

TRIAD ENGINEERING, INC.
MODULUS OF RUPTURE (R_o)
3-POINT

PROJECT NO.: C00553 PROJECT NAME: Big Branch Slurry Impoundment

BORING NO.: DH1-3 DEPTH: 84.2'-85.0'

DESCRIPTION: Brown sandstone, medium grained

DATE: 2/14/01 TESTED BY: M.A. Dastgheib

$$R_o = \frac{8F_c L}{\pi D^3}$$

LOAD (F_c) = 350 lbs

LENGTH (L) = 4.190 in.

DIAMETER (D) = 1.975 in

MODULUS OF RUPTURE = 485 (PSI)

TRIAD ENGINEERING, INC.
MODULUS OF RUPTURE (R_o)
3-POINT

PROJECT NO.: C00553 PROJECT NAME: Big Branch Slurry Impoundment

BORING NO.: DH1-3 DEPTH: 85.4'-86.0'

DESCRIPTION: Brown and gray sandstone, medium grained

DATE: 2/14/01 TESTED BY: M.A. Dastgheib

$$R_o = \frac{8F_c L}{\pi D^3}$$

LOAD (F_c) = 250 lbs

LENGTH (L) = 4.190 in.

DIAMETER (D) = 1.975 in

MODULUS OF RUPTURE = 346 (PSI)

TRIAD ENGINEERING, INC.
MODULUS OF RUPTURE (R_o)
3-POINT

PROJECT NO.: C00553 PROJECT NAME: Big Branch Slurry Impoundment

BORING NO.: DH1-4 DEPTH: 78.0'-78.7'

DESCRIPTION: Brown and gray sandstone, medium grained

DATE: 2/14/01 TESTED BY: M.A. Dastgheib

$$R_o = \frac{8F_c L}{\pi D^3}$$

LOAD (F_c) = 200 lbs

LENGTH (L) = 4.190 in.

DIAMETER (D) = 1.965 in

MODULUS OF RUPTURE = 280 (PSI)

TRIAD ENGINEERING, INC.
MODULUS OF RUPTURE (R_o)
3-POINT

PROJECT NO.: C00553 PROJECT NAME: Big Branch Slurry Impoundment

BORING NO.: DH1-4 DEPTH: 84.0'-84.5'

DESCRIPTION: Brown sandstone, medium grained

DATE: 2/14/01 TESTED BY: M.A. Dastgheib

$$R_o = \frac{8F_c L}{\pi D^3}$$

LOAD (F_c) = 280 lbs

LENGTH (L) = 4.190 in.

DIAMETER (D) = 1.975 in

MODULUS OF RUPTURE = 388 (PSI)

TRIAD ENGINEERING, INC.
MODULUS OF RUPTURE (R_o)
3-POINT

PROJECT NO.: C00553 PROJECT NAME: Big Branch Slurry Impoundment

BORING NO.: DH1-5 DEPTH: 82.0'-82.5'

DESCRIPTION: Brown sandstone, medium grained

DATE: 2/14/01 TESTED BY: M.A. Dastgheib

$$R_o = \frac{8F_c L}{\pi D^3}$$

LOAD (F_c) = 250 lbs

LENGTH (L) = 4.190 in.

DIAMETER (D) = 1.970 in

MODULUS OF RUPTURE = 249 (PSI)

TRIAD ENGINEERING, INC.
MODULUS OF RUPTURE (R_o)
3-POINT

PROJECT NO.: C00553 PROJECT NAME: Big Branch Slurry Impoundment

BORING NO.: DH1-5 DEPTH: 84.0'-84.6'

DESCRIPTION: Gray sandstone, medium grained

DATE: 2/14/01 TESTED BY: M.A. Dastgheib

$$R_o = \frac{8F_c L}{\pi D^3}$$

LOAD (F_c) = 200 lbs

LENGTH (L) = 4.190 in.

DIAMETER (D) = 1.980 in

MODULUS OF RUPTURE = 275 (PSI)

TRIAD ENGINEERING, INC.
MODULUS OF RUPTURE (R_o)
3-POINT

PROJECT NO.: C00553 PROJECT NAME: Big Branch Slurry Impoundment

BORING NO.: DH1-8 DEPTH: 79.5'-80.1'

DESCRIPTION: Gray sandstone, medium grained

DATE: 2/14/01 TESTED BY: M.A. Dastgheib

$$R_o = \frac{8F_c L}{\pi D^3}$$

LOAD (F_c) = 250 lbs

LENGTH (L) = 4.190 in.

DIAMETER (D) = 1.980 in

MODULUS OF RUPTURE = 344 (PSI)

TRIAD ENGINEERING, INC.
MODULUS OF RUPTURE (R_o)
3-POINT

PROJECT NO.: C00553 PROJECT NAME: Big Branch Slurry Impoundment

BORING NO.: DH1-8 DEPTH: 83.0'-83.8'

DESCRIPTION: Gray sandstone, medium grained

DATE: 2/14/01 TESTED BY: M.A. Dastgheib

$$R_o = \frac{8F_c L}{\pi D^3}$$

LOAD (F_c) = 290 lbs

LENGTH (L) = 4.190 in.

DIAMETER (D) = 1.980 in

MODULUS OF RUPTURE = 398 (PSI)

APPENDIX B

***CHEMICAL ANALYSIS OF
SELECTED SLURRY SAMPLES***

CT&E Environmental Services Inc.
Laboratory Division: Charleston Laboratory

John Meeks
TRIAD ENGINEERING INC

Laboratory Number TA1-CO-P271-006

Page 1

CW #1
2000' UPSTREAM OF CONF. AT STRAIGHT FORK

COC
Date Sampled 01/06/01 00:00
Date Received 02/13/01 11:00

Type F Matrix WATER
Sampled by CLIENT

% Solids 71

032001 1358 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
ACRYLAMIDE	79-06-1	ND	U	0.26	mg/L	Y SW8316	03/19/01 23:26 ra	1.0



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

TRIAD ENGINEERING INC
MCCC BIG BRANCH IMPOUNDMENT
CT&E Laboratory Delivery Group Number: TA1-B0-P338 Page 1

DATE: 03/15/01

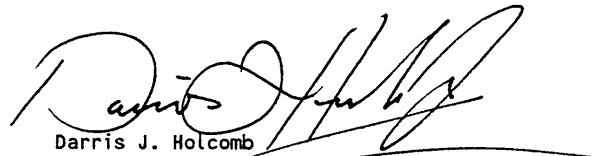
COC:

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 in an attached case narrative. Release of the data contained in the hard copy data package has been authorized by the Laboratory Manager or designee, as verified by the following signature.

A case narrative is not required.

<u>Reference</u>	<u>Sample Description</u>	<u>Sampled</u>	<u>Laboratory Number</u>
DH 1-11 SLURRY SAMPLE 1-ME	SLURRY SAMPLE 1 96.1-97.1 FEET	12/14/2000	TA1-B0-P338-001
DH 2-9 SLURRY SAMPLE 5-ME	SLURRY BAG SAMPLE 5 97.8-100.1 FEET	01/18/2001	TA1-B0-P338-002
WOLF CREEK #1	1.7 MILES DOWNSTREAM OF BIG ANDY CULVERT	01/06/2001	TA1-B0-P338-003
DH 2-9 SLURRY SAMPLE 2-ME	SLURRY BAG SAMPLE 2 91.8-93.8 FEET	01/18/2001	TA1-B0-P338-004
SP #5	100' UPSTREAM OF DRILL PAD 20' FROM SHORE	01/06/2001	TA1-B0-P338-005
CW #1	2000' UPSTREAM OF CONF. AT STRAIGHT FORK	01/06/2001	TA1-B0-P338-006

Submitted by,



Darris J. Holcomb
Project Manager

CT&E Environmental Services Inc.
 Laboratory Division: Charleston Laboratory

John Meeks
 TRIAD ENGINEERING INC

Laboratory Number TA1-B0-P338-001

Page 1

DH 1-11 SLURRY SAMPLE 1-ME
 SLURRY SAMPLE 1 96.1-97.1 FEET

COC
 Date Sampled 12/14/00 00:00
 Date Received 02/13/01 11:00

Type F Matrix SLUDGE
 Sampled by CLIENT

% Solids 77

031501 1145 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DILF
ALUMINUM	7429-90-5	2700		19	mg/Kg	Y SW6010B	02/21/01 02:23 JWJ	1.0
ANTIMONY	7440-36-0	ND	U	0.97	mg/Kg	Y SW6010B	02/21/01 02:23 JWJ	1.0
ARSENIC	7440-38-2	2.6		0.97	mg/Kg	Y SW6010B	02/21/01 02:23 JWJ	1.0
BARIIUM	7440-39-3	34		0.19	mg/Kg	Y SW6010B	02/21/01 02:23 JWJ	1.0
BERYLLIUM	7440-41-7	0.65		0.19	mg/Kg	Y SW6010B	02/21/01 02:23 JWJ	1.0
BORON	7440-42-8	ND	U	19	mg/Kg	Y SW6010B	02/21/01 02:23 JWJ	1.0
CADMIUM	7440-43-9	ND	U	0.19	mg/Kg	Y SW6010B	02/21/01 02:23 JWJ	1.0
CALCIUM	7440-70-2	640		9.7	mg/Kg	Y SW6010B	02/21/01 02:23 JWJ	1.0
MIUM	7440-47-3	5.8		0.97	mg/Kg	Y SW6010B	02/21/01 02:23 JWJ	1.0
OSALT	7440-48-4	5.8		0.97	mg/Kg	Y SW6010B	02/21/01 02:23 JWJ	1.0
COPPER	7440-50-8	11		0.97	mg/Kg	Y SW6010B	02/21/01 02:23 JWJ	1.0
IRON	7439-89-6	16000		9.7	mg/Kg	Y SW6010B	02/21/01 02:23 JWJ	1.0
LEAD	7439-92-1	6.1		0.97	mg/Kg	Y SW6010B	02/21/01 02:23 JWJ	1.0
MAGNESIUM	7439-95-4	1200		9.7	mg/Kg	Y SW6010B	02/21/01 02:23 JWJ	1.0
MANGANESE	7439-96-5	230		1.9	mg/Kg	Y SW6010B	02/21/01 02:23 JWJ	1.0
MOLYBDENUM	7439-98-7	ND	U	0.97	mg/Kg	Y SW6010B	02/21/01 02:23 JWJ	1.0
NICKEL	7440-02-0	9.0		0.97	mg/Kg	Y SW6010B	02/21/01 02:23 JWJ	1.0
POTASSIUM	7440-09-7	650		190	mg/Kg	Y SW6010B	02/21/01 02:23 JWJ	1.0
SELENIUM	7782-49-2	ND	U	0.97	mg/Kg	Y SW6010B	02/21/01 02:23 JWJ	1.0
SILICON	7440-21-3	1100		19	mg/Kg	Y SW6010B	02/21/01 02:23 JWJ	1.0
SILVER	7440-22-4	ND	U	0.97	mg/Kg	Y SW6010B	02/21/01 02:23 JWJ	1.0
SODIUM	7440-23-5	ND	U	190	mg/Kg	Y SW6010B	02/21/01 02:23 JWJ	1.0
THALLIUM	7440-28-0	ND	U	0.97	mg/Kg	Y SW6010B	02/21/01 02:23 JWJ	1.0
TITANIUM	7440-32-6	45		0.19	mg/Kg	Y SW6010B	02/21/01 02:23 JWJ	1.0
VANADIUM	7440-62-2	7.7		0.97	mg/Kg	Y SW6010B	02/21/01 02:23 JWJ	1.0
ZINC	7440-66-6	27		3.9	mg/Kg	Y SW6010B	02/21/01 02:23 JWJ	1.0
Total Solids (Percent)		77		0.010	%	EPA160.3	02/15/01 15:30 MHS	1.0
Acidity (Soluble)		1800		260	mg/Kg	Y	02/20/01 14:44 TF	100
Alkalinity (Soluble)		640		260	mg/Kg	Y	02/20/01 14:44 TF	100
LIBRARY SEARCH		ND	U			SW8270C	02/26/01 12:12 tjh	1.0
PHENOL	108-95-2	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
BIS(2-CHLOROETHYL)ETHER	111-44-4	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0

