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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350

Final Analytical Report

ORIGINAL

Site Name.....	Elkton Farms Firehole
Sample Collection Date(s).....	12/14/07 14:00- 12/14/07 14:15
Contact.....	Charles Fitzsimmons
Report Date.....	01/22/08 11:34
Project #.....	DAS R32793
Work Orders.....	0712013

Analyses included in this report:

Nitroaromatics/Nitramines by 8330

Approved for Release

OASQA Representative

SDMS DocID 2211861

Site Name: **Elkton Farms Firehole** **Project #:** **DAS R32793**

Report Narrative

Nitroaromatic/Nitramine sample concentrations are reported on an air-dried weight basis.

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ANALYTICAL REPORT FOR SAMPLES

Station ID	Laboratory ID	Matrix	Date Sampled	Date Received
ELK-L1D-001	0712013-01	Sediment	12/14/07 14:15	12/17/07 11:25
ELK-SP-01-002	0712013-02	Sediment	12/14/07 14:00	12/17/07 11:25

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USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case
Client No: R32793
SDG No:
L

Date Shipped:	12/15/2007
Carrier Name:	FedEx
Airbill:	8407899446317
Shipped to:	USEPA Region 3 ASO/B Laboratory 701 Mapes Road Fo George Meade MD 20755 (410) 605-2667

Chain of Custody Record

Relinquished By (Date / Time)	Received By (Date / Time)
1 Marian Murphy 12/15/07 1700	1 [illegible] 12/17/07 11:25
2	
3	
4	

Sampler Signature: Marian Murphy

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/ PRESERVATIVES/ Bottles	STATION/ LOCATION	SAMPLE COLLECT DATE/TIME		FOR LAB USE ONLY Sample Condition On Receipt
~~ELK-SP-01-001~~ ELK-LIO-001	Soil/Sediment/ Marian Murphy	L/C	NIT_ARO (14)	ELK537 (Ice Only) (1)	~~ELK-SP-001~~ ELK-LIO-001	S: 12/14/2007	14:15	0712013-01
ELK-SP-01-002	Sediment/ Marian Murphy	L/C	NIT_ARO (14)	ELK538 (Ice Only) (1)	ELK-SP-01-002	S: 12/14/2007	14:00	0712013-02

Shipment for Case Complete?N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 2.0	Chain of Custody Seal Number:
Analyte Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designator: Composite = C, Grab = G	Custody Seal Intact? ___	Shipment Iced? ___
NIT_ARO = Nitroaromatics				

TR Number: 3-141818219-121507-0001

LABORATORY 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 703/818-4300; Fax 703/818-4602

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Site Name: **Elkton Farms Firehole** **Project #:** **DAS R32793**

Lab ID: **0712013-01** **Station ID:** **ELK-L1D-001**

Batch: **BA80302**

Sample Type: **Sediment** **Date Collected:** **12/14/2007**

Nitroaromatics/Nitroamines

Targets

Analyte	Result mg/kg	Analyte Qualifiers	Quantitation Limit	Dilution	Prepared	Analyzed	Method/SOP#
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	U		0.100	1	12/26/07	12/28/07 05:05	EPA 8330/R3QA221
Hexahydro-1,3,5-trinitro-1,3,5-triazine	U		0.100	1	12/26/07	12/28/07 05:05	EPA 8330/R3QA221
1,3,5-Trinitrobenzene	3.08		0.500	10	12/26/07	01/01/08 00:58	EPA 8330/R3QA221
1,3-Dinitrobenzene	0.519		0.050	1	12/26/07	12/28/07 05:05	EPA 8330/R3QA221
Nitrobenzene	U	UJ	0.050	1	12/26/07	12/28/07 05:05	EPA 8330/R3QA221
Tetryl	U	UL	0.100	1	12/26/07	12/28/07 05:05	EPA 8330/R3QA221
2,4,6-Trinitrotoluene	40.4		5.00	100	12/26/07	12/31/07 23:47	EPA 8330/R3QA221
4-Amino-2,6-dinitrotoluene	8.16		0.500	10	12/26/07	01/01/08 00:58	EPA 8330/R3QA221
2-Amino-4,6-dinitrotoluene	8.06		0.500	10	12/26/07	01/01/08 00:58	EPA 8330/R3QA221
2,4-/2,6-Dinitrotoluene	15.4		10.0	100	12/26/07	12/31/07 23:47	EPA 8330/R3QA221
2-Nitrotoluene	0.060		0.050	1	12/26/07	12/28/07 05:05	EPA 8330/R3QA221
4-Nitrotoluene	0.228		0.050	1	12/26/07	12/28/07 05:05	EPA 8330/R3QA221
3-Nitrotoluene	U		0.050	1	12/26/07	12/28/07 05:05	EPA 8330/R3QA221

Surrogates

Analyte	Result mg/kg	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed	Method/SOP#
Surrogate: 1,2-Dinitrobenzene	0.259		**104 %**	*70-130*	*12/26/07*	*12/28/07 05:05*	*EPA 8330/R3QA221*

