	9E-08	2E-09	2E-07	7E-09	6E-07
dibenzo[a,h]anthracene	0.27965	U	7E+00	5E-08	4E-07	2E-08	1E-07	4E-08	3E-07	1E-07	8E-07
n-nitrosodinpropylamine	0.27965	U	7E+00	5E-08	3E-07	2E-08	1E-07	4E-08	3E-07	1E-07	8E-07
Cancer Risk for Detected Compounds Only:				**Sum =**	**3.2E-06**	**Sum =**	**1.2E-06**	**Sum =**	**2.9E-06**	**Sum =**	**7.6E-06**
Cancer Risk for Nondetected Compounds Only:				**Sum =**	**9.3E-07**	**Sum =**	**3.6E-07**	**Sum =**	**8.3E-07**	**Sum =**	**2.2E-06**
Cancer Risk for Detected and Nondetected Compounds:				**Sum =**	**4.2E-06**	**Sum =**	**1.6E-06**	**Sum =**	**3.7E-06**	**Sum =**	**9.8E-06**

LADD = lifetime average daily dose (mg/kg/d). CR = Cancer risk. Compounds printed in lowercase letters were not detected in any sample.

* Cancer risk exceeds 10E-4.

Table 3. Quantitative Risk Assessment - Noncarcinogenic
Commercial Use - Incidental Ingestion/Subsurface Soil.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

Analyte	Concentration (mg/kg)	Qualifier	Reference Dose (mg/kg/d)	Adult Worker		Construction Worker		Youth Visitor		Child Visitor	
				ADD	HQ	ADD	HQ	ADD	HQ	ADD	HQ
ALUMINUM	12400		1E+00	6E-03	6E-03	6E-02	6E-02	1E-02	1E-02	6E-02	6E-02
ANTIMONY	3.9	B	4E-04	2E-06	5E-03	2E-05	5E-02	4E-06	9E-03	2E-05	5E-02
ARSENIC	11.3		3E-04	6E-06	2E-02	5E-05	2E-01	1E-05	3E-02	5E-05	2E-01
BARIUM	5990		7E-02	3E-03	4E-02	3E-02	4E-01	5E-03	8E-02	3E-02	4E-01
CHROMIUM	77.6		3E-03	4E-05	1E-02	4E-04	1E-01	7E-05	2E-02	4E-04	1E-01
VANADIUM	64.9		1E-03	3E-05	3E-02	3E-04	3E-01	6E-05	6E-02	3E-04	3E-01
thallium	1.535	U	7E-05	8E-07	1E-02	7E-06	1E-01	1E-06	2E-02	7E-06	1E-01
Hazard Index for Detected Compounds Only:				**Sum =**	**1.2E-01**	**Sum =**	**1.1E+00**	**Sum =**	**2.1E-01**	**Sum =**	**1.1E+00**
Hazard Index for Nondetected Compounds Only:				**Sum =**	**1.1E-02**	**Sum =**	**1.0E-01**	**Sum =**	**2.0E-02**	**Sum =**	**1.1E-01**
Hazard Index for Detected and Nondetected Compounds:				**Sum =**	**1.3E-01**	**Sum =**	**1.2E+00**	**Sum =**	**2.3E-01**	**Sum =**	**1.2E+00**

ADD = average daily dose (mg/kg/d). HQ = Hazard Quotient (unitless). Compounds printed in lowercase letters were not detected in any sample.

* Hazard quotient or hazard index exceeds 1.5.

ORIGINAL

Table 4. Quantitative Risk Assessment - Carcinogenic
Commercial Use - Incidental Ingestion/Subsurface soil.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

ORIGINAL

Analyte	Concentration (mg/kg)	Qualifier	Slope Factor (1/mg/kg/d)	Adult Worker		Construction Worker		Youth Visitor		Child Visitor	
				LADD	CR	LADD	CR	LADD	CR	LADD	CR
ARSENIC	11.3		2E+00	2E-06	3E-06	8E-07	1E-06	2E-06	3E-06	5E-06	7E-06
1,2-dibromoethane	0.01163	U	9E+01	2E-09	2E-07	8E-10	7E-08	2E-09	2E-07	5E-09	4E-07
benzo[a]pyrene	0.1968	U	7E+00	3E-08	3E-07	1E-08	1E-07	3E-08	2E-07	8E-08	6E-07
dibenzo[a,h]anthracene	0.1968	U	7E+00	3E-08	3E-07	1E-08	1E-07	3E-08	2E-07	8E-08	6E-07
n-nitrosodinpropylamine	0.1968	U	7E+00	3E-08	2E-07	1E-08	9E-08	3E-08	2E-07	8E-08	6E-07
Cancer Risk for Detected Compounds Only:				**Sum =**	**3.0E-06**	**Sum =**	**1.1E-06**	**Sum =**	**2.6E-06**	**Sum =**	**7.0E-06**
Cancer Risk for Nondetected Compounds Only:				**Sum =**	**9.2E-07**	**Sum =**	**3.5E-07**	**Sum =**	**8.1E-07**	**Sum =**	**2.2E-06**
Cancer Risk for Detected and Nondetected Compounds:				**Sum =**	**3.9E-06**	**Sum =**	**1.5E-06**	**Sum =**	**3.4E-06**	**Sum =**	**9.2E-06**

LADD = lifetime average daily dose (mg/kg/d). CR = Cancer risk. Compounds printed in lowercase letters were not detected in any sample.

* Cancer risk exceeds 10E-4.

Table 5. Quantitative Risk Assessment - Noncarcinogenic
Commercial Use - Inhalation of Volatiles and Fugitive Dust (Surface Soil).
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

Analyte	Concentration (mg/kg)	Qualifier	Reference Dose (mg/kg/d)	PEF/VF	Adult Worker ADD	Adult Worker HQ	Construction Worker ADD	Construction Worker HQ	Youth Visitor ADD	Youth Visitor HQ	Child Visitor ADD	Child Visitor HQ
Particulate Emission:				**PEF**								
ALUMINUM	64000		1E-03	5.66E+08	9E-06	9E-03	1E-05	1E-02	2E-06	2E-03	3E-06	3E-03
BARIUM	47600		1E-04	5.66E+08	7E-06	5E-02	1E-05	7E-02	2E-06	1E-02	3E-06	2E-02
CHROMIUM	187		3E-05	5.66E+08	3E-08	9E-04	4E-08	1E-03	7E-09	2E-04	1E-08	3E-04
MANGANESE	824		1E-05	5.66E+08	1E-07	8E-03	2E-07	1E-02	3E-08	2E-03	4E-08	3E-03
MERCURY	1.7		9E-05	5.66E+08	2E-10	3E-06	4E-10	4E-06	6E-11	7E-07	9E-11	1E-06
1,2-dibromoethane	0.015855	U	6E-05	5.66E+08	2E-12	4E-08	3E-12	6E-08	6E-13	1E-08	9E-13	2E-08
Volatilization:				**VF**								
ALUMINUM	64000		1E-03									
BARIUM	47600		1E-04									
CHROMIUM	187		3E-05									
MANGANESE	824		1E-05									
MERCURY	1.7		9E-05	1.88E+04	7E-06	8E-02	1E-05	1E-01	2E-06	2E-02	3E-06	3E-02
1,2-dibromoethane	0.015855	U	6E-05									

	Adult Worker	Construction Worker	Youth Visitor	Child Visitor
Particle Hazard Index for Detected Compounds Only:	Sum = 6.5E-02	Sum = 9.7E-02	Sum = 1.7E-02	Sum = 2.6E-02
Particle Hazard Index for Nondetected Compounds Only:	Sum = 3.8E-08	Sum = 5.8E-08	Sum = 1.0E-08	Sum = 1.5E-08
Volatile Hazard Index for Detected Compounds Only:	Sum = 8.2E-02	Sum = 1.2E-01	Sum = 2.1E-02	Sum = 3.2E-02
Volatile Hazard Index for Nondetected Compounds Only:	Sum = --	Sum = --	Sum = --	Sum = --
Hazard Index via Inhalation (Detected and nondetected compounds):	Sum = 1.5E-01	Sum = 2.2E-01	Sum = 3.8E-02	Sum = 5.8E-02

ADD = average daily dose (mg/kg/d). HQ = Hazard Quotient (unitless). Compounds printed in lowercase letters were not detected in any sample.

* Hazard quotient or hazard index exceeds 1.5.

ORIGINAL

Table 6. Quantitative Risk Assessment - Carcinogenic
Commercial Use - Inhalation of Volatiles and Fugitive Dust (Surface Soil).
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

ORIGINAL

Analyte	Concentration (mg/kg)	Qualifier	Slope Factor (1/mg/kg/d)	PEF/VF	Adult Worker LADD	Adult Worker CR	Construction Worker LADD	Construction Worker CR	Youth Visitor LADD	Youth Visitor CR	Child Visitor LADD	Child Visitor CR
Particulate Emission:				**PEF**								
ARSENIC	18.9		2E+01	5.66E+08	9E-10	1E-08	6E-11	8E-10	1E-10	2E-09	9E-11	1E-09
CHROMIUM	187		4E+01	5.66E+08	9E-09	4E-07	6E-10	2E-08	1E-09	5E-08	9E-10	4E-08
BENZO[A]PYRENE	0.35	J	3E+00	5.66E+08	2E-11	5E-11	1E-12	3E-12	2E-12	7E-12	2E-12	5E-12
1,2-dibromoethane	0.015855	U	8E-01	5.66E+08	8E-13	6E-13	5E-14	4E-14	1E-13	7E-14	7E-14	6E-14
Volatilization:				**VF**								
ARSENIC	18.9		2E+01									
CHROMIUM	187		4E+01									
BENZO[A]PYRENE	0.35	J	3E+00	1.38E+07	7E-10	2E-09	4E-11	1E-10	9E-11	3E-10	7E-11	2E-10
1,2-dibromoethane	0.015855	U	8E-01									

Particle Cancer Risk Totals for Detected Compounds Only:	Sum =	3.9E-07	Sum =	2.4E-08	Sum =	4.9E-08	Sum = 3.7E-08
Particle Cancer Risk Totals for Nondetected Compounds Only:	Sum =	6.0E-13	Sum =	3.6E-14	Sum =	7.4E-14	Sum = 5.6E-14
Volatile Cancer Risk Totals for Detected Compounds Only:	Sum =	2.2E-09	Sum =	1.3E-10	Sum =	2.7E-10	Sum = 2.1E-10
Volatile Cancer Risk Totals for Nondetected Compounds Only:	Sum =	--	Sum =	--	Sum =	--	Sum = --
Total Cancer Risk via Inhalation (Detected and nondetected compounds):	Sum =	4.0E-07	Sum =	2.4E-08	Sum =	4.9E-08	Sum = 3.7E-08

LADD = lifetime average daily dose (mg/kg/d). CR = Cancer risk. Compounds printed in lowercase letters were not detected in any sample.

* Cancer risk exceeds 10E-4.

Table 7. Quantitative Risk Assessment - Noncarcinogenic
Commercial Use - Inhalation of Volatiles and Fugitive Dust (Subsurface Soil).
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

Analyte	Concentration (mg/kg)	Qualifier	Reference Dose (mg/kg/d)	PEF/VF	Adult Worker ADD	Adult Worker HQ	Construction Worker ADD	Construction Worker HQ	Youth Visitor ADD	Youth Visitor HQ	Child Visitor ADD	Child Visitor HQ
Particulate Emission:				**PEF**								
ALUMINUM	12400		1E-03	5.66E+08	2E-06	2E-03	3E-06	3E-03	4E-07	4E-04	7E-07	7E-04
BARIUM	5990		1E-04	5.66E+08	8E-07	6E-03	1E-06	9E-03	2E-07	2E-03	3E-07	2E-03
CHROMIUM	77.6		3E-05	5.66E+08	1E-08	4E-04	2E-08	5E-04	3E-09	9E-05	4E-09	1E-04
MERCURY	0.2	B	9E-05	5.66E+08	3E-11	3E-07	4E-11	5E-07	7E-12	8E-08	1E-11	1E-07
1,2-dibromoethane	0.01163	U	6E-05	5.66E+08	2E-12	3E-08	2E-12	4E-08	4E-13	7E-09	6E-13	1E-08
Volatilization:				**VF**								
ALUMINUM	12400		1E-03									
BARIUM	5990		1E-04									
CHROMIUM	77.6		3E-05									
MERCURY	0.2	B	9E-05	1.88E+04	8E-07	1E-02	1E-06	1E-02	2E-07	3E-03	3E-07	4E-03
1,2-dibromoethane	0.01163	U	6E-05									

	Adult Worker	Construction Worker	Youth Visitor	Child Visitor
Particle Hazard Index for Detected Compounds Only:	Sum = 8.0E-03	Sum = 1.2E-02	Sum = 2.1E-03	Sum = 3.2E-03
Particle Hazard Index for Nondetected Compounds Only:	Sum = 2.8E-08	Sum = 4.2E-08	Sum = 7.3E-09	Sum = 1.1E-08
Volatile Hazard Index for Detected Compounds Only:	Sum = 9.7E-03	Sum = 1.5E-02	Sum = 2.5E-03	Sum = 3.8E-03
Volatile Hazard Index for Nondetected Compounds Only:	Sum = --	Sum = --	Sum = --	Sum = --
Hazard Index via Inhalation (Detected and nondetected compounds):	Sum = 1.8E-02	Sum = 2.6E-02	Sum = 4.6E-03	Sum = 7.0E-03

ADD = average daily dose (mg/kg/d). HQ = Hazard Quotient (unitless). Compounds printed in lowercase letters were not detected in any sample.

* Hazard quotient or hazard index exceeds 1.5.

ORIGINAL

Table 8. Quantitative Risk Assessment - Carcinogenic
Commercial Use - Inhalation of Volatiles and Fugitive Dust (Subsurface Soil).
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

ORIGINAL

Analyte	Concentration (mg/kg)	Qualifier	Slope Factor (1/mg/kg/d)	PEF/VF	Adult Worker LADD	Adult Worker CR	Construction Worker LADD	Construction Worker CR	Youth Visitor LADD	Youth Visitor CR	Child Visitor LADD	Child Visitor CR
Particulate Emission:				**PEF**								
ARSENIC	11.3		2E+01	5.66E+08	6E-10	8E-09	3E-11	5E-10	7E-11	1E-09	5E-11	8E-10
CHROMIUM	77.6		4E+01	5.66E+08	4E-09	2E-07	2E-10	9E-09	5E-10	2E-08	4E-10	1E-08
1,2-dibromoethane	0.01163	U	8E-01	5.66E+08	6E-13	4E-13	3E-14	3E-14	7E-14	5E-14	5E-14	4E-14
benzo[a]pyrene	0.1968	U	3E+00	5.66E+08	1E-11	3E-11	6E-13	2E-12	1E-12	4E-12	9E-13	3E-12
Volatilization:				**VF**								
ARSENIC	11.3		2E+01									
CHROMIUM	77.6		4E+01									
1,2-dibromoethane	0.01163	U	8E-01									
benzo[a]pyrene	0.1968	U	3E+00	1.38E+07	4E-10	1E-09	2E-11	7E-11	5E-11	2E-10	4E-11	1E-10
Particle Cancer Risk Totals for Detected Compounds Only:					**Sum =**	**1.7E-07**	**Sum =**	**9.9E-09**	**Sum =**	**2.1E-08**	**Sum =**	**1.6E-08**
Particle Cancer Risk Totals for Nondetected Compounds Only:					**Sum =**	**3.1E-11**	**Sum =**	**1.8E-12**	**Sum =**	**3.8E-12**	**Sum =**	**2.9E-12**
Volatile Cancer Risk Totals for Detected Compounds Only:					**Sum =**	**--**	**Sum =**	**--**	**Sum =**	**--**	**Sum =**	**--**
Volatile Cancer Risk Totals for Nondetected Compounds Only:					**Sum =**	**1.2E-09**	**Sum =**	**7.4E-11**	**Sum =**	**1.5E-10**	**Sum =**	**1.2E-10**
Total Cancer Risk via Inhalation (Detected and nondetected compounds):					**Sum =**	**1.7E-07**	**Sum =**	**1.0E-08**	**Sum =**	**2.1E-08**	**Sum =**	**1.6E-08**

LADD = lifetime average daily dose (mg/kg/d). CR = Cancer risk. Compounds printed in lowercase letters were not detected in any sample.

* Cancer risk exceeds 10E-4.

Table 9. Quantitative Risk Assessment - Noncarcinogenic
Commercial Use - Dermal Contact/Surface Soil.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

Analyte	Concentration (mg/kg)	Qualifier	Reference Dose (mg/kg/d)	Adult Worker		Construction Worker		Youth Visitor		Child Visitor	
				ADD	HQ	ADD	HQ	ADD	HQ	ADD	HQ
ALUMINUM	64000		3E-01	1E-03	5E-03	2E-03	6E-03	2E-03	6E-03	2E-02	7E-02
ANTIMONY	12.5	L	4E-05	3E-07	7E-03	3E-07	8E-03	3E-07	9E-03	4E-06	9E-02
ARSENIC	18.9		3E-04	1E-06	4E-03	1E-06	5E-03	2E-06	5E-03	2E-05	5E-02
BARIUM	47600		7E-02	1E-03	2E-02	1E-03	2E-02	1E-03	2E-02	1E-02	2E-01
CHROMIUM	187		3E-05	4E-06	1E-01	5E-06	2E-01	5E-06	2E-01	5E-05	2E+00 *
MANGANESE	824		1E-03	2E-05	2E-02	2E-05	2E-02	2E-05	2E-02	2E-04	2E-01
VANADIUM	31.7		2E-05	7E-07	4E-02	8E-07	4E-02	9E-07	4E-02	9E-06	4E-01
thallium	1.61	U	7E-05	4E-08	5E-04	4E-08	6E-04	4E-08	6E-04	5E-07	7E-03
Hazard Index for Detected Compounds Only:				**Sum =**	**2.2E-01**	**Sum =**	**2.5E-01**	**Sum =**	**2.7E-01**	**Sum =**	**2.8E+00 ***
Hazard Index for Nondetected Compounds Only:				**Sum =**	**5.2E-04**	**Sum =**	**5.9E-04**	**Sum =**	**6.3E-04**	**Sum =**	**6.5E-03**
Hazard Index for Detected and Nondetected Compounds:				**Sum =**	**2.2E-01**	**Sum =**	**2.6E-01**	**Sum =**	**2.7E-01**	**Sum =**	**2.8E+00 ***

ADD = average daily dose (mg/kg/d). HQ = Hazard Quotient (unitless). Compounds printed in lowercase letters were not detected in any sample.

* Hazard quotient or hazard index exceeds 1.5.

ORIGINAL

Table 9UCL. Quantitative Risk Assessment - Noncarcinogenic
Commercial Use - Dermal Contact/Surface Soil.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

ORIGINAL

Analyte	Concentration (mg/kg)	Qualifier	Reference Dose (mg/kg/d)	Adult Worker		Construction Worker		Youth Visitor		Child Visitor	
				ADD	HQ	ADD	HQ	ADD	HQ	ADD	HQ
ALUMINUM	25374	UCL	3E-01	6E-04	2E-03	7E-04	2E-03	7E-04	3E-03	7E-03	3E-02
ANTIMONY	9.8	UCL	4E-05	2E-07	6E-03	3E-07	6E-03	3E-07	7E-03	3E-06	7E-02
ARSENIC	10.6	UCL	3E-04	7E-07	2E-03	8E-07	3E-03	9E-07	3E-03	9E-06	3E-02
BARIUM	32233	UCL	7E-02	7E-04	1E-02	8E-04	1E-02	9E-04	1E-02	9E-03	1E-01
CHROMIUM	81.3	UCL	3E-05	2E-06	6E-02	2E-06	7E-02	2E-06	7E-02	2E-05	8E-01
MANGANESE	645.2	UCL	1E-03	1E-05	1E-02	2E-05	1E-02	2E-05	1E-02	2E-04	2E-01
VANADIUM	26.2	UCL	2E-05	6E-07	3E-02	7E-07	3E-02	7E-07	4E-02	7E-06	4E-01
thallium	1.61	U	7E-05	4E-08	5E-04	4E-08	6E-04	4E-08	6E-04	5E-07	7E-03
Hazard Index for Detected Compounds Only:				**Sum =**	***1.2E-01***	**Sum =**	***1.4E-01***	***Sum =***	***1.5E-01***	***Sum =***	***1.5E+00 ****
Hazard Index for Nondetected Compounds Only:				**Sum =**	**5.2E-04**	**Sum =**	**5.9E-04**	**Sum =**	**6.3E-04**	**Sum =**	**6.5E-03**
Hazard Index for Detected and Nondetected Compounds:				**Sum =**	**1.2E-01**	**Sum =**	**1.4E-01**	**Sum =**	**1.5E-01**	**Sum =**	**1.6E+00 ***

ADD = average daily dose (mg/kg/d). HQ = Hazard Quotient (unitless). Compounds printed in lowercase letters were not detected in any sample.

* Hazard quotient or hazard index exceeds 1.5.

Table 10. Quantitative Risk Assessment - Carcinogenic
Commercial Use - Dermal Contact/Surface soil.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

Analyte	Concentration (mg/kg)	Qualifier	Slope Factor (1/mg/kg/d)	Adult Worker		Construction Worker		Youth Visitor		Child Visitor	
				LADD	CR	LADD	CR	LADD	CR	LADD	CR
ARSENIC	18.9		2E+00	5E-07	7E-07	2E-08	3E-08	3E-07	4E-07	1E-06	2E-06
BENZO[A]PYRENE	0.35	J	7E+00	4E-08	3E-07	2E-09	1E-08	2E-08	2E-07	1E-07	8E-07
1,2-dibromoethane	0.015855	U	9E+01	4E-10	3E-08	2E-11	1E-09	2E-10	2E-08	1E-09	1E-07
dibenzo[a,h]anthracene	0.27965	U	7E+00	3E-08	2E-07	1E-09	1E-08	2E-08	1E-07	9E-08	6E-07
n-nitrosodinpropylamine	0.27965	U	7E+00	2E-08	2E-07	1E-09	7E-09	1E-08	9E-08	7E-08	5E-07
Cancer Risk for Detected Compounds Only:				**Sum =**	**9.5E-07**	**Sum =**	**4.3E-08**	**Sum =**	**5.5E-07**	**Sum =**	**2.9E-06**
Cancer Risk for Nondetected Compounds Only:				**Sum =**	**4.0E-07**	**Sum =**	**1.8E-08**	**Sum =**	**2.4E-07**	**Sum =**	**1.2E-06**
Cancer Risk for Detected and Nondetected Compounds:				**Sum =**	**1.4E-06**	**Sum =**	**6.2E-08**	**Sum =**	**7.9E-07**	**Sum =**	**4.1E-06**

ORIGINAL

LADD = lifetime average daily dose (mg/kg/d). CR = Cancer risk. Compounds printed in lowercase letters were not detected in any sample.

* Cancer risk exceeds 10E-4.

Table 10UCL. Quantitative Risk Assessment - Carcinogenic
Commercial Use - Dermal Contact/Surface soil.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

ORIGINAL

Analyte	Concentration (mg/kg)	Qualifier	Slope Factor (1/mg/kg/d)	Adult Worker LADD	Adult Worker CR	Construction Worker LADD	Construction Worker CR	Youth Visitor LADD	Youth Visitor CR	Child Visitor LADD	Child Visitor CR
ARSENIC	10.6	UCL	2E+00	3E-07	4E-07	1E-08	2E-08	1E-07	2E-07	8E-07	1E-06
BENZO[A]PYRENE	0.35	J	7E+00	4E-08	3E-07	2E-09	1E-08	2E-08	2E-07	1E-07	8E-07
1,2-dibromoethane	0.015855	U	9E+01	4E-10	3E-08	2E-11	1E-09	2E-10	2E-08	1E-09	1E-07
dibenzo[a,h]anthracene	0.27965	U	7E+00	3E-08	2E-07	1E-09	1E-08	2E-08	1E-07	9E-08	6E-07
n-nitrosodinpropylamine	0.27965	U	7E+00	2E-08	2E-07	1E-09	7E-09	1E-08	9E-08	7E-08	5E-07
Cancer Risk for Detected Compounds Only:				**Sum =**	**6.5E-07**	**Sum =**	**3.0E-08**	**Sum =**	**3.8E-07**	**Sum =**	**2.0E-06**
Cancer Risk for Nondetected Compounds Only:				**Sum =**	**4.0E-07**	**Sum =**	**1.8E-08**	**Sum =**	**2.4E-07**	**Sum =**	**1.2E-06**
Cancer Risk for Detected and Nondetected Compounds:				**Sum =**	**1.1E-06**	**Sum =**	**4.8E-08**	**Sum =**	**6.1E-07**	**Sum =**	**3.2E-06**

LADD = lifetime average daily dose (mg/kg/d). CR = Cancer risk. Compounds printed in lowercase letters were not detected in any sample.

* Cancer risk exceeds 10E-4.

Table 11. Quantitative Risk Assessment - Noncarcinogenic
Commercial Use - Dermal Contact/Subsurface Soil.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

Analyte	Concentration (mg/kg)	Qualifier	Reference Dose (mg/kg/d)	Adult Worker		Construction Worker		Youth Visitor		Child Visitor	
				ADD	HQ	ADD	HQ	ADD	HQ	ADD	HQ
ALUMINUM	12400		3E-01	3E-04	1E-03	3E-04	1E-03	3E-04	1E-03	4E-03	1E-02
ANTIMONY	3.9	B	4E-05	9E-08	2E-03	1E-07	3E-03	1E-07	3E-03	1E-06	3E-02
ARSENIC	11.3		3E-04	8E-07	3E-03	9E-07	3E-03	9E-07	3E-03	1E-05	3E-02
BARIUM	5990		7E-02	1E-04	2E-03	2E-04	2E-03	2E-04	2E-03	2E-03	2E-02
CHROMIUM	77.6		3E-05	2E-06	6E-02	2E-06	7E-02	2E-06	7E-02	2E-05	7E-01
VANADIUM	64.9		2E-05	1E-06	7E-02	2E-06	8E-02	2E-06	9E-02	2E-05	9E-01
thallium	1.535	U	7E-05	3E-08	5E-04	4E-08	6E-04	4E-08	6E-04	4E-07	6E-03
Hazard Index for Detected Compounds Only:				**Sum =**	**1.4E-01**	**Sum =**	**1.6E-01**	**Sum =**	**1.7E-01**	**Sum =**	**1.7E+00 ***
Hazard Index for Nondetected Compounds Only:				**Sum =**	**4.9E-04**	**Sum =**	**5.6E-04**	**Sum =**	**6.0E-04**	**Sum =**	**6.2E-03**
Hazard Index for Detected and Nondetected Compounds:				**Sum =**	**1.4E-01**	**Sum =**	**1.6E-01**	**Sum =**	**1.7E-01**	**Sum =**	**1.8E+00 ***

ORIGINAL

ADD = average daily dose (mg/kg/d). HQ = Hazard Quotient (unitless). Compounds printed in lowercase letters were not detected in any sample.

* Hazard quotient or hazard index exceeds 1.5.

Table 12. Quantitative Risk Assessment - Carcinogenic
Commercial Use - Dermal Contact/Subsurface soil.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

ORIGINAL

Analyte	Concentration (mg/kg)	Qualifier	Slope Factor (1/mg/kg/d)	Adult Worker		Construction Worker		Youth Visitor		Child Visitor	
				LADD	CR	LADD	CR	LADD	CR	LADD	CR
ARSENIC	11.3		2E+00	3E-07	4E-07	1E-08	2E-08	2E-07	2E-07	8E-07	1E-06
1,2-dibromoethane	0.01163	U	9E+01	3E-10	2E-08	1E-11	1E-09	2E-10	1E-08	8E-10	7E-08
benzo[a]pyrene	0.1968	U	7E+00	2E-08	1E-07	9E-10	7E-09	1E-08	9E-08	6E-08	5E-07
dibenzo[a,h]anthracene	0.1968	U	7E+00	2E-08	1E-07	9E-10	7E-09	1E-08	9E-08	6E-08	5E-07
n-nitrosodinpropylamine	0.1968	U	7E+00	2E-08	1E-07	7E-10	5E-09	9E-09	6E-08	5E-08	3E-07
Cancer Risk for Detected Compounds Only:				**Sum =**	**4.1E-07**	**Sum =**	**1.9E-08**	**Sum =**	**2.4E-07**	**Sum =**	**1.2E-06**
Cancer Risk for Nondetected Compounds Only:				**Sum =**	**4.3E-07**	**Sum =**	**2.0E-08**	**Sum =**	**2.5E-07**	**Sum =**	**1.3E-06**
Cancer Risk for Detected and Nondetected Compounds:				**Sum =**	**8.4E-07**	**Sum =**	**3.8E-08**	**Sum =**	**4.9E-07**	**Sum =**	**2.5E-06**

LADD = lifetime average daily dose (mg/kg/d). CR = Cancer risk. Compounds printed in lowercase letters were not detected in any sample.

* Cancer risk exceeds 10E-4.

Table 13. Quantitative Risk Assessment - Noncarcinogenic
Commercial Use - Incidental Ingestion/Sediment.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

Analyte	Concentration (mg/kg)	Qualifier	Reference Dose (mg/kg/d)	Adult Worker		Construction Worker		Youth Visitor		Child Visitor	
				ADD	HQ	ADD	HQ	ADD	HQ	ADD	HQ
ANTIMONY	103	L	4E-04	1E-05	3E-02	1E-04	3E-01	4E-05	9E-02	2E-04	5E-01
ARSENIC	6.3	L	3E-04	6E-07	2E-03	6E-06	2E-02	2E-06	7E-03	1E-05	4E-02
BARIUM	1610	J	7E-02	2E-04	2E-03	2E-03	2E-02	6E-04	8E-03	3E-03	4E-02
CHROMIUM	25.5		3E-03	3E-06	9E-04	2E-05	8E-03	9E-06	3E-03	5E-05	2E-02
MANGANESE	2150		2E-02	2E-04	1E-02	2E-03	1E-01	8E-04	4E-02	4E-03	2E-01
THALLIUM	4.2		7E-05	4E-07	6E-03	4E-06	6E-02	1E-06	2E-02	8E-06	1E-01
VANADIUM	27.3		1E-03	3E-06	3E-03	3E-05	3E-02	1E-05	1E-02	5E-05	5E-02
Hazard Index for Detected Compounds Only:				**Sum =**	**5.1E-02**	**Sum =**	**4.9E-01**	**Sum =**	**1.8E-01**	**Sum =**	**9.6E-01**
Hazard Index for Detected and Nondetected Compounds:				**Sum =**	**5.1E-02**	**Sum =**	**4.9E-01**	**Sum =**	**1.8E-01**	**Sum =**	**9.6E-01**

ADD = average daily dose (mg/kg/d). HQ = Hazard Quotient (unitless). Compounds printed in lowercase letters were not detected in any sample.

* Hazard quotient or hazard index exceeds 1.5.

ORIGINAL

Table 14. Quantitative Risk Assessment - Carcinogenic
Commercial Use - Incidental Ingestion/Sediment.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

ORIGINAL

Analyte	Concentration (mg/kg)	Qualifier	Slope Factor (1/mg/kg/d)	Adult Worker		Construction Worker		Youth Visitor		Child Visitor	
				LADD	CR	LADD	CR	LADD	CR	LADD	CR
ARSENIC	6.3	L	2E+00	2E-07	3E-07	9E-08	1E-07	4E-07	6E-07	1E-06	2E-06
1,2-dibromoethane	0.010325	U	9E+01	4E-10	3E-08	1E-10	1E-08	6E-10	5E-08	2E-09	1E-07
benzo[a]pyrene	0.28165	U	7E+00	1E-08	7E-08	4E-09	3E-08	2E-08	1E-07	5E-08	3E-07
dibenzo[a,h]anthracene	0.28165	U	7E+00	1E-08	7E-08	4E-09	3E-08	2E-08	1E-07	5E-08	3E-07
n-nitrosodinpropylamine	0.28165	U	7E+00	1E-08	7E-08	4E-09	3E-08	2E-08	1E-07	5E-08	3E-07
Cancer Risk for Detected Compounds Only:				**Sum =**	**3.4E-07**	**Sum =**	**1.3E-07**	**Sum =**	**5.8E-07**	**Sum =**	**1.5E-06**
Cancer Risk for Nondetected Compounds Only:				**Sum =**	**2.5E-07**	**Sum =**	**9.7E-08**	**Sum =**	**4.3E-07**	**Sum =**	**1.1E-06**
Cancer Risk for Detected and Nondetected Compounds:				**Sum =**	**6.0E-07**	**Sum =**	**2.3E-07**	**Sum =**	**1.0E-06**	**Sum =**	**2.7E-06**

LADD = lifetime average daily dose (mg/kg/d). CR = Cancer risk. Compounds printed in lowercase letters were not detected in any sample.

* Cancer risk exceeds 10E-4.

Table 15. Quantitative Risk Assessment - Noncarcinogenic
Commercial Use - Dermal Contact/Sediment.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

Analyte	Concentration (mg/kg)	Qualifier	Reference Dose (mg/kg/d)	Adult Worker		Construction Worker		Youth Visitor		Child Visitor	
				ADD	HQ	ADD	HQ	ADD	HQ	ADD	HQ
ANTIMONY	103	L	4E-05	5E-07	1E-02	6E-07	1E-02	1E-06	3E-02	1E-05	3E-01
ARSENIC	6.3	L	3E-04	9E-08	3E-04	1E-07	3E-04	2E-07	7E-04	2E-06	7E-03
BARIUM	1610	J	7E-02	8E-06	1E-04	9E-06	1E-04	2E-05	2E-04	2E-04	3E-03
CHROMIUM	25.5		3E-05	1E-07	4E-03	1E-07	5E-03	3E-07	9E-03	3E-06	9E-02
MANGANESE	2150		1E-03	1E-05	8E-03	1E-05	1E-02	2E-05	2E-02	2E-04	2E-01
THALLIUM	4.2		7E-05	2E-08	3E-04	2E-08	3E-04	5E-08	6E-04	5E-07	7E-03
VANADIUM	27.3		2E-05	1E-07	6E-03	1E-07	7E-03	3E-07	1E-02	3E-06	2E-01
Hazard Index for Detected Compounds Only:				**Sum =**	**3.1E-02**	**Sum =**	**3.6E-02**	**Sum =**	**7.2E-02**	**Sum =**	**7.5E-01**
Hazard Index for Detected and Nondetected Compounds:				**Sum =**	**3.1E-02**	**Sum =**	**3.6E-02**	**Sum =**	**7.2E-02**	**Sum =**	**7.5E-01**

ADD = average daily dose (mg/kg/d). HQ = Hazard Quotient (unitless). Compounds printed in lowercase letters were not detected in any sample.

* Hazard quotient or hazard index exceeds 1.5.

ORIGINAL

Table 16. Quantitative Risk Assessment - Carcinogenic
Commercial Use - Dermal Contact/Sediment.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

ORIGINAL

Analyte	Concentration (mg/kg)	Qualifier	Slope Factor (1/mg/kg/d)	Adult Worker		Construction Worker		Youth Visitor		Child Visitor	
				LADD	CR	LADD	CR	LADD	CR	LADD	CR
ARSENIC	6.3	L	2E+00	3E-08	5E-08	1E-09	2E-09	3E-08	5E-08	2E-07	3E-07
1,2-dibromoethane	0.010325	U	9E+01	5E-11	4E-09	2E-12	2E-10	6E-11	5E-09	3E-10	3E-08
benzo[a]pyrene	0.28165	U	7E+00	6E-09	4E-08	3E-10	2E-09	7E-09	5E-08	4E-08	3E-07
dibenzo[a,h]anthracene	0.28165	U	7E+00	6E-09	4E-08	3E-10	2E-09	7E-09	5E-08	4E-08	3E-07
n-nitrosodinpropylamine	0.28165	U	7E+00	5E-09	3E-08	2E-10	2E-09	5E-09	4E-08	3E-08	2E-07
Cancer Risk for Detected Compounds Only:				**Sum =**	**4.7E-08**	**Sum =**	**2.2E-09**	**Sum =**	**5.2E-08**	**Sum =**	**2.7E-07**
Cancer Risk for Nondetected Compounds Only:				**Sum =**	**1.3E-07**	**Sum =**	**5.8E-09**	**Sum =**	**1.4E-07**	**Sum =**	**7.3E-07**
Cancer Risk for Detected and Nondetected Compounds:				**Sum =**	**1.7E-07**	**Sum =**	**7.9E-09**	**Sum =**	**1.9E-07**	**Sum =**	**1.0E-06**

LADD = lifetime average daily dose (mg/kg/d). CR = Cancer risk. Compounds printed in lowercase letters were not detected in any sample.

* Cancer risk exceeds 10E-4.

Table 17. Comparison of sediment contaminant concentrations to NOAA ERM values For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

Analyte	Qualifier	Concentration	ERM	Exceeds ERM (Yes/No)
ARSENIC	L	6.3	70	No
CADMIUM		1	9.6	No
CHROMIUM		25.5	370	No
COPPER		32.3	270	No
LEAD		64.7	218	No
MERCURY		0.22	0.71	No
NICKEL		12.6	51.6	No
SILVER	U	0.85	3.7	No
ZINC		153	410	No
2-METHYLNAPHTHALENE	U	0.28165	0.67	No
4,4'-DDE	U	0.00278	0.027	No
4,4'-DDT	U	0.00278	0.0461	No
ACENAPHTHENE	U	0.28165	0.5	No
ACENAPHTHYLENE	U	0.28165	0.5	No
ANTHRACENE	U	0.28165	1.1	No
BENZO[A]ANTHRACENE	U	0.28165	1.6	No
BENZO[A]PYRENE	U	0.28165	1.6	No
BENZO[G,H,I]PERYLENE	U	0.28165	2.6	No
CHRYSENE	U	0.28165	2.8	No
DIBENZO[A,H]ANTHRACENE	U	0.28165	0.26	Yes
FLUORANTHENE	U	0.28165	5.1	No
FLUORENE	U	0.28165	0.54	No
NAPHTHALENE	U	0.28165	2.1	No
PHENANTHRENE	U	0.28165	1.1	No
PYRENE	U	0.28165	2.6	No

< or U = compound was not detected, reported concentration represents one half the detection level.
Contaminant concentrations and ERM values are reported in units of mg/kg.