CT&E Environmental Services Inc.
 Laboratory Division: Charleston Laboratory

John Meeks
 TRIAD ENGINEERING INC

Laboratory Number TA1-B0-P338-001

Page 2

DH 1-11 SLURRY SAMPLE 1-ME
 SLURRY SAMPLE 1 96.1-97.1 FEET

COC
 Date Sampled 12/14/00 00:00
 Date Received 02/13/01 11:00

Type F Matrix SLUDGE
 Sampled by CLIENT

% Solids 77

031501 1145 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DILF
2-CHLOROPHENOL	95-57-8	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
1,3-DICHLOROBENZENE	541-73-1	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
1,4-DICHLOROBENZENE	106-46-7	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
1,2-DICHLOROBENZENE	95-50-1	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
2-METHYLPHENOL	95-48-7	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
3- & 4-METHYLPHENOL		ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
N-NITROSODI-N-PROPYLAMINE	621-64-7	ND	U	4900	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
HEXACHLOROETHANE	67-72-1	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
BENZENE	98-95-3	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
ISOPHORONE	78-59-1	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
2-NITROPHENOL	88-75-5	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
2,4-DIMETHYLPHENOL	105-67-9	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
BIS(2-CHLOROETHOXY) METHANE	111-91-1	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
2,4-DICHLOROPHENOL	120-83-2	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
1,2,4-TRICHLOROBENZENE	120-82-1	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
NAPHTHALENE	91-20-3	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
4-CHLOROANILINE	106-47-8	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
HEXACHLOROBUTADIENE	87-68-3	ND	U	4900	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
4-CHLORO-3-METHYLPHENOL	59-50-7	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
2-METHYLNAPHTHALENE	91-57-6	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
HEXACHLOROCYCLOPENTADIENE	77-47-4	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
2,4,6-TRICHLOROPHENOL	88-06-2	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
2,4,5-TRICHLOROPHENOL	95-95-4	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
2-CHLORONAPHTHALENE	91-58-7	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
2-NITROANILINE	88-74-4	ND	U	12000	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
DIMETHYLPHTHALATE	131-11-3	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
ACENAPHTHYLENE	208-96-8	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
2,6-DINITROTOLUENE	606-20-2	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
3-NITROANILINE	99-09-2	ND	U	12000	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
ACENAPHTHENE	83-32-9	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
2,4-DINITROPHENOL	51-28-5	ND	U	12000	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
4-NITROPHENOL	100-02-7	ND	U	12000	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
DIBENZOFURAN	132-64-9	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
2,4-DINITROTOLUENE	121-14-2	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
DIMETHYLPHTHALATE	84-66-2	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
4-CHLORODIPHENYLETHER	7005-72-3	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
FLUORENE	86-73-7	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0

CT&E Environmental Services Inc.
 Laboratory Division: Charleston Laboratory

John Meeks
 TRIAD ENGINEERING INC

Laboratory Number TA1-B0-P338-001

Page 3

DH 1-11 SLURRY SAMPLE 1-ME
 SLURRY SAMPLE 1 96.1-97.1 FEET

COC
 Date Sampled 12/14/00 00:00
 Date Received 02/13/01 11:00

Type F Matrix SLUDGE
 Sampled by CLIENT

% Solids 77

031501 1145 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
4-NITROANILINE	100-01-6	ND	U	12000	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
4,6-DINITRO-2-METHYLPHENOL	534-52-1	ND	U	12000	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
N-NITROSODIPHENYLAMINE	86-30-6	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
4-BROMOPHENYL PHENYL ETHER	101-55-3	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
HEXACHLOROBENZENE	118-74-1	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
PENTACHLOROPHENOL	87-86-5	ND	U	12000	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
PHENANTHRENE	85-01-8	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
ANTHRACENE	120-12-7	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
1-BUTYLPHTHALATE	84-74-2	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
FLUORANTHENE	206-44-0	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
PYRENE	129-00-0	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
BUTYL BENZYL PHTHALATE	85-68-7	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
3,3-DICHLOROBENZIDINE	91-94-1	ND	U	4900	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
BENZO(A)ANTHRACENE	56-55-3	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
CHRYSENE	218-01-9	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
DI-N-OCTYLPHTHALATE	117-84-0	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
BENZO(B)FLUORANTHENE	205-99-2	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
BENZO(K)FLUORANTHENE	207-08-9	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
BENZO(A)PYRENE	50-32-8	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
INDENO(1,2,3-CD)PYRENE	193-39-5	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
DIBENZO(A,H)ANTHRACENE	53-70-3	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
BENZO(G,H,I)PERYLENE	191-24-2	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
BENZYL ALCOHOL	100-51-6	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
BENZOIC ACID	65-85-0	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
BIS(2-CHLOROISOPROPYL)ETHER	108-60-1	ND	U	2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
SURROGATE RESULTS								
NITROBENZENE-D5	4165-60-0	6200		2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
NITROBENZENE-D5	4165-60-0	25			% REC	Y SW8270C	02/26/01 12:12 tjh	1.0
2-FLUOROBIPHENYL	321-60-8	13000		2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
2-FLUOROBIPHENYL	321-60-8	55			% REC	Y SW8270C	02/26/01 12:12 tjh	1.0
TERPHENYL-D14	1718-51-0	15000		2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
TERPHENYL-D14	1718-51-0	62			% REC	Y SW8270C	02/26/01 12:12 tjh	1.0
NOL-D5	4165-62-2	13000		2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
NOL-D5	4165-62-2	54			% REC	Y SW8270C	02/26/01 12:12 tjh	1.0
2-FLUOROPHENOL	367-12-4	13000		2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
2-FLUOROPHENOL	367-12-4	55			% REC	Y SW8270C	02/26/01 12:12 tjh	1.0

CT&E Environmental Services Inc.
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Page 4

DH 1-11 SLURRY SAMPLE 1-ME
SLURRY SAMPLE 1 96.1-97.1 FEET

COC
Date Sampled 12/14/00 00:00
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031501 1145 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
2,4,6-TRIBROMOPHENOL	118-79-6	7700		2400	ug/Kg	Y SW8270C	02/26/01 12:12 tjh	1.0
2,4,6-TRIBROMOPHENOL	118-79-6	32			% REC	Y SW8270C	02/26/01 12:12 tjh	1.0

CT&E Environmental Services Inc.
Laboratory Division: Charleston Laboratory

John Meeks
TRIAD ENGINEERING INC

Laboratory Number TA1-C0-P271-001

Page 1

DH 1-11 SLURRY SAMPLE 1-ME
SLURRY SAMPLE 1 96.1-97.1 FEET

COC
Date Sampled 12/14/00 00:00
Date Received 02/13/01 11:00

Type F Matrix SLUDGE
Sampled by CLIENT

% Solids 77

032001 1358 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
ACRYLAMIDE	79-06-1	ND	U	0.23	mg/L	Y SW8316	03/19/01 21:58 ra	1.0

CT&E Environmental Services Inc.
 Laboratory Division: Charleston Laboratory

John Meeks
 TRIAD ENGINEERING INC

Laboratory Number TA1-B0-P338-002

Page 1

DH 2-9 SLURRY SAMPLE 5-ME
 SLURRY BAG SAMPLE 5 97.8-100.1 FEET

COC
 Date Sampled 01/18/01 00:00
 Date Received 02/13/01 11:00

Type F Matrix SLUDGE
 Sampled by CLIENT

% Solids 78

031501 1145 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
ALUMINUM	7429-90-5	2800		19	mg/Kg	Y SW6010B	02/21/01 02:31 JWJ	1.0
ANTIMONY	7440-36-0	ND	U	0.95	mg/Kg	Y SW6010B	02/21/01 02:31 JWJ	1.0
ARSENIC	7440-38-2	2.9		0.95	mg/Kg	Y SW6010B	02/21/01 02:31 JWJ	1.0
BARIUM	7440-39-3	58		0.19	mg/Kg	Y SW6010B	02/21/01 02:31 JWJ	1.0
BERYLLIUM	7440-41-7	0.62		0.19	mg/Kg	Y SW6010B	02/21/01 02:31 JWJ	1.0
BORON	7440-42-8	ND	U	19	mg/Kg	Y SW6010B	02/21/01 02:31 JWJ	1.0
CADMIUM	7440-43-9	ND	U	0.19	mg/Kg	Y SW6010B	02/21/01 02:31 JWJ	1.0
CALCIUM	7440-70-2	780		9.5	mg/Kg	Y SW6010B	02/21/01 02:31 JWJ	1.0
CHROMIUM	7440-47-3	5.1		0.95	mg/Kg	Y SW6010B	02/21/01 02:31 JWJ	1.0
COBALT	7440-48-4	5.6		0.95	mg/Kg	Y SW6010B	02/21/01 02:31 JWJ	1.0
COPPER	7440-50-8	12		0.95	mg/Kg	Y SW6010B	02/21/01 02:31 JWJ	1.0
IRON	7439-89-6	10000		9.5	mg/Kg	Y SW6010B	02/21/01 02:31 JWJ	1.0
LEAD	7439-92-1	7.6		0.95	mg/Kg	Y SW6010B	02/21/01 02:31 JWJ	1.0
MAGNESIUM	7439-95-4	1300		9.5	mg/Kg	Y SW6010B	02/21/01 02:31 JWJ	1.0
MANGANESE	7439-96-5	190		1.9	mg/Kg	Y SW6010B	02/21/01 02:31 JWJ	1.0
MOLYBDENUM	7439-98-7	ND	U	0.95	mg/Kg	Y SW6010B	02/21/01 02:31 JWJ	1.0
NICKEL	7440-02-0	8.9		0.95	mg/Kg	Y SW6010B	02/21/01 02:31 JWJ	1.0
POTASSIUM	7440-09-7	830		190	mg/Kg	Y SW6010B	02/21/01 02:31 JWJ	1.0
SELENIUM	7782-49-2	1.0		0.95	mg/Kg	Y SW6010B	02/21/01 02:31 JWJ	1.0
SILICON	7440-21-3	1200		19	mg/Kg	Y SW6010B	02/21/01 02:31 JWJ	1.0
SILVER	7440-22-4	ND	U	0.95	mg/Kg	Y SW6010B	02/21/01 02:31 JWJ	1.0
SODIUM	7440-23-5	ND	U	190	mg/Kg	Y SW6010B	02/21/01 02:31 JWJ	1.0
THALLIUM	7440-28-0	ND	U	0.95	mg/Kg	Y SW6010B	02/21/01 02:31 JWJ	1.0
TITANIUM	7440-32-6	50		0.19	mg/Kg	Y SW6010B	02/21/01 02:31 JWJ	1.0
VANADIUM	7440-62-2	8.0		0.95	mg/Kg	Y SW6010B	02/21/01 02:31 JWJ	1.0
ZINC	7440-66-6	28		3.8	mg/Kg	Y SW6010B	02/21/01 02:31 JWJ	1.0
Total Solids (Percent)		78		0.010	%	EPA160.3	02/15/01 15:30 MHS	1.0
Acidity (Soluble)		3600		250	mg/Kg	Y	02/20/01 14:44 TF	100
Alkalinity (Soluble)		890		250	mg/Kg	Y	02/20/01 14:44 TF	100
LIBRARY SEARCH		ND	U			SW8270C	02/26/01 13:06 tjh	1.0
PHENOL	108-95-2	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
BIS(2-CHLOROETHYL)ETHER	111-44-4	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0

CT&E Environmental Services Inc.
 Laboratory Division: Charleston Laboratory

John Meeks
 TRIAD ENGINEERING INC

Laboratory Number TA1-B0-P338-002

Page 2

DH 2-9 SLURRY SAMPLE 5-ME
 SLURRY BAG SAMPLE 5 97.8-100.1 FEET

COC
 Date Sampled 01/18/01 00:00
 Date Received 02/13/01 11:00

Type F Matrix SLUDGE
 Sampled by CLIENT

% Solids 78

031501 1145 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
2-CHLOROPHENOL	95-57-8	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
1,3-DICHLOROENZENE	541-73-1	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
1,4-DICHLOROENZENE	106-46-7	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
1,2-DICHLOROENZENE	95-50-1	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
2-METHYLPHENOL	95-48-7	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
3- & 4-METHYLPHENOL		ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
N-NITROSODI-N-PROPYLAMINE	621-64-7	ND	U	4600	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
HEXACHLOROETHANE	67-72-1	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
BENZENE	98-95-3	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
ISOPHORONE	78-59-1	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
2-NITROPHENOL	88-75-5	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
2,4-DIMETHYLPHENOL	105-67-9	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
BIS(2-CHLOROETHOXY) METHANE	111-91-1	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
2,4-DICHLOROPHENOL	120-83-2	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
1,2,4-TRICHLOROENZENE	120-82-1	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
NAPHTHALENE	91-20-3	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
4-CHLOROANILINE	106-47-8	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
HEXACHLOROBUTADIENE	87-68-3	ND	U	4600	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
4-CHLORO-3-METHYLPHENOL	59-50-7	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
2-METHYLNAPHTHALENE	91-57-6	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
HEXACHLOROCYCLOPENTADIENE	77-47-4	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
2,4,6-TRICHLOROPHENOL	88-06-2	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
2,4,5-TRICHLOROPHENOL	95-95-4	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
2-CHLORONAPHTHALENE	91-58-7	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
2-NITROANILINE	88-74-4	ND	U	12000	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
DIMETHYLPHTHALATE	131-11-3	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
ACENAPHTHYLENE	208-96-8	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
2,6-DINITROTOLUENE	606-20-2	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
3-NITROANILINE	99-09-2	ND	U	12000	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
ACENAPHTHENE	83-32-9	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
2,4-DINITROPHENOL	51-28-5	ND	U	12000	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
4-NITROPHENOL	100-02-7	ND	U	12000	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
DIBENZOFURAN	132-64-9	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
DINITROTOLUENE	121-14-2	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
METHYLPHTHALATE	84-66-2	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
4-CHLORODIPHENYLETHER	7005-72-3	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
FLUORENE	86-73-7	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0

