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JEB FORT STORY, VA
5090.3a

LETTER TRANSMITTING CERTIFICATES OF ANALYSIS FORT STORY VA
9/21/1994
INTERNATIONAL TECHNOLOGICAL CORPORATION

File 6C.11

INTERNATIONAL TECHNOLOGY CORPORATION

September 21, 1994

Project No. 519201

U.S. Army Corps of Engineers
CEMRO-ED-ER (Hubbard)
215 N. 17th Street
Omaha, NE 68102-4978

80th Division Removal Action
Fort Story, Virginia
Contract No. DACW45-94-D-0054
Delivery Order No. 3

Dear Mr. Hubbard:

Enclosed please find the Certificates of Analysis for the advance samples which were collected at Fort Story on September 9, 1994. Also included is a preliminary sketch of the sample locations and a summary of the parameters analyzed for each sample.

Please contact me should you have any questions regarding this submittal.

Sincerely,

IT CORPORATION

Thomas P. Mathison
Project Manager

TPM:amm
Enclosures

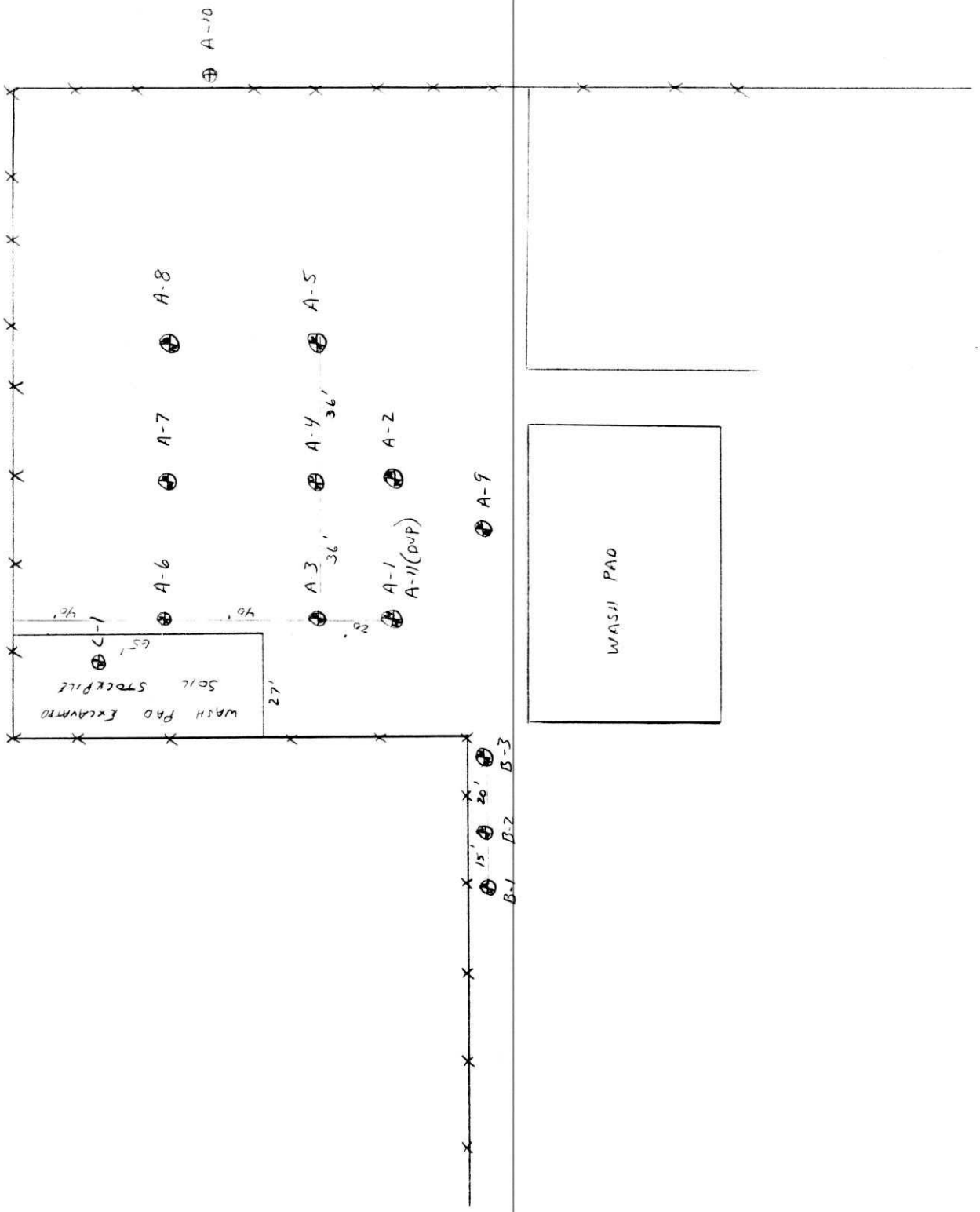
cc: D. Musel, Ft. Eustis

INTERNATIONAL TECHNOLOGY CORPORATION

By TPH Date 9/21/94 Subject FORT STORY Sheet No. ____ of ____

Chkd. By ____ Date ____ 20TH DIVISION LAKE ALLEN Proj. No. ____

0.5cm. X 0.5cm.



INTERNATIONAL TECHNOLOGY CORPORATION

By _____ Date _____ Subject FORT STORY Sheet No. ____ of ____

Chkd. By ____ Date _____ 80TH DIVISION LARC AREA Proj. No. _____

0.5cm. X 0.5cm.

SAMPLE NO	DEPTH	PARAMETERS
A-1	0-3 FT	DISPOSAL
A-2	0-3	DISPOSAL
A-3	2-3 / 4-6	TCLP ~~[illegible]~~ / VOA
A-4	2-3	TCLP
A-5	2-3 / 4-6	TCLP / VOA
A-6	2-3	TCLP
A-7	2-3	TCLP
A-8	2-3	TCLP
A-9	2-3	TCLP
A-10	2-3	TRPH / TOTAL LEAD
A-11	0-3 (DUPLICATE OF A1)	DISPOSAL
B-1	4-6	VOA
B-2	4-6	VOA
B-3	0-6	DISPOSAL
C-1	COMPOSITE OF STOCKPILE	TRPH / TOTAL LEAD

Quanterra Incorporated
5103 Old William Penn Highway
Export, Pennsylvania 15632

412 731-8806 Telephone
412 327-7231 Fax

Quanterra
Environmental Services

IT Corporation/Fort Story
2790 Mosside Boulevard
Monroeville, PA 15146
Attn: Tom Mathison

September 19, 1994

Job Number: Q409096/099

The Certificate of Analysis is for the following:

Client Project ID:	519201
Date Received by Lab:	09/10/94
Number of Samples:	Sixteen
Sample Type:	Soil/Water

1.0 Introduction

On September 10, 1994, fifteen soil and one water samples were received at ITAS Pittsburgh, labeled as follows:

Soil:	C-1	Water:	TRIP BLANK
	B-3		
	B-2		
	B-1		
	A-2		
	A-10		
	A-9		
	A-8		
	A-7		
	A-6		
	A-5		
	A-4		
	A-3		
	A-11		
	A-1		

Reviewed and Approved: Carrie L. Smith-Gamber

Carrie L. Smith-Gamber, Project Manager

Quanterra
Environmental Services

2.0 Analytical Results/Methodology

Results are presented in the enclosed tables, and were determined in accordance with Methods 3010, 3050, 6010, 7470, and 8240, Test Methods for Evaluating Solid Waste, EPA SW-846, 3rd ed., 1986; Method 9095, Test Methods for Evaluating Solid Waste, EPA, SW-846, 3rd Ed., 1986; Method 418.1, Method for the Chemical Analysis of Water and Waste, EPA, 600/4-79-020, 1983 revision; Federal Register, Vol. 57, No. 227, Tuesday, November 24, 1992; and Environmental Protection Agency, CLP SOW No. 7/88, Section IV, Exhibit-D, Part F, July 1988.

Results of sample concentrations are based on dry weight and expressed in milligrams per liter and milligrams per kilogram or parts per million. ND denotes that the compound is not detected at or above the indicated detection limit.

The analysis for BTEX and TOX were performed at our Quanterra Laboratory in Austin, Texas. These results are enclosed.

The TRIP BLANK was canceled on September 13, 1994 as per Tom Mathison.

Volatiles

Sample A-2 was analyzed twice due to the surrogate toluene-d_8 being outside QC limits. Both analyses are reported.

3.0 Quality Control

QA/QC information can be found immediately following the analytical data.