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Site Name: **Elkton Farms Firehole** **Project #:** **DAS R32793**

Lab ID: **0712013-02** **Station ID:** **ELK-SP-01-002**

Batch: **BA80302**

Sample Type: **Sediment** **Date Collected:** **12/14/2007**

Nitroaromatics/Nitroamines

Targets

Analyte	Result mg/kg	Analyte Qualifiers	Quantitation Limit	Dilution	Prepared	Analyzed	Method/SOP#
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	U		0.100	1	12/26/07	12/28/07 06:15	EPA 8330/R3QA221
Hexahydro-1,3,5-trinitro-1,3,5-triazine	U		0.100	1	12/26/07	12/28/07 06:15	EPA 8330/R3QA221
1,3,5-Trinitrobenzene	U		0.050	1	12/26/07	12/28/07 06:15	EPA 8330/R3QA221
1,3-Dinitrobenzene	U		0.050	1	12/26/07	12/28/07 06:15	EPA 8330/R3QA221
Nitrobenzene	U	UJ	0.050	1	12/26/07	12/28/07 06:15	EPA 8330/R3QA221
Tetryl	U	UL	0.100	1	12/26/07	12/28/07 06:15	EPA 8330/R3QA221
2,4,6-Trinitrotoluene	0.070	J	0.050	1	12/26/07	12/28/07 06:15	EPA 8330/R3QA221
4-Amino-2,6-dinitrotoluene	0.064		0.050	1	12/26/07	12/28/07 06:15	EPA 8330/R3QA221
2-Amino-4,6-dinitrotoluene	0.042	J	0.050	1	12/26/07	12/28/07 06:15	EPA 8330/R3QA221
2,4-/2,6-Dinitrotoluene	U		0.100	1	12/26/07	12/28/07 06:15	EPA 8330/R3QA221
2-Nitrotoluene	U		0.050	1	12/26/07	12/28/07 06:15	EPA 8330/R3QA221
4-Nitrotoluene	U		0.050	1	12/26/07	12/28/07 06:15	EPA 8330/R3QA221
3-Nitrotoluene	U		0.050	1	12/26/07	12/28/07 06:15	EPA 8330/R3QA221

Surrogates

Analyte	Result mg/kg	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed	Method/SOP#
Surrogate: 1,2-Dinitrobenzene	0.256		**102 %**	*70-130*	*12/26/07*	*12/28/07 06:15*	*EPA 8330/R3QA221*

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QC Data
Nitroaromatics/Nitroamines - Quality Control

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BA80302 - Nitroaromatic solids										
Blank (BA80302-BLK1)				Prepared: 12/26/07 09:00		Analyzed: 12/28/07 13:32				
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	U	0.100	mg/kg							
Hexahydro-1,3,5-trinitro-1,3,5-triazine	U	0.100	"							
1,3,5-Trinitrobenzene	U	0.050	"							
1,3-Dinitrobenzene	U	0.050	"							
Nitrobenzene	U	0.050	"							
Tetryl	U	0.100	"							
2,4,6-Trinitrotoluene	U	0.050	"							
4-Amino-2,6-dinitrotoluene	U	0.050	"							
2-Amino-4,6-dinitrotoluene	U	0.050	"							
2,4-/2,6-Dinitrotoluene	U	0.100	"							
2-Nitrotoluene	U	0.050	"							
4-Nitrotoluene	U	0.050	"							
3-Nitrotoluene	U	0.050	"							
Surrogate: 1,2-Dinitrobenzene	*0.266*		"	*0.25000*		*106*	*70-130*			

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QC Data
Nitroaromatics/Nitroamines - Quality Control

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BA80302 - Nitroaromatic solids										
LCS (BA80302-BS1)				Prepared: 12/26/07 09:00		Analyzed: 12/28/07 14:43				
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.288	0.100	mg/kg	0.25000		115	60-140			
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.295	0.100	"	0.25000		118	70-130			
1,3,5-Trinitrobenzene	0.257	0.050	"	0.25000		103	70-130			
1,3-Dinitrobenzene	0.270	0.050	"	0.25000		108	70-130			
Nitrobenzene	0.500	0.050	"	0.25000		200	70-130			A
Tetryl	0.153	0.100	"	0.25000		61	50-150			
2,4,6-Trinitrotoluene	0.259	0.050	"	0.25000		104	70-130			
4-Amino-2,6-dinitrotoluene	0.219	0.050	"	0.25000		88	70-130			
2-Amino-4,6-dinitrotoluene	0.286	0.050	"	0.25000		114	70-130			
2,4-/2,6-Dinitrotoluene	0.580	0.100	"	0.50000		116	70-130			
2-Nitrotoluene	0.238	0.050	"	0.25000		95	70-130			
4-Nitrotoluene	0.206	0.050	"	0.25000		83	70-130			
3-Nitrotoluene	0.252	0.050	"	0.25000		101	70-130			
Surrogate: 1,2-Dinitrobenzene	*0.262*		*"*	*0.25000*		*105*	*70-130*			