CT&E Environmental Services Inc.
 Laboratory Division: Charleston Laboratory

John Meeks
 TRIAD ENGINEERING INC

Laboratory Number TA1-B0-P338-002

Page 3

DH 2-9 SLURRY SAMPLE 5-ME
 SLURRY BAG SAMPLE 5 97.8-100.1 FEET

COC
 Date Sampled 01/18/01 00:00
 Date Received 02/13/01 11:00

Type F Matrix SLUDGE
 Sampled by CLIENT

% Solids 78

031501 1145 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
4-NITROANILINE	100-01-6	ND	U	12000	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
4,6-DINITRO-2-METHYLPHENOL	534-52-1	ND	U	12000	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
N-NITROSODIPHENYLAMINE	86-30-6	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
4-BROMOPHENYL PHENYL ETHER	101-55-3	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
HEXACHLOROBENZENE	118-74-1	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
PENTACHLOROPHENOL	87-86-5	ND	U	12000	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
PHENANTHRENE	85-01-8	3300		2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
ANTHRACENE	120-12-7	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
-BUTYLPHTHALATE	84-74-2	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
FLUORANTHENE	206-44-0	6300		2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
PYRENE	129-00-0	5100		2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
BUTYL BENZYL PHTHALATE	85-68-7	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
3,3-DICHLOROBENZIDINE	91-94-1	ND	U	4600	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
BENZO(A)ANTHRACENE	56-55-3	3100		2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
CHRYSENE	218-01-9	3200		2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
DI-N-OCTYLPHTHALATE	117-84-0	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
BENZO(B)FLUORANTHENE	205-99-2	2900		2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
BENZO(K)FLUORANTHENE	207-08-9	2700		2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
BENZO(A)PYRENE	50-32-8	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
INDENO(1,2,3-CD)PYRENE	193-39-5	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
DIBENZO(A,H)ANTHRACENE	53-70-3	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
BENZO(G,H,I)PERYLENE	191-24-2	2500		2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
BENZYL ALCOHOL	100-51-6	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
BENZOIC ACID	65-85-0	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
BIS(2-CHLOROISOPROPYL)ETHER	108-60-1	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
SURROGATE RESULTS								
NITROBENZENE-D5	4165-60-0	5400		2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
NITROBENZENE-D5	4165-60-0	23			% REC	Y SW8270C	02/26/01 13:06 tjh	1.0
2-FLUOROBIPHENYL	321-60-8	14000		2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
2-FLUOROBIPHENYL	321-60-8	62			% REC	Y SW8270C	02/26/01 13:06 tjh	1.0
TERPHENYL-D14	1718-51-0	16000		2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
TERPHENYL-D14	1718-51-0	68			% REC	Y SW8270C	02/26/01 13:06 tjh	1.0
F OL-D5	4165-62-2	15000		2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
F OL-D5	4165-62-2	65			% REC	Y SW8270C	02/26/01 13:06 tjh	1.0
2-FLUOROPHENOL	367-12-4	15000		2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
2-FLUOROPHENOL	367-12-4	64			% REC	Y SW8270C	02/26/01 13:06 tjh	1.0

CT&E Environmental Services Inc.
Laboratory Division: Charleston Laboratory

John Meeks
TRIAD ENGINEERING INC

Laboratory Number TA1-B0-P338-002

Page 4

DH 2-9 SLURRY SAMPLE 5-ME
SLURRY BAG SAMPLE 5 97.8-100.1 FEET

COC
Date Sampled 01/18/01 00:00
Date Received 02/13/01 11:00

Type F Matrix SLUDGE
Sampled by CLIENT

% Solids 78

031501 1145 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
2,4,6-TRIBROMOPHENOL	118-79-6	11000		2300	ug/Kg	Y SW8270C	02/26/01 13:06 tjh	1.0
2,4,6-TRIBROMOPHENOL	118-79-6	48			% REC	Y SW8270C	02/26/01 13:06 tjh	1.0

CT&E Environmental Services Inc.
Laboratory Division: Charleston Laboratory

John Meeks
TRIAD ENGINEERING INC

Laboratory Number TA1-C0-P271-002

Page 1

DH 2-9 SLURRY SAMPLE 5-ME
SLURRY BAG SAMPLE 5 97.8-100.1 FEET

COC
Date Sampled 01/18/01 00:00
Date Received 02/13/01 11:00

Type F Matrix SLUDGE
Sampled by CLIENT

% Solids 78

032001 1358 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
ACRYLAMIDE	79-06-1	ND	U	0.25	mg/L	Y SW8316	03/19/01 22:36 ra	1.0

CT&E Environmental Services Inc.
 Laboratory Division: Charleston Laboratory

John Meeks
 TRIAD ENGINEERING INC

Laboratory Number TA1-B0-P338-003

Page 1

WOLF CREEK #1
 1.7 MILES DOWNSTREAM OF BIG ANDY CULVERT

COC
 Date Sampled 01/06/01 00:00
 Date Received 02/13/01 11:00

Type F Matrix SLUDGE
 Sampled by CLIENT

% Solids 68

031501 1145 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
ALUMINUM	7429-90-5	4800		22	mg/Kg	Y SW6010B	02/21/01 02:38 JWJ	1.0
ANTIMONY	7440-36-0	ND	U	1.1	mg/Kg	Y SW6010B	02/21/01 02:38 JWJ	1.0
ARSENIC	7440-38-2	4.6		1.1	mg/Kg	Y SW6010B	02/21/01 02:38 JWJ	1.0
BARIUM	7440-39-3	170		0.22	mg/Kg	Y SW6010B	02/21/01 02:38 JWJ	1.0
BERYLLIUM	7440-41-7	1.2		0.22	mg/Kg	Y SW6010B	02/21/01 02:38 JWJ	1.0
BORON	7440-42-8	ND	U	22	mg/Kg	Y SW6010B	02/21/01 02:38 JWJ	1.0
CADMIUM	7440-43-9	ND	U	0.22	mg/Kg	Y SW6010B	02/21/01 02:38 JWJ	1.0
CALCIUM	7440-70-2	1400		11	mg/Kg	Y SW6010B	02/21/01 02:38 JWJ	1.0
CERIUM	7440-47-3	9.1		1.1	mg/Kg	Y SW6010B	02/21/01 02:38 JWJ	1.0
COBALT	7440-48-4	7.5		1.1	mg/Kg	Y SW6010B	02/21/01 02:38 JWJ	1.0
COPPER	7440-50-8	28		1.1	mg/Kg	Y SW6010B	02/21/01 02:38 JWJ	1.0
IRON	7439-89-6	10000		11	mg/Kg	Y SW6010B	02/21/01 02:38 JWJ	1.0
LEAD	7439-92-1	14		1.1	mg/Kg	Y SW6010B	02/21/01 02:38 JWJ	1.0
MAGNESIUM	7439-95-4	2100		11	mg/Kg	Y SW6010B	02/21/01 02:38 JWJ	1.0
MANGANESE	7439-96-5	92		2.2	mg/Kg	Y SW6010B	02/21/01 02:38 JWJ	1.0
MOLYBDENUM	7439-98-7	ND	U	1.1	mg/Kg	Y SW6010B	02/21/01 02:38 JWJ	1.0
NICKEL	7440-02-0	16		1.1	mg/Kg	Y SW6010B	02/21/01 02:38 JWJ	1.0
POTASSIUM	7440-09-7	1700		220	mg/Kg	Y SW6010B	02/21/01 02:38 JWJ	1.0
SELENIUM	7782-49-2	3.1		1.1	mg/Kg	Y SW6010B	02/21/01 02:38 JWJ	1.0
SILICON	7440-21-3	1400		22	mg/Kg	Y SW6010B	02/21/01 02:38 JWJ	1.0
SILVER	7440-22-4	ND	U	1.1	mg/Kg	Y SW6010B	02/21/01 02:38 JWJ	1.0
SODIUM	7440-23-5	ND	U	220	mg/Kg	Y SW6010B	02/21/01 02:38 JWJ	1.0
THALLIUM	7440-28-0	ND	U	1.1	mg/Kg	Y SW6010B	02/21/01 02:38 JWJ	1.0
TITANIUM	7440-32-6	130		0.22	mg/Kg	Y SW6010B	02/21/01 02:38 JWJ	1.0
VANADIUM	7440-62-2	16		1.1	mg/Kg	Y SW6010B	02/21/01 02:38 JWJ	1.0
ZINC	7440-66-6	35		4.4	mg/Kg	Y SW6010B	02/21/01 02:38 JWJ	1.0
Total Solids (Percent)		68		0.010	%	EPA160.3	02/15/01 15:30 MHS	1.0
Acidity (Soluble)		7600		300	mg/Kg	Y	02/20/01 14:44 TF	100
Alkalinity (Soluble)		1600		300	mg/Kg	Y	02/20/01 14:44 TF	100
Undecane	629-59-4	1900	J		ug/Kg	SW8270C	02/26/01 14:00 tjh	1.0
Naphthalene, 1-hexyl-	2876-53-1	2100	J		ug/Kg	SW8270C	02/26/01 14:00 tjh	1.0
Naphthalene, 1,6-dimethyl-	575-43-9	1900	J		ug/Kg	SW8270C	02/26/01 14:00 tjh	1.0
Heptane, 2,6-dimethyl-	1072-05-5	2000	J		ug/Kg	SW8270C	02/26/01 14:00 tjh	1.0

CT&E Environmental Services Inc.
 Laboratory Division: Charleston Laboratory

John Meeks
 TRIAD ENGINEERING INC

Laboratory Number TA1-B0-P338-003

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WOLF CREEK #1
 1.7 MILES DOWNSTREAM OF BIG ANDY CULVERT

COC
 Date Sampled 01/06/01 00:00
 Date Received 02/13/01 11:00

Type F Matrix SLUDGE
 Sampled by CLIENT

% Solids 68

031501 1145 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
PHENOL	108-95-2	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
BIS(2-CHLOROETHYL)ETHER	111-44-4	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
2-CHLOROPHENOL	95-57-8	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
1,3-DICHLOROBENZENE	541-73-1	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
1,4-DICHLOROBENZENE	106-46-7	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
1,2-DICHLOROBENZENE	95-50-1	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
2-METHYLPHENOL	95-48-7	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
2- & 4-METHYLPHENOL		ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
DIMETHYLAMINE	621-64-7	ND	U	5400	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
HEXACHLOROETHANE	67-72-1	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
NITROBENZENE	98-95-3	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
ISOPHORONE	78-59-1	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
2-NITROPHENOL	88-75-5	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
2,4-DIMETHYLPHENOL	105-67-9	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
BIS(2-CHLOROETHOXY) METHANE	111-91-1	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
2,4-DICHLOROPHENOL	120-83-2	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
1,2,4-TRICHLOROBENZENE	120-82-1	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
NAPHTHALENE	91-20-3	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
4-CHLOROANILINE	106-47-8	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
HEXACHLOROBUTADIENE	87-68-3	ND	U	5400	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
4-CHLORO-3-METHYLPHENOL	59-50-7	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
2-METHYLNAPHTHALENE	91-57-6	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
HEXACHLOROCYCLOPENTADIENE	77-47-4	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
2,4,6-TRICHLOROPHENOL	88-06-2	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
2,4,5-TRICHLOROPHENOL	95-95-4	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
2-CHLORONAPHTHALENE	91-58-7	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
2-NITROANILINE	88-74-4	ND	U	13000	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
DIMETHYLPHTHALATE	131-11-3	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
ACENAPHTHYLENE	208-96-8	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
2,6-DINITROTOLUENE	606-20-2	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
3-NITROANILINE	99-09-2	ND	U	13000	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
ACENAPHTHENE	83-32-9	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
2,4-DINITROPHENOL	51-28-5	ND	U	13000	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
1-NITROPHENOL	100-02-7	ND	U	13000	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
BENZOFURAN	132-64-9	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
2,4-DINITROTOLUENE	121-14-2	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
DIETHYLPHTHALATE	84-66-2	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0

CT&E Environmental Services Inc.
 Laboratory Division: Charleston Laboratory

John Meeks
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Laboratory Number TA1-B0-P338-003

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WOLF CREEK #1
 1.7 MILES DOWNSTREAM OF BIG ANDY CULVERT

COC
 Date Sampled 01/06/01 00:00
 Date Received 02/13/01 11:00

Type F Matrix SLUDGE
 Sampled by CLIENT

% Solids 68

031501 1145 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
4-CHLORODIPHENYLETHER	7005-72-3	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
FLUORENE	86-73-7	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
4-NITROANILINE	100-01-6	ND	U	13000	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
4,6-DINITRO-2-METHYLPHENOL	534-52-1	ND	U	13000	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
N-NITROSODIPHENYLAMINE	86-30-6	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
4-BROMOPHENYL PHENYL ETHER	101-55-3	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
HEXACHLOROBENZENE	118-74-1	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
PENTACHLOROPHENOL	87-86-5	ND	U	13000	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
ANTHRENE	85-01-8	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
ANTHRACENE	120-12-7	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
DI-N-BUTYLPHTHALATE	84-74-2	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
FLUORANTHENE	206-44-0	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
PYRENE	129-00-0	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
BUTYL BENZYL PHTHALATE	85-68-7	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
3,3-DICHLOROENZIDINE	91-94-1	ND	U	5400	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
BENZO(A)ANTHRACENE	56-55-3	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
CHRYSENE	218-01-9	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
DI-N-OCTYLPHTHALATE	117-84-0	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
BENZO(B)FLUORANTHENE	205-99-2	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
BENZO(K)FLUORANTHENE	207-08-9	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
BENZO(A)PYRENE	50-32-8	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
INDENO(1,2,3-CD)PYRENE	193-39-5	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
DIBENZO(A,H)ANTHRACENE	53-70-3	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
BENZO(G,H,I)PERYLENE	191-24-2	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
BENZYL ALCOHOL	100-51-6	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
BENZOIC ACID	65-85-0	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
BIS(2-CHLOROISOPROPYL)ETHER	108-60-1	ND	U	2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
SURROGATE RESULTS								
NITROBENZENE-D5	4165-60-0	6300		2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
NITROBENZENE-D5	4165-60-0	24			% REC	Y SW8270C	02/26/01 14:00 tjh	1.0
2-FLUOROBIPHENYL	321-60-8	9500		2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
2-FLUOROBIPHENYL	321-60-8	35			% REC	Y SW8270C	02/26/01 14:00 tjh	1.0
PHENYL-D14	1718-51-0	10000		2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
PHENYL-D14	1718-51-0	38			% REC	Y SW8270C	02/26/01 14:00 tjh	1.0
PHENOL-D5	4165-62-2	11000		2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
PHENOL-D5	4165-62-2	40			% REC	Y SW8270C	02/26/01 14:00 tjh	1.0