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra
Environmental Services

Volatile Organic Compounds

Client Sample ID: B-3
Sample Date: 09/08/94
Lab Sample ID: Q40909602
Analysis Date: 09/13/94

Compound	Concentration µg/Kg	Compound	Concentration µg/Kg
Chloromethane	ND11	1,2-Dichloropropane	ND5
Bromomethane	ND11	cis-1,3-Dichloropropene	ND5
Vinyl chloride	ND11	Trichloroethene	ND5
Chloroethane	ND11	Dibromochloromethane	ND5
Methylene chloride	ND5	1,1,2-Trichloroethane	ND5
Acetone	ND110	Benzene	ND5
Carbon disulfide	ND5	trans-1,3-Dichloropropene	ND5
1,1-Dichloroethene	ND5	Bromoform	ND5
1,1-Dichloroethane	ND5	4-Methyl-2-pentanone	ND54
1,2-Dichloroethene (total)	ND5	2-Hexanone	ND54
Chloroform	ND5	Tetrachloroethene	ND5
1,2-Dichloroethane	ND5	1,1,2,2-Tetrachloroethane	ND5
2-Butanone	ND110	Toluene	ND5
1,1,1-Trichloroethane	ND5	Chlorobenzene	ND5
Carbon tetrachloride	ND5	Ethylbenzene	ND5
Vinyl acetate	ND54	Styrene	ND5
Bromodichloromethane	ND5	Xylenes (total)	ND5
		2-Chloroethylvinylether	ND11

Surrogate Spike
Percent Recovery

Method Blank No. 1

Toluene-d_8	100%
Bromofluorobenzene	90%
1,2-Dichloroethane-d_4	101%

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra
Environmental Services

Volatile Organic Compounds

Client Sample ID: B-2
Sample Date: 09/08/94
Lab Sample ID: Q40909603
Analysis Date: 09/13/94

Compound	Concentration µg/Kg	Compound	Concentration µg/Kg
Chloromethane	ND10	1,2-Dichloropropane	ND5
Bromomethane	ND10	cis-1,3-Dichloropropene	ND5
Vinyl chloride	ND10	Trichloroethene	ND5
Chloroethane	ND10	Dibromochloromethane	ND5
Methylene chloride	ND5	1,1,2-Trichloroethane	ND5
Acetone	ND98	Benzene	ND5
Carbon disulfide	ND5	trans-1,3-Dichloropropene	ND5
1,1-Dichloroethene	ND5	Bromoform	ND5
1,1-Dichloroethane	ND5	4-Methyl-2-pentanone	ND49
1,2-Dichloroethene (total)	ND5	2-Hexanone	ND49
Chloroform	ND5	Tetrachloroethene	66
1,2-Dichloroethane	ND5	1,1,2,2-Tetrachloroethane	ND5
2-Butanone	ND98	Toluene	ND5
1,1,1-Trichloroethane	ND5	Chlorobenzene	ND5
Carbon tetrachloride	ND5	Ethylbenzene	ND5
Vinyl acetate	ND49	Styrene	ND5
Bromodichloromethane	ND5	Xylenes (total)	ND5
		2-Chloroethylvinylether	ND10

Surrogate Spike
Percent Recovery

Method Blank No. 1

Toluene-d_8	105%
Bromofluorobenzene	88%
1,2-Dichloroethane-d_4	106%

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra
Environmental Services

Volatile Organic Compounds

Client Sample ID: B-1
Sample Date: 09/08/94
Lab Sample ID: Q40909604
Analysis Date: 09/13/94

Compound	Concentration µg/Kg	Compound	Concentration µg/Kg
Chloromethane	ND11	1,2-Dichloropropane	ND5
Bromomethane	ND11	cis-1,3-Dichloropropene	ND5
Vinyl chloride	ND11	Trichloroethene	ND5
Chloroethane	ND11	Dibromochloromethane	ND5
Methylene chloride	ND5	1,1,2-Trichloroethane	ND5
Acetone	ND110	Benzene	ND5
Carbon disulfide	ND5	trans-1,3-Dichloropropene	ND5
1,1-Dichloroethene	ND5	Bromoform	ND5
1,1-Dichloroethane	ND5	4-Methyl-2-pentanone	ND54
1,2-Dichloroethene (total)	ND5	2-Hexanone	ND54
Chloroform	ND5	Tetrachloroethene	28
1,2-Dichloroethane	ND5	1,1,2,2-Tetrachloroethane	ND5
2-Butanone	ND110	Toluene	10
1,1,1-Trichloroethane	ND5	Chlorobenzene	ND5
Carbon tetrachloride	ND5	Ethylbenzene	ND5
Vinyl acetate	ND54	Styrene	ND5
Bromodichloromethane	ND5	Xylenes (total)	ND5
		2-Chloroethylvinylether	ND11

	Surrogate Spike Percent Recovery
Method Blank No. 1	
Toluene-d_8	112%
Bromofluorobenzene	85%
1,2-Dichloroethane-d_4	109%

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra Environmental Services

Volatile Organic Compounds

Client Sample ID: A-2
Sample Date: 09/08/94
Lab Sample ID: Q40909605
Analysis Date: 09/14/94

Compound	Concentration µg/Kg	Compound	Concentration µg/Kg
Chloromethane	ND10	1,2-Dichloropropane	ND5
Bromomethane	ND10	cis-1,3-Dichloropropene	ND5
Vinyl chloride	ND10	Trichloroethene	ND5
Chloroethane	ND10	Dibromochloromethane	ND5
Methylene chloride	ND5	1,1,2-Trichloroethane	ND5
Acetone	ND99	Benzene	ND5
Carbon disulfide	ND5	trans-1,3-Dichloropropene	ND5
1,1-Dichloroethene	ND5	Bromoform	ND5
1,1-Dichloroethane	ND5	4-Methyl-2-pentanone	ND50
1,2-Dichloroethene (total)	ND5	2-Hexanone	ND50
Chloroform	ND5	Tetrachloroethene	ND5
1,2-Dichloroethane	ND5	1,1,2,2-Tetrachloroethane	ND5
2-Butanone	ND99	Toluene	8
1,1,1-Trichloroethane	ND5	Chlorobenzene	ND5
Carbon tetrachloride	ND5	Ethylbenzene	ND5
Vinyl acetate	ND50	Styrene	ND5
Bromodichloromethane	ND5	Xylenes (total)	ND5
		2-Chloroethylvinylether	ND10

Surrogate Spike
Percent Recovery

Method Blank No. 2

Toluene-d_8	125%	*
Bromofluorobenzene	91%	
1,2-Dichloroethane-d_4	98%	

*Outside QC limits.

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra Environmental Services

Volatile Organic Compounds

Client Sample ID: A-2 Reanalysis
Sample Date: 09/08/94
Lab Sample ID: Q40909605
Analysis Date: 09/13/94

Compound	Concentration µg/Kg	Compound	Concentration µg/Kg
Chloromethane	ND11	1,2-Dichloropropane	ND5
Bromomethane	ND11	cis-1,3-Dichloropropene	ND5
Vinyl chloride	ND11	Trichloroethene	ND5
Chloroethane	ND11	Dibromochloromethane	ND5
Methylene chloride	ND5	1,1,2-Trichloroethane	ND5
Acetone	ND110	Benzene	ND5
Carbon disulfide	ND5	trans-1,3-Dichloropropene	ND5
1,1-Dichloroethene	ND5	Bromoform	ND5
1,1-Dichloroethane	ND5	4-Methyl-2-pentanone	ND55
1,2-Dichloroethene (total)	ND5	2-Hexanone	ND55
Chloroform	ND5	Tetrachloroethene	ND5
1,2-Dichloroethane	ND5	1,1,2,2-Tetrachloroethane	ND5
2-Butanone	ND110	Toluene	10
1,1,1-Trichloroethane	ND5	Chlorobenzene	ND5
Carbon tetrachloride	8	Ethylbenzene	ND5
Vinyl acetate	ND55	Styrene	ND5
Bromodichloromethane	ND5	Xylenes (total)	ND5
		2-Chloroethylvinylether	ND11

Surrogate Spike
Percent Recovery

Method Blank No. 1

Toluene-d_8	119%	*
Bromofluorobenzene	81%	
1,2-Dichloroethane-d_4	104%	

*Outside QC limits.

