APPENDIX A
BORING LOGS

BORING LOG FOR: PROJECT NO.: LOGGED BY: DRILLED BY (Company/Driller):		Beaton & Corbin Factory Site 112G03599.03 Robin Clark DrilEx			TRANSCRIBED BY:	BORING NO.: START DATE: COMPLETION: MON. WELL NO			
GRD. SURFACE ELEVATION:					ELEVATION FROM:	CHECKED BY:			
DEPTH (FEET)	SAMP REC. / SAMP LENG.	SAMPL TIMI & SAMPLE (QA/QC S	E NO. TATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = PID [(PPM)]
2	8	121 Lab sar				0-2 in. asphalt. 2-8 in. bright orange fine sand, trace silt	SP	dry	1.4
2	7	121	5	_		Same as above	SP	dry	0.6
4	24								
6	6	122	0			Orange fine sand, gray subangular gravel up to 1 in, black coarse sand	SW	Low recovery Dry Looks like it fell from above	Not enough material
0	48			-					
8									
	12	122	3			Red platy and subangular gravel, silty fine sand, some medium sand and pea gravel	GW	wet	0.8
10	24								
	12	122	5			Same as above	GW		0.4
12	24					End of boring.			
14				_					
16									

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	_	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct push	_	
METHOD OF SOIL SAMPLING:	Acetate liner		[]
METHOD OF ROCK CORING:	NA	_	
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-128	PAGE: 1 OF 1

BORING LOG FOR:	Beaton & Corbin Factory Site		BORING NO.:	SB-129	
PROJECT NO.:	112G03599.03		START DATE:	11/28/11	
LOGGED BY:	Robin Clark	TRANSCRIBED BY:	COMPLETION: DATE:	11/28/11	
DRILLED BY (Company/Driller):	DrilEx		MON. WELL NO.:		
GRD. SURFACE ELEVATION:		ELEVATION FROM:	CHECKED BY:		

DEPTH (FEET) SAMP REC. TIME A	FIELD SCREENING DATA METHOD = PID [(PPM)]
DEPTH (FEET) REC. TIME & MAT'L CONSITY CONSIS. SAMPLE NO. (QA/QC STATUS) SAMP LENG. (QA/QC STATUS) SAMPLE NO. (QA/QC STATUS) S	DATA METHOD = PID
(FEET) SAMP LENG. (QA/QC STATUS) ROCK PROF'L MATERIAL CLASSIFICATION Or ROCK PROCK HARD. MATERIAL CLASSIFICATION O-2 in. asphalt. 2-10 in. Dark brown fine sand, trace silt or ROCK BRKN or ROCK BRKN classification; rock weathering; etc.)	METHOD = PID
SAMP SAMPLE NO. (QA/QC STATUS) SAMPLE NO. (QA/QC STATUS) WELL PROF'L Or ROCK HARD. MATERIAL CLASSIFICATION MATERIAL CLASSIFICATION SP Dry	
LENG. (QA/QC STATUS) PROF'L HARD. MATERIAL CLASSIFICATION 12 1050 0-2 in. asphalt. 2-10 in. Dark brown fine sand, trace silt Dry Dry	[(PPM)]
CLASSIFICATION 12 1050 0-2 in. asphalt. 2-10 in. Dark brown fine sand, trace silt	. ,,
12 1050 0-2 in. asphalt. 2-10 in. Dark brown fine sand, trace silt	
2-10 in. Dark brown fine sand, trace silt	10.7
	-
I I I I I I I I I I I I I I I I I I I	
/ It is night during into during	
16 1050 Same as above with medium sand SP Dry	19.1
	10.1
Lab sample Duplicate lab sample	
4 / 24	
15 1055 0-6 in. Grey subangular gravel up to 1 in. GW Dry	4.6
	4.6
6-15 in. Red fine to medium sand, trace silt SW Damp at bottom	
6 / 24	
15 1055 Red fine to medium sand SW Wet	1.6
8 / 24	
15 1100 Same as above with little rounded gravel up to ½ in. SW Wet	1.5
18 1100 Same as above SW Wet	1.5
	-
12 / 24 End of boring.	
16	

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct push	_	
METHOD OF SOIL SAMPLING:	Acetate liner		(
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-129	PAGE: 1 OF 1

BORING LOG FOR:	Beaton & Corbin Factory Site		BORING NO.:	SB-130
PROJECT NO.:	112G03599.03		START DATE:	11/28/11
LOGGED BY:	Robin Clark	TRANSCRIBED BY:	COMPLETION: DATE:	11/28/11
DRILLED BY (Company/Driller):	DrilEx		MON. WELL NO.:	
GRD. SURFACE ELEVATION:		ELEVATION FROM:	CHECKED BY:	
	·			

DEPTH (FEET)	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = PID [(PPM)]
	18	1020			0-2 in. asphalt 2-4 in. Very dark grey fine to medium sand, little fine subangular gravel	SW	Dry	7.4
2	24				4-16 in. brown fine to medium sand, trace silt. 16-18 in. bright orange fine to medium sand trace silt	SW SW	Damp	
	20	1020			Same as above	SW	Damp	1.7
4	24							
	12	1030			Light orange medium sand.	SP	Dry	30
6	24							
	12	1035			0-2 in. Bright orange platy gravel (crumbly) 2-12 in. orange silty sand, trace rounded gravel up to 1 in.	GW SM	Dry	27
8	24							
	16	1040 Lab sample			Red silty fine to medium sand, little subrounded fine gravel, trace silt.	SM	Wet	54
10	24							
	20	1040			Red fine to medium sand, trace silt	SW	Wet	26
12	24				End of boring.			
14								
16								

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	_	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct push	_	
METHOD OF SOIL SAMPLING:	Acetate liner		(753 _)
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-130	PAGE: 1 OF 1

BORING LOG FOR:	Beaton & Corbin Factory Site		BORING NO.:	SB-131	
PROJECT NO.:	112G03599.03		START DATE:	11/28/11	
LOGGED BY:	Robin Clark	TRANSCRIBED BY:	COMPLETION: DATE:	11/28/11	
DRILLED BY (Company/Driller):	DrilEx		MON. WELL NO.:		
GRD. SURFACE ELEVATION:		ELEVATION FROM:	CHECKED BY:		
					

DEPTH (FEET)	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = PID [(PPM)]
	10	1357			0-2 in. asphalt 2-6 in. black medium sand, little fine rounded gravel	SP	Dry	0.6
2	24				6-10 in. dark orange brown fine sand, some silt	SP		
	18	1357			Orange fine sand	SP	Damp	0.6
4	24							
	8	1400			Red/brown silt, some medium sand, trace angular pea gravel	SM	Dry	1.2
6	24							
		No recovery			No sample recovery			NA
8								
	10	1405			Same as above (4-6 ft)	SM	Dry	1.4
10	24							
	12	1405 Lab sample			Red silt, trace clay and platy gravel	ML	Damp	1.8
12	24							
	18	1418			Same as above	ML	Wet	1.6
14	24							
	18	1418			Same as above	ML	Wet	1.4
16	24				End of boring.			

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct push		
METHOD OF SOIL SAMPLING:	Acetate liner		(-83 _)
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-131	PAGE: 1 OF 1

BORING LOG FOR:	Beaton & Corbin Factory Site		BORING NO.:	SB-132
PROJECT NO.:	112G03599.03		START DATE:	11/28/11
LOGGED BY:	Robin Clark	TRANSCRIBED BY:	COMPLETION: DATE:	11/28/11
DRILLED BY (Company/Driller):	DrilEx		MON. WELL NO.:	
GRD. SURFACE ELEVATION:		ELEVATION FROM:	CHECKED BY:	
				_

DEPTH (FEET)	SAMP REC. / SAMP	SAMPLING TIME & SAMPLE NO.	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	MATERIAL	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = PID [(PPM)]
	LENG.	(QA/QC STATUS)			CLASSIFICATION			
	6	1145			0-2 in. asphalt 2-6 in. brown fine sand, little silt and medium sand	SM	Damp	11.5
2	24							
	6	1145			Same as above	SM	Damp	23.5
4	24							
	15	1155			Dark red/orange silt, some fine sand	SM	Damp	5.1
6	24							
	12	1155			Olive brown fine sand, trace silt	SP	Wet	3.3
8	24							
	24	1200			Same as above, loose.	SP	Wet	3.6
10	24							
	18	1200 Lab sample	=		Dark red silt and fine sand, little coarse sand, platy gravel at bottom	SM	Wet	25.3
12	24				End of boring.			
14								
			1					
16								
TYPE OF	DRILLING RI	G: Geoprol	pe 6620 DT					Tetra Tech NUS, Inc.

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	<u>-</u>	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct push	_	
METHOD OF SOIL SAMPLING:	Acetate liner	_	(
METHOD OF ROCK CORING:	NA	_	
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-132	PAGE: 1 OF 1

PROJECT NO.: 11:		Beaton & Corbin Factory Site 112G03599.03 Robin Clark		ctory Site	TRANSCRIPED BY:	BORING NO.: START DATE: COMPLETION:	-	SB-133 11/28/11 11/28/11		
	ът. BY (Compar		DrilEx	IK		TRANSCRIBED BY:	MON. WELL N	_	11/20/11	
	RFACE ELE		DIIIEX			ELEVATION FROM:	CHECKED BY:			
DEPTH (FEET)	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE N (QA/QC STAT	O.	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REM/ (moisture odors; go classifica weatheri	condition; eological tion; rock	FIELD SCREENING DATA METHOD = PID [(PPM)]
	12	1337 Lab sample	е			0-2 in. asphalt 2-8 in. black gravelly fine sand	SP	D	ry	0.8
2	24					8-12 in. orange fine to medium sand	SP			
	18	1337				Same as above	SP	Damp a	t bottom	0.7
4	24									
	15	1345				0-6 in. red silt 6-15 in. red silt some brown medium to coarse sand, fine sand at bottom	ML SM	W	et	0.5
6	24									
	18	1348				Brown fine sand	SP	W	et	0.4
8	24					End of boring				
10										
12										
14										
40										

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	_	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	_ Direct push	_	
METHOD OF SOIL SAMPLING:	Acetate liner		[]
METHOD OF ROCK CORING:	NA		IL
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-133	PAGE: 1 OF 1

BORING LOG FOR:	Beaton & Corbin Factory Site		BORING NO.:	SB-200A	
PROJECT NO.:	112G03599.03		START DATE:	11/28/11	
LOGGED BY:	Robin Clark	TRANSCRIBED BY:	COMPLETION: DATE:	11/28/11	
DRILLED BY (Company/Driller):	DrilEx		MON. WELL NO.:	MW-200A	
GRD. SURFACE ELEVATION:		ELEVATION FROM:	CHECKED BY:		
			=	<u> </u>	

DEPTH (FEET)	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = PID [(PPM)]
	24	1530			Dark brown very fine silty sand	SM	Dry	0.3
2	24							
	12	1530			Orange fine sand	SP	Dry	0.7
4	24							
	13	1535 Lab sample			Orange/brown fine to medium sand	SP	Damp	0.8
6	24							
	15	1535			Same as above with coarse sand	SW	Wet	0.5
8	24							
	24	1540			0-12 in. same as above 12-15 in. tan/yellow/black/brown medium to coarse sand (weathered granite)	SW SW	Wet	0.4
10	24				15-24 red fine sand	SP		
	24	1540	=		0-14 in. Red very fine sand 14-24 in. Red fine sand	SP SP	wet	0.7
12	24				End of boring.			
14								
16								

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct push		
METHOD OF SOIL SAMPLING:	Acetate liner		(
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-200A	PAGE: 1 OF 1

	NO.:		112G03 Robin C DrilEx	DEPTH MAT'L	SOIL DENSITY/	STA STA COI	RING NO.: IRT DATE: MPLETION: N. WELL NO ECKED BY: USCS	REMARKS (moisture condit	8/11 8/11 iion;	FIELD SCREENING
(FEET)	SAMP LENG.	SAMPLE (QA/QC ST	NO.	CHG./ WELL PROF'L	CONSIS. or ROCK HARD.	MATERIAL CLASSIFICATION	or ROCK BRKN	odors; geologic classification; ro weathering; etc	ock	DATA METHOD = PID [(PPM)]
2	12	1500				0-8 in. brown topsoil (silty fine sand) 8-12 in. same as above with brick fragments	SM FILL	Dry		1.2
2	12	1500				Black very fine to medium silty sand, some subangular to subrounded gravel up to 1 in	SM	Dry		3.7
4	12	1503				Orange/brown fine to medium sand, trace silt	SP	Dry		2.1
6	24 12	1503 Lab sam				0-5 in. same as above 5-12 in. black very fine silty sand	SP SM	Damp		61.3
8	24					Gray at bottom with medium sand End of boring.	SW	Wet		
10										
12									_	
14										
16										
	ORILLING RIG OF ADVANC	G: ING BORING:	Geoprob Direct po	oe 6620 DT ush					Te	etra Tech NUS, Inc.

TIFE OF DRILLING RIG.	Geophobe 6020 DT		retia recirinos, inc.
METHOD OF ADVANCING BORING:	Direct push		
METHOD OF SOIL SAMPLING:	Acetate liner		(-83 _)
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-301	PAGE: 1 OF 1

BORING LOG FOR:	Beaton & Corbin Factory Site		BORING NO.:	SB-302	
PROJECT NO.:	112G03599.03		START DATE:	11/28/11	
LOGGED BY:	Robin Clark	TRANSCRIBED BY:	COMPLETION: DATE:	11/28/11	
DRILLED BY (Company/Driller):	DrilEx		MON. WELL NO.:		
GRD. SURFACE ELEVATION:		ELEVATION FROM:	CHECKED BY:		

DEPTH (FEET)	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = PID [(PPM)]
	13	1512			0-2 in. asphalt 2-6 in. orange medium sand	SP	Dry	0.8
2	24				6-8 in. concrete 8-13 in. orange medium sand	FILL SP		
	15	1512			Orange fine sand, trace silt	SP	Dry	0.3
4	24							
	17	1530			0-10 in. same as above 10-17 in. dark red silt, some fine rounded gravel	SP GM	Damp	0.2
6	24							
	13	1530			Same as above	GM	Wet	0.9
8	24							
	18	1540 Lab sample			Red fine to coarse sand, little subangular to subrounded gravel, some silt	GM	Wet	1.2
10	24							
	18	1542			Red very fine to fine sand	SP	Wet	0.6
12	24				End of boring			
14								
16								
TYPE OF	DRILLING RI	Geograf	e 6620 DT					Tetra Tech NUS, Inc.