ORIGINAL

Table 18Total. Quantitative Risk Assessment - Noncarcinogenic
Commercial Use - Ingestion of Drinking Water/Groundwater.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

ORIGINAL

Analyte	Concentration (ug/L)	Qualifier	Reference Dose (mg/kg/d)	Adult Worker		Construction Worker		Youth Visitor		Child Visitor	
				ADD	HQ	ADD	HQ	ADD	HQ	ADD	HQ
ALUMINUM	88300		1E+00	9E-01	9E-01	3E+00	3E+00 *	2E+00	2E+00 *	2E+00	2E+00 *
ARSENIC	77.5		3E-04	8E-04	3E+00 *	2E-03	8E+00 *	1E-03	5E+00 *	2E-03	6E+00 *
BARIUM	43700		7E-02	4E-01	6E+00 *	1E+00	2E+01 *	8E-01	1E+01 *	1E+00	2E+01 *
BERYLLIUM	15.5		2E-03	2E-04	8E-02	5E-04	2E-01	3E-04	1E-01	4E-04	2E-01
CADMIUM	5.2		1E-03	5E-05	5E-02	2E-04	2E-01	9E-05	9E-02	1E-04	1E-01
CHROMIUM	335		3E-03	3E-03	1E+00	1E-02	3E+00 *	6E-03	2E+00 *	8E-03	3E+00 *
COBALT	331		2E-02	3E-03	2E-01	1E-02	5E-01	6E-03	3E-01	8E-03	4E-01
COPPER	322		4E-02	3E-03	8E-02	9E-03	2E-01	6E-03	1E-01	8E-03	2E-01
MANGANESE	1940	J	2E-02	2E-02	9E-01	6E-02	3E+00 *	4E-02	2E+00 *	5E-02	2E+00 *
NICKEL	187		2E-02	2E-03	9E-02	5E-03	3E-01	3E-03	2E-01	5E-03	2E-01
SELENIUM	57.2		5E-03	6E-04	1E-01	2E-03	3E-01	1E-03	2E-01	1E-03	3E-01
THALLIUM	12.7	J	7E-05	1E-04	2E+00 *	4E-04	5E+00 *	2E-04	3E+00 *	3E-04	4E+00 *
VANADIUM	637		1E-03	6E-03	6E+00 *	2E-02	2E+01 *	1E-02	1E+01 *	2E-02	2E+01 *
antimony	30	U	4E-04	3E-04	7E-01	9E-04	2E+00 *	5E-04	1E+00	7E-04	2E+00 *
2,2'-oxybis(1-chloropropane)	5	U	4E-02	5E-05	1E-03	1E-04	4E-03	9E-05	2E-03	1E-04	3E-03
2,4-dinitrophenol	12.5	U	2E-03	1E-04	6E-02	4E-04	2E-01	2E-04	1E-01	3E-04	2E-01
2,6-dinitrotoluene	5	U	1E-03	5E-05	5E-02	1E-04	1E-01	9E-05	9E-02	1E-04	1E-01
2-chlorophenol	5	U	5E-03	5E-05	1E-02	1E-04	3E-02	9E-05	2E-02	1E-04	2E-02
2-methylnaphthalene	5	U	4E-03	5E-05	1E-02	1E-04	4E-02	9E-05	2E-02	1E-04	3E-02
2-nitroaniline	12.5	U	3E-03	1E-04	4E-02	4E-04	1E-01	2E-04	8E-02	3E-04	1E-01
3-nitroaniline	12.5	U	3E-03	1E-04	4E-02	4E-04	1E-01	2E-04	8E-02	3E-04	1E-01
4,6-dinitro-2-methylphenol	12.5	U	1E-04	1E-04	1E+00	4E-04	4E+00 *	2E-04	2E+00 *	3E-04	3E+00 *
4-nitroaniline	12.5	U	3E-03	1E-04	4E-02	4E-04	1E-01	2E-04	8E-02	3E-04	1E-01
aldrin	0.025	U	3E-05	2E-07	8E-03	7E-07	2E-02	5E-07	2E-02	6E-07	2E-02
arochlor-1254	0.5	U	2E-05	5E-06	2E-01	1E-05	7E-01	9E-06	5E-01	1E-05	6E-01
atrazine	5	U	4E-02	5E-05	1E-03	1E-04	4E-03	9E-05	3E-03	1E-04	3E-03
bis(2-ethylhexyl)phthalate	5	U	2E-02	5E-05	2E-03	1E-04	7E-03	9E-05	5E-03	1E-04	6E-03
dibenzofuran	5	U	2E-03	5E-05	2E-02	1E-04	7E-02	9E-05	5E-02	1E-04	6E-02
dieldrin	0.05	U	5E-05	5E-07	1E-02	1E-06	3E-02	9E-07	2E-02	1E-06	2E-02
heptachlor	0.025	U	5E-04	2E-07	5E-04	7E-07	1E-03	5E-07	9E-04	6E-07	1E-03

ADD = average daily dose (mg/kg/d). HQ = Hazard Quotient (unitless). Compounds printed in lowercase letters were not detected in any sample.

* Hazard quotient or hazard index exceeds 1.5.

Table 18Total (continued). Quantitative Risk Assessment - Noncarcinogenic
Commercial Use - Ingestion of Drinking Water/Groundwater.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

Analyte	Concentration (ug/L)	Qualifier	Reference Dose (mg/kg/d)	Adult Worker		Construction Worker		Youth Visitor		Child Visitor	
				ADD	HQ	ADD	HQ	ADD	HQ	ADD	HQ
heptachlor epoxide	0.025	U	1E-05	2E-07	2E-02	7E-07	6E-02	5E-07	3E-02	6E-07	5E-02
hexachlorobenzene	5	U	8E-04	5E-05	6E-02	1E-04	2E-01	9E-05	1E-01	1E-04	2E-01
hexachlorobutadiene	5	U	2E-04	5E-05	2E-01	1E-04	7E-01	9E-05	5E-01	1E-04	6E-01
hexachloroethane	5	U	1E-03	5E-05	5E-02	1E-04	1E-01	9E-05	9E-02	1E-04	1E-01
naphthalene	5	U	2E-02	5E-05	2E-03	1E-04	7E-03	9E-05	5E-03	1E-04	6E-03
nitrobenzene	5	U	5E-04	5E-05	1E-01	1E-04	3E-01	9E-05	2E-01	1E-04	2E-01
pentachlorophenol	12.5	U	3E-02	1E-04	4E-03	4E-04	1E-02	2E-04	8E-03	3E-04	1E-02
Hazard Index for Detected Compounds Only:				**Sum =**	**2.0E+01 ***	**Sum =**	**6.0E+01 ***	**Sum =**	**3.7E+01 ***	**Sum =**	**5.0E+01 ***
Hazard Index for Nondetected Compounds Only:				**Sum =**	**3.0E+00 ***	**Sum =**	**8.9E+00 ***	**Sum =**	**5.5E+00 ***	**Sum =**	**7.3E+00 ***
Hazard Index for Detected and Nondetected Compounds:				**Sum =**	**2.3E+01 ***	**Sum =**	**6.9E+01 ***	**Sum =**	**4.3E+01 ***	**Sum =**	**5.7E+01 ***

ADD = average daily dose (mg/kg/d). HQ = Hazard Quotient (unitless). Compounds printed in lowercase letters were not detected in any sample.

* Hazard quotient or hazard index exceeds 1.5.

ORIGINAL

Table 18DIS. Quantitative Risk Assessment - Noncarcinogenic
Commercial Use - Ingestion of Drinking Water/Groundwater.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

Analyte	Concentration (ug/L)	Qualifier	Reference Dose (mg/kg/d)	Adult Worker		Construction Worker		Youth Visitor		Child Visitor	
				ADD	HQ	ADD	HQ	ADD	HQ	ADD	HQ
ARSENIC	8.2	J	3E-04	8E-05	3E-01	2E-04	8E-01	1E-04	5E-01	2E-04	7E-01
BARIUM	37800		7E-02	4E-01	5E+00 *	1E+00	2E+01 *	7E-01	1E+01 *	9E-01	1E+01 *
COBALT	81.3		2E-02	8E-04	4E-02	2E-03	1E-01	1E-03	7E-02	2E-03	1E-01
COPPER	173		4E-02	2E-03	4E-02	5E-03	1E-01	3E-03	8E-02	4E-03	1E-01
MANGANESE	1540	J	2E-02	2E-02	8E-01	5E-02	2E+00 *	3E-02	1E+00	4E-02	2E+00 *
NICKEL	160		2E-02	2E-03	8E-02	5E-03	2E-01	3E-03	1E-01	4E-03	2E-01
antimony	30	U	4E-04	3E-04	7E-01	9E-04	2E+00 *	5E-04	1E+00	7E-04	2E+00 *
thallium	12.5	U	7E-05	1E-04	2E+00 *	4E-04	5E+00 *	2E-04	3E+00 *	3E-04	4E+00 *
vanadium	25	U	1E-03	2E-04	2E-01	7E-04	7E-01	5E-04	5E-01	6E-04	6E-01
2,2'-oxybis(1-chloropropane)	5	U	4E-02	5E-05	1E-03	1E-04	4E-03	9E-05	2E-03	1E-04	3E-03
2,4-dinitrophenol	12.5	U	2E-03	1E-04	6E-02	4E-04	2E-01	2E-04	1E-01	3E-04	2E-01
2,6-dinitrotoluene	5	U	1E-03	5E-05	5E-02	1E-04	1E-01	9E-05	9E-02	1E-04	1E-01
2-chlorophenol	5	U	5E-03	5E-05	1E-02	1E-04	3E-02	9E-05	2E-02	1E-04	2E-02
2-methylnaphthalene	5	U	4E-03	5E-05	1E-02	1E-04	4E-02	9E-05	2E-02	1E-04	3E-02
2-nitroaniline	12.5	U	3E-03	1E-04	4E-02	4E-04	1E-01	2E-04	8E-02	3E-04	1E-01
3-nitroaniline	12.5	U	3E-03	1E-04	4E-02	4E-04	1E-01	2E-04	8E-02	3E-04	1E-01
4,6-dinitro-2-methylphenol	12.5	U	1E-04	1E-04	1E+00	4E-04	4E+00 *	2E-04	2E+00 *	3E-04	3E+00 *
4-nitroaniline	12.5	U	3E-03	1E-04	4E-02	4E-04	1E-01	2E-04	8E-02	3E-04	1E-01
aldrin	0.025	U	3E-05	2E-07	8E-03	7E-07	2E-02	5E-07	2E-02	6E-07	2E-02
arochlor-1254	0.5	U	2E-05	5E-06	2E-01	1E-05	7E-01	9E-06	5E-01	1E-05	6E-01
atrazine	5	U	4E-02	5E-05	1E-03	1E-04	4E-03	9E-05	3E-03	1E-04	3E-03
bis(2-ethylhexyl)phthalate	5	U	2E-02	5E-05	2E-03	1E-04	7E-03	9E-05	5E-03	1E-04	6E-03
dibenzofuran	5	U	2E-03	5E-05	2E-02	1E-04	7E-02	9E-05	5E-02	1E-04	6E-02
dieldrin	0.05	U	5E-05	5E-07	1E-02	1E-06	3E-02	9E-07	2E-02	1E-06	2E-02
heptachlor	0.025	U	5E-04	2E-07	5E-04	7E-07	1E-03	5E-07	9E-04	6E-07	1E-03
heptachlor epoxide	0.025	U	1E-05	2E-07	2E-02	7E-07	6E-02	5E-07	3E-02	6E-07	5E-02
hexachlorobenzene	5	U	8E-04	5E-05	6E-02	1E-04	2E-01	9E-05	1E-01	1E-04	2E-01
hexachlorobutadiene	5	U	2E-04	5E-05	2E-01	1E-04	7E-01	9E-05	5E-01	1E-04	6E-01
hexachloroethane	5	U	1E-03	5E-05	5E-02	1E-04	1E-01	9E-05	9E-02	1E-04	1E-01
naphthalene	5	U	2E-02	5E-05	2E-03	1E-04	7E-03	9E-05	5E-03	1E-04	6E-03

ADD = average daily dose (mg/kg/d). HQ = Hazard Quotient (unitless). Compounds printed in lowercase letters were not detected in any sample.

* Hazard quotient or hazard index exceeds 1.5.

ORIGINAL

Table 18DIS (continued). Quantitative Risk Assessment - Noncarcinogenic
Commercial Use - Ingestion of Drinking Water/Groundwater.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

Analyte	Concentration (ug/L)	Qualifier	Reference Dose (mg/kg/d)	Adult Worker		Construction Worker		Youth Visitor		Child Visitor	
				ADD	HQ	ADD	HQ	ADD	HQ	ADD	HQ
nitrobenzene	5	U	5E-04	5E-05	1E-01	1E-04	3E-01	9E-05	2E-01	1E-04	2E-01
pentachlorophenol	12.5	U	3E-02	1E-04	4E-03	4E-04	1E-02	2E-04	8E-03	3E-04	1E-02
Hazard Index for Detected Compounds Only:				Sum =	6.5E+00 *	Sum =	1.9E+01 *	Sum =	1.2E+01 *	Sum =	1.6E+01 *
Hazard Index for Nondetected Compounds Only:				Sum =	5.0E+00 *	Sum =	1.5E+01 *	Sum =	9.2E+00 *	Sum =	1.2E+01 *
Hazard Index for Detected and Nondetected Compounds:				Sum =	1.1E+01 *	Sum =	3.4E+01 *	Sum =	2.1E+01 *	Sum =	2.8E+01 *

ADD = average daily dose (mg/kg/d). HQ = Hazard Quotient (unitless). Compounds printed in lowercase letters were not detected in any sample.

* Hazard quotient or hazard index exceeds 1.5.

ORIGINAL

Table 19Total. Quantitative Risk Assessment - Carcinogenic
Commercial Use - Ingestion of Drinking Water/Groundwater.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

ORIGINAL

Analyte	Concentration (ug/L)	Qualifier	Slope Factor (1/mg/kg/d)	Adult Worker		Construction Worker		Youth Visitor		Child Visitor	
				LADD	CR	LADD	CR	LADD	CR	LADD	
ARSENIC	77.5		2E+00	3E-04	4E-04 *	3E-05	5E-05	2E-04	4E-04 *	2E-04	2E-04 *
2,2'-oxybis(1-chloropropane)	5	U	7E-02	2E-05	1E-06	2E-06	1E-07	2E-05	1E-06	1E-05	7E-07
3,3'-dichlorobenzidine	5	U	5E-01	2E-05	8E-06	2E-06	9E-07	2E-05	7E-06	1E-05	5E-06
aldrin	0.025	U	2E+01	9E-08	1E-06	1E-08	2E-07	8E-08	1E-06	5E-08	9E-07
alpha-bhc	0.025	U	6E+00	9E-08	6E-07	1E-08	7E-08	8E-08	5E-07	5E-08	3E-07
arochlor-1221	1	U	2E+00	3E-06	7E-06	4E-07	8E-07	3E-06	6E-06	2E-06	4E-06
arochlor-1232	0.5	U	2E+00	2E-06	3E-06	2E-07	4E-07	2E-06	3E-06	1E-06	2E-06
arochlor-1242	0.5	U	2E+00	2E-06	3E-06	2E-07	4E-07	2E-06	3E-06	1E-06	2E-06
arochlor-1248	0.5	U	2E+00	2E-06	3E-06	2E-07	4E-07	2E-06	3E-06	1E-06	2E-06
arochlor-1254	0.5	U	2E+00	2E-06	3E-06	2E-07	4E-07	2E-06	3E-06	1E-06	2E-06
arochlor-1260	0.5	U	2E+00	2E-06	3E-06	2E-07	4E-07	2E-06	3E-06	1E-06	2E-06
atrazine	5	U	2E-01	2E-05	4E-06	2E-06	5E-07	2E-05	3E-06	1E-05	2E-06
benzo[a]anthracene	5	U	7E-01	2E-05	1E-05	2E-06	2E-06	2E-05	1E-05	1E-05	8E-06
benzo[a]pyrene	5	U	7E+00	2E-05	1E-04 *	2E-06	2E-05	2E-05	1E-04 *	1E-05	8E-05
benzo[b]fluoranthene	5	U	7E-01	2E-05	1E-05	2E-06	2E-06	2E-05	1E-05	1E-05	8E-06
benzo[k]fluoranthene	5	U	7E-02	2E-05	1E-06	2E-06	2E-07	2E-05	1E-06	1E-05	8E-07
bis(2-chloroethyl)ether	5	U	1E+00	2E-05	2E-05	2E-06	2E-06	2E-05	2E-05	1E-05	1E-05
bis(2-ethylhexyl)phthalate	5	U	1E-02	2E-05	2E-07	2E-06	3E-08	2E-05	2E-07	1E-05	1E-07
carbazole	5	U	2E-02	2E-05	3E-07	2E-06	4E-08	2E-05	3E-07	1E-05	2E-07
dibenzo[a,h]anthracene	5	U	7E+00	2E-05	1E-04 *	2E-06	2E-05	2E-05	1E-04 *	1E-05	8E-05
dieldrin	0.05	U	2E+01	2E-07	3E-06	2E-08	3E-07	2E-07	2E-06	1E-07	2E-06
heptachlor	0.025	U	5E+00	9E-08	4E-07	1E-08	5E-08	8E-08	3E-07	5E-08	2E-07
heptachlor epoxide	0.025	U	9E+00	9E-08	8E-07	1E-08	1E-07	8E-08	7E-07	5E-08	5E-07
hexachlorobenzene	5	U	2E+00	2E-05	3E-05	2E-06	3E-06	2E-05	2E-05	1E-05	2E-05
hexachlorobutadiene	5	U	8E-02	2E-05	1E-06	2E-06	2E-07	2E-05	1E-06	1E-05	8E-07
hexachloroethane	5	U	1E-02	2E-05	2E-07	2E-06	3E-08	2E-05	2E-07	1E-05	1E-07
indeno[1,2,3-cd]pyrene	5	U	7E-01	2E-05	1E-05	2E-06	2E-06	2E-05	1E-05	1E-05	8E-06
n-nitrosodinpropylamine	5	U	7E+00	2E-05	1E-04 *	2E-06	1E-05	2E-05	1E-04 *	1E-05	7E-05
pentachlorophenol	12.5	U	1E-01	4E-05	5E-06	5E-06	6E-07	4E-05	5E-06	3E-05	3E-06
toxaphene	2.5	U	1E+00	9E-06	1E-05	1E-06	1E-06	8E-06	9E-06	5E-06	6E-06

LADD = lifetime average daily dose (mg/kg/d). CR = Cancer risk. Compounds printed in lowercase letters were not detected in any sample.

* Cancer risk exceeds 10E-4.

Table 19Total (continued). Quantitative Risk Assessment - Carcinogenic
Commercial Use - Ingestion of Drinking Water/Groundwater.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

Analyte	Concentration (ug/L)	Qualifier	Slope Factor (1/mg/kg/d)	Adult Worker LADD	Adult Worker CR	Construction Worker LADD	Construction Worker CR	Youth Visitor LADD	Youth Visitor CR	Child Visitor LADD	Child Visitor CR
Cancer Risk for Detected Compounds Only:				Sum =	4.1E-04 *	Sum =	4.9E-05	Sum =	3.6E-04 *	Sum =	2.4E-04 *
Cancer Risk for Nondetected Compounds Only:				Sum =	5.2E-04 *	Sum =	6.3E-05	Sum =	4.7E-04 *	Sum =	3.1E-04 *
Cancer Risk for Detected and Nondetected Compounds:				Sum =	9.3E-04 *	Sum =	1.1E-04 *	Sum =	8.3E-04 *	Sum =	5.5E-04 *

LADD = lifetime average daily dose (mg/kg/d). CR = Cancer risk. Compounds printed in lowercase letters were not detected in any sample.
* Cancer risk exceeds 10E-4.

ORIGINAL

Table 19DISS. Quantitative Risk Assessment - Carcinogenic
Commercial Use - Ingestion of Drinking Water/Groundwater.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

ORIGINAL

Analyte	Concentration (ug/L)	Qualifier	Slope Factor (1/mg/kg/d)	Adult Worker LADD	Adult Worker CR	Construction Worker LADD	Construction Worker CR	Youth Visitor LADD	Youth Visitor CR	Child Visitor LADD	Child Visitor CR
ARSENIC	8.2	J	2E+00	3E-05	4E-05	3E-06	5E-06	3E-05	4E-05	2E-05	3E-05
2,2'-oxybis(1-chloropropane)	5	U	7E-02	2E-05	1E-06	2E-06	1E-07	2E-05	1E-06	1E-05	7E-07
3,3'-dichlorobenzidine	5	U	5E-01	2E-05	8E-06	2E-06	9E-07	2E-05	7E-06	1E-05	5E-06
aldrin	0.025	U	2E+01	9E-08	1E-06	1E-08	2E-07	8E-08	1E-06	5E-08	9E-07
alpha-bhc	0.025	U	6E+00	9E-08	6E-07	1E-08	7E-08	8E-08	5E-07	5E-08	3E-07
arochlor-1221	1	U	2E+00	3E-06	7E-06	4E-07	8E-07	3E-06	6E-06	2E-06	4E-06
arochlor-1232	0.5	U	2E+00	2E-06	3E-06	2E-07	4E-07	2E-06	3E-06	1E-06	2E-06
arochlor-1242	0.5	U	2E+00	2E-06	3E-06	2E-07	4E-07	2E-06	3E-06	1E-06	2E-06
arochlor-1248	0.5	U	2E+00	2E-06	3E-06	2E-07	4E-07	2E-06	3E-06	1E-06	2E-06
arochlor-1254	0.5	U	2E+00	2E-06	3E-06	2E-07	4E-07	2E-06	3E-06	1E-06	2E-06
arochlor-1260	0.5	U	2E+00	2E-06	3E-06	2E-07	4E-07	2E-06	3E-06	1E-06	2E-06
atrazine	5	U	2E-01	2E-05	4E-06	2E-06	5E-07	2E-05	3E-06	1E-05	2E-06
benzo[a]anthracene	5	U	7E-01	2E-05	1E-05	2E-06	2E-06	2E-05	1E-05	1E-05	8E-06
benzo[a]pyrene	5	U	7E+00	2E-05	1E-04 *	2E-06	2E-05	2E-05	1E-04 *	1E-05	8E-05
benzo[b]fluoranthene	5	U	7E-01	2E-05	1E-05	2E-06	2E-06	2E-05	1E-05	1E-05	8E-06
benzo[k]fluoranthene	5	U	7E-02	2E-05	1E-06	2E-06	2E-07	2E-05	1E-06	1E-05	8E-07
bis(2-chloroethyl)ether	5	U	1E+00	2E-05	2E-05	2E-06	2E-06	2E-05	2E-05	1E-05	1E-05
bis(2-ethylhexyl)phthalate	5	U	1E-02	2E-05	2E-07	2E-06	3E-08	2E-05	2E-07	1E-05	1E-07
carbazole	5	U	2E-02	2E-05	3E-07	2E-06	4E-08	2E-05	3E-07	1E-05	2E-07
dibenzo[a,h]anthracene	5	U	7E+00	2E-05	1E-04 *	2E-06	2E-05	2E-05	1E-04 *	1E-05	8E-05
dieldrin	0.05	U	2E+01	2E-07	3E-06	2E-08	3E-07	2E-07	2E-06	1E-07	2E-06
heptachlor	0.025	U	5E+00	9E-08	4E-07	1E-08	5E-08	8E-08	3E-07	5E-08	2E-07
heptachlor epoxide	0.025	U	9E+00	9E-08	8E-07	1E-08	1E-07	8E-08	7E-07	5E-08	5E-07
hexachlorobenzene	5	U	2E+00	2E-05	3E-05	2E-06	3E-06	2E-05	2E-05	1E-05	2E-05
hexachlorobutadiene	5	U	8E-02	2E-05	1E-06	2E-06	2E-07	2E-05	1E-06	1E-05	8E-07
hexachloroethane	5	U	1E-02	2E-05	2E-07	2E-06	3E-08	2E-05	2E-07	1E-05	1E-07
indeno[1,2,3-cd]pyrene	5	U	7E-01	2E-05	1E-05	2E-06	2E-06	2E-05	1E-05	1E-05	8E-06
n-nitrosodinpropylamine	5	U	7E+00	2E-05	1E-04 *	2E-06	1E-05	2E-05	1E-04 *	1E-05	7E-05
pentachlorophenol	12.5	U	1E-01	4E-05	5E-06	5E-06	6E-07	4E-05	5E-06	3E-05	3E-06
toxaphene	2.5	U	1E+00	9E-06	1E-05	1E-06	1E-06	8E-06	9E-06	5E-06	6E-06

LADD = lifetime average daily dose (mg/kg/d). CR = Cancer risk. Compounds printed in lowercase letters were not detected in any sample.

* Cancer risk exceeds 10E-4.

Table 19DISS (continued). Quantitative Risk Assessment - Carcinogenic
Commercial Use - Ingestion of Drinking Water/Groundwater.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

Analyte	Concentration (ug/L)	Qualifier	Slope Factor (1/mg/kg/d)	Adult Worker LADD	Adult Worker CR	Construction Worker LADD	Construction Worker CR	Youth Visitor LADD	Youth Visitor CR	Child Visitor LADD	Child Visitor CR
Cancer Risk for Detected Compounds Only:				Sum =	4.3E-05	Sum =	5.2E-06	Sum =	3.8E-05	Sum =	2.5E-05
Cancer Risk for Nondetected Compounds Only:				Sum =	5.2E-04 *	Sum =	6.3E-05	Sum =	4.7E-04 *	Sum =	3.1E-04 *
Cancer Risk for Detected and Nondetected Compounds:				Sum =	5.7E-04 *	Sum =	6.8E-05	Sum =	5.0E-04 *	Sum =	3.4E-04 *

LADD = lifetime average daily dose (mg/kg/d). CR = Cancer risk. Compounds printed in lowercase letters were not detected in any sample.
* Cancer risk exceeds 10E-4.

ORIGINAL

Table 20Total. Quantitative Risk Assessment - Noncarcinogenic
Commercial Use - Dermal Contact/Groundwater.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

ORIGINAL

Analyte	Concentration (ug/L)	Qualifier	Reference Dose (mg/kg/d)	Adult Worker		Construction Worker		Youth Visitor		Child Visitor	
				ADD	HQ	ADD	HQ	ADD	HQ	ADD	HQ
ALUMINUM	88300		3E-01								
ARSENIC	77.5		3E-04								
BARIUM	43700		7E-02								
BERYLLIUM	15.5		2E-05								
CADMIUM	5.2		3E-05	2E-06	9E-02	1E-06	5E-02	3E-07	1E-02	4E-07	2E-02
CHROMIUM	335		3E-05	3E-04	1E+01 *	1E-04	5E+00 *	4E-05	1E+00	5E-05	2E+00 *
COBALT	331		6E-03	6E-05	1E-02	3E-05	5E-03	8E-06	1E-03	1E-05	2E-03
COPPER	322		4E-02								
MANGANESE	1940	J	1E-03								
NICKEL	187		9E-04	2E-05	2E-02	8E-06	9E-03	2E-06	2E-03	3E-06	3E-03
SELENIUM	57.2		5E-03								
THALLIUM	12.7	J	7E-05								
VANADIUM	637		2E-05								
antimony	30	U	4E-05								
2,2'-oxybis(1-chloropropane)	5	U	4E-02								
2,4-dinitrophenol	12.5	U	2E-03	1E-05	5E-03	5E-06	2E-03	1E-06	7E-04	2E-06	9E-04
2,6-dinitrotoluene	5	U	1E-03	6E-06	6E-03	3E-06	3E-03	7E-07	7E-04	1E-06	1E-03
2-chlorophenol	5	U	5E-03								
2-methylnaphthalene	5	U	4E-03								
2-nitroaniline	12.5	U	3E-03								
3-nitroaniline	12.5	U	3E-03								
4,6-dinitro-2-methylphenol	12.5	U	1E-04								
4-nitroaniline	12.5	U	3E-03								
aldrin	0.025	U	3E-05	2E-08	6E-04	9E-09	3E-04	2E-09	8E-05	3E-09	1E-04
arochlor-1254	0.5	U	2E-05								
atrazine	5	U	4E-02								
bis(2-ethylhexyl)phthalate	5	U	2E-02	7E-05	4E-03	4E-05	2E-03	1E-05	5E-04	1E-05	7E-04
dibenzofuran	5	U	2E-03								
dieldrin	0.05	U	5E-05	4E-07	7E-03	2E-07	4E-03	5E-08	9E-04	6E-08	1E-03
heptachlor	0.025	U	5E-04	1E-07	2E-04	6E-08	1E-04	2E-08	3E-05	2E-08	4E-05

ADD = average daily dose (mg/kg/d). HQ = Hazard Quotient (unitless). Compounds printed in lowercase letters were not detected in any sample.

* Hazard quotient or hazard index exceeds 1.5.

Table 20Total (continued). Quantitative Risk Assessment - Noncarcinogenic
Commercial Use - Dermal Contact/Groundwater.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

Analyte	Concentration (ug/L)	Qualifier	Reference Dose (mg/kg/d)	Adult Worker		Construction Worker		Youth Visitor		Child Visitor	
				ADD	HQ	ADD	HQ	ADD	HQ	ADD	HQ
heptachlor epoxide	0.025	U	1E-05								
hexachlorobenzene	5	U									
hexachlorobutadiene	5	U	2E-04	3E-04	1E+00	1E-04	7E-01	4E-05	2E-01	5E-05	2E-01
hexachloroethane	5	U	1E-03	9E-05	9E-02	5E-05	5E-02	1E-05	1E-02	2E-05	2E-02
naphthalene	5	U	2E-02	2E-04	8E-03	8E-05	4E-03	2E-05	1E-03	3E-05	1E-03
nitrobenzene	5	U	5E-04								
pentachlorophenol	12.5	U	3E-02	4E-03	1E-01	2E-03	6E-02	5E-04	2E-02	6E-04	2E-02
Hazard Index for Detected Compounds Only:				Sum =	1.0E+01 *	Sum =	5.0E+00 *	Sum =	1.3E+00	Sum =	1.8E+00 *
Hazard Index for Nondetected Compounds Only:				Sum =	1.6E+00 *	Sum =	7.9E-01	Sum =	2.1E-01	Sum =	2.8E-01
Hazard Index for Detected and Nondetected Compounds:				Sum =	1.2E+01 *	Sum =	5.8E+00 *	Sum =	1.5E+00 *	Sum =	2.1E+00 *

ADD = average daily dose (mg/kg/d). HQ = Hazard Quotient (unitless). Compounds printed in lowercase letters were not detected in any sample.

* Hazard quotient or hazard index exceeds 1.5.

ORIGINAL

Table 20DISS. Quantitative Risk Assessment - Noncarcinogenic
Commercial Use - Dermal Contact/Groundwater.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

ORIGINAL

Analyte	Concentration (ug/L)	Qualifier	Reference Dose (mg/kg/d)	Adult Worker		Construction Worker		Youth Visitor		Child Visitor	
				ADD	HQ	ADD	HQ	ADD	HQ	ADD	HQ
ARSENIC	8.2	J	3E-04								
BARIUM	37800		7E-02								
COBALT	81.3		6E-03	1E-05	2E-03	7E-06	1E-03	2E-06	3E-04	3E-06	4E-04
COPPER	173		4E-02								
MANGANESE	1540	J	1E-03								
NICKEL	160		9E-04	1E-05	2E-02	7E-06	8E-03	2E-06	2E-03	3E-06	3E-03
antimony	30	U	4E-05								
thallium	12.5	U	7E-05								
vanadium	25	U	2E-05								
2,2'-oxybis(1-chloropropane)	5	U	4E-02								
2,4-dinitrophenol	12.5	U	2E-03	1E-05	5E-03	5E-06	2E-03	1E-06	7E-04	2E-06	9E-04
2,6-dinitrotoluene	5	U	1E-03	6E-06	6E-03	3E-06	3E-03	7E-07	7E-04	1E-06	1E-03
2-chlorophenol	5	U	5E-03								
2-methylnaphthalene	5	U	4E-03								
2-nitroaniline	12.5	U	3E-03								
3-nitroaniline	12.5	U	3E-03								
4,6-dinitro-2-methylphenol	12.5	U	1E-04								
4-nitroaniline	12.5	U	3E-03								
aldrin	0.025	U	3E-05	2E-08	6E-04	9E-09	3E-04	2E-09	8E-05	3E-09	1E-04
arochlor-1254	0.5	U	2E-05								
atrazine	5	U	4E-02								
bis(2-ethylhexyl)phthalate	5	U	2E-02	7E-05	4E-03	4E-05	2E-03	1E-05	5E-04	1E-05	7E-04
dibenzofuran	5	U	2E-03								
dieldrin	0.05	U	5E-05	4E-07	7E-03	2E-07	4E-03	5E-08	9E-04	6E-08	1E-03
heptachlor	0.025	U	5E-04	1E-07	2E-04	6E-08	1E-04	2E-08	3E-05	2E-08	4E-05
heptachlor epoxide	0.025	U	1E-05								
hexachlorobenzene	5	U									
hexachlorobutadiene	5	U	2E-04	3E-04	1E+00	1E-04	7E-01	4E-05	2E-01	5E-05	2E-01
hexachloroethane	5	U	1E-03	9E-05	9E-02	5E-05	5E-02	1E-05	1E-02	2E-05	2E-02
naphthalene	5	U	2E-02	2E-04	8E-03	8E-05	4E-03	2E-05	1E-03	3E-05	1E-03

ADD = average daily dose (mg/kg/d). HQ = Hazard Quotient (unitless). Compounds printed in lowercase letters were not detected in any sample.

* Hazard quotient or hazard index exceeds 1.5.

Table 20DISS (continued). Quantitative Risk Assessment - Noncarcinogenic
Commercial Use - Dermal Contact/Groundwater.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

Analyte	Concentration (ug/L)	Qualifier	Reference Dose (mg/kg/d)	Adult Worker ADD	Adult Worker HQ	Construction Worker ADD	Construction Worker HQ	Youth Visitor ADD	Youth Visitor HQ	Child Visitor ADD	Child Visitor HQ
nitrobenzene	5	U	5E-04								
pentachlorophenol	12.5	U	3E-02	4E-03	1E-01	2E-03	6E-02	5E-04	2E-02	6E-04	2E-02
Hazard Index for Detected Compounds Only:				**Sum =**	**1.8E-02**	**Sum =**	**9.1E-03**	**Sum =**	**2.4E-03**	**Sum =**	**3.2E-03**
Hazard Index for Nondetected Compounds Only:				**Sum =**	**1.6E+00 ***	**Sum =**	**7.9E-01**	**Sum =**	**2.1E-01**	**Sum =**	**2.8E-01**
Hazard Index for Detected and Nondetected Compounds:				**Sum =**	**1.6E+00 ***	**Sum =**	**8.0E-01**	**Sum =**	**2.1E-01**	**Sum =**	**2.8E-01**

ADD = average daily dose (mg/kg/d). HQ = Hazard Quotient (unitless). Compounds printed in lowercase letters were not detected in any sample.

* Hazard quotient or hazard index exceeds 1.5.

ORIGINAL

Table 21Total. Quantitative Risk Assessment - Carcinogenic
Commercial Use - Dermal Contact/Groundwater.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

ORIGINAL

Analyte	Concentration (ug/L)	Qualifier	Slope Factor (1/mg/kg/d)	Adult Worker		Construction Worker		Youth Visitor		Child Visitor	
				LADD	CR	LADD	CR	LADD	CR	LADD	CR
ARSENIC	77.5		2E+00								
2,2'-oxybis(1-chloropropane)	5	U	7E-02								
3,3'-dichlorobenzidine	5	U	5E-01	1E-05	6E-06	3E-07	1E-07	9E-07	4E-07	6E-07	3E-07
aldrin	0.025	U	2E+01	6E-09	1E-07	1E-10	2E-09	4E-10	7E-09	3E-10	5E-09
alpha-bhc	0.025	U	6E+00								
arochlor-1221	1	U	2E+00								
arochlor-1232	0.5	U	2E+00								
arochlor-1242	0.5	U	2E+00								
arochlor-1248	0.5	U	2E+00								
arochlor-1254	0.5	U	2E+00								
arochlor-1260	0.5	U	2E+00								
atrazine	5	U	2E-01								
benzo[a]anthracene	5	U	7E-01	6E-04	5E-04 *	1E-05	9E-06	4E-05	3E-05	3E-05	2E-05
benzo[a]pyrene	5	U	7E+00	1E-03	7E-03 *	2E-05	1E-04 *	6E-05	4E-04 *	4E-05	3E-04 *
benzo[b]fluoranthene	5	U	7E-01	1E-03	7E-04 *	2E-05	1E-05	6E-05	4E-05	4E-05	3E-05
benzo[k]fluoranthene	5	U	7E-02								
bis(2-chloroethyl)ether	5	U	1E+00								
bis(2-ethylhexyl)phthalate	5	U	1E-02	3E-05	4E-07	5E-07	7E-09	2E-06	2E-08	1E-06	2E-08
carbazole	5	U	2E-02								
dibenzo[a,h]anthracene	5	U	7E+00	2E-03	2E-02 *	4E-05	3E-04 *	1E-04	1E-03 *	9E-05	7E-04 *
dieldrin	0.05	U	2E+01	1E-07	2E-06	3E-09	4E-08	8E-09	1E-07	5E-09	9E-08
heptachlor	0.025	U	5E+00	4E-08	2E-07	9E-10	4E-09	3E-09	1E-08	2E-09	8E-09
heptachlor epoxide	0.025	U	9E+00								
hexachlorobenzene	5	U									
hexachlorobutadiene	5	U	8E-02	1E-04	7E-06	2E-06	1E-07	6E-06	5E-07	4E-06	3E-07
hexachloroethane	5	U	1E-02	3E-05	5E-07	7E-07	9E-09	2E-06	3E-08	1E-06	2E-08
indeno[1,2,3-cd]pyrene	5	U	7E-01	2E-03	1E-03 *	3E-05	2E-05	1E-04	7E-05	6E-05	5E-05
n-nitrosodinpropylamine	5	U	7E+00								
pentachlorophenol	12.5	U	1E-01	1E-03	2E-04 *	3E-05	3E-06	8E-05	1E-05	6E-05	7E-06
toxaphene	2.5	U	1E+00	6E-06	7E-06	1E-07	1E-07	4E-07	4E-07	3E-07	3E-07

LADD = lifetime average daily dose (mg/kg/d). CR = Cancer risk. Compounds printed in lowercase letters were not detected in any sample.

* Cancer risk exceeds 10E-4.

Table 21Total (continued). Quantitative Risk Assessment - Carcinogenic
Commercial Use - Dermal Contact/Groundwater.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

Analyte	Concentration (ug/L)	Qualifier	Slope Factor (1/mg/kg/d)	Adult Worker LADD	Adult Worker CR	Construction Worker LADD	Construction Worker CR	Youth Visitor LADD	Youth Visitor CR	Child Visitor LADD	Child Visitor CR
Cancer Risk for Detected Compounds Only:				Sum =	--	Sum =	--	Sum =	--	Sum =	--
Cancer Risk for Nondetected Compounds Only:				Sum =	2.5E-02 *	Sum =	5.0E-04 *	Sum =	1.6E-03 *	Sum =	1.1E-03 *
Cancer Risk for Detected and Nondetected Compounds:				Sum =	2.5E-02 *	Sum =	5.0E-04 *	Sum =	1.6E-03 *	Sum =	1.1E-03 *

LADD = lifetime average daily dose (mg/kg/d). CR = Cancer risk. Compounds printed in lowercase letters were not detected in any sample.
* Cancer risk exceeds 10E-4.

ORIGINAL

Table 21DISS. Quantitative Risk Assessment - Carcinogenic
Commercial Use - Dermal Contact/Groundwater.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

Analyte	Concentration (ug/L)	Qualifier	Slope Factor (1/mg/kg/d)	Adult Worker LADD	Adult Worker CR	Construction Worker LADD	Construction Worker CR	Youth Visitor LADD	Youth Visitor CR	Child Visitor LADD	Child Visitor CR
ARSENIC	8.2	J	2E+00								
2,2'-oxybis(1-chloropropane)	5	U	7E-02								
3,3'-dichlorobenzidine	5	U	5E-01	1E-05	6E-06	3E-07	1E-07	9E-07	4E-07	6E-07	3E-07
aldrin	0.025	U	2E+01	6E-09	1E-07	1E-10	2E-09	4E-10	7E-09	3E-10	5E-09
alpha-bhc	0.025	U	6E+00								
arochlor-1221	1	U	2E+00								
arochlor-1232	0.5	U	2E+00								
arochlor-1242	0.5	U	2E+00								
arochlor-1248	0.5	U	2E+00								
arochlor-1254	0.5	U	2E+00								
arochlor-1260	0.5	U	2E+00								
atrazine	5	U	2E-01								
benzo[a]anthracene	5	U	7E-01	6E-04	5E-04 *	1E-05	9E-06	4E-05	3E-05	3E-05	2E-05
benzo[a]pyrene	5	U	7E+00	1E-03	7E-03 *	2E-05	1E-04 *	6E-05	4E-04 *	4E-05	3E-04 *
benzo[b]fluoranthene	5	U	7E-01	1E-03	7E-04 *	2E-05	1E-05	6E-05	4E-05	4E-05	3E-05
benzo[k]fluoranthene	5	U	7E-02								
bis(2-chloroethyl)ether	5	U	1E+00								
bis(2-ethylhexyl)phthalate	5	U	1E-02	3E-05	4E-07	5E-07	7E-09	2E-06	2E-08	1E-06	2E-08
carbazole	5	U	2E-02								
dibenzo[a,h]anthracene	5	U	7E+00	2E-03	2E-02 *	4E-05	3E-04 *	1E-04	1E-03 *	9E-05	7E-04 *
dieldrin	0.05	U	2E+01	1E-07	2E-06	3E-09	4E-08	8E-09	1E-07	5E-09	9E-08
heptachlor	0.025	U	5E+00	4E-08	2E-07	9E-10	4E-09	3E-09	1E-08	2E-09	8E-09
heptachlor epoxide	0.025	U	9E+00								
hexachlorobenzene	5	U									
hexachlorobutadiene	5	U	8E-02	1E-04	7E-06	2E-06	1E-07	6E-06	5E-07	4E-06	3E-07
hexachloroethane	5	U	1E-02	3E-05	5E-07	7E-07	9E-09	2E-06	3E-08	1E-06	2E-08
indeno[1,2,3-cd]pyrene	5	U	7E-01	2E-03	1E-03 *	3E-05	2E-05	1E-04	7E-05	6E-05	5E-05
n-nitrosodinpropylamine	5	U	7E+00								
pentachlorophenol	12.5	U	1E-01	1E-03	2E-04 *	3E-05	3E-06	8E-05	1E-05	6E-05	7E-06
toxaphene	2.5	U	1E+00	6E-06	7E-06	1E-07	1E-07	4E-07	4E-07	3E-07	3E-07

LADD = lifetime average daily dose (mg/kg/d). CR = Cancer risk. Compounds printed in lowercase letters were not detected in any sample.