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra
Environmental Services

Volatile Organic Compounds

Client Sample ID: A-5
Sample Date: 09/08/94
Lab Sample ID: Q40909611
Analysis Date: 09/13/94

Compound	Concentration µg/Kg	Compound	Concentration µg/Kg
Chloromethane	ND26	1,2-Dichloropropane	ND13
Bromomethane	ND26	cis-1,3-Dichloropropene	ND13
Vinyl chloride	ND26	Trichloroethene	ND13
Chloroethane	ND26	Dibromochloromethane	ND13
Methylene chloride	ND13	1,1,2-Trichloroethane	ND13
Acetone	510	Benzene	ND13
Carbon disulfide	ND13	trans-1,3-Dichloropropene	ND13
1,1-Dichloroethene	ND13	Bromoform	ND13
1,1-Dichloroethane	ND13	4-Methyl-2-pentanone	ND130
1,2-Dichloroethene (total)	ND13	2-Hexanone	ND130
Chloroform	ND13	Tetrachloroethene	ND13
1,2-Dichloroethane	ND13	1,1,2,2-Tetrachloroethane	ND13
2-Butanone	ND260	Toluene	ND13
1,1,1-Trichloroethane	ND13	Chlorobenzene	ND13
Carbon tetrachloride	ND13	Ethylbenzene	ND13
Vinyl acetate	ND130	Styrene	ND13
Bromodichloromethane	ND13	Xylenes (total)	ND13
		2-Chloroethylvinylether	ND26

Surrogate Spike
Percent Recovery

Method Blank No. 1

Toluene-d_8	105%
Bromofluorobenzene	91%
1,2-Dichloroethane-d_4	113%

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra Environmental Services

Volatile Organic Compounds

Client Sample ID: A-3
Sample Date: 09/08/94
Lab Sample ID: Q40909613
Analysis Date: 09/14/94

Compound	Concentration µg/Kg	Compound	Concentration µg/Kg
Chloromethane	ND10	1,2-Dichloropropane	ND5
Bromomethane	ND10	cis-1,3-Dichloropropene	ND5
Vinyl chloride	ND10	Trichloroethene	ND5
Chloroethane	ND10	Dibromochloromethane	ND5
Methylene chloride	ND5	1,1,2-Trichloroethane	ND5
Acetone	ND100	Benzene	ND5
Carbon disulfide	ND5	trans-1,3-Dichloropropene	ND5
1,1-Dichloroethene	ND5	Bromoform	ND5
1,1-Dichloroethane	ND5	4-Methyl-2-pentanone	ND52
1,2-Dichloroethene (total)	ND5	2-Hexanone	ND52
Chloroform	ND5	Tetrachloroethene	ND5
1,2-Dichloroethane	ND5	1,1,2,2-Tetrachloroethane	ND5
2-Butanone	ND100	Toluene	ND5
1,1,1-Trichloroethane	ND5	Chlorobenzene	ND5
Carbon tetrachloride	ND5	Ethylbenzene	ND5
Vinyl acetate	ND52	Styrene	ND5
Bromodichloromethane	ND5	Xylenes (total)	ND5
		2-Chloroethylvinylether	ND10

	Surrogate Spike Percent Recovery
Method Blank No. 2	
Toluene-d_8	106%
Bromofluorobenzene	91%
1,2-Dichloroethane-d_4	86%

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra Environmental Services

Volatile Organic Compounds

Client Sample ID: A-11
Sample Date: 09/08/94
Lab Sample ID: Q40909614
Analysis Date: 09/14/94

Compound	Concentration µg/Kg	Compound	Concentration µg/Kg
Chloromethane	ND10	1,2-Dichloropropane	ND5
Bromomethane	ND10	cis-1,3-Dichloropropene	ND5
Vinyl chloride	ND10	Trichloroethene	ND5
Chloroethane	ND10	Dibromochloromethane	ND5
Methylene chloride	ND5	1,1,2-Trichloroethane	ND5
Acetone	ND100	Benzene	ND5
Carbon disulfide	ND5	trans-1,3-Dichloropropene	ND5
1,1-Dichloroethene	ND5	Bromoform	ND5
1,1-Dichloroethane	ND5	4-Methyl-2-pentanone	ND51
1,2-Dichloroethene (total)	ND5	2-Hexanone	ND51
Chloroform	ND5	Tetrachloroethene	ND5
1,2-Dichloroethane	ND5	1,1,2,2-Tetrachloroethane	ND5
2-Butanone	ND100	Toluene	ND5
1,1,1-Trichloroethane	ND5	Chlorobenzene	ND5
Carbon tetrachloride	ND5	Ethylbenzene	ND5
Vinyl acetate	ND51	Styrene	ND5
Bromodichloromethane	ND5	Xylenes (total)	ND5
		2-Chloroethylvinylether	ND10

Surrogate Spike
Percent Recovery

Method Blank No. 2

Toluene-d_8	98%
Bromofluorobenzene	92%
1,2-Dichloroethane-d_4	97%

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra Environmental Services

Volatile Organic Compounds

Client Sample ID: A-1
Sample Date: 09/08/94
Lab Sample ID: Q40909615
Analysis Date: 09/14/94

Compound	Concentration µg/Kg	Compound	Concentration µg/Kg
Chloromethane	ND10	1,2-Dichloropropane	ND5
Bromomethane	ND10	cis-1,3-Dichloropropene	ND5
Vinyl chloride	ND10	Trichloroethene	ND5
Chloroethane	ND10	Dibromochloromethane	ND5
Methylene chloride	ND5	1,1,2-Trichloroethane	ND5
Acetone	ND100	Benzene	ND5
Carbon disulfide	ND5	trans-1,3-Dichloropropene	ND5
1,1-Dichloroethene	ND5	Bromoform	ND5
1,1-Dichloroethane	ND5	4-Methyl-2-pentanone	ND52
1,2-Dichloroethene (total)	ND5	2-Hexanone	ND52
Chloroform	ND5	Tetrachloroethene	ND5
1,2-Dichloroethane	ND5	1,1,2,2-Tetrachloroethane	ND5
2-Butanone	ND100	Toluene	ND5
1,1,1-Trichloroethane	ND5	Chlorobenzene	ND5
Carbon tetrachloride	ND5	Ethylbenzene	ND5
Vinyl acetate	ND52	Styrene	ND5
Bromodichloromethane	ND5	Xylenes (total)	ND5
		2-Chloroethylvinylether	ND10

	Surrogate Spike Percent Recovery
Method Blank No. 2	
Toluene-d_8	93%
Bromofluorobenzene	89%
1,2-Dichloroethane-d_4	84%

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra
Environmental Services

Volatile Organic Compounds

Client Sample ID: A-11 MSD
Sample Date: 09/08/94
Lab Sample ID: Q40909616
Analysis Date: 09/14/94

Compound	Concentration µg/Kg	Compound	Concentration µg/Kg
Chloromethane	ND10	1,2-Dichloropropane	ND5
Bromomethane	ND10	cis-1,3-Dichloropropene	ND5
Vinyl chloride	ND10	Trichloroethene	ND5
Chloroethane	ND10	Dibromochloromethane	ND5
Methylene chloride	ND5	1,1,2-Trichloroethane	ND5
Acetone	ND100	Benzene	ND5
Carbon disulfide	ND5	trans-1,3-Dichloropropene	ND5
1,1-Dichloroethene	ND5	Bromoform	ND5
1,1-Dichloroethane	ND5	4-Methyl-2-pentanone	ND52
1,2-Dichloroethene (total)	ND5	2-Hexanone	ND52
Chloroform	ND5	Tetrachloroethene	ND5
1,2-Dichloroethane	ND5	1,1,2,2-Tetrachloroethane	ND5
2-Butanone	ND100	Toluene	ND5
1,1,1-Trichloroethane	ND5	Chlorobenzene	ND5
Carbon tetrachloride	ND5	Ethylbenzene	ND5
Vinyl acetate	ND52	Styrene	ND5
Bromodichloromethane	ND5	Xylenes (total)	ND5
		2-Chloroethylvinylether	ND10

	Surrogate Spike Percent Recovery
Method Blank No. 2	
Toluene-d_8	98%
Bromofluorobenzene	95%
1,2-Dichloroethane-d_4	93%

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra
Environmental Services

Volatile Organic Compounds

Client Sample ID: A-11 MS
Sample Date: 09/08/94
Lab Sample ID: Q40909617
Analysis Date: 09/14/94