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	_	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct push	_	
METHOD OF SOIL SAMPLING:	Acetate liner		(-83 _)
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-302	PAGE: 1 OF 1

PROJECT LOGGED DRILLED	_	•	Beaton 112G03 Robin C DrilEx		ctory Site	TRANSCR	 ST/ CO 	BORING NO.: START DATE: COMPLETION: DATE: MON. WELL NO.: CHECKED BY:			SB-303 11/28/11 11/28/11	
DEPTH (FEET)	SAMP REC.	SAMPL TIME &		DEPTH MAT'L CHG./	SOIL DENSITY/ CONSIS.			USCS	(moistu	MARKS re condition; geological	FIELD SCREENING DATA	

DEPTH (FEET)	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = PID [(PPM)]
	12	1600			0-6 in brown topsoil (silty very fine sand) 6-10 in. red fine sand some medium sand	SM SP	Dry	0.4
2	24				10-12 in. black asphalt			
	11	1600 Lab sample			Red fine sand	SP	Dry	1.5
4	24							
	12	1610			Orange/ brown fine to medium sand	SW	Wet	0.1
6	24							
	12	1610			Same as above	SW	Wet	1.0
8	24							
	10	1615			Orange/brown fine to medium sand, trace coarse sand	SW	Wet	0.8
10	24							
	10	1615			Same as above	SW	Wet	0.7
12	24							
14								
16								
T) (DE OE			- 6620 DT					Totro Took NUC Inc

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	_	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct push	_	
METHOD OF SOIL SAMPLING:	Acetate liner	_	(-83 _)
METHOD OF ROCK CORING:	NA	_	
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-303	PAGE: 1 OF 1

BORING LOG FOR: PROJECT NO.: LOGGED BY: DRILLED BY (Company/Driller): GRD. SURFACE ELEVATION: Beaton & Co 112G03599.4 Robin Clark DrilEx			3599.03 Clark	actory Site	TRANSCRIBED BY: ELEVATION FROM:	BORING NO.: START DATE: COMPLETION: MON. WELL NO CHECKED BY:		11/28/11 11/28/11	
DEPTH (FEET)	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = PID [(PPM)]	
	12	1310			0-6 in. gray concrete 6-9 in. asphalt	FILL	Dry	2.0	
2					9-12 brown fine silty sand	SM	Damp		
		No sample						NA	
4	48								
	15	1320 Lab sample			Orange/brown subrounded gravel up to 12 in., some medium to coarse sand	GW	Wet	18.0	
6	24								
	8	1320			Orange/brown fine silty sand	SM	Wet	17.0	
8	24								
	18	1330			Orange/brown fine sand grades to medium sand at bottom	SP	Wet	17.6	
10	24								
10	20	1330			Same as above with little coarse sand	SW	Wet	4.5	
12	24								
14									
16									
TYPE OF	DRILLING RI	G: Geong	be 6620 DT					Tetra Tech NUS Inc	

TIFE OF DRILLING RIG.	Geophobe 6020 DT		retia recirinos, inc.
METHOD OF ADVANCING BORING:	Direct push		
METHOD OF SOIL SAMPLING:	Acetate liner		(-83 _)
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-304	PAGE: 1 OF 1

BORING LOG FOR:	Beaton & Corbin Factory Site		BORING NO.:	SB-305
PROJECT NO.:	112G03599.03		START DATE:	11/28/11
LOGGED BY:	Robin Clark	TRANSCRIBED BY:	COMPLETION: DATE:	11/28/11
DRILLED BY (Company/Driller):	DrilEx	· · · · · · · · · · · · · · · · · · ·	MON. WELL NO.:	MW-304
GRD. SURFACE ELEVATION:		ELEVATION FROM:	CHECKED BY:	

		· ·					•	
DEPTH (FEET)	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = PID [(PPM)]
	12	0845			Brown fine to medium sand little rounded gravel up to 1 in.	SW	Damp	1.1
2	24							
	15	0845 2-3 ft lab sample			0-5 in. white granular substance 5-8 in. green granular substance	FILL FILL	Damp	0.6
4	24				8-15 in. brown fine to medium sand	SP		0.6
	18	0855			0-8 in. orange/brown fine to medium sand 8-18 in. red fine sand, some platy gravel and silt	SP GM	Dry	0.9
6	24							
	18	0855			Same as above	GM	Dry	0.4
8	24							
	20	0900			Red subangular to platy gravel and fine sand	GM	Wet	0.5
10	24							
	18	0900 Lab sample			Red fine to medium sand, little subangular gravel, some silt	GM	Wet	2.0
12	24							
14								
16								
TVDE OF	DRILLING RIC	Cooprob	e 6620 DT					Tetra Tech NUS Inc

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct push		
METHOD OF SOIL SAMPLING:	Acetate liner		(
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:	Measured at 6.5 ft bgs after drilling, before well install.		
OTHER OBSERVATIONS:		BORING NO.: SB-305	PAGE: 1 OF 1

PROJECT NO.: 112G0		Beaton & 112G0359 Robin Cla DrilEx	99.03	ctory Site	TRANSCRIBED BY:	BORING NO.: START DATE: COMPLETION: MON. WELL NO CHECKED BY:	11 DATE: 11	SB-306 11/28/11 11/28/11 MW-303		
DEPTH (FEET)	SAMP REC. / SAMP LENG.	SAMPLIN TIME & SAMPLE N (QA/QC STA'	IO.	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	MATERIAL CLASSIFICATION Very dark brown silty fine sand	USCS or ROCK BRKN	REMARK (moisture cor odors; geold classification weathering;	ndition; ogical o; rock	FIELD SCREENING DATA METHOD = PID [(PPM)]
2		33.10				vary dark storm only line darie	Siw.	zump		2.1
4	48									
6	15	0950				Orange fine to medium sand, trace coarse sand	SW	Damp		0.6
	12	0950				Dark red fine to medium sand, some fine rounded gravel and coarse sand	SW	Damp		0.7
8	12	0955				Brown fine to coarse sand	SW	Damp		0.8
10	13	0955				Red fine sand and subangular to subrounded gravel up to 1 in., some silt and Coarse sand (till)	GM	Damp		3.3
12	24									
14										
16	DRILLING RI	G·	Geoprobe	6620 DT						Tetra Tech NUS, Inc.
1 51	LL 10 IVI	~· .	C Soprobe (55 <u>L</u> 0 D 1					_ '	ona room woo, me.

THE OF DIVILLING ING.	Geophobe 6020 D1	•	relia recirivos, inc.
METHOD OF ADVANCING BORING:	Direct push		
METHOD OF SOIL SAMPLING:	Acetate liner		(-83 _)
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-306	PAGE: 1 OF 1

BORING LOG FOR:	Beaton &	Corbin Fac	tory Site					BOR	ING NO.:		SB-307	
PROJECT NO.:	112G0359	99.03						STAF	RT DATE:		11/28/11	
LOGGED BY:	Robin Cla	ırk				TRANSCRIBED BY:		COM	IPLETION:	DATE:	11/28/11	
DRILLED BY (Company/Driller):	DrilEx	DrilEx						MON	I. WELL NO	D.:	MW-302	
GRD. SURFACE ELEVATION:						ELEVATION FROM:		CHE	CKED BY:			
							<u> </u>					
		DEDTU	2011							D.F.	144 DIGO	EIEL D

DEPTH (FEET)	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = PID [(PPM)]
	10	1425			0-2 in. dark brown very fine silty sand (topsoil) 2-10 in. orange/brown fine to medium sand, trace brick fragments	SM FILL	Dry	0.5
2			-					
4	48							
	11	1430			Same as above	FILL	Dry	0.4
6	24							
	12	1430			Red silt, some subangular to platy gravel up to ½ in.	GM	Dry	0.2
8	24							
	10	1440 Lab sample			Brick red subangular to subrounded gravel up to 1 in., and medium to coarse sand	GM	Wet	5.1
10	24							
	12	1440			Same as above with fine sand lens from 4-10 in.	GM	Wet	1.7
12	24							
14								
16								
TYPE OF	DRILLING RIG	Geonrol	ne 6620 DT					Tetra Tech NUS, Inc.

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct push	_	
METHOD OF SOIL SAMPLING:	Acetate liner		(
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-307	PAGE: 1 OF 1

BORING LOG FOR:	Beaton & Corbin Factory Site		BORING NO.:	SB-308
PROJECT NO.:	112G03599.03		START DATE:	11/28/11
LOGGED BY:	Robin Clark	TRANSCRIBED BY:	COMPLETION: DATE:	11/28/11
DRILLED BY (Company/Driller):	DrilEx		MON. WELL NO.:	MW-305
GRD. SURFACE ELEVATION:		ELEVATION FROM:	CHECKED BY:	
	<u>'</u>			

DEPTH (FEET)	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition odors; geological classification; rock weathering; etc.)	DATA
	8	1105			Black and brown medium sand, some silt	SM	Dry	0.8
2	24		=				_	
	6	1105			Orange/brown silty fine sand	SM	Dry	0.7
4	24					_		
	15	1110			Orange fine sand, trace rounded gravel to 1 in	SP	Damp	0.8
6	24							
	12	1110			Orange fine sand	SP	Wet	0.5
8	24							
	24	1120			Same as above with little rounded gravel up to ½ in.	SP	Wet	0.8
10	24							
	24	1120 Lab sample			Same as above	SP	Wet	0.8
12	24				End of boring			
14								
16								
	DRILLING RI	G: Geoprob	pe 6620 DT					Tetra Tech NUS, Inc.

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		retra recn NOS, inc.
METHOD OF ADVANCING BORING:	_Direct push		
METHOD OF SOIL SAMPLING:	Acetate liner		()
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-308	PAGE: 1 OF 1

APPENDIX C WELL CONSTRUCTION LOGS

OVERBURDEN MONITORING WELL CONSTRUCTION LOG		TETRA TECH
PROJECT NAME Beaton & Cordin Factory Site	PROJECTINO	112G03599.03
PROJECT LOCATION Southington, CT	WELL NO	MW 301
QJENT:	BORING NO	SB 304
CONTRACTOR DrillEX DRILLER T. LAFICCHE		BORING LOCATION
LOGGED BY: R CLARK DATE 11/29/11		
O-EOKED BY:		
		PAGE 1 OF 1
BLEVATION TOP OF PROTECTIVE		
CASING LENGTH OF PROTECTIVE CASING ABOV	Ξ	
ELEVATION TOP OF LENGTH OF RISER PIPE ABOVE GROUN	D	
SUFFACE (Pt.)		
11 11		
GROUND BLEVATION		
TYPE OF SUFFACE SEAL	-	cement
DA SUFFACE SEAL BOS (In.)		1/
DEPTH TO BOTTOM OF SUFFACE SEAL (R.)		1/2
SAND DRAIN LAYER		01-01
TYPE OF PROTECTIVE CASING		Steel
DEPTH BOTTOM OF PROTECTIVE CASING (R.)	
DEPTH BOTTOM OF DRAIN LAYER (R.)		
PISER PIPE (In.) i.D.:		OD: IN
TYPE OF RISER PIPE		_PVC
TYPE OF BACKFILL APOUND FISER PIP	_	Sand/coment
DEPTH TOP OF SEAL (R.)	=	2
		bowtonite
TYPE OF SEAL		0.2
DEPTIH BOTTOM OF SEAL (Pt.)		2
DEPTH TOP OF PERMOUS SECTION (PR)	
DAMETER OF BOTH OLE (in.)		DVC
TYPE OF PERMOUS SECTION TYPE OF OPENINGS		ID Stat
		10 010
		_ OD: _ IN .
TYPE OF FILTER PACK AROUND PERWOUS SECTION		#1 Sand
DEPTH BOTTOM OF PERMOUS SECTION (R.)		
DEPTH BOTTOM OF FILTER PACK (R.)		13
		NA
TYPE OF BACKFILL BBLOWFILTER PACK		12
BND OF BORING(R.)		
GENERAL NOTE:		
Entry of 0.00 for Ground Bevetion, Bev. Top of Riser Ripe & Bev. Top of Protective Indicates that Surveyed Ground Revetion Not.		

PFOJECT NAME Beaton & Cordin Factory Site		PROJECT NO	112G03599.03
PROJECT LOCATION: Southington, CT		WELL NO	MW 302
CUENT:		BORING NO	SB 307
CONTRACTOR	HUB T Lature		BOHNGLODATION
LOGGED BY PClark	DATE 11/2-9/11		
O-BOKED BY:	DATE		E
		_	PAGE 1 OF 1
	•		
	FLUSH MOUNT PROTECTIVE CASING		
CFOLND .			
BLEVATION	LENGIH FISER PIPE BELOWGFD. SUFF.(Ft.)		-
	TYPE OF SUFFACE SEAL		Clarent
	DIA SUFFACE SEAL BOS (In.)		
	DEPTH TO BOTTOM OF SUFFACE SEA	L (R.)	1/2
SAND DRAIN LAYER	I.D. OF PROTECTIVE CASING (In.)		4
	TYPE OF PROTECTIVE CASING		Steel
1	DEPTH BOTTOM OF PROTECTIVE ONS	NG (Ft.)	
	DEPTH BOTTOM OF DRAIN LAYER (PI	.)	
	RSER PIPE (In.) I.D.:		QD: ·
	TYPE OF RISER PIPE		PVC
	TYPE OF BYOKFILL AFOUND RISER P		5000/100000
	DEPTH TOP OF SEAL (R.)	IFE.	Sard/Cemen
	TYPE OF SEAL		beaton to
			16
	DEPTH BOTTOM OF SEAL (Pt.)		-4
	DEPTH TOP OF PERMOUS SECTION (I	R.)	
*	DAMETER OF BOREHOLE (In.) TYPE OF PERMOUS SECTION		PVC
	TMPE OF OPENINGS		10 Slot
	PERMOLE SECTION (In) I.D.:		00: 1
	TYPE OF FILTER PACK AROUND		_ OD:
	PERMOLE SECTION		# 1 Oling
	DEPTH BOTTOM OF PERMOLS SECTION (R.)		16
	DEPTH BOTTOM OF FILTER PACK (R.)	16
			1/2
	TYPE OF BACKFILL (GROUT) BELOWALTER PACK		IVA
			1.1
	END OF BORING		16
GENERAL NOTE:			