* Cancer risk exceeds 10E-4.

ORIGINAL

Table 21DISS (continued). Quantitative Risk Assessment - Carcinogenic
Commercial Use - Dermal Contact/Groundwater.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

Analyte	Concentration (ug/L)	Qualifier	Slope Factor (1/mg/kg/d)	Adult Worker LADD	Adult Worker CR	Construction Worker LADD	Construction Worker CR	Youth Visitor LADD	Youth Visitor CR	Child Visitor LADD	Child Visitor CR
Cancer Risk for Detected Compounds Only:				Sum =	--	Sum =	--	Sum =	--	Sum =	--
Cancer Risk for Nondetected Compounds Only:				Sum =	2.5E-02 *	Sum =	5.0E-04 *	Sum =	1.6E-03 *	Sum =	1.1E-03 *
Cancer Risk for Detected and Nondetected Compounds:				Sum =	2.5E-02 *	Sum =	5.0E-04 *	Sum =	1.6E-03 *	Sum =	1.1E-03 *

LADD = lifetime average daily dose (mg/kg/d). CR = Cancer risk. Compounds printed in lowercase letters were not detected in any sample.
* Cancer risk exceeds 10E-4.

ORIGINAL

ORIGINAL

Table 22DISS. Comparison of groundwater contaminant concentrations to MCLs For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

Analyte	Qualifier	Concentration	MCL	Exceeds MCL (Yes/No)
Aluminum	J	190	200	No
Antimony	U	30	6	Yes
Arsenic	J	8.2	50	No
Atrazine	U	5	3	Yes
Barium		37800	2000	Yes
Benzo[a]pyrene	U	5	0.2	Yes
Beryllium	U	2.5	4	No
BIS(2-ethylhexyl)phthalate	U	5	6	No
Cadmium	U	2.5	5	No
Chromium	U	5	100	No
Copper		173	1300	No
Endrin	U	0.05	2	No
Heptachlor	U	0.025	0.4	No
Heptachlor epoxide	U	0.025	0.2	No
Hexachlorobenzene	U	5	1	Yes
Hexachlorocyclopentadiene	U	5	50	No
Lead	U	5	15	No
Manganese	J	1540	50	Yes
Mercury	UL	0.1	2	No
Methoxychlor	U	0.25	40	No
Pentachlorophenol	U	12.5	1	Yes
Selenium	U	17.5	50	No
Thallium	U	12.5	2	Yes
Toxaphene	U	2.5	3	No

< or U = compound was not detected, reported concentration represents one half the detection level.
Contaminant concentrations and MCLs are reported in units of ug/L.

Table 23DISS. Comparison of detected groundwater contaminant concentrations to MDE and EPA Freshwater Ambient Water Quality Criteria For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

ORIGINAL

		Freshwater Criteria				Fish Consumption (Organism only)	
		MDE Aquatic Life Criteria		EPA Water Quality Criteria			
Analyte	Concentration	Acute:	Chronic:	Acute:	Chronic:	MDE	USEPA
PERCHLORATE	5.07	--	--	--	--	--	--
ALUMINUM	190	--	--	--	--	--	--
ARSENIC	8.2	--	--	--	--	--	0.14
BARIUM	37800	--	--	--	--	--	--
BERYLLIUM	1.7	--	--	130 c	5.3 c	--	0.131
CADMIUM	2.2	3.9 a	1 a	3.9 e	1.1 e	--	170
CHROMIUM	2.2	16	11	16	11	--	3400
COBALT	81.3	--	--	--	--	--	--
COPPER	173	18 a	12 a	18 e	12 e	--	--
MANGANESE	1540	--	--	--	--	--	--
MERCURY	0.094	--	--	--	--	--	--
NICKEL	160	1400 a	160 a	1400 e	160 e	4600	3800
THALLIUM	5.5	--	--	1400 c	40 c	--	6
VANADIUM	0.95	--	--	--	--	--	--
ZINC	100	120 a	110 a	120 e	110 e	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	4	--	--	400 d	360 d	--	5.9
DIETHYLPHTHALATE	1	--	--	--	--	--	--
PHENOL	6	--	--	10200 c	2560 c	--	4600

a = The toxicicty of certain substances is decreased or increased by hardness or pH. For these substances MDE may modify the criteria at a site; b = The fresh water aquatic life criteria for cyanide apply only to those waters of the State designed as uses III, III-P, IV, or IV-P. In all other waters of the State cyanide acute and chronic aquatic life criteria of 31.3 and 7.3 ug/L, respectively, apply; c = Insufficient data to develop criteria. Value represents the lowest observed effect level (LOEL); d = Proposed criterion; e = Hardness dependent criteria (100 mg/L CaCO3 used); f = pH dependent criteria, (7.8 pH used); g = Silver has a hardness dependent value as well as different proposed criteria values.

Contaminant concentrations are reported in units of ug/L.

Table 24Total. Quantitative Risk Assessment - Noncarcinogenic
Residential Use - Incidental Ingestion/Surface water While Swimming.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

ORIGINAL

Analyte	Concentration (ug/L)	Qualifier	Reference Dose (mg/kg/d)	Adult Worker		Construction Worker		Youth Visitor		Child Visitor	
				ADD	HQ	ADD	HQ	ADD	HQ	ADD	
BARIUM	2590	J	7E-02	6E-05	9E-04			1E-04	2E-03	3E-04	4E-03
MANGANESE	6150		2E-02	1E-04	7E-03			3E-04	1E-02	7E-04	3E-02
antimony	30	U	4E-04	7E-07	2E-03			1E-06	3E-03	3E-06	8E-03
arsenic	5	U	3E-04	1E-07	4E-04			2E-07	7E-04	5E-07	2E-03
thallium	12.5	U	7E-05	3E-07	4E-03			5E-07	7E-03	1E-06	2E-02
vanadium	25	U	1E-03	6E-07	6E-04			1E-06	1E-03	3E-06	3E-03
2,2'-oxybis(1-chloropropane)	5	U	4E-02	1E-07	3E-06			2E-07	5E-06	5E-07	1E-05
2,4-dinitrophenol	12.5	U	2E-03	3E-07	1E-04			5E-07	3E-04	1E-06	7E-04
2,6-dinitrotoluene	5	U	1E-03	1E-07	1E-04			2E-07	2E-04	5E-07	5E-04
2-chlorophenol	5	U	5E-03	1E-07	2E-05			2E-07	4E-05	5E-07	1E-04
2-methylnaphthalene	5	U	4E-03	1E-07	3E-05			2E-07	5E-05	5E-07	1E-04
2-nitroaniline	12.5	U	3E-03	3E-07	1E-04			5E-07	2E-04	1E-06	5E-04
3-nitroaniline	12.5	U	3E-03	3E-07	1E-04			5E-07	2E-04	1E-06	5E-04
4,6-dinitro-2-methylphenol	12.5	U	1E-04	3E-07	3E-03			5E-07	5E-03	1E-06	1E-02
4-nitroaniline	12.5	U	3E-03	3E-07	1E-04			5E-07	2E-04	1E-06	5E-04
aldrin	0.025	U	3E-05	6E-10	2E-05			1E-09	3E-05	3E-09	9E-05
arochlor-1254	0.5	U	2E-05	1E-08	6E-04			2E-08	1E-03	5E-08	3E-03
atrazine	5	U	4E-02	1E-07	3E-06			2E-07	6E-06	5E-07	2E-05
bis(2-ethylhexyl)phthalate	5	U	2E-02	1E-07	6E-06			2E-07	1E-05	5E-07	3E-05
dibenzofuran	5	U	2E-03	1E-07	6E-05			2E-07	1E-04	5E-07	3E-04
dieldrin	0.05	U	5E-05	1E-09	2E-05			2E-09	4E-05	5E-09	1E-04
heptachlor	0.025	U	5E-04	6E-10	1E-06			1E-09	2E-06	3E-09	5E-06
heptachlor epoxide	0.025	U	1E-05	6E-10	5E-05			1E-09	8E-05	3E-09	2E-04
hexachlorobenzene	5	U	8E-04	1E-07	1E-04			2E-07	3E-04	5E-07	7E-04
hexachlorobutadiene	5	U	2E-04	1E-07	6E-04			2E-07	1E-03	5E-07	3E-03
hexachloroethane	5	U	1E-03	1E-07	1E-04			2E-07	2E-04	5E-07	5E-04
naphthalene	5	U	2E-02	1E-07	6E-06			2E-07	1E-05	5E-07	3E-05
nitrobenzene	5	U	5E-04	1E-07	2E-04			2E-07	4E-04	5E-07	1E-03
pentachlorophenol	12.5	U	3E-02	3E-07	1E-05			5E-07	2E-05	1E-06	5E-05

ADD = average daily dose (mg/kg/d). HQ = Hazard Quotient (unitless). Compounds printed in lowercase letters were not detected in any sample.

* Hazard quotient or hazard index exceeds 1.5.

Table 24Total (continued). Quantitative Risk Assessment - Noncarcinogenic
Residential Use - Incidental Ingestion/Surface water While Swimming.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

Analyte	Concentration (ug/L)	Qualifier	Reference Dose (mg/kg/d)	Adult Worker ADD	Adult Worker HQ	Construction Worker ADD	Construction Worker HQ	Youth Visitor ADD	Youth Visitor HQ	Child Visitor ADD	Child Visitor HQ
Hazard Index for Detected Compounds Only:				Sum =	8.1E-03	Sum =	--	Sum =	1.4E-02	Sum =	3.8E-02
Hazard Index for Nondetected Compounds Only:				Sum =	1.2E-02	Sum =	--	Sum =	2.2E-02	Sum =	5.8E-02
Hazard Index for Detected and Nondetected Compounds:				Sum =	2.0E-02	Sum =	--	Sum =	3.6E-02	Sum =	9.5E-02

ADD = average daily dose (mg/kg/d). HQ = Hazard Quotient (unitless). Compounds printed in lowercase letters were not detected in any sample.
* Hazard quotient or hazard index exceeds 1.5.

ORIGINAL

Table 25Total. Quantitative Risk Assessment - Carcinogenic
Residential Use - Incidental Ingestion/Surface water While Swimming.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

ORIGINAL

Analyte	Concentration (ug/L)	Qualifier	Slope Factor (1/mg/kg/d)	Adult Worker		Construction Worker		Youth Visitor		Child Visitor	
				LADD	CR	LADD	CR	LADD	CR	LADD	CR
arsenic	5	U	2E+00	5E-08	8E-08			4E-08	5E-08	5E-08	7E-08
2,2'-oxybis(1-chloropropane)	5	U	7E-02	5E-08	4E-09			4E-08	2E-09	5E-08	3E-09
3,3'-dichlorobenzidine	5	U	5E-01	5E-08	2E-08			4E-08	2E-08	5E-08	2E-08
aldrin	0.025	U	2E+01	3E-10	4E-09			2E-10	3E-09	2E-10	4E-09
alpha-bhc	0.025	U	6E+00	3E-10	2E-09			2E-10	1E-09	2E-10	1E-09
arochlor-1221	1	U	2E+00	1E-08	2E-08			7E-09	1E-08	9E-09	2E-08
arochlor-1232	0.5	U	2E+00	5E-09	1E-08			4E-09	7E-09	5E-09	9E-09
arochlor-1242	0.5	U	2E+00	5E-09	1E-08			4E-09	7E-09	5E-09	9E-09
arochlor-1248	0.5	U	2E+00	5E-09	1E-08			4E-09	7E-09	5E-09	9E-09
arochlor-1254	0.5	U	2E+00	5E-09	1E-08			4E-09	7E-09	5E-09	9E-09
arochlor-1260	0.5	U	2E+00	5E-09	1E-08			4E-09	7E-09	5E-09	9E-09
atrazine	5	U	2E-01	5E-08	1E-08			4E-08	8E-09	5E-08	1E-08
benzo[a]anthracene	5	U	7E-01	5E-08	4E-08			4E-08	3E-08	5E-08	3E-08
benzo[a]pyrene	5	U	7E+00	5E-08	4E-07			4E-08	3E-07	5E-08	3E-07
benzo[b]fluoranthene	5	U	7E-01	5E-08	4E-08			4E-08	3E-08	5E-08	3E-08
benzo[k]fluoranthene	5	U	7E-02	5E-08	4E-09			4E-08	3E-09	5E-08	3E-09
bis(2-chloroethyl)ether	5	U	1E+00	5E-08	6E-08			4E-08	4E-08	5E-08	5E-08
bis(2-ethylhexyl)phthalate	5	U	1E-02	5E-08	7E-10			4E-08	5E-10	5E-08	7E-10
carbazole	5	U	2E-02	5E-08	1E-09			4E-08	7E-10	5E-08	9E-10
dibenzo[a,h]anthracene	5	U	7E+00	5E-08	4E-07			4E-08	3E-07	5E-08	3E-07
dieldrin	0.05	U	2E+01	5E-10	8E-09			4E-10	6E-09	5E-10	8E-09
heptachlor	0.025	U	5E+00	3E-10	1E-09			2E-10	8E-10	2E-10	1E-09
heptachlor epoxide	0.025	U	9E+00	3E-10	2E-09			2E-10	2E-09	2E-10	2E-09
hexachlorobenzene	5	U	2E+00	5E-08	8E-08			4E-08	6E-08	5E-08	8E-08
hexachlorobutadiene	5	U	8E-02	5E-08	4E-09			4E-08	3E-09	5E-08	4E-09
hexachloroethane	5	U	1E-02	5E-08	7E-10			4E-08	5E-10	5E-08	7E-10
indeno[1,2,3-cd]pyrene	5	U	7E-01	5E-08	4E-08			4E-08	3E-08	5E-08	3E-08
n-nitrosodinpropylamine	5	U	7E+00	5E-08	4E-07			4E-08	2E-07	5E-08	3E-07
pentachlorophenol	12.5	U	1E-01	1E-07	2E-08			9E-08	1E-08	1E-07	1E-08
toxaphene	2.5	U	1E+00	3E-08	3E-08			2E-08	2E-08	2E-08	3E-08

LADD = lifetime average daily dose (mg/kg/d). CR = Cancer risk. Compounds printed in lowercase letters were not detected in any sample.

* Cancer risk exceeds 10E-4.

Table 25Total (continued). Quantitative Risk Assessment - Carcinogenic
Residential Use - Incidental Ingestion/Surface water While Swimming.
For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

Analyte	Concentration (ug/L)	Qualifier	Slope Factor (1/mg/kg/d)	Adult Worker LADD	Adult Worker CR	Construction Worker LADD	Construction Worker CR	Youth Visitor LADD	Youth Visitor CR	Child Visitor LADD	Child Visitor CR
Cancer Risk for Nondetected Compounds Only:				Sum =	1.6E-06	Sum =	--	Sum =	1.1E-06	Sum =	1.5E-06
Cancer Risk for Detected and Nondetected Compounds:				Sum =	1.6E-06	Sum =	--	Sum =	1.1E-06	Sum =	1.5E-06

LADD = lifetime average daily dose (mg/kg/d). CR = Cancer risk. Compounds printed in lowercase letters were not detected in any sample.
* Cancer risk exceeds 10E-4.

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Table 6DISS. Comparison of detected surface water contaminant concentrations to MDE and EPA Freshwater Ambient Water Quality Criteria For New Jersey Fireworks, 1726 Old Philadelphia Road Cecil County, Maryland.

		Freshwater Criteria				Fish Consumption (Organism only)	
		MDE Aquatic Life Criteria		EPA Water Quality Criteria			
Analyte	Concentration	Acute:	Chronic:	Acute:	Chronic:	MDE	USEPA
PERCHLORATE	8.51	--	--	--	--	--	--
ALUMINUM	127	--	--	--	--	--	--
ANTIMONY	8.5	--	--	88 d	30 d	--	4300
ARSENIC	3.2	--	--	--	--	--	0.14
BARIUM	2430	--	--	--	--	--	--
BERYLLIUM	0.085	--	--	130 c	5.3 c	--	0.131
CHROMIUM	2.5	16	11	16	11	--	3400
COBALT	25.6	--	--	--	--	--	--
COPPER	3.5	18 a	12 a	18 e	12 e	--	--
MANGANESE	6020	--	--	--	--	--	--
NICKEL	8.4	1400 a	160 a	1400 e	160 e	4600	3800
SILVER	10	4.1 a	--	4.1 g	0.12	--	--
THALLIUM	9	--	--	1400 c	40 c	--	6
VANADIUM	0.68	--	--	--	--	--	--
ZINC	18.6	120 a	110 a	120 e	110 e	--	--
DINBUTYLPHTHALATE	5	--	--	--	--	--	12000

a = The toxicicty of certain substances is decreased or increased by hardness or pH. For these substances MDE may modify the criteria at a site; b = The fresh water aquatic life criteria for cyanide apply only to those waters of the State designed as uses III, III-P, IV, or IV-P. In all other waters of the State cyanide acute and chronic aquatic life criteria of 31.3 and 7.3 ug/L, respectively, apply; c = Insufficient data to develop criteria. Value represents the lowest observed effect level (LOEL); d = Proposed criterion; e = Hardness dependent criteria (100 mg/L CaCO3 used); f = pH dependent criteria, (7.8 pH used); g = Silver has a hardness dependent value as well as different proposed criteria values.

Contaminant concentrations are reported in units of ug/L.

ATTACHMENTS

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ORIGINAL

ATTACHMENT A

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC		Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)	Pass Tier 1 Screen ?
Water: Groundwater											
No RBCs Available											
MW4	4-BROMOPHENYL PHENYL ETHER		Water	5	U	UG/L			?	--	--
MW4	4-CHLORO-3-METHYLPHENOL		Water	5	U	UG/L			?	--	--
MW4	4-CHLOROPHENYL PHENYL ETHER		Water	5	U	UG/L			?	--	--
MW4	BIS(2-CHLOROETHOXY)METHANE		Water	5	U	UG/L			?	--	--
GW2	PERCHLORATE		Water	438	L	ug/L			?	--	--
Inorganics:											
MW1	ALUMINUM	7429905	Water	88300		UG/L	3.65E+03	* N	Fail	--	--
GW3	ANTIMONY	7440360	Water	30	U	UG/L	1.46E+00	* N	Fail	--	--
MW1	ARSENIC	7440382	Water	77.5		UG/L	4.46E-02	C	Fail	--	--
GW2	BARIUM	7440393	Water	43700		UG/L	2.56E+02	* N	Fail	--	--
MW1	BERYLLIUM	7440417	Water	15.5		UG/L	7.30E+00	* N	Fail	--	--
MW1	CADMIUM	7440439	Water	5.2		UG/L	3.65E+00	* N	Fail	--	--
MW4	CHROMIUM	18540299	Water	335		UG/L	1.09E+01	* N	Fail	--	--
MW1	COBALT	7440484	Water	331		UG/L	7.30E+01	* N	Fail	--	--
MW1	COPPER	7440508	Water	322		UG/L	1.46E+02	* N	Fail	--	--
MW2	CYANIDE	57125	Water	5	U	UG/L	7.30E+01	* N	Pass	--	--
MW1	LEAD		Water	151		UG/L			?	--	--
MW1	MANGANESE	7439965	Water	1940	J	UG/L	7.30E+01	* N	Fail	--	--
MW1	MERCURY	7439976	Water	0.36	B	UG/L			?	--	--
MW3A	NICKEL	7440020	Water	187		UG/L	7.30E+01	* N	Fail	--	--
MW1	SELENIUM	7782492	Water	57.2		UG/L	1.83E+01	* N	Fail	--	--
MW1DM	SILVER	7440224	Water	5	U	UG/L	1.83E+01	* N	Pass	--	--
MW1	THALLIUM	7440280	Water	12.7	J	UG/L	2.56E-01	* N	Fail	--	--
MW1	VANADIUM	7440622	Water	637		UG/L	3.70E+00	* N	Fail	--	--
MW1	ZINC	7440666	Water	620		UG/L	1.10E+03	* N	Pass	--	--
Organics:											
MW3A	1,1-BIPHENYL	92524	Water	5	U	UG/L	3.04E+01	* N	Pass	--	--
MW3A	2,2'-OXYBIS(1-CHLOROPROPANE)	108601	Water	5	U	UG/L	2.60E-01	C	Fail	--	--

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ORIGINAL

ORIGINAL

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC		Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)	Pass Tier 1 Screen ?
Water: Groundwater											
Organics:											
MW3A	2,4,5-TRICHLOROPHENOL	95954	Water	12.5	U	UG/L	3.65E+02	* N	Pass	--	--
MW3A	2,4,6-TRICHLOROPHENOL	88062	Water	5	U	UG/L	6.09E+00	C	Pass	--	--
MW3A	2,4-DICHLOROPHENOL	120832	Water	5	U	UG/L	1.09E+01	* N	Pass	--	--
MW3A	2,4-DIMETHYLPHENOL	105679	Water	5	U	UG/L	7.30E+01	* N	Pass	--	--
MW3	2,4-DINITROPHENOL	51285	Water	12.5	U	UG/L	7.30E+00	* N	Fail	--	--
MW3A	2,4-DINITROTOLUENE	121142	Water	5	U	UG/L	7.30E+00	* N	Pass	--	--
MW3A	2,6-DINITROTOLUENE	606202	Water	5	U	UG/L	3.65E+00	* N	Fail	--	--
MW3A	2-CHLORONAPHTHALENE	91587	Water	5	U	UG/L	4.87E+01	* N	Pass	--	--
MW3A	2-CHLOROPHENOL	95578	Water	5	U	UG/L	3.04E+00	* N	Fail	--	--
MW3A	2-METHYLNAPHTHALENE	91576	Water	5	U	UG/L	2.40E+00	* N	Fail	--	--
MW3A	2-METHYLPHENOL	95487	Water	5	U	UG/L	1.83E+02	* N	Pass	--	--
MW2	2-NITROANILINE	88744	Water	12.5	U	UG/L	1.10E+01	* N	Fail	--	--
MW3A	2-NITROPHENOL	100027	Water	5	U	UG/L	2.92E+01	* N	Pass	--	--
MW3A	3,3'-DICHLOROBENZIDINE	91941	Water	5	U	UG/L	1.49E-01	C	Fail	--	--
MW3	3-NITROANILINE	88744	Water	12.5	U	UG/L	1.10E+01	* N	Fail	--	--
MW2	4,4'-DDE	72559	Water	0.05	U	UG//L	1.97E-01	C	Pass	--	--
MW2	4,4'-DDT	50293	Water	0.05	U	UG//L	1.97E-01	C	Pass	--	--
MW4	4,6-DINITRO-2-METHYLPHENOL	534521	Water	12.5	U	UG/L	3.70E-01	* N	Fail	--	--
MW3A	4-CHLOROANILINE	106478	Water	5	U	UG/L	1.46E+01	* N	Pass	--	--
MW3A	4-METHYLPHENOL	106445	Water	5	U	UG/L	1.83E+01	* N	Pass	--	--
MW4	4-NITROANILINE	88744	Water	12.5	U	UG/L	1.10E+01	* N	Fail	--	--
MW4	4-NITROPHENOL	100027	Water	12.5	U	UG/L	2.92E+01	* N	Pass	--	--
MW3A	ACENAPHTHENE	83329	Water	5	U	UG/L	3.65E+01	* N	Pass	--	--
MW3A	ACENAPHTHYLENE	83329	Water	5	U	UG/L	3.65E+01	* N	Pass	--	--
MW3A	ACETOPHENONE	98862	Water	5	U	UG/L	6.10E+01	* N	Pass	--	--
PW5	ALDRIN	309002	Water	0.025	U	UG/L	3.94E-03	C	Fail	--	--
PW5	ALPHA-BHC	319846	Water	0.025	U	UG/L	1.06E-02	C	Fail	--	--
MW4	ALPHA-CHLORDANE	57749	Water	0.025	U	UG/L	1.91E-01	C	Pass	--	--

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC		Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)	Pass Tier 1 Screen ?
Water: Groundwater											
Organics:											
MW3A	ANTHRACENE	120127	Water	5	U	UG/L	1.83E+02	* N	Pass	--	--
MW1A	AROCHLOR-1016	12674112	Water	0.5	U	UG/L	9.57E-01	C	Pass	--	--
MW1A	AROCHLOR-1221	11104282	Water	1	U	UG/L	3.35E-02	C	Fail	--	--
MW1A	AROCHLOR-1232	11141165	Water	0.5	U	UG/L	3.35E-02	C	Fail	--	--
MW1A	AROCHLOR-1242	53469219	Water	0.5	U	UG/L	3.35E-02	C	Fail	--	--
MW1A	AROCHLOR-1248	12672296	Water	0.5	U	UG/L	3.35E-02	C	Fail	--	--
MW3A	AROCHLOR-1254	11097691	Water	0.5	U	UG/L	3.35E-02	C	Fail	--	--
MW3A	AROCHLOR-1260	11096825	Water	0.5	U	UG/L	3.35E-02	C	Fail	--	--
MW3A	ATRAZINE	1912249	Water	5	U	UG/L	3.04E-01	C	Fail	--	--
MW3A	BENZALDEHYDE	100527	Water	5	U	UG/L	3.65E+02	* N	Pass	--	--
MW3A	BENZO[A]ANTHRACENE	56553	Water	5	U	UG/L	9.17E-02	C	Fail	--	--
MW3A	BENZO[A]PYRENE	50328	Water	5	U	UG/L	9.17E-03	C	Fail	--	--
MW3A	BENZO[B]FLUORANTHENE	205992	Water	5	U	UG/L	9.17E-02	C	Fail	--	--
MW3	BENZO[G,H,I]PERYLENE	129000	Water	5	U	UG/L	1.83E+01	* N	Pass	--	--
MW3A	BENZO[K]FLUORANTHENE	207089	Water	5	U	UG/L	9.17E-01	C	Fail	--	--
MW2	BETA-BHC	319857	Water	0.025	U	UG//L	3.72E-02	C	Pass	--	--
MW3A	BIS(2-CHLOROETHYL)ETHER	111444	Water	5	U	UG/L	9.59E-03	C	Fail	--	--
MW3A	BIS(2-ETHYLHEXYL)PHTHALATE	117817	Water	5	U	UG/L	4.78E+00	C	Fail	--	--
MW3A	BUTYLBENZYLPHTHALATE	85687	Water	5	U	UG/L	7.30E+02	* N	Pass	--	--
MW3A	CAPROLACTAM	105602	Water	5	U	UG/L	1.83E+03	* N	Pass	--	--
MW3A	CARBAZOLE	86748	Water	5	U	UG/L	3.35E+00	C	Fail	--	--
MW3	CHRYSENE	218019	Water	5	U	UG/L	9.17E+00	C	Pass	--	--
MW3	DELTA-BHC	58899	Water	0.025	U	UG/L	5.15E-02	C	Pass	--	--
MW3	DIBENZO[A,H]ANTHRACENE	53703	Water	5	U	UG/L	9.17E-03	C	Fail	--	--
MW3	DIBENZOFURAN	132649	Water	5	U	UG/L	1.20E+00	* N	Fail	--	--
MW4	DIELDRIN	60571	Water	0.05	U	UG/L	4.19E-03	C	Fail	--	--
MW3	DIETHYLPHTHALATE	84662	Water	5	U	UG/L	2.92E+03	* N	Pass	--	--
MW3	DIMETHYLPHTHALATE	131113	Water	5	U	UG/L	3.65E+04	* N	Pass	--	--

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

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Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC		Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)	Pass Tier 1 Screen ?
Water: Groundwater											
Organics:											
MW3	DINBUTYLPHTHALATE	84742	Water	5	U	UG/L	3.65E+02	* N	Pass	--	--
MW3	DINOCTYLPHTHALATE	117840	Water	5	U	UG/L	1.50E+02	* N	Pass	--	--
MW4	ENDOSULFAN I	115297	Water	0.025	U	UG/L	2.19E+01	* N	Pass	--	--
MW2	ENDOSULFAN II	115297	Water	0.05	U	UG//L	2.19E+01	* N	Pass	--	--
MW1A	ENDRIN	72208	Water	0.05	U	UG/L	1.10E+00	* N	Pass	--	--
MW1	ENDRIN ALDEHYDE	72208	Water	0.05	U	UG/L	1.10E+00	* N	Pass	--	--
MW1	ENDRIN KETONE	72208	Water	0.05	U	UG/L	1.10E+00	* N	Pass	--	--
MW3	FLUORANTHENE	206440	Water	5	U	UG/L	1.46E+02	* N	Pass	--	--
MW3	FLUORENE	86737	Water	5	U	UG/L	2.43E+01	* N	Pass	--	--
MW3	GAMMA-BHC (LINDANE)	58899	Water	0.025	U	UG/L	5.15E-02	C	Pass	--	--
MW4	GAMMA-CHLORDANE	57749	Water	0.025	U	UG/L	1.91E-01	C	Pass	--	--
MW1	HEPTACHLOR	76448	Water	0.025	U	UG/L	1.49E-02	C	Fail	--	--
MW3	HEPTACHLOR EPOXIDE	1024573	Water	0.025	U	UG/L	7.36E-03	C	Fail	--	--
MW3	HEXACHLOROBENZENE	118741	Water	5	U	UG/L	4.19E-02	C	Fail	--	--
MW3	HEXACHLOROBUTADIENE	87683	Water	5	U	UG/L	8.59E-01	C	Fail	--	--
MW3	HEXACHLOROCYCLOPENTADIENE	77474	Water	5	U	UG/L	2.19E+01	* N	Pass	--	--
MW3	HEXACHLOROETHANE	67721	Water	5	U	UG/L	4.78E+00	C	Fail	--	--
MW3	INDENO[1,2,3-CD]PYRENE	193395	Water	5	U	UG/L	9.17E-02	C	Fail	--	--
MW3	ISOPHORONE	78591	Water	5	U	UG/L	7.05E+01	C	Pass	--	--
MW2	METHOXYCHLOR	72435	Water	0.25	U	UG//L	1.83E+01	* N	Pass	--	--
MW3	N-NITROSODINPROPYLAMINE	621647	Water	5	U	UG/L	9.57E-03	C	Fail	--	--
MW3	N-NITROSODIPHENYLAMINE	86306	Water	5	U	UG/L	1.37E+01	C	Pass	--	--
MW3	NAPHTHALENE	91203	Water	5	U	UG/L	6.51E-01	* N	Fail	--	--
MW3	NITROBENZENE	98953	Water	5	U	UG/L	3.53E-01	* N	Fail	--	--
MW2	PENTACHLOROPHENOL	87865	Water	12.5	U	UG/L	5.58E-01	C	Fail	--	--
MW3A	PHENANTHRENE	120127	Water	5	U	UG/L	1.83E+02	* N	Pass	--	--
MW3	PHENOL	108952	Water	6	J	UG/L	1.10E+03	* N	Pass	--	--
MW3	PYRENE	129000	Water	5	U	UG/L	1.83E+01	* N	Pass	--	--

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

Attachment A (cont.). Identification of Chemicals of Concern: New Jersey Fireworks, Cecil County, Maryland; PCA Code: 65651

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC		Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)	Pass Tier 1 Screen ?
Water: Groundwater											
Organics:											
MW3A	TOXAPHENE	8001352	Water	2.5	U	UG/L	6.09E-02	C	Fail	--	--
Water: Surface water											
No RBCs Available											
SW7	4-BROMOPHENYL PHENYL ETHER		Water	5	U	UG/L			?	--	--
SW2	4-CHLORO-3-METHYLPHENOL		Water	5	U	UG/L			?	--	--
SW2	4-CHLOROPHENYL PHENYL ETHER		Water	5	U	UG/L			?	--	--
SW6	BIS(2-CHLOROETHOXY)METHANE		Water	5	U	UG/L			?	--	--
SW6	PERCHLORATE		Water	8.51		ug/L			?	--	--
Inorganics:											
SW8	ALUMINUM	7429905	Water	893		ug/L	3.65E+03	* N	Pass	--	--
SW6DM	ANTIMONY	7440360	Water	30	U	UG/L	1.46E+00	* N	Fail	--	--
SW2DM	ARSENIC	7440382	Water	5	U	UG/L	4.46E-02	C	Fail	--	--
SW6	BARIUM	7440393	Water	2590	J	ug/L	2.56E+02	* N	Fail	--	--
SW9DM	BERYLLIUM	7440417	Water	2.5	UL	UG/L	7.30E+00	* N	Pass	--	--
SW5DM	CADMIUM	7440439	Water	2.5	UL	UG/L	3.65E+00	* N	Pass	--	--
SW8	CHROMIUM	18540299	Water	3.5	J	ug/L	1.09E+01	* N	Pass	--	--
SW5DM	COBALT	7440484	Water	25.6	J	UG/L	7.30E+01	* N	Pass	--	--
SW9DM	COPPER	7440508	Water	12.5	U	UG/L	1.46E+02	* N	Pass	--	--
SW4	CYANIDE	57125	Water	5	U	ug/L	7.30E+01	* N	Pass	--	--
SW8	LEAD		Water	6.3	J	ug/L			?	--	--
SW5	MANGANESE	7439965	Water	6150		ug/L	7.30E+01	* N	Fail	--	--
SW4DM	MERCURY	7439976	Water	0.1	U	ug/L			?	--	--
SW4DM	NICKEL	7440020	Water	8.4	J	ug/L	7.30E+01	* N	Pass	--	--
SW4DM	SELENIUM	7782492	Water	17.5	UL	ug/L	1.83E+01	* N	Pass	--	--
SW6DM	SILVER	7440224	Water	10		UG/L	1.83E+01	* N	Pass	--	--
SW4DM	THALLIUM	7440280	Water	12.5	U	ug/L	2.56E-01	* N	Fail	--	--
SW8DM	VANADIUM	7440622	Water	25	U	UG/L	3.70E+00	* N	Fail	--	--

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

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Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC		Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)	Pass Tier 1 Screen ?
Water: Surface water											
Inorganics:											
SW8	ZINC	7440666	Water	25.5	J	ug/L	1.10E+03	* N	Pass	--	--
Organics:											
SW3	1,1-BIPHENYL	92524	Water	5	U	UG/L	3.04E+01	* N	Pass	--	--
SW3	2,2'-OXYBIS(1-CHLOROPROPANE)	108601	Water	5	U	UG/L	2.60E-01	C	Fail	--	--
SW3	2,4,5-TRICHLOROPHENOL	95954	Water	12.5	U	UG/L	3.65E+02	* N	Pass	--	--
SW4	2,4,6-TRICHLOROPHENOL	88062	Water	5	U	UG/L	6.09E+00	C	Pass	--	--
SW4	2,4-DICHLOROPHENOL	120832	Water	5	U	UG/L	1.09E+01	* N	Pass	--	--
SW4	2,4-DIMETHYLPHENOL	105679	Water	5	U	UG/L	7.30E+01	* N	Pass	--	--
SW7	2,4-DINITROPHENOL	51285	Water	12.5	U	UG/L	7.30E+00	* N	Fail	--	--
SW4	2,4-DINITROTOLUENE	121142	Water	5	U	UG/L	7.30E+00	* N	Pass	--	--
SW4	2,6-DINITROTOLUENE	606202	Water	5	U	UG/L	3.65E+00	* N	Fail	--	--
SW3	2-CHLORONAPHTHALENE	91587	Water	5	U	UG/L	4.87E+01	* N	Pass	--	--
SW4	2-CHLOROPHENOL	95578	Water	5	U	UG/L	3.04E+00	* N	Fail	--	--
SW4	2-METHYLNAPHTHALENE	91576	Water	5	U	UG/L	2.40E+00	* N	Fail	--	--
SW4	2-METHYLPHENOL	95487	Water	5	U	UG/L	1.83E+02	* N	Pass	--	--
SW2	2-NITROANILINE	88744	Water	12.5	U	UG/L	1.10E+01	* N	Fail	--	--
SW4	2-NITROPHENOL	100027	Water	5	U	UG/L	2.92E+01	* N	Pass	--	--
SW4	3,3'-DICHLOROBENZIDINE	91941	Water	5	U	UG/L	1.49E-01	C	Fail	--	--
SW2	3-NITROANILINE	88744	Water	12.5	U	UG/L	1.10E+01	* N	Fail	--	--
SW3	4,4'-DDE	72559	Water	0.05	U	UG/L	1.97E-01	C	Pass	--	--
SW3	4,4'-DDT	50293	Water	0.05	U	UG/L	1.97E-01	C	Pass	--	--
SW7	4,6-DINITRO-2-METHYLPHENOL	534521	Water	12.5	U	UG/L	3.70E-01	* N	Fail	--	--
SW4	4-CHLOROANILINE	106478	Water	5	U	UG/L	1.46E+01	* N	Pass	--	--
SW4	4-METHYLPHENOL	106445	Water	5	U	UG/L	1.83E+01	* N	Pass	--	--
SW2	4-NITROANILINE	88744	Water	12.5	U	UG/L	1.10E+01	* N	Fail	--	--
SW4	4-NITROPHENOL	100027	Water	12.5	U	UG/L	2.92E+01	* N	Pass	--	--
SW3	ACENAPHTHENE	83329	Water	5	U	UG/L	3.65E+01	* N	Pass	--	--
SW3	ACENAPHTHYLENE	83329	Water	5	U	UG/L	3.65E+01	* N	Pass	--	--

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC		Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)	Pass Tier 1 Screen ?
Water: Surface water											
Organics:											
SW3	ACETOPHENONE	98862	Water	5	U	UG/L	6.10E+01	* N	Pass	--	--
SW3	ALDRIN	309002	Water	0.025	U	UG/L	3.94E-03	C	Fail	--	--
SW4	ALPHA-BHC	319846	Water	0.025	U	UG/L	1.06E-02	C	Fail	--	--
SW6	ALPHA-CHLORDANE	57749	Water	0.025	U	UG/L	1.91E-01	C	Pass	--	--
SW3	ANTHRACENE	120127	Water	5	U	UG/L	1.83E+02	* N	Pass	--	--
SW4	AROCHLOR-1016	12674112	Water	0.5	U	UG/L	9.57E-01	C	Pass	--	--
SW2	AROCHLOR-1221	11104282	Water	1	U	ug/l	3.35E-02	C	Fail	--	--
SW2	AROCHLOR-1232	11141165	Water	0.5	U	ug/l	3.35E-02	C	Fail	--	--
SW1	AROCHLOR-1242	53469219	Water	0.5	U	UG/L	3.35E-02	C	Fail	--	--
SW1	AROCHLOR-1248	12672296	Water	0.5	U	UG/L	3.35E-02	C	Fail	--	--
SW1	AROCHLOR-1254	11097691	Water	0.5	U	UG/L	3.35E-02	C	Fail	--	--
SW1	AROCHLOR-1260	11096825	Water	0.5	U	UG/L	3.35E-02	C	Fail	--	--
SW3	ATRAZINE	1912249	Water	5	U	UG/L	3.04E-01	C	Fail	--	--
SW3	BENZALDEHYDE	100527	Water	5	U	UG/L	3.65E+02	* N	Pass	--	--
SW3	BENZO[A]ANTHRACENE	56553	Water	5	U	UG/L	9.17E-02	C	Fail	--	--
SW3	BENZO[A]PYRENE	50328	Water	5	U	UG/L	9.17E-03	C	Fail	--	--
SW3	BENZO[B]FLUORANTHENE	205992	Water	5	U	UG/L	9.17E-02	C	Fail	--	--
SW3	BENZO[G,H,I]PERYLENE	129000	Water	5	U	UG/L	1.83E+01	* N	Pass	--	--
SW3	BENZO[K]FLUORANTHENE	207089	Water	5	U	UG/L	9.17E-01	C	Fail	--	--
SW6	BETA-BHC	319857	Water	0.025	U	UG/L	3.72E-02	C	Pass	--	--
SW4	BIS(2-CHLOROETHYL)ETHER	111444	Water	5	U	UG/L	9.59E-03	C	Fail	--	--
SW4	BIS(2-ETHYLHEXYL)PHTHALATE	117817	Water	5	U	UG/L	4.78E+00	C	Fail	--	--
SW3	BUTYLBENZYLPHTHALATE	85687	Water	5	U	UG/L	7.30E+02	* N	Pass	--	--
SW3	CAPROLACTAM	105602	Water	5	U	UG/L	1.83E+03	* N	Pass	--	--
SW3	CARBAZOLE	86748	Water	5	U	UG/L	3.35E+00	C	Fail	--	--
SW3	CHRYSENE	218019	Water	5	U	UG/L	9.17E+00	C	Pass	--	--
SW6	DELTA-BHC	58899	Water	0.025	U	UG/L	5.15E-02	C	Pass	--	--
SW3	DIBENZO[A,H]ANTHRACENE	53703	Water	5	U	UG/L	9.17E-03	C	Fail	--	--