Compound	Concentration µg/Kg	Compound	Concentration µg/Kg
Chloromethane	ND11	1,2-Dichloropropane	ND5
Bromomethane	ND11	cis-1,3-Dichloropropene	ND5
Vinyl chloride	ND11	Trichloroethene	ND5
Chloroethane	ND11	Dibromochloromethane	ND5
Methylene chloride	ND5	1,1,2-Trichloroethane	ND5
Acetone	ND110	Benzene	ND5
Carbon disulfide	ND5	trans-1,3-Dichloropropene	ND5
1,1-Dichloroethene	ND5	Bromoform	ND5
1,1-Dichloroethane	ND5	4-Methyl-2-pentanone	ND54
1,2-Dichloroethene (total)	ND5	2-Hexanone	ND54
Chloroform	ND5	Tetrachloroethene	ND5
1,2-Dichloroethane	ND5	1,1,2,2-Tetrachloroethane	ND5
2-Butanone	ND110	Toluene	ND5
1,1,1-Trichloroethane	ND5	Chlorobenzene	ND5
Carbon tetrachloride	ND5	Ethylbenzene	ND5
Vinyl acetate	ND54	Styrene	ND5
Bromodichloromethane	ND5	Xylenes (total)	ND5
		2-Chloroethylvinylether	ND11

Surrogate Spike
Percent Recovery

Method Blank No. 2

Toluene-d_8	102%
Bromofluorobenzene	96%
1,2-Dichloroethane-d_4	96%

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra Environmental Services

Volatile Organic Compounds

Lab Sample ID: Method Blank No. 1
Analysis Date: 09/13/94

Compound	Concentration µg/Kg	Compound	Concentration µg/Kg
Chloromethane	ND10	1,2-Dichloropropane	ND5
Bromomethane	ND10	cis-1,3-Dichloropropene	ND5
Vinyl chloride	ND10	Trichloroethene	ND5
Chloroethane	ND10	Dibromochloromethane	ND5
Methylene chloride	ND5	1,1,2-Trichloroethane	ND5
Acetone	ND100	Benzene	ND5
Carbon disulfide	ND5	trans-1,3-Dichloropropene	ND5
1,1-Dichloroethene	ND5	Bromoform	ND5
1,1-Dichloroethane	ND5	4-Methyl-2-pentanone	ND50
1,2-Dichloroethene (total)	ND5	2-Hexanone	ND50
Chloroform	ND5	Tetrachloroethene	ND5
1,2-Dichloroethane	ND5	1,1,2,2-Tetrachloroethane	ND5
2-Butanone	ND100	Toluene	ND5
1,1,1-Trichloroethane	ND5	Chlorobenzene	ND5
Carbon tetrachloride	ND5	Ethylbenzene	ND5
Vinyl acetate	ND50	Styrene	ND5
Bromodichloromethane	ND5	Xylenes (total)	ND5
		2-Chloroethylvinylether	ND10

	Surrogate Spike Percent Recovery
Toluene-d_8	94%
Bromofluorobenzene	87%
1,2-Dichloroethane-d_4	91%

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra
Environmental Services

Volatile Organic Compounds

Lab Sample ID: Method Blank No. 2
Analysis Date: 09/14/94

Compound	Concentration µg/Kg	Compound	Concentration µg/Kg
Chloromethane	ND10	1,2-Dichloropropane	ND5
Bromomethane	ND10	cis-1,3-Dichloropropene	ND5
Vinyl chloride	ND10	Trichloroethene	ND5
Chloroethane	ND10	Dibromochloromethane	ND5
Methylene chloride	ND5	1,1,2-Trichloroethane	ND5
Acetone	ND100	Benzene	ND5
Carbon disulfide	ND5	trans-1,3-Dichloropropene	ND5
1,1-Dichloroethene	ND5	Bromoform	ND5
1,1-Dichloroethane	ND5	4-Methyl-2-pentanone	ND50
1,2-Dichloroethene (total)	ND5	2-Hexanone	ND50
Chloroform	ND5	Tetrachloroethene	ND5
1,2-Dichloroethane	ND5	1,1,2,2-Tetrachloroethane	ND5
2-Butanone	ND100	Toluene	ND5
1,1,1-Trichloroethane	ND5	Chlorobenzene	ND5
Carbon tetrachloride	ND5	Ethylbenzene	ND5
Vinyl acetate	ND50	Styrene	ND5
Bromodichloromethane	ND5	Xylenes (total)	ND5
		2-Chloroethylvinylether	ND10

	Surrogate Spike Percent Recovery
Toluene-d_8	98%
Bromofluorobenzene	105%
1,2-Dichloroethane-d_4	95%

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra Environmental Services

Volatile Matrix Spike Percent Recovery

Client Sample ID: A-11

Compound	Matrix Spike Percent Recovery
1,1-Dichloroethene	92%/93%
Trichloroethene	108%/117%
Benzene	116%/119%
Toluene	120%/120%
Chlorobenzene	117%/121%

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra Environmental Services

Total Petroleum Hydrocarbons

Client Sample ID: See below
Sample Date: 09/08/94
Analysis Date: 09/14 and 16/94

Client Sample ID	Lab Sample ID	Total Petroleum Hydrocarbons mg/Kg	Matrix Spike Percent Recovery
C-1	Q40909601	19	--
B-3	Q40909602	1,600	--
A-2	Q40909605	9,900	--
A-10	Q40909606	140	--
A-11	Q40909614	720/720	105%
A-1	Q40909615	1,400	--
--	Method Blank 09/14/94	ND17	--
--	Method Blank 09/16/94	ND17	--

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra
Environmental Services

TCLP Metals Analysis

Client Sample ID: B-3
Sample Date: 09/08/94
Lab Sample ID: Q40909602
TCLP Extraction Date: 09/13/94
Analysis Date: 09/15/94
Mercury: 09/14/94

Parameter	Concentration mg/L
Arsenic	ND0.3
Barium	ND0.5
Cadmium	0.007
Chromium	ND0.05
Lead	0.45
Mercury	ND0.0002
Selenium	ND0.3
Silver	ND0.01

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra Environmental Services

TCLP Metals Analysis

Client Sample ID: A-2
Sample Date: 09/08/94
Lab Sample ID: Q40909605
TCLP Extraction Date: 09/13/94
Analysis Date: 09/15/94
Mercury: 09/14/94

Parameter	Concentration mg/L
Arsenic	ND0.3
Barium	0.6
Cadmium	0.02
Chromium	ND0.5
Lead	1.0
Mercury	ND0.0002
Selenium	ND0.3
Silver	ND0.01

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra
Environmental Services

TCLP Metals Analysis

Client Sample ID: A-9
Sample Date: 09/08/94
Lab Sample ID: Q40909607
TCLP Extraction Date: 09/13/94
Analysis Date: 09/15/94
Mercury: 09/14/94

Parameter	Concentration mg/L
Arsenic	ND0.3
Barium	ND0.5
Cadmium	ND0.005
Chromium	ND0.05
Lead	ND0.05
Mercury	ND0.0002
Selenium	ND0.3
Silver	ND0.1

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra
Environmental Services

TCLP Metals Analysis

Client Sample ID:	A-8
Sample Date:	09/08/94
Lab Sample ID:	Q40909608
TCLP Extraction Date:	09/13/94
Analysis Date:	09/15/94
	Mercury: 09/14/94

Parameter	Concentration mg/L
Arsenic	ND0.3
Barium	0.5
Cadmium	ND0.005
Chromium	ND0.05
Lead	0.11
Mercury	ND0.0002
Selenium	ND0.3
Silver	ND0.01

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra
Environmental Services

TCLP Metals Analysis

Client Sample ID: A-7
Sample Date: 09/08/94
Lab Sample ID: Q40909609
TCLP Extraction Date: 09/13/94
Analysis Date: 09/15/94
Mercury: 09/14/94

Parameter	Concentration mg/L
Arsenic	ND0.3
Barium	0.5
Cadmium	0.006
Chromium	ND0.05
Lead	0.85
Mercury	ND0.0002
Selenium	ND0.3
Silver	ND0.01

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra
Environmental Services

TCLP Metals Analysis

Client Sample ID: A-6
Sample Date: 09/08/94
Lab Sample ID: Q40909610
TCLP Extraction Date: 09/13/94
Analysis Date: 09/15/94
Mercury: 09/14/94

Parameter	Concentration mg/L
Arsenic	ND0.3
Barium	0.6
Cadmium	ND0.005
Chromium	ND0.05
Lead	0.51
Mercury	ND0.0002
Selenium	ND0.3
Silver	ND0.01

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra
Environmental Services

TCLP Metals Analysis

Client Sample ID: A-5
Sample Date: 09/08/94
Lab Sample ID: Q40909611
TCLP Extraction Date: 09/13/94
Analysis Date: 09/15/94
Mercury: 09/14/94

Parameter	Concentration mg/L
Arsenic	ND0.3
Barium	0.6
Cadmium	0.007
Chromium	ND0.05
Lead	1.1
Mercury	ND0.0002
Selenium	ND0.3
Silver	ND0.01