OVERBURDEN MONTORING WELL CONSTRUCTION LOG	TETRA TECH
PROJECT NAME Beaton & Cordin Factory Site	
PROJECT LOCATION Southington, CT	WELLNO MW 303
CUENT:	BORNGNO SB 306
CONTRACTOR DrillEX DALLER T. Latteche	BORING LOCATION:
LOGGED BY: R Clark DATE 1/29/11	
O-EO(ED BY:	
	PAGE 1 OF 1
BLEVATION TOP OF PROTECTIVE CASING	_
GROUND SUFFACE (Pt.)	<u></u>
BLEVATION TOP OF REER PIPE ABOVE GROUN SUFFACE (R.)	D
GROUND BLEVATION	
TYPE OF SUFFACE SEAL	cenent
DIA SUFFACE SEAL BOS (In.)	1/2
DEPTH TO BOTTOM OF SUPFACE SEAL (R.)	11
SAND DRAIN LAYER L.D. OF PROTECTIVE CASING (in.)	Stool
TYPE OF PROTECTIVE CASING	steel
DEPTH BOTTOM OF PROTECTIVE CASING (R.	
DEPTH BOTTOM OF DRAIN LAYER (R.)	' 1
RSER PIPE (In.) I.D:	OD:
TYPE OF RISER PIPE	PVC
TYPE OF BACKFILL AROUND FISSER PIP	E Sand Cener
DEPTIH TICP OF SEAL (Ft.)	2
TYPE OF SEAL	pentonite
DEPTH BOTTOM OF SEAL (Pt.)	3
DEPTH TOP OF PERMOUS SECTION (PA	4
DAMETER OF BOREHOLE (In.)	2
TYPE OF PERMOUS SECTION	PVC
TYPE OF OPENINGS	10 Slot
PERMOUS SECTION (In.)	QD:
TYPE OF FILTER PACK AROUND PERMOUS SECTION	#1 Sand
DEPTH BOTTOM OF PERMOUS SECTION (R.)	14
DEPTH BOTTOM OF FILTER PACK (R.)	14
TYPE OF BACKFILL BELOWFILTER PACK	NA
	14
BND OF BORING(Pt.)	
GENERAL NOTE:	
 Entry of 0.00 for Ground Bevetion, Bev. Top of Riser Ripe & Bev. Top of Protective Indicates that Surveyed Ground Bevetion Not 	

OVERBURDEN MONTORING WELL CONSTRUCTION LOG		TEIRA TECH
PFOJECT NAME Beaton & Cordin Factory Site	_ PROJECT NO	112G03599.03
PROJECT LOCATION Southington, CT	WELL NO	MW 304
CLIENT:	BOTING NO.	SB 305
CONTRACTOR DrillEX DALLER J. LAFTECLE	-	BORING LOCATION
LOGGED BY: RCLARK DATE 11/29/11		
O-BOXED BY:	-	
	-	PAGE 1 OF 1
ELEVATION TOP OF PROTECTIVE		
CASING LENGTH OF PROTECTIVE CASING ABO	Æ	
ELEVATION TOP CF LENGTH OF RISER PIPE ABOVE GFOU	D	
SUFFACE (R.)		
CPOUND BLEVATION		
TYPE OF SURFACE SEAL		cement
DA SUFFACE SEAL BOS (In.)		-11-0
DEPTH TO BOTTOM OF SUFFACE SEAL (R.)		42
SAND DRAIN LAYER		
TYPE OF PROTECTIVE CASING		Steel
DEPTH BOTTOM OF PROTECTIVE CASING (R	.)	
DEPTH BOTTOM OF DRAIN LAYER (R.)	,	
RSER PIPE (In.) I.D:		_ OD:
TYPE OF FISSER PIPE		PVC
TYPE OF BACKFILL AFOUND FISER PI	x=	Sand larment
DEPTH TOP OF SEAL (Pt.)	_	2
TMFE OF SEAL		bestonte
DEPTH BOTTOM OF SEAL (Ft.)		3
		<u></u>
DEPTH TOP OF PERMOUS SECTION (FI	.)	
DAVETER OF BORD-OLE (In.) TYPE OF PERMOUS SECTION		DV(_
TYPE OF OPENINGS		10 Slot
PETMOLE SECTION (In.)		QD:
TYPE OF FILTER PACK AROUND		#1 Sand
PERMOUS SECTION DEPTH BOTTOM OF PERMOUS SECTION (R.)		14
		116
DEPTH BOTTOM OF FILTER PACK (R.)		19
TYPE OF BAOKFILL BELOWFILTER PACK		NA NA
END OF BOHNQ(R.)		14
and wheth		,
GENERAL NOTE:		
 Entry of 0.00 for Ground Bevetion, Elev. Top of Fiser Ripe & Elev. Top of Protective Indicates that Surveyed Ground Elevation Not 		