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ORIGINAL

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Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC		Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)	Pass Tier 1 Screen ?
Water: Surface water											
Organics:											
SW3	DIBENZOFURAN	132649	Water	5	U	UG/L	1.20E+00	* N	Fail	--	--
SW3	DIELDRIN	60571	Water	0.05	U	UG/L	4.19E-03	C	Fail	--	--
SW3	DIETHYLPHTHALATE	84662	Water	5	U	UG/L	2.92E+03	* N	Pass	--	--
SW3	DIMETHYLPHTHALATE	131113	Water	5	U	UG/L	3.65E+04	* N	Pass	--	--
SW3	DINBUTYLPHTHALATE	84742	Water	5	U	UG/L	3.65E+02	* N	Pass	--	--
SW3	DINOCTYLPHTHALATE	117840	Water	5	U	UG/L	1.50E+02	* N	Pass	--	--
SW5	ENDOSULFAN I	115297	Water	0.025	U	UG/L	2.19E+01	* N	Pass	--	--
SW3	ENDOSULFAN II	115297	Water	0.05	U	UG/L	2.19E+01	* N	Pass	--	--
SW7	ENDRIN	72208	Water	0.05	U	UG/L	1.10E+00	* N	Pass	--	--
SW7	ENDRIN ALDEHYDE	72208	Water	0.05	U	UG/L	1.10E+00	* N	Pass	--	--
SW7	ENDRIN KETONE	72208	Water	0.05	U	UG/L	1.10E+00	* N	Pass	--	--
SW3	FLUORANTHENE	206440	Water	5	U	UG/L	1.46E+02	* N	Pass	--	--
SW3	FLUORENE	86737	Water	5	U	UG/L	2.43E+01	* N	Pass	--	--
SW6	GAMMA-BHC (LINDANE)	58899	Water	0.025	U	UG/L	5.15E-02	C	Pass	--	--
SW2	GAMMA-CHLORDANE	57749	Water	0.025	U	ug/l	1.91E-01	C	Pass	--	--
SW2	HEPTACHLOR	76448	Water	0.025	U	ug/l	1.49E-02	C	Fail	--	--
SW2	HEPTACHLOR EPOXIDE	1024573	Water	0.025	U	ug/l	7.36E-03	C	Fail	--	--
SW3	HEXACHLOROBENZENE	118741	Water	5	U	UG/L	4.19E-02	C	Fail	--	--
SW3	HEXACHLOROBUTADIENE	87683	Water	5	U	UG/L	8.59E-01	C	Fail	--	--
SW3	HEXACHLOROCYCLOPENTADIENE	77474	Water	5	U	UG/L	2.19E+01	* N	Pass	--	--
SW4	HEXACHLOROETHANE	67721	Water	5	U	UG/L	4.78E+00	C	Fail	--	--
SW3	INDENO[1,2,3-CD]PYRENE	193395	Water	5	U	UG/L	9.17E-02	C	Fail	--	--
SW4	ISOPHORONE	78591	Water	5	U	UG/L	7.05E+01	C	Pass	--	--
SW2	METHOXYCHLOR	72435	Water	0.25	U	ug/l	1.83E+01	* N	Pass	--	--
SW4	N-NITROSODINPROPYLAMINE	621647	Water	5	U	UG/L	9.57E-03	C	Fail	--	--
SW4	N-NITROSODIPHENYLAMINE	86306	Water	5	U	UG/L	1.37E+01	C	Pass	--	--
SW4	NAPHTHALENE	91203	Water	5	U	UG/L	6.51E-01	* N	Fail	--	--
SW4	NITROBENZENE	98953	Water	5	U	UG/L	3.53E-01	* N	Fail	--	--

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC		Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)	Pass Tier 1 Screen ?
Water: Surface water											
Organics:											
SW1	PENTACHLOROPHENOL	87865	Water	12.5	U	UG/L	5.58E-01	C	Fail	--	--
SW3	PHENANTHRENE	120127	Water	5	U	UG/L	1.83E+02	* N	Pass	--	--
SW3	PHENOL	108952	Water	5	U	UG/L	1.10E+03	* N	Pass	--	--
SW7	PYRENE	129000	Water	5	U	UG/L	1.83E+01	* N	Pass	--	--
SW5	TOXAPHENE	8001352	Water	2.5	U	UG/L	6.09E-02	C	Fail	--	--

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

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Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC	Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)		Pass Tier 1 Screen ?
Soil											
Surface:											
No RBCs Available											
S14	4-BROMOPHENYL PHENYL ETHER		Soil	0.27965	U	mg/kg	--	--			?
S14	4-CHLORO-3-METHYLPHENOL		Soil	0.27965	U	mg/kg	--	--			?
S14	4-CHLOROPHENYL PHENYL ETHER		Soil	0.27965	U	mg/kg	--	--			?
S14	BIS(2-CHLOROETHOXY)METHANE		Soil	0.27965	U	mg/kg	--	--			?
S21	PERCHLORATE		Soil	0.062		mg/kg	--	--			?
Inorganics:											
S25	ALUMINUM	7429905	Soil	64000		MG/KG	--	--	7.80E+03	* N	Fail
S25	ANTIMONY	7440360	Soil	12.5	L	MG/KG	--	--	3.10E+00	* N	Fail
S25	ARSENIC	7440382	Soil	18.9		MG/KG	--	--	4.30E-01	C	Fail
S25	BARIUM	7440393	Soil	47600		MG/KG	--	--	5.50E+02	* N	Fail
S14	BERYLLIUM	7440417	Soil	0.51	J	MG/KG	--	--	1.60E+01	* N	Pass
S21	CADMIUM	7440439	Soil	2.8		MG/KG	--	--	7.80E+00	* N	Pass
S25	CHROMIUM	18540299	Soil	187		MG/KG	--	--	2.30E+01	* N	Fail
S25	COBALT	7440484	Soil	30.6		MG/KG	--	--	1.56E+02	* N	Pass
S25	COPPER	7440508	Soil	200		MG/KG	--	--	3.10E+02	* N	Pass
S24	CYANIDE	57125	Soil	9.7		MG/KG	--	--	1.60E+02	* N	Pass
S14	LEAD		Soil	130	J	MG/KG	--	--			?
S25	MANGANESE	7439965	Soil	824		MG/KG	--	--	1.60E+02	* N	Fail
S21	MERCURY	7439976	Soil	1.7		MG/KG	--	--	1.00E-06	MDE	Fail
S25	NICKEL	7440020	Soil	147		MG/KG	--	--	1.60E+02	* N	Pass
S21	SELENIUM	7782492	Soil	6.7		MG/KG	--	--	3.90E+01	* N	Pass
S25	SILVER	7440224	Soil	0.7	U	MG/KG	--	--	3.90E+01	* N	Pass
S12	THALLIUM	7440280	Soil	1.61	U	MG/KG	--	--	5.50E-01	* N	Fail
S14	VANADIUM	7440622	Soil	31.7		MG/KG	--	--	7.80E+00	* N	Fail
S25	ZINC	7440666	Soil	94.7	J	MG/KG	--	--	2.30E+03	* N	Pass
Organics:											
S11	1,1,1-TRICHLOROETHANE	71556	Soil	0.015855	U	mg/kg	--	--	2.20E+03	* N	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC	Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)		Pass Tier 1 Screen ?
Soil											
Surface:											
Organics:											
S11	1,1,2,2-TETRACHLOROETHANE	79345	Soil	0.015855	U	mg/kg	--	--	3.20E+00	C	Pass
S11	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76131	Soil	0.015855	U	mg/kg	--	--	2.30E+05	* N	Pass
S11	1,1,2-TRICHLOROETHANE	79005	Soil	0.015855	U	mg/kg	--	--	1.10E+01	C	Pass
S14	1,1-BIPHENYL	92524	Soil	0.27965	U	mg/kg	--	--	3.90E+02	* N	Pass
S11	1,1-DICHLOROETHANE	75343	Soil	0.015855	U	mg/kg	--	--	7.80E+02	* N	Pass
S11	1,1-DICHLOROETHENE	75354	Soil	0.015855	U	mg/kg	--	--	3.90E+02	* N	Pass
S11	1,2,4-TRICHLOROBENZENE	120821	Soil	0.015855	U	mg/kg	--	--	7.80E+01	* N	Pass
S12	1,2-DIBROMO-3-CHLOROPROPANE	96128	Soil	0.01131	U	mg/kg	--	--	4.60E-01	C	Pass
S11	1,2-DIBROMOETHANE	106934	Soil	0.015855	U	mg/kg	--	--	7.50E-03	C	Fail
S11	1,2-DICHLOROBENZENE	95501	Soil	0.015855	U	mg/kg	--	--	7.04E+02	* N	Pass
S11	1,2-DICHLOROETHANE	107062	Soil	0.015855	U	mg/kg	--	--	7.00E+00	C	Pass
S11	1,2-DICHLOROPROPANE	78875	Soil	0.015855	U	mg/kg	--	--	9.40E+00	C	Pass
S11	1,3-DICHLOROBENZENE	541731	Soil	0.015855	U	mg/kg	--	--	2.35E+02	* N	Pass
S11	1,4-DICHLOROBENZENE	106467	Soil	0.015855	U	mg/kg	--	--	2.70E+01	C	Pass
S14	2,2'-OXYBIS(1-CHLOROPROPANE)	108601	Soil	0.27965	U	mg/kg	--	--	9.10E+00	C	Pass
S14	2,4,5-TRICHLOROPHENOL	95954	Soil	0.7035	U	mg/kg	--	--	7.80E+02	* N	Pass
S14	2,4,6-TRICHLOROPHENOL	88062	Soil	0.27965	U	mg/kg	--	--	5.80E+01	C	Pass
S14	2,4-DICHLOROPHENOL	120832	Soil	0.27965	U	mg/kg	--	--	2.30E+01	* N	Pass
S14	2,4-DIMETHYLPHENOL	105679	Soil	0.27965	U	mg/kg	--	--	1.60E+02	* N	Pass
S14	2,4-DINITROPHENOL	51285	Soil	0.7035	U	mg/kg	--	--	1.60E+01	* N	Pass
S14	2,4-DINITROTOLUENE	121142	Soil	0.27965	U	mg/kg	--	--	1.60E+01	* N	Pass
S14	2,6-DINITROTOLUENE	606202	Soil	0.27965	U	mg/kg	--	--	7.80E+00	* N	Pass
S11	2-BUTANONE	78933	Soil	0.015855	U	mg/kg	--	--	4.70E+03	* N	Pass
S14	2-CHLORONAPHTHALENE	91587	Soil	0.27965	U	mg/kg	--	--	6.30E+02	* N	Pass
S14	2-CHLOROPHENOL	95578	Soil	0.27965	U	mg/kg	--	--	3.90E+01	* N	Pass
S11	2-HEXANONE	591786	Soil	0.015855	U	mg/kg	--	--	3.10E+02	* N	Pass
S14	2-METHYLNAPHTHALENE	91576	Soil	0.27965	U	mg/kg	--	--	3.10E+01	* N	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ORIGINAL

ORIGINAL

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC	Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)		Pass Tier 1 Screen ?
Soil											
Surface:											
Organics:											
S14	2-METHYLPHENOL	95487	Soil	0.27965	U	mg/kg	--	--	3.90E+02	* N	Pass
S14	2-NITROANILINE	88744	Soil	0.7035	U	mg/kg	--	--	2.30E+01	* N	Pass
S14	2-NITROPHENOL	100027	Soil	0.27965	U	mg/kg	--	--	6.30E+01	* N	Pass
S14	3,3'-DICHLOROBENZIDINE	91941	Soil	0.27965	U	mg/kg	--	--	1.40E+00	C	Pass
S14	3-NITROANILINE	88744	Soil	0.7035	U	mg/kg	--	--	2.30E+01	* N	Pass
S14	4,4'-DDE	72559	Soil	0.019		mg/kg	--	--	1.90E+00	C	Pass
S14	4,4'-DDT	50293	Soil	0.005	J	mg/kg	--	--	1.90E+00	C	Pass
S14	4,6-DINITRO-2-METHYLPHENOL	534521	Soil	0.7035	U	mg/kg	--	--	7.80E-01	* N	Pass
S14	4-CHLOROANILINE	106478	Soil	0.27965	U	mg/kg	--	--	3.10E+01	* N	Pass
S11	4-METHYL-2-PENTANONE	108101	Soil	0.015855	U	mg/kg	--	--			?
S14	4-METHYLPHENOL	106445	Soil	0.27965	U	mg/kg	--	--	3.90E+01	* N	Pass
S14	4-NITROANILINE	88744	Soil	0.7035	U	mg/kg	--	--	2.30E+01	* N	Pass
S14	4-NITROPHENOL	100027	Soil	0.7035	U	mg/kg	--	--	6.30E+01	* N	Pass
S14	ACENAPHTHENE	83329	Soil	0.27965	U	mg/kg	--	--	4.70E+02	* N	Pass
S14	ACENAPHTHYLENE	83329	Soil	0.27965	U	mg/kg	--	--	4.70E+02	* N	Pass
S11	ACETONE	67641	Soil	0.015855	U	mg/kg	--	--	7.00E+03	* N	Pass
S14	ACETOPHENONE	98862	Soil	0.27965	U	mg/kg	--	--	7.80E+02	* N	Pass
S14	ALDRIN	309002	Soil	0.00141	U	mg/kg	--	--	3.80E-02	C	Pass
S14	ALPHA-BHC	319846	Soil	0.00141	U	mg/kg	--	--	1.00E-01	C	Pass
S14	ALPHA-CHLORDANE	57749	Soil	0.00141	U	mg/kg	--	--	1.80E+00	C	Pass
S14	ANTHRACENE	120127	Soil	0.27965	U	mg/kg	--	--	2.30E+03	* N	Pass
S14	AROCHLOR-1016	12674112	Soil	0.0274	U	mg/kg	--	--	5.50E-01	* N	Pass
S14	AROCHLOR-1221	11104282	Soil	0.0555	U	mg/kg	--	--	3.20E-01	C	Pass
S14	AROCHLOR-1232	11141165	Soil	0.0274	U	mg/kg	--	--	3.20E-01	C	Pass
S22	AROCHLOR-1242	53469219	Soil	0.04085	U	mg/kg	--	--	3.20E-01	C	Pass
S22	AROCHLOR-1248	12672296	Soil	0.04085	U	mg/kg	--	--	3.20E-01	C	Pass
S22	AROCHLOR-1254	11097691	Soil	0.04085	U	mg/kg	--	--	3.20E-01	C	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC	Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)		Pass Tier 1 Screen ?
Soil											
Surface:											
Organics:											
S22	AROCHLOR-1260	11096825	Soil	0.04085	U	mg/kg	--	--	3.20E-01	C	Pass
S14	ATRAZINE	1912249	Soil	0.27965	U	mg/kg	--	--	2.90E+00	C	Pass
S14	BENZALDEHYDE	100527	Soil	0.27965	U	mg/kg	--	--	7.80E+02	* N	Pass
S11	BENZENE	71432	Soil	0.015855	U	mg/kg	--	--	1.20E+01	C	Pass
S13	BENZO[A]ANTHRACENE	56553	Soil	0.36	J	mg/kg	--	--	8.80E-01	C	Pass
S13	BENZO[A]PYRENE	50328	Soil	0.35	J	mg/kg	--	--	8.80E-02	C	Fail
S14	BENZO[B]FLUORANTHENE	205992	Soil	0.27965	U	mg/kg	--	--	8.80E-01	C	Pass
S14	BENZO[G,H,I]PERYLENE	129000	Soil	0.27965	U	mg/kg	--	--	2.30E+02	* N	Pass
S13	BENZO[K]FLUORANTHENE	207089	Soil	0.28	J	mg/kg	--	--	8.80E+00	C	Pass
S14	BETA-BHC	319857	Soil	0.00141	U	mg/kg	--	--	3.60E-01	C	Pass
S14	BIS(2-CHLOROETHYL)ETHER	111444	Soil	0.27965	U	mg/kg	--	--	5.80E-01	C	Pass
S21	BIS(2-ETHYLHEXYL)PHTHALATE	117817	Soil	0.76		mg/kg	--	--	4.60E+01	C	Pass
S11	BROMODICHLOROMETHANE	75274	Soil	0.015855	U	mg/kg	--	--	1.00E+01	C	Pass
S11	BROMOFORM	75252	Soil	0.015855	U	mg/kg	--	--	8.10E+01	C	Pass
S11	BROMOMETHANE	74839	Soil	0.015855	U	mg/kg	--	--	1.10E+01	* N	Pass
S14	BUTYLBENZYLPHTHALATE	85687	Soil	0.27965	U	mg/kg	--	--	1.60E+03	* N	Pass
S14	CAPROLACTAM	105602	Soil	0.27965	U	mg/kg	--	--	3.90E+03	* N	Pass
S14	CARBAZOLE	86748	Soil	0.27965	U	mg/kg	--	--	3.20E+01	C	Pass
S11	CARBON DISULFIDE	75150	Soil	0.015855	U	mg/kg	--	--	7.80E+02	* N	Pass
S11	CARBON TETRACHLORIDE	56235	Soil	0.015855	U	mg/kg	--	--	4.90E+00	C	Pass
S11	CHLOROBENZENE	108907	Soil	0.015855	U	mg/kg	--	--	1.60E+02	* N	Pass
S11	CHLOROETHANE	75003	Soil	0.015855	U	mg/kg	--	--	2.20E+02	C	Pass
S11	CHLOROFORM	67663	Soil	0.015855	U	mg/kg	--	--	7.80E+01	* N	Pass
S11	CHLOROMETHANE	74873	Soil	0.015855	U	mg/kg	--	--			?
S13	CHRYSENE	218019	Soil	0.46	J	mg/kg	--	--	8.80E+01	C	Pass
S11	CIS-1,2-DICHLOROETHENE	156592	Soil	0.015855	U	mg/kg	--	--	7.80E+01	* N	Pass
S11	CIS-1,3-DICHLOROPROPENE	542756	Soil	0.015855	U	mg/kg	--	--	6.40E+00	C	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ORIGINAL

ORIGINAL

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC	Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)		Pass Tier 1 Screen ?
Soil											
Surface:											
Organics:											
S11	CYCLOHEXANE	110827	Soil	0.015855	U	mg/kg	--	--			?
S14	DELTA-BHC	58899	Soil	0.00141	U	mg/kg	--	--	4.90E-01	C	Pass
S14	DIBENZO[A,H]ANTHRACENE	53703	Soil	0.27965	U	mg/kg	--	--	8.80E-02	C	Fail
S14	DIBENZOFURAN	132649	Soil	0.27965	U	mg/kg	--	--	1.60E+01	* N	Pass
S11	DIBROMOCHLOROMETHANE	124481	Soil	0.015855	U	mg/kg	--	--	7.60E+00	C	Pass
S11	DICHLORODIFLUOROMETHANE	75718	Soil	0.015855	U	mg/kg	--	--	1.60E+03	* N	Pass
S14	DIELDRIN	60571	Soil	0.00274	U	mg/kg	--	--	4.00E-02	C	Pass
S14	DIETHYLPHTHALATE	84662	Soil	0.27965	U	mg/kg	--	--	6.30E+03	* N	Pass
S14	DIMETHYLPHTHALATE	131113	Soil	0.27965	U	mg/kg	--	--	7.80E+04	* N	Pass
S14	DINBUTYLPHTHALATE	84742	Soil	0.27965	U	mg/kg	--	--	7.80E+02	* N	Pass
S14	DINOCTYLPHTHALATE	117840	Soil	0.27965	U	mg/kg	--	--	3.10E+02	* N	Pass
S14	ENDOSULFAN I	115297	Soil	0.00141	U	mg/kg	--	--	4.70E+01	* N	Pass
S14	ENDOSULFAN II	115297	Soil	0.00274	U	mg/kg	--	--	4.70E+01	* N	Pass
S14	ENDRIN	72208	Soil	0.00274	U	mg/kg	--	--	2.40E+00	* N	Pass
S14	ENDRIN ALDEHYDE	72208	Soil	0.00274	U	mg/kg	--	--	2.40E+00	* N	Pass
S14	ENDRIN KETONE	72208	Soil	0.00274	U	mg/kg	--	--	2.40E+00	* N	Pass
S11	ETHYLBENZENE	100414	Soil	0.015855	U	mg/kg	--	--	7.80E+02	* N	Pass
S13	FLUORANTHENE	206440	Soil	0.28	J	mg/kg	--	--	3.10E+02	* N	Pass
S14	FLUORENE	86737	Soil	0.27965	U	mg/kg	--	--	3.10E+02	* N	Pass
S14	GAMMA-BHC (LINDANE)	58899	Soil	0.00141	U	mg/kg	--	--	4.90E-01	C	Pass
S14	GAMMA-CHLORDANE	57749	Soil	0.00141	U	mg/kg	--	--	1.80E+00	C	Pass
S14	HEPTACHLOR	76448	Soil	0.00141	U	mg/kg	--	--	1.40E-01	C	Pass
S14	HEPTACHLOR EPOXIDE	1024573	Soil	0.00141	U	mg/kg	--	--	7.00E-02	C	Pass
S14	HEXACHLOROBENZENE	118741	Soil	0.27965	U	mg/kg	--	--	4.00E-01	C	Pass
S14	HEXACHLOROBUTADIENE	87683	Soil	0.27965	U	mg/kg	--	--	8.20E+00	C	Pass
S14	HEXACHLOROCYCLOPENTADIENE	77474	Soil	0.27965	U	mg/kg	--	--	4.69E+01	* N	Pass
S14	HEXACHLOROETHANE	67721	Soil	0.27965	U	mg/kg	--	--	4.60E+01	C	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC	Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)		Pass Tier 1 Screen ?
Soil											
Surface:											
Organics:											
S14	INDENO[1,2,3-CD]PYRENE	193395	Soil	0.27965	U	mg/kg	--	--	8.80E-01	C	Pass
S14	ISOPHORONE	78591	Soil	0.27965	U	mg/kg	--	--	6.70E+02	C	Pass
S11	ISOPROPYLBENZENE	98828	Soil	0.015855	U	mg/kg	--	--	7.80E+02	* N	Pass
S14	METHOXYCHLOR	72435	Soil	0.0141	U	mg/kg	--	--	3.90E+01	* N	Pass
S11	METHYL ACETATE	79209	Soil	0.015855	U	mg/kg	--	--	7.80E+03	* N	Pass
S11	METHYL TERT BUTYL ETHER	1634044	Soil	0.015855	U	mg/kg	--	--	1.60E+00	C	Pass
S11	METHYLCYCLOHEXANE	108872	Soil	0.015855	U	mg/kg	--	--			?
S16	METHYLENE CHLORIDE	75092	Soil	0.019	B	mg/kg	--	--	8.50E+01	C	Pass
S14	N-NITROSODINPROPYLAMINE	621647	Soil	0.27965	U	mg/kg	--	--	9.10E-02	C	Fail
S14	N-NITROSODIPHENYLAMINE	86306	Soil	0.27965	U	mg/kg	--	--	1.30E+02	C	Pass
S14	NAPHTHALENE	91203	Soil	0.27965	U	mg/kg	--	--	1.60E+02	* N	Pass
S14	NITROBENZENE	98953	Soil	0.27965	U	mg/kg	--	--	3.90E+00	* N	Pass
S14	PENTACHLOROPHENOL	87865	Soil	0.7035	U	mg/kg	--	--	5.30E+00	C	Pass
S23	PHENANTHRENE	120127	Soil	0.24625	U	mg/kg	--	--	2.30E+03	* N	Pass
S14	PHENOL	108952	Soil	0.27965	U	mg/kg	--	--	2.30E+03	* N	Pass
S13	PYRENE	129000	Soil	0.75	J	mg/kg	--	--	2.30E+02	* N	Pass
S11	STYRENE	100425	Soil	0.015855	U	mg/kg	--	--	1.60E+03	* N	Pass
S11	TETRACHLOROETHENE	127184	Soil	0.015855	U	mg/kg	--	--	1.20E+00	C	Pass
S11	TOLUENE	108883	Soil	0.015855	U	mg/kg	--	--	1.60E+03	* N	Pass
S14	TOXAPHENE	8001352	Soil	0.141	U	mg/kg	--	--	5.80E-01	C	Pass
S11	TRANS-1,2-DICHLOROETHENE	156605	Soil	0.015855	U	mg/kg	--	--	1.60E+02	* N	Pass
S11	TRANS-1,3-DICHLOROPROPENE	542756	Soil	0.015855	U	mg/kg	--	--	6.40E+00	C	Pass
S11	TRICHLOROETHENE	79016	Soil	0.015855	U	mg/kg	--	--	1.60E+00	C	Pass
S11	TRICHLOROFLUOROMETHANE	75694	Soil	0.015855	U	mg/kg	--	--	2.30E+03	* N	Pass
S11	VINYL CHLORIDE	75014	Soil	0.015855	U	mg/kg	--	--	9.00E-02	C	Pass
S11	XYLENES	1330207	Soil	0.015855	U	mg/kg	--	--	1.60E+03	* N	Pass
Subsurface:											

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ORIGINAL

ORIGINAL

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC	Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)		Pass Tier 1 Screen ?
Soil											
Subsurface:											
No RBCs Available											
SS24	4-BROMOPHENYL PHENYL ETHER		Soil	0.1968	U	mg/kg	--	--			?
SS24	4-CHLORO-3-METHYLPHENOL		Soil	0.1968	U	mg/kg	--	--			?
SS24	4-CHLOROPHENYL PHENYL ETHER		Soil	0.1968	U	mg/kg	--	--			?
SS24	BIS(2-CHLOROETHOXY)METHANE		Soil	0.1968	U	mg/kg	--	--			?
SS22	PERCHLORATE		Soil	1.79	L	mg/kg	--	--			?
Inorganics:											
SS21	ALUMINUM	7429905	Soil	12400		MG/KG	--	--	7.80E+03	* N	Fail
SS23	ANTIMONY	7440360	Soil	3.9	B	MG/KG	--	--	3.10E+00	* N	Fail
SS23	ARSENIC	7440382	Soil	11.3		MG/KG	--	--	4.30E-01	C	Fail
SS21	BARIUM	7440393	Soil	5990		MG/KG	--	--	5.50E+02	* N	Fail
SS11	BERYLLIUM	7440417	Soil	0.51	J	MG/KG	--	--	1.60E+01	* N	Pass
SS23	CADMIUM	7440439	Soil	0.27	J	MG/KG	--	--	7.80E+00	* N	Pass
SS23	CHROMIUM	18540299	Soil	77.6		MG/KG	--	--	2.30E+01	* N	Fail
SS11	COBALT	7440484	Soil	4.8	J	MG/KG	--	--	1.56E+02	* N	Pass
SS21	COPPER	7440508	Soil	31.4		MG/KG	--	--	3.10E+02	* N	Pass
SS24	CYANIDE	57125	Soil	1.455	U	MG/KG	--	--	1.60E+02	* N	Pass
SS14	LEAD		Soil	13.7	J	MG/KG	--	--			?
SS21	MANGANESE	7439965	Soil	108		MG/KG	--	--	1.60E+02	* N	Pass
SS21	MERCURY	7439976	Soil	0.2	B	MG/KG	--	--	1.00E-06	MDE	Fail
SS21	NICKEL	7440020	Soil	27		MG/KG	--	--	1.60E+02	* N	Pass
SS22	SELENIUM	7782492	Soil	2.15	U	MG/KG	--	--	3.90E+01	* N	Pass
SS22	SILVER	7440224	Soil	0.645	U	MG/KG	--	--	3.90E+01	* N	Pass
SS22	THALLIUM	7440280	Soil	1.535	U	MG/KG	--	--	5.50E-01	* N	Fail
SS23	VANADIUM	7440622	Soil	64.9		MG/KG	--	--	7.80E+00	* N	Fail
SS13	ZINC	7440666	Soil	23.7	J	MG/KG	--	--	2.30E+03	* N	Pass
Organics:											
SS13	1,1,1-TRICHLOROETHANE	71556	Soil	0.01163	U	mg/kg	--	--	2.20E+03	* N	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC	Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)		Pass Tier 1 Screen ?
Soil											
Subsurface:											
Organics:											
SS13	1,1,2,2-TETRACHLOROETHANE	79345	Soil	0.01163	U	mg/kg	--	--	3.20E+00	C	Pass
SS13	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76131	Soil	0.01163	U	mg/kg	--	--	2.30E+05	* N	Pass
SS13	1,1,2-TRICHLOROETHANE	79005	Soil	0.01163	U	mg/kg	--	--	1.10E+01	C	Pass
SS24	1,1-BIPHENYL	92524	Soil	0.1968	U	mg/kg	--	--	3.90E+02	* N	Pass
SS13	1,1-DICHLOROETHANE	75343	Soil	0.01163	U	mg/kg	--	--	7.80E+02	* N	Pass
SS13	1,1-DICHLOROETHENE	75354	Soil	0.01163	U	mg/kg	--	--	3.90E+02	* N	Pass
SS13	1,2,4-TRICHLOROBENZENE	120821	Soil	0.01163	U	mg/kg	--	--	7.80E+01	* N	Pass
SS24	1,2-DIBROMO-3-CHLOROPROPANE	96128	Soil	0.00735	U	mg/kg	--	--	4.60E-01	C	Pass
SS13	1,2-DIBROMOETHANE	106934	Soil	0.01163	U	mg/kg	--	--	7.50E-03	C	Fail
SS13	1,2-DICHLOROBENZENE	95501	Soil	0.01163	U	mg/kg	--	--	7.04E+02	* N	Pass
SS13	1,2-DICHLOROETHANE	107062	Soil	0.01163	U	mg/kg	--	--	7.00E+00	C	Pass
SS13	1,2-DICHLOROPROPANE	78875	Soil	0.01163	U	mg/kg	--	--	9.40E+00	C	Pass
SS13	1,3-DICHLOROBENZENE	541731	Soil	0.01163	U	mg/kg	--	--	2.35E+02	* N	Pass
SS13	1,4-DICHLOROBENZENE	106467	Soil	0.01163	U	mg/kg	--	--	2.70E+01	C	Pass
SS24	2,2'-OXYBIS(1-CHLOROPROPANE)	108601	Soil	0.1968	U	mg/kg	--	--	9.10E+00	C	Pass
SS24	2,4,5-TRICHLOROPHENOL	95954	Soil	0.495	U	mg/kg	--	--	7.80E+02	* N	Pass
SS24	2,4,6-TRICHLOROPHENOL	88062	Soil	0.1968	U	mg/kg	--	--	5.80E+01	C	Pass
SS24	2,4-DICHLOROPHENOL	120832	Soil	0.1968	U	mg/kg	--	--	2.30E+01	* N	Pass
SS24	2,4-DIMETHYLPHENOL	105679	Soil	0.1968	U	mg/kg	--	--	1.60E+02	* N	Pass
SS24	2,4-DINITROPHENOL	51285	Soil	0.495	U	mg/kg	--	--	1.60E+01	* N	Pass
SS24	2,4-DINITROTOLUENE	121142	Soil	0.1968	U	mg/kg	--	--	1.60E+01	* N	Pass
SS24	2,6-DINITROTOLUENE	606202	Soil	0.1968	U	mg/kg	--	--	7.80E+00	* N	Pass
SS13	2-BUTANONE	78933	Soil	0.01163	U	mg/kg	--	--	4.70E+03	* N	Pass
SS24	2-CHLORONAPHTHALENE	91587	Soil	0.1968	U	mg/kg	--	--	6.30E+02	* N	Pass
SS24	2-CHLOROPHENOL	95578	Soil	0.1968	U	mg/kg	--	--	3.90E+01	* N	Pass
SS13	2-HEXANONE	591786	Soil	0.01163	U	mg/kg	--	--	3.10E+02	* N	Pass
SS24	2-METHYLNAPHTHALENE	91576	Soil	0.1968	U	mg/kg	--	--	3.10E+01	* N	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ORIGINAL

ORIGINAL

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC	Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)		Pass Tier 1 Screen
Soil											
Subsurface:											
Organics:											
SS24	2-METHYLPHENOL	95487	Soil	0.1968	U	mg/kg	--	--	3.90E+02	* N	Pass
SS24	2-NITROANILINE	88744	Soil	0.495	U	mg/kg	--	--	2.30E+01	* N	Pass
SS24	2-NITROPHENOL	100027	Soil	0.1968	U	mg/kg	--	--	6.30E+01	* N	Pass
SS24	3,3'-DICHLOROBENZIDINE	91941	Soil	0.1968	U	mg/kg	--	--	1.40E+00	C	Pass
SS24	3-NITROANILINE	88744	Soil	0.495	U	mg/kg	--	--	2.30E+01	* N	Pass
SS22	4,4'-DDE	72559	Soil	0.00201	U	mg/kg	--	--	1.90E+00	C	Pass
SS21	4,4'-DDT	50293	Soil	0.00201	U	mg/kg	--	--	1.90E+00	C	Pass
SS24	4,6-DINITRO-2-METHYLPHENOL	534521	Soil	0.495	U	mg/kg	--	--	7.80E-01	* N	Pass
SS24	4-CHLOROANILINE	106478	Soil	0.1968	U	mg/kg	--	--	3.10E+01	* N	Pass
SS13	4-METHYL-2-PENTANONE	108101	Soil	0.01163	U	mg/kg	--	--			?
SS24	4-METHYLPHENOL	106445	Soil	0.1968	U	mg/kg	--	--	3.90E+01	* N	Pass
SS24	4-NITROANILINE	88744	Soil	0.495	U	mg/kg	--	--	2.30E+01	* N	Pass
SS24	4-NITROPHENOL	100027	Soil	0.495	U	mg/kg	--	--	6.30E+01	* N	Pass
SS24	ACENAPHTHENE	83329	Soil	0.1968	U	mg/kg	--	--	4.70E+02	* N	Pass
SS24	ACENAPHTHYLENE	83329	Soil	0.1968	U	mg/kg	--	--	4.70E+02	* N	Pass
SS13	ACETONE	67641	Soil	0.01163	U	mg/kg	--	--	7.00E+03	* N	Pass
SS24	ACETOPHENONE	98862	Soil	0.1968	U	mg/kg	--	--	7.80E+02	* N	Pass
SS21	ALDRIN	309002	Soil	0.001035	U	mg/kg	--	--	3.80E-02	C	Pass
SS21	ALPHA-BHC	319846	Soil	0.001035	U	mg/kg	--	--	1.00E-01	C	Pass
SS22	ALPHA-CHLORDANE	57749	Soil	0.001035	U	mg/kg	--	--	1.80E+00	C	Pass
SS24	ANTHRACENE	120127	Soil	0.1968	U	mg/kg	--	--	2.30E+03	* N	Pass
SS22	AROCHLOR-1016	12674112	Soil	0.0201	U	mg/kg	--	--	5.50E-01	* N	Pass
SS22	AROCHLOR-1221	11104282	Soil	0.04085	U	mg/kg	--	--	3.20E-01	C	Pass
SS21	AROCHLOR-1232	11141165	Soil	0.0201	U	mg/kg	--	--	3.20E-01	C	Pass
SS21	AROCHLOR-1242	53469219	Soil	0.04085	U	mg/kg	--	--	3.20E-01	C	Pass
SS22	AROCHLOR-1248	12672296	Soil	0.04085	U	mg/kg	--	--	3.20E-01	C	Pass
SS22	AROCHLOR-1254	11097691	Soil	0.04085	U	mg/kg	--	--	3.20E-01	C	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC	Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)		Pass Tier 1 Screen ?
Soil											
Subsurface:											
Organics:											
SS22	AROCHLOR-1260	11096825	Soil	0.04085	U	mg/kg	--	--	3.20E-01	C	Pass
SS24	ATRAZINE	1912249	Soil	0.1968	U	mg/kg	--	--	2.90E+00	C	Pass
SS24	BENZALDEHYDE	100527	Soil	0.1968	U	mg/kg	--	--	7.80E+02	* N	Pass
SS13	BENZENE	71432	Soil	0.01163	U	mg/kg	--	--	1.20E+01	C	Pass
SS24	BENZO[A]ANTHRACENE	56553	Soil	0.1968	U	mg/kg	--	--	8.80E-01	C	Pass
SS24	BENZO[A]PYRENE	50328	Soil	0.1968	U	mg/kg	--	--	8.80E-02	C	Fail
SS24	BENZO[B]FLUORANTHENE	205992	Soil	0.1968	U	mg/kg	--	--	8.80E-01	C	Pass
SS24	BENZO[G,H,I]PERYLENE	129000	Soil	0.1968	U	mg/kg	--	--	2.30E+02	* N	Pass
SS24	BENZO[K]FLUORANTHENE	207089	Soil	0.1968	U	mg/kg	--	--	8.80E+00	C	Pass
SS22	BETA-BHC	319857	Soil	0.001035	U	mg/kg	--	--	3.60E-01	C	Pass
SS24	BIS(2-CHLOROETHYL)ETHER	111444	Soil	0.1968	U	mg/kg	--	--	5.80E-01	C	Pass
SS24	BIS(2-ETHYLHEXYL)PHTHALATE	117817	Soil	0.1968	U	mg/kg	--	--	4.60E+01	C	Pass
SS13	BROMODICHLOROMETHANE	75274	Soil	0.01163	U	mg/kg	--	--	1.00E+01	C	Pass
SS13	BROMOFORM	75252	Soil	0.01163	U	mg/kg	--	--	8.10E+01	C	Pass
SS13	BROMOMETHANE	74839	Soil	0.01163	U	mg/kg	--	--	1.10E+01	* N	Pass
SS24	BUTYLBENZYLPHTHALATE	85687	Soil	0.1968	U	mg/kg	--	--	1.60E+03	* N	Pass
SS24	CAPROLACTAM	105602	Soil	0.1968	U	mg/kg	--	--	3.90E+03	* N	Pass
SS24	CARBAZOLE	86748	Soil	0.1968	U	mg/kg	--	--	3.20E+01	C	Pass
SS13	CARBON DISULFIDE	75150	Soil	0.01163	U	mg/kg	--	--	7.80E+02	* N	Pass
SS13	CARBON TETRACHLORIDE	56235	Soil	0.01163	U	mg/kg	--	--	4.90E+00	C	Pass
SS13	CHLOROBENZENE	108907	Soil	0.01163	U	mg/kg	--	--	1.60E+02	* N	Pass
SS13	CHLOROETHANE	75003	Soil	0.01163	U	mg/kg	--	--	2.20E+02	C	Pass
SS13	CHLOROFORM	67663	Soil	0.01163	U	mg/kg	--	--	7.80E+01	* N	Pass
SS13	CHLOROMETHANE	74873	Soil	0.01163	U	mg/kg	--	--			?
SS24	CHRYSENE	218019	Soil	0.1968	U	mg/kg	--	--	8.80E+01	C	Pass
SS13	CIS-1,2-DICHLOROETHENE	156592	Soil	0.01163	U	mg/kg	--	--	7.80E+01	* N	Pass
SS13	CIS-1,3-DICHLOROPROPENE	542756	Soil	0.01163	U	mg/kg	--	--	6.40E+00	C	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ORIGINAL