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra
Environmental Services

TCLP Metals Analysis

Client Sample ID: A-4
Sample Date: 09/08/94
Lab Sample ID: Q40909612
TCLP Extraction Date: 09/13/94
Analysis Date: 09/15/94
Mercury: 09/14/94

Parameter	Concentration mg/L
Arsenic	ND0.3
Barium	0.7
Cadmium	0.012
Chromium	ND0.05
Lead	1.0
Mercury	ND0.0002
Selenium	ND0.3
Silver	ND0.01

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra Environmental Services

TCLP Metals Analysis

Client Sample ID: A-3
Sample Date: 09/08/94
Lab Sample ID: Q40909613
TCLP Extraction Date: 09/13/94
Analysis Date: 09/15/94
Mercury: 09/14/94

Parameter	Concentration mg/L
Arsenic	ND0.3
Barium	0.6
Cadmium	0.005
Chromium	ND0.05
Lead	0.31
Mercury	ND0.0002
Selenium	ND0.3
Silver	ND0.01

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra Environmental Services

TCLP Metals Analysis

Client Sample ID: A-11
Sample Date: 09/08/94
Lab Sample ID: Q40909614
TCLP Extraction Date: 09/13/94
Analysis Date: 09/15/94
Mercury: 09/14/94

Parameter	Concentration mg/L	Matrix Spike Percent Recovery
Arsenic	ND0.3	101%
Barium	0.06	92%
Cadmium	0.006	94%
Chromium	ND0.05	91%
Lead	0.57	97%
Mercury	ND0.0002	81%
Selenium	ND0.3	105%
Silver	ND0.01	88%

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra
Environmental Services

TCLP Metals Analysis

Client Sample ID: A-1
Sample Date: 09/08/94
Lab Sample ID: Q40909615
TCLP Extraction Date: 09/13/94
Analysis Date: 09/15/94
Mercury: 09/14/94

Parameter	Concentration mg/L
Arsenic	ND0.3
Barium	0.6
Cadmium	0.006
Chromium	ND0.05
Lead	0.55
Mercury	ND0.0002
Selenium	ND0.3
Silver	ND0.01

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra
Environmental Services

TCLP Metals Analysis

Lab Sample ID: TCLP Preparation Blank
TCLP Extraction Date: 09/13/94
Analysis Date: 09/15/94
Mercury: 09/14/94

Parameter	Concentration mg/L
Arsenic	ND0.3
Barium	ND0.5
Cadmium	ND0.005
Chromium	ND0.05
Lead	ND0.05
Mercury	ND0.0002
Selenium	ND0.3
Silver	ND0.1

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra
Environmental Services

TCLP Metals Analysis

Lab Sample ID: Method Blank
Analysis Date: 09/15/94
Mercury: 09/14/94

Parameter	Concentration mg/L
Arsenic	ND0.3
Barium	ND0.5
Cadmium	ND0.005
Chromium	ND0.05
Lead	ND0.05
Mercury	ND0.0002
Selenium	ND0.3
Silver	ND0.01

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra Environmental Services

Total Metals Analysis

Client Sample ID: See Below
Sample Date: 09/08/94
Analysis Date: 09/15/94

Client Sample ID	Lab Sample ID	Lead Analysis mg/Kg
C-1	Q40909601	ND5.1
A-10	Q40909606	42.1
--	Method Blank	ND5.0

IT Corporation/Fort Story
Date: 09/19/94
Job Number: Q409096/099
Client Project ID: 519201

Quanterra Environmental Services

General Chemistry Analysis

Client Sample ID: See below
Sample Date: 09/08/94
Analysis Date: 09/14/94

Client Sample ID	Lab Sample ID	Paint Filter Liquids Test
B-3	Q40909602	Passed, No Free Liquids
A-2	Q40909605	Passed, No Free Liquids
A-11	Q40909614	Passed, No Free Liquids/ Passed, No Free Liquids
A-1	Q40909615	Passed, No Free Liquids

Cooler Receipt Form

Project: ~~WPAFB~~ Fort Story GAP 09/12/94 LIMS No. Q4090916, 099

Use other side of this form to note details concerning check-in problems.

A. Preliminary Examination Phase:

Date cooler opened: 09/10/94 C-of-C No.: 482176

By (print) Robert Finlay (sign) Robert Finlay

1. Did cooler come with a shipping slip (air bill, etc.)? ..... (Yes) No
   If YES, enter carrier name & air bill no. here: Federal Express - 1525622464
2. Were custody seals on outside of cooler? ..... (Yes) No
   How many & where: 4, 1 each corner
   Seal date: N/A Seal name: NA
3. Were custody seals unbroken and intact at the date and time of arrival: ..... (Yes) No
4. Did you screen samples for radioactivity using the Geiger Counter: ..... Yes (No)
5. Were custody papers sealed in a plastic bag and taped inside of the lid? ..... (Yes) No
6. Were custody papers filled out properly (ink, signed, etc.)? ..... (Yes) No
7. Did you sign custody papers in the appropriate place? ..... (Yes) No
8. Was project identifiable from custody papers? ..... (Yes) No
   If YES, enter project name at the top of this form. (Yes) No
9. If required, was enough ice used? ..... (Yes) No
   Type of ice: Wet Ice
10. Have designated person initial here to acknowledge receipt of cooler: BF Date: 9/10/94

B. Log-in Phase:

Date samples were logged-in: 09/12/94 By (print) Glenn A. Peterson (sign) Glenn A. Peterson

11. Describe type of packing in cooler: wet Ice, Cardboard Inserts, styrofoam beans
12. Were all bottles sealed in separate plastic bags? ..... (Yes) No
13. Did all bottles arrive unbroken & were labels in good condition? ..... (Yes) No
14. Were all bottle labels complete (ID, date, time, signature, preservative, etc.)? ..... (Yes) No
15. Did all bottle labels agree with custody papers? ..... (Yes) No
16. Were correct containers used for the test indicated? ..... (Yes) No
17. Were correct preservatives added to samples? ..... (Yes) No
18. Was a sufficient amount of sample sent for tests indicated? ..... (Yes) No
19. Were bubbles absent in volatile samples? ..... (Yes) No
    If NO, list by sample number:
20. Was the project manager called and status discussed? ..... (Yes) (No)
    If yes, give details on the back of this form.
21. Who was called? Tom Mathison By whom? Christopher Tarbe Date: 9/12/94

to discuss which sample was for QC

ITAS PT/03-94/0095/CoolRcpt.Frm

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 482176
Page 1 of 3

Project Name/No. [1] Coal Story / 519201
Sample Team Members [2] Bernarde / Wilson
Profit Center No. [3] 3813
Project Manager [4] Tom Mathison
Purchase Order No. [6] 519201
Required Report Date [11] Normal

Samples Shipment Date [7] 9/9/94
Lab Destination [8] Quanterra
Lab Contact [9] Carrie Smith
Project Contact/Phone [12] Lou Bernarde
Carrier/Waybill No. [13] FedEx 1525622464

Bill to: [5] IT Corp
2790 Mosside Blvd
Monroeville Pa
15146

Report to: [10] Tom Mathison
IT Corp
2790 Mosside Blvd
Monroeville Pa 15146

White: To accompany samples
Yellow: Field copy

ONE CONTAINER PER LINE

Sample Number [14]	Sample Description/Type [15]	Date/Time Collected [16]	Container Type [17]	Sample Volume [18]	Pre-servative [19]	Requested Testing Program [20]	Condition on Receipt [21]	Disposal Record No. [22]
C-1	soil	9/8/94	amber glass	(1) 250ml	4° ice	TRPH EPA 418.1	OK	
C-1	soil	9/8/94	amber glass	(1) 250ml	4° ice	Total Lead		
B-3	soil	9/8/94	amber glass	(1) 250ml	4° ice	Paint Filter 9095		
B-3	soil	9/8/94	amber glass	(1) 250ml	4° ice	TCLP Metals 1311/6010		
B-3	soil	9/8/94	amber glass	(2) 60ml	4° ice	BTEX 5030A/8020		
B-3	soil	9/8/94	amber glass	(2) 60ml	4° ice	VOC 5030A/8240A		
B-3	soil	9/8/94	amber glass	(1) 250ml	4° ice	TRPH EPA 418.1		
B-3	soil	9/8/94	amber glass	(1) 60ml	4° ice	TOX 9022		

FOR LAB USE ONLY

FOR LAB USE ONLY

Special Instructions: [23]

Possible Hazard Identification: [24]
Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: [25]
Return to Client ☐ Disposal by Lab ☒ Archive _____ (mos.)