COURNIE CONTROCT DATIER CONTROCT DATIER CONTROCT DATIER CONTROCT DATE CONTROCT PROJECTIVE O'RONG AROUE CONTROCT PROJECTIVE O'RONG AROUND AROU	OVERBURDEN MONTORING WELL CONSTRUCTION	N LOG		TETRA TECH
COUNTY CONTROL DATE TO THE TOTAL CONTROL OF PROJECT OF PROJECTIVE ON THE CHARACTER OF PROJECTIVE ON STRATE GRADE GROUND SERVER (R). SAD DEWN LAKER THE PROJECT ON STRATE GRADE GROUND SERVER (R). SAD DEWN LAKER THE PROJECT ON GRAVE GROUND SERVER (R). SAD DEWN LAKER THE PROJECT ON GRAVE GROUND SERVER GROUND S	PROJECT NAME Beaton & Cordin Factory S	ite	PROJECT NO	112G03599.03
CONFINCTION DETAILS CONFINCTION DOTE DOT	PROJECT LOCATION Southington, CT		WELL NO	MW 305
DORE DATE OF PROJECTIVE BEARDON TOP OF PROJECTIVE BEARDON TOP OF PROJECTIVE BEARDON TOP OF PROJECTIVE BEARDON TOP OF SHARES SEA. BEARDON TOP OF SHARE SEA. BEARDON TOP OF PROJECTIVE ORNOG (In) BEARDON TOP OF SHARE SEA. BEARD	CLIENT:		BOFING NO	SB 308
CHORD BY DRIE BEAMON TOP OF PROTECTIVE CRINICAL FOR PROTECTIVE CONSIGNATION BEAMON TOP OF PROTECTIVE CRINICAL FOR PROTECTIVE CONSIGNATION SERVICE SEA BESS (In.) DA SUFFICE SEA BESS (In.) THE OF PROTECTIVE CONSIGN. DEPTH DOTTON OF PROTECTIVE CONSIGN. DA SUFFICE SEA BESS (In.) THE OF BROWNILL PROUND RESER PRE SAMPLE QUARTER THE OF BROWNILL PROUND RESER PRE DEPTH DOT OF SEA (IN.) DAMERICAL SECTION (IN.) DA SUFFICE SEA BESS (IN.) THE OF BROWNIS SECTION (IN.) DA SUFFICE SEA BESS (IN.) THE OF BROWNIS SECTION (IN.) DA SUFFICE SEA BESS (IN.) THE OF BROWNIS SECTION (IN.) DA SUFFICE SEA BESS (IN.) THE OF BROWNIS SECTION (IN.) DEPTH BOTTON OF SEA (IN.) DA SUFFICE SEA BESS (IN.) THE OF BROWNIS SECTION (IN.) DEPTH BOTTON OF SEA (IN.) DEPTH BOTTON OF SEA (IN.) DEPTH BOTTON OF SEA (IN.) DA SUFFICE SEA BESS (IN.) DA SUFFICE SEA	CONTRACTOR DrillEx	That eche		BORING LOCATION:
CHORD BY DRIE BEAMON TOP OF PROTECTIVE CRINICAL FOR PROTECTIVE CONSIGNATION BEAMON TOP OF PROTECTIVE CRINICAL FOR PROTECTIVE CONSIGNATION SERVICE SEA BESS (In.) DA SUFFICE SEA BESS (In.) THE OF PROTECTIVE CONSIGN. DEPTH DOTTON OF PROTECTIVE CONSIGN. DA SUFFICE SEA BESS (In.) THE OF BROWNILL PROUND RESER PRE SAMPLE QUARTER THE OF BROWNILL PROUND RESER PRE DEPTH DOT OF SEA (IN.) DAMERICAL SECTION (IN.) DA SUFFICE SEA BESS (IN.) THE OF BROWNIS SECTION (IN.) DA SUFFICE SEA BESS (IN.) THE OF BROWNIS SECTION (IN.) DA SUFFICE SEA BESS (IN.) THE OF BROWNIS SECTION (IN.) DA SUFFICE SEA BESS (IN.) THE OF BROWNIS SECTION (IN.) DEPTH BOTTON OF SEA (IN.) DA SUFFICE SEA BESS (IN.) THE OF BROWNIS SECTION (IN.) DEPTH BOTTON OF SEA (IN.) DEPTH BOTTON OF SEA (IN.) DEPTH BOTTON OF SEA (IN.) DA SUFFICE SEA BESS (IN.) DA SUFFICE SEA				
BEARDON TOP OF PROTECTIVE BEARDON TOP OF PROTECTIVE BEARDON TOP OF PROTECTIVE BEARDON TOP OF BEARDON BEARDON THE OF SUPPLY SEAL DA SUPP	O-EO(ED BY:			· · · · · · · · · · · · · · · · · · ·
DENIGN TOP OF BERMINN SAND DRAIN LAMER SAND LORD BRAIN LAMER LAMER BRAIN LAMER SAND LORD BRAIN LAMER SAND LORD BRAIN LAMER SAND LORD BRAIN LAMER LAMER BRAIN LAMER SAND LORD BRAIN LAMER LAMER BRAIN LAMER SAND LAMER BRAIN LAMER LAMER BRAIN LAMER LAMER BRAIN LAMER LAMER BRAIN LAMER				PAGE 1 CF 1
BEARION ICP OF RISER RIPE FILIND ETAILON SWD DRWN LANGER DEPTH STOTION OF DRWN LANGER (R.) LD: DEPTH STOTION OF DRWN LANGER (R.) THE OF BROWNER SECTION (R.) DEPTH STOTION OF SPECIAL OR SECTION (R.) SWD DRWN LANGER SWD LANGER (R.) DEPTH STOTION OF SPECIAL (R.) THE OF BRWAD SECTION (R.) DEPTH STOTION OF SPECIAL (R.) THE OF BRWAD SECTION (R.) DEPTH STOTION OF SPECIAL SECTION (R.) THE OF BRWAD SECTION (R.) DEPTH STOTION OF SPECIAL SECTION (R.) THE OF BRUTH SECTION (R.) SWD OF STOTION OF SPECIAL SECTION (R.) SWD OF STOTION OF SPECIAL SECTION (R.) SWD OF STOTION OF SPECIAL SECTION (R.) THE OF BRUTH SECTION (R.) THE OF BRUTH SECTION (R.) THE OF SPECIAL SECTION (R.) THE	ELEVATION TOP OF PROTECTIVE			
SHADON SHADE SERVE SEAL CLARLES	CASING			
STATE (IT) THE OF SLIFACE SEAL DA SLIFACE SEAL DA SLIFACE SEAL BCS (IN) DEPH TO BOTTOM OF SLIFACE SEAL (IR) THE OF PROTECTINE OWNS (IN) THE OF PROTECTINE OWNS (IN) DEPH BOTTOM OF PROTECTINE OWNS (IR) DEPH BOTTOM OF PROTECTINE OWNS (IR) THE OF RISER PIEC (IN) THE OF PROTECTINE OWNS (IR) DEPH BOTTOM OF PROTECTINE OWNS (IR) THE OF SEAL (IR) DEPH BOTTOM OF SEAL (IR) DAMEER OF BOTH OLD (IR) DAMEER OF BOTH OLD (IR) THE OF PROMALS SECTION (IR) DEPH BOTTOM OF PRIMALS SECTION (IR) DEPH	ELEVATION TOP OF FISSER PIPE	LENGTH OF FISER PIPE ABOVE GROUND		
THE CF SLAFACE SEAL CLASSIAN DA SLAFACE SEAL BOS (IN) UP HOBOTION OF SLAFACE SEAL (IR.) ULD OF PROJECTIVE OWNOS (IN) UP HOBOTION OF SUPPLICE OWNOS (IN) UP HOBOTION OF PROJECTIVE OWNOS (IN) UP HOBOTION OF SEAL (IR.) UP HOBOTION OF PRIVALE SECTION INFE		SUHALE (H.)		
THE CF SLAFACE SEAL CLASSIAN DA SLAFACE SEAL BOS (IN) UP HOBOTION OF SLAFACE SEAL (IR.) ULD OF PROJECTIVE OWNOS (IN) UP HOBOTION OF SUPPLICE OWNOS (IN) UP HOBOTION OF PROJECTIVE OWNOS (IN) UP HOBOTION OF SEAL (IR.) UP HOBOTION OF PRIVALE SECTION INFE				
THE CF SUFFIXE SEAL CHARLES SAND DEPAN LAMER DEPH BOTTOM OF PROTECTINE O'RING DEPH BOTTOM OF SEAL (R.) DEPH BOTTOM OF PERMOLS SECTION (R.) DEPTH BO	CFOUND FIRATION			
DA SUFFICE SEAL BOS (In) UP THE OF PROTECTINE CYSING (In) UP HOTOTOM OF PROTECTIVE CYSING (In) UP HOTOTOM OF SEAL (In) UP SIDE OF PROTECTIVE CYSING (In) UP HOTOTOM OF PROTECTIVE CYSING (In) UP SIDE OF PROTECTIVE CYSING (IN)		TYPE OF SUFFACE SEAL		Chient
SAND DEPINI LAMER LD OF PROJECTIVE CASING CEPTH BOTTOM OF PROJECTIVE CASING THE OF SEAR PIFE D V C THE OF SEAR PIFE THE OF SEAR PIFE DEPTH TOP OF SEAL (R.) CEPTH BOTTOM OF SEAL (R.) THE OF PERMICUS SECTION (R.)		DIA SUFFACE SEAL BOS (in.)		11.
THE OF PROJECTIVE ORBING DEPTH BOTTOMOF PROJECTIVE CORING (R.) LEPTH BOTTOMOF PROJECTIVE CORING (R.) LEPTH BOTTOMOF PROJECTIVE CORING (R.) LEPTH BOTTOMOF PROVIDE CORING (R.) LEPTH BOTTOMOF PRINT LARER (R.) DEPTH BOTTOMOF SEAL (R.) LEPTH DOTTOMOF SEAL (R.) DEPTH BOTTOMOF SEAL (R.) LEPTH BOTTOMOF SEAL (R.) DEPTH BOTTOMOF SEAL (R.) LEPTH BOTTOMOF SEAL (R.) THE OF PRINTINGS PRINTING SECTION THE OF PRINTINGS PRINTING SECTION (R.) LEPTH BOTTOMOF PRINTING SECTION (R.) LEPTH		DEPTH TO BOTTOM OF SUFFACE SEAL (R.)		
DEPTH BOTTOMOF PROTECTIVE CYBING (R.) DEPTH BOTTOMOF DANN LAKER (R.) RESER RIFE (In.) LD: DOD: TYPE OF RISER RIFE DVC SAMAL CLIMATE TYPE OF BOARILL APCIND RISER RIFE DEPTH TOP OF SEAL (R.) DEPTH BOTTOMOF SEAL (R.) DAMEIER OF BOTH DE (In.) TYPE OF PERMOLIS SECTION TYPE OF PERMOLIS SECTION (R.) DEPTH BOTTOMOF PERMOLIS SECTION (R.) DEPTH BOTTOMOF PERMOLIS SECTION (R.) DEPTH BOTTOMOF PERMOLIS SECTION (R.) TYPE OF BOARIL BELOVIPLIER PROX BND OF BORNQ(R.) GENERAL NOTE: 1. Striv of 0000 for Grand Beeslion, Bev. Top of Protestive	SAND DRAIN LAYER	I.D. OF PROTECTIVE CASING (In.)		4
DEPTH BOTTOM OF DRAIN LAMER (R.) RESER PIFE (IN) LD: DVC TYPE OF BACKFILL AFOUND RESER PIFE DVC DEPTH BOTTOM OF SEAL (R.) DEPTH BOTTOM OF SEAL (R.) DEPTH BOTTOM OF SEAL (R.) DAMEIR OF BOTH-CLE (IN) TYPE OF PERMALS SECTION (R.) DAMEIR OF BOTH-CLE (IN) TYPE OF PERMALS SECTION (R.) DEPTH BOTTOM OF PERMALS SECTION TYPE OF PERMALS SECTION (R.) DEPTH BOTTOM OF PERMALS SECTION TYPE OF PERMALS SECTION (R.) DEPTH BOTTOM OF PERMALS SECTION		TYPE OF PROTECTIVE CASING		Stell
RESER RIFE (In) LD:		DEPTH BOTTOM OF PROTECTIVE CASING (R.)		
THE OF BACKFILL AFOLIND RISER PIPE THE OF BACKFILL AFOLIND RISER PIPE DEPTH TOP OF SEAL (R.) DEPTH TOP OF PEPHALOS SECTION (R.) DAMETER OF BOPE-OLE (IN) THE OF PEPHALOS SECTION THE OF PEPHALOS SECTION (R.) DEPTH BOTTOMOF PEPHALOS SECTION (R.) THE OF PEPHALOS SECTION (R.)		DEPTH BOTTOM OF DRAIN LAYER (FL.)		
TYPE OF BACKFILL APOUND FISHER PIPE DEPTH TOP OF SEAL (R.) TYPE OF SEAL DEPTH BOTTOMOF SEAL (R.) DAMETER OF BERTHOLE (IN.) TYPE OF PERMOLE SECTION (R.) DAMETER OF BERTHOLE (IN.) TYPE OF PERMOLE SECTION TYPE OF PERMOLE SECTION (R.) DEPTH BOTTOMOF PERMOLE SECTION (R.) TYPE OF BACKFILL BELOWFILTER PACK TYPE OF BACKFILL BELOWFILTER PACK BOD OF BORNS(R.) GENERAL NOTE: 1. ETTLY of 000 for Grand Beselton, Bev. Top of Protestive		FISER PIPE (In.) i.D.:		QD:
TYPE OF BACKFILL APOUND FISHER PIPE DEPTH TOP OF SEAL (R.) TYPE OF SEAL DEPTH BOTTOMOF SEAL (R.) DAMETER OF BERTHOLE (IN.) TYPE OF PERMOLE SECTION (R.) DAMETER OF BERTHOLE (IN.) TYPE OF PERMOLE SECTION TYPE OF PERMOLE SECTION (R.) DEPTH BOTTOMOF PERMOLE SECTION (R.) TYPE OF BACKFILL BELOWFILTER PACK TYPE OF BACKFILL BELOWFILTER PACK BOD OF BORNS(R.) GENERAL NOTE: 1. ETTLY of 000 for Grand Beselton, Bev. Top of Protestive		TYPE OF FISHER PIPE		_DVC
DEPTH TOP OF SEAL (R.) THE OF SEAL DEPTH BOTTOM OF SEAL (R.) DEPTH BOTTOM OF SEAL (R.) DEPTH TOP OF PETHALUS SECTION (R.) DAMEIRE OF BOTHELLE (IN.) THE OF OPENNOS THE OF OPENNOS THE OF OPENNOS THE OF OPENNOS DEPTH BOTTOM OF PETHALUS SECTION (R.) THE OF SEAL (R.) DEPTH BOTTOM OF PETHALUS SECTION (R.) DEPTH BOTTOM OF PETHALUS SECTION (R.) THE OF BOOGHILL BELOWIRLER PACK (R.) THE OF BOOGHILL BELOWIRLER PACK BOD OF BORNOR.) GENERAL NOTE: 1. STITY of 0.00 for Ground Beestion, Bev. Top of Protective				Shall a augan
TYPE OF SEAL DEPTH BOTTOM OF SEAL (R.) DAMETER OF BOTE-OLE (In.) TYPE OF PERMOLAS SECTION (R.) TYPE OF PERMOLAS SECTION TYPE OF PERMOLAS SECTION TYPE OF PERMOLAS SECTION TYPE OF PERMOLAS SECTION TYPE OF PERMOLAS SECTION (R.) DEPTH BOTTOM OF PERMOLAS SECTION (R.) DEPTH BOTTOM OF PERMOLAS SECTION (R.) TYPE OF BLIEF PACK APOUND PERMOLAS SECTION (R.) DEPTH BOTTOM OF PERMOLAS SECTION (R.) TYPE OF BACKAILL BELOVIPILITER PACK BND OF BOTHNICAS.) GENERAL NOTE: 1. STRY Of 0.000 for Ground Bevelion, Bev. Top of Protective				
DEPTH BOTTOM OF SEAL (R.) DAMETER OF PERMOLIS SECTION (R.) DAMETER OF PERMOLIS SECTION TYPE OF PERMOLIS SECTION TYPE OF PERMOLIS SECTION (R.) TYPE OF PERMOLIS SECTION (R.) TYPE OF PERMOLIS SECTION (R.) DEPTH BOTTOM OF PERMOLIS SECTION (R.) DEPTH BOTTOM OF PERMOLIS SECTION (R.) TYPE OF BYOGHL BELOWFILTER PXOX BND OF BOHNS(R.) GENERAL NOTE: 1. STOY of 0.000 for Ground Beveltion, Bev. Top of Protective				
DEPTH TOP OF PERMOLE SECTION (R.) DAMETER OF BOTH-DE (In.) THE OF PERMOLE SECTION THE OF PERMOLE SECTION (R.) DEPTH BOTTOM OF PERMOLE SECTION (R.) THE OF BOTH BOTTOM OF PERMOLE SECT		IVHE OF SEAL		_
DAMERIER OF BOTH-DLE (In.) TYPE OF PEHMOLS SECTION TYPE OF PEHMOLS SECTION TYPE OF PEHMOLS SECTION (In.) TYPE OF PEHMOLS		DEPTH BOTTOM OF SEAL (Rt.)		
TYPE OF PERMOLIS SECTION TYPE OF PERMOLIS S		DEPTH TOP OF PERMOUS SECTION (Rt.)		<u> </u>
TYPE OF CPENNOS PERMOLIS SECTION (In.) TYPE OF FILTER PACK APOUND HEMICUS SECTION DEPTH BOTTOM OF PERMOLIS SECTION (R.) TYPE OF BACKFILL BELOWFILTER PACK END OF BORNQIR.) GENERAL NOTE: 1. Ettry of 0.000 for Ground Beveition, Bev. Top of Fiser Pipe & Bev. Top of Protective				DV
PERMOLIS SECTION (In.) I.D: OD: TYPE OF FILTER PACK AFOUND HETMOLIS SECTION DEPTH BOTTOM OF FILTER PACK (R.) TYPE OF BACKFILL BELOWFILTER PACK BND OF BORNQ(R.) GENERAL NOTE: 1. Ettry of 0.000 for Ground Beveition, Bev. Top of Fiser Pipe & Bev. Top of Protective		11···		ID Clot
TYPE OF FILTER PACK AROUND HERMOUS SECTION (R.) DEPTH BOTTOM OF FILTER PACK (R.) TYPE OF BACKFILL BELOWRITER PACK BND OF BORNG(R.) GENERAL NOTE: 1. Britry of 0.00 for Ground Bevetion, Bev. Top of Protective				10 2101
FERMOLIS SECTION DEPTH BOTTOM OF PERMOLIS SECTION (R.) TYPE OF BACKFILL BELOWFILTER PACK BND OF BORING(R.) GENERAL NOTE: 1. Entry of 0.00 for Ground Bevetion, Bev. Top of Protective		PHMOUS SECIION (In.)		_ OD:
GENERAL NOTE: 1. Britry of 0.00 for Ground Bevetion, Bev. Top of Reer Ripe & Bev. Top of Protective				# Sand
TYPE OF BACKFILL BBLOWFILTER PACK BND OF BORNO(R.) GENERAL NOTE: 1. Britry of 0.00 for Ground Bevetion, Bev. Top of Riser Ripe & Bev. Top of Protective		DEPTH BOTTOM OF PERMOUS SECTION (R.)		14
TYPE OF BACKFILL BBLOWFILTER PACK BND OF BORNO(R.) GENERAL NOTE: 1. Britry of 0.00 for Ground Bevetion, Bev. Top of Riser Ripe & Bev. Top of Protective				14
BND OF BORNO(R.) GENERAL NOTE: 1. Britry of 0.00 for Ground Bevetion, Bev. Top of Riser Ripe & Bev. Top of Protective		LETIN BOTONO PILIEN PACK (H.)		$-\frac{1}{\Lambda / \Delta}$
GENERAL NOTE: 1. Entry of 0.00 for Ground Bevetion, Bev. Top of Fiser Ripe & Bev. Top of Protective		TYPE OF BACKFILL BELOWFILTER PACK		- IV/T
GENERAL NOTE: 1. Entry of 0.00 for Ground Bevetion, Bev. Top of Fiser Ripe & Bev. Top of Protective		BND OF BORING(R.)		14
1. Entry of 0.00 for Ground Bevation, Bev. Top of Fiser Pipe & Bev. Top of Protective				
1. Entry of 0.00 for Ground Bevation, Bev. Top of Fiser Pipe & Bev. Top of Protective				
1. Entry of 0.00 for Ground Bevation, Bev. Top of Fiser Pipe & Bev. Top of Protective				
1. Entry of 0.00 for Ground Bevetion, Bev. Top of Fiser Pipe & Bev. Top of Protective	GENERAL NOTE:			
	Entry of 0.00 for Ground Bevation, Bev. Top of Fiser Pipe & Be Indicates that Surveyed Ground Bevation Not	av. Top of Protective		

FLUSH MOUNT MONTORING WELL CONSTRUCTION LOG **TETRA TECH** Beaton & Cordin Factory Site PROJECT NAME 112G03599.03 PPOJECT NO Southington, CT MW 200A WELL NO PROJECT LODATION CTIENI: **BORNG NO.** affection BORING LOCATION CONTRACTOR LOGGED BY: DATE CHECKED BY: DATE PAŒ 1 OF FLUSH MOUNT PROTECTIVE CASING GROUND BLEVATION LENGTH FISSER PIPE BELOWGED, SUFF.(Ft.) Chilat TYPE OF SUFFACE SEAL DIA SUFFACE SEAL BOS (In.) DEPTH TO BOTTOM OF SUFFACE SEAL (R.) I.D. OF PROTECTIVE CASING (In.) SAND CRAIN LAYER TYPE OF PROTECTIVE CASING DEPTH BOTTOM OF PROTECTIVE CASING (R.) DEPTH BOTTOM OF DRAIN LAYER (R.) FISER PIPE (In.) I.D: QD: **PVC** TYPE OF RISER PIPE TYPE OF BACKFILL APOUND FISSER PIPE DEPTH TOP OF SEAL (R.) TYPE OF SEAL DEPTH BOTTOM OF SEAL (R.) DEPTH TOP OF PERMOUS SECTION (R.) DAMETER OF BOREHOLE (In.) TYPE OF PETMOUS SECTION TYPE OF OPENINGS PERMOUS SECTION (In.) I.D: QD: TYPE OF FILTER PACK AROUND PETMOUS SECTION DEPTH BOTTOM OF PERMOLS SECTION (R.) DEPTH BOTTOM OF FILTER PACK (FL.) TYPE OF BACKFILL (CPOUT) BELOWFILTER PACK END OF BORING GENERAL NOTE: 1. Entry of 0.00 for Ground Bevetion Indicates that Surveyed Ground Bevetion is NOT Aailable.

APPENDIX D WELL DEVELOPMENT LOGS

Tt.	Tetra Tech NUS, Inc.
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Page __lof ___

Time Cumulative Water Volume (Gal.) Water Level Readings (Ft. below TOC) Turbidity Remarks (odor, color, etc.) 301	Well: M Site: Date Instal Date Deve Dev. Methor Pump Type	led:	Depth to Bottom (ft.): 4,6 Static Water Level Before (ft.): Static Water Level After (ft.): Screen Length (ft.): 4,6 Specific Capacity: Casing ID (in.): 21	ウルン Drilling Co.: DrillEx -	Factory Site, Southington, CT	
1312 - 555 OVERSCULE reddid hrr. Sitty 1318 2 5.80 1323 3 5.93 1330 4 6.00 43.73 Slowed pump - partial of substitute 1341 41/2 5.48 30.2 Double	Time			Turbidity		
	130 1312 1318 1323 1330 1341	pumpon- 2 3 4 41/2	SIHG SOF 555 580 593 6.00 5.48			WHOTE

Page ___ of ___

Well: 25 Site: Date Installed: 1/A Date Developed: 1/-30-11 Dev. Method: suc++ron Pump Type: 200 pt 1	Depth to Bottom (ft.): 35,75 Static Water Level Before (ft.): 6,76 Static Water Level After (ft.): Project Name: Beaton & Corbin Factory Site, Southington, CT Screen Length (ft.): Project Number: 112G03599.03 Specific Capacity: 76 Casing ID (in.): 77 Second Length (ft.): 77 Project Number: 112G03599.03	20
---	--	----

Time	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Turbidity	Remarks (odor, color, etc.)
1436		DUMP ON		
1443	74	6.15	Very silty sordiffic	ult to oums
1432	1/2	6.16	very siltyy	
1458	2	6.16	clearing up but Dump	ines decris
15/3	<u> </u>	6,16	Sitty widebis	3
1525	-1	6,16	194	
1530	43/4	6.16	10:71	
1531	374	Stopped pur	se reduced rate	43/499/
1536	574	6:13	5146	
		ξ.		

Tetra Tech NUS	S, Inc.
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Page ____ of _____

Site: Date Insta Date Deve	alled: (29 eloped: 36 od: 5007000	Depth to Bottom (ft.):	Drilling Co.:DrillEx Project Name: Beaton & Corbin F	· · · · · · · · · · · · · · · · · · ·
Time	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Turbidity	Remarks (odor, color, etc.)
0800 0808 0815 0825 828 834	Pump on Bran 2 3 Stopped 5 41/2 43/4	Very 5, Hy 5,91 5,90 vrge - gedu 5,89 5,86	SIMU afterpurge - cl. cel rate 143 20.1	earing up 4 gallons

Page ____ of _____

Well: MW 30 Site: Date Installed: 129 Date Developed: 136 Pump Type: Pow	Depth to Bottom (ft.): 47 Static Water Level Before (ft.): Static Water Level After (ft.): Screen Length (ft.): 10 Specific Capacity: Casing ID (in.):	Responsible Personnel: Drilling Co.: DrillEx Project Name: Beaton & Corbin Project Number: 112G03599.03		
Time Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Turbidity	Remarks (odor, color, etc.)	
0918 pump 0 0927 pump 0 0927 pump 0 0939 31/2 0940 pump 0 0940 pump pump 0 0945 pump pump 0 0959 pump pump 1 0959 pump pump 1 0959 pump pump 1 0959 pump pump 1 0959 pump pump pump 1 0959 pump pump pump pump 1 0959 pump pump pump pump 1 0959 pump pump pump pump pump 1 0959 pump pump pump pump pump pump 1 0959 pump pump pump pump pump pump pump pum	Very thic 852- 8,56 mp 144 of 7,95 W pump rate 8,47 7,85 7,85 7,85	2 + SIHU Brick red DVEN SCULE STILL SIHU, WARD DOTE DOTTOM + reduced Pla 189 164 132 81.7 36.0	Clear Color Vary Sc De redd(Sh br Dir construe Si pump intake at water is orange bottom light orange Slowed pump de Clear Lower porch	colored



Tetra Tech NUS, Inc

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Page	_ of	

Date Developed: 1/- 36-// Screen Length (ft.): Project Number: 112G03599.03	
Dev. Method: Sucitive Specific Capacity:	20

Time	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Turbidity	Remarks (odor, color, etc.)
0917	pump On	Very silty	A	
0923	,5	5,3	Silty after pure	
0931	2	5	Silty Cleaning UP	
0939	2.5	4,98	934	Cleaning up quickly
0946	2 3/4	4,98	247	
0948	Stapped	purap requie	drate	3991
0953	3,5	4.15	54,3	
09	7	4,95	25./	
		322		
		,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
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Page_	1	of	 ĺ

Site:	Depth to Bottom (ft.): 16,35 Static Water Level Before (ft.): 4,7	Responsible Personnel: KTUWLL Drilling Co.: DrillEx	
Date Installed: 11-29-11	Static Water Level After (ft.):	Project Name:Beaton & Corbin Factory Site, Southington, CT	-
Date Developed: //- 30 //		Project Number: 112G03599.03	_
Dev. Method: SUCHION	Specific Capacity:		_
Pump Type:DPr	Casing ID (in.):		

Time	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Turbidity	Remarks (odor, color, etc.)
1306			Very STITY	
1315	35	4,93	Very Silty	
1324	্ব	9.43	sitty Cleaning up	
1334	3	9,87	Silty	
1339	3/2	4.85	313	
1345	374	4.84	9.79	
1355	5	1 4 / 83	716	
1405	(o	9,83	18.5	
1410	644	Stupped pri	cre reduced parte	
1414	6/2	4.7/	4,34	
<u> </u>			,	
	0 000 000 000 000			
	V V V 10101			
		2-3-117- HAND	Ton Sec.	8

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Page ____ of ____

Site:	Static Water Level Before (ft.): 9,34 Static Water Level After (ft.): Screen Length (ft.): _/	Responsible Personnel: Troleself Drilling Co.: DrillEx Project Name: Beaton & Corbin Factory Site, Southington, CT Project Number: 112G03599.03	
Pump Type: Peri	_ Specific Capacity:		63

Time	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Turbidity	Remarks (odor, color, etc.)
1037	DUMP ON	1/8	CV SITY	
1645		9,27	Silty cleaning up?	
1051	13/4	9,25	5,741	
1050	2 14	9,35.	241	
1100	23/4	5 topped pur	ge reduced rate	
1105	3	4,2	203	
7111	374	9.3	170	
1113	374	9,19	190	
1119	TIRM	used rute		3/4/00/
1124	4 ,	9,2	67,8	.)
1105	yec.	reuseil rute		7991
1/30	7 /2	4.19	1/3	
1140	5	7,14	41,4	
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Tt.	Tetra Tech NUS, Inc.
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Site:	oped: 11/20/11 od: 25 SUCTION	Depth to Bottom (ft.):			- - -
Time	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Turbidity	Remarks (odor, color, etc.)	
1044 1037 1110 1015 1130 1135	pump on Va 2 3 4 41/2 43/4 5	8.12 8.11 8.08 8.08 8.08 8.08 7.98 7.98	BKRED IDYN COLOV Very SITY SITY OVERSCULE 11 257 97.6 CLEAN 41.5	Soffatten hard bottom Water 15 redd Sitta moved pump intal seduced flow, &	sh bro el At Opp bottom

APPENDIX E GROUNDWATER SAMPLING LOGS

TETRA TECH NUS, INC.						MONITORING WELL PURGE DATA SHEET – "LOW STRESS" GROUNDWATER				
Site Name: Beaton & Corbin Factory Site, Southington, CT Sample ID: MW- 96							NUS Char	ge No. 1120	03599.03 VS/)	Page 1 of 1
Sample Method: Low Stress (flow) with Peristaltic Pump Depth Sampled: 2' 0 hot flogs Screen Int. Depth VnVn ft bgs Sample Date & Time: 2 / 0 1 /2011 / D hours Sampler(s): Data Recorded By: Signature: Signature: Well Diameter/Total Depth / (ft below TOR); Stickup Flv5h Visual Evidence of Sheen (Yes/No); Olfactory Evidence of Odor (Yes/No); Weather:;				Initial WL Analyte VOC EPH RCRA 8 To	5.0 (ft BT	•	ve Containe	Field Instrument Group A/B/C/D		
Clock Time 24hr	Water Depth (ft below TOR)	Purge Rate ml/min	Temp °C	S. Cond. 2 mS/cm	DO mg/L	pH (S.U.)	ORP mV	Turbidity (NTU)	Cum. Volume Purged Gals.	Comments
0953 1001 1012 1020 1027 1032 1037	5.26 5.28 5.38 5.30 5.30 5.30	175 150 150 150 150 150	12.65 12.60 12.56 12.70 12.72 12.73	5.01 305 297 297 294 294 293	1.06 0.45 0.44 0.43 0.35	6.30 6.23 6.19 6.20 6.22	88.0 95.6 90.4 87.3 78.3 83.1	57.1 21.7 14.60 10.50 9.82 9.79	1/4 3/4 11/4 1/2 13/4 2	

TtNUS Form 0009 (modified)

Saturated Screen Volume (gallons)______. 2in Screen Volume = 0.163 gal/ft or 616 ml per foot. BZ=Breathing Zone, W=Well, PW=Purge Water

Siemens per cm (same as umhos/cm) at 25 $^{\rm o}$ C. Oxidation reduction potential (stand in for Eh).

TETRA TECH NUS, INC.						MONITORING WELL PURGE DATA SHEET – "LOW STRESS" GROUNDWATER				
Site Name: Beaton & Corbin Factory Site, Southington, CT Sample ID: MW- 25							Tetra Tech NUS Charge No. 112G03599.03 Page 1 of 1 QC: (If applicable)			
Sample Method: Low Stress (flow) with Peristaltic Pump Depth Sampled: 2' of bit bits Screen Int. Depth Up ft bgs Sample Date & Time: 12/ (/2011 /220 hours Sampler(s): Data Recorded By: 2					6.13ft BT	·	İ	Field Instrument Group A/B/C/D er requirements Collected als Yes No		
Clock Time 24hr	Water Depth (ft below TOR)	Purge Rate ml/min	Temp °C	S. Cond. 2	DO mg/L	pH (S.U.)	ORP mV	Turbidity (NTU)	Cum. Volume Purged Gals.	Comments
1158 1206 1211 1246 1220	Plpp 6,17 6,17 6,17 6,17	250 250 250 250 250	12.33 12.79 12.77 12.84 12.91	505 509 510 511 511	4.01 3.73 3.86 3.81	6.69	123.7 121.7 123.3 124.4	1.58 1.17 2.0.59 0.65 0.45	1/2 3/4 1'14 2 2/14	
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TtNUS Form 0009 (modified)

Saturated Screen Volume (gallons)_____. 2in Screen Volume = 0.163 gal/ft or 616 ml per foot. BZ=Breathing Zone, W=Well, PW=Purge Water

Siemens per cm (same as umhos/cm) at 25 $^{\rm o}$ C. Oxidation reduction potential (stand in for Eh).

TETRA TECH NUS, INC.					MONITORING WELL PURGE DATA SHEET – "LOW STRESS" GROUNDWATER					
I Sample II): MM// "I//// ##						Tetra Tech	n NUS Char	ge No. <u>1120</u>	303599.03	Page 1 of 1
Sample Method: Low Stress (flow) with Peristaltic Pump Depth Sampled: 2 1 1 12011 OS45 hours Sample Date & Time: 12 1 1 12011 OS45 hours Sampler(s): Data Recorded By: Kould Falled Signature: Ke will Tribe!! Well Diameter/Total Depth 1 1 14 (ft below TOR); Stickup RD bo; Visual Evidence of Sheen (Yes/No) ; Olfactory Evidence of Odor (Yes/No) ; Weather: Sunny 305 F					≤ <u> 7</u> g ft BT	•	ve Containe	Field Instrument Group A/B/C/D er requirements Collected als Yes No When Ither Yes/No Ves/No		
Clock Time 24hr	Water Depth (ft below TOR)	Purge Rate ml/min	Temp °C	S. Cond. 2	DO mg/L	pH (S.U.)	ORP mV	Turbidity (NTU)	Cum. Volume Purged Gals.	Comments
0813 0919 0424 0431 0337 0342	5,28 5,30 5,40 5,80 5,80	150 150 150	9,92	376 379 343 343 382	6,02 5,93 5,71 5,31 5,32	\$,25 6,28 6,27 6,27 6,27	175.1 151.0 136.2 136.6 134.4	14.1 3.64 3.33 0.93 0.55	74 7/4 1 1/4 1/2	-pump sn
			!							

TtNUS Form 0009 (modified)

Saturated Screen Volume (gallons)_____. 2in Screen Volume = 0.163 gal/ft or 616 ml per foot. BZ=Breathing Zone, W=Well, PW=Purge Water

Siemens per cm (same as umhos/cm) at 25 °C. Oxidation reduction potential (stand in for Eh).

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Tt.	ETRA TEC	CH NUS, IN	IC.			MONITORING WELL PURGE DATA SHEET — "LOW STRESS" GROUNDWATER					
Site Name: Sample ID:	Beaton & Co MW- 331	orbin Factory	Site, Southing	uton, CT		Tetra Tech NUS Charge No. 112G03599.03 Page 1 of 1 QC:(If applicable)					
Depth Sam Sample Da Sampler(s) Data Recor Well Diame Visual Evid Olfactory E	pled: <u>Go'fn</u> te & Time: <u>In</u> : rded By: <u>In</u> eter/Total Dep ence of Shee vidence of Oc	w Stress (flow) with Peristaltic Pump of from two fit bgs Screen Int. Depth 3-13 ft bg e: 12 / /2011 2/5 hours Wendal Tidyel Signature: Level Technology Depth 1 (5 (ft below TOR); Stickup heen (Yes/No) of Odor (Yes/No)			Tederell.	VOC 4°C, HCL 2x 40 ml vials Yes EPH #44 4°C 2 amber Liter Yes				Collected Yes / No Yes / No	
Clock Time 24hr	Water Depth (ft below TOR)	Purge Rate ml/min	Temp °C	S. Cond. 2 mS/cm	DO mg/L	pH (S.U.)	ORP mV	Turbidity (NTU)	Cum. Volume Purged Gals.	Com	ments
1/34	7.73	WA-								pauso	on
1140	14 79 79	1325	1460	409	0,59	6,66	-a/5,19	33.2	3/4		
1145	7,93	300	14,65	409	0,53	le 106	-65,7	18,4	244		
1156	7,92	300	11.79	407	0,40	6,66	-76.4	165	LYa		
1155	7.43	300	11,40	409	0,46	6,65	-76,9	7,29	2		
1200	7.42	300	11.79	404	0,43	6,65	-172.5	4,97	24		
1210	7,43	300	11,59	409	0.40	4.65	-60.6	3,06	2/2		
12/5	7,43	300	12,06	408	0,26	6.05	640	2,26	2		
	61.4	700	74706		0,10		20110	9100			
						ļ					
						,					

Saturated Screen Volume (gallons)______. 2in Screen Volume = 0.163 gal/ft or 616 ml per foot. BZ=Breathing Zone, W=Well, PW=Purge Water

Siemens per cm (same as umhos/cm) at 25 $^{\circ}$ C. Oxidation reduction potential (stand in for Eh).

Tt	ETRA TEC	CH NUS, IN	IC.							E DATA SHEE	ET –
Site Name: Sample ID:	Beaton & Co	rbin Factory	Site, Southing	gton, CT		Tetra Tech NUS Charge No. 112G03599.03 Page 1 of 1 QC: (If applicable)					
Depth Sam Sample Da Sampler(s)	te & Time: <u>/</u> :	<u>2+4c</u> ft bgs 2 / <u>/</u> /201	Screen Int. 1 <u>/0 3/</u> ho	Depth 0	•	Initial WL 466 ft BTOR;				Group A/B/C/D	
	rded By: <u>火戸</u> eter/Total Dep			re: <u>Zoudul, Z</u> elow TOR); Sticl	robbilly.	Analyte		Preservati			Collected
	ence of Shee		(if pe	now TOH); Stici	kup <u><i>k@(1</i>00 x;</u> :	. VOC		4°C, HCL	4 x 40 ml vi		Yes / No
	vidence of O				;	EPH RCRA 8 To	tal Matala	ACC 4°C		of Liter	Yes / No
Weather: _	Sunny	305°F	-			HCHA 8 10	tai ivietais ,	Halo, 4°C	SOU M	1 Delle	Yes / No
Clock Time 24hr	Water Depth (ft below TOR)	Purge Rate ml/min	Temp °C	S. Cond. 2 mS/cm	DO mg/L	pH (S.U.)	ORP mV	Turbidity (NTU)	Cum. Volume Purged Gals.	Com	ments
0940	4,66	NA -								PUMPON	
0945	4,97	275	10:63	367	3,42	6,83	70.6		У2		
0950	4,97	275	10,76	367	3.06	0,95		6.52	144		
0455	4,197	275	10,33	365	3,07	6,94	43,6	5,44	1 43		
01800	4,97	275	10,77	362	2,93	6,93	34,2	7.22	13/4		
1005	4.47	375	10.83	366 355	3,42	6,40	37,2 37,2	4.91	2 Y4		- E
1615	4,97	275	10,45	354	3,40		4,0	60153	23/4		
1020	4,97	275	10,91	350	2,41	6,38	a4.5		374		
1028	4,97	275	10,48	351	2.76	6,53		2,54	3/2		
1031	4,27	275	16,90	350	9,72	6153	14.5	1154	3 /2		
						,					

Saturated Screen Volume (gallons)_____. 2in Screen Volume = 0.163 gal/ft or 616 ml per foot. BZ=Breathing Zone, W=Well, PW=Purge Water

Siemens per cm (same as umhos/cm) at 25 $^{\rm o}$ C. Oxidation reduction potential (stand in for Eh).

											
Tt 1	ETRA TEC	CH NUS, IN	IC.			MONITORING WELL PURGE DATA SHEET – "LOW STRESS" GROUNDWATER					
Site Name: Sample ID:	Beaton & Co MW- ろひろ	orbin Factory	Site, Southing	aton, CT		Tetra Tech NUS Charge No. 112G03599.03 Page 1 of 1 QC:(If applicable)					
Sample Method: Low Stress (flow) with Peristaltic Pump Depth Sampled: 2 noth post by Screen Int. Depth 4-14 ft by: Sample Date & Time: 12 / 1 /2011 i.6 or hours Sampler(s): Data Recorded By: Kendal Tidurel Signature: Yesulal Travel Mall Bismath Told Tidurel Signature: Yesulal Travel					PID BZ=0,0 / W=0,1 / PW=0,0 PPM. Field Instrument Group A/B/C/I				Group A/B/C/D		
Well Diame	eter/Total Dep	oth 11	14 (ft be	low TOR); Stic	<i>Fedwers</i> .	Analyte				r requirements	Collected
Visual Evid	ence of Shee	n (Yes/No)	(1, 50		, ,	VOC EPH		4°C, HCL	44 40 ml via		Yes/ No
		dor (Yes/No)			;	RCRA 8 To	tal Metals	HN024°C	500 ml	L Adly	Yes/ No Yes No
weather: _	Sunny	7031									
Clock Time 24hr	Water Depth (ft below TOR)	Purge Rate ml/min	Temp °C	S. Cond. 2 mS/cm	DO mg/L	pH (S.U.)	ORP mV	Turbidity (NTU)	Cum. Volume Purged Gals.	Cor	nments
1524	9.75	NA -	42					10		PUMP OU	2
1535	4.81	250	12,01	115	3,33	5.11	-175,7	19,2	1/4		
1545	9.81	250	12,13	1/9	9,76	5,04	-145, 8 -159,0	2,75 3,86	42		<u></u>
1550	4.81	250	12.13	121	2.67		-1848	2,25	174		
1555	9,81	250	12,13	122	2,60			0,84	13/4		
1600	9,81	250	12,16	122	2,50	4,88	172.2	0,44	2		4.
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						<u></u> .					
-											
						,					

Saturated Screen Volume (gallons)_____. 2in Screen Volume = 0.163 gal/ft or 616 ml per foot. BZ=Breathing Zone, W=Well, PW=Purge Water

Siemens per cm (same as umhos/cm) at 25 $^{\circ}$ C. Oxidation reduction potential (stand in for Eh).

TETRA TECH NUS, INC.	MONITORING WELL PURGE DATA SHEET "LOW STRESS" GROUNDWATER				
Site Name: Beaton & Corbin Factory Site, Southington, CT Sample ID: MW- 304	Tetra Tech NUS Charge No. 112G03599.03 Page 1 of 1 QC:(If applicable)				
Sample Method: Low Stress (flow) with Peristaltic Pump Depth Sampled: 2'1 How Mark bgs Screen Int. Depth 4 14 ft bgs Sample Date & Time: 2 / 1 /2011 Hours Sampler(s): Data Recorded By: Signature: Signature: Well Diameter/Total Depth 1 in 1444 (ft below TOR); Stickup ; Visual Evidence of Sheen (Yes/No) ; Olfactory Evidence of Odor (Yes/No) ; Weather: Sumu 50°	PID BZ=D,D /W=DD /PWD,D PPM. Field Instrument Group A/B/C/D Initial WL 9.18 ft BTOR; Analyte Preservative Container requirements Collected VOC 4°C, HCL 42×40 ml vials Yes/No EPH HC14°C D / LHCr Amber Yes/No RCRA 8 Total Metals HND 4°C / 500 ml po/y Yes/No				
Clock Time Water Depth (ft below TOR) Purge Rate Temp S. Cond. 2 DO mg/L TOR) S. Cond. 2 mg/L	pH ORP Turbidity Cum. (S.U.) mV (NTU) Volume Purged Comments Gals.				
1340 pump on 1346 19.28 250 14.20 503 5.10 1350 9.23 250 14.17 495 4.52 1355 9.23 250 14.15 494 4.25 1405 9.23 250 14.08 493 4.39 1405 9.23 250 14.06 492 4.48 1410 9.23 250 14.04 492 4.48	6.65 149.2 13.8 1/4 6.58 149.0 7.59 1/2 6.54 148.6 2.15 3/4 6.48 151.4 0.36 1 6.37 156.3 0.31 1/2 6.33 158.3 0.18 \$2.				

Saturated Screen Volume (gallons)_____. 2in Screen Volume = 0.163 gal/ft or 616 ml per foot. BZ=Breathing Zone, W=Well, PW=Purge Water

Siemens per cm (same as umhos/cm) at 25 °C. Oxidation reduction potential (stand in for Eh).

		·				1					
Tt 1	TETRA TEC	CH NUS, IN	C.			MONITORING WELL PURGE DATA SHEET – "LOW STRESS" GROUNDWATER					
Site Name: Sample ID:	Beaton & Co	orbin Factory S	Site, Southing	aton, CT		Tetra Tech NUS Charge No. 112G03599.03 Page 1 of 1 QC:(If applicable)					
Depth Sam Sample Da Sampler(s) Data Recor Well Diame Visual Evid Olfactory E	te & Time: <u> / </u>	<u>n bot</u> ff bgs 2////2011 <u>Ndul (Tide</u> oth _/_/ n (Yes/No) _ dor (Yes/No)_	Screen Int. 1 1450 ho	Depth 4-14	Tickuell		7,9 4 _{ft BT}	OR;	ive Containe Lyx 40 ml via	Field Instrument Governments Sals Ser Life L poly	Collected Yes / No Yes / No
Clock Time 24hr	Water Depth (ft below TOR)	Purge Rate ml/min	Temp °C	S. Cond. 2 mS/cm	DO mg/L	pH (S.U.)	ORP mV	Turbidity (NTU)	Cum. Volume Purged Gals.	Comm	nents
1908	7,94	NA								pump o	ひわ
14/6	7,49	250	12,13	359	210	6.34	-109,0	54,8	74		
1421	7.99	250	12.21	358	2,80	6,32	7097	33,4	144		
1426	7,49	250	12.25	358	1,83	6.30	-116,2	20,6	1/2		
143/	7,49	250	12.24	359	1,76	6.32	702.1	10,63	13/4	-	
1436	7,98	350	12.30	354	1,65		-121.3	5,85	214		
1441	7.98	250	12.35	358	1,62		136,2		2 1/2	V.,	
1444	7,48	250	12,39	358	1162		-136,0		2 3/4	3	
1450	7,98	250	12,33	357	1163		-124.00		2.7/4		
, , , , ,	117.0	٠, , ٠	/	- 7	1.0	<i>V</i> , 100	14,00	11.			
		_			1						

Saturated Screen Volume (gallons)_____. 2in Screen Volume = 0.163 gal/ft or 616 ml per foot. BZ=Breathing Zone, W=Well, PW=Purge Water

Siemens per cm (same as umhos/cm) at 25 $^{\circ}$ C. Oxidation reduction potential (stand in for Eh).

APPENDIX F RECOMMENDATION DETAILED COST ESTIMATE

APPENDIX F - PHASE II DETAILED COST ORDER-OF-MAGNITUDE COST ESTIMATE PHASE III INVESTIGATION FINAL ENVIRONMENTAL SITE ASSESSMENT FORMER BEATON AND CORBIN FACTORY SITE SOUTHINGTON, CONNECTICUT PAGE 1 OF 3

Project Planning								
DIRECT COST	Quantity	Unit	Unit Cost	Total Cost				
Work Plan	1	each	\$5,000.00	\$5,000				
Health and Safety Plan	1	each	\$2,000.00	\$2,000				
Specifications, Procurement, Purchase Requisitions	1	each	\$2,000.00	\$2,000				
Total Project Planning				\$9,000				

Rental Equipment								
DIRECT COST	Quantity	Unit	Unit Cost	Total Cost				
Photoionization Detector	1	week	\$350.00	\$350				
Horiba Water Quality Instument	1	week	\$300.00	\$300				
Oil-water Interface Probe	1	week	\$75.00	\$75				
Scale Balance	1	week	\$60.00	\$60				
Peristaltic Pump	1	week	\$60.00	\$60				
4 12 volt power packs	1	week	\$100.00	\$100				
GPS Survey Unit	1	week	\$800.00	\$800				
Level	1	week	\$75.00	\$75				
Total Rental Equipment for the Duration of the Project				\$1,820				

APPENDIX F - PHASE II DETAILED COST ORDER-OF-MAGNITUDE COST ESTIMATE PHASE III INVESTIGATION FINAL ENVIRONMENTAL SITE ASSESSMENT FORMER BEATON AND CORBIN FACTORY SITE SOUTHINGTON, CONNECTICUT PAGE 2 OF 3

Drilling and Monitoring Well Installation								
DIRECT COST	Quantity	Unit	Unit Cost	Total Cost				
Drill Rig and Crew	72	foot	\$30.00	\$2,160				
Mob/demob	1	LS	\$800.00	\$800				
Soil Sampling	36	each	\$10.00	\$360				
Monitoring Well installation	24	foot	\$30.00	\$720				
Protective Casings	2	each	\$150.00	\$300				
Decontamination Station Setup/Breakdown	1	ls	\$500.00	\$500				
IDW Containerization	4	each	\$65.00	\$260				
	١		·	\$5,100				

Soil and Groundwater Sample Collection A	Soil and Groundwater Sample Collection Analysis and Data Validation								
DIRECT COST	Quantity	Unit	Unit Cost	Total Cost					
Labor									
2 environmental sampler, 5 days, 10 hrs/day, & prep. & mob/demob	100	hours	\$46.25	\$4,625					
Laboratory Services									
SVOCs in groundwater (8 samples & 2 QCs)	10	each	\$360.00	\$3,600					
Metals in groundwater (8 samples & 2 QCs)	10	each	\$95.00	\$950					
VOCs in groundwater (10 samples & 2 QCs)	12	each	\$300.00	\$3,600					
VOCs in soil (14 samples & 2 QCs)	16	each	\$185.00	\$2,960					
Metals in soil (6 samples & 2 QCs)	8	each	\$95.00	\$760					
SPLP/metals (6 samples & 2 QCs)	8	each	\$855.19	\$6,842					
Sample shipping	10	each	\$75.00	\$750					
Data Validation									
Data evaluation and Validation	120	Hours	\$85.00	\$10,200					
Travel and Per Diem									
Vehicle & gas	8	days	\$100.00	\$800					
2 personnel, 4 days	8	days	\$151.00	\$1,208					
Total Confirmation Sampling and Reporting				\$36,295					

APPENDIX F - PHASE II DETAILED COST ORDER-OF-MAGNITUDE COST ESTIMATE PHASE III INVESTIGATION FINAL ENVIRONMENTAL SITE ASSESSMENT FORMER BEATON AND CORBIN FACTORY SITE SOUTHINGTON, CONNECTICUT PAGE 3 OF 3

Phase III Report							
DIRECT COST	Quantity	Unit	Unit Cost	Total Cost			
Labor							
Project Manager/LEP	100	hours	\$100.00	\$10,000			
Project Engineer	200	hours	\$85.00	\$17,000			
Environmental Scientist	150	hours	\$75.00	\$11,250			
Environmental Scientist	125	hours	\$55.00	\$6,875			
Clerical	20	hours	\$45.00	\$900			
Production Costs							
Copying	4500	page	\$0.08	\$360			
Total Engineered Control				\$46,385			

TOTAL PHASE III INVSTIGATION COSTS

\$98,600

APPENDIX F - SOIL REMOVAL AND DISPOSAL ORDER-OF-MAGNITUDE COST ESTIMATE PHASE III INVESTIGATION FINAL ENVIRONMENTAL SITE ASSESSMENT FORMER BEATON AND CORBIN FACTORY SITE SOUTHINGTON, CONNECTICUT PAGE 1 OF 1

EXCAVATION AND DISPOSAL								
DIRECT COST	Quantity	Unit	Unit Cost	Total Cost				
Mobilization	1	LS	\$15,000.00	\$20,000				
Excavation	15	day	\$8,500.00	\$127,500				
Waste Characterization	2	each	\$1,000.00	\$2,000				
Confirmation samples	20	each	\$150.00	\$3,000				
Offsite Disposal (RCRA Subtitle C)	1000	ton	\$250.00	\$250,000				
Offsite Disposal (RCRA Subtitle D)	1000	ton	\$70.00	\$70,000				
Imported clean backfill	1200	ton	\$25.00	\$30,000				
Backfilling and compaction	5	day	\$8,500.00	\$42,500				
Site restoration	2	day	\$3,500.00	\$7,000				
	١			\$552,000				

TOTAL SOIL REMOVAL AND DISPOSAL (SUBTITLE C)
TOTAL SOIL REMOVAL AND DISPOSAL (SUBTITLE D)

\$482,000 \$302,000 APPENDIX F - DEBRIS REMOVAL AND DISPOSAL ORDER-OF-MAGNITUDE COST ESTIMATE PHASE III INVESTIGATION FINAL ENVIRONMENTAL SITE ASSESSMENT FORMER BEATON AND CORBIN FACTORY SITE SOUTHINGTON, CONNECTICUT PAGE 1 OF 1

DEBRIS REMOVAL AND BUILDING DEMOLITION							
DIRECT COST	Quantity	Unit	Unit Cost	Total Cost			
Mobilization	1	LS	\$10,000.00	\$10,000			
Debris Loading	10	day	\$3,500.00	\$35,000			
Asbestos/Lead Paint Survey	1	LS	\$7,500.00	\$7,500			
Offsite Disposal (Construction Debris)	3000	ton	\$30.00	\$90,000			
Offsite Disposal (ACM/Lead Paint containing)	3000	ton	\$70.00	\$210,000			
Demolition of outbuildings	2	day	\$3,500.00	\$7,000			
				\$359,500			

TOTAL DEBRIS REMOVAL AND DISPOSAL (Construction Debris))
TOTAL DEBRIS REMOVAL AND DISPOSAL (ACM/Lead Paint Containing)

\$149,500 \$269,500 APPENDIX F - OFFSITE MONITORING ORDER-OF-MAGNITUDE COST ESTIMATE PHASE III INVESTIGATION FINAL ENVIRONMENTAL SITE ASSESSMENT FORMER BEATON AND CORBIN FACTORY SITE SOUTHINGTON, CONNECTICUT PAGE 1 OF 2

Rental Equipment						
DIRECT COST	Quantity	Unit	Unit Cost	Total Cost		
Photoionization Detector	0.5	week	\$350.00	\$175		
Horiba Water Quality Instument	0.5	week	\$300.00	\$150		
Oil-water Interface Probe	0.5	week	\$75.00	\$38		
Scale Balance	0.5	week	\$60.00	\$30		
Peristaltic Pump	0.5	week	\$60.00	\$30		
4 12 volt power packs	0.5	week	\$100.00	\$50		
GPS Survey Unit	0.5	week	\$800.00	\$400		
Level	0.5	week	\$75.00	\$38		
Total Rental Equipment for the Duration of the Project				\$910		

Drilling and Monitoring Well Installation						
DIRECT COST	Quantity	Unit	Unit Cost	Total Cost		
Drill Rig and Crew	24	foot	\$30.00	\$720		
Mob/demob	1	LS	\$800.00	\$800		
Soil Sampling	12	each	\$10.00	\$120		
Monitoring Well installation	24	foot	\$30.00	\$720		
Protective Casings	3	each	\$150.00	\$450		
Decontamination Station Setup/Breakdown	1	ls	\$500.00	\$500		
IDW Containerization	2	each	\$65.00	\$130		
				\$3,440		

APPENDIX F - OFFSITE MONITORING ORDER-OF-MAGNITUDE COST ESTIMATE PHASE III INVESTIGATION FINAL ENVIRONMENTAL SITE ASSESSMENT FORMER BEATON AND CORBIN FACTORY SITE SOUTHINGTON, CONNECTICUT PAGE 2 OF 2

Soil and Groundwater Sample Collection Analysis and Data Validation							
DIRECT COST	Quantity	Unit	Unit Cost	Total Cost			
Labor							
2 environmental sampler, 2 days, 10 hrs/day, & prep. & mob/demob	40	hours	\$46.25	\$1,850			
Laboratory Services							
Metals in groundwater (3 samples & 2 QCs)	5	each	\$95.00	\$475			
VOCs in groundwater (3 samples & 2 QCs)	5	each	\$300.00	\$1,500			
Sample shipping	1	each	\$75.00	\$75			
Data Validation							
Data evaluation and Validation	40	Hours	\$85.00	\$3,400			
Travel and Per Diem							
Vehicle & gas	2	days	\$100.00	\$200			
2 personnel, 4 days	2	days	\$151.00	\$302			
Total Confirmation Sampling and Reporting		•		\$7,802			

TOTAL OFFSITE MONITORING COSTS

\$12,152

APPENDIX G ENVIRONMENTAL PROFESSIONAL QUALIFICATIONS

BRANDON E. SMITH, P.E.

ENVIRONMENTAL ENGINEER / PROJECT MANAGER WILMINGTON, MASSACHUSETTS

EDUCATION: B.S.: Environmental Engineering: Tufts University: February 2000

Graduate Studies; Geotechnical Engineering; Tufts University; 2000-2001

CERTIFICATIONS/

REGISTRATIONS: Professional Engineer, Commonwealth of Massachusetts; License 47384

Professional Engineer, State of Maine; License 11792

TRAINING: OSHA 1910.120 40-Hour HAZWOPER Training; January, 2000

OSHA 1910.120 8-Hour HAZWOPER Supervisor Training, March 2005 OSHA 1910.120 8-Hour HAZWOPER Refresher Training; Annually

OSHA 10-Hour Construction Safety Training, August 2009 OSHA 30-Hour Construction Safety Training, July 2010

Tetra Tech Level 1 Project Management Training; October 2007 Training Course for the NITON XRF Spectrum Analyzer; March 2003 EPA Region 1, Advanced FORMS II Lite Training Course; 2003

First Aid & CPR Training Course; November 2007

DOT 49 CFR 172.704 Hazardous Materials Shipping Training; Jan, 2008

Training Course for Innov-X Systems XFR Analyzer; April 2008

EXPERIENCE SUMMARY:

Mr. Smith has over 11 years of professional experience in the environmental engineering field. During that time he has performed a variety of roles in support of environmental projects under the US Environmental Protection Agency (EPA), US Navy CLEAN, Air Force Reserve Command (AFRC) and Air Force Center for Engineering and the Environment (AFCEE) contracts and for private clients. These roles include preparation of Phase II Remedial Investigations, Phase III Remedial Action Plans, Phase IV Remedial Implementation Plans, Feasibility Studies (FS), and CIS Specifications, Site Assessment Reports for Brownfields targeted sites, Sampling and Analysis Plans for site investigations, and RCRA Closures.

Mr. Smith has also accumulated a wide range of field experience as a resident engineer and field operations leader (FOL) including construction and remediation oversight; surveying; RCRA building inspection; drilling, field screening and soil, sediment, surface water, soil gas, and groundwater sampling.

As a project manager, Mr. Smith is responsible for managing all aspects of environmental projects: developing work plans, budgets, and schedules; directing field investigations; preparing technical evaluations and documents; preparing design drawings and specifications; managing contracts and supporting community relations activities. Mr. Smith has managed environmental project ranging in size up to \$170,000.

PROJECT EXPERIENCE:

Project Manager; US EPA Region 1; Former Beaton and Corbin Site; \$100,000; Southington, Connecticut; June 2011 to present.

Managing site assessment at the Former Beaton and Corbin Site, a former plumbing fixture manufacturer, including evaluation of data to determine appropriateness and scope of future remedial activities to support reuse of the site.

Project Manager; AFCEE; Site SS-20 – Westover Air Reserve Base; \$48,000; Chicopee, Massachusetts; August 2010 to present.

Managing groundwater monitoring at Site SS-20 (Former Service Station, Former Building 1601) at Westover ARB in Chicopee, MA, including evaluation of data to determine appropriateness and scope of future remedial activities and AFCEE public meeting support.

Project Manager; AFCEE; Landfill A; Westover Air Reserve Base; \$73,000; Chicopee, Massachusetts; September 2008 to August 2010.

Managed remedial work at Landfill A (Site LF-02) at Westover ARB in Chicopee, MA including Title II services providing field oversight for the construction of a landfill cap. A remedial action was conducted at LF-02 for a landfill cap under a separate contract. Title II services were required in order to provide appropriate field oversight for the subject project. These services consisted of supervision and inspection of the project (being completed under another contract) and included consultation during remediation, review and comment on submittals as requested, ensuring compliance with project planning documents, and performing oversight of the landfill cap construction at LF-02.

Project Manager; AFCEE; Sites FT-08 and SS-20 – Westover Air Reserve Base; \$88,000; Chicopee, Massachusetts; September 2008 to December 2009.

Managed soil and groundwater monitoring work at Sites FT-08 (Current Fire Training Area) and SS-20 (Former Service Station, Former Building 1601) at Westover ARB in Chicopee, MA including evaluation of data to determine appropriateness and scope of future remedial activities. Additionally, SS-20 required an update based on new data to its Risk Assessment to determine to what degree an Activity Use Limitation may be required.

Environmental Engineer; U.S. Navy/CLEAN; Naval Air Station Brunswick; Brunswick, ME; May 2008 to Present. Support U.S. Navy BRAC office Base closure through a variety of tasks: Tasks include file searches, site reconnaissance/building inspection, development of sampling plans, implementation of sampling plans, oversight of subcontractors, interfacing with Navy and regulatory representatives, and preparation of summary reports, including MEDEP RCRA closure reports for approximately 230 buildings and land areas encompassing approximately 2,800 acres.

Environmental Engineer; U.S. Navy/CLEAN; Site 17; Naval Air Station Brunswick; Brunswick, ME; March 2009 to September 2010. Wrote the Statement of Work and Work Plan for a remedial action at Site 17 at Naval Air Station Brunswick, located in Brunswick, ME. The Remedial Action includes excavation and offsite disposal of pesticide and herbicide contaminated soil at Site 17, which formerly housed pest control operations that included storage, mixing, and disposal of pesticides and herbicides.

Project Manager/Environmental Engineer; U.S. Navy/CLEAN; Groundwater Treatment System, Tank Farm 5; \$170,000; Naval Station Newport; Middletown, RI; August 2007 to August 2009.

Managed the deconstruction of a 50-gallon per minute (gpm) groundwater treatment system consisting of a building housing the organics and metals treatment process units, two lines of extraction wells, extraction well collection piping, and an effluent discharge line. Prepared the Basis of Design Report and Statement of Work (SOW) summarizing the recommended approach to conduct the dismantling and disposal/recycling of the groundwater treatment system and building located at Tank Farm 5 at Naval Station Newport.

Resident Engineer/Environmental Engineer; U.S. Navy/CLEAN; Old Fire Fighter Training Area (OFFTA); Naval Station Newport; Newport, RI; December 2007 to Present.

Observed and coordinated all onsite daily activities associated with Remedial Action at the Old Fire Fighter Training Area at NAVSTA Newport. The remedial action consisted of excavation and off-site disposal of petroleum-contaminated soil, and removal of foundations and pipelines associated with former operations at OFFTA and site restoration. Prepared the Remedial Action Close-Out Report. Provided engineering support for the design and construction of an offshore revetment along Narragansett Bay.

Environmental Engineer; U.S. Navy/CLEAN; Site 03; Naval Weapons Industrial Reserve Plant (NWIRP); Bedford, MA; March 2007 to July 2007.

Amended and updated the Feasibility Study (FS) for Site 03 at the Naval Weapons Industrial Reserve Plant, located in Bedford, MA. The Feasibility Study included screening technologies, developing remedial alternatives and performing detailed analysis of alternatives as specified in the National Contingency Plan (NCP).

Environmental Engineer; U.S. Navy/CLEAN; Tank Farms 4 & 5; Naval Station Newport; Middletown, RI; March 2007.

Prepared a technical memorandum summarizing the recommended approach to conduct the additional phases of remediation work at Tank Farms 4 and 5 located within Naval Station Newport (NAVSTA), located in Middletown (Tank Farm 5) and Portsmouth (Tank Farm 4), Rhode Island.

Environmental Engineer; U.S. Navy/CLEAN; Site 08 – Naval Underwater Systems Center (NUSC) Disposal Area; Naval Undersea Warfare Center; Newport, RI; March 2007.

Prepared cost estimates for remedial investigation activities at the Naval Undersea Systems Center (NUSC) disposal area at the Naval Undersea Warfare Center in Newport, RI.

Environmental Engineer/Resident Engineer; U.S. Navy/Clean; Melville Water Tower; Naval Station Newport; Portsmouth, RI; February 2007 to September 2008.

Calculated volume of lead-contaminated soil to be excavated and disposed of offsite following demolition of U.S. Navy water tower. Prepared cost estimates for excavation and disposal activities at the site. Observed and coordinated all onsite daily activities associated with Remedial Action. The remedial action consisted of excavation and off-site disposal of lead-

contaminated soil and site restoration. The remedial action was conducted under a short schedule so as not to disrupt activities at the adjacent Melville Elementary School. Prepared the Remedial Action Close-Out Report.

Resident Engineer/Environmental Engineer; US EPA; New Hampshire Plating Superfund Site; Merrimack, NH; September 2004 to July 2007. Assisted in preparation of remedial action specifications. Prepared Site Management Plan and Construction Quality Assurance Plan for the remedial action and evaluated remedial contractor bid packages. Observed and coordinated all onsite daily activities and procedures and conducted site inspections of the site preparation and well decommissioning activities associated with Phase I of the Remedial Action on behalf of EPA. Observed and coordinated all onsite daily activities associated with Phase II of the Remedial Action. The objective of the RA is to protect human health and the environment through on-site source control of metal-contaminated soils. Phase I, performed during winter conditions (December 2004 through March 2005), consisted of site preparation (land clearing and fencing relocation) and demolition of a solidified materials storage cell. The cell demolition required excavation of 9,700 cubic yards of soil cover and breaking up and crushing of the 6,300 cubic yards concrete-like monolith created by soil-cement solidification treatment during a previous removal action. Phase II encompassed the excavation of metal-contaminated soils present in four lagoons, adjacent wetlands, and the footprint of the former process building and treatment by a chemical fixation treatment system. Approximately 95,000 tons of metalcontaminated soil was treated. The treatment goal is to prevent further leaching of metal contaminants the underlying aquifer. The treated soil was consolidated into the former lagoons; the backfilled and covered areas were graded so that the flood storage capacity is maintained across the site.

Environmental Engineer/SSO; US EPA; Stevens Linen Bleachery Site; Dudley, MA; Brownfields Targeted Site Assessment; April 2005.

Oversaw HSA and drive-and-wash drilling and conducted groundwater sampling activities at this former industrial Site. Developed and sampled monitoring wells using U.S. EPA Region I Low-Stress Sampling method.

Environmental Engineer/FOL; AFCEE; Construction Rubble Site; Westover Air Reserve Base; Chicopee, MA; August 2004 to September 2004.

Supervised all remedial actions at the Construction Rubble Site at Westover ARB in Chicopee, MA, which consisted of the excavation and removal of surficial construction debris, offsite disposal/recycling of construction debris material, and site restoration.

Environmental Engineer/FOL; US EPA; 28 River Street Site; Windsor, VT; Brownfields Targeted Site Assessment; July 2004 to September 2004.

Supervised all field activities and conducted groundwater sampling activities at this former industrial Site. Developed and sampled monitoring wells using U.S. EPA Region I Low-Stress Sampling method.

Environmental Engineer; AFCEE; Zone 1; Westover Air Reserve Base; Chicopee, Massachusetts; January 2004 to September 2004.

Performed engineering calculations and wrote technical specifications for the design, construction, operation, and maintenance of a soil and groundwater remediation system. Soil remediation will be accomplished through the implementation of a combined soil-vapor extraction/bioventing system to remediate soil contaminated with volatile petroleum hydrocarbons. Groundwater remediation will be accomplished through the strategic application of an oxygen releasing compound to the delineated groundwater contaminant plume.

Environmental Engineer/FOL; US EPA; Gilbert & Bennett Lagoon Site; Redding, CT; Non-Targeted Brownfields Site Assessment; December 2003 to September 2004.

Wrote Sampling and Analysis Plan and Health & Safety Plan for this former lagoon waste site. Supervised and conducted all field activities at this Site. Advanced soil borings and installed monitoring wells using a HSA drill rig. Developed and sampled monitoring wells using U.S. EPA Region I Low-Stress Sampling method. Wrote Non-Targeted Brownfields Site Assessment.

Environmental Engineer/SSO; US EPA; Seltsam Property; Foxborough, MA; Brownfields Targeted Site Assessment; December 2003 to September 2004; December 2005.

Conducted all field activities at this former junkyard. Advanced soil borings and installed monitoring wells using a Geoprobe drill rig and collected surficial soil samples. Developed and sampled monitoring wells using U.S. EPA Region I Low-Stress Sampling method. Wrote Brownfields Targeted Site Assessment after additional characterization was performed in 2005.

Environmental Engineer/Field Engineer; Clark Oil; Remedial Investigation and Site Characterization; Vertex Engineering; Weymouth, MA; October to December 2003.

Assisted Vertex Engineering in the preparation of over 160 Phase II Environmental Site Assessments for gasoline stations located throughout Michigan, Wisconsin, Illinois, Indiana, and Ohio as part of their due-diligence project. Performed soil and groundwater sampling at several locations throughout Wisconsin, Illinois, Indiana, and Ohio.

Environmental Engineer/FOL; AFRC; Construction Rubble Site; Westover Air Reserve Base; Chicopee, MA; October 2003.

Supervised and conducted all field activities associated with the site investigation at the Construction Rubble Site at Westover ARB, Chicopee, MA.

Environmental Engineer/FOL; AFRC; Hangar Apron Area (SS-16); Westover Air Reserve Base; Chicopee, MA; September 2003 to January 2004.

Wrote drilling specifications for the Hangar Apron Area (SS-16) for a pre-design LNAPL investigation. Supervised and conducted all field activities associated with the LNAPL study at the Hangar Apron Area (SS-16). Wrote Pre-Remedial Investigation Report for SS-16.

Environmental Engineer; FORMS II Lite Standard Operating Procedure (SOP); August 2003

Wrote Standard Operating Procedure for the use of the Field Operations Records Management System II Lite (FORMS II Lite) software to prepare chain-of-custody/traffic reports (COCs/TRs)

and other field documentation. The SOP was be used by TtNUS Wilmington office for all sample collection activities performed on behalf of EPA Region I.

Environmental Engineer/FOL; AFRC; Former Building 1601 (SS-20); Westover Air Reserve Base; Chicopee, MA; June 2003 to September 2004.

Supervised and conducted all field activities associated with the quarterly groundwater monitoring of the bioremediation pilot test at Former Building 1601 (SS-20) at Westover ARB in Chicopee, MA.

Environmental Engineer/FOL; AFRC; Basewide; Westover Air Reserve Base; Chicopee, MA; May 2003 to September 2004.

Supervised and conducted all field activities associated with monitoring well modifications at various areas of the Base.

Field Engineer; U.S. Navy/CLEAN; Site 34 – Former Oil Gasification Plant - Remedial Investigation and Site Characterization; Portsmouth Naval Shipyard; Kittery, Maine; May 2003.

Performed groundwater sampling of monitoring wells at the Portsmouth Naval Shipyard as part of the remedial investigation at Site 34. The Site 34 investigation was performed to collect data to support a non-time-critical removal action for the ash pile at Site 34 and to support the site screening evaluation under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) for Site 34.

Field Engineer; U.S. Navy/CLEAN; Site 32 – Topeka Pier Site - Remedial Investigation and Site Characterization; Portsmouth Naval Shipyard; Kittery, Maine; May 2003.

Performed groundwater sampling of monitoring wells at the Portsmouth Naval Shipyard as part of the remedial investigation at Site 32.

Field Engineer; US EPA; Eastern Surplus Company Superfund Site; Meddebemps, ME; April 2003 and April 2005.

Collected groundwater samples using EPA Region 1 Low-Stress Sampling method as part of a semi-annual groundwater monitoring at Eastern Surplus Company Superfund Site in Meddybemps, ME.

Environmental Engineer/FOL; US EPA; Diamond Match Mill; Peru, ME; Brownfields Targeted Site Assessment; March 2003 to October 2003.

Supervised and conducted all field activities at this former mill property. Advanced soil borings and installed monitoring wells using a Geoprobe drill rig and collected surficial soil samples. Developed and sampled monitoring wells using U.S. EPA Region I Low-Stress Sampling method. Oversaw asbestos and hazardous materials survey. Wrote Final Site Assessment Report summarizing analytical data and providing remedial alternatives and order-of-magnitude cost estimates for redevelopment of the property.

Field Engineer/SSO; U.S. Navy/CLEAN; Building 44 Remedial Investigation; Naval Station Newport; Building 44; Newport, Rhode Island; March 2003.

Collected groundwater samples as part of the semi-annual groundwater monitoring at Building 44 on Gould Island in Narragansett Bay, RI.

Environmental Engineer; U.S. Navy/CLEAN; Melville North Landfill Groundwater Investigation; Naval Station Newport; Newport, Rhode Island; March 2003.

Prepared Work Plan for groundwater investigation at the Former Melville North Landfill at Naval Station Newport.

Field Engineer; US EPA; Raymark Superfund Site; Stratford, CT; January 2003.

Collected groundwater samples using U.S. EPA Region I Low-Stress Sampling method as part of EPA's investigation of the OU2 and OU6 areas of the Raymark Superfund Site in Stratford, CT.

Environmental Engineer; U.S. Navy/CLEAN; Former Building 70 Site Investigation; Naval Station Newport; Middletown, RI; December 2002.

Wrote the Site Investigation report for the Former Building 70 Site at Naval Station Newport per Rhode Island Department of Environmental Management (RIDEM) specifications.

Environmental Engineer/FOL; AFRC; Aqua Systems Site (SS-19); Westover Air Reserve Base; Chicopee, MA; November 2002.

Supervised and conducted all field activities associated with the SVE pilot study at the Aqua Systems Site (SS-19) at Westover ARB in Chicopee, MA to support the design of an SVE/bioventing system.

Environmental Engineer/FOL; AFRC; Installation Wide Groundwater Monitoring Program; Westover Air Reserve Base; Chicopee, MA; November 2002 to September 2004.

Supervised and conducted all field activities associated with the semi-annual Installation Wide Groundwater Monitoring Program at Westover ARB in Chicopee, MA.

Environmental Engineer/SSO; US EPA; Essex Shipbuilding Museum; Essex, MA; Brownfields Targeted Site Assessment; October 2002 to September 2004.

Wrote Background Summary report and Sampling and Analysis Plan. Conducted all field activities at this Site. Advanced soil borings using a Geoprobe drill rig. Wrote Final Site Assessment Report summarizing analytical data and providing remedial alternatives and order-of-magnitude cost estimates for redevelopment of the property.

Environmental Engineer/FOL; US EPA; Ambargis Mill Site; Newport, NH; Brownfields Targeted Site Assessment; April 2002 to August 2002, April 2003 to July 2003.

Supervised and conducted all field activities at this former mill property. Advanced soil borings and installed monitoring wells using a hollow-stem auger drill rig and collected surficial soil samples. Developed and sampled monitoring wells using U.S. EPA Region I Low-Stress Sampling method. Wrote Final Site Assessment Report summarizing analytical data and providing remedial alternatives and order-of-magnitude cost estimates for redevelopment of the property.

Environmental Engineer/FOL; US EPA; Greene Tannery Site; Milton Mills, NH; Brownfields Targeted Site Assessment; August 2003

Supervised and conducted all field activities at this tannery property. Advanced soil borings and installed monitoring wells using a jackhammer Geoprobe drill rig. Developed and sampled monitoring wells using U.S. EPA Region I Low-Stress Sampling method.

Environmental Engineer/FOL; US EPA; W.S. Libbey Mill Site; Lewiston, ME; Brownfields Targeted Site Assessment; March 2002 to June 2002

Supervised and conducted all field activities at this former mill property. Advanced soil borings and installed monitoring wells using a Geoprobe drill rig and collecting building material samples. Developed and sampled monitoring wells using U.S. EPA Region I Low-Stress Sampling method. Wrote Final Site Assessment Report summarizing analytical data and providing remedial alternatives and order-of-magnitude cost estimates for redevelopment of the property.

Environmental Engineer/FOL; US EPA; Coes Knife Company Site; Worcester, MA; Brownfields Targeted Site Assessment; March 2002.

Supervised and conducted all field activities at this former manufacturing property on the Coes Reservoir. Advanced soil borings and installed monitoring wells using a Geoprobe drill rig. Developed and sampled monitoring wells using U.S. EPA Region I Low-Stress Sampling method.

Field Engineer; US EPA; Raymark Superfund Site; Stratford, CT; February and May 2002. Collected groundwater profiling samples using a Geoprobe drill rig and U.S. EPA Region I Low-Stress Sampling method as part of EPA's investigation of the OU2 area of the Raymark Superfund Site in Stratford, CT.

Environmental Engineer/FOL; US EPA; Franklin Sewer Beds Site; Franklin, MA; Brownfields Targeted Site Assessment; November 2001 to May 2002, June 2003 to September 2004.

Wrote Background Summary report and Sampling and Analysis Plan for this Brownfield Targeted Site. Supervised and conducted all field activities at this Site. Advanced soil borings and installed monitoring wells using a HSA drill rig. Developed and sampled monitoring wells using U.S. EPA Region I Low-Stress Sampling method.

Environmental Engineer/FOL; US EPA; 10 Reserve Road Site; Hartford, CT; Brownfields Targeted Site Assessment; November 2001 to August 2002

Wrote Background Summary report and Sampling and Analysis Plan for this Brownfield Targeted Site. Supervised and conducted all field activities at this Site. Advanced soil borings and installed monitoring wells using a HSA drill rig. Developed and sampled monitoring wells using U.S. EPA Region I Low-Stress Sampling method. Wrote Final Site Assessment Report summarizing analytical data and providing remedial alternatives and order-of-magnitude cost estimates for redevelopment of the property.

Environmental Engineer/FOL; US EPA; Former Portland Chemical Works Site; Middletown, CT; Brownfields Targeted Site Assessment; October 2001 to November 2002 Wrote Background Summary report and Sampling and Analysis Plan for this Brownfield Targeted Site. Supervised and conducted all field activities at this former chemical shipping facility. Advanced soil borings and installed monitoring wells using a hollow-stem auger drill rig and collected surface water, sediment and surficial soil samples. Developed and sampled monitoring wells using U.S. EPA Region I Low-Stress Sampling method. Wrote Final Site Assessment Report summarizing analytical data and providing remedial alternatives and order-of-magnitude cost estimates for redevelopment of the property.

Environmental Engineer/FOL; US EPA; Rau Fasteners Site; Providence, RI; Brownfields Targeted Site Assessment; October 2001 to May 2003

Wrote Background Summary report and Sampling and Analysis Plan for this former manufacturing facility. Supervised and conducted all field activities at this former industrial facility and adjacent lots. Advanced soil borings and installed monitoring wells using a hollow-stem auger drill rig. Developed and sampled monitoring wells using U.S. EPA Region I Low-Stress Sampling method. Wrote Final Site Assessment Report summarizing analytical data and providing remedial alternatives and order-of-magnitude cost estimates for redevelopment of the property.

Environmental Engineer; US EPA; Ayers Island Site; Orono, ME; Brownfields Targeted Site Assessment; September 2001 to October 2001.

Wrote Final Site Assessment Report summarizing analytical data at this former mill property and providing remedial alternatives and order-of-magnitude cost estimates for redevelopment of the property.

Environmental Engineer/SSO; US EPA; Sunshine Island/Fields Point Dump Site; Providence, RI; Brownfields Targeted Site Assessment; August 2001 to December 2001. Conducted soil gas survey at this former municipal landfill property on the banks of the Providence River. Wrote Final Site Assessment Report summarizing analytical data and providing remedial alternatives and order-of-magnitude cost estimates for redevelopment of the property. Wrote Draft Remedial Action Work Plan for redevelopment of the property.

Environmental Engineer; AFRC; Current Fire Training Area (FT-08); Westover Air Reserve Base; Chicopee, MA; July 2001 to November 2001. Wrote Remedy Implementation Plan (RIP) for Current Fire Fighting Training Area (FT-08) at Westover ARB in Chicopee, MA, summarizing analytical data collected during TtNUS investigations and providing remedial alternatives and order-of-magnitude cost estimates for remediation of the property.

Environmental Engineer; AFRC; Hangar Apron Area (SS-16); Westover Air Reserve Base; Chicopee, MA; July 2001 to November 2001. Wrote Remedial Action Plan (RAP) for the Hangar Apron Area (SS-16) at Westover ARB in Chicopee, MA providing remedial alternatives and order-of-magnitude cost estimates for remediation of the property.

Environmental Engineer; AFRC; Landfill A (LF-02); Westover Air Reserve Base; Chicopee, MA; July 2001 to November 2001. Wrote Remedial Investigation (RI) report for Landfill A (LF-02) at Westover ARB in Chicopee, MA, summarizing analytical data collected during TtNUS investigation of the closed sanitary landfill.

CHRONOLOGICAL WORK HISTORY:

Environmental Engineer/Project Manager; Tetra Tech NUS, Inc.; Wilmington, Massachusetts; February 2002 to Present.

Environmental Engineer; Onsite Environmental Staffing; Braintree, Massachusetts; July 2001 to February 2002. Performed a variety of roles in support of environmental projects under the RAC1 and AFRC contracts as a contractor to Tetra Tech NUS.

Engineer II; GZA GeoEnvironmental, Inc.; Norwood, Massachusetts; May 2000 to May 2001. Performed a variety of tasks including soil management and removal, construction supervision, soil sampling, surveying, installation of soil vapor extraction/air sparge system, laboratory data analysis, and project bid estimations as part of the Remedial Construction group.

PROFESSIONAL AFFILIATIONS:

Associate Member, American Society of Civil Engineers
Associate Member, Boston Society of Civil Engineers
Associate Member, International Society of Soil Mechanics and Geotechnical Engineering
Associate Member, Engineers for a Sustainable Society
Member, Society of American Military Engineers

PUBLICATIONS/PRESENTATIONS:

Smith, B.E. "Overcoming Obstacles During Construction of a Hazardous Waste Site Remedy", presented at 2008 US EPA/USACE Conference on Design and Construction Issues at Hazardous Waste Sites, Philadelphia, PA, April, 2008.