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QC Data
Nitroaromatics/Nitroamines - Quality Control

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BA80302 - Nitroaromatic solids										
Matrix Spike (BA80302-MS1)		**Source: 0712013-02**		Prepared: 12/26/07 09:00		Analyzed: 12/28/07 19:26				
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.251	0.100	mg/kg	0.25000	U	100	60-140			
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.231	0.100	"	0.25000	U	92	70-130			
1,3,5-Trinitrobenzene	0.278	0.050	"	0.25000	U	111	70-130			
1,3-Dinitrobenzene	0.236	0.050	"	0.25000	U	95	70-130			
Nitrobenzene	0.243	0.050	"	0.25000	U	97	70-130			
Tetryl	0.210	0.100	"	0.25000	U	84	50-150			
2,4,6-Trinitrotoluene	0.413	0.050	"	0.25000	0.070	137	70-130			A
4-Amino-2,6-dinitrotoluene	0.275	0.050	"	0.25000	0.064	84	70-130			
2-Amino-4,6-dinitrotoluene	0.276	0.050	"	0.25000	0.042	94	70-130			
2,4-/2,6-Dinitrotoluene	0.520	0.100	"	0.50000	U	104	70-130			
2-Nitrotoluene	0.253	0.050	"	0.25000	U	101	70-130			
4-Nitrotoluene	0.246	0.050	"	0.25000	U	99	70-130			
3-Nitrotoluene	0.232	0.050	"	0.25000	U	93	70-130			
Surrogate: 1,2-Dinitrobenzene	*0.252*		*"*	*0.25000*		*101*	*70-130*			

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QC Data
Nitroaromatics/Nitroamines - Quality Control

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BA80302 - Nitroaromatic solids										
Matrix Spike Dup (BA80302-MSD1)		**Source: 0712013-02**		Prepared: 12/26/07 09:00		Analyzed: 12/28/07 20:37				
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.276	0.100	mg/kg	0.25000	U	110	60-140	9	25	
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.249	0.100	"	0.25000	U	100	70-130	7	25	
1,3,5-Trinitrobenzene	0.276	0.050	"	0.25000	U	110	70-130	0.7	25	
1,3-Dinitrobenzene	0.268	0.050	"	0.25000	U	107	70-130	12	25	
Nitrobenzene	0.264	0.050	"	0.25000	U	106	70-130	8	25	
Tetryl	0.257	0.100	"	0.25000	U	103	50-150	20	25	
2,4,6-Trinitrotoluene	0.302	0.050	"	0.25000	0.070	93	70-130	38	25	A
4-Amino-2,6-dinitrotoluene	0.260	0.050	"	0.25000	0.064	78	70-130	8	25	
2-Amino-4,6-dinitrotoluene	0.300	0.050	"	0.25000	0.042	103	70-130	9	25	
2,4-/2,6-Dinitrotoluene	0.562	0.100	"	0.50000	U	112	70-130	8	25	
2-Nitrotoluene	0.271	0.050	"	0.25000	U	108	70-130	7	25	
4-Nitrotoluene	0.236	0.050	"	0.25000	U	95	70-130	4	25	
3-Nitrotoluene	0.245	0.050	"	0.25000	U	98	70-130	5	25	
Surrogate: 1,2-Dinitrobenzene	*0.250*		*"*	*0.25000*		*100*	*70-130*			

Site Name: **Elkton Farms Firehole** **Project #:** **DAS R32793**

Notes and Definitions

UL	The analyte was not detected. The quantitation limit is probably higher due to indications of a low bias.
UJ	The analyte was not detected at or above the quantitation limit. The quantitation limit is an estimate.
J	The identification of the analyte is acceptable; the reported value is an estimate.
A	Quality control value is outside acceptance limits.
NR	Not Reported
RPD	Relative Percent Difference
U	Analyte included in the analysis, but not detected at or above the quantitation limit.

Quantitation Limit: The lowest concentration of an analyte that can be reliably measured within specified limits of precision and accuracy for a specific laboratory analytical method and that takes into account analytical adjustments made during sample preparation and analysis.

SOLID SAMPLE RESULTS - REPORTING PROTOCOL: Solid samples where % Solids (percent dry wt at 105 degrees C) has been performed, are analyzed wet and converted to a dry weight result for reporting purposes. This is routine for organics and most inorganic analyses. When metals and mercury analyses are requested, solid samples are routinely analyzed and reported on a dry weight basis. Solid samples for metals/mercury are prepared for analysis by an initial drying at 60 degree C and homogenization before digestion. Oil-type samples will be analyzed and reported on a wet weight basis for all analyses because of the nature of the sample. Any exceptions to the protocol will be noted with a qualifier