CT&E Environmental Services Inc.
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John Meeks
TRIAD ENGINEERING INC

Laboratory Number TA1-B0-P338-003

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WOLF CREEK #1
1.7 MILES DOWNSTREAM OF BIG ANDY CULVERT

COC
Date Sampled 01/06/01 00:00
Date Received 02/13/01 11:00

Type F Matrix SLUDGE
Sampled by CLIENT

% Solids 68

031501 1145 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
2-FLUOROPHENOL	367-12-4	10000		2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
2-FLUOROPHENOL	367-12-4	38			% REC	Y SW8270C	02/26/01 14:00 tjh	1.0
2,4,6-TRIBROMOPHENOL	118-79-6	6500		2700	ug/Kg	Y SW8270C	02/26/01 14:00 tjh	1.0
2,4,6-TRIBROMOPHENOL	118-79-6	24			% REC	Y SW8270C	02/26/01 14:00 tjh	1.0

CT&E Environmental Services Inc.
Laboratory Division: Charleston Laboratory

John Meeks
TRIAD ENGINEERING INC

Laboratory Number TA1-C0-P271-003

Page 1

WOLF CREEK #1
1.7 MILES DOWNSTREAM OF BIG ANDY CULVERT

COC
Date Sampled 01/06/01 00:00
Date Received 02/13/01 11:00

Type F Matrix SLUDGE
Sampled by CLIENT

% Solids 68

032001 1358 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
ACRYLAMIDE	79-06-1	ND	U	0.26	mg/L	Y SW8316	03/19/01 22:48 ra	1.0

CT&E Environmental Services Inc.
 Laboratory Division: Charleston Laboratory

John Meeks
 TRIAD ENGINEERING INC

Laboratory Number TA1-B0-P338-004

Page 1

DH 2-9 SLURRY SAMPLE 2-ME
 SLURRY BAG SAMPLE 2 91.8-93.8 FEET

COC
 Date Sampled 01/18/01 00:00
 Date Received 02/13/01 11:00

Type F Matrix SLUDGE
 Sampled by CLIENT

% Solids 74

031501 1145 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
ALUMINUM	7429-90-5	3600		20	mg/Kg	Y SW6010B	02/21/01 03:08 JWW	1.0
ANTIMONY	7440-36-0	ND	U	1.0	mg/Kg	Y SW6010B	02/21/01 03:08 JWW	1.0
ARSENIC	7440-38-2	5.0		1.0	mg/Kg	Y SW6010B	02/21/01 03:08 JWW	1.0
BARIUM	7440-39-3	140		0.20	mg/Kg	Y SW6010B	02/21/01 03:08 JWW	1.0
BERYLLIUM	7440-41-7	1.1		0.20	mg/Kg	Y SW6010B	02/21/01 03:08 JWW	1.0
BORON	7440-42-8	ND	U	20	mg/Kg	Y SW6010B	02/21/01 03:08 JWW	1.0
CADMIUM	7440-43-9	ND	U	0.20	mg/Kg	Y SW6010B	02/21/01 03:08 JWW	1.0
CALCIUM	7440-70-2	1200		10	mg/Kg	Y SW6010B	02/21/01 03:08 JWW	1.0
CHLORINE	7440-47-3	11		1.0	mg/Kg	Y SW6010B	02/21/01 03:08 JWW	1.0
COBALT	7440-48-4	7.3		1.0	mg/Kg	Y SW6010B	02/21/01 03:08 JWW	1.0
COPPER	7440-50-8	26		1.0	mg/Kg	Y SW6010B	02/21/01 03:08 JWW	1.0
IRON	7439-89-6	9100		10	mg/Kg	Y SW6010B	02/21/01 03:08 JWW	1.0
LEAD	7439-92-1	13		1.0	mg/Kg	Y SW6010B	02/21/01 03:08 JWW	1.0
MAGNESIUM	7439-95-4	1400		10	mg/Kg	Y SW6010B	02/21/01 03:08 JWW	1.0
MANGANESE	7439-96-5	68		2.0	mg/Kg	Y SW6010B	02/21/01 03:08 JWW	1.0
MOLYBDENUM	7439-98-7	ND	U	1.0	mg/Kg	Y SW6010B	02/21/01 03:08 JWW	1.0
NICKEL	7440-02-0	15		1.0	mg/Kg	Y SW6010B	02/21/01 03:08 JWW	1.0
POTASSIUM	7440-09-7	1300		200	mg/Kg	Y SW6010B	02/21/01 03:08 JWW	1.0
SELENIUM	7782-49-2	4.5		1.0	mg/Kg	Y SW6010B	02/21/01 03:08 JWW	1.0
SILICON	7440-21-3	1300		20	mg/Kg	Y SW6010B	02/21/01 03:08 JWW	1.0
SILVER	7440-22-4	ND	U	1.0	mg/Kg	Y SW6010B	02/21/01 03:08 JWW	1.0
SODIUM	7440-23-5	ND	U	200	mg/Kg	Y SW6010B	02/21/01 03:08 JWW	1.0
THALLIUM	7440-28-0	ND	U	1.0	mg/Kg	Y SW6010B	02/21/01 03:08 JWW	1.0
TITANIUM	7440-32-6	170		0.20	mg/Kg	Y SW6010B	02/21/01 03:08 JWW	1.0
VANADIUM	7440-62-2	26		1.0	mg/Kg	Y SW6010B	02/21/01 03:08 JWW	1.0
ZINC	7440-66-6	29		4.1	mg/Kg	Y SW6010B	02/21/01 03:08 JWW	1.0
Total Solids (Percent)		74		0.010	%	EPA160.3	02/15/01 15:30 MHS	1.0
Acidity (Soluble)		7200		270	mg/Kg	Y	02/20/01 14:44 TF	100
Alkalinity (Soluble)		1000		270	mg/Kg	Y	02/20/01 14:44 TF	100
Naphthalene, 1,3-dimethyl-	575-41-7	2200	J		ug/Kg	SW8270C	02/26/01 14:53 tjh	1.0
Naphthalene, 1,5-dimethyl-	571-61-9	4000	J		ug/Kg	SW8270C	02/26/01 14:53 tjh	1.0
Octadecane, 2,6-dimethyl-	75163-97-2	6900	J		ug/Kg	SW8270C	02/26/01 14:53 tjh	1.0
Naphthalene, 1-methyl-7-(1-methylethyl)-	490-65-3	4400	J		ug/Kg	SW8270C	02/26/01 14:53 tjh	1.0

CT&E Environmental Services Inc.
 Laboratory Division: Charleston Laboratory

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 TRIAD ENGINEERING INC

Laboratory Number TA1-B0-P338-004

Page 2

DH 2-9 SLURRY SAMPLE 2-ME
 SLURRY BAG SAMPLE 2 91.8-93.8 FEET

COC
 Date Sampled 01/18/01 00:00
 Date Received 02/13/01 11:00

Type F Matrix SLUDGE
 Sampled by CLIENT

% Solids 74

031501 1145 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
Eicosane	112-95-8	2300	J		ug/Kg	SW8270C	02/26/01 14:53 tjh	1.0
Heptadecane, 4-methyl-	26429-11-8	2200	J		ug/Kg	SW8270C	02/26/01 14:53 tjh	1.0
Tetracosane	646-31-1	27000	J		ug/Kg	SW8270C	02/26/01 14:53 tjh	1.0
PHENOL	108-95-2	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
BIS(2-CHLOROETHYL)ETHER	111-44-4	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
2-CHLOROPHENOL	95-57-8	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
1,3-DICHLOROBENZENE	541-73-1	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
1,4-DICHLOROBENZENE	106-46-7	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
1,2-DICHLOROBENZENE	95-50-1	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
2-METHYLPHENOL	95-48-7	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
3- & 4-METHYLPHENOL		ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
N-NITROSODI-N-PROPYLAMINE	621-64-7	ND	U	4000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
HEXACHLOROETHANE	67-72-1	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
NITROBENZENE	98-95-3	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
ISOPHORONE	78-59-1	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
2-NITROPHENOL	88-75-5	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
2,4-DIMETHYLPHENOL	105-67-9	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
BIS(2-CHLOROETHOXY) METHANE	111-91-1	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
2,4-DICHLOROPHENOL	120-83-2	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
1,2,4-TRICHLOROBENZENE	120-82-1	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
NAPHTHALENE	91-20-3	4100		2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
4-CHLOROANILINE	106-47-8	3800		2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
HEXACHLOROBUTADIENE	87-68-3	ND	U	4000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
4-CHLORO-3-METHYLPHENOL	59-50-7	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
2-METHYLNAPHTHALENE	91-57-6	5900		2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
HEXACHLOROCYCLOPENTADIENE	77-47-4	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
2,4,6-TRICHLOROPHENOL	88-06-2	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
2,4,5-TRICHLOROPHENOL	95-95-4	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
2-CHLORONAPHTHALENE	91-58-7	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
2-NITROANILINE	88-74-4	ND	U	10000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
DIMETHYLPHTHALATE	131-11-3	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
ACENAPHTHYLENE	208-96-8	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
2,4-DINITROTOLUENE	606-20-2	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
3,4-DICHLOROANILINE	99-09-2	ND	U	10000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
ACENAPHTHENE	83-32-9	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
2,4-DINITROPHENOL	51-28-5	ND	U	10000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0

CT&E Environmental Services Inc.
 Laboratory Division: Charleston Laboratory

John Meeks
 TRIAD ENGINEERING INC

Laboratory Number TA1-B0-P338-004

Page 3

DH 2-9 SLURRY SAMPLE 2-ME
 SLURRY BAG SAMPLE 2 91.8-93.8 FEET

COC
 Date Sampled 01/18/01 00:00
 Date Received 02/13/01 11:00

Type F Matrix SLUDGE
 Sampled by CLIENT

% Solids 74

031501 1145 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
4-NITROPHENOL	100-02-7	ND	U	10000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
DIBENZOFURAN	132-64-9	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
2,4-DINITROTOLUENE	121-14-2	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
DIETHYLPHTHALATE	84-66-2	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
4-CHLORODIPHENYLETHER	7005-72-3	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
FLUORENE	86-73-7	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
4-NITROANILINE	100-01-6	ND	U	10000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
4 6-DINITRO-2-METHYLPHENOL	534-52-1	ND	U	10000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
TROSODIPHENYLAMINE	86-30-6	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
4-BROMOPHENYL PHENYL ETHER	101-55-3	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
HEXACHLOROBENZENE	118-74-1	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
PENTACHLOROPHENOL	87-86-5	ND	U	10000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
PHENANTHRENE	85-01-8	2800		2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
ANTHRACENE	120-12-7	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
DI-N-BUTYLPHTHALATE	84-74-2	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
FLUORANTHENE	206-44-0	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
PYRENE	129-00-0	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
BUTYL BENZYL PHTHALATE	85-68-7	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
3,3-DICHLOROBENZIDINE	91-94-1	ND	U	4000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
BENZO(A)ANTHRACENE	56-55-3	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
CHRYSENE	218-01-9	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
DI-N-OCTYLPHTHALATE	117-84-0	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
BENZO(B)FLUORANTHENE	205-99-2	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
BENZO(K)FLUORANTHENE	207-08-9	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
BENZO(A)PYRENE	50-32-8	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
INDENO(1,2,3-CD)PYRENE	193-39-5	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
DIBENZO(A,H)ANTHRACENE	53-70-3	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
BENZO(G,H,I)PERYLENE	191-24-2	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
BENZYL ALCOHOL	100-51-6	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
BENZOIC ACID	65-85-0	ND	U	2200	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
BIS(2-CHLOROISOPROPYL)ETHER	108-60-1	ND	U	2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
SURROGATE RESULTS								
M OCBENZENE-D5	4165-60-0	8200		2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
h OCBENZENE-D5	4165-60-0	40			% REC	Y SW8270C	02/26/01 14:53 tjh	1.0
2-FLUOROBIPHENYL	321-60-8	13000		2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
2-FLUOROBIPHENYL	321-60-8	65			% REC	Y SW8270C	02/26/01 14:53 tjh	1.0

CT&E Environmental Services Inc.
 Laboratory Division: Charleston Laboratory

John Meeks
 TRIAD ENGINEERING INC

Laboratory Number TA1-B0-P338-004

Page 4

DH 2-9 SLURRY SAMPLE 2-ME
 SLURRY BAG SAMPLE 2 91.8-93.8 FEET

COC
 Date Sampled 01/18/01 00:00
 Date Received 02/13/01 11:00

Type F Matrix SLUDGE
 Sampled by CLIENT

% Solids 74

031501 1145 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
TERPHENYL-D14	1718-51-0	16000		2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
TERPHENYL-D14	1718-51-0	78			% REC	Y SW8270C	02/26/01 14:53 tjh	1.0
PHENOL-D5	4165-62-2	16000		2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
PHENOL-D5	4165-62-2	79			% REC	Y SW8270C	02/26/01 14:53 tjh	1.0
2-FLUOROPHENOL	367-12-4	15000		2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
2-FLUOROPHENOL	367-12-4	74			% REC	Y SW8270C	02/26/01 14:53 tjh	1.0
2,4,6-TRIBROMOPHENOL	118-79-6	11000		2000	ug/Kg	Y SW8270C	02/26/01 14:53 tjh	1.0
2,4,6-TRIBROMOPHENOL	118-79-6	55			% REC	Y SW8270C	02/26/01 14:53 tjh	1.0

CT&E Environmental Services Inc.
Laboratory Division: Charleston Laboratory

John Meeks
TRIAD ENGINEERING INC

Laboratory Number TA1-C0-P271-004

Page 1

DH 2-9 SLURRY SAMPLE 2-ME
SLURRY BAG SAMPLE 2 91.8-93.8 FEET

COC
Date Sampled 01/18/01 00:00
Date Received 02/13/01 11:00

Type F Matrix SLUDGE
Sampled by CLIENT

% Solids 74

032001 1358 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
ACRYLAMIDE	79-06-1	ND	U	1.0	mg/L	Y SW8316	03/19/01 23:01 ra	1.0

CT&E Environmental Services Inc.
 Laboratory Division: Charleston Laboratory

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 TRIAD ENGINEERING INC

Laboratory Number TA1-80-P338-005

Page 1

SP #5
 100' UPSTREAM OF DRILL PAD 20' FROM SHORE

COC
 Date Sampled 01/06/01 00:00
 Date Received 02/13/01 11:00

Type F Matrix SLUDGE
 Sampled by CLIENT

% Solids 69

031501 1145 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
ALUMINUM	7429-90-5	5900		22	mg/Kg	Y SW6010B	02/21/01 03:15 JWJ	1.0
ANTIMONY	7440-36-0	ND	U	1.1	mg/Kg	Y SW6010B	02/21/01 03:15 JWJ	1.0
ARSENIC	7440-38-2	5.1		1.1	mg/Kg	Y SW6010B	02/21/01 03:15 JWJ	1.0
BARIUM	7440-39-3	150		0.22	mg/Kg	Y SW6010B	02/21/01 03:15 JWJ	1.0
BERYLLIUM	7440-41-7	0.91		0.22	mg/Kg	Y SW6010B	02/21/01 03:15 JWJ	1.0
BORON	7440-42-8	ND	U	22	mg/Kg	Y SW6010B	02/21/01 03:15 JWJ	1.0
CADMIUM	7440-43-9	ND	U	0.22	mg/Kg	Y SW6010B	02/21/01 03:15 JWJ	1.0
CALCIUM	7440-70-2	1200		11	mg/Kg	Y SW6010B	02/21/01 03:15 JWJ	1.0
CHROMIUM	7440-47-3	10		1.1	mg/Kg	Y SW6010B	02/21/01 03:15 JWJ	1.0
COBALT	7440-48-4	8.1		1.1	mg/Kg	Y SW6010B	02/21/01 03:15 JWJ	1.0
COPPER	7440-50-8	30		1.1	mg/Kg	Y SW6010B	02/21/01 03:15 JWJ	1.0
IRON	7439-89-6	12000		11	mg/Kg	Y SW6010B	02/21/01 03:15 JWJ	1.0
LEAD	7439-92-1	13		1.1	mg/Kg	Y SW6010B	02/21/01 03:15 JWJ	1.0
MAGNESIUM	7439-95-4	2600		11	mg/Kg	Y SW6010B	02/21/01 03:15 JWJ	1.0
MANGANESE	7439-96-5	97		2.2	mg/Kg	Y SW6010B	02/21/01 03:15 JWJ	1.0
MOLYBDENUM	7439-98-7	ND	U	1.1	mg/Kg	Y SW6010B	02/21/01 03:15 JWJ	1.0
NICKEL	7440-02-0	18		1.1	mg/Kg	Y SW6010B	02/21/01 03:15 JWJ	1.0
POTASSIUM	7440-09-7	1500		220	mg/Kg	Y SW6010B	02/21/01 03:15 JWJ	1.0
SELENIUM	7782-49-2	2.9		1.1	mg/Kg	Y SW6010B	02/21/01 03:15 JWJ	1.0
SILICON	7440-21-3	1800		22	mg/Kg	Y SW6010B	02/21/01 03:15 JWJ	1.0
SILVER	7440-22-4	ND	U	1.1	mg/Kg	Y SW6010B	02/21/01 03:15 JWJ	1.0
SODIUM	7440-23-5	ND	U	220	mg/Kg	Y SW6010B	02/21/01 03:15 JWJ	1.0
THALLIUM	7440-28-0	ND	U	1.1	mg/Kg	Y SW6010B	02/21/01 03:15 JWJ	1.0
TITANIUM	7440-32-6	120		0.22	mg/Kg	Y SW6010B	02/21/01 03:15 JWJ	1.0
VANADIUM	7440-62-2	17		1.1	mg/Kg	Y SW6010B	02/21/01 03:15 JWJ	1.0
ZINC	7440-66-6	43		4.3	mg/Kg	Y SW6010B	02/21/01 03:15 JWJ	1.0
Total Solids (Percent)		69		0.010	%	EPA160.3	02/15/01 15:30 MHS	1.0
Acidity (Soluble)		11000		290	mg/Kg	Y	02/20/01 14:44 TF	100
Alkalinity (Soluble)		1100		290	mg/Kg	Y	02/20/01 14:44 TF	100
Fluorene	112-40-3	2000	J		ug/Kg	SW8270C	02/26/01 15:47 tjh	1.0
Naphthalene, 1-methyl-	90-12-0	2000	J		ug/Kg	SW8270C	02/26/01 15:47 tjh	1.0
Naphthalene, 2,3-dimethyl-	581-40-8	2300	J		ug/Kg	SW8270C	02/26/01 15:47 tjh	1.0
Dodecane, 2-methyl-8-propyl-	55045-07-3	2600	J		ug/Kg	SW8270C	02/26/01 15:47 tjh	1.0

CT&E Environmental Services Inc.
 Laboratory Division: Charleston Laboratory

John Meeks
 TRIAD ENGINEERING INC

Laboratory Number TA1-B0-P338-005

Page 2

SP #5
 100' UPSTREAM OF DRILL PAD 20' FROM SHORE

COC
 Date Sampled 01/06/01 00:00
 Date Received 02/13/01 11:00

Type F Matrix SLUDGE
 Sampled by CLIENT

% Solids 69

031501 1145 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
Octadecane	593-45-3	4900	J		ug/Kg	SW8270C	02/26/01 15:47 tjh	1.0
PHENOL	108-95-2	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
BIS(2-CHLOROETHYL)ETHER	111-44-4	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
2-CHLOROPHENOL	95-57-8	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
1,3-DICHLOROBENZENE	541-73-1	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
1,4-DICHLOROBENZENE	106-46-7	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
1,2-DICHLOROBENZENE	95-50-1	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
2-METHYLPHENOL	95-48-7	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
3- & 4-METHYLPHENOL		ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
N-NITROSODI-N-PROPYLAMINE	621-64-7	ND	U	5200	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
HEXACHLOROETHANE	67-72-1	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
NITROBENZENE	98-95-3	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
ISOPHORONE	78-59-1	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
2-NITROPHENOL	88-75-5	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
2,4-DIMETHYLPHENOL	105-67-9	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
BIS(2-CHLOROETHOXY) METHANE	111-91-1	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
2,4-DICHLOROPHENOL	120-83-2	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
1,2,4-TRICHLOROBENZENE	120-82-1	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
NAPHTHALENE	91-20-3	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
4-CHLOROANILINE	106-47-8	2600		2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
HEXACHLOROBUTADIENE	87-68-3	ND	U	5200	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
4-CHLORO-3-METHYLPHENOL	59-50-7	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
2-METHYLNAPHTHALENE	91-57-6	3000		2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
HEXACHLOROCYCLOPENTADIENE	77-47-4	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
2,4,6-TRICHLOROPHENOL	88-06-2	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
2,4,5-TRICHLOROPHENOL	95-95-4	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
2-CHLORONAPHTHALENE	91-58-7	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
2-NITROANILINE	88-74-4	ND	U	13000	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
DIMETHYLPHTHALATE	131-11-3	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
ACENAPHTHYLENE	208-96-8	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
2,6-DINITROTOLUENE	606-20-2	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
3-NITROANILINE	99-09-2	ND	U	13000	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
1-METHYLNAPHTHENE	83-32-9	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
2,4-DINITROPHENOL	51-28-5	ND	U	13000	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
4-NITROPHENOL	100-02-7	ND	U	13000	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
DIBENZOFURAN	132-64-9	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0

CT&E Environmental Services Inc.
 Laboratory Division: Charleston Laboratory

John Meeks
 TRIAD ENGINEERING INC

Laboratory Number TA1-B0-P338-005

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SP #5
 100' UPSTREAM OF DRILL PAD 20' FROM SHORE

COC
 Date Sampled 01/06/01 00:00
 Date Received 02/13/01 11:00

Type F Matrix SLUDGE
 Sampled by CLIENT

% Solids 69

031501 1145 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
2,4-DINITROTOLUENE	121-14-2	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
DIETHYLPHthalate	84-66-2	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
4-CHLORODIPHENYLEther	7005-72-3	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
FLUORENE	86-73-7	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
4-NITROANILINE	100-01-6	ND	U	13000	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
4,6-DINITRO-2-METHYLPHENOL	534-52-1	ND	U	13000	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
N-NITROSODIPHENYLAMINE	86-30-6	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
4-BROMOPHENYL PHENYL ETHER	101-55-3	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
CHLOROBenzene	118-74-1	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
PENTACHLOROPHENOL	87-86-5	ND	U	13000	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
PHENANTHRENE	85-01-8	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
ANTHRACENE	120-12-7	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
DI-N-BUTYLPHthalate	84-74-2	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
FLUORANTHENE	206-44-0	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
PYRENE	129-00-0	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
BUTYL BENZYL PHthalate	85-68-7	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
3,3-DICHLOROBENZIDINE	91-94-1	ND	U	5200	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
BENZO(A)ANTHRACENE	56-55-3	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
CHRYSENE	218-01-9	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
BIS(2-ETHYLHEXYL) PHthalate	117-81-7	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
DI-N-OCTYLPHthalate	117-84-0	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
BENZO(B)FLUORANTHENE	205-99-2	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
BENZO(K)FLUORANTHENE	207-08-9	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
BENZO(A)PYRENE	50-32-8	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
INDENO(1,2,3-CD)PYRENE	193-39-5	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
DIBENZO(A,H)ANTHRACENE	53-70-3	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
BENZO(G,H,I)PERYLENE	191-24-2	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
BENZYL ALCOHOL	100-51-6	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
BENZOIC ACID	65-85-0	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
BIS(2-CHLOROISOPROPYL)ETHER	108-60-1	ND	U	2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
SURROGATE RESULTS								
NITROBENZENE-D5	4165-60-0	7000		2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
NITROBENZENE-D5	4165-60-0	27			% REC	Y SW8270C	02/26/01 15:47 tjh	1.0
UOROBIPHENYL	321-60-8	14000		2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
UOROBIPHENYL	321-60-8	53			% REC	Y SW8270C	02/26/01 15:47 tjh	1.0
TERPHENYL-D14	1718-51-0	15000		2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
TERPHENYL-D14	1718-51-0	57			% REC	Y SW8270C	02/26/01 15:47 tjh	1.0

CT&E Environmental Services Inc.
 Laboratory Division: Charleston Laboratory

John Meeks
 TRIAD ENGINEERING INC

Laboratory Number TA1-B0-P338-005

Page 4

SP #5
 100' UPSTREAM OF DRILL PAD 20' FROM SHORE

COC
 Date Sampled 01/06/01 00:00
 Date Received 02/13/01 11:00

Type F Matrix SLUDGE
 Sampled by CLIENT

% Solids 69

031501 1145 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
PHENOL-D5	4165-62-2	18000		2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
PHENOL-D5	4165-62-2	70			% REC	Y SW8270C	02/26/01 15:47 tjh	1.0
2-FLUOROPHENOL	367-12-4	14000		2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
2-FLUOROPHENOL	367-12-4	54			% REC	Y SW8270C	02/26/01 15:47 tjh	1.0
2,4,6-TRIBROMOPHENOL	118-79-6	12000		2600	ug/Kg	Y SW8270C	02/26/01 15:47 tjh	1.0
2,4,6-TRIBROMOPHENOL	118-79-6	48			% REC	Y SW8270C	02/26/01 15:47 tjh	1.0

CT&E Environmental Services Inc.
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Laboratory Number TA1-C0-P271-005

Page 1

SP #5
100' UPSTREAM OF DRILL PAD 20' FROM SHORE

COC
Date Sampled 01/06/01 00:00
Date Received 02/13/01 11:00

Type F Matrix SLUDGE
Sampled by CLIENT

% Solids 69

032001 1358 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
ACRYLAMIDE	79-06-1	ND	U	1.0	mg/L	Y SW8316	03/19/01 23:14 ra	1.0

CT&E Environmental Services Inc.
 Laboratory Division: Charleston Laboratory

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 TRIAD ENGINEERING INC

Laboratory Number TA1-80-P338-006

Page 1

CW #1
 2000' UPSTREAM OF CONF. AT STRAIGHT FORK

COC
 Date Sampled 01/06/01 00:00
 Date Received 02/13/01 11:00

Type F Matrix SLUDGE
 Sampled by CLIENT

% Solids 71

031501 1145 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
ALUMINUM	7429-90-5	4800		21	mg/Kg	Y SW6010B	02/21/01 03:23 JWJ	1.0
ANTIMONY	7440-36-0	ND	U	1.0	mg/Kg	Y SW6010B	02/21/01 03:23 JWJ	1.0
ARSENIC	7440-38-2	4.5		1.0	mg/Kg	Y SW6010B	02/21/01 03:23 JWJ	1.0
BARIUM	7440-39-3	170		0.21	mg/Kg	Y SW6010B	02/21/01 03:23 JWJ	1.0
BERYLLIUM	7440-41-7	1.2		0.21	mg/Kg	Y SW6010B	02/21/01 03:23 JWJ	1.0
BORON	7440-42-8	ND	U	21	mg/Kg	Y SW6010B	02/21/01 03:23 JWJ	1.0
CADMIUM	7440-43-9	ND	U	0.21	mg/Kg	Y SW6010B	02/21/01 03:23 JWJ	1.0
CAESIUM	7440-70-2	1400		10	mg/Kg	Y SW6010B	02/21/01 03:23 JWJ	1.0
CELESIUM	7440-47-3	8.4		1.0	mg/Kg	Y SW6010B	02/21/01 03:23 JWJ	1.0
COBALT	7440-48-4	7.3		1.0	mg/Kg	Y SW6010B	02/21/01 03:23 JWJ	1.0
COPPER	7440-50-8	28		1.0	mg/Kg	Y SW6010B	02/21/01 03:23 JWJ	1.0
IRON	7439-89-6	9800		10	mg/Kg	Y SW6010B	02/21/01 03:23 JWJ	1.0
LEAD	7439-92-1	13		1.0	mg/Kg	Y SW6010B	02/21/01 03:23 JWJ	1.0
MAGNESIUM	7439-95-4	2000		10	mg/Kg	Y SW6010B	02/21/01 03:23 JWJ	1.0
MANGANESE	7439-96-5	100		2.1	mg/Kg	Y SW6010B	02/21/01 03:23 JWJ	1.0
MOLYBDENUM	7439-98-7	ND	U	1.0	mg/Kg	Y SW6010B	02/21/01 03:23 JWJ	1.0
NICKEL	7440-02-0	15		1.0	mg/Kg	Y SW6010B	02/21/01 03:23 JWJ	1.0
POTASSIUM	7440-09-7	1700		210	mg/Kg	Y SW6010B	02/21/01 03:23 JWJ	1.0
SELENIUM	7782-49-2	3.3		1.0	mg/Kg	Y SW6010B	02/21/01 03:23 JWJ	1.0
SILICON	7440-21-3	2300		21	mg/Kg	Y SW6010B	02/21/01 03:23 JWJ	1.0
SILVER	7440-22-4	ND	U	1.0	mg/Kg	Y SW6010B	02/21/01 03:23 JWJ	1.0
SODIUM	7440-23-5	ND	U	210	mg/Kg	Y SW6010B	02/21/01 03:23 JWJ	1.0
THALLIUM	7440-28-0	ND	U	1.0	mg/Kg	Y SW6010B	02/21/01 03:23 JWJ	1.0
TITANIUM	7440-32-6	100		0.21	mg/Kg	Y SW6010B	02/21/01 03:23 JWJ	1.0
VANADIUM	7440-62-2	15		1.0	mg/Kg	Y SW6010B	02/21/01 03:23 JWJ	1.0
ZINC	7440-66-6	37		4.2	mg/Kg	Y SW6010B	02/21/01 03:23 JWJ	1.0
Total Solids (Percent)		71		0.010	%	EPA160.3	02/15/01 15:30 MHS	1.0
Acidity (Soluble)		6200		280	mg/Kg	Y	02/20/01 14:44 TF	100
Alkalinity (Soluble)		1600		280	mg/Kg	Y	02/20/01 14:44 TF	100
Decane, 2,6,10,14-tetramethyl-	1921-70-6	2000	J		ug/Kg	SW8270C	02/26/01 16:40 tjh	1.0
PHENOL	108-95-2	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
BIS(2-CHLOROETHYL)ETHER	111-44-4	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0

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 TRIAD ENGINEERING INC

Laboratory Number TA1-B0-P338-006

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CW #1
 2000' UPSTREAM OF CONF. AT STRAIGHT FORK

COC
 Date Sampled 01/06/01 00:00
 Date Received 02/13/01 11:00

Type F Matrix SLUDGE
 Sampled by CLIENT

% Solids 71

031501 1145 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
2-CHLOROPHENOL	95-57-8	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
1,3-DICHLOROBENZENE	541-73-1	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
1,4-DICHLOROBENZENE	106-46-7	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
1,2-DICHLOROBENZENE	95-50-1	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
2-METHYLPHENOL	95-48-7	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
3- & 4-METHYLPHENOL		ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
N-NITROSODI-N-PROPYLAMINE	621-64-7	ND	U	4700	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
HEXACHLOROETHANE	67-72-1	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
1,2,4-TRICHLOROBENZENE	98-95-3	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
ISOPHORONE	78-59-1	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
2-NITROPHENOL	88-75-5	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
2,4-DIMETHYLPHENOL	105-67-9	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
BIS(2-CHLOROETHOXY) METHANE	111-91-1	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
2,4-DICHLOROPHENOL	120-83-2	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
1,2,4-TRICHLOROBENZENE	120-82-1	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
NAPHTHALENE	91-20-3	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
4-CHLOROANILINE	106-47-8	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
HEXACHLOROBUTADIENE	87-68-3	ND	U	4700	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
4-CHLORO-3-METHYLPHENOL	59-50-7	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
2-METHYLNAPHTHALENE	91-57-6	2400		2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
HEXACHLOROCYCLOPENTADIENE	77-47-4	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
2,4,6-TRICHLOROPHENOL	88-06-2	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
2,4,5-TRICHLOROPHENOL	95-95-4	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
2-CHLORONAPHTHALENE	91-58-7	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
2-NITROANILINE	88-74-4	ND	U	12000	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
DIMETHYLPHTHALATE	131-11-3	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
ACENAPHTHYLENE	208-96-8	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
2,6-DINITROTOLUENE	606-20-2	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
3-NITROANILINE	99-09-2	ND	U	12000	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
ACENAPHTHENE	83-32-9	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
2,4-DINITROPHENOL	51-28-5	ND	U	12000	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
4-NITROPHENOL	100-02-7	ND	U	12000	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
DIBENZOFURAN	132-64-9	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
1,2-DINITROTOLUENE	121-14-2	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
1,2,4-TRIMETHYLPHTHALATE	84-66-2	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
4-CHLORODIPHENYLETHER	7005-72-3	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
FLUORENE	86-73-7	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0

CT&E Environmental Services Inc.
 Laboratory Division: Charleston Laboratory

John Meeks
 TRIAD ENGINEERING INC

Laboratory Number TA1-B0-P338-006

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CW #1
 2000' UPSTREAM OF CONF. AT STRAIGHT FORK

COC
 Date Sampled 01/06/01 00:00
 Date Received 02/13/01 11:00

Type F Matrix SLUDGE
 Sampled by CLIENT

% Solids 71

031501 1145 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
4-NITROANILINE	100-01-6	ND	U	12000	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
4,6-DINITRO-2-METHYLPHENOL	534-52-1	ND	U	12000	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
N-NITROSODIPHENYLAMINE	86-30-6	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
4-BROMOPHENYL PHENYL ETHER	101-55-3	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
HEXACHLOROBENZENE	118-74-1	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
PENTACHLOROPHENOL	87-86-5	ND	U	12000	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
PHENANTHRENE	85-01-8	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
ANTHRACENE	120-12-7	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
1-BUTYLPHTHALATE	84-74-2	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
FLUORANTHENE	206-44-0	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
PYRENE	129-00-0	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
BUTYL BENZYL PHTHALATE	85-68-7	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
3,3-DICHLOROBENZIDINE	91-94-1	ND	U	4700	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
BENZO(A)ANTHRACENE	56-55-3	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
CHRYSENE	218-01-9	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
DI-N-OCTYLPHTHALATE	117-84-0	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
BENZO(B)FLUORANTHENE	205-99-2	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
BENZO(K)FLUORANTHENE	207-08-9	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
BENZO(A)PYRENE	50-32-8	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
INDENO(1,2,3-CD)PYRENE	193-39-5	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
DIBENZO(A,H)ANTHRACENE	53-70-3	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
BENZO(G,H,I)PERYLENE	191-24-2	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
BENZYL ALCOHOL	100-51-6	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
BENZOIC ACID	65-85-0	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
BIS(2-CHLOROISOPROPYL)ETHER	108-60-1	ND	U	2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
SURROGATE RESULTS								
NITROBENZENE-D5	4165-60-0	9600		2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
NITROBENZENE-D5	4165-60-0	41			% REC	Y SW8270C	02/26/01 16:40 tjh	1.0
2-FLUOROBIPHENYL	321-60-8	10000		2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
2-FLUOROBIPHENYL	321-60-8	42			% REC	Y SW8270C	02/26/01 16:40 tjh	1.0
TERPHENYL-D14	1718-51-0	12000		2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
TERPHENYL-D14	1718-51-0	52			% REC	Y SW8270C	02/26/01 16:40 tjh	1.0
P L-D5	4165-62-2	15000		2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
PHENOL-D5	4165-62-2	64			% REC	Y SW8270C	02/26/01 16:40 tjh	1.0
2-FLUOROPHENOL	367-12-4	12000		2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
2-FLUOROPHENOL	367-12-4	53			% REC	Y SW8270C	02/26/01 16:40 tjh	1.0

CT&E Environmental Services Inc.
Laboratory Division: Charleston Laboratory

John Meeks
TRIAD ENGINEERING INC

Laboratory Number TA1-B0-P338-006

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CW #1
2000' UPSTREAM OF CONF. AT STRAIGHT FORK

COC
Date Sampled 01/06/01 00:00
Date Received 02/13/01 11:00

Type F Matrix SLUDGE
Sampled by CLIENT

% Solids 71

031501 1145 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
2,4,6-TRIBROMOPHENOL	118-79-6	8700		2300	ug/Kg	Y SW8270C	02/26/01 16:40 tjh	1.0
2,4,6-TRIBROMOPHENOL	118-79-6	37			% REC	Y SW8270C	02/26/01 16:40 tjh	1.0

CT&E Environmental Services Inc.
Laboratory Division: Charleston Laboratory

John Meeks
TRIAD ENGINEERING INC

Laboratory Number TA1-C0-P271-006

Page 1

CW #1
2000' UPSTREAM OF CONF. AT STRAIGHT FORK

COC
Date Sampled 01/06/01 00:00
Date Received 02/13/01 11:00

Type F Matrix WATER
Sampled by CLIENT

% Solids 71

032001 1358 Ver. 4.0.187

ANALYSIS FOR REQUESTED PARAMETERS

Analyzed Parameter	CAS No.	Result	Flg	RLimit	Units	S Method	Date/Time/Anl	DilF
ACRYLAMIDE	79-06-1	ND	U	0.26	mg/L	Y SW8316	03/19/01 23:26 ra	1.0

APPENDIX C

GEOPHYSICAL INVESTIGATION



**Final Report
Geophysical Survey
Big Branch Slurry Impoundment
Martin County Coal Corporation
Martin County, KY
Enviroscan Reference Number 120015**

**Prepared For: Triad Engineering, Inc.
Prepared By: Enviroscan, Inc.
January 23, 2001**



January 23, 2001

Mr. John Nottingham
Triad Engineering, Inc.
4980 Teays Valley Road
Scott Depot, WV 25560

RE: Geophysical Survey
Big Branch Slurry Impoundment
Martin County Coal Corporation
Martin County, KY
Enviroscan Reference Number 120015

Dear Mr. Nottingham:

Pursuant to our proposal, dated December 11, 2000, Enviroscan, Inc. completed a geophysical survey of the above-referenced site between December 18 through 20, 2000. The methods and results of the survey are described in the following text and figures.

Survey Purpose

The geophysical survey area lies in a dammed valley that has been used by the Martin County Coal Corporation as a coal washing slurry impoundment. According to information provided by Triad Engineering, Inc. (Triad) and the Mine Safety and Health Administration (MSHA), the impoundment bottom failed, releasing semi-liquid coal slurry into nearby mine workings. The purpose of the geophysical survey was to determine whether there is geophysical evidence to constrain the location of the presumed conduit or breakthrough from the impoundment into the mine workings. The survey area consists of a recently constructed earthen drilling pad extending out into the slurry impoundment. The locations of selected recent boreholes (by others) within the survey area are depicted on Figure 1.

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Survey Method

Based on the site conditions and survey purpose, Enviroscan performed a mise-a-la-masse electrical profiling survey. The mise-a-la-masse method is commonly used in the mining industry to map the extent of conductive ore bodies. The principles of the mise-a-la-masse method are depicted in Appendix A, and are described in detail in e.g. Telford, W.M., Geldart, L.P., and Sheriff, R.E., 1990, Applied Geophysics, Cambridge University Press. The method is based on the idea that an electrically conductive subsurface body (in this case the slurry-filled mine working and conduit/breakthrough area) will radiate the signal from an inserted current electrode. Concentrations of current flow at the ground surface are expected to mimic the footprint of the conductive body.

In this case, mine workings containing electrically conductive slurry were energized by a current source electrode inserted through borehole DH1-11. A current sink electrode was placed on the far western shore of the impoundment – at a distance of over 1500 feet representing essentially electrical infinity. The approximate footprint of the slurry-filled mine workings, and the possible breakthrough zone were then delineated by mapping the current flow from the energized mine workings. Current flow was mapped as voltage using a pair of voltage electrodes (with a constant 20-foot spacing) attached to a high-impedance microvolt meter. The voltage electrodes were walked along linear profiles radiating from the current electrode borehole, with the voltage electrodes arranged collinearly with the borehole. For each measurement, the midpoint of the voltage electrodes was measured using a backpack-mounted Trimble Pathfinder global positioning system (GPS) receiver in contact with 6 to 8 position-fixing satellites. Real-time communication with OmniStar resulted in differential GPS (DGPS) positioning with an accuracy of plus or minus approximately two feet. The applied signal was generated by an Advanced GeoSciences Sting R1-IP earth resistivity meter. The voltage measurements were also collected and digitally recorded by the Sting R1-IP.

The field survey was conducted on the nights of December 19 and 20, 2000. Nighttime work was necessitated by the contemporary drilling efforts on the site. In order to minimize “leakage” of electrical current from the mine workings, drilling steel was removed from any active holes prior to commencement of the electrical survey, and readings were spread across two nights, to allow avoidance of the drill rigs themselves. Note that a drill rod is reportedly stuck in borehole DHX-2 (see Figure 1), but it extends no closer than approximately 10 feet to the top of the coal seam.

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The field voltages from the survey stations depicted in Figure 1 were subjected to removal of a geometric factor derived from standard equations for a gradient array (see e.g. Telford et al., 1990). The corrected voltages were contoured using the statistical kriging algorithm in SURFER by Golden Software, and are depicted in Figure 2. Note that Figures 1, 2 and 3 also depict a depression that was GPS-surveyed by Enviroscan in the field, and which the drillers reported was suffering active subsidence during the drilling operations.

The main feature of Figure 2 is a zone of high voltage that mimics the reported westward extent of mine workings near the surficial depression. This high voltage zone presumably mimics the footprint of a subsurface electrically conductive zone in contact with the electrode inserted through DH1-11. A portion of the mine workings containing slurry (or other wet and therefore electrically conductive earth materials) would produce such a zone. The footprint of this zone is shown in gray on Figure 3. Note that it presumably extends some distance eastward (beyond the geophysical survey data coverage).

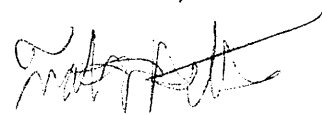
Superimposed on the overall high voltage anomaly are two distinct peaks (and a third subtle peak). The footprints of the two main peaks are highlighted on Figure 3. These peaks should represent areas where a portion of the electrically conductive target extends closer to the ground surface – e.g. areas of current leakage from the electrified mine workings. Such current leakage would certainly occur through the breakthrough/conduit from the slurry impoundment, and could also occur along natural mineralized or oxidized near-vertical joints or fractures intersecting the mine workings. Note that none of the three anomaly peaks coincide with contemporary drilling operations or features, and are therefore interpreted as representing actual subsurface conditions rather than artifacts or interference.

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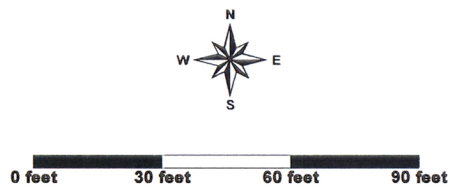
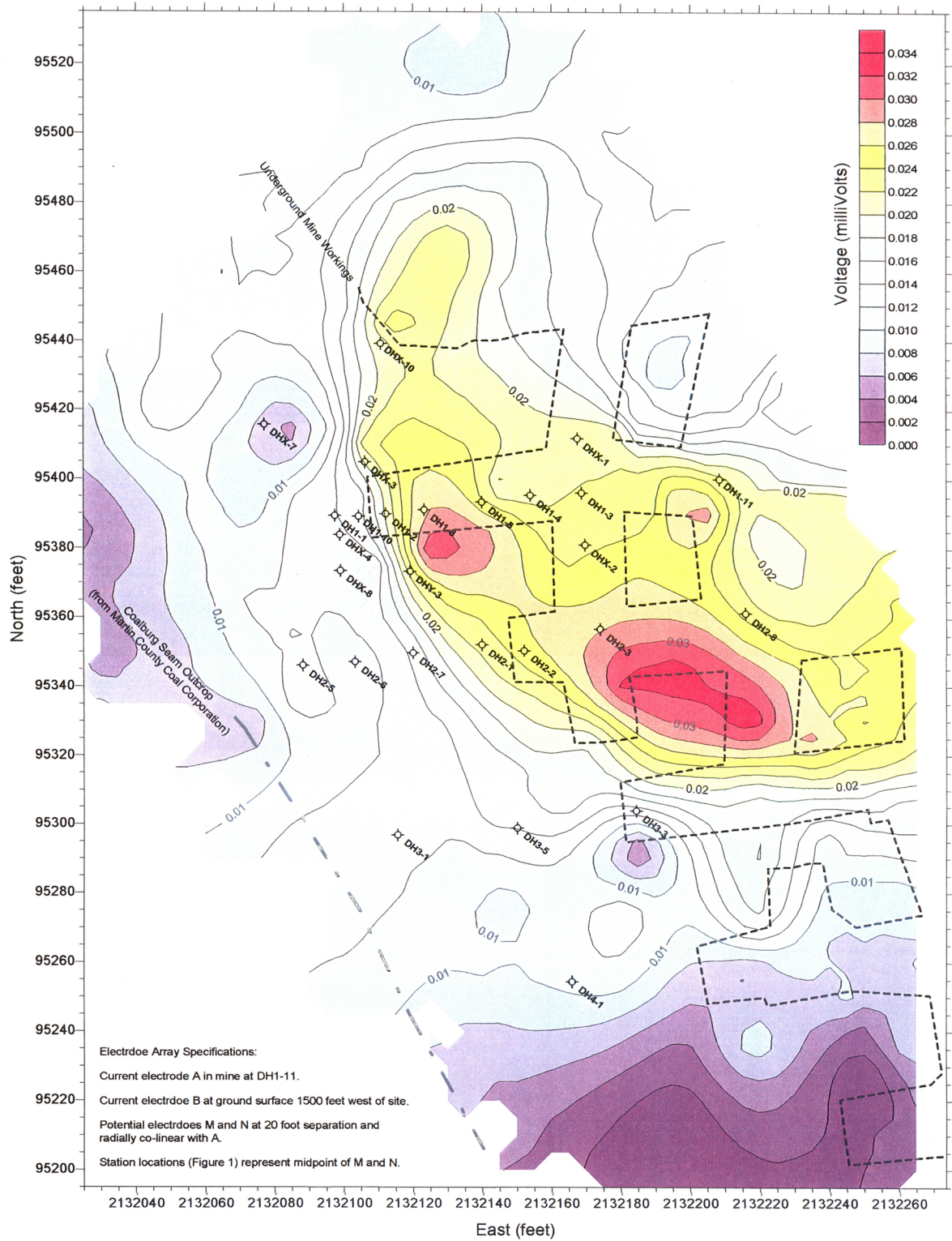
We have appreciated this opportunity to work with you. If you have any questions, please do not hesitate to contact me.

Sincerely,
Enviroscan, Inc.



Timothy D. Bechtel, Ph.D., P.G.
Principal Geophysicist

enc.: Figure 1: Geophysical Survey Data Coverage
Figure 2: Mise a la Masse Survey Data
Figure 3: Mise a la Masse Survey Interpretation
Appendix A: Mise-a-la-Masse Method Schematic



Legend:
 + Mise a la Masse Survey Station
 ⊕ Drill Hole (by others)

Notes:
 Coordinates in KY North State Plane Grid, NAD-83 geodetic datum.
 Survey stations and drill hole locations from DGPS survey by Enviroscan, Inc.
 Mine plan and coal outcrop lines digitized from portions of "MSHA Drilling Program" map provided by MSHA.

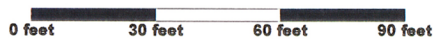
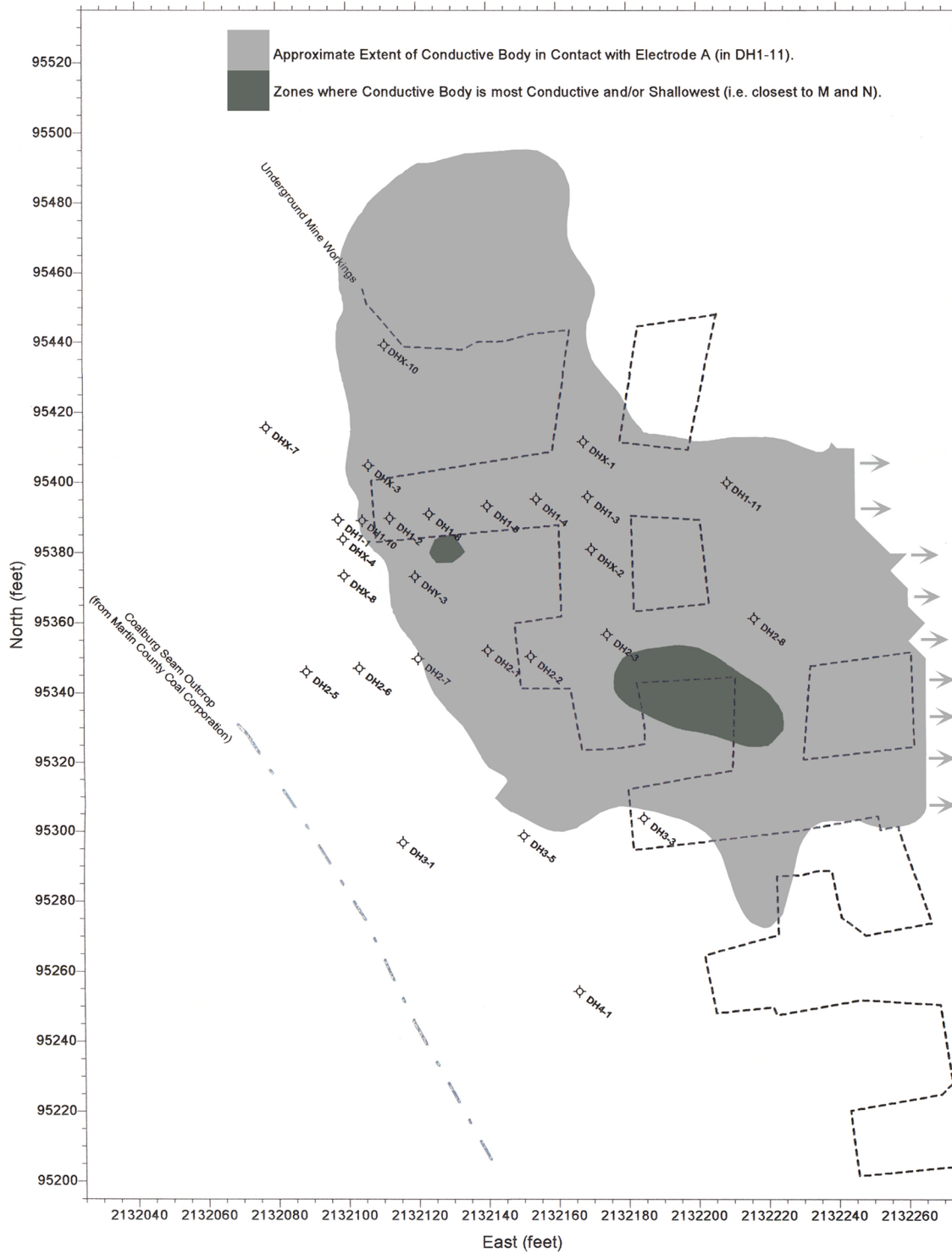
Figure 2

Mise a la Masse Survey Data

Big Branch Slurry Impoundment
 Martin County Coal Corporation
 Martin Co., KY

Enviroscan, Inc.
 Project No. 120016
 Rev. 01/03/01





Legend:

- + Mise a la Masse Survey Station
- ◇ Drill Hole (by others)

Notes:

Coordinates in KY North State Plane Grid, NAD-83 geodetic datum.
 Survey stations and drill hole locations from DGPS survey by Enviroscan, Inc.
 Mine plan and coal outcrop lines digitized from portions of "MSHA Drilling Program" map provided by MSHA.

Figure 3

**Mise a la Masse
 Survey Interpretation**

**Big Branch Slurry Impoundment
 Martin County Coal Corporation
 Martin Co., KY**

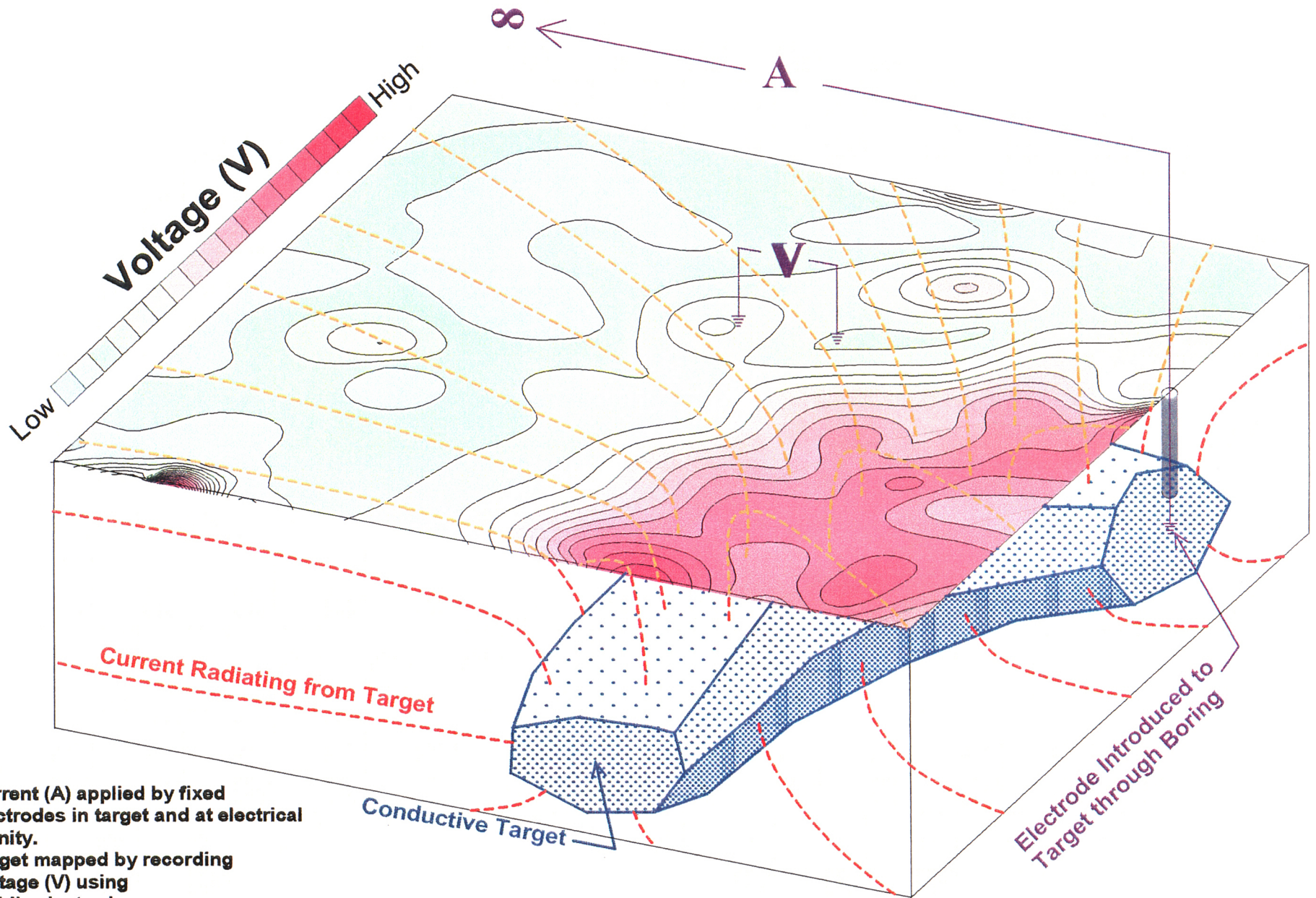
**Enviroscan, Inc.
 Project No. 120015
 Rev. 01/05/01**



ENVIROSCAN, INC.

Appendix A

Mise-a-la-Masse Method Schematic



Current (A) applied by fixed electrodes in target and at electrical infinity.
 Target mapped by recording Voltage (V) using mobile electrodes.

Mise a la Masse Method Schematic

Rev. 01/2001

DRAWINGS



MINE WORKINGS
IN COALBURG SEAM

COAL PILLARS
(TYPICAL)

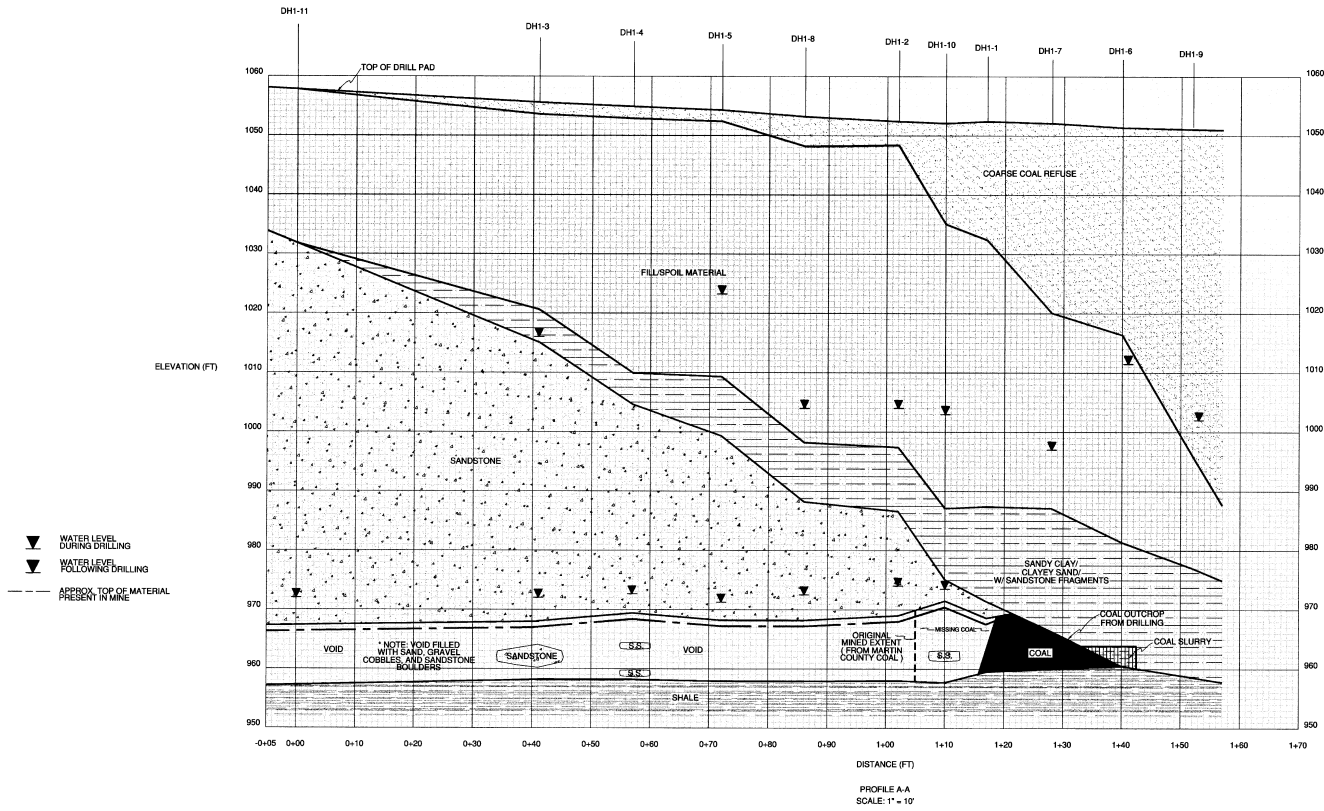
APPROXIMATE
COALBURG OUTCROP
(FROM DRILLING)

COALBURG OUTCROP
(FROM MARTIN COUNTY COAL)

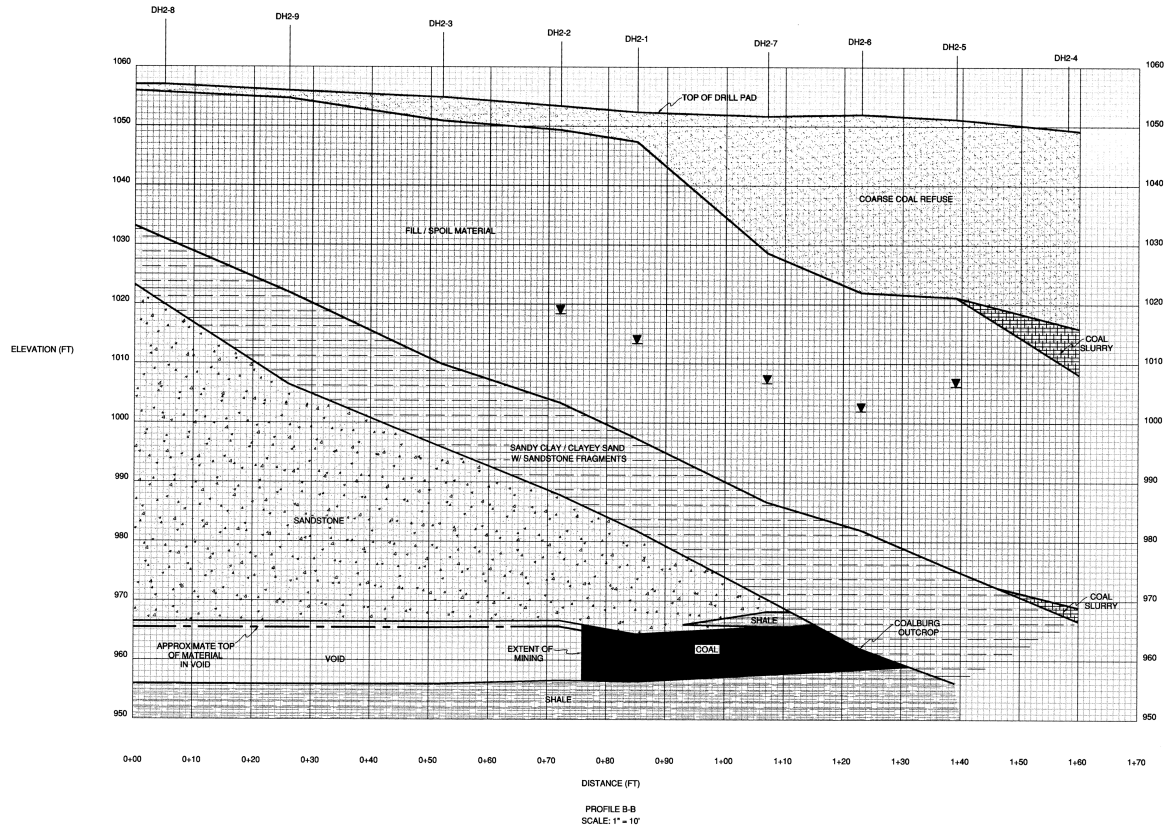
FULL THICKNESS
OF COALBURG

FORMER SLURRY LINE
(BEFORE BREAK)


REV.	DATE	ITEM		
CADFILE: C00553_BORINGS.DWG				
BIG BRANCH SLURRY IMPOUNDMENT INVESTIGATION BORING LOCATION PLAN				
Drawing No.	DRAWN	MDM	SCALE	1" = 20'
C00553-1	CHECKED	CEM	DATE	02/08/01
		TRIAD ENGINEERING, INC. 51 BANK LOUIS & BROADWAY, WEST VIRGINIA PROJECTS & INVESTIGATIONS, PITTSBURGH GREENSBORO, PENNSYLVANIA		



1	01/22/01	
REV.	DATE	ITEM
CADFILE: A-A.DWG		
PROFILE A-A SIXES BRANCH SLURRY IMPOUNDMENT INVESTIGATION MARTIN COUNTY, KENTUCKY		
Drawing No. C00553-2	DRAWN MDM CHECKED GEM	SCALE 1" = 10' DATE 01/22/01
TRIAD ENGINEERING, INC. 87 ALBING DRIVE & HICKORYVILLE, WEST VIRGINIA WINCHESTER & WYOMINGVILLE, VIRGINIA GREENSBORO, PENNSYLVANIA		



▼ WATER LEVEL DURING DRILLING
 - - - APPROX. TOP OF MATERIAL PRESENT IN MINE

REV.	DATE	ITEM
CADFILE: B-B.DWG		
PROFILE B-B BIG BRANCH SLURRY IMPOUNDMENT INVESTIGATION MARTIN COUNTY, KENTUCKY		
Drawing No. C00853-3	DRAWN MDM	SCALE 1" = 10'
	CHECKED GEM	DATE 02/01/01
 TRIAD ENGINEERING, INC. <small>31 AVENUE COAL & MINERALS, WEST PITTSBURGH, WEST VIRGINIA 26060 WINCHESTER & HARRISBURG, VIRGINIA STEUBENS, PENNSYLVANIA</small>		