ORIGINAL

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC	Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)		Pass Tier 1 Screen ?
Soil											
Subsurface:											
Organics:											
SS13	CYCLOHEXANE	110827	Soil	0.01163	U	mg/kg	--	--			?
SS22	DELTA-BHC	58899	Soil	0.001035	U	mg/kg	--	--	4.90E-01	C	Pass
SS24	DIBENZO[A,H]ANTHRACENE	53703	Soil	0.1968	U	mg/kg	--	--	8.80E-02	C	Fail
SS24	DIBENZOFURAN	132649	Soil	0.1968	U	mg/kg	--	--	1.60E+01	* N	Pass
SS13	DIBROMOCHLOROMETHANE	124481	Soil	0.01163	U	mg/kg	--	--	7.60E+00	C	Pass
SS13	DICHLORODIFLUOROMETHANE	75718	Soil	0.01163	U	mg/kg	--	--	1.60E+03	* N	Pass
SS22	DIELDRIN	60571	Soil	0.00201	U	mg/kg	--	--	4.00E-02	C	Pass
SS24	DIETHYLPHTHALATE	84662	Soil	0.1968	U	mg/kg	--	--	6.30E+03	* N	Pass
SS24	DIMETHYLPHTHALATE	131113	Soil	0.1968	U	mg/kg	--	--	7.80E+04	* N	Pass
SS24	DINBUTYLPHTHALATE	84742	Soil	0.1968	U	mg/kg	--	--	7.80E+02	* N	Pass
SS24	DINOCTYLPHTHALATE	117840	Soil	0.1968	U	mg/kg	--	--	3.10E+02	* N	Pass
SS22	ENDOSULFAN I	115297	Soil	0.001035	U	mg/kg	--	--	4.70E+01	* N	Pass
SS21	ENDOSULFAN II	115297	Soil	0.00201	U	mg/kg	--	--	4.70E+01	* N	Pass
SS21	ENDRIN	72208	Soil	0.00201	U	mg/kg	--	--	2.40E+00	* N	Pass
SS22	ENDRIN ALDEHYDE	72208	Soil	0.00201	U	mg/kg	--	--	2.40E+00	* N	Pass
SS21	ENDRIN KETONE	72208	Soil	0.00201	U	mg/kg	--	--	2.40E+00	* N	Pass
SS13	ETHYLBENZENE	100414	Soil	0.01163	U	mg/kg	--	--	7.80E+02	* N	Pass
SS24	FLUORANTHENE	206440	Soil	0.1968	U	mg/kg	--	--	3.10E+02	* N	Pass
SS24	FLUORENE	86737	Soil	0.1968	U	mg/kg	--	--	3.10E+02	* N	Pass
SS22	GAMMA-BHC (LINDANE)	58899	Soil	0.001035	U	mg/kg	--	--	4.90E-01	C	Pass
SS21	GAMMA-CHLORDANE	57749	Soil	0.001035	U	mg/kg	--	--	1.80E+00	C	Pass
SS22	HEPTACHLOR	76448	Soil	0.001035	U	mg/kg	--	--	1.40E-01	C	Pass
SS22	HEPTACHLOR EPOXIDE	1024573	Soil	0.001035	U	mg/kg	--	--	7.00E-02	C	Pass
SS24	HEXACHLOROBENZENE	118741	Soil	0.1968	U	mg/kg	--	--	4.00E-01	C	Pass
SS24	HEXACHLOROBUTADIENE	87683	Soil	0.1968	U	mg/kg	--	--	8.20E+00	C	Pass
SS24	HEXACHLOROCYCLOPENTADIENE	77474	Soil	0.1968	U	mg/kg	--	--	4.69E+01	* N	Pass
SS24	HEXACHLOROETHANE	67721	Soil	0.1968	U	mg/kg	--	--	4.60E+01	C	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC	Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)		Pass Tier 1 Screen ?
Soil											
Subsurface:											
Organics:											
SS24	INDENO[1,2,3-CD]PYRENE	193395	Soil	0.1968	U	mg/kg	--	--	8.80E-01	C	Pass
SS24	ISOPHORONE	78591	Soil	0.1968	U	mg/kg	--	--	6.70E+02	C	Pass
SS13	ISOPROPYLBENZENE	98828	Soil	0.01163	U	mg/kg	--	--	7.80E+02	* N	Pass
SS21	METHOXYCHLOR	72435	Soil	0.01035	U	mg/kg	--	--	3.90E+01	* N	Pass
SS13	METHYL ACETATE	79209	Soil	0.01163	U	mg/kg	--	--	7.80E+03	* N	Pass
SS13	METHYL TERT BUTYL ETHER	1634044	Soil	0.01163	U	mg/kg	--	--	1.60E+00	C	Pass
SS13	METHYLCYCLOHEXANE	108872	Soil	0.01163	U	mg/kg	--	--			?
SS13	METHYLENE CHLORIDE	75092	Soil	0.016	B	mg/kg	--	--	8.50E+01	C	Pass
SS24	N-NITROSODINPROPYLAMINE	621647	Soil	0.1968	U	mg/kg	--	--	9.10E-02	C	Fail
SS24	N-NITROSODIPHENYLAMINE	86306	Soil	0.1968	U	mg/kg	--	--	1.30E+02	C	Pass
SS24	NAPHTHALENE	91203	Soil	0.1968	U	mg/kg	--	--	1.60E+02	* N	Pass
SS24	NITROBENZENE	98953	Soil	0.1968	U	mg/kg	--	--	3.90E+00	* N	Pass
SS24	PENTACHLOROPHENOL	87865	Soil	0.495	U	mg/kg	--	--	5.30E+00	C	Pass
SS24	PHENANTHRENE	120127	Soil	0.1968	U	mg/kg	--	--	2.30E+03	* N	Pass
SS24	PHENOL	108952	Soil	0.1968	U	mg/kg	--	--	2.30E+03	* N	Pass
SS24	PYRENE	129000	Soil	0.1968	U	mg/kg	--	--	2.30E+02	* N	Pass
SS13	STYRENE	100425	Soil	0.01163	U	mg/kg	--	--	1.60E+03	* N	Pass
SS13	TETRACHLOROETHENE	127184	Soil	0.01163	U	mg/kg	--	--	1.20E+00	C	Pass
SS13	TOLUENE	108883	Soil	0.01163	U	mg/kg	--	--	1.60E+03	* N	Pass
SS21	TOXAPHENE	8001352	Soil	0.1035	U	mg/kg	--	--	5.80E-01	C	Pass
SS13	TRANS-1,2-DICHLOROETHENE	156605	Soil	0.01163	U	mg/kg	--	--	1.60E+02	* N	Pass
SS13	TRANS-1,3-DICHLOROPROPENE	542756	Soil	0.01163	U	mg/kg	--	--	6.40E+00	C	Pass
SS13	TRICHLOROETHENE	79016	Soil	0.01163	U	mg/kg	--	--	1.60E+00	C	Pass
SS13	TRICHLOROFLUOROMETHANE	75694	Soil	0.01163	U	mg/kg	--	--	2.30E+03	* N	Pass
SS13	VINYL CHLORIDE	75014	Soil	0.01163	U	mg/kg	--	--	9.00E-02	C	Pass
SS13	XYLENES	1330207	Soil	0.01163	U	mg/kg	--	--	1.60E+03	* N	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ORIGINAL

ORIGINAL

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC	Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)		Pass Tier 1 Screen ?
Sediment											
Surface:											
No RBCs Available											
SED8	4-BROMOPHENYL PHENYL ETHER		Sediment	0.28165	U	mg/kg	--	--			?
SED8	4-CHLORO-3-METHYLPHENOL		Sediment	0.28165	U	mg/kg	--	--			?
SED8	4-CHLOROPHENYL PHENYL ETHER		Sediment	0.28165	U	mg/kg	--	--			?
SED8	BIS(2-CHLOROETHOXY)METHANE		Sediment	0.28165	U	mg/kg	--	--			?
SED3	PERCHLORATE		Sediment	0.0025	U	mg/kg	--	--			?
Inorganics:											
SED 5	ALUMINUM	7429905	Sediment	6420		MG/KG	--	--	7.80E+03	* N	Pass
SED 5	ANTIMONY	7440360	Sediment	103	L	MG/KG	--	--	3.10E+00	* N	Fail
SED 5	ARSENIC	7440382	Sediment	6.3	L	MG/KG	--	--	4.30E-01	C	Fail
SED8	BARIUM	7440393	Sediment	1610	J	MG/KG	--	--	5.50E+02	* N	Fail
SED 5	BERYLLIUM	7440417	Sediment	0.45	J	MG/KG	--	--	1.60E+01	* N	Pass
SED 5	CADMIUM	7440439	Sediment	1		MG/KG	--	--	7.80E+00	* N	Pass
SED8	CHROMIUM	18540299	Sediment	25.5		MG/KG	--	--	2.30E+01	* N	Fail
SED 5	COBALT	7440484	Sediment	17		MG/KG	--	--	1.56E+02	* N	Pass
SED 5	COPPER	7440508	Sediment	32.3		MG/KG	--	--	3.10E+02	* N	Pass
SED3	CYANIDE	57125	Sediment	1.805	U	MG/KG	--	--	1.60E+02	* N	Pass
SED 5	LEAD		Sediment	64.7		MG/KG	--	--			?
SED 5	MANGANESE	7439965	Sediment	2150		MG/KG	--	--	1.60E+02	* N	Fail
SED 5	MERCURY	7439976	Sediment	0.22		MG/KG	--	--	1.00E-06	MDE	Fail
SED 5	NICKEL	7440020	Sediment	12.6		MG/KG	--	--	1.60E+02	* N	Pass
SED8	SELENIUM	7782492	Sediment	2.97	UL	MG/KG	--	--	3.90E+01	* N	Pass
SED8	SILVER	7440224	Sediment	0.85	U	MG/KG	--	--	3.90E+01	* N	Pass
SED 5	THALLIUM	7440280	Sediment	4.2		MG/KG	--	--	5.50E-01	* N	Fail
SED6	VANADIUM	7440622	Sediment	27.3		MG/KG	--	--	7.80E+00	* N	Fail
SED 5	ZINC	7440666	Sediment	153		MG/KG	--	--	2.30E+03	* N	Pass
Organics:											
SED6	1,1,1-TRICHLOROETHANE	71556	Sediment	0.018		mg/kg	--	--	2.20E+03	* N	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC	Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)		Pass Tier 1 Screen ?
Sediment											
Surface:											
Organics:											
SED 5	1,1,2,2-TETRACHLOROETHANE	79345	Sediment	0.010325	U	mg/kg	--	--	3.20E+00	C	Pass
SED 5	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76131	Sediment	0.010325	U	mg/kg	--	--	2.30E+05	* N	Pass
SED 5	1,1,2-TRICHLOROETHANE	79005	Sediment	0.010325	U	mg/kg	--	--	1.10E+01	C	Pass
SED8	1,1-BIPHENYL	92524	Sediment	0.28165	U	mg/kg	--	--	3.90E+02	* N	Pass
SED 5	1,1-DICHLOROETHANE	75343	Sediment	0.010325	U	mg/kg	--	--	7.80E+02	* N	Pass
SED 5	1,1-DICHLOROETHENE	75354	Sediment	0.010325	U	mg/kg	--	--	3.90E+02	* N	Pass
SED 5	1,2,4-TRICHLOROBENZENE	120821	Sediment	0.010325	U	mg/kg	--	--	7.80E+01	* N	Pass
SED 5	1,2-DIBROMOETHANE	106934	Sediment	0.010325	U	mg/kg	--	--	7.50E-03	C	Fail
SED 5	1,2-DICHLOROBENZENE	95501	Sediment	0.010325	U	mg/kg	--	--	7.04E+02	* N	Pass
SED 5	1,2-DICHLOROETHANE	107062	Sediment	0.010325	U	mg/kg	--	--	7.00E+00	C	Pass
SED 5	1,2-DICHLOROPROPANE	78875	Sediment	0.010325	U	mg/kg	--	--	9.40E+00	C	Pass
SED 5	1,3-DICHLOROBENZENE	541731	Sediment	0.010325	U	mg/kg	--	--	2.35E+02	* N	Pass
SED 5	1,4-DICHLOROBENZENE	106467	Sediment	0.010325	U	mg/kg	--	--	2.70E+01	C	Pass
SED8	2,2'-OXYBIS(1-CHLOROPROPANE)	108601	Sediment	0.28165	U	mg/kg	--	--	9.10E+00	C	Pass
SED8	2,4,5-TRICHLOROPHENOL	95954	Sediment	0.7085	U	mg/kg	--	--	7.80E+02	* N	Pass
SED8	2,4,6-TRICHLOROPHENOL	88062	Sediment	0.28165	U	mg/kg	--	--	5.80E+01	C	Pass
SED8	2,4-DICHLOROPHENOL	120832	Sediment	0.28165	U	mg/kg	--	--	2.30E+01	* N	Pass
SED8	2,4-DIMETHYLPHENOL	105679	Sediment	0.28165	U	mg/kg	--	--	1.60E+02	* N	Pass
SED8	2,4-DINITROPHENOL	51285	Sediment	0.7085	U	mg/kg	--	--	1.60E+01	* N	Pass
SED8	2,4-DINITROTOLUENE	121142	Sediment	0.28165	U	mg/kg	--	--	1.60E+01	* N	Pass
SED8	2,6-DINITROTOLUENE	606202	Sediment	0.28165	U	mg/kg	--	--	7.80E+00	* N	Pass
SED 5	2-BUTANONE	78933	Sediment	0.010325	U	mg/kg	--	--	4.70E+03	* N	Pass
SED8	2-CHLORONAPHTHALENE	91587	Sediment	0.28165	U	mg/kg	--	--	6.30E+02	* N	Pass
SED8	2-CHLOROPHENOL	95578	Sediment	0.28165	U	mg/kg	--	--	3.90E+01	* N	Pass
SED 5	2-HEXANONE	591786	Sediment	0.010325	U	mg/kg	--	--	3.10E+02	* N	Pass
SED8	2-METHYLNAPHTHALENE	91576	Sediment	0.28165	U	mg/kg	--	--	3.10E+01	* N	Pass
SED8	2-METHYLPHENOL	95487	Sediment	0.28165	U	mg/kg	--	--	3.90E+02	* N	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ORIGINAL

ORIGINAL

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC	Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)		Pass Tier 1 Screen ?
Sediment											
Surface:											
Organics:											
SED8	2-NITROANILINE	88744	Sediment	0.7085	U	mg/kg	--	--	2.30E+01	* N	Pass
SED8	2-NITROPHENOL	100027	Sediment	0.28165	U	mg/kg	--	--	6.30E+01	* N	Pass
SED8	3,3'-DICHLOROBENZIDINE	91941	Sediment	0.28165	U	mg/kg	--	--	1.40E+00	C	Pass
SED8	3-NITROANILINE	88744	Sediment	0.7085	U	mg/kg	--	--	2.30E+01	* N	Pass
SED8	4,4'-DDE	72559	Sediment	0.00278	U	mg/kg	--	--	1.90E+00	C	Pass
SED8	4,4'-DDT	50293	Sediment	0.00278	U	mg/kg	--	--	1.90E+00	C	Pass
SED8	4,6-DINITRO-2-METHYLPHENOL	534521	Sediment	0.7085	U	mg/kg	--	--	7.80E-01	* N	Pass
SED8	4-CHLOROANILINE	106478	Sediment	0.28165	U	mg/kg	--	--	3.10E+01	* N	Pass
SED 5	4-METHYL-2-PENTANONE	108101	Sediment	0.010325	U	mg/kg	--	--			?
SED7	4-METHYLPHENOL	106445	Sediment	0.86		mg/kg	--	--	3.90E+01	* N	Pass
SED8	4-NITROANILINE	88744	Sediment	0.7085	U	mg/kg	--	--	2.30E+01	* N	Pass
SED8	4-NITROPHENOL	100027	Sediment	0.7085	U	mg/kg	--	--	6.30E+01	* N	Pass
SED8	ACENAPHTHENE	83329	Sediment	0.28165	U	mg/kg	--	--	4.70E+02	* N	Pass
SED8	ACENAPHTHYLENE	83329	Sediment	0.28165	U	mg/kg	--	--	4.70E+02	* N	Pass
SED 5	ACETONE	67641	Sediment	0.010325	U	mg/kg	--	--	7.00E+03	* N	Pass
SED8	ACETOPHENONE	98862	Sediment	0.28165	U	mg/kg	--	--	7.80E+02	* N	Pass
SED8	ALDRIN	309002	Sediment	0.001435	U	mg/kg	--	--	3.80E-02	C	Pass
SED8	ALPHA-BHC	319846	Sediment	0.001435	U	mg/kg	--	--	1.00E-01	C	Pass
SED8	ALPHA-CHLORDANE	57749	Sediment	0.001435	U	mg/kg	--	--	1.80E+00	C	Pass
SED8	ANTHRACENE	120127	Sediment	0.28165	U	mg/kg	--	--	2.30E+03	* N	Pass
SED8	AROCHLOR-1016	12674112	Sediment	0.0278	U	mg/kg	--	--	5.50E-01	* N	Pass
SED 5	AROCHLOR-1221	11104282	Sediment	0.054	U	mg/kg	--	--	3.20E-01	C	Pass
SED8	AROCHLOR-1232	11141165	Sediment	0.0278	U	mg/kg	--	--	3.20E-01	C	Pass
SED4	AROCHLOR-1242	53469219	Sediment	0.04085	U	mg/kg	--	--	3.20E-01	C	Pass
SED4	AROCHLOR-1248	12672296	Sediment	0.04085	U	mg/kg	--	--	3.20E-01	C	Pass
SED4	AROCHLOR-1254	11097691	Sediment	0.04085	U	mg/kg	--	--	3.20E-01	C	Pass
SED4	AROCHLOR-1260	11096825	Sediment	0.04085	U	mg/kg	--	--	3.20E-01	C	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC	Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)		Pass Tier 1 Screen ?
Sediment											
Surface:											
Organics:											
SED8	ATRAZINE	1912249	Sediment	0.28165	U	mg/kg	--	--	2.90E+00	C	Pass
SED 5	BENZALDEHYDE	100527	Sediment	0.26345	U	mg/kg	--	--	7.80E+02	* N	Pass
SED 5	BENZENE	71432	Sediment	0.010325	U	mg/kg	--	--	1.20E+01	C	Pass
SED8	BENZO[A]ANTHRACENE	56553	Sediment	0.28165	U	mg/kg	--	--	8.80E-01	C	Pass
SED8	BENZO[A]PYRENE	50328	Sediment	0.28165	U	mg/kg	--	--	8.80E-02	C	Fail
SED8	BENZO[B]FLUORANTHENE	205992	Sediment	0.28165	U	mg/kg	--	--	8.80E-01	C	Pass
SED8	BENZO[G,H,I]PERYLENE	129000	Sediment	0.28165	U	mg/kg	--	--	2.30E+02	* N	Pass
SED8	BENZO[K]FLUORANTHENE	207089	Sediment	0.28165	U	mg/kg	--	--	8.80E+00	C	Pass
SED8	BETA-BHC	319857	Sediment	0.001435	U	mg/kg	--	--	3.60E-01	C	Pass
SED8	BIS(2-CHLOROETHYL)ETHER	111444	Sediment	0.28165	U	mg/kg	--	--	5.80E-01	C	Pass
SED8	BIS(2-ETHYLHEXYL)PHTHALATE	117817	Sediment	0.67		mg/kg	--	--	4.60E+01	C	Pass
SED 5	BROMODICHLOROMETHANE	75274	Sediment	0.010325	U	mg/kg	--	--	1.00E+01	C	Pass
SED 5	BROMOFORM	75252	Sediment	0.010325	U	mg/kg	--	--	8.10E+01	C	Pass
SED 5	BROMOMETHANE	74839	Sediment	0.010325	U	mg/kg	--	--	1.10E+01	* N	Pass
SED8	BUTYLBENZYLPHTHALATE	85687	Sediment	0.28165	U	mg/kg	--	--	1.60E+03	* N	Pass
SED8	CAPROLACTAM	105602	Sediment	0.28165	U	mg/kg	--	--	3.90E+03	* N	Pass
SED8	CARBAZOLE	86748	Sediment	0.28165	U	mg/kg	--	--	3.20E+01	C	Pass
SED 5	CARBON DISULFIDE	75150	Sediment	0.010325	U	mg/kg	--	--	7.80E+02	* N	Pass
SED 5	CARBON TETRACHLORIDE	56235	Sediment	0.010325	U	mg/kg	--	--	4.90E+00	C	Pass
SED 5	CHLOROBENZENE	108907	Sediment	0.010325	U	mg/kg	--	--	1.60E+02	* N	Pass
SED 5	CHLOROETHANE	75003	Sediment	0.010325	U	mg/kg	--	--	2.20E+02	C	Pass
SED 5	CHLOROFORM	67663	Sediment	0.010325	U	mg/kg	--	--	7.80E+01	* N	Pass
SED 5	CHLOROMETHANE	74873	Sediment	0.010325	U	mg/kg	--	--			?
SED8	CHRYSENE	218019	Sediment	0.28165	U	mg/kg	--	--	8.80E+01	C	Pass
SED 5	CIS-1,2-DICHLOROETHENE	156592	Sediment	0.010325	U	mg/kg	--	--	7.80E+01	* N	Pass
SED 5	CIS-1,3-DICHLOROPROPENE	542756	Sediment	0.010325	U	mg/kg	--	--	6.40E+00	C	Pass
SED 5	CYCLOHEXANE	110827	Sediment	0.010325	U	mg/kg	--	--			?

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ORIGINAL

ORIGINAL

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC	Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)		Pass Tier 1 Screen ?
Sediment											
Surface:											
Organics:											
SED8	DELTA-BHC	58899	Sediment	0.001435	U	mg/kg	--	--	4.90E-01	C	Pass
SED8	DIBENZO[A,H]ANTHRACENE	53703	Sediment	0.28165	U	mg/kg	--	--	8.80E-02	C	Fail
SED8	DIBENZOFURAN	132649	Sediment	0.28165	U	mg/kg	--	--	1.60E+01	* N	Pass
SED 5	DIBROMOCHLOROMETHANE	124481	Sediment	0.010325	U	mg/kg	--	--	7.60E+00	C	Pass
SED 5	DICHLORODIFLUOROMETHANE	75718	Sediment	0.010325	U	mg/kg	--	--	1.60E+03	* N	Pass
SED8	DIELDRIN	60571	Sediment	0.00278	U	mg/kg	--	--	4.00E-02	C	Pass
SED8	DIETHYLPHTHALATE	84662	Sediment	0.28165	U	mg/kg	--	--	6.30E+03	* N	Pass
SED8	DIMETHYLPHTHALATE	131113	Sediment	0.28165	U	mg/kg	--	--	7.80E+04	* N	Pass
SED8	DINBUTYLPHTHALATE	84742	Sediment	0.28165	U	mg/kg	--	--	7.80E+02	* N	Pass
SED8	DINOCTYLPHTHALATE	117840	Sediment	0.28165	U	mg/kg	--	--	3.10E+02	* N	Pass
SED8	ENDOSULFAN I	115297	Sediment	0.001435	U	mg/kg	--	--	4.70E+01	* N	Pass
SED8	ENDOSULFAN II	115297	Sediment	0.00278	U	mg/kg	--	--	4.70E+01	* N	Pass
SED8	ENDRIN	72208	Sediment	0.00278	U	mg/kg	--	--	2.40E+00	* N	Pass
SED8	ENDRIN ALDEHYDE	72208	Sediment	0.00278	U	mg/kg	--	--	2.40E+00	* N	Pass
SED8	ENDRIN KETONE	72208	Sediment	0.00278	U	mg/kg	--	--	2.40E+00	* N	Pass
SED 5	ETHYLBENZENE	100414	Sediment	0.010325	U	mg/kg	--	--	7.80E+02	* N	Pass
SED8	FLUORANTHENE	206440	Sediment	0.28165	U	mg/kg	--	--	3.10E+02	* N	Pass
SED8	FLUORENE	86737	Sediment	0.28165	U	mg/kg	--	--	3.10E+02	* N	Pass
SED8	GAMMA-BHC (LINDANE)	58899	Sediment	0.001435	U	mg/kg	--	--	4.90E-01	C	Pass
SED8	GAMMA-CHLORDANE	57749	Sediment	0.001435	U	mg/kg	--	--	1.80E+00	C	Pass
SED8	HEPTACHLOR	76448	Sediment	0.001435	U	mg/kg	--	--	1.40E-01	C	Pass
SED8	HEPTACHLOR EPOXIDE	1024573	Sediment	0.001435	U	mg/kg	--	--	7.00E-02	C	Pass
SED8	HEXACHLOROBENZENE	118741	Sediment	0.28165	U	mg/kg	--	--	4.00E-01	C	Pass
SED8	HEXACHLOROBUTADIENE	87683	Sediment	0.28165	U	mg/kg	--	--	8.20E+00	C	Pass
SED8	HEXACHLOROCYCLOPENTADIENE	77474	Sediment	0.28165	U	mg/kg	--	--	4.69E+01	* N	Pass
SED8	HEXACHLOROETHANE	67721	Sediment	0.28165	U	mg/kg	--	--	4.60E+01	C	Pass
SED8	INDENO[1,2,3-CD]PYRENE	193395	Sediment	0.28165	U	mg/kg	--	--	8.80E-01	C	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	Adjusted Tap Water RBC	Pass Tier 1 Screen ?	Adjusted Soil RBC (Residential)		Pass Tier 1 Screen ?
Sediment											
Surface:											
Organics:											
SED8	ISOPHORONE	78591	Sediment	0.28165	U	mg/kg	--	--	6.70E+02	C	Pass
SED 5	ISOPROPYLBENZENE	98828	Sediment	0.010325	U	mg/kg	--	--	7.80E+02	* N	Pass
SED8	METHOXYCHLOR	72435	Sediment	0.01435	U	mg/kg	--	--	3.90E+01	* N	Pass
SED 5	METHYL ACETATE	79209	Sediment	0.010325	U	mg/kg	--	--	7.80E+03	* N	Pass
SED 5	METHYL TERT BUTYL ETHER	1634044	Sediment	0.010325	U	mg/kg	--	--	1.60E+00	C	Pass
SED 5	METHYLCYCLOHEXANE	108872	Sediment	0.010325	U	mg/kg	--	--			?
SED 5	METHYLENE CHLORIDE	75092	Sediment	0.014	B	mg/kg	--	--	8.50E+01	C	Pass
SED8	N-NITROSODINPROPYLAMINE	621647	Sediment	0.28165	U	mg/kg	--	--	9.10E-02	C	Fail
SED8	N-NITROSODIPHENYLAMINE	86306	Sediment	0.28165	U	mg/kg	--	--	1.30E+02	C	Pass
SED8	NAPHTHALENE	91203	Sediment	0.28165	U	mg/kg	--	--	1.60E+02	* N	Pass
SED8	NITROBENZENE	98953	Sediment	0.28165	U	mg/kg	--	--	3.90E+00	* N	Pass
SED8	PENTACHLOROPHENOL	87865	Sediment	0.7085	U	mg/kg	--	--	5.30E+00	C	Pass
SED8	PHENANTHRENE	120127	Sediment	0.28165	U	mg/kg	--	--	2.30E+03	* N	Pass
SED8	PHENOL	108952	Sediment	0.28165	U	mg/kg	--	--	2.30E+03	* N	Pass
SED8	PYRENE	129000	Sediment	0.28165	U	mg/kg	--	--	2.30E+02	* N	Pass
SED 5	STYRENE	100425	Sediment	0.010325	U	mg/kg	--	--	1.60E+03	* N	Pass
SED6	TETRACHLOROETHENE	127184	Sediment	0.015		mg/kg	--	--	1.20E+00	C	Pass
SED 5	TOLUENE	108883	Sediment	0.010325	U	mg/kg	--	--	1.60E+03	* N	Pass
SED8	TOXAPHENE	8001352	Sediment	0.1435	U	mg/kg	--	--	5.80E-01	C	Pass
SED 5	TRANS-1,2-DICHLOROETHENE	156605	Sediment	0.010325	U	mg/kg	--	--	1.60E+02	* N	Pass
SED 5	TRANS-1,3-DICHLOROPROPENE	542756	Sediment	0.010325	U	mg/kg	--	--	6.40E+00	C	Pass
SED 5	TRICHLOROETHENE	79016	Sediment	0.010325	U	mg/kg	--	--	1.60E+00	C	Pass
SED 5	TRICHLOROFLUOROMETHANE	75694	Sediment	0.010325	U	mg/kg	--	--	2.30E+03	* N	Pass
SED 5	VINYL CHLORIDE	75014	Sediment	0.010325	U	mg/kg	--	--	9.00E-02	C	Pass
SED 5	XYLENES	1330207	Sediment	0.010325	U	mg/kg	--	--	1.60E+03	* N	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ORIGINAL

Attachment A. Identification of Chemicals of Concern (Non-Residential Use): New Jersey Fireworks, Cecil County, Maryland; PCA Code: 65651

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier 1 Screen ?
Water: Groundwater										
No Standards Available										
MW1A	4-BROMOPHENYL PHENYL ETHER		Water	5	U	UG/L		?	--	--
MW1A	4-CHLORO-3-METHYLPHENOL		Water	5	U	UG/L		?	--	--
MW2	4-CHLOROPHENYL PHENYL ETHER		Water	5	U	UG/L		?	--	--
MW2	BIS(2-CHLOROETHOXY)METHANE		Water	5	U	UG/L		?	--	--
GW2	PERCHLORATE		Water	438	L	ug/L		?	--	--
Inorganics:										
MW1	ALUMINUM	7429905	Water	88300		UG/L	5.00E+01	Fail	--	--
PW5DM	ANTIMONY	7440360	Water	30	U	UG/L	6.00E+00	Fail	--	--
MW1	ARSENIC	7440382	Water	77.5		UG/L	5.00E+01	Fail	--	--
GW2	BARIUM	7440393	Water	43700		UG/L	2.00E+03	Fail	--	--
MW1	BERYLLIUM	7440417	Water	15.5		UG/L	4.00E+00	Fail	--	--
MW1	CADMIUM	7440439	Water	5.2		UG/L	5.00E+00	Fail	--	--
MW4	CHROMIUM	18540299	Water	335		UG/L	1.00E+02	Fail	--	--
MW1	COBALT	7440484	Water	331		UG/L	7.30E+01	Fail	--	--
MW1	COPPER	7440508	Water	322		UG/L	1.30E+03	Pass	--	--
MW1A	CYANIDE	57125	Water	5	U	UG/L	2.00E+02	Pass	--	--
MW1	LEAD		Water	151		UG/L	1.50E+01	Fail	--	--
MW1	MANGANESE	7439965	Water	1940	J	UG/L	5.00E+01	Fail	--	--
MW1	MERCURY	7439976	Water	0.36	B	UG/L	2.00E+00	Pass	--	--
MW3A	NICKEL	7440020	Water	187		UG/L	7.30E+01	Fail	--	--
MW1	SELENIUM	7782492	Water	57.2		UG/L	5.00E+01	Fail	--	--
PW5DM	SILVER	7440224	Water	5	U	UG/L	1.80E+01	Pass	--	--
MW1	THALLIUM	7440280	Water	12.7	J	UG/L	2.00E+00	Fail	--	--
MW1	VANADIUM	7440622	Water	637		UG/L	5.00E+01	Fail	--	--
MW1	ZINC	7440666	Water	620		UG/L	1.10E+03	Pass	--	--
Organics:										
MW2	1,1-BIPHENYL		Water	5	U	UG/L		?	--	--
MW2	2,2'-OXYBIS(1-CHLOROPROPANE)	108601	Water	5	U	UG/L	1.00E+01	Pass	--	--

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

Attachment A (cont.). Identification of Chemicals of Concern (Non-Residential Use): New Jersey Fireworks, Cecil County, Maryland; PCA Code: 65651

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier 1 Screen ?
Water: Groundwater										
Organics:										
MW1	2,4,5-TRICHLOROPHENOL	95954	Water	12.5	U	UG/L	3.70E+02	Pass	--	--
MW2	2,4,6-TRICHLOROPHENOL	88062	Water	5	U	UG/L	1.00E+01	Pass	--	--
MW2	2,4-DICHLOROPHENOL	120832	Water	5	U	UG/L	1.10E+01	Pass	--	--
MW2	2,4-DIMETHYLPHENOL	105679	Water	5	U	UG/L	7.30E+01	Pass	--	--
MW1	2,4-DINITROPHENOL	51285	Water	12.5	U	UG/L	1.00E+01	Fail	--	--
MW2	2,4-DINITROTOLUENE	121142	Water	5	U	UG/L	5.00E+01	Pass	--	--
MW2	2,6-DINITROTOLUENE	606202	Water	5	U	UG/L	5.00E+01	Pass	--	--
MW2	2-CHLORONAPHTHALENE	91587	Water	5	U	UG/L	4.90E+01	Pass	--	--
MW2	2-CHLOROPHENOL	95578	Water	5	U	UG/L	2.00E+01	Pass	--	--
MW2	2-METHYLNAPHTHALENE	91576	Water	5	U	UG/L	2.00E+01	Pass	--	--
MW1A	2-METHYLPHENOL	95487	Water	5	U	UG/L	1.80E+02	Pass	--	--
MW3A	2-NITROANILINE	88744	Water	12.5	U	UG/L	1.00E+01	Fail	--	--
MW1A	2-NITROPHENOL	100027	Water	5	U	UG/L	2.90E+01	Pass	--	--
MW1A	3,3'-DICHLOROBENZIDINE	91941	Water	5	U	UG/L	1.00E+01	Pass	--	--
MW4	3-NITROANILINE	88744	Water	12.5	U	UG/L	1.00E+01	Fail	--	--
GW2	4,4'-DDE	72559	Water	0.05	U	UG/L	2.00E-01	Pass	--	--
GW2	4,4'-DDT	50293	Water	0.05	U	UG/L	2.00E-01	Pass	--	--
MW4	4,6-DINITRO-2-METHYLPHENOL	534521	Water	12.5	U	UG/L	5.00E+01	Pass	--	--
MW1A	4-CHLOROANILINE	106478	Water	5	U	UG/L	2.00E+01	Pass	--	--
MW2	4-METHYLPHENOL	106445	Water	5	U	UG/L	1.80E+01	Pass	--	--
MW2	4-NITROANILINE	88744	Water	12.5	U	UG/L	1.00E+01	Fail	--	--
MW2	4-NITROPHENOL	100027	Water	12.5	U	UG/L	5.00E+01	Pass	--	--
MW2	ACENAPHTHENE	83329	Water	5	U	UG/L	3.70E+01	Pass	--	--
MW2	ACENAPHTHYLENE	83329	Water	5	U	UG/L	3.70E+01	Pass	--	--
MW2	ACETOPHENONE		Water	5	U	UG/L		?	--	--
MW2	ALDRIN	309002	Water	0.025	U	UG//L	8.00E-02	Pass	--	--
MW2	ALPHA-BHC	319846	Water	0.025	U	UG//L	8.00E-02	Pass	--	--
MW2	ALPHA-CHLORDANE	57749	Water	0.025	U	UG//L	2.00E+00	Pass	--	--

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ORIGINAL

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier 1 Screen ?
Water: Groundwater										
Organics:										
MW2	ANTHRACENE	120127	Water	5	U	UG/L	1.80E+02	Pass	--	--
PW5	AROCHLOR-1016	12674112	Water	0.5	U	UG/L	5.00E-01	Pass	--	--
MW2	AROCHLOR-1221	11104282	Water	1	U	UG//L	5.00E-01	Fail	--	--
MW3A	AROCHLOR-1232	11141165	Water	0.5	U	UG/L	5.00E-01	Pass	--	--
MW3A	AROCHLOR-1242	53469219	Water	0.5	U	UG/L	5.00E-01	Pass	--	--
MW4	AROCHLOR-1248	12672296	Water	0.5	U	UG/L	5.00E-01	Pass	--	--
GW3	AROCHLOR-1254	11097691	Water	0.5	U	UG/L	5.00E-01	Pass	--	--
MW3	AROCHLOR-1260	11096825	Water	0.5	U	UG/L	5.00E-01	Pass	--	--
MW2	ATRAZINE	1912249	Water	5	U	UG/L	3.00E+00	Fail	--	--
MW1A	BENZALDEHYDE		Water	5	U	UG/L		?	--	--
MW2	BENZO[A]ANTHRACENE	56553	Water	5	U	UG/L	1.00E+01	Pass	--	--
MW2	BENZO[A]PYRENE	50328	Water	5	U	UG/L	1.00E+01	Pass	--	--
MW2	BENZO[B]FLUORANTHENE	205992	Water	5	U	UG/L	1.00E+01	Pass	--	--
MW2	BENZO[G,H,I]PERYLENE	129000	Water	5	U	UG/L	1.80E+01	Pass	--	--
MW2	BENZO[K]FLUORANTHENE	207089	Water	5	U	UG/L	1.00E+01	Pass	--	--
MW2	BETA-BHC	319857	Water	0.025	U	UG//L	8.00E-02	Pass	--	--
MW2	BIS(2-CHLOROETHYL)ETHER	111444	Water	5	U	UG/L	1.00E+01	Pass	--	--
GW2	BIS(2-ETHYLHEXYL)PHTHALATE	117817	Water	5	U	ug/l	2.00E+01	Pass	--	--
MW1A	BUTYLBENZYLPHTHALATE		Water	5	U	UG/L		?	--	--
MW1A	CAPROLACTAM		Water	5	U	UG/L		?	--	--
MW1A	CARBAZOLE	86748	Water	5	U	UG/L	1.00E+01	Pass	--	--
MW1A	CHRYSENE	218019	Water	5	U	UG/L	1.00E+01	Pass	--	--
MW3	DELTA-BHC	58899	Water	0.025	U	UG/L	2.00E-01	Pass	--	--
MW1A	DIBENZO[A,H]ANTHRACENE	53703	Water	5	U	UG/L	1.00E+01	Pass	--	--
MW1A	DIBENZOFURAN	132649	Water	5	U	UG/L	1.00E+01	Pass	--	--
GW2	DIELDRIN	60571	Water	0.05	U	UG/L	8.00E-02	Pass	--	--
MW1A	DIETHYLPHTHALATE	84662	Water	5	U	UG/L	2.90E+03	Pass	--	--
MW1A	DIMETHYLPHTHALATE	131113	Water	5	U	UG/L	3.70E+04	Pass	--	--

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

Attachment A (cont.). Identification of Chemicals of Concern (Non-Residential Use): New Jersey Fireworks, Cecil County, Maryland; PCA Code: 65651

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier 1 Screen ?
Water: Groundwater										
Organics:										
MW1A	DINBUTYLPHTHALATE	84742	Water	5	U	UG/L	3.70E+02	Pass	--	--
MW1A	DINOCTYLPHTHALATE	117840	Water	5	U	UG/L	7.30E+01	Pass	--	--
MW2	ENDOSULFAN I	115297	Water	0.025	U	UG//L	2.20E+01	Pass	--	--
MW3A	ENDOSULFAN II	115297	Water	0.05	U	UG/L	2.20E+01	Pass	--	--
PW5	ENDRIN	72208	Water	0.05	U	UG/L	2.00E+00	Pass	--	--
PW5	ENDRIN ALDEHYDE	72208	Water	0.05	U	UG/L	2.00E+00	Pass	--	--
GW2	ENDRIN KETONE	72208	Water	0.05	U	UG/L	2.00E+00	Pass	--	--
MW1A	FLUORANTHENE	206440	Water	5	U	UG/L	1.50E+02	Pass	--	--
MW1A	FLUORENE	86737	Water	5	U	UG/L	2.40E+01	Pass	--	--
MW2	GAMMA-BHC (LINDANE)	58899	Water	0.025	U	UG//L	2.00E-01	Pass	--	--
MW2	GAMMA-CHLORDANE	57749	Water	0.025	U	UG//L	2.00E+00	Pass	--	--
PW5	HEPTACHLOR	76448	Water	0.025	U	UG/L	4.00E-01	Pass	--	--
MW1A	HEPTACHLOR EPOXIDE	1024573	Water	0.025	U	UG/L	2.00E-01	Pass	--	--
MW1A	HEXACHLOROBENZENE		Water	5	U	UG/L		?	--	--
MW1A	HEXACHLOROBUTADIENE	87683	Water	5	U	UG/L	1.00E+01	Pass	--	--
MW1A	HEXACHLOROCYCLOPENTADIENE	77474	Water	5	U	UG/L	5.00E+01	Pass	--	--
MW1A	HEXACHLOROETHANE	67721	Water	5	U	UG/L	1.00E+01	Pass	--	--
MW1A	INDENO[1,2,3-CD]PYRENE	193395	Water	5	U	UG/L	1.00E+01	Pass	--	--
MW1A	ISOPHORONE	78591	Water	5	U	UG/L	7.00E+01	Pass	--	--
PW5	METHOXYCHLOR	72435	Water	0.25	U	UG/L	4.00E+01	Pass	--	--
PW5	N-NITROSODINPROPYLAMINE	621647	Water	5	U	UG/L	1.00E+01	Pass	--	--
PW5	N-NITROSODIPHENYLAMINE	86306	Water	5	U	UG/L	5.00E+01	Pass	--	--
PW5	NAPHTHALENE	91203	Water	5	U	UG/L	1.00E+01	Pass	--	--
PW5	NITROBENZENE	98953	Water	5	U	UG/L	2.00E+01	Pass	--	--
PW5	PENTACHLOROPHENOL	87865	Water	12.5	U	UG/L	5.00E+01	Pass	--	--
PW5	PHENANTHRENE	120127	Water	5	U	UG/L	1.80E+02	Pass	--	--
MW3	PHENOL	108952	Water	6	J	UG/L	2.20E+03	Pass	--	--
PW5	PYRENE	129000	Water	5	U	UG/L	1.80E+01	Pass	--	--

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ORIGINAL

ORIGINAL

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier 1 Screen ?
Water: Groundwater										
Organics:										
PW5	TOXAPHENE	8001352	Water	2.5	U	UG/L	3.00E+00	Pass	--	--
Water: Surface water										
No Standards Available										
SW1	4-BROMOPHENYL PHENYL ETHER		Water	5	U	UG/L		?	--	--
SW1	4-CHLORO-3-METHYLPHENOL		Water	5	U	UG/L		?	--	--
SW1	4-CHLOROPHENYL PHENYL ETHER		Water	5	U	UG/L		?	--	--
SW3	BIS(2-CHLOROETHOXY)METHANE		Water	5	U	UG/L		?	--	--
SW6	PERCHLORATE		Water	8.51		ug/L		?	--	--
Inorganics:										
SW8	ALUMINUM	7429905	Water	893		ug/L	5.00E+01	Fail	--	--
SW1	ANTIMONY	7440360	Water	30	U	ug/L	6.00E+00	Fail	--	--
SW1DM	ARSENIC	7440382	Water	5	U	UG/L	5.00E+01	Pass	--	--
SW6	BARIUM	7440393	Water	2590	J	ug/L	2.00E+03	Fail	--	--
SW9	BERYLLIUM	7440417	Water	2.5	UL	ug/L	4.00E+00	Pass	--	--
SW3	CADMIUM	7440439	Water	2.5	UL	ug/L	5.00E+00	Pass	--	--
SW8	CHROMIUM	18540299	Water	3.5	J	ug/L	1.00E+02	Pass	--	--
SW5DM	COBALT	7440484	Water	25.6	J	UG/L	7.30E+01	Pass	--	--
SW9DM	COPPER	7440508	Water	12.5	U	UG/L	1.30E+03	Pass	--	--
SW3	CYANIDE	57125	Water	5	U	ug/L	2.00E+02	Pass	--	--
SW8	LEAD		Water	6.3	J	ug/L	1.50E+01	Pass	--	--
SW5	MANGANESE	7439965	Water	6150		ug/L	5.00E+01	Fail	--	--
SW1	MERCURY	7439976	Water	0.1	U	ug/L	2.00E+00	Pass	--	--
SW4DM	NICKEL	7440020	Water	8.4	J	ug/L	7.30E+01	Pass	--	--
SW1DM	SELENIUM	7782492	Water	17.5	UL	UG/L	5.00E+01	Pass	--	--
SW6DM	SILVER	7440224	Water	10		UG/L	1.80E+01	Pass	--	--
SW1DM	THALLIUM	7440280	Water	12.5	U	UG/L	2.00E+00	Fail	--	--
SW1DM	VANADIUM	7440622	Water	25	U	UG/L	5.00E+01	Pass	--	--

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

Attachment A (cont.). Identification of Chemicals of Concern (Non-Residential Use): New Jersey Fireworks, Cecil County, Maryland; PCA Code: 65651

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier 1 Screen ?
Water: Surface water										
Inorganics:										
SW8	ZINC	7440666	Water	25.5	J	ug/L	1.10E+03	Pass	--	--
Organics:										
SW1	1,1-BIPHENYL		Water	5	U	UG/L		?	--	--
SW2	2,2'-OXYBIS(1-CHLOROPROPANE)	108601	Water	5	U	UG/L	1.00E+01	Pass	--	--
SW2	2,4,5-TRICHLOROPHENOL	95954	Water	12.5	U	UG/L	3.70E+02	Pass	--	--
SW2	2,4,6-TRICHLOROPHENOL	88062	Water	5	U	UG/L	1.00E+01	Pass	--	--
SW2	2,4-DICHLOROPHENOL	120832	Water	5	U	UG/L	1.10E+01	Pass	--	--
SW2	2,4-DIMETHYLPHENOL	105679	Water	5	U	UG/L	7.30E+01	Pass	--	--
SW2	2,4-DINITROPHENOL	51285	Water	12.5	U	UG/L	1.00E+01	Fail	--	--
SW2	2,4-DINITROTOLUENE	121142	Water	5	U	UG/L	5.00E+01	Pass	--	--
SW2	2,6-DINITROTOLUENE	606202	Water	5	U	UG/L	5.00E+01	Pass	--	--
SW1	2-CHLORONAPHTHALENE	91587	Water	5	U	UG/L	4.90E+01	Pass	--	--
SW1	2-CHLOROPHENOL	95578	Water	5	U	UG/L	2.00E+01	Pass	--	--
SW1	2-METHYLNAPHTHALENE	91576	Water	5	U	UG/L	2.00E+01	Pass	--	--
SW1	2-METHYLPHENOL	95487	Water	5	U	UG/L	1.80E+02	Pass	--	--
SW1	2-NITROANILINE	88744	Water	12.5	U	UG/L	1.00E+01	Fail	--	--
SW1	2-NITROPHENOL	100027	Water	5	U	UG/L	5.00E+01	Pass	--	--
SW1	3,3'-DICHLOROBENZIDINE	91941	Water	5	U	UG/L	1.00E+01	Pass	--	--
SW1	3-NITROANILINE	88744	Water	12.5	U	UG/L	1.00E+01	Fail	--	--
SW2	4,4'-DDE	72559	Water	0.05	U	ug/l	2.00E-01	Pass	--	--
SW3	4,4'-DDT	50293	Water	0.05	U	UG/L	2.00E-01	Pass	--	--
SW1	4,6-DINITRO-2-METHYLPHENOL	534521	Water	12.5	U	UG/L	5.00E+01	Pass	--	--
SW1	4-CHLOROANILINE	106478	Water	5	U	UG/L	2.00E+01	Pass	--	--
SW1	4-METHYLPHENOL	106445	Water	5	U	UG/L	1.80E+01	Pass	--	--
SW2	4-NITROANILINE	88744	Water	12.5	U	UG/L	1.00E+01	Fail	--	--
SW2	4-NITROPHENOL	100027	Water	12.5	U	UG/L	2.90E+01	Pass	--	--
SW1	ACENAPHTHENE	83329	Water	5	U	UG/L	3.70E+01	Pass	--	--
SW1	ACENAPHTHYLENE	83329	Water	5	U	UG/L	3.70E+01	Pass	--	--

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ORIGINAL

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier 1 Screen ?
Water: Surface water										
Organics:										
SW1	ACETOPHENONE		Water	5	U	UG/L		?	--	--
SW1	ALDRIN	309002	Water	0.025	U	UG/L	8.00E-02	Pass	--	--
SW1	ALPHA-BHC	319846	Water	0.025	U	UG/L	8.00E-02	Pass	--	--
SW3	ALPHA-CHLORDANE	57749	Water	0.025	U	UG/L	2.00E+00	Pass	--	--
SW3	ANTHRACENE	120127	Water	5	U	UG/L	1.80E+02	Pass	--	--
SW3	AROCHLOR-1016	12674112	Water	0.5	U	UG/L	5.00E-01	Pass	--	--
SW2	AROCHLOR-1221	11104282	Water	1	U	ug/l	5.00E-01	Fail	--	--
SW2	AROCHLOR-1232	11141165	Water	0.5	U	ug/l	5.00E-01	Pass	--	--
SW2	AROCHLOR-1242	53469219	Water	0.5	U	ug/l	5.00E-01	Pass	--	--
SW2	AROCHLOR-1248	12672296	Water	0.5	U	ug/l	5.00E-01	Pass	--	--
SW1	AROCHLOR-1254	11097691	Water	0.5	U	UG/L	5.00E-01	Pass	--	--
SW1	AROCHLOR-1260	11096825	Water	0.5	U	UG/L	5.00E-01	Pass	--	--
SW1	ATRAZINE	1912249	Water	5	U	UG/L	3.00E+00	Fail	--	--
SW1	BENZALDEHYDE		Water	5	U	UG/L		?	--	--
SW1	BENZO[A]ANTHRACENE	56553	Water	5	U	UG/L	1.00E+01	Pass	--	--
SW1	BENZO[A]PYRENE	50328	Water	5	U	UG/L	1.00E+01	Pass	--	--
SW1	BENZO[B]FLUORANTHENE	205992	Water	5	U	UG/L	1.00E+01	Pass	--	--
SW1	BENZO[G,H,I]PERYLENE	129000	Water	5	U	UG/L	1.80E+01	Pass	--	--
SW3	BENZO[K]FLUORANTHENE	207089	Water	5	U	UG/L	1.00E+01	Pass	--	--
SW3	BETA-BHC	319857	Water	0.025	U	UG/L	8.00E-02	Pass	--	--
SW1	BIS(2-CHLOROETHYL)ETHER	111444	Water	5	U	UG/L	1.00E+01	Pass	--	--
SW1	BIS(2-ETHYLHEXYL)PHTHALATE	117817	Water	5	U	UG/L	2.00E+01	Pass	--	--
SW3	BUTYLBENZYLPHTHALATE		Water	5	U	UG/L		?	--	--
SW3	CAPROLACTAM		Water	5	U	UG/L		?	--	--
SW3	CARBAZOLE	86748	Water	5	U	UG/L	1.00E+01	Pass	--	--
SW3	CHRYSENE	218019	Water	5	U	UG/L	1.00E+01	Pass	--	--
SW3	DELTA-BHC	58899	Water	0.025	U	UG/L	2.00E-01	Pass	--	--
SW3	DIBENZO[A,H]ANTHRACENE	53703	Water	5	U	UG/L	1.00E+01	Pass	--	--

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ORIGINAL

Attachment A (cont.). Identification of Chemicals of Concern (Non-Residential Use): New Jersey Fireworks, Cecil County, Maryland; PCA Code: 65651

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier 1 Screen ?
Water: Surface water										
Organics:										
SW1	DIBENZOFURAN	132649	Water	5	U	UG/L	1.00E+01	Pass	--	--
SW3	DIELDRIN	60571	Water	0.05	U	UG/L	8.00E-02	Pass	--	--
SW3	DIETHYLPHTHALATE	84662	Water	5	U	UG/L	2.90E+03	Pass	--	--
SW1	DIMETHYLPHTHALATE	131113	Water	5	U	UG/L	3.70E+04	Pass	--	--
SW1	DINBUTYLPHTHALATE	84742	Water	5	U	UG/L	3.70E+02	Pass	--	--
SW1	DINOCTYLPHTHALATE	117840	Water	5	U	UG/L	7.30E+01	Pass	--	--
SW2	ENDOSULFAN I	115297	Water	0.025	U	ug/l	2.20E+01	Pass	--	--
SW2	ENDOSULFAN II	115297	Water	0.05	U	ug/l	2.20E+01	Pass	--	--
SW2	ENDRIN	72208	Water	0.05	U	ug/l	2.00E+00	Pass	--	--
SW2	ENDRIN ALDEHYDE	72208	Water	0.05	U	ug/l	2.00E+00	Pass	--	--
SW1	ENDRIN KETONE	72208	Water	0.05	U	UG/L	2.00E+00	Pass	--	--
SW1	FLUORANTHENE	206440	Water	5	U	UG/L	1.50E+02	Pass	--	--
SW1	FLUORENE	86737	Water	5	U	UG/L	2.40E+01	Pass	--	--
SW1	GAMMA-BHC (LINDANE)	58899	Water	0.025	U	UG/L	2.00E-01	Pass	--	--
SW1	GAMMA-CHLORDANE	57749	Water	0.025	U	UG/L	2.00E+00	Pass	--	--
SW1	HEPTACHLOR	76448	Water	0.025	U	UG/L	4.00E-01	Pass	--	--
SW1	HEPTACHLOR EPOXIDE	1024573	Water	0.025	U	UG/L	2.00E-01	Pass	--	--
SW1	HEXACHLOROBENZENE		Water	5	U	UG/L		?	--	--
SW1	HEXACHLOROBUTADIENE	87683	Water	5	U	UG/L	1.00E+01	Pass	--	--
SW1	HEXACHLOROCYCLOPENTADIENE	77474	Water	5	U	UG/L	5.00E+01	Pass	--	--
SW1	HEXACHLOROETHANE	67721	Water	5	U	UG/L	1.00E+01	Pass	--	--
SW1	INDENO[1,2,3-CD]PYRENE	193395	Water	5	U	UG/L	1.00E+01	Pass	--	--
SW1	ISOPHORONE	78591	Water	5	U	UG/L	7.00E+01	Pass	--	--
SW2	METHOXYCHLOR	72435	Water	0.25	U	ug/l	4.00E+01	Pass	--	--
SW1	N-NITROSODINPROPYLAMINE	621647	Water	5	U	UG/L	1.00E+01	Pass	--	--
SW1	N-NITROSODIPHENYLAMINE	86306	Water	5	U	UG/L	5.00E+01	Pass	--	--
SW1	NAPHTHALENE	91203	Water	5	U	UG/L	1.00E+01	Pass	--	--
SW1	NITROBENZENE	98953	Water	5	U	UG/L	2.00E+01	Pass	--	--

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ORIGINAL

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier 1 Screen ?
Water: Surface water										
Organics:										
SW2	PENTACHLOROPHENOL	87865	Water	12.5	U	UG/L	5.00E+01	Pass	--	--
SW1	PHENANTHRENE	120127	Water	5	U	UG/L	1.80E+02	Pass	--	--
SW1	PHENOL	108952	Water	5	U	UG/L	2.20E+03	Pass	--	--
SW1	PYRENE	129000	Water	5	U	UG/L	1.80E+01	Pass	--	--
SW2	TOXAPHENE	8001352	Water	2.5	U	ug/l	3.00E+00	Pass	--	--

ORIGINAL

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

Attachment A (cont.). Identification of Chemicals of Concern (Non-Residential Use): New Jersey Fireworks, Cecil County, Maryland; PCA Code: 65651

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier 1 Screen ?
Soil										
Surface:										
No Standards Available										
S14	4-BROMOPHENYL PHENYL ETHER		Soil	0.27965	U	mg/kg	--	--		?
S14	4-CHLORO-3-METHYLPHENOL		Soil	0.27965	U	mg/kg	--	--		?
S14	4-CHLOROPHENYL PHENYL ETHER		Soil	0.27965	U	mg/kg	--	--		?
S14	BIS(2-CHLOROETHOXY)METHANE		Soil	0.27965	U	mg/kg	--	--		?
S21	PERCHLORATE		Soil	0.062		mg/kg	--	--		?
Inorganics:										
S25	ALUMINUM	7429905	Soil	64000		MG/KG	--	--	2.00E+05	Pass
S25	ANTIMONY	7440360	Soil	12.5	L	MG/KG	--	--	8.20E+01	Pass
S25	ARSENIC	7440382	Soil	18.9		MG/KG	--	--	3.80E+00	Fail
S25	BARIUM	7440393	Soil	47600		MG/KG	--	--	1.40E+04	Fail
S14	BERYLLIUM	7440417	Soil	0.51	J	MG/KG	--	--	4.10E+02	Pass
S21	CADMIUM	7440439	Soil	2.8		MG/KG	--	--	1.00E+02	Pass
S25	CHROMIUM	18540299	Soil	187		MG/KG	--	--	6.10E+02	Pass
S25	COBALT	7440484	Soil	30.6		MG/KG	--	--	4.10E+03	Pass
S25	COPPER	7440508	Soil	200		MG/KG	--	--	8.20E+03	Pass
S24	CYANIDE	57125	Soil	9.7		MG/KG	--	--	4.10E+03	Pass
S14	LEAD		Soil	130	J	MG/KG	--	--	4.00E+02	Pass
S25	MANGANESE	7439965	Soil	824		MG/KG	--	--	4.10E+03	Pass
S21	MERCURY	7439976	Soil	1.7		MG/KG	--	--	1.20E-01	Fail
S21	NICKEL	7440020	Soil	147		MG/KG	--	--	4.10E+03	Pass
S21	SELENIUM	7782492	Soil	6.7		MG/KG	--	--	1.00E+03	Pass
S25	SILVER	7440224	Soil	0.7	U	MG/KG	--	--	1.00E+03	Pass
S12	THALLIUM	7440280	Soil	1.61	U	MG/KG	--	--	1.40E+01	Pass
S14	VANADIUM	7440622	Soil	31.7		MG/KG	--	--	1.40E+03	Pass
S25	ZINC	7440666	Soil	94.7	J	MG/KG	--	--	6.10E+04	Pass
Organics:										
S11	1,1,1-TRICHLOROETHANE	71556	Soil	0.015855	U	mg/kg	--	--	5.70E+04	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ORIGINAL

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier 1 Screen ?
Soil										
Surface:										
Organics:										
S11	1,1,2,2-TETRACHLOROETHANE	79345	Soil	0.015855	U	mg/kg	--	--	2.90E+01	Pass
S11	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		Soil	0.015855	U	mg/kg	--	--		?
S11	1,1,2-TRICHLOROETHANE	79005	Soil	0.015855	U	mg/kg	--	--	1.00E+02	Pass
S14	1,1-BIPHENYL		Soil	0.27965	U	mg/kg	--	--		?
S11	1,1-DICHLOROETHANE	75343	Soil	0.015855	U	mg/kg	--	--	2.00E+04	Pass
S11	1,1-DICHLOROETHENE	75354	Soil	0.015855	U	mg/kg	--	--	9.50E+00	Pass
S11	1,2,4-TRICHLOROBENZENE	120821	Soil	0.015855	U	mg/kg	--	--	2.00E+03	Pass
S12	1,2-DIBROMO-3-CHLOROPROPANE	96128	Soil	0.01131	U	mg/kg	--	--	4.10E+00	Pass
S11	1,2-DIBROMOETHANE	106934	Soil	0.015855	U	mg/kg	--	--	6.70E-02	Pass
S11	1,2-DICHLOROBENZENE	95501	Soil	0.015855	U	mg/kg	--	--	1.80E+04	Pass
S11	1,2-DICHLOROETHANE	107062	Soil	0.015855	U	mg/kg	--	--	6.30E+01	Pass
S11	1,2-DICHLOROPROPANE	78875	Soil	0.015855	U	mg/kg	--	--	8.40E+01	Pass
S11	1,3-DICHLOROBENZENE	541731	Soil	0.015855	U	mg/kg	--	--	6.10E+03	Pass
S11	1,4-DICHLOROBENZENE	106467	Soil	0.015855	U	mg/kg	--	--	2.40E+02	Pass
S14	2,2'-OXYBIS(1-CHLOROPROPANE)	108601	Soil	0.27965	U	mg/kg	--	--	8.20E+01	Pass
S14	2,4,5-TRICHLOROPHENOL	95954	Soil	0.7035	U	mg/kg	--	--	2.00E+04	Pass
S14	2,4,6-TRICHLOROPHENOL	88062	Soil	0.27965	U	mg/kg	--	--	5.20E+02	Pass
S14	2,4-DICHLOROPHENOL	120832	Soil	0.27965	U	mg/kg	--	--	6.10E+02	Pass
S14	2,4-DIMETHYLPHENOL	105679	Soil	0.27965	U	mg/kg	--	--	4.10E+03	Pass
S14	2,4-DINITROPHENOL	51285	Soil	0.7035	U	mg/kg	--	--	4.10E+02	Pass
S14	2,4-DINITROTOLUENE	121142	Soil	0.27965	U	mg/kg	--	--	4.10E+02	Pass
S14	2,6-DINITROTOLUENE	606202	Soil	0.27965	U	mg/kg	--	--	2.00E+02	Pass
S11	2-BUTANONE	78933	Soil	0.015855	U	mg/kg	--	--	1.20E+05	Pass
S14	2-CHLORONAPHTHALENE	91587	Soil	0.27965	U	mg/kg	--	--	1.60E+04	Pass
S14	2-CHLOROPHENOL	95578	Soil	0.27965	U	mg/kg	--	--	1.00E+03	Pass
S11	2-HEXANONE	591786	Soil	0.015855	U	mg/kg	--	--	8.20E+03	Pass
S14	2-METHYLNAPHTHALENE	91576	Soil	0.27965	U	mg/kg	--	--	4.10E+03	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ORIGINAL

Attachment A (cont.). Identification of Chemicals of Concern (Non-Residential Use): New Jersey Fireworks, Cecil County, Maryland; PCA Code: 65651

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier 1 Screen ?
Soil										
Surface:										
Organics:										
S14	2-METHYLPHENOL	95487	Soil	0.27965	U	mg/kg	--	--	1.00E+04	Pass
S14	2-NITROANILINE	88744	Soil	0.7035	U	mg/kg	--	--		?
S14	2-NITROPHENOL	100027	Soil	0.27965	U	mg/kg	--	--	1.60E+03	Pass
S14	3,3'-DICHLOROBENZIDINE	91941	Soil	0.27965	U	mg/kg	--	--	1.30E+01	Pass
S14	3-NITROANILINE	88744	Soil	0.7035	U	mg/kg	--	--		?
S14	4,4'-DDE	72559	Soil	0.019		mg/kg	--	--	1.70E+01	Pass
S14	4,4'-DDT	50293	Soil	0.005	J	mg/kg	--	--	1.70E+01	Pass
S14	4,6-DINITRO-2-METHYLPHENOL	534521	Soil	0.7035	U	mg/kg	--	--	2.00E+01	Pass
S14	4-CHLOROANILINE	106478	Soil	0.27965	U	mg/kg	--	--	8.20E+02	Pass
S11	4-METHYL-2-PENTANONE	108101	Soil	0.015855	U	mg/kg	--	--	1.60E+04	Pass
S14	4-METHYLPHENOL	106445	Soil	0.27965	U	mg/kg	--	--	1.00E+03	Pass
S14	4-NITROANILINE	88744	Soil	0.7035	U	mg/kg	--	--		?
S14	4-NITROPHENOL	100027	Soil	0.7035	U	mg/kg	--	--	1.60E+03	Pass
S14	ACENAPHTHENE	83329	Soil	0.27965	U	mg/kg	--	--	1.20E+04	Pass
S14	ACENAPHTHYLENE	83329	Soil	0.27965	U	mg/kg	--	--	1.20E+04	Pass
S11	ACETONE	67641	Soil	0.015855	U	mg/kg	--	--	2.00E+04	Pass
S14	ACETOPHENONE		Soil	0.27965	U	mg/kg	--	--		?
S14	ALDRIN	309002	Soil	0.00141	U	mg/kg	--	--	3.40E-01	Pass
S14	ALPHA-BHC	319846	Soil	0.00141	U	mg/kg	--	--	9.10E-01	Pass
S14	ALPHA-CHLORDANE	57749	Soil	0.00141	U	mg/kg	--	--	1.60E+01	Pass
S14	ANTHRACENE	120127	Soil	0.27965	U	mg/kg	--	--	6.10E+04	Pass
S14	AROCHLOR-1016	12674112	Soil	0.0274	U	mg/kg	--	--	8.20E+01	Pass
S14	AROCHLOR-1221	11104282	Soil	0.0555	U	mg/kg	--	--	2.90E+00	Pass
S14	AROCHLOR-1232	11141165	Soil	0.0274	U	mg/kg	--	--	2.90E+00	Pass
S22	AROCHLOR-1242	53469219	Soil	0.04085	U	mg/kg	--	--	2.90E+00	Pass
S22	AROCHLOR-1248	12672296	Soil	0.04085	U	mg/kg	--	--	2.90E+00	Pass
S22	AROCHLOR-1254	11097691	Soil	0.04085	U	mg/kg	--	--	2.90E+00	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ORIGINAL

ORIGINAL

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier 1 Screen ?
Soil										
Surface:										
Organics:										
S22	AROCHLOR-1260	11096825	Soil	0.04085	U	mg/kg	--	--	2.90E+00	Pass
S14	ATRAZINE	1912249	Soil	0.27965	U	mg/kg	--	--	2.60E+01	Pass
S14	BENZALDEHYDE		Soil	0.27965	U	mg/kg	--	--		?
S11	BENZENE	71432	Soil	0.015855	U	mg/kg	--	--	1.00E+02	Pass
S13	BENZO[A]ANTHRACENE	56553	Soil	0.36	J	mg/kg	--	--	7.80E+00	Pass
S13	BENZO[A]PYRENE	50328	Soil	0.35	J	mg/kg	--	--	7.80E-01	Pass
S14	BENZO[B]FLUORANTHENE	205992	Soil	0.27965	U	mg/kg	--	--	7.80E+00	Pass
S14	BENZO[G,H,I]PERYLENE	129000	Soil	0.27965	U	mg/kg	--	--	6.10E+03	Pass
S13	BENZO[K]FLUORANTHENE	207089	Soil	0.28	J	mg/kg	--	--	7.80E+01	Pass
S14	BETA-BHC	319857	Soil	0.00141	U	mg/kg	--	--	3.20E+00	Pass
S14	BIS(2-CHLOROETHYL)ETHER	111444	Soil	0.27965	U	mg/kg	--	--	5.20E+00	Pass
S21	BIS(2-ETHYLHEXYL)PHTHALATE	117817	Soil	0.76		mg/kg	--	--	4.10E+02	Pass
S11	BROMODICHLOROMETHANE	75274	Soil	0.015855	U	mg/kg	--	--	9.20E+01	Pass
S11	BROMOFORM	75252	Soil	0.015855	U	mg/kg	--	--	7.20E+02	Pass
S11	BROMOMETHANE	74839	Soil	0.015855	U	mg/kg	--	--	2.90E+02	Pass
S14	BUTYLBENZYLPHTHALATE		Soil	0.27965	U	mg/kg	--	--		?
S14	CAPROLACTAM		Soil	0.27965	U	mg/kg	--	--		?
S14	CARBAZOLE	86748	Soil	0.27965	U	mg/kg	--	--	2.90E+02	Pass
S11	CARBON DISULFIDE	75150	Soil	0.015855	U	mg/kg	--	--	2.00E+04	Pass
S11	CARBON TETRACHLORIDE	56235	Soil	0.015855	U	mg/kg	--	--	4.40E+01	Pass
S11	CHLOROBENZENE	108907	Soil	0.015855	U	mg/kg	--	--	4.10E+03	Pass
S11	CHLOROETHANE	75003	Soil	0.015855	U	mg/kg	--	--	2.00E+03	Pass
S11	CHLOROFORM	67663	Soil	0.015855	U	mg/kg	--	--	9.40E+02	Pass
S11	CHLOROMETHANE	74873	Soil	0.015855	U	mg/kg	--	--	4.40E+02	Pass
S13	CHRYSENE	218019	Soil	0.46	J	mg/kg	--	--	7.80E+02	Pass
S11	CIS-1,2-DICHLOROETHENE	156592	Soil	0.015855	U	mg/kg	--	--	2.00E+03	Pass
S11	CIS-1,3-DICHLOROPROPENE	542756	Soil	0.015855	U	mg/kg	--	--	5.70E+01	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

Attachment A (cont.). Identification of Chemicals of Concern (Non-Residential Use): New Jersey Fireworks, Cecil County, Maryland; PCA Code: 65651

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier 1 Screen ?
Soil										
Surface:										
Organics:										
S11	CYCLOHEXANE		Soil	0.015855	U	mg/kg	--	--		?
S14	DELTA-BHC	58899	Soil	0.00141	U	mg/kg	--	--	4.40E+00	Pass
S14	DIBENZO[A,H]ANTHRACENE	53703	Soil	0.27965	U	mg/kg	--	--	7.80E-01	Pass
S14	DIBENZOFURAN	132649	Soil	0.27965	U	mg/kg	--	--	8.20E+02	Pass
S11	DIBROMOCHLOROMETHANE	124481	Soil	0.015855	U	mg/kg	--	--	6.80E+01	Pass
S11	DICHLORODIFLUOROMETHANE		Soil	0.015855	U	mg/kg	--	--		?
S14	DIELDRIN	60571	Soil	0.00274	U	mg/kg	--	--	3.60E-01	Pass
S14	DIETHYLPHTHALATE	84662	Soil	0.27965	U	mg/kg	--	--	1.60E+05	Pass
S14	DIMETHYLPHTHALATE	131113	Soil	0.27965	U	mg/kg	--	--	2.00E+06	Pass
S14	DINBUTYLPHTHALATE	84742	Soil	0.27965	U	mg/kg	--	--	2.00E+04	Pass
S14	DINOCTYLPHTHALATE	117840	Soil	0.27965	U	mg/kg	--	--	4.10E+03	Pass
S14	ENDOSULFAN I	115297	Soil	0.00141	U	mg/kg	--	--	1.20E+03	Pass
S14	ENDOSULFAN II	115297	Soil	0.00274	U	mg/kg	--	--	1.20E+03	Pass
S14	ENDRIN	72208	Soil	0.00274	U	mg/kg	--	--	6.10E+01	Pass
S14	ENDRIN ALDEHYDE	72208	Soil	0.00274	U	mg/kg	--	--	6.10E+01	Pass
S14	ENDRIN KETONE	72208	Soil	0.00274	U	mg/kg	--	--	6.10E+01	Pass
S11	ETHYLBENZENE	100414	Soil	0.015855	U	mg/kg	--	--	2.00E+04	Pass
S13	FLUORANTHENE	206440	Soil	0.28	J	mg/kg	--	--	8.20E+03	Pass
S14	FLUORENE	86737	Soil	0.27965	U	mg/kg	--	--	8.20E+03	Pass
S14	GAMMA-BHC (LINDANE)	58899	Soil	0.00141	U	mg/kg	--	--	4.40E+00	Pass
S14	GAMMA-CHLORDANE	57749	Soil	0.00141	U	mg/kg	--	--	1.60E+01	Pass
S14	HEPTACHLOR	76448	Soil	0.00141	U	mg/kg	--	--	1.30E+00	Pass
S14	HEPTACHLOR EPOXIDE	1024573	Soil	0.00141	U	mg/kg	--	--	6.30E-01	Pass
S14	HEXACHLOROBENZENE		Soil	0.27965	U	mg/kg	--	--		?
S14	HEXACHLOROBUTADIENE	87683	Soil	0.27965	U	mg/kg	--	--	7.30E+01	Pass
S14	HEXACHLOROCYCLOPENTADIENE	77474	Soil	0.27965	U	mg/kg	--	--	1.40E+03	Pass
S14	HEXACHLOROETHANE	67721	Soil	0.27965	U	mg/kg	--	--	4.10E+02	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ORIGINAL

ORIGINAL

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier 1 Screen ?
Soil										
Surface:										
Organics:										
S14	INDENO[1,2,3-CD]PYRENE	193395	Soil	0.27965	U	mg/kg	--	--	7.80E+00	Pass
S14	ISOPHORONE	78591	Soil	0.27965	U	mg/kg	--	--	6.00E+03	Pass
S11	ISOPROPYLBENZENE	98828	Soil	0.015855	U	mg/kg	--	--	2.00E+04	Pass
S14	METHOXYCHLOR	72435	Soil	0.0141	U	mg/kg	--	--	1.00E+03	Pass
S11	METHYL ACETATE		Soil	0.015855	U	mg/kg	--	--		?
S11	METHYL TERT BUTYL ETHER	1634044	Soil	0.015855	U	mg/kg	--	--	2.70E+03	Pass
S11	METHYLCYCLOHEXANE		Soil	0.015855	U	mg/kg	--	--		?
S16	METHYLENE CHLORIDE	75092	Soil	0.019	B	mg/kg	--	--	7.60E+02	Pass
S14	N-NITROSODINPROPYLAMINE	621647	Soil	0.27965	U	mg/kg	--	--	8.20E-01	Pass
S14	N-NITROSODIPHENYLAMINE	86306	Soil	0.27965	U	mg/kg	--	--	1.20E+03	Pass
S14	NAPHTHALENE	91203	Soil	0.27965	U	mg/kg	--	--	4.10E+03	Pass
S14	NITROBENZENE	98953	Soil	0.27965	U	mg/kg	--	--	1.00E+02	Pass
S14	PENTACHLOROPHENOL	87865	Soil	0.7035	U	mg/kg	--	--	4.80E+01	Pass
S23	PHENANTHRENE	120127	Soil	0.24625	U	mg/kg	--	--	6.10E+04	Pass
S14	PHENOL	108952	Soil	0.27965	U	mg/kg	--	--	1.20E+05	Pass
S13	PYRENE	129000	Soil	0.75	J	mg/kg	--	--	6.10E+03	Pass
S11	STYRENE	100425	Soil	0.015855	U	mg/kg	--	--	4.10E+04	Pass
S11	TETRACHLOROETHENE	127184	Soil	0.015855	U	mg/kg	--	--	1.10E+02	Pass
S11	TOLUENE	108883	Soil	0.015855	U	mg/kg	--	--	4.10E+04	Pass
S14	TOXAPHENE	8001352	Soil	0.141	U	mg/kg	--	--	5.20E+00	Pass
S11	TRANS-1,2-DICHLOROETHENE	156605	Soil	0.015855	U	mg/kg	--	--	4.10E+03	Pass
S11	TRANS-1,3-DICHLOROPROPENE	542756	Soil	0.015855	U	mg/kg	--	--	5.70E+01	Pass
S11	TRICHLOROETHENE	79016	Soil	0.015855	U	mg/kg	--	--	5.20E+02	Pass
S11	TRICHLOROFLUOROMETHANE		Soil	0.015855	U	mg/kg	--	--		?
S11	VINYL CHLORIDE	75014	Soil	0.015855	U	mg/kg	--	--	7.90E+00	Pass
S11	XYLENES	1330207	Soil	0.015855	U	mg/kg	--	--	4.10E+05	Pass
Subsurface:										

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

Attachment A (cont.). Identification of Chemicals of Concern (Non-Residential Use): New Jersey Fireworks, Cecil County, Maryland; PCA Code: 65651

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier 1 Screen ?
Soil										
Subsurface:										
No Standards Available										
SS24	4-BROMOPHENYL PHENYL ETHER		Soil	0.1968	U	mg/kg	--	--		?
SS24	4-CHLORO-3-METHYLPHENOL		Soil	0.1968	U	mg/kg	--	--		?
SS24	4-CHLOROPHENYL PHENYL ETHER		Soil	0.1968	U	mg/kg	--	--		?
SS24	BIS(2-CHLOROETHOXY)METHANE		Soil	0.1968	U	mg/kg	--	--		?
SS22	PERCHLORATE		Soil	1.79	L	mg/kg	--	--		?
Inorganics:										
SS21	ALUMINUM	7429905	Soil	12400		MG/KG	--	--	2.00E+05	Pass
SS23	ANTIMONY	7440360	Soil	3.9	B	MG/KG	--	--	8.20E+01	Pass
SS23	ARSENIC	7440382	Soil	11.3		MG/KG	--	--	3.80E+00	Fail
SS21	BARIUM	7440393	Soil	5990		MG/KG	--	--	1.40E+04	Pass
SS11	BERYLLIUM	7440417	Soil	0.51	J	MG/KG	--	--	4.10E+02	Pass
SS23	CADMIUM	7440439	Soil	0.27	J	MG/KG	--	--	1.00E+02	Pass
SS23	CHROMIUM	18540299	Soil	77.6		MG/KG	--	--	6.10E+02	Pass
SS11	COBALT	7440484	Soil	4.8	J	MG/KG	--	--	4.10E+03	Pass
SS21	COPPER	7440508	Soil	31.4		MG/KG	--	--	8.20E+03	Pass
SS24	CYANIDE	57125	Soil	1.455	U	MG/KG	--	--	4.10E+03	Pass
SS14	LEAD		Soil	13.7	J	MG/KG	--	--	4.00E+02	Pass
SS21	MANGANESE	7439965	Soil	108		MG/KG	--	--	4.10E+03	Pass
SS21	MERCURY	7439976	Soil	0.2	B	MG/KG	--	--	1.20E-01	Fail
SS21	NICKEL	7440020	Soil	27		MG/KG	--	--	4.10E+03	Pass
SS22	SELENIUM	7782492	Soil	2.15	U	MG/KG	--	--	1.00E+03	Pass
SS22	SILVER	7440224	Soil	0.645	U	MG/KG	--	--	1.00E+03	Pass
SS22	THALLIUM	7440280	Soil	1.535	U	MG/KG	--	--	1.40E+01	Pass
SS23	VANADIUM	7440622	Soil	64.9		MG/KG	--	--	1.40E+03	Pass
SS13	ZINC	7440666	Soil	23.7	J	MG/KG	--	--	6.10E+04	Pass
Organics:										
SS13	1,1,1-TRICHLOROETHANE	71556	Soil	0.01163	U	mg/kg	--	--	5.70E+04	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ORIGINAL

ORIGINAL

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier 1 Screen
Soil										
Subsurface:										
Organics:										
SS13	1,1,2,2-TETRACHLOROETHANE	79345	Soil	0.01163	U	mg/kg	--	--	2.90E+01	Pass
SS13	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		Soil	0.01163	U	mg/kg	--	--		?
SS13	1,1,2-TRICHLOROETHANE	79005	Soil	0.01163	U	mg/kg	--	--	1.00E+02	Pass
SS24	1,1-BIPHENYL		Soil	0.1968	U	mg/kg	--	--		?
SS13	1,1-DICHLOROETHANE	75343	Soil	0.01163	U	mg/kg	--	--	2.00E+04	Pass
SS13	1,1-DICHLOROETHENE	75354	Soil	0.01163	U	mg/kg	--	--	9.50E+00	Pass
SS13	1,2,4-TRICHLOROBENZENE	120821	Soil	0.01163	U	mg/kg	--	--	2.00E+03	Pass
SS24	1,2-DIBROMO-3-CHLOROPROPANE	96128	Soil	0.00735	U	mg/kg	--	--	4.10E+00	Pass
SS13	1,2-DIBROMOETHANE	106934	Soil	0.01163	U	mg/kg	--	--	6.70E-02	Pass
SS13	1,2-DICHLOROBENZENE	95501	Soil	0.01163	U	mg/kg	--	--	1.80E+04	Pass
SS13	1,2-DICHLOROETHANE	107062	Soil	0.01163	U	mg/kg	--	--	6.30E+01	Pass
SS13	1,2-DICHLOROPROPANE	78875	Soil	0.01163	U	mg/kg	--	--	8.40E+01	Pass
SS13	1,3-DICHLOROBENZENE	541731	Soil	0.01163	U	mg/kg	--	--	6.10E+03	Pass
SS13	1,4-DICHLOROBENZENE	106467	Soil	0.01163	U	mg/kg	--	--	2.40E+02	Pass
SS24	2,2'-OXYBIS(1-CHLOROPROPANE)	108601	Soil	0.1968	U	mg/kg	--	--	8.20E+01	Pass
SS24	2,4,5-TRICHLOROPHENOL	95954	Soil	0.495	U	mg/kg	--	--	2.00E+04	Pass
SS24	2,4,6-TRICHLOROPHENOL	88062	Soil	0.1968	U	mg/kg	--	--	5.20E+02	Pass
SS24	2,4-DICHLOROPHENOL	120832	Soil	0.1968	U	mg/kg	--	--	6.10E+02	Pass
SS24	2,4-DIMETHYLPHENOL	105679	Soil	0.1968	U	mg/kg	--	--	4.10E+03	Pass
SS24	2,4-DINITROPHENOL	51285	Soil	0.495	U	mg/kg	--	--	4.10E+02	Pass
SS24	2,4-DINITROTOLUENE	121142	Soil	0.1968	U	mg/kg	--	--	4.10E+02	Pass
SS24	2,6-DINITROTOLUENE	606202	Soil	0.1968	U	mg/kg	--	--	2.00E+02	Pass
SS13	2-BUTANONE	78933	Soil	0.01163	U	mg/kg	--	--	1.20E+05	Pass
SS24	2-CHLORONAPHTHALENE	91587	Soil	0.1968	U	mg/kg	--	--	1.60E+04	Pass
SS24	2-CHLOROPHENOL	95578	Soil	0.1968	U	mg/kg	--	--	1.00E+03	Pass
SS13	2-HEXANONE	591786	Soil	0.01163	U	mg/kg	--	--	8.20E+03	Pass
SS24	2-METHYLNAPHTHALENE	91576	Soil	0.1968	U	mg/kg	--	--	4.10E+03	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

Attachment A (cont.). Identification of Chemicals of Concern (Non-Residential Use): New Jersey Fireworks, Cecil County, Maryland; PCA Code: 65651

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier 1 Screen ?
Soil										
Subsurface:										
Organics:										
SS24	2-METHYLPHENOL	95487	Soil	0.1968	U	mg/kg	--	--	1.00E+04	Pass
SS24	2-NITROANILINE	88744	Soil	0.495	U	mg/kg	--	--		?
SS24	2-NITROPHENOL	100027	Soil	0.1968	U	mg/kg	--	--	1.60E+03	Pass
SS24	3,3'-DICHLOROBENZIDINE	91941	Soil	0.1968	U	mg/kg	--	--	1.30E+01	Pass
SS24	3-NITROANILINE	88744	Soil	0.495	U	mg/kg	--	--		?
SS21	4,4'-DDE	72559	Soil	0.00201	U	mg/kg	--	--	1.70E+01	Pass
SS21	4,4'-DDT	50293	Soil	0.00201	U	mg/kg	--	--	1.70E+01	Pass
SS24	4,6-DINITRO-2-METHYLPHENOL	534521	Soil	0.495	U	mg/kg	--	--	2.00E+01	Pass
SS24	4-CHLOROANILINE	106478	Soil	0.1968	U	mg/kg	--	--	8.20E+02	Pass
SS13	4-METHYL-2-PENTANONE	108101	Soil	0.01163	U	mg/kg	--	--	1.60E+04	Pass
SS24	4-METHYLPHENOL	106445	Soil	0.1968	U	mg/kg	--	--	1.00E+03	Pass
SS24	4-NITROANILINE	88744	Soil	0.495	U	mg/kg	--	--		?
SS24	4-NITROPHENOL	100027	Soil	0.495	U	mg/kg	--	--	1.60E+03	Pass
SS24	ACENAPHTHENE	83329	Soil	0.1968	U	mg/kg	--	--	1.20E+04	Pass
SS24	ACENAPHTHYLENE	83329	Soil	0.1968	U	mg/kg	--	--	1.20E+04	Pass
SS13	ACETONE	67641	Soil	0.01163	U	mg/kg	--	--	2.00E+04	Pass
SS24	ACETOPHENONE		Soil	0.1968	U	mg/kg	--	--		?
SS22	ALDRIN	309002	Soil	0.001035	U	mg/kg	--	--	3.40E-01	Pass
SS22	ALPHA-BHC	319846	Soil	0.001035	U	mg/kg	--	--	9.10E-01	Pass
SS22	ALPHA-CHLORDANE	57749	Soil	0.001035	U	mg/kg	--	--	1.60E+01	Pass
SS24	ANTHRACENE	120127	Soil	0.1968	U	mg/kg	--	--	6.10E+04	Pass
SS22	AROCHLOR-1016	12674112	Soil	0.0201	U	mg/kg	--	--	8.20E+01	Pass
SS22	AROCHLOR-1221	11104282	Soil	0.04085	U	mg/kg	--	--	2.90E+00	Pass
SS21	AROCHLOR-1232	11141165	Soil	0.0201	U	mg/kg	--	--	2.90E+00	Pass
SS21	AROCHLOR-1242	53469219	Soil	0.04085	U	mg/kg	--	--	2.90E+00	Pass
SS21	AROCHLOR-1248	12672296	Soil	0.04085	U	mg/kg	--	--	2.90E+00	Pass
SS21	AROCHLOR-1254	11097691	Soil	0.04085	U	mg/kg	--	--	2.90E+00	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ORIGINAL

ORIGINAL

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier 1 Screen ?
Soil										
Subsurface:										
Organics:										
SS22	AROCHLOR-1260	11096825	Soil	0.04085	U	mg/kg	--	--	2.90E+00	Pass
SS24	ATRAZINE	1912249	Soil	0.1968	U	mg/kg	--	--	2.60E+01	Pass
SS24	BENZALDEHYDE		Soil	0.1968	U	mg/kg	--	--		?
SS13	BENZENE	71432	Soil	0.01163	U	mg/kg	--	--	1.00E+02	Pass
SS24	BENZO[A]ANTHRACENE	56553	Soil	0.1968	U	mg/kg	--	--	7.80E+00	Pass
SS24	BENZO[A]PYRENE	50328	Soil	0.1968	U	mg/kg	--	--	7.80E-01	Pass
SS24	BENZO[B]FLUORANTHENE	205992	Soil	0.1968	U	mg/kg	--	--	7.80E+00	Pass
SS24	BENZO[G,H,I]PERYLENE	129000	Soil	0.1968	U	mg/kg	--	--	6.10E+03	Pass
SS24	BENZO[K]FLUORANTHENE	207089	Soil	0.1968	U	mg/kg	--	--	7.80E+01	Pass
SS21	BETA-BHC	319857	Soil	0.001035	U	mg/kg	--	--	3.20E+00	Pass
SS24	BIS(2-CHLOROETHYL)ETHER	111444	Soil	0.1968	U	mg/kg	--	--	5.20E+00	Pass
SS24	BIS(2-ETHYLHEXYL)PHTHALATE	117817	Soil	0.1968	U	mg/kg	--	--	4.10E+02	Pass
SS13	BROMODICHLOROMETHANE	75274	Soil	0.01163	U	mg/kg	--	--	9.20E+01	Pass
SS13	BROMOFORM	75252	Soil	0.01163	U	mg/kg	--	--	7.20E+02	Pass
SS13	BROMOMETHANE	74839	Soil	0.01163	U	mg/kg	--	--	2.90E+02	Pass
SS24	BUTYLBENZYLPHTHALATE		Soil	0.1968	U	mg/kg	--	--		?
SS24	CAPROLACTAM		Soil	0.1968	U	mg/kg	--	--		?
SS24	CARBAZOLE	86748	Soil	0.1968	U	mg/kg	--	--	2.90E+02	Pass
SS13	CARBON DISULFIDE	75150	Soil	0.01163	U	mg/kg	--	--	2.00E+04	Pass
SS13	CARBON TETRACHLORIDE	56235	Soil	0.01163	U	mg/kg	--	--	4.40E+01	Pass
SS13	CHLOROBENZENE	108907	Soil	0.01163	U	mg/kg	--	--	4.10E+03	Pass
SS13	CHLOROETHANE	75003	Soil	0.01163	U	mg/kg	--	--	2.00E+03	Pass
SS13	CHLOROFORM	67663	Soil	0.01163	U	mg/kg	--	--	9.40E+02	Pass
SS13	CHLOROMETHANE	74873	Soil	0.01163	U	mg/kg	--	--	4.40E+02	Pass
SS24	CHRYSENE	218019	Soil	0.1968	U	mg/kg	--	--	7.80E+02	Pass
SS13	CIS-1,2-DICHLOROETHENE	156592	Soil	0.01163	U	mg/kg	--	--	2.00E+03	Pass
SS13	CIS-1,3-DICHLOROPROPENE	542756	Soil	0.01163	U	mg/kg	--	--	5.70E+01	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier 1 Screen ?
Soil										
Subsurface:										
Organics:										
SS13	CYCLOHEXANE		Soil	0.01163	U	mg/kg	--	--		?
SS21	DELTA-BHC	58899	Soil	0.001035	U	mg/kg	--	--	4.40E+00	Pass
SS24	DIBENZO[A,H]ANTHRACENE	53703	Soil	0.1968	U	mg/kg	--	--	7.80E-01	Pass
SS24	DIBENZOFURAN	132649	Soil	0.1968	U	mg/kg	--	--	8.20E+02	Pass
SS13	DIBROMOCHLOROMETHANE	124481	Soil	0.01163	U	mg/kg	--	--	6.80E+01	Pass
SS13	DICHLORODIFLUOROMETHANE		Soil	0.01163	U	mg/kg	--	--		?
SS21	DIELDRIN	60571	Soil	0.00201	U	mg/kg	--	--	3.60E-01	Pass
SS24	DIETHYLPHTHALATE	84662	Soil	0.1968	U	mg/kg	--	--	1.60E+05	Pass
SS24	DIMETHYLPHTHALATE	131113	Soil	0.1968	U	mg/kg	--	--	2.00E+06	Pass
SS24	DINBUTYLPHTHALATE	84742	Soil	0.1968	U	mg/kg	--	--	2.00E+04	Pass
SS24	DINOCTYLPHTHALATE	117840	Soil	0.1968	U	mg/kg	--	--	4.10E+03	Pass
SS21	ENDOSULFAN I	115297	Soil	0.001035	U	mg/kg	--	--	1.20E+03	Pass
SS21	ENDOSULFAN II	115297	Soil	0.00201	U	mg/kg	--	--	1.20E+03	Pass
SS21	ENDRIN	72208	Soil	0.00201	U	mg/kg	--	--	6.10E+01	Pass
SS21	ENDRIN ALDEHYDE	72208	Soil	0.00201	U	mg/kg	--	--	6.10E+01	Pass
SS21	ENDRIN KETONE	72208	Soil	0.00201	U	mg/kg	--	--	6.10E+01	Pass
SS13	ETHYLBENZENE	100414	Soil	0.01163	U	mg/kg	--	--	2.00E+04	Pass
SS24	FLUORANTHENE	206440	Soil	0.1968	U	mg/kg	--	--	8.20E+03	Pass
SS24	FLUORENE	86737	Soil	0.1968	U	mg/kg	--	--	8.20E+03	Pass
SS21	GAMMA-BHC (LINDANE)	58899	Soil	0.001035	U	mg/kg	--	--	4.40E+00	Pass
SS21	GAMMA-CHLORDANE	57749	Soil	0.001035	U	mg/kg	--	--	1.60E+01	Pass
SS21	HEPTACHLOR	76448	Soil	0.001035	U	mg/kg	--	--	1.30E+00	Pass
SS21	HEPTACHLOR EPOXIDE	1024573	Soil	0.001035	U	mg/kg	--	--	6.30E-01	Pass
SS24	HEXACHLOROBENZENE		Soil	0.1968	U	mg/kg	--	--		?
SS24	HEXACHLOROBUTADIENE	87683	Soil	0.1968	U	mg/kg	--	--	7.30E+01	Pass
SS24	HEXACHLOROCYCLOPENTADIENE	77474	Soil	0.1968	U	mg/kg	--	--	1.40E+03	Pass
SS24	HEXACHLOROETHANE	67721	Soil	0.1968	U	mg/kg	--	--	4.10E+02	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ORIGINAL

ORIGINAL

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier 1 Screen ?*
Soil										
Subsurface:										
Organics:										
SS24	INDENO[1,2,3-CD]PYRENE	193395	Soil	0.1968	U	mg/kg	--	--	7.80E+00	Pass
SS24	ISOPHORONE	78591	Soil	0.1968	U	mg/kg	--	--	6.00E+03	Pass
SS13	ISOPROPYLBENZENE	98828	Soil	0.01163	U	mg/kg	--	--	2.00E+04	Pass
SS21	METHOXYCHLOR	72435	Soil	0.01035	U	mg/kg	--	--	1.00E+03	Pass
SS13	METHYL ACETATE		Soil	0.01163	U	mg/kg	--	--		?
SS13	METHYL TERT BUTYL ETHER	1634044	Soil	0.01163	U	mg/kg	--	--	2.70E+03	Pass
SS13	METHYLCYCLOHEXANE		Soil	0.01163	U	mg/kg	--	--		?
SS13	METHYLENE CHLORIDE	75092	Soil	0.016	B	mg/kg	--	--	7.60E+02	Pass
SS24	N-NITROSODINPROPYLAMINE	621647	Soil	0.1968	U	mg/kg	--	--	8.20E-01	Pass
SS24	N-NITROSODIPHENYLAMINE	86306	Soil	0.1968	U	mg/kg	--	--	1.20E+03	Pass
SS24	NAPHTHALENE	91203	Soil	0.1968	U	mg/kg	--	--	4.10E+03	Pass
SS24	NITROBENZENE	98953	Soil	0.1968	U	mg/kg	--	--	1.00E+02	Pass
SS24	PENTACHLOROPHENOL	87865	Soil	0.495	U	mg/kg	--	--	4.80E+01	Pass
SS24	PHENANTHRENE	120127	Soil	0.1968	U	mg/kg	--	--	6.10E+04	Pass
SS24	PHENOL	108952	Soil	0.1968	U	mg/kg	--	--	1.20E+05	Pass
SS24	PYRENE	129000	Soil	0.1968	U	mg/kg	--	--	6.10E+03	Pass
SS13	STYRENE	100425	Soil	0.01163	U	mg/kg	--	--	4.10E+04	Pass
SS13	TETRACHLOROETHENE	127184	Soil	0.01163	U	mg/kg	--	--	1.10E+02	Pass
SS13	TOLUENE	108883	Soil	0.01163	U	mg/kg	--	--	4.10E+04	Pass
SS22	TOXAPHENE	8001352	Soil	0.1035	U	mg/kg	--	--	5.20E+00	Pass
SS13	TRANS-1,2-DICHLOROETHENE	156605	Soil	0.01163	U	mg/kg	--	--	4.10E+03	Pass
SS13	TRANS-1,3-DICHLOROPROPENE	542756	Soil	0.01163	U	mg/kg	--	--	5.70E+01	Pass
SS13	TRICHLOROETHENE	79016	Soil	0.01163	U	mg/kg	--	--	5.20E+02	Pass
SS13	TRICHLOROFLUOROMETHANE		Soil	0.01163	U	mg/kg	--	--		?
SS13	VINYL CHLORIDE	75014	Soil	0.01163	U	mg/kg	--	--	7.90E+00	Pass
SS13	XYLENES	1330207	Soil	0.01163	U	mg/kg	--	--	4.10E+05	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

Attachment A (cont.). Identification of Chemicals of Concern (Non-Residential Use): New Jersey Fireworks, Cecil County, Maryland; PCA Code: 65651

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier 1 Screen ?
Sediment										
Surface:										
No Standards Available										
SED8	4-BROMOPHENYL PHENYL ETHER		Sediment	0.28165	U	mg/kg	--	--		?
SED8	4-CHLORO-3-METHYLPHENOL		Sediment	0.28165	U	mg/kg	--	--		?
SED8	4-CHLOROPHENYL PHENYL ETHER		Sediment	0.28165	U	mg/kg	--	--		?
SED8	BIS(2-CHLOROETHOXY)METHANE		Sediment	0.28165	U	mg/kg	--	--		?
SED 5	PERCHLORATE		Sediment	0.0025	U	mg/kg	--	--		?
Inorganics:										
SED 5	ALUMINUM	7429905	Sediment	6420		MG/KG	--	--	2.00E+05	Pass
SED 5	ANTIMONY	7440360	Sediment	103	L	MG/KG	--	--	8.20E+01	Fail
SED 5	ARSENIC	7440382	Sediment	6.3	L	MG/KG	--	--	3.80E+00	Fail
SED8	BARIUM	7440393	Sediment	1610	J	MG/KG	--	--	1.40E+04	Pass
SED 5	BERYLLIUM	7440417	Sediment	0.45	J	MG/KG	--	--	4.10E+02	Pass
SED 5	CADMIUM	7440439	Sediment	1		MG/KG	--	--	1.00E+02	Pass
SED8	CHROMIUM	18540299	Sediment	25.5		MG/KG	--	--	6.10E+02	Pass
SED 5	COBALT	7440484	Sediment	17		MG/KG	--	--	4.10E+03	Pass
SED 5	COPPER	7440508	Sediment	32.3		MG/KG	--	--	8.20E+03	Pass
SED3	CYANIDE	57125	Sediment	1.805	U	MG/KG	--	--	4.10E+03	Pass
SED 5	LEAD		Sediment	64.7		MG/KG	--	--	4.00E+02	Pass
SED 5	MANGANESE	7439965	Sediment	2150		MG/KG	--	--	4.10E+03	Pass
SED 5	MERCURY	7439976	Sediment	0.22		MG/KG	--	--	1.20E-01	Fail
SED 5	NICKEL	7440020	Sediment	12.6		MG/KG	--	--	4.10E+03	Pass
SED8	SELENIUM	7782492	Sediment	2.97	UL	MG/KG	--	--	1.00E+03	Pass
SED8	SILVER	7440224	Sediment	0.85	U	MG/KG	--	--	1.00E+03	Pass
SED 5	THALLIUM	7440280	Sediment	4.2		MG/KG	--	--	1.40E+01	Pass
SED6	VANADIUM	7440622	Sediment	27.3		MG/KG	--	--	1.40E+03	Pass
SED 5	ZINC	7440666	Sediment	153		MG/KG	--	--	6.10E+04	Pass
Organics:										
SED6	1,1,1-TRICHLOROETHANE	71556	Sediment	0.018		mg/kg	--	--	5.70E+04	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ORIGINAL

ORIGINAL

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier 1 Screen
Sediment										
Surface:										
Organics:										
SED 5	1,1,2,2-TETRACHLOROETHANE	79345	Sediment	0.010325	U	mg/kg	--	--	2.90E+01	Pass
SED 5	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		Sediment	0.010325	U	mg/kg	--	--		?
SED 5	1,1,2-TRICHLOROETHANE	79005	Sediment	0.010325	U	mg/kg	--	--	1.00E+02	Pass
SED8	1,1-BIPHENYL		Sediment	0.28165	U	mg/kg	--	--		?
SED 5	1,1-DICHLOROETHANE	75343	Sediment	0.010325	U	mg/kg	--	--	2.00E+04	Pass
SED 5	1,1-DICHLOROETHENE	75354	Sediment	0.010325	U	mg/kg	--	--	9.50E+00	Pass
SED 5	1,2,4-TRICHLOROBENZENE	120821	Sediment	0.010325	U	mg/kg	--	--	2.00E+03	Pass
SED 5	1,2-DIBROMOETHANE	106934	Sediment	0.010325	U	mg/kg	--	--	6.70E-02	Pass
SED 5	1,2-DICHLOROBENZENE	95501	Sediment	0.010325	U	mg/kg	--	--	1.80E+04	Pass
SED 5	1,2-DICHLOROETHANE	107062	Sediment	0.010325	U	mg/kg	--	--	6.30E+01	Pass
SED 5	1,2-DICHLOROPROPANE	78875	Sediment	0.010325	U	mg/kg	--	--	8.40E+01	Pass
SED 5	1,3-DICHLOROBENZENE	541731	Sediment	0.010325	U	mg/kg	--	--	6.10E+03	Pass
SED 5	1,4-DICHLOROBENZENE	106467	Sediment	0.010325	U	mg/kg	--	--	2.40E+02	Pass
SED8	2,2'-OXYBIS(1-CHLOROPROPANE)	108601	Sediment	0.28165	U	mg/kg	--	--	8.20E+01	Pass
SED8	2,4,5-TRICHLOROPHENOL	95954	Sediment	0.7085	U	mg/kg	--	--	2.00E+04	Pass
SED8	2,4,6-TRICHLOROPHENOL	88062	Sediment	0.28165	U	mg/kg	--	--	5.20E+02	Pass
SED8	2,4-DICHLOROPHENOL	120832	Sediment	0.28165	U	mg/kg	--	--	6.10E+02	Pass
SED8	2,4-DIMETHYLPHENOL	105679	Sediment	0.28165	U	mg/kg	--	--	4.10E+03	Pass
SED8	2,4-DINITROPHENOL	51285	Sediment	0.7085	U	mg/kg	--	--	4.10E+02	Pass
SED8	2,4-DINITROTOLUENE	121142	Sediment	0.28165	U	mg/kg	--	--	4.10E+02	Pass
SED8	2,6-DINITROTOLUENE	606202	Sediment	0.28165	U	mg/kg	--	--	2.00E+02	Pass
SED 5	2-BUTANONE	78933	Sediment	0.010325	U	mg/kg	--	--	1.20E+05	Pass
SED8	2-CHLORONAPHTHALENE	91587	Sediment	0.28165	U	mg/kg	--	--	1.60E+04	Pass
SED8	2-CHLOROPHENOL	95578	Sediment	0.28165	U	mg/kg	--	--	1.00E+03	Pass
SED 5	2-HEXANONE	591786	Sediment	0.010325	U	mg/kg	--	--	8.20E+03	Pass
SED8	2-METHYLNAPHTHALENE	91576	Sediment	0.28165	U	mg/kg	--	--	4.10E+03	Pass
SED8	2-METHYLPHENOL	95487	Sediment	0.28165	U	mg/kg	--	--	1.00E+04	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier 1 Screen ?
Sediment										
Surface:										
Organics:										
SED8	2-NITROANILINE	88744	Sediment	0.7085	U	mg/kg	--	--		?
SED8	2-NITROPHENOL	100027	Sediment	0.28165	U	mg/kg	--	--	1.60E+03	Pass
SED8	3,3'-DICHLOROBENZIDINE	91941	Sediment	0.28165	U	mg/kg	--	--	1.30E+01	Pass
SED8	3-NITROANILINE	88744	Sediment	0.7085	U	mg/kg	--	--		?
SED8	4,4'-DDE	72559	Sediment	0.00278	U	mg/kg	--	--	1.70E+01	Pass
SED8	4,4'-DDT	50293	Sediment	0.00278	U	mg/kg	--	--	1.70E+01	Pass
SED8	4,6-DINITRO-2-METHYLPHENOL	534521	Sediment	0.7085	U	mg/kg	--	--	2.00E+01	Pass
SED8	4-CHLOROANILINE	106478	Sediment	0.28165	U	mg/kg	--	--	8.20E+02	Pass
SED 5	4-METHYL-2-PENTANONE	108101	Sediment	0.010325	U	mg/kg	--	--	1.60E+04	Pass
SED7	4-METHYLPHENOL	106445	Sediment	0.86		mg/kg	--	--	1.00E+03	Pass
SED8	4-NITROANILINE	88744	Sediment	0.7085	U	mg/kg	--	--		?
SED8	4-NITROPHENOL	100027	Sediment	0.7085	U	mg/kg	--	--	1.60E+03	Pass
SED8	ACENAPHTHENE	83329	Sediment	0.28165	U	mg/kg	--	--	1.20E+04	Pass
SED8	ACENAPHTHYLENE	83329	Sediment	0.28165	U	mg/kg	--	--	1.20E+04	Pass
SED 5	ACETONE	67641	Sediment	0.010325	U	mg/kg	--	--	2.00E+04	Pass
SED8	ACETOPHENONE		Sediment	0.28165	U	mg/kg	--	--		?
SED8	ALDRIN	309002	Sediment	0.001435	U	mg/kg	--	--	3.40E-01	Pass
SED8	ALPHA-BHC	319846	Sediment	0.001435	U	mg/kg	--	--	9.10E-01	Pass
SED8	ALPHA-CHLORDANE	57749	Sediment	0.001435	U	mg/kg	--	--	1.60E+01	Pass
SED8	ANTHRACENE	120127	Sediment	0.28165	U	mg/kg	--	--	6.10E+04	Pass
SED8	AROCHLOR-1016	12674112	Sediment	0.0278	U	mg/kg	--	--	8.20E+01	Pass
SED 5	AROCHLOR-1221	11104282	Sediment	0.054	U	mg/kg	--	--	2.90E+00	Pass
SED8	AROCHLOR-1232	11141165	Sediment	0.0278	U	mg/kg	--	--	2.90E+00	Pass
SED4	AROCHLOR-1242	53469219	Sediment	0.04085	U	mg/kg	--	--	2.90E+00	Pass
SED4	AROCHLOR-1248	12672296	Sediment	0.04085	U	mg/kg	--	--	2.90E+00	Pass
SED4	AROCHLOR-1254	11097691	Sediment	0.04085	U	mg/kg	--	--	2.90E+00	Pass
SED4	AROCHLOR-1260	11096825	Sediment	0.04085	U	mg/kg	--	--	2.90E+00	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ORIGINAL

ORIGINAL

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier 1 Screen ?
Sediment										
Surface:										
Organics:										
SED8	ATRAZINE	1912249	Sediment	0.28165	U	mg/kg	--	--	2.60E+01	Pass
SED 5	BENZALDEHYDE		Sediment	0.26345	U	mg/kg	--	--		?
SED 5	BENZENE	71432	Sediment	0.010325	U	mg/kg	--	--	1.00E+02	Pass
SED8	BENZO[A]ANTHRACENE	56553	Sediment	0.28165	U	mg/kg	--	--	7.80E+00	Pass
SED8	BENZO[A]PYRENE	50328	Sediment	0.28165	U	mg/kg	--	--	7.80E-01	Pass
SED8	BENZO[B]FLUORANTHENE	205992	Sediment	0.28165	U	mg/kg	--	--	7.80E+00	Pass
SED8	BENZO[G,H,I]PERYLENE	129000	Sediment	0.28165	U	mg/kg	--	--	6.10E+03	Pass
SED8	BENZO[K]FLUORANTHENE	207089	Sediment	0.28165	U	mg/kg	--	--	7.80E+01	Pass
SED8	BETA-BHC	319857	Sediment	0.001435	U	mg/kg	--	--	3.20E+00	Pass
SED8	BIS(2-CHLOROETHYL)ETHER	111444	Sediment	0.28165	U	mg/kg	--	--	5.20E+00	Pass
SED8	BIS(2-ETHYLHEXYL)PHTHALATE	117817	Sediment	0.67		mg/kg	--	--	4.10E+02	Pass
SED 5	BROMODICHLOROMETHANE	75274	Sediment	0.010325	U	mg/kg	--	--	9.20E+01	Pass
SED 5	BROMOFORM	75252	Sediment	0.010325	U	mg/kg	--	--	7.20E+02	Pass
SED 5	BROMOMETHANE	74839	Sediment	0.010325	U	mg/kg	--	--	2.90E+02	Pass
SED8	BUTYLBENZYLPHTHALATE		Sediment	0.28165	U	mg/kg	--	--		?
SED8	CAPROLACTAM		Sediment	0.28165	U	mg/kg	--	--		?
SED8	CARBAZOLE	86748	Sediment	0.28165	U	mg/kg	--	--	2.90E+02	Pass
SED 5	CARBON DISULFIDE	75150	Sediment	0.010325	U	mg/kg	--	--	2.00E+04	Pass
SED 5	CARBON TETRACHLORIDE	56235	Sediment	0.010325	U	mg/kg	--	--	4.40E+01	Pass
SED 5	CHLOROBENZENE	108907	Sediment	0.010325	U	mg/kg	--	--	4.10E+03	Pass
SED 5	CHLOROETHANE	75003	Sediment	0.010325	U	mg/kg	--	--	2.00E+03	Pass
SED 5	CHLOROFORM	67663	Sediment	0.010325	U	mg/kg	--	--	9.40E+02	Pass
SED 5	CHLOROMETHANE	74873	Sediment	0.010325	U	mg/kg	--	--	4.40E+02	Pass
SED8	CHRYSENE	218019	Sediment	0.28165	U	mg/kg	--	--	7.80E+02	Pass
SED 5	CIS-1,2-DICHLOROETHENE	156592	Sediment	0.010325	U	mg/kg	--	--	2.00E+03	Pass
SED 5	CIS-1,3-DICHLOROPROPENE	542756	Sediment	0.010325	U	mg/kg	--	--	5.70E+01	Pass
SED 5	CYCLOHEXANE		Sediment	0.010325	U	mg/kg	--	--		?

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier 1 Screen ?
Sediment										
Surface:										
Organics:										
SED8	DELTA-BHC	58899	Sediment	0.001435	U	mg/kg	--	--	4.40E+00	Pass
SED8	DIBENZO[A,H]ANTHRACENE	53703	Sediment	0.28165	U	mg/kg	--	--	7.80E-01	Pass
SED8	DIBENZOFURAN	132649	Sediment	0.28165	U	mg/kg	--	--	8.20E+02	Pass
SED 5	DIBROMOCHLOROMETHANE	124481	Sediment	0.010325	U	mg/kg	--	--	6.80E+01	Pass
SED 5	DICHLORODIFLUOROMETHANE		Sediment	0.010325	U	mg/kg	--	--		?
SED8	DIELDRIN	60571	Sediment	0.00278	U	mg/kg	--	--	3.60E-01	Pass
SED8	DIETHYLPHTHALATE	84662	Sediment	0.28165	U	mg/kg	--	--	1.60E+05	Pass
SED8	DIMETHYLPHTHALATE	131113	Sediment	0.28165	U	mg/kg	--	--	2.00E+06	Pass
SED8	DINBUTYLPHTHALATE	84742	Sediment	0.28165	U	mg/kg	--	--	2.00E+04	Pass
SED8	DINOCTYLPHTHALATE	117840	Sediment	0.28165	U	mg/kg	--	--	4.10E+03	Pass
SED8	ENDOSULFAN I	115297	Sediment	0.001435	U	mg/kg	--	--	1.20E+03	Pass
SED8	ENDOSULFAN II	115297	Sediment	0.00278	U	mg/kg	--	--	1.20E+03	Pass
SED8	ENDRIN	72208	Sediment	0.00278	U	mg/kg	--	--	6.10E+01	Pass
SED8	ENDRIN ALDEHYDE	72208	Sediment	0.00278	U	mg/kg	--	--	6.10E+01	Pass
SED8	ENDRIN KETONE	72208	Sediment	0.00278	U	mg/kg	--	--	6.10E+01	Pass
SED 5	ETHYLBENZENE	100414	Sediment	0.010325	U	mg/kg	--	--	2.00E+04	Pass
SED8	FLUORANTHENE	206440	Sediment	0.28165	U	mg/kg	--	--	8.20E+03	Pass
SED8	FLUORENE	86737	Sediment	0.28165	U	mg/kg	--	--	8.20E+03	Pass
SED8	GAMMA-BHC (LINDANE)	58899	Sediment	0.001435	U	mg/kg	--	--	4.40E+00	Pass
SED8	GAMMA-CHLORDANE	57749	Sediment	0.001435	U	mg/kg	--	--	1.60E+01	Pass
SED8	HEPTACHLOR	76448	Sediment	0.001435	U	mg/kg	--	--	1.30E+00	Pass
SED8	HEPTACHLOR EPOXIDE	1024573	Sediment	0.001435	U	mg/kg	--	--	6.30E-01	Pass
SED8	HEXACHLOROBENZENE		Sediment	0.28165	U	mg/kg	--	--		?
SED8	HEXACHLOROBUTADIENE	87683	Sediment	0.28165	U	mg/kg	--	--	7.30E+01	Pass
SED8	HEXACHLOROCYCLOPENTADIENE	77474	Sediment	0.28165	U	mg/kg	--	--	1.40E+03	Pass
SED8	HEXACHLOROETHANE	67721	Sediment	0.28165	U	mg/kg	--	--	4.10E+02	Pass
SED8	INDENO[1,2,3-CD]PYRENE	193395	Sediment	0.28165	U	mg/kg	--	--	7.80E+00	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ORIGINAL

ORIGINAL

Sample ID	Analyte	CAS	Matrix	Concentration	Qual.	Units	MDE Groundwater Standard	Pass Tier 1 Screen ?	MDE Soil Standard (Non-Residential)	Pass Tier Screen ?
Sediment										
Surface:										
Organics:										
SED8	ISOPHORONE	78591	Sediment	0.28165	U	mg/kg	--	--	6.00E+03	Pass
SED 5	ISOPROPYLBENZENE	98828	Sediment	0.010325	U	mg/kg	--	--	2.00E+04	Pass
SED8	METHOXYCHLOR	72435	Sediment	0.01435	U	mg/kg	--	--	1.00E+03	Pass
SED 5	METHYL ACETATE		Sediment	0.010325	U	mg/kg	--	--		?
SED 5	METHYL TERT BUTYL ETHER	1634044	Sediment	0.010325	U	mg/kg	--	--	2.70E+03	Pass
SED 5	METHYLCYCLOHEXANE		Sediment	0.010325	U	mg/kg	--	--		?
SED 5	METHYLENE CHLORIDE	75092	Sediment	0.014	B	mg/kg	--	--	7.60E+02	Pass
SED8	N-NITROSODINPROPYLAMINE	621647	Sediment	0.28165	U	mg/kg	--	--	8.20E-01	Pass
SED8	N-NITROSODIPHENYLAMINE	86306	Sediment	0.28165	U	mg/kg	--	--	1.20E+03	Pass
SED8	NAPHTHALENE	91203	Sediment	0.28165	U	mg/kg	--	--	4.10E+03	Pass
SED8	NITROBENZENE	98953	Sediment	0.28165	U	mg/kg	--	--	1.00E+02	Pass
SED8	PENTACHLOROPHENOL	87865	Sediment	0.7085	U	mg/kg	--	--	4.80E+01	Pass
SED8	PHENANTHRENE	120127	Sediment	0.28165	U	mg/kg	--	--	6.10E+04	Pass
SED8	PHENOL	108952	Sediment	0.28165	U	mg/kg	--	--	1.20E+05	Pass
SED8	PYRENE	129000	Sediment	0.28165	U	mg/kg	--	--	6.10E+03	Pass
SED 5	STYRENE	100425	Sediment	0.010325	U	mg/kg	--	--	4.10E+04	Pass
SED6	TETRACHLOROETHENE	127184	Sediment	0.015		mg/kg	--	--	1.10E+02	Pass
SED 5	TOLUENE	108883	Sediment	0.010325	U	mg/kg	--	--	4.10E+04	Pass
SED8	TOXAPHENE	8001352	Sediment	0.1435	U	mg/kg	--	--	5.20E+00	Pass
SED 5	TRANS-1,2-DICHLOROETHENE	156605	Sediment	0.010325	U	mg/kg	--	--	4.10E+03	Pass
SED 5	TRANS-1,3-DICHLOROPROPENE	542756	Sediment	0.010325	U	mg/kg	--	--	5.70E+01	Pass
SED 5	TRICHLOROETHENE	79016	Sediment	0.010325	U	mg/kg	--	--	5.20E+02	Pass
SED 5	TRICHLOROFLUOROMETHANE		Sediment	0.010325	U	mg/kg	--	--		?
SED 5	VINYL CHLORIDE	75014	Sediment	0.010325	U	mg/kg	--	--	7.90E+00	Pass
SED 5	XYLENES	1330207	Sediment	0.010325	U	mg/kg	--	--	4.10E+05	Pass

* RBC adjusted for non-carcinogenic additive effects; N = non-carcinogenic; C = carcinogenic. Note: no RBC value exists for inorganic mercury; the screening value was arbitrarily set at 1E-6 for soil and water.

ANALYTE MAX REPORT

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
65651							
	ANTIMONY						
		Sedime					
			S				
				SED6	5.2000	J	MG/KG
				SED1	3.9850	UL	MG/KG
				SED2	0.4700	B	MG/KG
				SED3	1.1000	B	MG/KG
				SED 5	103.0000	L	MG/KG
				SED7	8.7000	L	MG/KG
				SED8	11.0000	L	MG/KG
				SED4	3.5850	UL	MG/KG
		Soil					
			S				
				S14	1.5000	J	MG/KG
				S24	1.8000	B	MG/KG
				S23	4.9000	J	MG/KG
				S22	4.3000	J	MG/KG
				S21	9.7000	L	MG/KG
				S15	1.1000	J	MG/KG

ORIGINAL

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
				S13	1.7000	J	MG/KG
				S11	1.5000	J	MG/KG
				S25	12.5000	L	MG/KG
				S16	1.0000	J	MG/KG
			SS				
				SS11	1.1000	B	MG/KG
				SS24	1.4000	B	MG/KG
				SS23	3.9000	B	MG/KG
				SS22	3.0000	B	MG/KG
				SS21	3.7000	B	MG/KG
				SS14	1.3000	B	MG/KG
				SS13	2.8000	B	MG/KG
		Water					
			NA				
				MW3A	30.0000	U	UG/L
				MW3	30.0000	U	UG/L
				MW2	30.0000	U	UG/L
				MW1A	30.0000	U	UG/L
				MW1	30.0000	U	UG/L
				GW2	30.0000	U	UG/L
				PW5	30.0000	U	UG/L
				MW4DM	30.0000	U	UG/L
				GW3	30.0000	U	UG/L
				SW6	30.0000	U	ug/L

ORIGINAL

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
				GW2DM	30.0000	U	UG/L
				SW9DM	30.0000	U	UG/L
				SW8DM	30.0000	U	UG/L
				SW7DM	30.0000	U	UG/L
				SW6DM	30.0000	U	UG/L
				SW5DM	8.5000	J	UG/L
				SW4DM	30.0000	U	ug/L
				SW3DM	30.0000	U	ug/L
				SW2DM	30.0000	U	UG/L
				SW1DM	30.0000	U	UG/L
				SW9	30.0000	U	ug/L
				MW4	30.0000	U	UG/L
				SW7	30.0000	U	ug/L
				GW3DM	30.0000	U	UG/L
				SW5	8.1000	J	ug/L
				SW4	30.0000	U	ug/L
				SW3	30.0000	U	ug/L
				SW2	30.0000	U	ug/L
				SW1	30.0000	U	ug/L
				MW1ADM	30.0000	U	UG/L
				MW2DM	30.0000	U	UG/L
				PW5DM	30.0000	U	UG/L
				MW3DM	30.0000	U	UG/L
				MW3ADM	30.0000	U	UG/L
				MW1DM	30.0000	U	UG/L

ORIGINAL

ORIGINAL

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
				SW8	30.0000	U	ug/L

ANALYTE MAX REPORT

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
65651							
	ALUMINUM						
		Sedime					
			S				
				SED 5	6420.0000		MG/KG
				SED1	730.0000		MG/KG
				SED2	697.0000		MG/KG
				SED4	278.0000		MG/KG
				SED6	2990.0000		MG/KG
				SED7	3150.0000		MG/KG
				SED8	6060.0000		MG/KG
				SED3	2020.0000		MG/KG
		Soil					
			S				
				S14	7570.0000		MG/KG
				S24	3980.0000		MG/KG
				S23	9420.0000		MG/KG
				S22	12300.0000		MG/KG
				S21	40200.0000		MG/KG
				S15	4400.0000		MG/KG

ORIGINAL

ORIGINAL

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
				S13	7490.0000		MG/KG
				S12	5620.0000		MG/KG
				S11	4280.0000		MG/KG
				S25	64000.0000		MG/KG
				S16	3300.0000		MG/KG
			SS				
				SS11	6450.0000		MG/KG
				SS24	5630.0000		MG/KG
				SS23	4250.0000		MG/KG
				SS22	8620.0000		MG/KG
				SS21	12400.0000		MG/KG
				SS14	8610.0000		MG/KG
				SS13	1350.0000		MG/KG
		Water					
			NA				
				MW3A	9200.0000		UG/L
				MW3	1030.0000		UG/L
				MW2	172.0000	J	UG/L
				MW1A	449.0000		UG/L
				MW1	88300.0000		UG/L
				GW2	23200.0000		UG/L
				PW5	14.2000	J	UG/L
				MW4DM	100.0000	U	UG/L
				GW3	1010.0000		UG/L

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
				SW6	351.0000		ug/L
				GW2DM	100.0000	U	UG/L
				SW9DM	100.0000	U	UG/L
				SW8DM	44.3000	B	UG/L
				SW7DM	37.9000	B	UG/L
				SW6DM	64.5000	B	UG/L
				SW5DM	100.0000	U	UG/L
				SW4DM	127.0000	B	MG/KG
				SW3DM	82.2000	B	MG/KG
				SW2DM	87.1000	B	UG/L
				SW1DM	127.0000	B	UG/L
				SW9	39.3000	B	ug/L
				MW4	11000.0000		UG/L
				SW7	150.0000	J	ug/L
				GW3DM	100.0000	U	UG/L
				SW5	79.5000	B	ug/L
				SW4	359.0000		ug/L
				SW3	359.0000		ug/L
				SW2	558.0000		ug/L
				SW1	372.0000	K	ug/L
				MW1ADM	17.6000	B	UG/L
				MW2DM	30.2000	B	UG/L
				MW3DM	7.8000	B	UG/L
				PW5DM	9.2000	B	UG/L
				MW3ADM	190.0000	J	UG/L

ORIGINAL

ORIGINAL

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
				MW1DM	15.6000	B	UG/L
				SW8	893.0000		ug/L

ANALYTE MAX REPORT

PCAcode	*Analyte*	*Matrix*	*Depth*	*SampleID*	*Concentration*	*Qualifier*	*ConcUnit*
65651							
	ARSENIC						
		Sedime					
			S				
				SED 5	6.3000	L	MG/KG
				SED1	0.6700	J	MG/KG
				SED2	0.6200	UL	MG/KG
				SED4	0.5950	UL	MG/KG
				SED6	4.6000	L	MG/KG
				SED7	3.4000	L	MG/KG
				SED8	4.8000	L	MG/KG
				SED3	1.2000	J	MG/KG
		Soil					
			S				
				S14	6.0000		MG/KG
				S24	2.6000		MG/KG
				S23	4.0000		MG/KG
				S22	5.3000		MG/KG
				S21	14.2000		MG/KG
				S15	3.5000		MG/KG

ORIGINAL

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
				S13	2.9000		MG/KG
				S12	6.1000		MG/KG
				S11	3.2000		MG/KG
				S25	18.9000		MG/KG
				S16	2.1000		MG/KG
			SS				
				SS11	1.8000		MG/KG
				SS24	3.0000		MG/KG
				SS23	11.3000		MG/KG
				SS22	4.0000		MG/KG
				SS21	6.2000		MG/KG
				SS14	3.9000		MG/KG
				SS13	6.4000		MG/KG
		Water					
			NA				
				MW3A	5.0000	U	UG/L
				MW3	5.0000	U	UG/L
				MW2	3.3000	J	UG/L
				MW1A	5.0000	U	UG/L
				MW1	77.5000		UG/L
				GW2	20.0000		UG/L
				PW5	5.0000	U	UG/L
				MW4DM	5.0000	U	UG/L
				GW3	5.0000	U	UG/L

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
				SW6	5.0000	U	ug/L
				GW2DM	5.0000	U	UG/L
				SW9DM	5.0000	U	UG/L
				SW8DM	5.0000	U	UG/L
				SW7DM	5.0000	U	UG/L
				SW6DM	5.0000	U	UG/L
				SW5DM	3.2000	B	UG/L
				SW4DM	5.0000	U	ug/L
				SW3DM	5.0000	U	ug/L
				SW2DM	5.0000	U	UG/L
				SW1DM	5.0000	U	UG/L
				SW9	5.0000	U	ug/L
				MW4	41.1000		UG/L
				SW7	5.0000	U	ug/L
				GW3DM	5.0000	U	UG/L
				SW5	5.0000	U	ug/L
				SW4	5.0000	U	ug/L
				SW3	5.0000	U	ug/L
				SW2	5.0000	U	ug/L
				SW1	4.9000	B	ug/L
				MW1ADM	5.0000	U	UG/L
				MW2DM	5.0000	U	UG/L
				MW3DM	5.0000	U	UG/L
				PW5DM	5.0000	U	UG/L
				MW3ADM	5.0000	U	UG/L

ORIGINAL

ORIGINAL

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
				MW1DM	8.2000	J	UG/L
				SW8	3.1000	B	ug/L

ANALYTE MAX REPORT

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
65651							
	BARIUM						
		Sedime					
			S				
				SED 5	213.0000	J	MG/KG
				SED1	4.6000	J	MG/KG
				SED2	15.1000	J	MG/KG
				SED4	2.2000	J	MG/KG
				SED6	562.0000	J	MG/KG
				SED7	925.0000	J	MG/KG
				SED8	1610.0000	J	MG/KG
				SED3	27.8000	J	MG/KG
		Soil					
			S				
				S14	102.0000		MG/KG
				S24	501.0000		MG/KG
				S23	27.3000		MG/KG
				S22	5500.0000		MG/KG
				S21	30500.0000		MG/KG
				S15	29.2000		MG/KG

ORIGINAL

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
				S13	599.0000		MG/KG
				S12	23.0000	J	MG/KG
				S11	57.1000		MG/KG
				S25	47600.0000		MG/KG
				S16	51.2000		MG/KG
			SS				
				SS11	47.0000		MG/KG
				SS24	85.4000		MG/KG
				SS23	10.1000	J	MG/KG
				SS22	866.0000		MG/KG
				SS21	5990.0000		MG/KG
				SS14	33.8000		MG/KG
				SS13	37.5000		MG/KG
		Water					
			NA				
				MW3A	337.0000		UG/L
				MW3	219.0000		UG/L
				MW2	18.9000	J	UG/L
				MW1A	34.9000	J	UG/L
				MW1	31500.0000		UG/L
				GW2	43700.0000		UG/L
				PW5	12.5000	J	UG/L
				MW4DM	70.2000	J	UG/L
				GW3	230.0000		UG/L

ORIGINAL

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
				SW6	2590.0000	J	ug/L
				GW2DM	37800.0000		UG/L
				SW9DM	1830.0000	J	UG/L
				SW8DM	2040.0000	J	UG/L
				SW7DM	2030.0000	J	UG/L
				SW6DM	2430.0000	J	UG/L
				SW5DM	161.0000	J	UG/L
				SW4DM	51.4000	J	ug/L
				SW3DM	45.7000	J	ug/L
				SW2DM	39.0000	J	UG/L
				SW1DM	28.9000	J	UG/L
				SW9	1840.0000	J	ug/L
				MW4	99.6000	J	UG/L
				SW7	2030.0000	J	ug/L
				GW3DM	196.0000	J	UG/L
				SW5	170.0000	J	ug/L
				SW4	50.8000	J	ug/L
				SW3	48.1000	J	ug/L
				SW2	43.0000	J	ug/L
				SW1	33.8000	J	ug/L
				MW1ADM	31.8000	J	UG/L
				MW2DM	50.6000	J	UG/L
				MW3DM	206.0000		UG/L
				PW5DM	12.2000	J	UG/L
				MW3ADM	130.0000	J	UG/L

ORIGINAL

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
				MW1DM	26000.0000		UG/L
				SW8	2270.0000	J	ug/L

ANALYTE MAX REPORT

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
65651							
	CHROMIUM						
		Sedime					
			S				
				SED 5	17.7000		MG/KG
				SED1	7.8000		MG/KG
				SED2	5.3000		MG/KG
				SED4	3.2000		MG/KG
				SED6	17.7000		MG/KG
				SED7	15.0000		MG/KG
				SED8	25.5000		MG/KG
				SED3	9.4000		MG/KG
		Soil					
			S				
				S14	28.3000		MG/KG
				S24	12.8000		MG/KG
				S23	20.6000		MG/KG
				S22	42.9000		MG/KG
				S21	150.0000		MG/KG
				S15	18.2000		MG/KG

ORIGINAL

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
				S13	20.7000		MG/KG
				S12	21.8000		MG/KG
				S11	14.9000		MG/KG
				S25	187.0000		MG/KG
				S16	12.0000		MG/KG
			SS				
				SS11	15.2000		MG/KG
				SS24	25.9000		MG/KG
				SS23	77.6000		MG/KG
				SS22	28.0000		MG/KG
				SS21	61.3000		MG/KG
				SS14	16.3000		MG/KG
				SS13	27.2000		MG/KG
		Water					
			NA				
				MW3A	124.0000		UG/L
				MW3	32.1000		UG/L
				MW2	1.8000	B	UG/L
				MW1A	38.6000		UG/L
				MW1	328.0000		UG/L
				GW2	230.0000		UG/L
				PW5	1.6000	B	UG/L
				MW4DM	0.7300	B	UG/L
				GW3	35.6000		UG/L

ORIGINAL

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
				SW6	2.1000	J	ug/L
				GW2DM	5.0000	U	UG/L
				SW9DM	0.4200	J	UG/L
				SW8DM	1.1000	J	UG/L
				SW7DM	0.9200	J	UG/L
				SW6DM	1.1000	J	UG/L
				SW5DM	2.5000	J	UG/L
				SW4DM	1.5000	J	ug/L
				SW3DM	0.5300	J	ug/L
				SW2DM	0.6800	J	UG/L
				SW1DM	1.5000	J	UG/L
				SW9	0.6100	J	ug/L
				MW4	335.0000		UG/L
				SW7	1.1000	J	ug/L
				GW3DM	2.2000	B	UG/L
				SW5	2.5000	J	ug/L
				SW4	2.0000	J	ug/L
				SW3	1.4000	J	ug/L
				SW2	1.8000	J	ug/L
				SW1	2.8000	J	ug/L
				MW1ADM	0.6100	B	UG/L
				MW2DM	0.9100	B	UG/L
				MW3DM	1.9000	B	UG/L
				PW5DM	1.7000	B	UG/L
				MW3ADM	1.1000	B	UG/L

ORIGINAL

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
				MW1DM	5.0000	U	UG/L
				SW8	3.5000	J	ug/L

ORIGINAL

ANALYTE MAX REPORT

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
65651							
	MANGANESE						
		Sedime					
			S				
				SED 5	2150.0000		MG/KG
				SED1	7.7000		MG/KG
				SED2	5.6000		MG/KG
				SED4	10.1000		MG/KG
				SED6	315.0000		MG/KG
				SED7	213.0000		MG/KG
				SED8	850.0000		MG/KG
				SED3	31.3000		MG/KG
		Soil					
			S				
				S14	77.2000		MG/KG
				S24	8.7000		MG/KG
				S23	47.0000		MG/KG
				S22	455.0000		MG/KG
				S21	693.0000		MG/KG
				S15	38.8000		MG/KG

ORIGINAL

ORIGINAL

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
				S13	113.0000		MG/KG
				S12	72.1000		MG/KG
				S11	34.4000		MG/KG
				S25	824.0000		MG/KG
				S16	63.6000		MG/KG
			SS				
				SS11	71.4000		MG/KG
				SS24	19.2000		MG/KG
				SS23	32.4000		MG/KG
				SS22	92.6000		MG/KG
				SS21	108.0000		MG/KG
				SS14	52.1000		MG/KG
				SS13	23.9000		MG/KG
		Water					
			NA				
				MW3A	59.1000	J	UG/L
				MW3	25.0000	J	UG/L
				MW2	26.5000	J	UG/L
				MW1A	18.7000	J	UG/L
				MW1	1940.0000	J	UG/L
				GW2	185.0000	J	UG/L
				PW5	10.7000	J	UG/L
				MW4DM	1540.0000	J	UG/L
				GW3	27.0000	J	UG/L

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
				SW6	1540.0000		ug/L
				GW2DM	100.0000	J	UG/L
				SW9DM	309.0000		UG/L
				SW8DM	769.0000		UG/L
				SW7DM	661.0000		UG/L
				SW6DM	802.0000		UG/L
				SW5DM	6020.0000		UG/L
				SW4DM	74.0000		ug/L
				SW3DM	79.5000		ug/L
				SW2DM	68.0000		UG/L
				SW1DM	54.8000		UG/L
				SW9	332.0000		ug/L
				MW4	1520.0000	J	UG/L
				SW7	697.0000		ug/L
				GW3DM	14.2000	J	UG/L
				SW5	6150.0000		ug/L
				SW4	68.5000		ug/L
				SW3	78.0000		ug/L
				SW2	69.5000		ug/L
				SW1	54.0000		ug/L
				MW1ADM	22.5000	J	UG/L
				MW2DM	30.1000	J	UG/L
				MW3DM	19.4000	J	UG/L
				PW5DM	11.0000	J	UG/L
				MW3ADM	47.5000	J	UG/L

ORIGINAL

ORIGINAL

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
				MW1DM	383.0000	J	UG/L
				SW8	1080.0000		ug/L

ANALYTE MAX REPORT

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
65651							
	VANADIUM						
		Sedime					
			S				
				SED 5	21.1000		MG/KG
				SED1	5.0000	J	MG/KG
				SED2	5.3000	J	MG/KG
				SED4	2.3000	J	MG/KG
				SED6	27.3000		MG/KG
				SED7	17.7000		MG/KG
				SED8	26.9000		MG/KG
				SED3	9.9000		MG/KG
		Soil					
			S				
				S14	31.7000		MG/KG
				S24	14.5000		MG/KG
				S23	27.5000		MG/KG
				S22	24.8000		MG/KG
				S21	28.4000		MG/KG
				S15	24.7000		MG/KG

ORIGINAL

ORIGINAL

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
				S13	23.5000		MG/KG
				S12	9.8000		MG/KG
				S11	20.5000		MG/KG
				S25	27.3000		MG/KG
				S16	12.0000		MG/KG
			SS				
				SS11	9.8500	U	MG/KG
				SS24	19.5000		MG/KG
				SS23	64.9000		MG/KG
				SS22	34.2000		MG/KG
				SS21	35.2000		MG/KG
				SS14	23.1000		MG/KG
				SS13	37.4000		MG/KG
		Water					
			NA				
				MW3A	120.0000		UG/L
				MW3	14.5000	J	UG/L
				MW2	1.0000	J	UG/L
				MW1A	7.7000	J	UG/L
				MW1	637.0000		UG/L
				GW2	204.0000		UG/L
				PW5	25.0000	U	UG/L
				MW4DM	25.0000	U	UG/L
				GW3	15.9000	J	UG/L

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
				SW6	1.9000	J	ug/L
				GW2DM	25.0000	U	UG/L
				SW9DM	25.0000	U	UG/L
				SW8DM	25.0000	U	UG/L
				SW7DM	25.0000	U	UG/L
				SW6DM	0.6800	J	UG/L
				SW5DM	25.0000	U	UG/L
				SW4DM	25.0000	U	ug/L
				SW3DM	25.0000	U	ug/L
				SW2DM	25.0000	U	UG/L
				SW1DM	25.0000	U	UG/L
				SW9	25.0000	U	ug/L
				MW4	218.0000		UG/L
				SW7	0.9000	J	ug/L
				GW3DM	25.0000	U	UG/L
				SW5	25.0000	U	ug/L
				SW4	1.0000	J	ug/L
				SW3	0.8400	J	ug/L
				SW2	1.7000	J	ug/L
				SW1	2.1000	J	ug/L
				MW1ADM	25.0000	U	UG/L
				MW2DM	25.0000	U	UG/L
				MW3DM	0.9500	J	UG/L
				PW5DM	25.0000	U	UG/L
				MW3ADM	25.0000	U	UG/L

ORIGINAL

ORIGINAL

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
				MW1DM	25.0000	U	UG/L
				SW8	3.6000	J	ug/L

ANALYTE MAX REPORT

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
65651							
	PERCHLORATE						
		Sedime					
			S				
				SED4	0.0025	U	mg/kg
				SED1	0.0025	U	mg/kg
				SED3	0.0025	U	mg/kg
				SED 5	0.0025	U	mg/kg
				SED7	0.0025	U	mg/kg
				SED8	0.0025	U	mg/kg
				SED2	0.0025	U	mg/kg
		Soil					
			S				
				S25	0.0450		mg/kg
				S23	0.0025	U	mg/kg
				S21	0.0620		mg/kg
				S24	0.0025	U	mg/kg
				S16	0.0025	U	mg/kg
				S15	0.0090		mg/kg
				S14	0.0180		mg/kg

ORIGINAL

ORIGINAL

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
				S13	0.0250		mg/kg
				S12	0.0060		mg/kg
				S11	0.0025	U	mg/kg
				S22	0.0070		mg/kg
			SS				
				SS22	1.7900	L	mg/kg
				SS11	0.0025	U	mg/kg
				SS13	0.0025	U	mg/kg
				SS14	0.0025	U	mg/kg
				SS21	0.0360		mg/kg
				SS24	0.0025	U	mg/kg
				SS23	0.0025	U	mg/kg
		Water					
			NA				
				MW1	0.5000	U	ug/L
				PW5	27.7000	L	ug/L
				MW4	9.3500	L	ug/L
				SW8	7.5200		ug/L
				SW7	7.6500		ug/L
				SW6	8.5100		ug/L
				SW5	0.5000	U	ug/L
				SW4	0.5000	U	ug/L
				SW3	0.5000	U	ug/L
				GW2	438.0000	L	ug/L

PCAcode	Analyte	Matrix	Depth	SampleID	Concentration	Qualifier	ConcUnit
				SW1	0.5000	U	ug/L
				GW1	0.5000	U	ug/L
				MW3A	5.0700		ug/L
				MW3	0.5000	U	ug/L
				MW2	0.5000	U	ug/L
				MW1A	0.5000	U	ug/L
				SW9	0.5000	U	ug/L
				GW3	4.7900		ug/L
				SW2	0.5000	U	ug/L

ORIGINAL

ORIGINAL

ORIGINAL

From File

Summary Statistics for	Aluminum (sediment)
Number of Samples	8
Minimum	278
Maximum	6420
Mean	2793.125
Median	2505
Standard Deviation	2377.472093
Variance	5652373.554
Coefficient of Variation	0.8511871446
Skewness	0.6840902536
Shapiro-Wilk Test Statisitic	0.8768662203
Shapiro-Wilk 5% Critical Value	0.818
Data are Normal at 5% Significance Level	
Recommended UCL to use	Student's-t
95 % UCL (Assuming Normal Data)	
Student's-t	4385.63819
95 % UCL (Adjusted for Skewness)	
Adjusted-CLT	4392.958354
Modified-t	4419.521637
95 % Non-parametric UCL	
CLT	4175.728626
Jackknife	4385.63819
Standard Bootstrap	4073.356228
Bootstrap-t	5269.275312
Chebyshev (Mean, Std)	6457.055566

General Statistics

ORIGINAL

From File			
Summary Statistics for	Aluminum S	Summary Statistics for	ln(Aluminu
Number of Samples	11	Minimum	8.101678
Minimum	3300	Maximum	11.06664
Maximum	64000	Mean	9.078668
Mean	14778.18182	Standard Deviation	0.959293
Median	7490	Variance	0.920244
Standard Deviation	19388.45884		
Variance	375912336.4	Shapiro-Wilk Test Statisitic	0.849123
Coefficient of Variation	1.311965104	Shapiro-Wilk 5% Critical Value	0.85
Skewness	2.162232987	Data Not Lognormal at 5% Significance Level	
		Try Normal or Non-parametric UCL	
95 % UCL (Normal Data)			
Student's t	25373.53983	Estimates Assuming Lognormal Distribution	
		MLE Mean	13888.13
95 % UCL (Adjusted for Skewness)		MLE Standard Deviation	17065.47
Adjusted CLT	28465.97476	MLE Coefficient of Variation	1.228781
Modified t	26008.72719	MLE Skewness	5.541681
		MLE Median	8766.281
95 % Non-parametric UCL		MLE 80% Quantile	19717.68
CLT	24393.73344	MLE 90% Quantile	30072.31
Jackknife	25373.53983	MLE 95% Quantile	42476.47
Standard Bootstrap	24045.17754	MLE 99% Quantile	81632.63
Bootstrap t	71265.64671		
Chebyshev (Mean, Std)	40259.60891	MVU Estimate of Median	8405.922
		MVU Estimate of Mean	13140.26
		MVU Estimate of Std. Dev.	13623.05
		MVU Estimate of SE of Mean	4016.826
		UCL Assuming Lognormal Distribution	
		95% H-UCL	33789.9
		95% Chebyshev (MVUE) UCL	30649.19
		99% Chebyshev (MVUE) UCL	53107.17
		Recommended UCL to use:	
		H-UCL	

ORIGINAL

From File

Summary Statistics for	Antimony (sediment)
Number of Samples	8
Minimum	0.47
Maximum	103
Mean	17.13
Median	4.5925
Standard Deviation	34.87815147
Variance	1216.48545
Coefficient of Variation	2.0360859
Skewness	2.770577787
Shapiro-Wilk Test Statisitic	0.5137664428
Shapiro-Wilk 5% Critical Value	0.818

Data not Normal at 5% Significance Level
Data are Lognormal: Try Lognormal UCLs

95 % UCL (Assuming Normal Data)	
Student's-t	40.49259442
95 % UCL (Adjusted for Skewness)	
Adjusted-CLT	50.31983582
Modified-t	42.50577425
95 % Non-parametric UCL	
CLT	37.41316497
Jackknife	40.49259442
Standard Bootstrap	36.2015698
Bootstrap-t	189.952466
Chebyshev (Mean, Std)	70.88084133

ORIGINAL

General Statistics

ORIGINAL

From File	C:\ProUcl\3800Biddle.xls			
Summary Statistics for	ArsenicS		Summary Statistics for	ln(ArsenicS
Number of Samples	11		Minimum	0.741937
Minimum	2.1		Maximum	2.939162
Maximum	18.9		Mean	1.584048
Mean	6.254545		Standard Deviation	0.691366
Median	4		Variance	0.477987
Standard Deviation	5.365699			
Variance	28.79073		Shapiro-Wilk Test Statisitic	0.905285
Coefficient of Variation	0.857888		Shapiro-Wilk 5% Critical Value	0.85
Skewness	1.822613		Data Are Lognormal at 5% Significance Level	
95 % UCL (Normal Data)			Estimates Assuming Lognormal Distribution	
Student's t	9.18678		MLE Mean	6.190657
			MLE Standard Deviation	4.846237
95 % UCL (Adjusted for Skewness)			MLE Coefficient of Variation	0.782831
Adjusted CLT	9.865588		MLE Skewness	2.82823
Modified t	9.334955		MLE Median	4.874648
			MLE 80% Quantile	8.742988
95 % Non-parametric UCL			MLE 90% Quantile	11.85148
CLT	8.915621		MLE 95% Quantile	15.20075
Jackknife	9.18678		MLE 99% Quantile	24.34106
Standard Bootstrap	8.804944			
Bootstrap t	15.01206		MVU Estimate of Median	4.769692
Chebyshev (Mean, Std)	13.30646		MVU Estimate of Mean	6.034757
			MVU Estimate of Std. Dev.	4.35327
			MVU Estimate of SE of Mean	1.303415
			UCL Assuming Lognormal Distribution	
			95% H-UCL	10.59824
			95% Chebyshev (MVUE) UCL	11.71621
			99% Chebyshev (MVUE) UCL	19.00357
			Recommended UCL to use:	
			H-UCL	

ORIGINAL

From File		
Summary Statistics for	ArsenicS	
Number of Samples	11	
Minimum	23	
Maximum	47600	
Mean	7726.345	
Median	102	
Standard Deviation	16031.93	
Variance	2.6E+008	
Coefficient of Variation	2.074969	
Skewness	2.12793	
Shapiro-Wilk Test Statisitic	0.564634	
Shapiro-Wilk 5% Critical Value	0.85	
Data Not Normal at 0.05 Significance Level		
Try Lognormal or Non-parametric UCL		
95% UCL (Normal Data)		
Student's t	16487.44	
95% UCL (Adjusted for Skewness)		
Adjusted CLT	18991.09	
Modified t	17004.33	
95% Non-parametric UCL		
CLT	15677.25	
Jackknife	16487.44	
Standard Bootstrap	15238.08	
Bootstrap t	77741.35	
Chebyshev (Mean, Std)	28796.43	

ORIGINAL

From File	C:\ProUcl\3800Biddle.xls			
Summary Statistics for	BariumS		Summary Statistics for	ln(BariumS
Number of Samples	11		Minimum	3.135494
Minimum	23		Maximum	10.77059
Maximum	47600		Mean	5.885682
Mean	7726.345		Standard Deviation	2.840436
Median	102		Variance	8.068078
Standard Deviation	16031.93			
Variance	2.6E+008		Shapiro-Wilk Test Statisitic	0.851669
Coefficient of Variation	2.074969		Shapiro-Wilk 5% Critical Value	0.85
Skewness	2.12793		Data Are Lognormal at 5% Significance Leve	
95 % UCL (Normal Data)			Estimates Assuming Lognormal Distribution	
Student's t	16487.44		MLE Mean	20327.33
			MLE Standard Deviation	1148082
95 % UCL (Adjusted for Skewness)			MLE Coefficient of Variation	56.47975
Adjusted CLT	18991.09		MLE Skewness	180337.7
Modified t	17004.33		MLE Median	359.8483
			MLE 80% Quantile	3967.34
95 % Non-parametric UCL			MLE 90% Quantile	13844.5
CLT	15677.25		MLE 95% Quantile	38491.78
Jackknife	16487.44		MLE 99% Quantile	266342.2
Standard Bootstrap	15265.55			
Bootstrap t	77664.08		MVU Estimate of Median	246.3822
Chebyshev (Mean, Std)	28796.43		MVU Estimate of Mean	7039.187
			MVU Estimate of Std. Dev.	30631.07
			MVU Estimate of SE of Mean	5779.842
			UCL Assuming Lognormal Distribution	
			95% H-UCL	12485207
			95% Chebyshev (MVUE) UCL	32232.93
			99% Chebyshev (MVUE) UCL	64547.89
			Recommended UCL to use:	
			Greater of	
				99 % Chebyshev (MVUE) UCL
				99 % Chebyshev (Mean, Std)

ORIGINAL

From File		
Summary Statistics for	BariumS	
Number of Samples	11	
Minimum	23	
Maximum	47600	
Mean	7726.345	
Median	102	
Standard Deviation	16031.93	
Variance	2.6E+008	
Coefficient of Variation	2.074969	
Skewness	2.12793	
Shapiro-Wilk Test Statisitic	0.564634	
Shapiro-Wilk 5% Critical Value	0.85	
Data Not Normal at 0.05 Significance Level		
Try Lognormal or Non-parametric UCL		
95 % UCL (Normal Data)		
Student's t	16487.44	
95 % UCL (Adjusted for Skewness)		
Adjusted CLT	18991.09	
Modified t	17004.33	
95 % Non-parametric UCL		
CLT	15677.25	
Jackknife	16487.44	
Standard Bootstrap	15449.32	
Bootstrap t	77712.75	
Chebyshev (Mean, Std)	28796.43	

ORIGINAL

From File	C:\ProUcl\3800Biddle.xls	
Summary Statistics for	Chromium!	
Number of Samples	11	
Minimum	12	
Maximum	187	
Mean	48.10909	
Median	20.7	
Standard Deviation	60.69609	
Variance	3684.015	
Coefficient of Variation	1.261634	
Skewness	1.921342	
Shapiro-Wilk Test Statisitic	0.621822	
Shapiro-Wilk 5% Critical Value	0.85	
Data Not Normal at 0.05 Significance Level		
Try Lognormal or Non-parametric UCL		
95	% UCL (Normal Data)	
Student's t	81.27814	
95	% UCL (Adjusted for Skewness)	
Adjusted CLT	89.53883	
Modified t	83.04508	
95	% Non-parametric UCL	
CLT	78.21083	
Jackknife	81.27814	
Standard Bootstrap	76.88438	
Bootstrap t	237.5575	
Chebyshev (Mean, Std)	127.8794	

ORIGINAL

General Statistics

From File	C:\ProUcl\3800Biddle.xls			
Summary Statistics for	Chromium!		Summary Statistics for	ln(Chromiu
Number of Samples	11		Minimum	2.484907
Minimum	12		Maximum	5.231109
Maximum	187		Mean	3.374359
Mean	48.10909		Standard Deviation	0.935298
Median	20.7		Variance	0.874783
Standard Deviation	60.69609			
Variance	3684.015		Shapiro-Wilk Test Statisitic	0.808869
Coefficient of Variation	1.261634		Shapiro-Wilk 5% Critical Value	0.85
Skewness	1.921342		Data Not Lognormal at 5% Significance Level	
			Try Normal or Non-parametric UCL	
95 % UCL (Normal Data)				
Student's t	81.27814		Estimates Assuming Lognormal Distribution	
			MLE Mean	45.22954
95 % UCL (Adjusted for Skewness)			MLE Standard Deviation	53.48486
Adjusted CLT	89.53883		MLE Coefficient of Variation	1.182521
Modified t	83.04508		MLE Skewness	5.201146
			MLE Median	29.20555
95 % Non-parametric UCL			MLE 80% Quantile	64.37247
CLT	78.21083		MLE 90% Quantile	97.14622
Jackknife	81.27814		MLE 95% Quantile	136.0367
Standard Bootstrap	77.28072		MLE 99% Quantile	257.2023
Bootstrap t	242.0595			
Chebyshev (Mean, Std)	127.8794		MVU Estimate of Median	28.06331
			MVU Estimate of Mean	42.93653
			MVU Estimate of Std. Dev.	43.25074
			MVU Estimate of SE of Mean	12.77641
			UCL Assuming Lognormal Distribution	
			95% H-UCL	106.1913
			95% Chebyshev (MVUE) UCL	98.62759
			99% Chebyshev (MVUE) UCL	170.0602
			Recommended UCL to use:	
			H-UCL	

General Statistics

ORIGINAL

From File	C:\ProUcl\3800Biddle.xls			
Summary Statistics for	Manganese		Summary Statistics for	ln(Mangan
Number of Samples	11		Minimum	2.163323
Minimum	8.7		Maximum	6.714171
Maximum	824		Mean	4.553627
Mean	220.6182		Standard Deviation	1.393674
Median	72.1		Variance	1.942328
Standard Deviation	293.9047			
Variance	86379.95		Shapiro-Wilk Test Statisitic	0.925406
Coefficient of Variation	1.332187		Shapiro-Wilk 5% Critical Value	0.85
Skewness	1.441374		Data Are Lognormal at 5% Significance Leve	
95	% UCL (Normal Data)		Estimates Assuming Lognormal Distribution	
Student's t	381.2305		MLE Mean	250.834
			MLE Standard Deviation	613.1322
95	% UCL (Adjusted for Skewness)		MLE Coefficient of Variation	2.444375
Adjusted CLT	407.528		MLE Skewness	21.93819
Modified t	387.6491		MLE Median	94.97629
			MLE 80% Quantile	308.3643
95	% Non-parametric UCL		MLE 90% Quantile	569.3519
CLT	366.3779		MLE 95% Quantile	940.3211
Jackknife	381.2305		MLE 99% Quantile	2429.191
Standard Bootstrap	359.0876			
Bootstrap t	533.5971		MVU Estimate of Median	86.89313
Chebyshev (Mean, Std)	606.8846		MVU Estimate of Mean	217.1482
			MVU Estimate of Std. Dev.	350.9232
			MVU Estimate of SE of Mean	98.1909
			UCL Assuming Lognormal Distribution	
			95% H-UCL	1350.005
			95% Chebyshev (MVUE) UCL	645.1524
			99% Chebyshev (MVUE) UCL	1194.135
			Recommended UCL to use:	
				95 % Chebyshev (MVUE) UCL

ORIGINAL

From File	C:\ProUcl\3800Biddle.xls	
Summary Statistics for	Manganese	
Number of Samples	11	
Minimum	8.7	
Maximum	824	
Mean	220.6182	
Median	72.1	
Standard Deviation	293.9047	
Variance	86379.95	
Coefficient of Variation	1.332187	
Skewness	1.441374	
Shapiro-Wilk Test Statisitic	0.703271	
Shapiro-Wilk 5% Critical Value	0.85	
Data Not Normal at 0.05 Significance Level		
Try Lognormal or Non-parametric UCL		
95	% UCL (Normal Data)	
Student's t	381.2305	
95	% UCL (Adjusted for Skewness)	
Adjusted CLT	407.528	
Modified t	387.6491	
95	% Non-parametric UCL	
CLT	366.3779	
Jackknife	381.2305	
Standard Bootstrap	363.1717	
Bootstrap t	530.347	
Chebyshev (Mean, Std)	606.8846	

ORIGINAL

From File		
Summary Statistics for	Vanadium8	
Number of Samples	11	
Minimum	9.8	
Maximum	31.7	
Mean	22.24545	
Median	24.7	
Standard Deviation	7.193381	
Variance	51.74473	
Coefficient of Variation	0.323364	
Skewness	-0.685358	
Shapiro-Wilk Test Statisitic	0.910265	
Shapiro-Wilk 5% Critical Value	0.85	
Data Are Normal at 0.05 Significance Level		
Recommended UCL to use	Student's t	
95 % UCL (Normal Data)		
Student's t	26.17648	
95 % UCL (Adjusted for Skewness)		
Adjusted CLT	25.33406	
Modified t	26.10178	
95 % Non-parametric UCL		
CLT	25.81295	
Jackknife	26.17648	
Standard Bootstrap	25.67819	
Bootstrap t	25.82053	
Chebyshev (Mean, Std)	31.69941	

ORIGINAL

From File

Summary Statistics for	Perchlorate S
Number of Samples	7
Minimum	0.006
Maximum	0.062
Mean	0.02457142857
Median	0.018
Standard Deviation	0.02143872775
Variance	0.00045961905
Coefficient of Variation	0.872506362
Skewness	1.067233501
Shapiro-Wilk Test Statisitic	0.8587562439
Shapiro-Wilk 5% Critical Value	0.803
Data are Normal at 5% Significance Level	
Recommended UCL to use	Student's-t
95 % UCL (Assuming Normal Data)	
Student's-t	0.04031716325
95 % UCL (Adjusted for Skewness)	
Adjusted-CLT	0.04139234042
Modified-t	0.04086192821
95 % Non-parametric UCL	
CLT	0.03789980489
Jackknife	0.04031716325
Standard Bootstrap	0.03701698823
Bootstrap-t	0.05498438056
Chebyshev (Mean, Std)	0.05989192425

ATTACHMENT B

ORIGINAL

groundwater
NJ Fireworks
65651

ORIGINAL

DATA ENTRY SHEET

GW-SCREEN
Version 3.0; 04/03

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [X]

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
7439976	3.60E-01	Mercury (elemental)

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	82	SC	13.9	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
		1.00E-08	SC	1.5	0.43	0.3

MORE ↓

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
1.0E-06	1	70	25	25	250

Used to calculate risk-based groundwater concentration.

RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (µg/L)	Indoor exposure groundwater conc., noncarcinogen (µg/L)	Risk-based indoor exposure groundwater conc., (µg/L)	Pure component water solubility, S (µg/L)	Final indoor exposure groundwater conc., (µg/L)
NA	NA	NA	2.00E+04	NA

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	7.9E-03

MESSAGE SUMMARY BELOW:

END

ORIGINAL

Surface Soil
NJ Fireworks
65651

ORIGINAL

DATA ENTRY SHEET

SL-SCREEN
Version 3.0; 04/03

Reset to Defaults

CALCULATE RISK-BASED SOIL CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL SOIL CONCENTRATION (enter "X" in "YES" box and initial soil conc. below)

YES [X]

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial soil conc., C_R (µg/kg)	Chemical
72559	1.90E+01	DDE

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to top of contamination, L_1 (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	61	13.9			1.00E-08

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Vadose zone soil organic carbon fraction, f_{oc}^V (unitless)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SC	1.5	0.43	0.3	0.002	5

MORE ↓

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)
70	25	25	250	1.0E-06	1
				Used to calculate risk-based soil concentration.	

END

RESULTS SHEET

RISK-BASED SOIL CONCENTRATION CALCULATIONS:

Indoor exposure soil conc., carcinogen (µg/kg)	Indoor exposure soil conc., noncarcinogen (µg/kg)	Risk-based indoor exposure soil conc., (µg/kg)	Soil saturation conc., C_{sat} (µg/kg)	Final indoor exposure soil conc., (µg/kg)
NA	NA	NA	1.07E+06	NA

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
2.2E-11	NA

MESSAGE SUMMARY BELOW:

MESSAGE: Risk/HQ or risk-based soil concentration is based on a route-to-route extrapolation.

END

ORIGINAL

SL-SCREEN
Version 3.0; 04/03

Reset to Defaults

ORIGINAL

CALCULATE RISK-BASED SOIL CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL SOIL CONCENTRATION (enter "X" in "YES" box and initial soil conc. below)

YES [X]

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial soil conc., C_R (µg/kg)	Chemical
7439976	1.70E+03	Mercury (elemental)

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to top of contamination, L_t (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	61	13.9			1.00E-08

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Vadose zone soil organic carbon fraction, f_{oc}^V (unitless)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SC	1.5	0.43	0.3	0.002	5

MORE ↓

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)
70	25	25	250	1.0E-06	1
				Used to calculate risk-based soil concentration.	

END

RESULTS SHEET

RISK-BASED SOIL CONCENTRATION CALCULATIONS:

Indoor exposure soil conc., carcinogen (µg/kg)	Indoor exposure soil conc., noncarcinogen (µg/kg)	Risk-based indoor exposure soil conc., (µg/kg)	Soil saturation conc., C_{sat} (µg/kg)	Final indoor exposure soil conc., (µg/kg)
NA	NA	NA	1.04E+06	NA

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	4.7E+02

MESSAGE SUMMARY BELOW:

END

ORIGINAL

ORIGINAL

SL-SCREEN
Version 3.0; 04/03

Reset to Defaults

CALCULATE RISK-BASED SOIL CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL SOIL CONCENTRATION (enter "X" in "YES" box and initial soil conc. below)

YES [X]

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial soil conc., C_R (µg/kg)	Chemical
218019	4.60E+02	Chrysene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to top of contamination, L_1 (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	61	13.9			1.00E-08

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Vadose zone soil organic carbon fraction, f_{oc}^V (unitless)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SC	1.5	0.43	0.3	0.002	5

MORE ↓

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)
70	25	25	250	1.0E-06	1

Used to calculate risk-based soil concentration.

END

RESULTS SHEET

RISK-BASED SOIL CONCENTRATION CALCULATIONS:

Indoor exposure soil conc., carcinogen (µg/kg)	Indoor exposure soil conc., noncarcinogen (µg/kg)	Risk-based indoor exposure soil conc., (µg/kg)	Soil saturation conc., C_{sat} (µg/kg)	Final indoor exposure soil conc., (µg/kg)
NA	NA	NA	5.02E+03	NA

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
2.2E-10	NA

MESSAGE SUMMARY BELOW:

MESSAGE: Risk/HQ or risk-based soil concentration is based on a route-to-route extrapolation.

END

ORIGINAL

SL-SCREEN
Version 3.0; 04/03

Reset to Defaults

ORIGINAL

CALCULATE RISK-BASED SOIL CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL SOIL CONCENTRATION (enter "X" in "YES" box and initial soil conc. below)

YES [X]

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial soil conc., C_R (µg/kg)	Chemical
75092	1.90E+01	Methylene chloride

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to top of contamination, L_t (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	61	13.9			1.00E-08

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Vadose zone soil organic carbon fraction, f_{oc}^V (unitless)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SC	1.5	0.43	0.3	0.002	5

MORE ↓

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)
70	25	25	250	1.0E-06	1

Used to calculate risk-based soil concentration.

END

RESULTS SHEET

RISK-BASED SOIL CONCENTRATION CALCULATIONS:

Indoor exposure soil conc., carcinogen (µg/kg)	Indoor exposure soil conc., noncarcinogen (µg/kg)	Risk-based indoor exposure soil conc., (µg/kg)	Soil saturation conc., C_{sat} (µg/kg)	Final indoor exposure soil conc., (µg/kg)
NA	NA	NA	2.98E+06	NA

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
3.9E-07	7.7E-04

MESSAGE SUMMARY BELOW:

END

ORIGINAL

SL-SCREEN
Version 3.0; 04/03

Reset to Defaults

ORIGINAL

CALCULATE RISK-BASED SOIL CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL SOIL CONCENTRATION (enter "X" in "YES" box and initial soil conc. below)

YES [X]

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial soil conc., C_R (µg/kg)	Chemical
129000	7.50E+02	Pyrene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to top of contamination, L_t (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	61	13.9			1.00E-08

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Vadose zone soil organic carbon fraction, f_{oc}^V (unitless)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SC	1.5	0.43	0.3	0.002	5

MORE ↓

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)
70	25	25	250	1.0E-06	1
				Used to calculate risk-based soil concentration.	

END

RESULTS SHEET

RISK-BASED SOIL CONCENTRATION CALCULATIONS:

Indoor exposure soil conc., carcinogen (µg/kg)	Indoor exposure soil conc., noncarcinogen (µg/kg)	Risk-based indoor exposure soil conc., (µg/kg)	Soil saturation conc., C_{sat} (µg/kg)	Final indoor exposure soil conc., (µg/kg)
NA	NA	NA	2.84E+05	NA

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	8.5E-06

MESSAGE SUMMARY BELOW:

MESSAGE: Risk/HQ or risk-based soil concentration is based on a route-to-route extrapolation.

END

ORIGINAL

Subsurface soil
NJ Fireworks
65651

ORIGINAL

DATA ENTRY SHEET

SL-SCREEN
Version 3.0; 04/03

Reset to Defaults

CALCULATE RISK-BASED SOIL CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL SOIL CONCENTRATION (enter "X" in "YES" box and initial soil conc. below)

YES [X]

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial soil conc., C_R (µg/kg)	Chemical
7439976	2.00E+02	Mercury (elemental)

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to top of contamination, L_t (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	122	13.9			1.00E-08

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Vadose zone soil organic carbon fraction, f_{oc}^V (unitless)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SC	1.5	0.43	0.3	0.002	5

MORE ↓

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)
70	25	25	250	1.0E-06	1
				Used to calculate risk-based soil concentration.	

END

RESULTS SHEET

RISK-BASED SOIL CONCENTRATION CALCULATIONS:

Indoor exposure soil conc., carcinogen (µg/kg)	Indoor exposure soil conc., noncarcinogen (µg/kg)	Risk-based indoor exposure soil conc., (µg/kg)	Soil saturation conc., C_{sat} (µg/kg)	Final indoor exposure soil conc., (µg/kg)
NA	NA	NA	1.04E+06	NA

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	2.5E+01

MESSAGE SUMMARY BELOW:

END

ORIGINAL

SL-SCREEN
Version 3.0; 04/03

Reset to Defaults

CALCULATE RISK-BASED SOIL CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL SOIL CONCENTRATION (enter "X" in "YES" box and initial soil conc. below)

YES [X]

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial soil conc., C_R (µg/kg)	Chemical
75092	1.60E+01	Methylene chloride

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to top of contamination, L_t (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	122	13.9			1.00E-08

MORE ↓

ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Vadose zone soil organic carbon fraction, f_{oc}^V (unitless)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SC	1.5	0.43	0.3	0.002	5

MORE ↓

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)
70	25	25	250	1.0E-06	1
				Used to calculate risk-based soil concentration.	

END

ORIGINAL

RESULTS SHEET

RISK-BASED SOIL CONCENTRATION CALCULATIONS:

Indoor exposure soil conc., carcinogen (µg/kg)	Indoor exposure soil conc., noncarcinogen (µg/kg)	Risk-based indoor exposure soil conc., (µg/kg)	Soil saturation conc., C_{sat} (µg/kg)	Final indoor exposure soil conc., (µg/kg)
NA	NA	NA	2.98E+06	NA

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
1.5E-07	3.0E-04

MESSAGE SUMMARY BELOW:

END

ORIGINAL