Turnaround Time Required: [26]
Normal ☒ Rush ☐

QC Level: [27]
I. ☐ II. ☐ III. ☐ Project Specific (specify): _____

1. Relinquished by [28] (Signature/Affiliation) Heather Wilson	Date: 9/9/94 Time: 10:30	1. Received by [28] (Signature/Affiliation) Bob Finley QES	Date: 9/10/94 Time: 1000
2. Relinquished by (Signature/Affiliation)	Date: Time:	2. Received by (Signature/Affiliation)	Date: Time:
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments: [29]

*See back of form for special instructions.

MCA 3/15/91

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)*

Reference Document No.[30] 482176
Page 2 of 3

Project Name Fort Story

Project No. 519201

Samples Shipment Date 9/9/94

ONE CONTAINER PER LINE

Sample[14] Number	Sample[15] Description/Type	Date/Time[16] Collected	Container[17] Type	Sample[18] Volume	Pre-[19] servative	Requested Testing[20] Program	Condition on[21] Receipt	Disposal[22] Record No.
B-2	soil	9/8/94	(2) 60ml	amber glass	4° ice	VOC 5030A/8240A	OK	
~~B-3~~ B-1	soil	9/8/94	(2) 60ml	amber glass	4° ice	VOC 5030A/8240A		
A-2	soil	9/8/94	amber glass	(1) 250ml	4° ice	Paint filter 9095		
A-2	soil	9/8/94	amber glass	(1) 250ml	4° ice	TRPH EPA 418.1		
A-2	soil	9/8/94	amber glass	(1) 250ml	4° ice	TCLP metals 1311/6010		
A-2	soil	9/8/94	amber glass	(2) 60ml	4° ice	VOC 5030A/8240A		
A-2	soil	9/8/94	amber glass	(2) 60ml	4° ice	BTEX 5030A/8020		
A-2	soil	9/8/94	amber glass	(1) 60ml	4° ice	TOX 9022		
A-10	soil	9/8/94	amber glass	(1) 250ml	ice 4°	Total Lead		
A-10	soil	9/8/94	amber glass	(1) 250ml	ice 4°	TRPH EPA 418.1		
A-9	soil	9/8/94	amber glass	(1) 250ml	ice 4°	TCLP metals 1311/6010		
A-8	soil	9/8/94	amber glass	(1) 250ml	ice 4°	TCLP metals 1311/6010		
A-7	soil	9/8/94	amber glass	(1) 250ml	ice 4°	TCLP metals 1311/6010		
A-6	soil	9/8/94	amber glass	(1) 250ml	ice 4°	TCLP metals 1311/6010		
A-5	soil	9/8/94	amber glass	(1) 250ml	ice 4°	TCLP metals 1311/6010		
A-5	soil	9/8/94	amber glass	(2) 60ml	ice 4°	VOC 5030A/8240A		
A-4	soil	9/8/94	amber glass	250ml	ice 4°	TCLP metals 1311/6010		
A-3	soil	9/8/94	amber glass	(2) 60ml	ice 4°	VOC 5030A/8240A		
A-3	soil	9/8/94	amber glass	250ml	ice 4°	TCLP metals 1311/6010		
A-11	soil	9/8/94	amber glass	250ml	ice 4°	TCLP metals 1311/6010		

White: To accompany samples
Yellow: Field copy
*See back of form for special instructions.

MCA 3/15/91

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)*

Reference Document No.[30] 48-2176

Project Name Fort Sterling

Project No. 519201

Samples Shipment Date 9/9/94

ONE CONTAINER PER LINE

Sample[14] Number	Sample[15] Description/Type	Date/Time[16] Collected	Container[17] Type	Sample[18] Volume	Pre-[19] servative	Requested Testing[20] Program	Condition on[21] Receipt	Disposal[22] Record No.
A-11	soil	9/8/94	amber glass	250ml	4° ice	Paint filter 9095	OK	
A-11	soil	9/8/94	amber glass	250ml	4° ice	TRPH EPA 418.1		
A-11	soil	9/8/94	amber glass	(2) 60ml	4° ice	VOC 5030A/8240A		
A-11	soil	9/8/94	amber glass	60ml	4° ice	TOX 9022		
A-11	soil	9/8/94	amber glass	60ml	4° ice	BTEX 5030A/8020		
A-1	soil	9/8/94	amber glass	250ml	4° ice	1311/6010 TCLP metals / 9095 Paint filter		
A-1	soil	9/8/94	amber glass	250ml	4° ice	TRPH EPA 418.1		
A-1	soil	9/8/94	amber glass	(2) 60ml	4° ice	BTEX 5030A/8020		
A-1	soil	9/8/94	amber glass	60ml	4° ice	TOX 9022		
A-1	soil	9/8/94	amber glass	(2) 60ml	4° ice	VOC 5030A/8240A		
Tripblank	water	9/8/94	amber glass	40ml	4° ice	VOC 5030A/8240A		

White: To accompany samples

Yellow: Field copy

*See back of form for special instructions.

MCA 3/15/91

Quanterra
Environmental Services

CERTIFICATE OF ANALYSIS

QUANTERRA ENV SERVICES
5103 OLD WILLIAM PENN HWY.
EXPORT, PENN. 15632
CARRIE GAMBER

Date: 09/19/94

Work Order: B4-09-199 P.O. Number: E94-203

This is the Certificate of Analysis for the following samples:

Client Work ID: FT STORY/ 519029 3I4610
Date Received: 09/13/94
Number of Samples: 6
Sample Type: SOIL

I. Introduction

Samples were labeled as follows:

SAMPLE IDENTIFICATION		LABORATORY #
B-3	Q409096-02	B4-09-199-01
A-2	Q409096-05	B4-09-199-02
A-11	Q409096-14	B4-09-199-03
A-11	MATRIX SPIKE	B4-09-199-04
A-11	MTX SPK DUP	B4-09-199-05
A-1	Q409096-15	B4-09-199-06

Reviewed and Approved:

Jon Bartell
Laboratory Director

Quanterra Environmental Services

Company: QUANTERRA ENV SERVICES
Date: 09/19/94
Client Work ID: FT STORY/ 519029 3I4610 Work Order: B4-09-199

II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. Quanterra reserves the right to control report production except in whole.

Quanterra Environmental Services

Company: QUANTERRA ENV SERVICES
Date: 09/19/94
Client Work ID: FT STORY/ 519029 3I4610 Work Order: B4-09-199

SAMPLE ID: **B-3** **Q409096-02**
SAMPLE DATE: **09/08/94**
SAMPLE MATRIX: **SOIL**

Test Name	Note Ref	Result	Reporting Limit	Units	Date Analyzed	Method Reference
Extractable Organic Halide		ND	200	MG/KG	09/16/94	EPA450_1_D

Quanterra Environmental Services

Company: QUANTERRA ENV SERVICES
Date: 09/19/94
Client Work ID: FT STORY/ 519029 3I4610 Work Order: B4-09-199

TEST NAME: **BTEX - Purge and Trap**
METHOD REFERENCE: **EPA8020**

SAMPLE ID: **B-3** **Q409096-02**
SAMPLE DATE: **09/08/94**
SAMPLE MATRIX: **SOIL**
ANALYSIS DATE: **09/16/94**
DILUTION FACTOR: **50**
UNITS: **UG/KG**

	Result	Reporting Limit
Benzene	ND	50
Ethylbenzene	ND	50
Toluene	ND	50
Xylenes (total)	ND	50

Total BTEX concentration: Not Detected

Surrogates	% Recovery
4-Bromofluorobenzene	100

Quanterra Environmental Services

Company: QUANTERRA ENV SERVICES
Date: 09/19/94
Client Work ID: FT STORY/ 519029 3I4610 **Work Order: B4-09-199**

SAMPLE ID: **A-2** **Q409096-05**
SAMPLE DATE: **09/08/94**
SAMPLE MATRIX: **SOIL**

Test Name	Note Ref	Result	Reporting Limit	Units	Date Analyzed	Method Reference
Extractable Organic Halide		ND	200	MG/KG	09/16/94	EPA450_1_D

Quanterra Environmental Services

Company: QUANTERRA ENV SERVICES
Date: 09/19/94
Client Work ID: FT STORY/ 519029 3I4610 **Work Order: B4-09-199**

TEST NAME: **BTEX - Purge and Trap**
METHOD REFERENCE: **EPA8020**

SAMPLE ID: **A-2** **Q409096-05**
SAMPLE DATE: **09/08/94**
SAMPLE MATRIX: **SOIL**
ANALYSIS DATE: **09/16/94**
DILUTION FACTOR: **50**
UNITS: **UG/KG**

	Result	Reporting Limit
Benzene	ND	50
Ethylbenzene	ND	50
Toluene	ND	50
Xylenes (total)	ND	50

Total BTEX concentration: Not Detected

Surrogates	% Recovery
4-Bromofluorobenzene	99

Quanterra Environmental Services

Company: QUANTERRA ENV SERVICES
Date: 09/19/94
Client Work ID: FT STORY/ 519029 3I4610 **Work Order: B4-09-199**

SAMPLE ID: **A-11** **Q409096-14**
SAMPLE DATE: **09/08/94**
SAMPLE MATRIX: **SOIL**

Test Name	Note Ref	Result	Reporting Limit	Units	Date Analyzed	Method Reference
Extractable Organic Halide		ND	200	MG/KG	09/16/94	EPA450_1_D

Quanterra Environmental Services

Company: QUANTERRA ENV SERVICES
Date: 09/19/94
Client Work ID: FT STORY/ 519029 3I4610 **Work Order: B4-09-199**

TEST NAME: **BTEX - Purge and Trap**
METHOD REFERENCE: **EPA8020**

SAMPLE ID: **A-11** **Q409096-14**
SAMPLE DATE: **09/08/94**
SAMPLE MATRIX: **SOIL**
ANALYSIS DATE: **09/16/94**
DILUTION FACTOR: **50**
UNITS: **UG/KG**

	Result	Reporting Limit
Benzene	ND	50
Ethylbenzene	ND	50
Toluene	ND	50
Xylenes (total)	ND	50

Total BTEX concentration: Not Detected

Surrogates	% Recovery
4-Bromofluorobenzene	100

Quanterra Environmental Services

Company: QUANTERRA ENV SERVICES
Date: 09/19/94
Client Work ID: FT STORY/ 519029 3I4610 Work Order: B4-09-199

SAMPLE ID: **A-11** **MATRIX SPIKE**
SAMPLE DATE: **09/08/94**
SAMPLE MATRIX: **SOIL**

Test Name	Note Ref	Result	Reporting Limit	Units	Date Analyzed	Method Reference
Extractable Organic Halide		107		% REC	09/16/94	EPA450_1_D

Quanterra Environmental Services

Company: QUANTERRA ENV SERVICES
Date: 09/19/94
Client Work ID: FT STORY/ 519029 3I4610 **Work Order: B4-09-199**

TEST NAME: **BTEX - Purge and Trap**
METHOD REFERENCE: **EPA8020**

SAMPLE ID: **A-11** **MATRIX SPIKE**
SAMPLE DATE: **09/08/94**
SAMPLE MATRIX: **SOIL**
ANALYSIS DATE: **09/16/94**
DILUTION FACTOR: **50**
UNITS: **% REC**

	Result	Reporting Limit
Benzene	102	
Ethylbenzene	101	
Toluene	101	
Xylenes (total)	101	
Total BTEX concentration:	405	% REC

Surrogates	% Recovery
4-Bromofluorobenzene	99

Quanterra Environmental Services

Company: QUANTERRA ENV SERVICES
Date: 09/19/94
Client Work ID: FT STORY/ 519029 3I4610 **Work Order: B4-09-199**

SAMPLE ID: **A-11** **MTX SPK DUP**
SAMPLE DATE: **09/08/94**
SAMPLE MATRIX: **SOIL**

Test Name	Note Ref	Result	Reporting Limit	Units	Date Analyzed	Method Reference
Extractable Organic Halide		103		% REC	09/16/94	EPA450_1_D

Quanterra Environmental Services

Company: QUANTERRA ENV SERVICES
Date: 09/19/94
Client Work ID: FT STORY/ 519029 3I4610 **Work Order: B4-09-199**

TEST NAME: **BTEX - Purge and Trap**
METHOD REFERENCE: **EPA8020**

SAMPLE ID: **A-11** **MTX SPK DUP**
SAMPLE DATE: **09/08/94**
SAMPLE MATRIX: **SOIL**
ANALYSIS DATE: **09/16/94**
DILUTION FACTOR: **50**
UNITS: **% REC**

	Result	Reporting Limit
Benzene	99	
Ethylbenzene	100	
Toluene	101	
Xylenes (total)	100	
Total BTEX concentration:	400	% REC

Surrogates	% Recovery
4-Bromofluorobenzene	99

Quanterra Environmental Services

Company: QUANTERRA ENV SERVICES
Date: 09/19/94
Client Work ID: FT STORY/ 519029 3I4610 Work Order: B4-09-199

SAMPLE ID: **A-1** **Q409096-15**
SAMPLE DATE: **09/08/94**
SAMPLE MATRIX: **SOIL**

Test Name	Note Ref	Result	Reporting Limit	Units	Date Analyzed	Method Reference
Extractable Organic Halide		ND	200	MG/KG	09/16/94	EPA450_1_D

Quanterra Environmental Services

Company: QUANTERRA ENV SERVICES
Date: 09/19/94
Client Work ID: FT STORY/ 519029 3I4610 Work Order: B4-09-199

TEST NAME: **BTEX - Purge and Trap**
METHOD REFERENCE: **EPA8020**

SAMPLE ID: **A-1** **Q409096-15**
SAMPLE DATE: **09/08/94**
SAMPLE MATRIX: **SOIL**
ANALYSIS DATE: **09/16/94**
DILUTION FACTOR: **50**
UNITS: **UG/KG**

	Result	Reporting Limit
Benzene	ND	50
Ethylbenzene	ND	50
Toluene	ND	50
Xylenes (total)	ND	50

Total BTEX concentration: Not Detected

Surrogates	% Recovery
4-Bromofluorobenzene	99

Quanterra Environmental Services

Company: QUANTERRA ENV SERVICES
Date: 09/19/94
Client Work ID: FT STORY/ 519029 **3I4610** **Work Order: B4-09-199**

IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME **BTEX - Purge and Trap** TEST CODE **BTEX**

BTEX	Method 8020, SW-846, Test Methods for Evaluating Solid Wastes, Third Edition. This technique uses a purge and trap with gas chromatography (GC) and photo ionization detection (PID) with a five point curve. This method exceeds the requirement of Method 602. Prep method is 5030.

TEST NAME **Extractable Organic Halide** TEST CODE **EOX**

Extractable Organic Halides	Method 450_1 Appendix D, Method for Extractable Organic Halides in Solids. Used for determination of extractable organic halides (EOX) as Cl- in solids. EOX is defined as the sum of those organic halides which are extracted and detected by pyrolysis/ microcolulometry.

B409199

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. [illegible]
Page 1 of 1

Project Name/No. 1 Fort Story / 519029
Sample Team Members 2
Profit Center No. 3 4610
Project Manager 4 Carrie Gamber
Purchase Order No. 6 E94-203
Required Report Date 11 9/19/94

Samples Shipment Date 7
Lab Destination 8 AUSTIN
Lab Contact 9 Chris Ashy Coff
Project Contact/Phone 12 CLSGamber / (412) 931-8800
Carrier/Waybill No. 13 Federal Express 242 3820 253

Bill to: 5 QES
5403 Old William Penn Highway
Export, PA. 15632
Attention: Carrie Smith-Gamber
Report to: 10 See Above

ONE CONTAINER PER

Sample Number 14	Sample Description/Type 15	Date/Time Collected 16	Container Type 17	Sample Volume 18	Pre-servative 19	Requested Testing Program 20	Condition on Receipt 21	Disposal Record No. 22
B-3	Q409096-02 / Soil	09/08/94	Amber Glass	180 ml.	None	TOX + BTEX	Good 1°C	3x60
A-2	-05			180 ml.			FOR LAB USE ONLY	
A-11 (MS/MSD)	-14			120 ml.				2x60
A-1	-15			180 ml.				3x60
							FOR LAB USE ONLY	
							GAP 09/12/94	

Special Instructions: 23 analyze MS/MSD on sample A-11 - 1 week Rush

Possible Hazard Identification: 24
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: 25
Return to Client ☐ Disposal by Lab ☐ Archive (mos.)

Turnaround Time Required: 26
Normal ☐ Rush ☐

QC Level: 27
I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by 28 (Signature/Affiliation) [signature] / [illegible]	Date: 09/12/94 Time: 1700	1. Received by 28 (Signature/Affiliation) [signature] QF	Date: 9-13-94 Time: 0925
2. Relinquished by (Signature/Affiliation)	Date: Time:	2. Received by (Signature/Affiliation)	Date: Time:
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments: 29 please fill out & return w/ QA UCA COC cooler receipt form.

White: To accompany samples
Yellow: Field copy
*See back of form for special instructions.

MCA 3/15/91

ITAS Austin QC Batch Summary for AA / Wet Chemical Analysis (Page 1 of 2)

Batch QC ID

Test Code: EOX

Preprep Method	
Prep Method	450.1 - D
Analysis Method	450.1 - D
Batch Date	9/16/99
Instrument ID	A4
Batch (set) #	1

Batch QC Information

Data Reported to : MDL PQL (circle one)

Analyst:	RW
Matrix:	Soil
Units:	mg/kg

QC Sample	Lab ID	Dil. Factor	Date Analyzed	Time Analyzed
Method Blank	9/6/99	1x	9/16/99	1100
LCS	1000ppm LCS	↓	↓	1200
LCSD	1000ppm LCS			1600
MS	B409199-01B			1500
MSD	B409199 05B			1530
Replicate	B409199-03B	↓	↓	1545

Sample Numbers Associate With Batch

#	Lab Sample ID
1	B409199-01B
2	02B
3	03B
4	04B
5	05B
6	06B
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	RW
17	9/16/99
18	
19	
20	

General Comments for Batch Export

ITAS Austin QC Batch Summary for AA / Wet Chemical Analysis (Page 2 of 2)

Analyte	Blank Data		Laboratory Control Samples									Replicate Sample Data				
			Accuracy									Precision				
	Method Blank Result	Reporting Limit	LCS True Value	LCS Conc. Found	LCS % Rec	Q	LCSD Conc. Found	LCSD % Rec	Q	Upper Control Limit	Lower Control Limit	% RPD for LCS/LCSD % Rec.	Q	Original Result for Replicate	Replicate Result	REP % RPD	Q	% RPD Control Limit
Extractable Halides	ND	200	1000	1030	103		956.5	95.6		120	80	7.4		ND	ND	0		20

Analyte	MS/MSD Batch QC Data														
	Accuracy										Precision				
	Unspiked Sample Result	MS Result	Spike Added	MS % Rec.	Q	MSD Result	MSD % Rec.	Q	Upper Control Limit	Lower Control Limit	% RPD for MS/MSD % Rec.	Q	MS/MSD % RPD as Reps	Q	% RPD Control Limit
Extractable Halides	ND (59.8)	1130	1000	107		1090	103		125	75	3.81		9.0		20

Qualifiers (Q):

H - Sample concentration was greater than five times the spike level.

N - Spike recovery was outside method control limits.

R - Percent RPD for MS/MSD or LCS/LCSD was outside control limits

* - Replicate % RPD was outside control limits.

D - Sample concentration was greater than five times the spike level.
The RPD was calculated between the MS and MSD results as replicates.

Comments

ITAS QC Batch Summary

QC Batch ID	0
Preprep Method:	NA
Prep Method:	NA
Analysis Method:	BTEX
Batch Date:	" 9-16-94
Instrument ID:	I
Batch (set) #:	1
Test Code:	

Batch QC Information

Matrix: H_2O Analyst: drh

Units: ug/L

QC Sample	Lab ID	Dil. Factor	Date	Time
Method Blank ID:	Lab Blank	1X	9/16/94	09:54
LCS ID:	LCS LM10072	↓	"	10:32
LCSD ID:	LCSD LM10072	↓	"	23:17
MS Sample ID:	B409199-04	50X	"	20:53
MSD Sample ID:	B409199-05	↓	" ↓	21:21
Rep Sample ID:			"	

Sample Numbers Associated With Batch:

#	Lab Sample ID
1	B409240-01
2	B409222-01
3	-02
4	-03
5	B409199-01
6	-02
7	-03
8	-04 MS of -03
9	-05 MSD of -03
10	-06
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

Data reported to: PQL

General Comments for Batch

Method 8020-W

ITAS QC Batch Summary

Analyte	Accuracy													Precision				
	Blank Data		Laboratory Control Samples											Replicate Sample Data				
	Method Blank Result mg/L	Reporting Limit mg/L	LCS True Value mg/L	LCS Conc. Found mg/L	LCS % Rec.	Q	LCSD Conc. Found mg/L	LCSD % Rec.	Q	Lower Cntrl. Limit	Upper Cntrl. Limit	%RPD for LCS/LCSD % Rec.	Q	Original Result for Replicate mg/L	Replicate Result mg/L	Rep. %RPD	Q	% RPD Cntrl. Limit
Benzene	ND	1.00	19.50	18.79	96		19.80	97		80	120	1						30.0
Toluene	ND	1.00	56.80	56.50	99		56.51	99		80	120	0						30.0
Ethylbenzene	ND	1.00	20.40	21.33	105		20.82	102		80	120	1						30.0
Total Xylenes	ND	1.00	122.20	121.98	100		121.14	99		80	120	0						
Surrogates (Percent Recovery)																		
Fluorobenzene										70	130							
4-Bromofluorobenzene	99	100	100	100	100		100	100		70	130	0						

Comments:

Qualifiers/Q:

* - Replicate % RPD was outside control limits
N - LCS recovery was outside method control limits
R - Percent RPD for LCS/LCSD recoveries was outside control limits

Method 8020-W

ITAS QC Batch Summary

Analyte:	Accuracy										Precision			
	Matrix Spike/Matrix Spike Dup Batch QC Data													
	Unspiked Sample Result mg/L	MS Result mg/L	Spike Added	MS % Rec	Q	MSD Result mg/L	MSD % Rec	Q	Lower Cntrl. Limit	Upper Cntrl. Limit	%RPD for MS/MSD	%RPD for MS/MSD As Repe.	Q	% RPD Control Limit
Benzene	ND	993.33	975	102		969.61	99		80	120		1		30.0
Toluene	ND	2864.90	2840	101		2852.35	100		80	120		0		30.0
Ethylbenzene	ND	1029.90	1020	101		1025.17	101		80	120		0		30.0
Total Xylenes	ND	6145.16	6110	101		6123.14	100		80	120		0		30.0
Surrogates (Percent Recovery)														
Fluorobenzene									70	130				
4-Bromofluorobenzene	100	99		99		99	99		70	130		0		

Comments:

Qualifiers/Q:

H - Sample Concentration was greater than five times the spike level
N - Spike recovery was outside method control limits
R - Percent RPD for LCS/LCSD recoveries was outside control limits
D - Sample concentration was greater than five times the spike level.
The RPD was calculated between the MS and MSD Results as replicates.

Cooler Receipt Form

Project: Ft. Story LIMS No. B409199

Use other side of this form to note details concerning check-in problems.

A. Preliminary Examination Phase:

Date cooler opened: 9-13-94 C-of-C No.: 482351

By (print) Lorri Church (sign) Lorri Church

1. Did cooler come with a shipping slip (air bill, etc.)? ..... Yes N
   If YES, enter carrier name & air bill no. here: Fed Ex 2423820253
2. Were custody seals on outside of cooler? ..... Yes N
   How many & where: 1 Top Right
   Seal date: - Seal name: -
3. Were custody seals unbroken and intact at the date and time of arrival: ..... Yes N
4. Did you screen samples for radioactivity using the Geiger Counter: ..... Yes No
5. Were custody papers sealed in a plastic bag and taped inside of the lid? ..... Yes N
6. Were custody papers filled out properly (ink, signed, etc.)? ..... Yes N
7. Did you sign custody papers in the appropriate place? ..... Yes N
8. Was project identifiable from custody papers? ..... Yes N
   If YES, enter project name at the top of this form.
9. If required, was enough ice used? ..... Yes N
   Type of ice: Blue
10. Have designated person initial here to acknowledge receipt of cooler: LLC Date: 9-13-94

Fort Story

B. Log-in Phase:

Date samples were logged-in: 9/15/94 By (print) CHRIS SCHERCOFF (sign) Chris Schercoff

11. Describe type of packing in cooler: Bubble wrap
12. Were all bottles sealed in separate plastic bags? ..... Yes No
13. Did all bottles arrive unbroken & were labels in good condition? ..... Yes No
14. Were all bottle labels complete (ID, date, time, signature, preservative, etc.)? ..... Yes No
15. Did all bottle labels agree with custody papers? ..... Yes No
16. Were correct containers used for the test indicated? ..... Yes No
17. Were correct preservatives added to samples? ..... Yes No
18. Was a sufficient amount of sample sent for tests indicated? ..... Yes No
19. Were bubbles absent in volatile samples? ..... N/A Yes No
    If NO, list by sample number:
20. Was the project manager called and status discussed? ..... Yes No
    If yes, give details on the back of this form.
21. Who was called? By whom? Date: