BAFO Cost Quote Price Schedule 2 EAF Contractor - Loaded hourly Rate Pricing

A bidder must fit its existing personnel and that of proposed subcontractors into the following Labor Titles.

Line #	Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hourly Rate Year 2	Hourly Rate Year 3
Office and Management Staff					
16	Principal	Program Manager	$176.13	$181.41	$186.85
17	Program Director	Program Manager	$176.13	$181.41	$186.85
18	Task Manager	Scientist IV	$150.96	$155.49	$160.15
Project Field Staff					
19	Field Manager	Engineer IV	$136.45	$140.54	$144.76
20	Field Professional	Scientist III	$121.54	$125.19	$128.95
21	Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54	$184.93	$190.48
22	Principal/Senior Biologist	Scientist IV	$150.96	$155.49	$160.15
23	Principal/Senior Historic Preservation Specialist	Scientist III	$121.54	$125.19	$128.95
24	Senior Hydrogeologist	Scientist IV	$150.96	$155.49	$160.15
25	Junior Hydrogeologist	Scientist II	$95.62	$98.49	$101.44
26	Field Associate	Analyst/Planner II	$83.89	$86.41	$89.00
27	Field Observer	Scientist I	$73.64	$75.85	$78.13
28	Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20	$122.78	$126.46
29	Hydrogeologist	Scientist I	$73.64	$75.85	$78.13
30	Senior Technician	Technician II	$68.72	$70.78	$72.90
31	Junior Technician	Technician I	$59.04	$60.81	$62.63
32	Senior GIS Specialist	Computer Graphics Tech III	$117.16	$120.67	$124.29
33	Junior GIS Specialist	Computer Graphics Tech II	$76.87	$79.18	$81.56
34	Administrative Support/Data Entry	Administrative Assistant II	$63.18	$65.08	$67.03

Round 2 BAFO Cost Quote Price Schedule 2 EAF Contractor - Firm Fixed Pricing

Pricing for services required under this RFQ will be a blend of firm fixed rates and the hourly rates. Bidders must complete all price cells within the Price Schedule or be deemed non-responsive.

Line No.	Description	Unit	Estimated Quantity (A)	Year 1 (B)	Year 1 Total (A) * (B)	Year 2 (C)	Year 2 Total (A) * (C)	Year 3 (D)	Year 3 Total (A) * (D)
1	Base Price per application for Exempt (Volume 1 to 100) Section 3.2.2	Each	100	$666.29	$66,629.44	N/A	N/A	N/A	N/A
2	Base Price per application for Exempt (Volume 101 to 200) Section 3.2.2	Each	100	$666.29	$66,629.44	N/A	N/A	N/A	N/A
3	Base Price per application for Exempt (Volume > 200) Section 3.2.2	Each	100	$666.29	$66,629.44	$685.80	$68,579.94	$705.89	$70,588.94
4	Base Price per application (Fixed Fee) for Categorically Excluded Subject to 58.5 (Volume 1 to 100) Section 3.2.4	Each	100	$1,650.44	$165,044.17	$1,698.15	$169,815.17	$1,747.27	$174,727.17
5	Base Price per application (Fixed Fee) for Categorically Excluded Subject to 58.5 (Volume 101 to 200) Section 3.2.4	Each	100	$1,438.38	$143,837.59	$1,479.92	$147,991.59	$1,522.69	$152,268.59
6	Base Price per application (Fixed Fee) for Categorically Excluded Subject to 58.5 (Volume GT 200) Section 3.2.4	Each	100	$1,226.31	$122,631.01	$1,261.68	$126,168.01	$1,298.10	$129,810.01

Round 2 BAFO Cost Quote Price Schedule 2 EAF Contractor - Firm Fixed Pricing

Pricing for services required under this RFQ will be a blend of firm fixed rates and the hourly rates. Bidders must complete all price cells within the Price Schedule or be deemed non-responsive.

Line No.	Description	Unit	Estimated Quantity (A)	Year 1 (B)	Year 1 Total (A) * (B)	Year 2 (C)	Year 2 Total (A) * (C)	Year 3 (D)	Year 3 Total (A) * (D)
7	Base Price per application (Fixed Fee) for non-tiered Environmental Assessments (Volume 1 to 100) Section 3.2.2	Each	100	$11,007.61	$1,100,761.02	$11,323.49	$1,132,349.02	$11,648.89	$1,164,889.02
8	Base Price per application (Fixed Fee) for non-tiered Environmental Assessments (Volume 101 to 200) Section 3.2.2	Each	100	$10,008.75	$1,000,874.71	$10,295.43	$1,029,542.71	$10,590.75	$1,059,074.71
9	Base Price per application (Fixed Fee) for non-tiered Environmental Assessments (Volume GT 200) Section 3.2.2	Each	100	$9,311.08	$931,108.40	$9,577.60	$957,760.40	$9,852.20	$985,220.40
10	Base Price per application Tier 2 Site Specific Reviews (Volume 1 - 100) Section 3.2.8	Each	100	$13,153.64	$1,315,363.63	$13,470.06	$1,347,005.63	$13,795.90	$1,379,589.63
11	Base Price per application Tier 2 Site Specific Reviews (Volume 101 - 200) Section 3.2.8	Each	100	$13,153.64	$1,315,363.63	$13,470.06	$1,347,005.63	$13,795.90	$1,379,589.63

Round 2 BAFO Cost Quote Price Schedule 2 EAF Contractor - Firm Fixed Pricing

Pricing for services required under this RFQ will be a blend of firm fixed rates and the hourly rates. Bidders must complete all price cells within the Price Schedule or be deemed non-responsive.

Line No.	Description	Unit	Estimated Quantity (A)	Year 1 (B)	Year 1 Total (A) * (B)	Year 2 (C)	Year 2 Total (A) * (C)	Year 3 (D)	Year 3 Total (A) * (D)
12	Base Price per application Tier 2 Site Specific Reviews (Volume GT 200) Section 3.2.8	Each	100	$13,153.64	$1,315,363.63	$13,470.06	$1,347,005.63	$13,795.90	$1,379,589.63
13	FEMA Addendum Section 3.2.3, 3.2.8	Each	UNK	$4,913.61	_	$5,056.49	_	$5,203.61	_
14	Reporting Functions Section 3.2.13, 3.2.14, 3.2.15	Each	12	$2,871.17	$34,453.99	$2,955.65	$35,467.75	$3,042.69	$36,512.23
15	Environmental Impact Statement Fee Section 3.2.2	Each	UNK	$97,920.26	_	$100,586.42	_	$103,333.22	_

GS-10F-0076K Labor Rates	Year 15	Year 16 *	Year 17 *	Year 18*	Year 19*
Program Manager	$176.13	$181.41	$186.85	$192.46	$198.23
Business Manager	$146.61	$151.01	$155.54	$160.21	$165.02
Administrative Assistant I	$49.29	$50.77	$52.29	$53.86	$55.48
Administrative Assistant II	$63.18	$65.08	$67.03	$69.04	$71.11
Administrative Assistant III	$78.36	$80.71	$83.13	$85.62	$88.19
Scientist I	$73.64	$75.85	$78.13	$80.47	$82.88
Scientist II	$95.62	$98.49	$101.44	$104.48	$107.61
Scientist III	$121.54	$125.19	$128.95	$132.82	$136.80
Scientist IV	$150.96	$155.49	$160.15	$164.95	$169.90
Scientist V	$179.54	$184.93	$190.48	$196.19	$202.08
Engineer I	$78.95	$81.32	$83.76	$86.27	$88.86
Engineer II	$96.80	$99.70	$102.69	$105.77	$108.94
Engineer III	$119.20	$122.78	$126.46	$130.25	$134.16
Engineer IV	$136.45	$140.54	$144.76	$149.10	$153.57
Engineer V	$195.74	$201.61	$207.66	$213.89	$220.31
Computer Graphics Tech I	$58.91	$60.68	$62.50	$64.38	$66.31
Computer Graphics Tech II	$76.87	$79.18	$81.56	$84.01	$86.53
Computer Graphics Tech III	$117.16	$120.67	$124.29	$128.02	$131.86
Computer Programmer I	$70.98	$73.11	$75.30	$77.56	$79.89
Computer Programmer II	$92.12	$94.88	$97.73	$100.66	$103.68
Computer Programmer III	$140.80	$145.02	$149.37	$153.85	$158.47
Technician I	$59.04	$60.81	$62.63	$64.51	$66.45
Technician II	$68.72	$70.78	$72.90	$75.09	$77.34
Database Specialist I	$70.98	$73.11	$75.30	$77.56	$79.89
Database Specialist II	$92.12	$94.88	$97.73	$100.66	$103.68
Database Specialist III	$140.80	$145.02	$149.37	$153.85	$158.47
Analyst/Planner I	$61.29	$63.13	$65.02	$66.97	$68.98
Analyst/Planner II	$83.89	$86.41	$89.00	$91.67	$94.42
Analyst/Planner III	$105.14	$108.29	$111.54	$114.89	$118.34
Analyst/Planner IV	$129.29	$133.17	$137.17	$141.29	$145.53
Analyst/Planner V	$171.09	$176.22	$181.51	$186.96	$192.57
Conference Planner	$102.87	$105.96	$109.14	$112.41	$115.78
Training Specialist	$137.98	$142.12	$146.38	$150.77	$155.29
QA Manager	$154.79	$159.43	$164.21	$169.14	$174.21
Data Analyst	$154.87	$159.52	$164.31	$169.24	$174.32
Technical Editor/Writer I	$73.28	$75.48	$77.74	$80.07	$82.47
Technical Editor/Writer II	$108.39	$111.64	$114.99	$118.44	$121.99
Word Processor	$64.70	$66.64	$68.64	$70.70	$72.82

*Rate for years 16 - 19 were escalated 3% which has been our historical average escalation rate. The actual negotiated rates will be provided once the schedule has been renewed.

Tetra Tech EM Inc.
Cost Estimate For CLIN 1

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1
Principal	Program Manager	$176.13		$0.00
Program Director	Program Manager	$176.13	0.5	$88.07
Task Manager	Scientist IV	$150.96	0.5	$75.48
Field Manager	Engineer IV	$136.45		$0.00
Field Professional	Scientist III	$121.54	4.0	$486.16
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00
Principal/Senior Biologist	Scientist IV	$150.96		$0.00
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54		$0.00
Senior Hydrogeologist	Scientist IV	$150.96		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00
Field Associate	Analyst/Planner II	$83.89		$0.00
Field Observer	Scientist I	$73.64		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00
Senior Technician	Technician II	$68.72		$0.00
Junior Technician	Technician I	$59.04		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16		$0.00
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00
Total Labor			5.0	$649.71

Tetra Tech EM Inc.
Cost Estimate For CLIN 1

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1
Other Direct Cost		Rate	Units	
Computer Usage	Per Hour	$2.86	5.0	$14.30
Reproduction	Per Copy	$0.10		$0.00
Fed-ex/Shipping	Per Package	$12.50		$0.00
Total ODCs				$14.30
Travel				
Airfare		$0.00		$0.00
Hotel		$0.00		$0.00
Per Diem		$0.00		$0.00
Car Rental		$0.00		$0.00
Mileage		$0.00		$0.00
Parking		$0.00		$0.00
Other Ground		$0.00		$0.00
Total Travel				$0.00
G&A on Travel & ODCs		16.01%		$2.29
Toal Estimated Cost Clin 1				$666.29

Tetra Tech EM Inc.
Cost Estimate For CLIN 2

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1
Principal	Program Manager	$176.13		$0.00
Program Director	Program Manager	$176.13	0.5	$88.07
Task Manager	Scientist IV	$150.96	0.5	$75.48
Field Manager	Engineer IV	$136.45		$0.00
Field Professional	Scientist III	$121.54	4.0	$486.16
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00
Principal/Senior Biologist	Scientist IV	$150.96		$0.00
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54		$0.00
Senior Hydrogeologist	Scientist IV	$150.96		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00
Field Associate	Analyst/Planner II	$83.89		$0.00
Field Observer	Scientist I	$73.64		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00
Senior Technician	Technician II	$68.72		$0.00
Junior Technician	Technician I	$59.04		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16		$0.00
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00
Total Labor			5.0	$649.71

Tetra Tech EM Inc.
Cost Estimate For CLIN 2

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1
Other Direct Cost		Rate	Units	
Computer Usage	Per Hour	$2.86	5.0	$14.30
Reproduction	Per Copy	$0.10		$0.00
Fed-ex/Shipping	Per Package	$12.50		$0.00
Total ODCs				$14.30
Travel				
Airfare		$0.00		$0.00
Hotel		$0.00		$0.00
Per Diem		$0.00		$0.00
Car Rental		$0.00		$0.00
Mileage		$0.00		$0.00
Parking		$0.00		$0.00
Other Ground		$0.00		$0.00
Total Travel				$0.00
G&A on Travel & ODCs		16.01%		$2.29
Toal Estimated Cost Clin 2				$666.29

Tetra Tech EM Inc.
Cost Estimate For CLIN 3

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	0.5	$88.07	$181.41	0.5	$90.71	$186.85	0.5	$93.43
Task Manager	Scientist IV	$150.96	0.5	$75.48	$155.49	0.5	$77.75	$160.15	0.5	$80.08
Field Manager	Engineer IV	$136.45		$0.00	$140.54		$0.00	$144.76		$0.00
Field Professional	Scientist III	$121.54	4.0	$486.16	$125.19	4.0	$500.76	$128.95	4.0	$515.80
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54		$0.00	$125.19		$0.00	$128.95		$0.00
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89		$0.00	$86.41		$0.00	$89.00		$0.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16		$0.00	$120.67		$0.00	$124.29		$0.00
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			5.0	$649.71		5.0	$669.21		5.0	$689.30
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	5.0	$14.30		5	$14.30		5.0	$14.30
Reproduction	Per Copy	$0.10		$0.00						

Tetra Tech EM Inc.
Cost Estimate For CLIN 3

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Fed-ex/Shipping	Per Package	$12.50		$0.00						
Total ODCs				$14.30			$14.30			$14.30
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$2.29			$2.29			$2.29
Toal Estimated Cost Clin 3				$666.29			$685.80			$705.89

Tetra Tech EM Inc.
Cost Estimate For CLIN 4

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	1.0	$176.13	$181.41	1.0	$181.41	$186.85	1.0	$186.85
Task Manager	Scientist IV	$150.96	1.0	$150.96	$155.49	1.0	$155.49	$160.15	1.0	$160.15
Field Manager	Engineer IV	$136.45	2.0	$272.90	$140.54	2.0	$281.08	$144.76	2.0	$289.52
Field Professional	Scientist III	$121.54	4.0	$486.16	$125.19	4.0	$500.76	$128.95	4.0	$515.80
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54		$0.00	$125.19		$0.00	$128.95		$0.00
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	6.0	$503.34	$86.41	6.0	$518.46	$89.00	6.0	$534.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16		$0.00	$120.67		$0.00	$124.29		$0.00
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			14.0	$1,589.49		14.0	$1,637.20		14.0	$1,686.32
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	14.0	$40.04		14	$40.04		14.0	$40.04

Tetra Tech EM Inc.
Cost Estimate For CLIN 4

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Reproduction	Per Copy	$0.10		$0.00						$0.00
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1	$12.50		1	$12.50
Total ODCs				$52.54			$52.54			$52.54
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$8.41			$8.41			$8.41
Toal Estimated Cost Clin 4				$1,650.44			$1,698.15			$1,747.27

Tetra Tech EM Inc.
Cost Estimate For CLIN 5

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	1.0	$176.13	$181.41	1.0	$181.41	$186.85	1.0	$186.85
Task Manager	Scientist IV	$150.96	1.0	$150.96	$155.49	1.0	$155.49	$160.15	1.0	$160.15
Field Manager	Engineer IV	$136.45	2.0	$272.90	$140.54	2.0	$281.08	$144.76	2.0	$289.52
Field Professional	Scientist III	$121.54	3.0	$364.62	$125.19	3.0	$375.57	$128.95	3.0	$386.85
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54		$0.00	$125.19		$0.00	$128.95		$0.00
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	5.0	$419.45	$86.41	5.0	$432.05	$89.00	5.0	$445.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16		$0.00	$120.67		$0.00	$124.29		$0.00
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			12.0	$1,384.06		12.0	$1,425.60		12.0	$1,468.37
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	12.0	$34.32		12	$34.32		12.0	$34.32

Tetra Tech EM Inc.
Cost Estimate For CLIN 5

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Reproduction	Per Copy	$0.10		$0.00						$0.00
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1	$12.50		1	$12.50
Total ODCs				$46.82			$46.82			$46.82
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$7.50			$7.50			$7.50
Toal Estimated Cost Clin 5				$1,438.38			$1,479.92			$1,522.69

Tetra Tech EM Inc.
Cost Estimate For CLIN 6

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	1.0	$176.13	$181.41	1.0	$181.41	$186.85	1.0	$186.85
Task Manager	Scientist IV	$150.96	1.0	$150.96	$155.49	1.0	$155.49	$160.15	1.0	$160.15
Field Manager	Engineer IV	$136.45	2.0	$272.90	$140.54	2.0	$281.08	$144.76	2.0	$289.52
Field Professional	Scientist III	$121.54	2.0	$243.08	$125.19	2.0	$250.38	$128.95	2.0	$257.90
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54		$0.00	$125.19		$0.00	$128.95		$0.00
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	4.0	$335.56	$86.41	4.0	$345.64	$89.00	4.0	$356.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16		$0.00	$120.67		$0.00	$124.29		$0.00
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			10.0	$1,178.63		10.0	$1,214.00		10.0	$1,250.42
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	10.0	$28.60		10	$28.60		10.0	$28.60

Tetra Tech EM Inc.
Cost Estimate For CLIN 6

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Reproduction	Per Copy	$0.10		$0.00						$0.00
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1	$12.50		1	$12.50
Total ODCs				$41.10			$41.10			$41.10
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$6.58			$6.58			$6.58
Toal Estimated Cost Clin 6				$1,226.31			$1,261.68			$1,298.10

Tetra Tech EM Inc.
Cost Estimate For CLIN 7

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	4.0	$704.52	$181.41	4.0	$725.64	$186.85	4.0	$747.40
Task Manager	Scientist IV	$150.96	4.0	$603.84	$155.49	4.0	$621.96	$160.15	4.0	$640.60
Field Manager	Engineer IV	$136.45	24.0	$3,274.80	$140.54	24.0	$3,372.96	$144.76	24.0	$3,474.24
Field Professional	Scientist III	$121.54	24.0	$2,916.96	$125.19	24.0	$3,004.56	$128.95	24.0	$3,094.80
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96	2.0	$301.92	$155.49	2.0	$310.98	$160.15	2.0	$320.30
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54	2.0	$243.08	$125.19	2.0	$250.38	$128.95	2.0	$257.90
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	24.0	$2,013.36	$86.41	24.0	$2,073.84	$89.00	24.0	$2,136.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16	4.0	$468.64	$120.67	4.0	$482.68	$124.29	4.0	$497.16
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			88.0	$10,527.12		88.0	$10,843.00		88.0	$11,168.40
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	88.0	$251.68		88	$251.68		88.0	$251.68
Reproduction	Per Copy	$0.10	1,500.0	$150.00		1,500.0	$150.00		1,500.0	$150.00

Tetra Tech EM Inc.
Cost Estimate For CLIN 7

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1.0	$12.50		1.0	$12.50
Total ODCs				$414.18			$414.18			$414.18
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$66.31			$66.31			$66.31
Toal Estimated Cost Clin 7				$11,007.61			$11,323.49			$11,648.89

Tetra Tech EM Inc.
Cost Estimate For CLIN 8

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	4.0	$704.52	$181.41	4.0	$725.64	$186.85	4.0	$747.40
Task Manager	Scientist IV	$150.96	4.0	$603.84	$155.49	4.0	$621.96	$160.15	4.0	$640.60
Field Manager	Engineer IV	$136.45	24.0	$3,274.80	$140.54	24.0	$3,372.96	$144.76	24.0	$3,474.24
Field Professional	Scientist III	$121.54	16.0	$1,944.64	$125.19	16.0	$2,003.04	$128.95	16.0	$2,063.20
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96	2.0	$301.92	$155.49	2.0	$310.98	$160.15	2.0	$320.30
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54	2.0	$243.08	$125.19	2.0	$250.38	$128.95	2.0	$257.90
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	24.0	$2,013.36	$86.41	24.0	$2,073.84	$89.00	24.0	$2,136.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16	4.0	$468.64	$120.67	4.0	$482.68	$124.29	4.0	$497.16
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			80.0	$9,554.80		80.0	$9,841.48		80.0	$10,136.80
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	80.0	$228.80		80	$228.80		80.0	$228.80
Reproduction	Per Copy	$0.10	1,500.0	$150.00		1,500.0	$150.00		1,500.0	$150.00
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1.0	$12.50		1.0	$12.50
Total ODCs				$391.30			$391.30			$391.30

Tetra Tech EM Inc.
Cost Estimate For CLIN 8

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$62.65			$62.65			$62.65
Toal Estimated Cost Clin 8				$10,008.75			$10,295.43			$10,590.75

Tetra Tech EM Inc.
Cost Estimate For CLIN 9

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	4.0	$704.52	$181.41	4.0	$725.64	$186.85	4.0	$747.40
Task Manager	Scientist IV	$150.96	4.0	$603.84	$155.49	4.0	$621.96	$160.15	4.0	$640.60
Field Manager	Engineer IV	$136.45	24.0	$3,274.80	$140.54	24.0	$3,372.96	$144.76	24.0	$3,474.24
Field Professional	Scientist III	$121.54	16.0	$1,944.64	$125.19	16.0	$2,003.04	$128.95	16.0	$2,063.20
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96	2.0	$301.92	$155.49	2.0	$310.98	$160.15	2.0	$320.30
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54	2.0	$243.08	$125.19	2.0	$250.38	$128.95	2.0	$257.90
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	16.0	$1,342.24	$86.41	16.0	$1,382.56	$89.00	16.0	$1,424.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16	4.0	$468.64	$120.67	4.0	$482.68	$124.29	4.0	$497.16
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			72.0	$8,883.68		72.0	$9,150.20		72.0	$9,424.80
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	72.0	$205.92		72	$205.92		72.0	$205.92
Reproduction	Per Copy	$0.10	1,500.0	$150.00		1,500.0	$150.00		1,500.0	$150.00
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1.0	$12.50		1.0	$12.50
Total ODCs				$368.42			$368.42			$368.42

Tetra Tech EM Inc.
Cost Estimate For CLIN 9

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$58.98			$58.98			$58.98
Toal Estimated Cost Clin 9				$9,311.08			$9,577.60			$9,852.20

Tetra Tech EM Inc.
Cost Estimate For CLIN 10

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	2.0	$352.26	$181.41	2.0	$362.82	$186.85	2.0	$373.70
Task Manager	Scientist IV	$150.96	2.0	$301.92	$155.49	2.0	$310.98	$160.15	2.0	$320.30
Field Manager	Engineer IV	$136.45	16.0	$2,183.20	$140.54	16.0	$2,248.64	$144.76	16.0	$2,316.16
Field Professional	Scientist III	$121.54	24.0	$2,916.96	$125.19	24.0	$3,004.56	$128.95	24.0	$3,094.80
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96	6.0	$905.76	$155.49	6.0	$932.94	$160.15	6.0	$960.90
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54	6.0	$729.24	$125.19	6.0	$751.14	$128.95	6.0	$773.70
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	32.0	$2,684.48	$86.41	32.0	$2,765.12	$89.00	32.0	$2,848.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16	4.0	$468.64	$120.67	4.0	$482.68	$124.29	4.0	$497.16
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			92.0	$10,542.46		92.0	$10,858.88		92.0	$11,184.72
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	92.0	$263.12		92	$263.12		92.0	$263.12
Reproduction	Per Copy	$0.10	1,500.0	$150.00		1,500.0	$150.00		1,500.0	$150.00
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1.0	$12.50		1.0	$12.50
Total ODCs				$425.62			$425.62			$425.62

Tetra Tech EM Inc.
Cost Estimate For CLIN 10

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Travel										
Airfare	New Jersey RT	$500.00	2.0	$1,000.00		2.0	$1,000.00		2.0	$1,000.00
Hotel		$88.55	4.0	$354.20		4.0	$354.20		4.0	$354.20
Per Diem		$46.00	6.0	$276.00		6.0	$276.00		6.0	$276.00
Car Rental		$65.00	3	$195.00		3	$195.00		3	$195.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$1,825.20			$1,825.20			$1,825.20
G&A on Travel & ODCs		16.01%		$360.36			$360.36			$360.36
Toal Estimated Cost Clin 10				$13,153.64			$13,470.06			$13,795.90

Tetra Tech EM Inc.
Cost Estimate For CLIN 11

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	2.0	$352.26	$181.41	2.0	$362.82	$186.85	2.0	$373.70
Task Manager	Scientist IV	$150.96	2.0	$301.92	$155.49	2.0	$310.98	$160.15	2.0	$320.30
Field Manager	Engineer IV	$136.45	16.0	$2,183.20	$140.54	16.0	$2,248.64	$144.76	16.0	$2,316.16
Field Professional	Scientist III	$121.54	24.0	$2,916.96	$125.19	24.0	$3,004.56	$128.95	24.0	$3,094.80
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96	6.0	$905.76	$155.49	6.0	$932.94	$160.15	6.0	$960.90
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54	6.0	$729.24	$125.19	6.0	$751.14	$128.95	6.0	$773.70
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	32.0	$2,684.48	$86.41	32.0	$2,765.12	$89.00	32.0	$2,848.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16	4.0	$468.64	$120.67	4.0	$482.68	$124.29	4.0	$497.16
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			92.0	$10,542.46		92.0	$10,858.88		92.0	$11,184.72
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	92.0	$263.12		92	$263.12		92.0	$263.12
Reproduction	Per Copy	$0.10	1,500.0	$150.00		1,500.0	$150.00		1,500.0	$150.00
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1.0	$12.50		1.0	$12.50
Total ODCs				$425.62			$425.62			$425.62

Tetra Tech EM Inc.
Cost Estimate For CLIN 11

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Travel										
Airfare	New Jersey RT	$500.00	2.0	$1,000.00		2.0	$1,000.00		2.0	$1,000.00
Hotel		$88.55	4.0	$354.20		4.0	$354.20		4.0	$354.20
Per Diem		$46.00	6.0	$276.00		6.0	$276.00		6.0	$276.00
Car Rental		$65.00	3	$195.00		3	$195.00		3	$195.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$1,825.20			$1,825.20			$1,825.20
G&A on Travel & ODCs		16.01%		$360.36			$360.36			$360.36
Toal Estimated Cost Clin 11				$13,153.64			$13,470.06			$13,795.90

Tetra Tech EM Inc.
Cost Estimate For CLIN 12

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	2.0	$352.26	$181.41	2.0	$362.82	$186.85	2.0	$373.70
Task Manager	Scientist IV	$150.96	2.0	$301.92	$155.49	2.0	$310.98	$160.15	2.0	$320.30
Field Manager	Engineer IV	$136.45	16.0	$2,183.20	$140.54	16.0	$2,248.64	$144.76	16.0	$2,316.16
Field Professional	Scientist III	$121.54	24.0	$2,916.96	$125.19	24.0	$3,004.56	$128.95	24.0	$3,094.80
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96	6.0	$905.76	$155.49	6.0	$932.94	$160.15	6.0	$960.90
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54	6.0	$729.24	$125.19	6.0	$751.14	$128.95	6.0	$773.70
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	32.0	$2,684.48	$86.41	32.0	$2,765.12	$89.00	32.0	$2,848.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16	4.0	$468.64	$120.67	4.0	$482.68	$124.29	4.0	$497.16
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			92.0	$10,542.46		92.0	$10,858.88		92.0	$11,184.72
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	92.0	$263.12		92	$263.12		92.0	$263.12
Reproduction	Per Copy	$0.10	1,500.0	$150.00		1,500.0	$150.00		1,500.0	$150.00
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1.0	$12.50		1.0	$12.50
Total ODCs				$425.62			$425.62			$425.62

Tetra Tech EM Inc.
Cost Estimate For CLIN 12

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Travel										
Airfare	New Jersey RT	$500.00	2.0	$1,000.00		2.0	$1,000.00		2.0	$1,000.00
Hotel		$88.55	4.0	$354.20		4.0	$354.20		4.0	$354.20
Per Diem		$46.00	6.0	$276.00		6.0	$276.00		6.0	$276.00
Car Rental		$65.00	3	$195.00		3	$195.00		3	$195.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$1,825.20			$1,825.20			$1,825.20
G&A on Travel & ODCs		16.01%		$360.36			$360.36			$360.36
Toal Estimated Cost Clin 12				$13,153.64			$13,470.06			$13,795.90

Tetra Tech EM Inc.
Cost Estimate For CLIN 13

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	2.0	$352.26	$181.41	2.0	$362.82	$186.85	2.0	$373.70
Task Manager	Scientist IV	$150.96	2.0	$301.92	$155.49	2.0	$310.98	$160.15	2.0	$320.30
Field Manager	Engineer IV	$136.45	6.0	$818.70	$140.54	6.0	$843.24	$144.76	6.0	$868.56
Field Professional	Scientist III	$121.54	16.0	$1,944.64	$125.19	16.0	$2,003.04	$128.95	16.0	$2,063.20
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54		$0.00	$125.19		$0.00	$128.95		$0.00
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	16.0	$1,342.24	$86.41	16.0	$1,382.56	$89.00	16.0	$1,424.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16		$0.00	$120.67		$0.00	$124.29		$0.00
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			42.0	$4,759.76		42.0	$4,902.64		42.0	$5,049.76
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	42.0	$120.12		42.0	$120.12		42.0	$120.12
Reproduction	Per Copy	$0.10		$0.00			$0.00			$0.00

Tetra Tech EM Inc.
Cost Estimate For CLIN 13

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1.0	$12.50		1.0	$12.50
Total ODCs				$132.62			$132.62			$132.62
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$21.23			$21.23			$21.23
Toal Estimated Cost Clin 13				$4,913.61			$5,056.49			$5,203.61

Tetra Tech EM Inc.
Cost Estimate For CLIN 14

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	16.0	$2,818.08	$181.41	16.0	$2,902.56	$186.85	16.0	$2,989.60
Task Manager	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Field Manager	Engineer IV	$136.45		$0.00	$140.54		$0.00	$144.76		$0.00
Field Professional	Scientist III	$121.54		$0.00	$125.19		$0.00	$128.95		$0.00
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54		$0.00	$125.19		$0.00	$128.95		$0.00
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89		$0.00	$86.41		$0.00	$89.00		$0.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16		$0.00	$120.67		$0.00	$124.29		$0.00
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			16.0	$2,818.08		16.0	$2,902.56		16.0	$2,989.60
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	16.0	$45.76		16	$45.76		16.0	$45.76
Reproduction	Per Copy	$0.10		$0.00						

Tetra Tech EM Inc.
Cost Estimate For CLIN 14

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Fed-ex/Shipping	Per Package	$12.50		$0.00			$0.00			
Total ODCs				$45.76			$45.76			$45.76
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$7.33			$7.33			$7.33
Toal Estimated Cost Clin 14				$2,871.17			$2,955.65			$3,042.69

Tetra Tech EM Inc.
Cost Estimate For CLIN 15

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	24.0	$4,227.12	$181.41	24.0	$4,353.84	$186.85	24.0	$4,484.40
Task Manager	Scientist IV	$150.96	24.0	$3,623.04	$155.49	24.0	$3,731.76	$160.15	24.0	$3,843.60
Field Manager	Engineer IV	$136.45	240.0	$32,748.00	$140.54	240.0	$33,729.60	$144.76	240.0	$34,742.40
Field Professional	Scientist III	$121.54	200.0	$24,308.00	$125.19	200.0	$25,038.00	$128.95	200.0	$25,790.00
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96	16.0	$2,415.36	$155.49	16.0	$2,487.84	$160.15	16.0	$2,562.40
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54	16.0	$1,944.64	$125.19	16.0	$2,003.04	$128.95	16.0	$2,063.20
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	200.0	$16,778.00	$86.41	200.0	$17,282.00	$89.00	200.0	$17,800.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16	24.0	$2,811.84	$120.67	24.0	$2,896.08	$124.29	24.0	$2,982.96
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			744.0	$88,856.00		744.0	$91,522.16		744.0	$94,268.96
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	744.0	$2,127.84		744.0	$2,127.84		744.0	$2,127.84
Reproduction	Per Copy	$0.10	10,000.0	$1,000.00		10,000.0	$1,000.00		10,000.0	$1,000.00
Fed-ex/Shipping	Per Package	$12.50	2.0	$25.00		2.0	$25.00		2.0	$25.00
Total ODCs				$3,152.84			$3,152.84			$3,152.84

Tetra Tech EM Inc.
Cost Estimate For CLIN 15

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Travel										
Airfare	New Jersey RT	$500.00	5.0	$2,500.00		5.0	$2,500.00		5.0	$2,500.00
Hotel		$88.55	10.0	$885.50		10.0	$885.50		10.0	$885.50
Per Diem		$46.00	15.0	$690.00		15.0	$690.00		15.0	$690.00
Car Rental		$65.00	9	$585.00		9	$585.00		9	$585.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$4,660.50			$4,660.50			$4,660.50
G&A on Travel & ODCs		16.01%		$1,250.92			$1,250.92			$1,250.92
Toal Estimated Cost Clin 15				$97,920.26			$100,586.42			$103,333.22

BAFO Cost Quote Price Schedule 2 EAF Contractor - Loaded hourly Rate Pricing

A bidder must fit its existing personnel and that of proposed subcontractors into the following Labor Titles.

Line #	Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hourly Rate Year 2	Hourly Rate Year 3
Office and Management Staff					
16	Principal	Program Manager	$176.13	$181.41	$186.85
17	Program Director	Program Manager	$176.13	$181.41	$186.85
18	Task Manager	Scientist IV	$150.96	$155.49	$160.15
Project Field Staff					
19	Field Manager	Engineer IV	$136.45	$140.54	$144.76
20	Field Professional	Scientist III	$121.54	$125.19	$128.95
21	Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54	$184.93	$190.48
22	Principal/Senior Biologist	Scientist IV	$150.96	$155.49	$160.15
23	Principal/Senior Historic Preservation Specialist	Scientist III	$121.54	$125.19	$128.95
24	Senior Hydrogeologist	Scientist IV	$150.96	$155.49	$160.15
25	Junior Hydrogeologist	Scientist II	$95.62	$98.49	$101.44
26	Field Associate	Analyst/Planner II	$83.89	$86.41	$89.00
27	Field Observer	Scientist I	$73.64	$75.85	$78.13
28	Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20	$122.78	$126.46
29	Hydrogeologist	Scientist I	$73.64	$75.85	$78.13
30	Senior Technician	Technician II	$68.72	$70.78	$72.90
31	Junior Technician	Technician I	$59.04	$60.81	$62.63
32	Senior GIS Specialist	Computer Graphics Tech III	$117.16	$120.67	$124.29
33	Junior GIS Specialist	Computer Graphics Tech II	$76.87	$79.18	$81.56
34	Administrative Support/Data Entry	Administrative Assistant II	$63.18	$65.08	$67.03

BAFO Cost Quote Price Schedule 2 EAF Contractor - Firm Fixed Pricing

Pricing for services required under this RFQ will be a blend of firm fixed rates and the hourly rates. Bidders must complete all price cells within the Price Schedule or be deemed non-responsive.

Line No.	Description	Unit	Estimated Quantity (A)	Year 1 (B)	Year 1 Total (A) * (B)	Year 2 (C)	Year 2 Total (A) * (C)	Year 3 (D)	Year 3 Total (A) * (D)
1	Base Price per application for Exempt (Volume 1 to 100) Section 3.2.2	Each	100	$1,082.87	$108,287.31	N/A	N/A	N/A	N/A
2	Base Price per application for Exempt (Volume 101 to 200) Section 3.2.2	Each	100	$1,082.87	$108,287.31	N/A	N/A	N/A	N/A
3	Base Price per application for Exempt (Volume > 200) Section 3.2.2	Each	100	$1,082.87	$108,287.31	$1,114.58	$111,458.31	$1,147.24	$114,724.31
4	Base Price per application (Fixed Fee) for Categorically Excluded Subject to 58.5 (Volume 1 to 100) Section 3.2.4	Each	100	$2,687.83	$268,783.47	$2,765.87	$276,587.47	$2,846.23	$284,623.47
5	Base Price per application (Fixed Fee) for Categorically Excluded Subject to 58.5 (Volume 101 to 200) Section 3.2.4	Each	100	$2,687.83	$268,783.47	$2,765.87	$276,587.47	$2,846.23	$284,623.47
6	Base Price per application (Fixed Fee) for Categorically Excluded Subject to 58.5 (Volume GT 200) Section 3.2.4	Each	100	$2,687.83	$268,783.47	$2,765.87	$276,587.47	$2,846.23	$284,623.47

BAFO Cost Quote Price Schedule 2 EAF Contractor - Firm Fixed Pricing

Pricing for services required under this RFQ will be a blend of firm fixed rates and the hourly rates. Bidders must complete all price cells within the Price Schedule or be deemed non-responsive.

Line No.	Description	Unit	Estimated Quantity (A)	Year 1 (B)	Year 1 Total (A) * (B)	Year 2 (C)	Year 2 Total (A) * (C)	Year 3 (D)	Year 3 Total (A) * (D)
7	Base Price per application (Fixed Fee) for non-tiered Environmental Assessments (Volume 1 to 100) Section 3.2.2	Each	100	$15,048.00	$1,504,800.26	$15,481.94	$1,548,194.26	$15,928.94	$1,592,894.26
8	Base Price per application (Fixed Fee) for non-tiered Environmental Assessments (Volume 101 to 200) Section 3.2.2	Each	100	$15,048.00	$1,504,800.26	$15,481.94	$1,548,194.26	$15,928.94	$1,592,894.26
9	Base Price per application (Fixed Fee) for non-tiered Environmental Assessments (Volume GT 200) Section 3.2.2	Each	100	$15,048.00	$1,504,800.26	$15,481.94	$1,548,194.26	$15,928.94	$1,592,894.26
10	Base Price per application Tier 2 Site Specific Reviews (Volume 1 - 100) Section 3.2.8	Each	100	$23,372.34	$2,337,233.87	$23,987.08	$2,398,707.87	$24,620.20	$2,462,019.87
11	Base Price per application Tier 2 Site Specific Reviews (Volume 101 - 200) Section 3.2.8	Each	100	$23,372.34	$2,337,233.87	$23,987.08	$2,398,707.87	$24,620.20	$2,462,019.87
12	Base Price per application Tier 2 Site Specific Reviews (Volume GT 200) Section 3.2.8	Each	100	$23,372.34	$2,337,233.87	$23,987.08	$2,398,707.87	$24,620.20	$2,462,019.87

BAFO Cost Quote Price Schedule 2 EAF Contractor - Firm Fixed Pricing

Pricing for services required under this RFQ will be a blend of firm fixed rates and the hourly rates. Bidders must complete all price cells within the Price Schedule or be deemed non-responsive.

Line No.	Description	Unit	Estimated Quantity (A)	Year 1 (B)	Year 1 Total (A) * (B)	Year 2 (C)	Year 2 Total (A) * (C)	Year 3 (D)	Year 3 Total (A) * (D)
13	FEMA Addendum Section 3.2.3, 3.2.8	Each	UNK	$5,193.15	_	$5,344.21	_	$5,499.77	_
14	Reporting Functions Section 3.2.13, 3.2.14, 3.2.15	Each	12	$4,306.75	$51,680.99	$4,433.47	$53,201.63	$4,564.03	$54,768.35
15	Environmental Impact Statement Fee Section 3.2.2	Each	UNK	$120,275.00	_	$123,592.56	_	$127,010.32	_

GS-10F-0076K Labor Rates	Year 15	Year 16 *	Year 17 *	Year 18*	Year 19*
Program Manager	$176.13	$181.41	$186.85	$192.46	$198.23
Business Manager	$146.61	$151.01	$155.54	$160.21	$165.02
Administrative Assistant I	$49.29	$50.77	$52.29	$53.86	$55.48
Administrative Assistant II	$63.18	$65.08	$67.03	$69.04	$71.11
Administrative Assistant III	$78.36	$80.71	$83.13	$85.62	$88.19
Scientist I	$73.64	$75.85	$78.13	$80.47	$82.88
Scientist II	$95.62	$98.49	$101.44	$104.48	$107.61
Scientist III	$121.54	$125.19	$128.95	$132.82	$136.80
Scientist IV	$150.96	$155.49	$160.15	$164.95	$169.90
Scientist V	$179.54	$184.93	$190.48	$196.19	$202.08
Engineer I	$78.95	$81.32	$83.76	$86.27	$88.86
Engineer II	$96.80	$99.70	$102.69	$105.77	$108.94
Engineer III	$119.20	$122.78	$126.46	$130.25	$134.16
Engineer IV	$136.45	$140.54	$144.76	$149.10	$153.57
Engineer V	$195.74	$201.61	$207.66	$213.89	$220.31
Computer Graphics Tech I	$58.91	$60.68	$62.50	$64.38	$66.31
Computer Graphics Tech II	$76.87	$79.18	$81.56	$84.01	$86.53
Computer Graphics Tech III	$117.16	$120.67	$124.29	$128.02	$131.86
Computer Programmer I	$70.98	$73.11	$75.30	$77.56	$79.89
Computer Programmer II	$92.12	$94.88	$97.73	$100.66	$103.68
Computer Programmer III	$140.80	$145.02	$149.37	$153.85	$158.47
Technician I	$59.04	$60.81	$62.63	$64.51	$66.45
Technician II	$68.72	$70.78	$72.90	$75.09	$77.34
Database Specialist I	$70.98	$73.11	$75.30	$77.56	$79.89
Database Specialist II	$92.12	$94.88	$97.73	$100.66	$103.68
Database Specialist III	$140.80	$145.02	$149.37	$153.85	$158.47
Analyst/Planner I	$61.29	$63.13	$65.02	$66.97	$68.98
Analyst/Planner II	$83.89	$86.41	$89.00	$91.67	$94.42
Analyst/Planner III	$105.14	$108.29	$111.54	$114.89	$118.34
Analyst/Planner IV	$129.29	$133.17	$137.17	$141.29	$145.53
Analyst/Planner V	$171.09	$176.22	$181.51	$186.96	$192.57
Conference Planner	$102.87	$105.96	$109.14	$112.41	$115.78
Training Specialist	$137.98	$142.12	$146.38	$150.77	$155.29
QA Manager	$154.79	$159.43	$164.21	$169.14	$174.21
Data Analyst	$154.87	$159.52	$164.31	$169.24	$174.32
Technical Editor/Writer I	$73.28	$75.48	$77.74	$80.07	$82.47
Technical Editor/Writer II	$108.39	$111.64	$114.99	$118.44	$121.99
Word Processor	$64.70	$66.64	$68.64	$70.70	$72.82

*Rate for years 16 - 19 were escalated 3% which has been our historical average escalation rate. The actual negotiated rates will be provided once the schedule has been renewed.

Tetra Tech EM Inc.
Cost Estimate For CLIN 1

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1
Principal	Program Manager	$176.13		$0.00
Program Director	Program Manager	$176.13	1.0	$176.13
Task Manager	Scientist IV	$150.96	1.0	$150.96
Field Manager	Engineer IV	$136.45		$0.00
Field Professional	Scientist III	$121.54	6.0	$729.24
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00
Principal/Senior Biologist	Scientist IV	$150.96		$0.00
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54		$0.00
Senior Hydrogeologist	Scientist IV	$150.96		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00
Field Associate	Analyst/Planner II	$83.89		$0.00
Field Observer	Scientist I	$73.64		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00
Senior Technician	Technician II	$68.72		$0.00
Junior Technician	Technician I	$59.04		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16		$0.00
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00
Total Labor			8.0	$1,056.33

Tetra Tech EM Inc.
Cost Estimate For CLIN 1

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1
Other Direct Cost		Rate	Units	
Computer Usage	Per Hour	$2.86	8.0	$22.88
Reproduction	Per Copy	$0.10		$0.00
Fed-ex/Shipping	Per Package	$12.50		$0.00
Total ODCs				$22.88
Travel				
Airfare		$0.00		$0.00
Hotel		$0.00		$0.00
Per Diem		$0.00		$0.00
Car Rental		$0.00		$0.00
Mileage		$0.00		$0.00
Parking		$0.00		$0.00
Other Ground		$0.00		$0.00
Total Travel				$0.00
G&A on Travel & ODCs		16.01%		$3.66
Toal Estimated Cost Clin 1				$1,082.87

Tetra Tech EM Inc.
Cost Estimate For CLIN 2

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1
Principal	Program Manager	$176.13		$0.00
Program Director	Program Manager	$176.13	1.0	$176.13
Task Manager	Scientist IV	$150.96	1.0	$150.96
Field Manager	Engineer IV	$136.45		$0.00
Field Professional	Scientist III	$121.54	6.0	$729.24
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00
Principal/Senior Biologist	Scientist IV	$150.96		$0.00
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54		$0.00
Senior Hydrogeologist	Scientist IV	$150.96		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00
Field Associate	Analyst/Planner II	$83.89		$0.00
Field Observer	Scientist I	$73.64		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00
Senior Technician	Technician II	$68.72		$0.00
Junior Technician	Technician I	$59.04		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16		$0.00
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00
Total Labor			8.0	$1,056.33

Tetra Tech EM Inc.
Cost Estimate For CLIN 2

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1
Other Direct Cost		Rate	Units	
Computer Usage	Per Hour	$2.86	8.0	$22.88
Reproduction	Per Copy	$0.10		$0.00
Fed-ex/Shipping	Per Package	$12.50		$0.00
Total ODCs				$22.88
Travel				
Airfare		$0.00		$0.00
Hotel		$0.00		$0.00
Per Diem		$0.00		$0.00
Car Rental		$0.00		$0.00
Mileage		$0.00		$0.00
Parking		$0.00		$0.00
Other Ground		$0.00		$0.00
Total Travel				$0.00
G&A on Travel & ODCs		16.01%		$3.66
Toal Estimated Cost Clin 2				$1,082.87

Tetra Tech EM Inc.
Cost Estimate For CLIN 3

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	1.0	$176.13	$181.41	1.0	$181.41	$186.85	1.0	$186.85
Task Manager	Scientist IV	$150.96	1.0	$150.96	$155.49	1.0	$155.49	$160.15	1.0	$160.15
Field Manager	Engineer IV	$136.45		$0.00	$140.54		$0.00	$144.76		$0.00
Field Professional	Scientist III	$121.54	6.0	$729.24	$125.19	6.0	$751.14	$128.95	6.0	$773.70
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54		$0.00	$125.19		$0.00	$128.95		$0.00
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89		$0.00	$86.41		$0.00	$89.00		$0.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16		$0.00	$120.67		$0.00	$124.29		$0.00
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			8.0	$1,056.33		8.0	$1,088.04		8.0	$1,120.70
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	8.0	$22.88		8	$22.88		8.0	$22.88
Reproduction	Per Copy	$0.10		$0.00						

Tetra Tech EM Inc.
Cost Estimate For CLIN 3

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Fed-ex/Shipping	Per Package	$12.50		$0.00						
Total ODCs				$22.88			$22.88			$22.88
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$3.66			$3.66			$3.66
Toal Estimated Cost Clin 3				$1,082.87			$1,114.58			$1,147.24

Tetra Tech EM Inc.
Cost Estimate For CLIN 4

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	2.0	$352.26	$181.41	2.0	$362.82	$186.85	2.0	$373.70
Task Manager	Scientist IV	$150.96	2.0	$301.92	$155.49	2.0	$310.98	$160.15	2.0	$320.30
Field Manager	Engineer IV	$136.45	4.0	$545.80	$140.54	4.0	$562.16	$144.76	4.0	$579.04
Field Professional	Scientist III	$121.54	6.0	$729.24	$125.19	6.0	$751.14	$128.95	6.0	$773.70
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54		$0.00	$125.19		$0.00	$128.95		$0.00
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	8.0	$671.12	$86.41	8.0	$691.28	$89.00	8.0	$712.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16		$0.00	$120.67		$0.00	$124.29		$0.00
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			22.0	$2,600.34		22.0	$2,678.38		22.0	$2,758.74
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	22.0	$62.92		22	$62.92		22.0	$62.92

Tetra Tech EM Inc.
Cost Estimate For CLIN 4

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Reproduction	Per Copy	$0.10		$0.00						$0.00
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1	$12.50		1	$12.50
Total ODCs				$75.42			$75.42			$75.42
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$12.07			$12.07			$12.07
Toal Estimated Cost Clin 4				$2,687.83			$2,765.87			$2,846.23

Tetra Tech EM Inc.
Cost Estimate For CLIN 5

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	2.0	$352.26	$181.41	2.0	$362.82	$186.85	2.0	$373.70
Task Manager	Scientist IV	$150.96	2.0	$301.92	$155.49	2.0	$310.98	$160.15	2.0	$320.30
Field Manager	Engineer IV	$136.45	4.0	$545.80	$140.54	4.0	$562.16	$144.76	4.0	$579.04
Field Professional	Scientist III	$121.54	6.0	$729.24	$125.19	6.0	$751.14	$128.95	6.0	$773.70
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54		$0.00	$125.19		$0.00	$128.95		$0.00
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	8.0	$671.12	$86.41	8.0	$691.28	$89.00	8.0	$712.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16		$0.00	$120.67		$0.00	$124.29		$0.00
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			22.0	$2,600.34		22.0	$2,678.38		22.0	$2,758.74
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	22.0	$62.92		22	$62.92		22.0	$62.92

Tetra Tech EM Inc.
Cost Estimate For CLIN 5

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Reproduction	Per Copy	$0.10		$0.00						$0.00
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1	$12.50		1	$12.50
Total ODCs				$75.42			$75.42			$75.42
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$12.07			$12.07			$12.07
Toal Estimated Cost Clin 5				$2,687.83			$2,765.87			$2,846.23

Tetra Tech EM Inc.
Cost Estimate For CLIN 6

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	2.0	$352.26	$181.41	2.0	$362.82	$186.85	2.0	$373.70
Task Manager	Scientist IV	$150.96	2.0	$301.92	$155.49	2.0	$310.98	$160.15	2.0	$320.30
Field Manager	Engineer IV	$136.45	4.0	$545.80	$140.54	4.0	$562.16	$144.76	4.0	$579.04
Field Professional	Scientist III	$121.54	6.0	$729.24	$125.19	6.0	$751.14	$128.95	6.0	$773.70
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54		$0.00	$125.19		$0.00	$128.95		$0.00
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	8.0	$671.12	$86.41	8.0	$691.28	$89.00	8.0	$712.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16		$0.00	$120.67		$0.00	$124.29		$0.00
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			22.0	$2,600.34		22.0	$2,678.38		22.0	$2,758.74
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	22.0	$62.92		22	$62.92		22.0	$62.92

Tetra Tech EM Inc.
Cost Estimate For CLIN 6

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Reproduction	Per Copy	$0.10		$0.00						$0.00
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1	$12.50		1	$12.50
Total ODCs				$75.42			$75.42			$75.42
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$12.07			$12.07			$12.07
Toal Estimated Cost Clin 6				$2,687.83			$2,765.87			$2,846.23

Tetra Tech EM Inc.
Cost Estimate For CLIN 7

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	6.0	$1,056.78	$181.41	6.0	$1,088.46	$186.85	6.0	$1,121.10
Task Manager	Scientist IV	$150.96	6.0	$905.76	$155.49	6.0	$932.94	$160.15	6.0	$960.90
Field Manager	Engineer IV	$136.45	32.0	$4,366.40	$140.54	32.0	$4,497.28	$144.76	32.0	$4,632.32
Field Professional	Scientist III	$121.54	32.0	$3,889.28	$125.19	32.0	$4,006.08	$128.95	32.0	$4,126.40
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96	4.0	$603.84	$155.49	4.0	$621.96	$160.15	4.0	$640.60
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54	4.0	$486.16	$125.19	4.0	$500.76	$128.95	4.0	$515.80
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	32.0	$2,684.48	$86.41	32.0	$2,765.12	$89.00	32.0	$2,848.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16	4.0	$468.64	$120.67	4.0	$482.68	$124.29	4.0	$497.16
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			120.0	$14,461.34		120.0	$14,895.28		120.0	$15,342.28
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	120.0	$343.20		120	$343.20		120.0	$343.20
Reproduction	Per Copy	$0.10	1,500.0	$150.00		1,500.0	$150.00		1,500.0	$150.00

Tetra Tech EM Inc.
Cost Estimate For CLIN 7

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1.0	$12.50		1.0	$12.50
Total ODCs				$505.70			$505.70			$505.70
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$80.96			$80.96			$80.96
Toal Estimated Cost Clin 7				$15,048.00			$15,481.94			$15,928.94

Tetra Tech EM Inc.
Cost Estimate For CLIN 8

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	6.0	$1,056.78	$181.41	6.0	$1,088.46	$186.85	6.0	$1,121.10
Task Manager	Scientist IV	$150.96	6.0	$905.76	$155.49	6.0	$932.94	$160.15	6.0	$960.90
Field Manager	Engineer IV	$136.45	32.0	$4,366.40	$140.54	32.0	$4,497.28	$144.76	32.0	$4,632.32
Field Professional	Scientist III	$121.54	32.0	$3,889.28	$125.19	32.0	$4,006.08	$128.95	32.0	$4,126.40
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96	4.0	$603.84	$155.49	4.0	$621.96	$160.15	4.0	$640.60
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54	4.0	$486.16	$125.19	4.0	$500.76	$128.95	4.0	$515.80
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	32.0	$2,684.48	$86.41	32.0	$2,765.12	$89.00	32.0	$2,848.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16	4.0	$468.64	$120.67	4.0	$482.68	$124.29	4.0	$497.16
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			120.0	$14,461.34		120.0	$14,895.28		120.0	$15,342.28
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	120.0	$343.20		120	$343.20		120.0	$343.20
Reproduction	Per Copy	$0.10	1,500.0	$150.00		1,500.0	$150.00		1,500.0	$150.00
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1.0	$12.50		1.0	$12.50
Total ODCs				$505.70			$505.70			$505.70

Tetra Tech EM Inc.
Cost Estimate For CLIN 8

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$80.96			$80.96			$80.96
Toal Estimated Cost Clin 8				$15,048.00			$15,481.94			$15,928.94

Tetra Tech EM Inc.
Cost Estimate For CLIN 9

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	6.0	$1,056.78	$181.41	6.0	$1,088.46	$186.85	6.0	$1,121.10
Task Manager	Scientist IV	$150.96	6.0	$905.76	$155.49	6.0	$932.94	$160.15	6.0	$960.90
Field Manager	Engineer IV	$136.45	32.0	$4,366.40	$140.54	32.0	$4,497.28	$144.76	32.0	$4,632.32
Field Professional	Scientist III	$121.54	32.0	$3,889.28	$125.19	32.0	$4,006.08	$128.95	32.0	$4,126.40
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96	4.0	$603.84	$155.49	4.0	$621.96	$160.15	4.0	$640.60
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54	4.0	$486.16	$125.19	4.0	$500.76	$128.95	4.0	$515.80
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	32.0	$2,684.48	$86.41	32.0	$2,765.12	$89.00	32.0	$2,848.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16	4.0	$468.64	$120.67	4.0	$482.68	$124.29	4.0	$497.16
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			120.0	$14,461.34		120.0	$14,895.28		120.0	$15,342.28
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	120.0	$343.20		120	$343.20		120.0	$343.20
Reproduction	Per Copy	$0.10	1,500.0	$150.00		1,500.0	$150.00		1,500.0	$150.00
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1.0	$12.50		1.0	$12.50
Total ODCs				$505.70			$505.70			$505.70

Tetra Tech EM Inc.
Cost Estimate For CLIN 9

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$80.96			$80.96			$80.96
Toal Estimated Cost Clin 9				$15,048.00			$15,481.94			$15,928.94

Tetra Tech EM Inc.
Cost Estimate For CLIN 10

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	6.0	$1,056.78	$181.41	6.0	$1,088.46	$186.85	6.0	$1,121.10
Task Manager	Scientist IV	$150.96	6.0	$905.76	$155.49	6.0	$932.94	$160.15	6.0	$960.90
Field Manager	Engineer IV	$136.45	36.0	$4,912.20	$140.54	36.0	$5,059.44	$144.76	36.0	$5,211.36
Field Professional	Scientist III	$121.54	56.0	$6,806.24	$125.19	56.0	$7,010.64	$128.95	56.0	$7,221.20
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96	6.0	$905.76	$155.49	6.0	$932.94	$160.15	6.0	$960.90
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54	6.0	$729.24	$125.19	6.0	$751.14	$128.95	6.0	$773.70
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	56.0	$4,697.84	$86.41	56.0	$4,838.96	$89.00	56.0	$4,984.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16	4.0	$468.64	$120.67	4.0	$482.68	$124.29	4.0	$497.16
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			176.0	$20,482.46		176.0	$21,097.20		176.0	$21,730.32
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	176.0	$503.36		176	$503.36		176.0	$503.36
Reproduction	Per Copy	$0.10	1,500.0	$150.00		1,500.0	$150.00		1,500.0	$150.00
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1.0	$12.50		1.0	$12.50
Total ODCs				$665.86			$665.86			$665.86

Tetra Tech EM Inc.
Cost Estimate For CLIN 10

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Travel										
Airfare	New Jersey RT	$500.00	2.0	$1,000.00		2.0	$1,000.00		2.0	$1,000.00
Hotel		$88.55	4.0	$354.20		4.0	$354.20		4.0	$354.20
Per Diem		$46.00	6.0	$276.00		6.0	$276.00		6.0	$276.00
Car Rental		$65.00	3	$195.00		3	$195.00		3	$195.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$1,825.20			$1,825.20			$1,825.20
G&A on Travel & ODCs		16.01%		$398.82			$398.82			$398.82
Toal Estimated Cost Clin 10				$23,372.34			$23,987.08			$24,620.20

Tetra Tech EM Inc.
Cost Estimate For CLIN 11

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	6.0	$1,056.78	$181.41	6.0	$1,088.46	$186.85	6.0	$1,121.10
Task Manager	Scientist IV	$150.96	6.0	$905.76	$155.49	6.0	$932.94	$160.15	6.0	$960.90
Field Manager	Engineer IV	$136.45	36.0	$4,912.20	$140.54	36.0	$5,059.44	$144.76	36.0	$5,211.36
Field Professional	Scientist III	$121.54	56.0	$6,806.24	$125.19	56.0	$7,010.64	$128.95	56.0	$7,221.20
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96	6.0	$905.76	$155.49	6.0	$932.94	$160.15	6.0	$960.90
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54	6.0	$729.24	$125.19	6.0	$751.14	$128.95	6.0	$773.70
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	56.0	$4,697.84	$86.41	56.0	$4,838.96	$89.00	56.0	$4,984.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16	4.0	$468.64	$120.67	4.0	$482.68	$124.29	4.0	$497.16
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			176.0	$20,482.46		176.0	$21,097.20		176.0	$21,730.32
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	176.0	$503.36		176	$503.36		176.0	$503.36
Reproduction	Per Copy	$0.10	1,500.0	$150.00		1,500.0	$150.00		1,500.0	$150.00
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1.0	$12.50		1.0	$12.50
Total ODCs				$665.86			$665.86			$665.86

Tetra Tech EM Inc.
Cost Estimate For CLIN 11

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Travel										
Airfare	New Jersey RT	$500.00	2.0	$1,000.00		2.0	$1,000.00		2.0	$1,000.00
Hotel		$88.55	4.0	$354.20		4.0	$354.20		4.0	$354.20
Per Diem		$46.00	6.0	$276.00		6.0	$276.00		6.0	$276.00
Car Rental		$65.00	3	$195.00		3	$195.00		3	$195.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$1,825.20			$1,825.20			$1,825.20
G&A on Travel & ODCs		16.01%		$398.82			$398.82			$398.82
Toal Estimated Cost Clin 11				$23,372.34			$23,987.08			$24,620.20

Tetra Tech EM Inc.
Cost Estimate For CLIN 12

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	6.0	$1,056.78	$181.41	6.0	$1,088.46	$186.85	6.0	$1,121.10
Task Manager	Scientist IV	$150.96	6.0	$905.76	$155.49	6.0	$932.94	$160.15	6.0	$960.90
Field Manager	Engineer IV	$136.45	36.0	$4,912.20	$140.54	36.0	$5,059.44	$144.76	36.0	$5,211.36
Field Professional	Scientist III	$121.54	56.0	$6,806.24	$125.19	56.0	$7,010.64	$128.95	56.0	$7,221.20
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96	6.0	$905.76	$155.49	6.0	$932.94	$160.15	6.0	$960.90
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54	6.0	$729.24	$125.19	6.0	$751.14	$128.95	6.0	$773.70
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	56.0	$4,697.84	$86.41	56.0	$4,838.96	$89.00	56.0	$4,984.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16	4.0	$468.64	$120.67	4.0	$482.68	$124.29	4.0	$497.16
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			176.0	$20,482.46		176.0	$21,097.20		176.0	$21,730.32
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	176.0	$503.36		176	$503.36		176.0	$503.36
Reproduction	Per Copy	$0.10	1,500.0	$150.00		1,500.0	$150.00		1,500.0	$150.00
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1.0	$12.50		1.0	$12.50
Total ODCs				$665.86			$665.86			$665.86

Tetra Tech EM Inc.
Cost Estimate For CLIN 12

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Travel										
Airfare	New Jersey RT	$500.00	2.0	$1,000.00		2.0	$1,000.00		2.0	$1,000.00
Hotel		$88.55	4.0	$354.20		4.0	$354.20		4.0	$354.20
Per Diem		$46.00	6.0	$276.00		6.0	$276.00		6.0	$276.00
Car Rental		$65.00	3	$195.00		3	$195.00		3	$195.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$1,825.20			$1,825.20			$1,825.20
G&A on Travel & ODCs		16.01%		$398.82			$398.82			$398.82
Toal Estimated Cost Clin 12				$23,372.34			$23,987.08			$24,620.20

Tetra Tech EM Inc.
Cost Estimate For CLIN 13

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	2.0	$352.26	$181.41	2.0	$362.82	$186.85	2.0	$373.70
Task Manager	Scientist IV	$150.96	2.0	$301.92	$155.49	2.0	$310.98	$160.15	2.0	$320.30
Field Manager	Engineer IV	$136.45	8.0	$1,091.60	$140.54	8.0	$1,124.32	$144.76	8.0	$1,158.08
Field Professional	Scientist III	$121.54	16.0	$1,944.64	$125.19	16.0	$2,003.04	$128.95	16.0	$2,063.20
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54		$0.00	$125.19		$0.00	$128.95		$0.00
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	16.0	$1,342.24	$86.41	16.0	$1,382.56	$89.00	16.0	$1,424.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16		$0.00	$120.67		$0.00	$124.29		$0.00
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			44.0	$5,032.66		44.0	$5,183.72		44.0	$5,339.28
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	44.0	$125.84		44.0	$125.84		44.0	$125.84
Reproduction	Per Copy	$0.10		$0.00			$0.00			$0.00

Tetra Tech EM Inc.
Cost Estimate For CLIN 13

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1.0	$12.50		1.0	$12.50
Total ODCs				$138.34			$138.34			$138.34
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$22.15			$22.15			$22.15
Toal Estimated Cost Clin 13				$5,193.15			$5,344.21			$5,499.77

Tetra Tech EM Inc.
Cost Estimate For CLIN 14

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	24.0	$4,227.12	$181.41	$24.00	$4,353.84	$186.85	$24.00	$4,484.40
Task Manager	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Field Manager	Engineer IV	$136.45		$0.00	$140.54		$0.00	$144.76		$0.00
Field Professional	Scientist III	$121.54		$0.00	$125.19		$0.00	$128.95		$0.00
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54		$0.00	$125.19		$0.00	$128.95		$0.00
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89		$0.00	$86.41		$0.00	$89.00		$0.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16		$0.00	$120.67		$0.00	$124.29		$0.00
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			24.0	$4,227.12		24.0	$4,353.84		24.0	$4,484.40
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	24.0	$68.64		24	$68.64		24.0	$68.64
Reproduction	Per Copy	$0.10		$0.00						

Tetra Tech EM Inc.
Cost Estimate For CLIN 14

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Fed-ex/Shipping	Per Package	$12.50		$0.00			$0.00			
Total ODCs				$68.64			$68.64			$68.64
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$10.99			$10.99			$10.99
Toal Estimated Cost Clin 14				$4,306.75			$4,433.47			$4,564.03

Tetra Tech EM Inc.
Cost Estimate For CLIN 15

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	24.0	$4,227.12	$181.41	24.0	$4,353.84	$186.85	24.0	$4,484.40
Task Manager	Scientist IV	$150.96	24.0	$3,623.04	$155.49	24.0	$3,731.76	$160.15	24.0	$3,843.60
Field Manager	Engineer IV	$136.45	300.0	$40,935.00	$140.54	300.0	$42,162.00	$144.76	300.0	$43,428.00
Field Professional	Scientist III	$121.54	256.0	$31,114.24	$125.19	256.0	$32,048.64	$128.95	256.0	$33,011.20
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96	16.0	$2,415.36	$155.49	16.0	$2,487.84	$160.15	16.0	$2,562.40
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54	16.0	$1,944.64	$125.19	16.0	$2,003.04	$128.95	16.0	$2,063.20
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	280.0	$23,489.20	$86.41	280.0	$24,194.80	$89.00	280.0	$24,920.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16	24.0	$2,811.84	$120.67	24.0	$2,896.08	$124.29	24.0	$2,982.96
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			940.0	$110,560.44		940.0	$113,878.00		940.0	$117,295.76
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	940.0	$2,688.40		940.0	$2,688.40		940.0	$2,688.40
Reproduction	Per Copy	$0.10	10,000.0	$1,000.00		10,000.0	$1,000.00		10,000.0	$1,000.00
Fed-ex/Shipping	Per Package	$12.50	2.0	$25.00		2.0	$25.00		2.0	$25.00
Total ODCs				$3,713.40			$3,713.40			$3,713.40

Tetra Tech EM Inc.
Cost Estimate For CLIN 15

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Travel										
Airfare	New Jersey RT	$500.00	5.0	$2,500.00		5.0	$2,500.00		5.0	$2,500.00
Hotel		$88.55	10.0	$885.50		10.0	$885.50		10.0	$885.50
Per Diem		$46.00	15.0	$690.00		15.0	$690.00		15.0	$690.00
Car Rental		$65.00	9	$585.00		9	$585.00		9	$585.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$4,660.50			$4,660.50			$4,660.50
G&A on Travel & ODCs		16.01%		$1,340.66			$1,340.66			$1,340.66
Toal Estimated Cost Clin 15				$120,275.00			$123,592.56			$127,010.32

TETRA TECH

Roger Argus
President, EMI Division

June 27, 2013

Judson Cross
Purchase Bureau
Division of Purchase and Property
Department of the Treasury
33 West State St. P.O. Box 230
Trenton, NJ 08625-0230

Subject: Technical Quote to Response to the Request for Quote: 787923S – Environmental Assessment Field Contractors for Environmental and Historic Preservation Reviews, New Jersey's CDBG-DR Grant Program

Dear Mr. Cross,

Tetra Tech, Inc., (Tetra Tech) is pleased to submit this technical proposal in response to the above-referenced Request for Quote: 787923S – Environmental Assessment Field Contractors for Environmental and Historic Preservation Reviews, New Jersey's CDBG-DR Grant Program. This response was prepared in accordance with the RFQ dated June 12, 2013, as clarified by Modification #1 and 2, issued on June 17 and June 19, 2013, respectively.

Tetra Tech understands that the New Jersey Department of Environmental Protection is seeking firms to provide technical environmental and historic preservation reviews in support of the Superstorm Sandy CDBG-DR program. Tetra Tech has a rich history of providing these services throughout New Jersey and in fact across the country. Our team is prepared to provide its collective knowledge; skill and expertise to ensure that proper documentation of these reviews are conducted in accordance with HUD and FEMA policy.

Tetra Tech has included our business license, as well as all other forms required by the RFQ in an attachment to the Cost Quote submitted under separate cover.

Tetra Tech confirms that there is no record of substandard work within the past five years.

Tetra Tech confirms it has not engaged in any unethical practices within the past five years.

Tetra Tech confirms its understanding that, if awarded the Contract, we are responsible completing for the entire Contract, including payment of any and all charges resulting from the Contract.

Tetra Tech, Inc.
1000 The American Rd. | Morris Plains, NJ 07950
Tel 973.630.8041 | Fax 973.630.8304
www.tetratech.com

Lastly, in accordance with Section 4.1.12.2 of the RFQ, Tetra Tech has chosen not to bid on the program management aspect of this program and therefore expects no conflict of interest with our role as an environmental assessment field contractor in support of this program.

By my signature below, I assert that I am authorized to legally bind Tetra Tech in submitting this offer. Thank you, and should you or the evaluation panel have any additional questions, or require clarification of our proposal, please contact me directly at (619) 525-7188 or roger.argus@tetratech.com.

Sincerely,

Roger Argus
President – EMI Division

cc: Andrew Mazzeo, Northeast Operations Manager
John Bock, Proposed Project Manager

TECHNICAL QUOTE

Solicitation For Environmental Assessment Field Contractors

For Environmental and Historic Preservation Reviews New Jersey's CDBG-DR Grant Program

RFQ787923S

June 27, 2013

Prepared by:

TETRA TECH

1000 The American Road
Morris Plain, NJ 07950
Tel: 973.630.8000
Fax: 973.630.8304

Tax ID: [redacted]

Roger Argus
President – EMI Division
Roger.Argus@tetratech.com
1230 Columbia St.
Ste. 1000
San Diego, CA 92101
Tel: 619.525.7188
Fax: 619.525.7186

www.tetratech.com

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EXHIBITS

APPENDICES

Tab 1. Management Overview

Tetra Tech team members live and work in New Jersey and were in the state on that day in October 2012 when Superstorm Sandy hit New Jersey and the surrounding states. Many of them personally experienced the storm's wrath, destruction, and devastation. Through their daily work in the State of New Jersey, at the municipal, county, and state level, our Team members have come to understand the unique and complex challenges that lie in assisting the New Jersey Department of Environmental (DEP), and the residential property owners directly impacted from the storm through the implementation of the Environmental and Historic Preservation Review process associated with the New Jersey Community Development Block Grant Disaster Recovery (CDBG-DR) Program as defined in the RFQ787923S issued by the State of New Jersey on June 12, 2013. Tetra Tech and its small business team firm, Yu & Associates offer the state the requisite expertise, experience and most importantly, personnel resource capacity to provide the DEP with timely and high quality environmental review services. We acutely understand that that the environmental review record and documentation is a necessary and important aspect of this CDBG-DR program and its successful completion is critical to the State's ability to disburse grant funds to affected homeowners and communities.

Tetra Tech Team in New Jersey

- *Tetra Tech, Inc.*
- *Yu& Associates, Inc.*

Prior to preparing this response, the Tetra Tech team reviewed the following documents:

- DR-4086 issued by President Obama on October 30, 2012, and the subsequent amendments
- Executive Order 104 issued by Governor Chris Christie
- Request for Program Manager Contractor and Environmental Field Contractors for Environmental and Historic Preservation Reviews, New Jersey's CDBG-DR Grant Program (RFQ787923S)
- RFQ787923S Addenda #1 and #2 issued on June 17, 2013, and June 19,2013, respectively
- New Jersey Department of Community Affairs Community Development Block Grant Disaster Recovery Action Plan (Action Plan)

Based on information gathered during this document review and our Team's previous experience working in New Jersey, on other CDBG-DR programs, on other housing disaster recovery efforts, and on recovery efforts from other disasters, the Tetra Tech team is confident that we can successfully implement the Environmental Assessment Field (EAF) Contractor services for New Jersey.

Below is a brief overview of the team's understanding of the project as it is defined in the RFQ document.

DEP has been identified as the lead agency to oversee compliance with the HUD and FEMA environmental and historic preservation review requirements for individual projects under the CDBG-DR program and will be the organization that our team will report to during the contract activity period for the project. The project has an aggressive timeline, in part based on the requirement that all CDBG-DR grant monies be expended within two years of the date of the Grant Agreement between the New Jersey Department of Community Affairs (DCA) and HUD.

The reviews conducted under the applicable regulations will address the various anticipated programs: Neighborhood Enhancement Pilot Program; Fund for Rehabilitation of Small Rental Properties; Homeowner Reconstruction, Rehabilitation, Elevation, and Mitigation (RREM); Supportive Services Program; Direct Loans for Impacted Small Businesses; Grants/Forgivable Loans for Small Businesses; Neighborhood and Community Revitalization. These programs will provide financial assistance to communities in New Jersey that have been impacted by the Superstorm.

Our Team's initial step will be to deploy the Key Resource Staff to Trenton, New Jersey, within 3 days from the execution of the contract. These Key Resource Staff members will immediately begin to provide services to DEP staff and launch work under this contract.

Tetra Tech Team To Be In Trenton for Project Launch

Project Manager – John Bock
Quality Assurance Manager – Andy Mazzeo
Task Managers – Cliff Jarman
Field Manager – Derek Farmer
Field Professional – Andrew Leung (Yu and Associates)

Throughout the entire project, the Team will implement a Quality Control and Quality Assurance (QA/QC) process to identify any issues with compliance and work to resolve them.

The Tetra Tech team understands the importance and requirement of providing comprehensive and timely information to our clients through various forms of communication. Throughout this program, the Project Manager will provide timely reports on the progress of the project (both weekly and monthly), the project milestones and the budget of the project. Tetra Tech also anticipates that weekly project conference calls may be required to client coordination needs. Our team will also meet with DEP, appropriate HUD and FEMA representatives, and any other stakeholders throughout the contract period.

The Tetra Team has prepared the following discussion to respond to the technical quote requirements outlined in the RFQ document based on our assertion of being a **Level 3** provider of environmental review services, as defined in the RFQ

1.1 Project Launch Meeting (3.2.1)

Tetra Tech will bring the following staff to the project launch meeting within 3 business days of contract award: Project Manager, Quality Assurance Manager, Task Manager, Field Manager, and subcontractor representative. Tetra Tech will identify and track any action items that come out of that meeting. The action item tracking sheet (identifying responsible parties and deadlines) will be submitted with the weekly progress report, with DEP's approval. If desired, Tetra Tech would also provide draft meeting minutes within 3 business days of the project launch meeting.

1.2 Environmental Review Process (3.2.2)

As part of the initial review of the individual project materials and Task Orders, Tetra Tech will determine the assessment requirements and necessary steps to complete the contracted scope. The Project Manager will assign each Task Order to a Task Manager, and together they will identify the additional team members needed to support the scope and schedule requirements.

1.3 Desktop Assessments (3.2.3)

Tetra Tech will assign a Field Professional or Field Associate to complete the desktop assessment for an individual application. This assessment will utilize the steps and tools identified in the RFQ Scope of Work. Tetra Tech will prepare a memorandum documenting the assessment's findings, unless another deliverable format is preferred by DEP.

1.4 Development Environmental Review Record (3.2.4)

For exempt activities, Categorical Exclusions Not Subject To 24 CFR Part 58.5 (CENST) activities, and Categorical Exclusions Subject To 24 CFR Part 58.5 (CEST) activities, Tetra Tech will assign a Field Professional or Field Associate to complete the required materials for the Environmental Review Record (ERR) Packet.

For activities requiring preparation of an Environmental Assessment (EA), Tetra Tech will assign a Field Manager to oversee and coordinate completion of the EA. The Project Manager and Field Manager will identify the additional team members needed to support the scope and schedule requirements.

The below discussion addresses the ERR levels for each of the four activity types anticipated under this contract.

1.4.1 Exempt Activities

For exempt activities, Tetra Tech will prepare the required ERR Packet materials outlined in Exhibit B of the RFQ. The 58.6 Checklist addresses Flood Disaster Protection Act, the National Flood Insurance Reform Act, the Coastal Barrier Resources Act, and Runway Clear Zones. This packet will be submitted for DEP review. Following receipt of any comments, Tetra Tech will coordinate with DEP regarding the disposition of those comments and prepare a final ERR Packet.

Tetra Tech will provide electronic copies of the packet.

The anticipated schedule for preparation of this ERR Packet is:

- Draft Packet – within three business days of the notice to proceed
- Final Packet – within two business days of receiving comments on the draft packet

1.4.2 Categorical Exclusions Not Subject To 24 CFR Part 58.5 Activities

For CENST activities, Tetra Tech will prepare the required ERR Packet materials outlined in Exhibit B of the RFQ. This packet will be submitted for DEP review. Following receipt of any comments, Tetra Tech will coordinate with DEP regarding the disposition of those comments and prepare a final ERR Packet.

Tetra Tech will provide electronic copies of the packet.

The anticipated schedule for preparation of this CENST Packet is:

- Draft Packet – within three business days of the notice to proceed
- Final Packet – within two business days of receiving comments on the draft packet

1.4.3 Categorical Exclusions Subject To 24 CFR Part 58.5 Activities

For CEST activities, Tetra Tech will prepare the required ERR Packet materials outlined in Exhibit B of the RFQ.

This will include a Statutory Checklist in compliance with NEPA and HUD's NEPA requirements (24 CFR Parts 50 and 58). The Statutory Checklist will document the NEPA findings and will address HUD's specific requirements for the following topics:

- Historic Preservation
- Floodplain Management
- Wetlands Protection
- Coastal Zone Management Act
- Sole Source Aquifers
- Endangered Species Act
- Wild and Scenic Rivers Act
- Air Quality
- Farmland Protection Policy Act

- Environmental Justice
- HUD Environmental Standards
- Noise Abatement and Control
- Toxic Chemicals and Gases, Hazardous Materials, Contamination, and Radioactive Substances
- Siting of HUD-Assisted Projects near Hazardous Operations
- Airport Clear Zones and Accident Potential Zones
- Fish and Wildlife Coordination Act
- Magnuson-Stevens Fishery Conservation and Management Act

Following receipt of comments on the draft CEST Packet, Tetra Tech will coordinate with DEP regarding the disposition of those comments and prepare a final CEST Packet.

Tetra Tech will provide electronic copies of the draft CEST Packet and electronic and up to five (5) hard copies of the final CEST Packet.

The anticipated schedule for CEST Packet preparation is:

- Draft CEST Packet – within one week of the notice to proceed
- Draft CEST Packet comments – within one week of document submittal
- Final CEST Packet – within one week of receiving comments on the draft packet

1.4.4 Environmental Assessments

An initial step in the EA preparation process will be drafting the project description and distributing it for review and approval. By undertaking this important step, we will ensure an adequate level of detail for the environmental impact analysis and confirm a common understanding of the project features.

Tetra Tech will prepare a Draft EA in compliance with NEPA and the HUD NEPA requirements (24 CFR Parts 50 and 58). This EA will include the required ERR Packet materials outlined in Exhibit B of the RFQ. It will describe the affected environment, identify potential impacts of the project, and address the specific HUD requirements for the following topics:

- Land Development
  - Conformance with Comprehensive Plans and Zoning
  - Compatibility and Urban Impact
  - Slope
  - Soil Suitability
  - Hazardous and Nuisances including Site Safety
  - Energy Consumption
  - Noise
  - Air Quality
  - Environmental Design
- Socioeconomic
  - Demographic Character Changes
  - Displacement
  - Employment and Income Patterns
- Community Facilities and Services
  - Educational Facilities
  - Commercial Facilities

  - Health Care
  - Social Services
  - Solid Waste
  - Waste Water
  - Storm Water
  - Water Supply
  - Public Safety – Police
  - Public Safety – Fire
  - Public Safety – Emergency Medical
  - Open Space, Recreation, and Cultural Facilities
  - Transportation
  - Water Resources
  - Surface Water
  - Unique Natural Resources and Agricultural Lands
  - Vegetation and Wildlife
- Other Factors
  - Flood Disaster Protection Act
  - Coastal Barrier Resources Act/Coastal Barrier Improvement Act
  - Airport Runway Clear Zone or Clear Zone Disclosure

The EA also will address the Statutory Checklist topics.

Following receipt of comments on the Draft EA, Tetra Tech will coordinate with DEP regarding the disposition of those comments and prepare a Final EA.

Tetra Tech will provide electronic copies of the Draft EA and electronic and up to five (5) hard copies of the Final EA.

The anticipated schedule for EA preparation is:

- Draft EA – within six weeks of the notice to proceed
- Draft EA comments – within two weeks of document submittal
- Final EA – within one week of receiving comments on the Draft EA

1.5 Compliance with Section 106 Reviews (3.2.5)

Tetra Tech's architectural historian will coordinate compliance under Section 106 of the National Historic Preservation Act, in accordance with the steps outlined in the RFQ Scope of Work. In addition to the standard regulatory directives, Tetra Tech's historic review activities will be guided by the Programmatic Agreement (PA) executed in 2013. Tetra Tech will coordinate with DEP at the outset of the Section 106 review and at important milestones during that review, such as the determination of project activity coverage under the PA's Tier I and Tier II Allowances. Tetra Tech's understanding of the PA requirements will ensure that the directed activities are conducted in a turn-key approach, without the need for an undue level of DEP oversight.

1.6 Coordination for Permits and/or Compliance Resolution (3.2.6)

Tetra Tech will coordinate with DEP and other project stakeholders to identify the consultation, permitting, and other regulatory agency approvals needed for individual projects. Tetra Tech will assist the team with the level of support desired and warranted for the individual efforts. Where specific direction on the consultation requirements, such as those detailed in the PA, are not in place, Tetra Tech will work with the team to identify the approach that is appropriate

for the subject proposed action. Where those agency coordination requirements are deemed mitigation measures for purposes of the ERR, Tetra Tech will develop and secure team approval of the language to be incorporated.

1.7 Information Management (3.2.7)

Tetra Tech will provide professional assistance to New Jersey in managing the information required to take care of the business of government in an effective and cost-efficient manner. Tetra Tech will accomplish this goal by providing efficient, effective, and economical management of environmental review assessment and determination data, records and information to ensure that information is available when and where it is needed, in an organized and efficient manner, and in a secure environment.

Our regulatory experience with numerous federal programs has provided Tetra Tech with a firm understanding the regulatory requirements associated with data and information management. Additionally, our experience with information management and analysis related to hurricanes, tropical storms, and similar natural disasters will be of vital importance for supporting the development of the information management needs for this project.

Tetra Tech's program will manage and control information throughout their life cycle, from their creation and distribution, through their filing and use, and ultimately to their final disposition or transfer back to the state for permanent retention.

The sections below demonstrate our understanding and knowledge of, approach to, and corporate capabilities to support the information management requirements of this Program.

1.7.1 Information Management Plan

At the onset of the project, Tetra Tech will develop an information management plan that will include policies, procedures, and guidelines for short and long term housing of physical documents, emails, correspondence, and electronic images for all site specific environmental assessment data. Tetra Tech's plan will make retrieval of information more efficient through effective management of paper records systems and through cost-effective and efficient implementation of non-paper systems, such as electronic document imaging. Additionally, Tetra Tech's plan will ensure compliance with legal retention requirements. Tetra Tech will appoint an Information Manager with considerable experience in managing information, data and records to lead this program and develop the information management plan. The Information Manager will be supported by a team of individuals with expertise in administration, finance, environmental, and information management. The Tetra Tech information management team will make every effort to keep themselves educated and informed so that their actions are consistent with law and best practices.

Elements of the Information Management Plan will include, but not limited to:

- Compliance with state laws, regulations, and policies
- Data inventory and archiving
- Data retention and disposition
- Data storage
- Data preservation principles
- Data system design, including creation and maintenance
- Data filing, indexing, and retrieval equipment
- storage, indexing, and retrieval equipment
- Electronic recordkeeping requirements and guidelines
- Data protection planning and disaster planning and recovery

- Training for individuals who create, store, retrieve, or dispose of data

1.7.2 Policies, Procedures and Guidelines

Tetra Tech will establish policies and procedures for this program to ensure that electronic and hard copies of documents, data, and records are retained and accessible as long as needed. Tetra Tech's Information Management Plan will include objectives for electronic and non-electronic records management as well as responsibilities and authorities of its information management team.

Tetra Tech policies and procedures developed for this program will include provisions for:

- File naming
- Scheduling the retention and disposition of all electronic and non-electronic data, as well as related documentation and indexes, in accordance with contract and NJ Office of Information Technology (NJOIT) requirements
- Establishing procedures for copying, formatting, and other necessary maintenance to ensure the retention and usability of the records throughout their authorized life cycle
- Transferring of electronic and non-electronic records, documentation, and indexes to the state archives at the time specified in the records retention schedule
- Destruction of electronic data in accordance with contract and NJOIT requirements

1.7.3 Design and implementation of specialized system for managing documents

Tetra Tech's data management system will have appropriate security in place to protect information that is confidential or exempt from disclosure, but also be capable of integrating with the State's MIS systems. All spatial data acquisition, development, and output will follow DEP's published Digital Data Standards and will be in a format that is compatible for import into and use of this data within the DEP and NJOIT GIS systems.

The functionality of the Tetra Tech system will be designed to facilitate workflow. Features of the Tetra Tech system will include: capture of electronic records, organizing and indexing of documents, storage management (data retention in accordance with set schedules), search and retrieval tools to access the documents, automated reporting, and other functionality designed to ensure the appropriate maintenance, accessibility, and security of records for as long as required. When providing access to or destroying records containing confidential or exempt information, Tetra Tech will take the necessary steps to prevent unauthorized access to or use of the exempt information.

1.8 Field Assessments (3.2.8)

Upon receipt of a Task Order from the State Contract Manager/Program Manager, Tetra Tech will conduct a basic visual site assessment to photograph the property for purposes of the Section 106 review and documentation. Prior to conducting the visual site inspection, Tetra Tech will review available environmental files and environmental database information. Tetra Tech will identify current and prior uses of the property to the extent that information is available through documents on file with the State, municipal, and county offices, aerial photographs and/or historical fire insurance maps. Identification of prior land use on adjoining properties will be performed only to the extent that operations are evident on historical documents reviewed in connection with the subject property. Tetra Tech will conduct a site visit to identify and photograph obvious visual signs of environmental impact. It is assumed that Tetra Tech will be provided access to all properties being assessed. Limitations due to pooled water, cover vegetation, storage, or debris, snow cover, etc. will be noted during the visual site assessment.

Potential environmental impacts from other properties that do not adjoin the subject properties will be assessed based on commercial database reports. Tetra Tech will document evidence of noxious odors, locations of refuse or debris,

discolored or stained areas, transformers, storage tanks, waste water, air emission discharge locations, drum storage areas and evidence of subsurface structures, such as underground storage tanks and septic systems. For site specific environmental assessments or a Tiered Environmental Assessment, Tetra Tech will conduct the site reconnaissance using HUD form 4128 (Environmental Assessment and Compliance Findings for the Related Laws) and DEP developed field checklists

Following the assessment, Tetra Tech will provide DEP with a written report summarizing the data collection efforts and present an interpretation of the findings for each potential area of environmental concern. The report will identify areas of environmental concern (AOCs) requiring further investigation, if any, in accordance with the regulations.

1.9 Additional Levels of Assessments (3.2.9)

As mentioned in Section 3.2.8 above, Tetra Tech will provide written notification to the State Contract Manager on the findings following the conduct of a site specific reconnaissance. In this report, Tetra Tech will identify potential areas of environmental concern requiring further investigation and provide recommendations related to the additional investigation needed. Tetra Tech will prepare a work plan for conducting the additional assessment and investigation activities and submit it to DEP for review and approval. Upon approval of the Tetra Tech work plan by the State Contractor Manager, Tetra Tech will perform the additional assessment according to the approved plan.

Any recognized environmental condition (REC) identified during the assessment will require further investigation in accordance with NJ regulations. This will most likely consist of a comprehensive review of available NJDEP records/reports regarding past investigations and possible remedial activities, geophysical surveys to determine the location of the site's underground utilities and/or USTs and performance of additional soil and groundwater investigations to delineate the horizontal and vertical extents of the RECs. If a remedial action is required, based on the records reviewed and additional investigations conducted, a Licensed Site Remediation Professional (LSRP) will be required to oversee remediation of contaminated sites per the Site Remediation Reform Act (SRRA). Parties remediating sites are required to follow N.J.S.A. 58:10B-1.3b 1-9.

1.10 Environmental Investigations (3.2.10)

As mentioned above, RECs identified during the assessment may require further investigation. A general outline of the steps that may be performed as part of an environmental investigation are described below. These steps may be combined and/or contingent upon contamination encountered and the LSRP overseeing the same.

- Preliminary Assessment (PA): Similar to Phase 1 but done in accordance with NJAC 7:26E which will include a comprehensive review of NJDEP records;
- Site Investigation (SI): Geophysical survey, soil sampling, sampling of existing monitoring wells, advancement of additional monitoring wells all of which will determine contaminants of concern at the site;
- Remedial Investigation (RI): Additional soil and groundwater investigation to delineate contamination limits and begin to evaluate potential remedial strategies/actions;
- Baseline Ecological Evaluation (BEE): and determine ecological receptors and impacts determine if Ecological Risk Assessment is warranted;
- Remedial Action Work Plan (RAWP): Evaluates and proposes remedial action for site, for this project based on data reviewed to date, in addition to any active remediation (soil removal/disposal) an engineering control would most likely be the favorable remedial action whereby the proposed development improvements would be the remedial action in the form of a cap, encapsulating contaminated material on site;
- Remedial Action Report (RAR): Summary of remedial actions undertaken with supporting data;
- Construct Remedial Engineering Control: Development of proposed land development; A Restricted Use Response Action Outcome (RAO) Letter from the LSRP of record for the site would be the end deliverable.

NJDEP reserves the right to audit a case for 3 years following issuance of the RAO and may require additional investigative work based on the audit i.e. additional well advancement and monitoring. The deed restriction will also require monitoring of groundwater to verify natural attenuation of contaminants for an indeterminate amount of time.

1.11 Compliance with State and Federal Requirements (3.2.11)

The objective of the environmental assessments and field investigations is to identify possible Recognized Environmental Conditions associated with the site. To achieve this objective, the assessments performed by Tetra Tech will include a review of historical records and mapping and regulatory databases followed by visual observations of the site and surrounding properties. These assessments will be conducted in general accordance with the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process (E1527-05) and Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process (E1903–11), and in compliance with the following federal requirements: 24 CFR Part 58.30 and 36 CFR Part 800, 24 CFR Part 51, and 24 CFR Part 55, and 44 CFR Part 10.

1.12 Communications (3.2.12)

Effective public involvement can improve the content of the State's decisions and enhance the deliberative process. Public involvement also promotes democracy and civic engagement, and builds public trust in government. Tetra Tech can assist with these communication efforts by publishing public notices at milestones in the investigation. All public notices published by Tetra Tech will comply with 24 CFR Part 58 and 24 CFR Part 55. These will be sent to the local media and wire service outlets for the affected region or site. Other communications assistance that Tetra Tech can provide includes:

- Responding to public comments on Public Notices published as part of the environmental review assessment process.
- Initiating contact with State/federal Agency resulting in further consultation and/or study
- Providing more definitive comments from State/federal agency following completion and submittal of detailed study;
- Responding to comments by federal agencies;
- Responding to comments from public or private entities during the public comment period; and
- Documenting the public comments and responses into the Environmental Review Record.

Tetra Tech can also provide assistance at public meetings. Our skilled facilitators and technical experts can provide the appropriate forum for presentation and exchange of important information and to provide site updates. We will make every effort to present materials in a non-technical format and to provide opportunities for interaction with meeting attendees to ensure that the information is understood. They may include slide shows or videotape presentations.

1.13 Reporting and Documentation (3.2.13)

At the onset of the project, Tetra Tech will develop a Records Retention Plan that will include policies, procedures, and guidelines for short and long-term housing of physical documents, e-mails, correspondence, and electronic images for each site. Tetra Tech's plan will make retrieval of information more efficient through effective management of paper records systems, and through cost-effective and efficient implementation of non-paper systems, such as electronic document imaging. Additionally, Tetra Tech's plan will ensure compliance with legal retention requirements.

Tetra Tech will establish policies and procedures for this program to ensure that electronic and hard copies of documents and records are retained and accessible as long as needed. Tetra Tech's Records Retention Plan will include objectives for electronic and non-electronic records management as well as responsibilities and authorities of

its records management team. Tetra Tech policies and procedures developed for this program will include provisions for:

- File naming
- Scheduling the retention and disposition of all electronic and non-electronic records, as well as related documentation and indexes, in accordance with contract requirements
- Establishing procedures for copying, formatting, and other necessary maintenance to ensure the retention and usability of the records throughout their authorized life cycle
- Transferring of electronic and non-electronic records, documentation, and indexes to the state archives at the time specified in the records retention schedule
- Destruction of electronic records in accordance with contract requirements

1.14 Weekly Status Reports (3.2.14)

Our Teams' experience working on similar programs and other disaster recovery efforts has provided us with an understanding of the need to continually provide comprehensive project status reports to the client and the state and federal government. The Tetra Tech team will utilize the Project's MIS system and Tetra Tech's internal systems to prepare these reports. The client will review the draft contents of the proposed status report and provide comments and requirements for these reports. The State will approve the reporting process and status meeting process that the Tetra Tech team will utilize during the contract period. The Tetra Tech team will prepare and submit a written report in electronic format to the state every Monday by 0900 hours and address client comments on the report within three business days. The report will include details and information related to project progress, activities completed during the previous period, as well as areas of concern, meetings attended and outstanding issues. Tetra Tech weekly reports shall include, but not be limited to the following elements:

- Number of applications, by type of environmental assessment, by property address, including lot and block, completed under the Task Orders to include the status of each environmental assessment activity, including what additional investigative studies are required to document the environmental review;
- Status of each required application and the estimated time to complete;
- Number of properties requiring Section 106 consultation with the SHPO, including the date referred; the status of every property under consultation with the SHPO;
- Properties requiring or under consultation with any federal, State or local agency, including the status of those consultations;
- Properties requiring or under consultation with a Sub-Recipient's designated program manager to develop a Scope of Work.
- The number and identification of properties that have environmentally cleared and have completed ERRs; and the number and identification of properties have been denied and the reason for denial.

1.15 Monthly Status Reports (3.2.15)

As mentioned above, Tetra Tech understands the need to provide comprehensive project status reports to the client and has the tools and systems in place to provide these reports. The client will review the draft contents of the proposed status report and provide comments and requirements for these reports. The State will approve the reporting process and status meeting process that the Tetra Tech team will utilize during the contract period. The Tetra Tech team will prepare and submit a written report in electronic format reports to the State Contract Manager for approval by 9:00 a.m. on the second day of the following month for the previous month. Additionally, Tetra Tech will address all comments and questions generated by the State Contract Manager within seven (7) business days. The report will include details and information related to project progress, activities completed during the previous period, as well as

areas of concern, meetings attended and outstanding issues. Tetra Tech weekly reports shall include, but not be limited to the following elements:

- What tasked activities have been conducted;
- The staff that performed the task; and
- The hourly rate of staff performing those tasked activities.

Tab 2. Start-Up Team

The NJ DEP will hire a team that will provide environmental reviews in support of the implementation of the NJ CDBG-DR and FEMA HMGP programs. The reason for hiring an experienced team like the Tetra Tech team is to gain access to experts that have experience working on CDBG-DR programs, and programmatic NEPA and environmental documentation in support of large federal and state programs. In order for the NJ DEP to successfully implement the program, it will need to have the knowledge, resources and experiences that the Tetra Tech team can offer. The Tetra Tech team has identified its team members that will be designated as the Key Staff Resources. These team members will begin work in Trenton within 1 week of the contract execution. Our team's Key Staff Resources will be available to provide guidance and expertise based on their experience with similar environmental review projects throughout the country. Listed below (**Exhibit 1**) are the Tetra Tech team members associated with the key resource labor categories for this project.

EXHIBIT 1: KEY RESOURCE LABOR CATEGORY AND TEAM MEMBERS

Key Resource Labor Category	Tetra Tech Team Member
Project Manager	Tetra Tech, Inc.
Task Manager	Tetra Tech, Inc.
Field Manager	Tetra Tech, Inc.
Field Professional	Tetra Tech, Inc. & Yu & Associates
Field Associate	Tetra Tech, Inc.
Staff Assistant	Tetra Tech, Inc.

The Tetra Tech team recognizes that all documents, policies, and procedures that will be developed must be reviewed and approved by the NJ DEP prior to their implementation and release to the general public. **Exhibit 2** on the following page provides the information requested in **Tab 2** of the RFQ.

EXHIBIT 2: START-UP AND PROGRAM INTAKE

Staff Name	Labor Category	Firm	Location	% Commitment
John Bock*	Project Manager	Tetra Tech, Inc.	Oakland, CA/Morris Plains, NJ	90
Cliff Jarman*	Task Manager	Tetra Tech, Inc.	Oakland, CA	75
Craig Miller*	Task Manager	Tetra Tech, Inc.	Oakland, CA	75
Kevin Doyle*	Task Manager	Tetra Tech, Inc.	Oakland, CA	75
Jay Rose*	Task Manager	Tetra Tech, Inc.	Oakland, CA	75
Maher Itani*	Task Manager	Tetra Tech, Inc.	Arlington, VA	75
Matt Loscalzo*	Field Manager	Tetra Tech, Inc.	Boulder, CO	75
Derek Farmer*	Field Manager	Tetra Tech, Inc.	Oakland, CA	75
Emmy Andrews*	Field Manager	Tetra Tech, Inc.	Oakland, CA	75
Delight Buenaflor*	Field Manager	Tetra Tech, Inc.	Arlington, VA	75
Joseph Campo*	Field Manager	Tetra Tech, Inc.	Norfolk, VA	75
Dave Wertz*	Field Professional	Tetra Tech, Inc.	Arlington, VA	75
Brian Dresser*	Field Professional	Tetra Tech, Inc.	Manchester, NH	75
Genevieve Kaiser*	Field Professional	Tetra Tech, Inc.	Boulder, CO	75
Julia Mates*	Field Professional	Tetra Tech, Inc.	Oakland, CA	75
Richard Delahunty, PWS*	Field Professional	Tetra Tech, Inc.	Morris Plains, NJ	75
Joe Fischl*	Field Professional	Tetra Tech, Inc.	Morris Plains, NJ	75
Sydne Marshall, PhD, RPA*	Field Professional	Tetra Tech, Inc.	Morris Plains, NJ	75
James Sexton, PhD	Field Professional	Tetra Tech, Inc.	Morris Plains, NJ	25
Chris Borstel, PhD	Field Professional	Tetra Tech, Inc.	Morris Plains, NJ	25
Nihal Oztek*	Field Associate	Tetra Tech, Inc.	Oakland, CA	75
Mark Duffy*	Field Associate	Tetra Tech, Inc.	Oakland, CA	75
Loren Casale*	Field Associate	Tetra Tech, Inc.	Morris Plains, NJ	75
Jen Sherwood*	Field Associate	Tetra Tech, Inc.	Morris Plains, NJ	75
Chelsea Gittle	Field Associate	Tetra Tech, Inc.	Boulder, CO	75
John Schaffer*	Field Professional	Tetra Tech, Inc.	Morris Plains, NJ	75
Jeff Vandever*	Field Professional	Tetra Tech, Inc.	Morris Plains, NJ	75
Joey Gawazewski, CHMM*	Field Manager	Tetra Tech, Inc.	Newark, DE	25
Jeff Hosterman, PG, LSRP*	Task Manager	Tetra Tech, Inc.	Newark, DE	75
Andrew Leung, PE*	Field Professional	Yu & Associates	Elmwood Park, NJ	75
Charles McCusker, PG, CHMM, LSRP*	Field Professional	Yu & Associates	Elmwood Park, NJ	25
Paul Miller, CFM*	Field Professional	Tetra Tech, Inc.	Morris Plains, NJ	75
Alison Miskiman, CFM*	Field Professional	Tetra Tech, Inc.	Morris Plains, NJ	75
Ralph Boedeker, PE	Field Associate	Tetra Tech, Inc.	Newark, DE	25

Staff Name	Labor Category	Firm	Location	% Commitment
Tom Flis	Field Associate	Tetra Tech, Inc.	Newark, DE	25
Casey Grabowski, PE	Field Associate	Tetra Tech, Inc.	Newark, DE	25
Ken Jeffery	Field Associate	Tetra Tech, Inc.	Newark, DE	25
Dave Kane, PG	Field Associate	Tetra Tech, Inc.	Newark, DE	25
Chris Geiger, PG	Field Associate	Tetra Tech, Inc.	Newark, DE	25
JB Moore	Field Associate	Tetra Tech, Inc.	Newark, DE	25
Eric Watt	Field Associate	Tetra Tech, Inc.	Newark, DE	25
Jason Daliessio	Field Associate	Tetra Tech, Inc.	Newark, DE	25

* Resumes included in Appendix A

Tab 3. Contract Management

The Tetra Tech team will follow a streamlined approach to managing all activities of the New Jersey CDBG-DR environmental review project. This approach to managing, controlling, and supervising the contract revolves around (1) providing our Project Manager with appropriate responsibilities and authority; (2) tracking and reporting progress and costs; (3) implementing a tested and reliable quality assurance methodology; (4) communicating tools and techniques that drive projects towards completion; and (5) and providing subcontract management. Each aspect of our management approach is discussed below.

Responsibilities and Authority of the Project Manager: Our Project Manager, Mr. John Bock, will provide overall leadership and direction for the project as the Project. He has full responsibility for contract performance and financial management and will have the corporate support as defined in the organizational chart. With his direct reporting to the Northeast Operations Manager, he has the ability to access and direct the necessary company resources. Mr. Bock will serve as the primary point of contact to NJ DEP and State Contract Manager for all contractual items and client satisfaction

Tracking and Reporting of Project Progress and Costs: Tetra Tech uses proven methods for tracking and monitoring progress and costs for the entire project. Tetra Tech's procedures for controlling schedules and ensuring the timing of contract deliverables are based on two premises: (1) an understanding of client milestones and due dates for all services and deliverables, and for any interim/working products needed on the project; and (2) maintaining regular communication with the client's managers about changing needs and priorities.

Our financial and management systems undergo routine auditing by the Defense Contract Audit Agency and our accounting, billing, purchasing, disclosure statement, and estimating practices are in full compliance with applicable standards and regulations. Our accounting system, ORACLE, is a fully integrated accounting and financial management relational database, able to provide fast and reliable retrieval of financial data and reports complete with all required backup information. The ORACLE system has built-in, easy-to-use functionality that allows us to meet each client's unique needs. The system allows for pre-programmed financial reports generated on a weekly and monthly basis, and it run ad hoc reports and access all data collected in the system on a daily basis if necessary.

After receiving approval to begin work, Mr. Bock will meet with all managers assigned to the project and discuss the project's purpose and goals, the schedule, milestones, and their managers' responsibilities. Mr. Bock will also have a corporate team that will monitor and report the status of the contract. Mr. Bock will meet regularly with the staff to monitor the progress of the project and help keep them on track with the timeline prescribed.

Tested and reliable quality assurance methodology: Although processes and policies will be in place throughout the program to monitor quality assurance and control, a Compliance Team will report directly to Mr. Bock to provide an additional layer of quality control to ensure that policies and procedures will be followed throughout the program. They will conduct and coordinate technical and financial quality assurance and control reviews of project activities to ensure compliance with project and program regulations.

Communication: This project will require an extensive amount of communication between the Tetra Tech team and NJ DEP and the State Contract Manager.

Reporting and Status Meeting Process

The Tetra Tech team understands the importance of this project as part of the overall recovery effort in New Jersey from Superstorm Sandy. The storm resulted in significant damage to the housing structures throughout the state that had a severe impact on the property owners, renters, and municipal and county governments. Given the magnitude

of the damage and the severity of the impact, the federal government provided significant financial assistance to the state through funds committed through the CDBG-DR program; funds aggressively monitored by state and federal government. Our Teams' experience working on CDBG-DR programs and other housing and disaster recovery efforts, has provided us with an understanding of the need to continually provide comprehensive project reports to the Client and the state and federal government.

Subcontractor Management: Tetra Tech has well-established mechanisms for overseeing the work of subcontractors and maintaining effective communication to ensure they provide high-quality, cost-efficient services. For this project, we have carefully selected our subcontractors because they complement Tetra Tech's expertise, and we have clearly defined each firm's role and areas of responsibility. Staff from the subcontractor has been integrated into our seamless project team, and we have obtained commitments from their senior management that they will work under the direction of the Project Manager. We fully understand our obligation to manage our subcontractors effectively and ensure that this contract operates as a seamless operation. Appropriate contract clauses and certifications will be incorporated into all subcontract documents, and our subcontractors will be managed to ensure that they adhere to those requirements.

As the prime contractor, Tetra Tech will manage its subcontractors to ensure that project requirements for quality work will be met on time and within budget. Our approach is to work closely with subcontractors throughout a project and vigorously apply our QA process to subcontractor work products. Each subcontractor has designated a responsible corporate officer who will allocate and commit the resources of the company and ensure that work it performs meets NJ DEP and Tetra Tech expectations. Our Project Manager will meet as needed with each subcontractor corporate officer to address any issues and make changes as needed.

Tab 4. Potential Challenges

In any contract, challenges may occur that need thorough yet rapid analysis and decisive resolutions. The Tetra Tech team believes that the management structure presented Tab 3 will facilitate expeditious resolutions. The experience and qualifications of Tetra Tech team personnel will allow the project team to resolve routine problems at the staff level. However, for more significant issues, the management structure allows for prompt access to the Tetra Tech Program Manager and higher levels of Tetra Tech corporate management, up to and including the President of Tetra Tech. **Exhibit 3** below illustrates potential problems that may be encountered in the course of this contract and the Tetra Tech team's plan to resolve them.

EXHIBIT 3: POTENTIAL CHALLENGES

Potential Risk	Proposed Solution/Mitigation
Managing the staffing requirements for multiple concurrent environmental assessments	Our extensive experience in preparing large, complex projects such as environmental assessments, environmental impact statements, and, particularly HUD environmental assessments, and our understanding of project issues and procedures enables us meet schedule demands. In addition, Tetra Tech is a large company, with extensive resources to draw from, who can assist our team if necessary. While we have a host of tools, institutional procedures, and experience to help us be adaptable, the uncertainties facing the DEP on some projects mean that adaptability, flexibility, and ability to meet client expectations still comes down to the people involved.
Highly compressed proposed New Jersey timeline	Internal strategies must to be developed to mitigate overall timeline expectations, including outreach to local/state elected officials and local organizations as well as the general public. Communications must be proactive to these groups to assure programmatic success and ability to conduct efforts effectively with minimal future issues. Our staff enjoys an excellent reputation among clients for accomplishing quality work within critical time limits. Although the time for each environmental review record short, to meet the schedule, we will implement our proven integrated project schedule tracking, which will be modified to fit the timeframes for multiple concurrent projects. Generally, this system facilitates "critical path" scheduling; provides solutions to attain final deliverable dates should the schedule for any work elements slip; and assists the project team in adhering to a schedule that meets or exceeds project requirements based on obtainable milestones. The program allows us to track deadlines and staffing requirements easily and to adjust the schedule based on unexpected occurrences.

Potential Risk	Proposed Solution/Mitigation
Ensuring an adequate level of detail for the environmental analysis and confirming a common understanding of the project features	For more than 25 environmental assessment documents, in compliance with NEPA and the US Department of Housing and Urban Development (HUD) NEPA requirements (24 CFR Parts 50 and 58), Tetra Tech has followed the format and guidelines outlined in the Environmental Assessment for HUD-funded Proposals form that have addressed specific HUD requirements regarding: Air Quality, Coastal Zone Management, Endangered Species, Environmental Justice, Explosive and Flammable Operations, Farmlands Protection, Flood Insurance, Floodplain Management and Wetlands Protection, Hazardous, Toxic, or Radioactive Substances, Historic Properties, Noise Abatement and Control, Sole Source Aquifers, and Wild and Scenic Rivers.
Maintaining accessible, secure network amongst team comprised of multiple teams at various locations and at different phases in the environmental process	Tetra Tech has provided an internal secure SharePoint Site for its complex programs that involve multiple sub-projects and submissions to track the progress of each element and provide a forum for information exchange. During critical paths, we have typically conducted weekly conference calls to discuss common issues, problem resolution, and streamlining of consultation efforts.

Tab 5. Organizational Support and Experience

Founded in 1966, Tetra Tech, Inc. (Tetra Tech) is one of the nation's leading technical consulting and engineering firms with current annual revenue of nearly $2.7 billion. We have been providing disaster management services to the public and commercial sectors for nearly 25 years. In addition, Tetra Tech is ranked in the 2012 Engineering News-Record as 1st in Environmental Management and in Consulting/Studies, 2nd in Environmental Science, and 5th-ranked Environmental firm nationwide. For the last 50 years, Tetra Tech has repeatedly demonstrated its ability to work in partnership with its customers to produce solutions for some of the nation's largest problems. The firm has a rich history and proven track record of rapid start-up contracts for the U.S. Departments of State and Defense, many times in much more difficult locations and under more dire circumstances than will be faced in New Jersey. Similarly at the state level, we routinely assemble and deploy large teams of management and response staff to support and augment our client's staff in post-disaster situations. Tetra Tech's internal management systems and infrastructure are superior to those of our competitors, thereby allowing us to continuously meet our customer's expectations in this area. These systems provide for Tetra Tech's more than 330 offices to be seamlessly integrated through information technology and communications systems. Moreover, our financial, procurement, and human resource development programs have been accepted as fully compliant by U.S. General Services Administration (GSA) and our cognizant audit agency.

Tetra Tech has prepared thousands of NEPA documents and studies for various federal agencies, including HUD. We have consistently demonstrated an ability to produce easily understood NEPA documents of the highest quality that can withstand public and regulatory scrutiny. With a vast resource pool and scope of staffing expertise, Tetra Tech offers DEP the capability to perform multiple simultaneous projects, as we have done routinely in the past on thousands of NEPA documentation and related projects. Tetra Tech has extensive experience providing HUD NEPA and historic reviews, including the preparation of 6 EAs and 39 Statutory Checklists.

Tetra Tech currently serves HUD clients through the following:

- San Francisco Mayor's Office of Housing Environmental Review Services Contract
- Berkeley Health, Housing, and Community Services Department's NEPA and Section 106 Services Contract
- Berkeley Planning Department's NEPA, National Historic Preservation Act, and California Environmental Quality Act Services Contract

To complement our abilities, supplement our expertise, and expand the capacity of qualified resources made available to NJ DEP, Tetra Tech has elected to align ourselves with the following New Jersey based firm:

YU & Associates, Inc. (YU) provides comprehensive environmental management solutions to local, state and federal governments and industrial, municipal, and commercial clients. To address environmental concerns, we provide a full spectrum of environmental investigation, remedial design, remediation, compliance, engineering consulting, and construction services.

Having personnel with decades of experience in the industry, we have built long-term relationships with our clients. We customize our project delivery system to meet the specific technical requirements, financial constraints, and regulatory mandates of our clients. We integrate and apply technology and management strategies that provide 'best value' results. We deliver low cost, low risk, and high quality performance through a comprehensive client-focused approach based on the principles of safety, quality, and effective cost/schedule management.

Today, technical excellence and quality remains the foundation of our service, while our expertise has expanded across the full spectrum of environmental solutions. Our staff experience and services areas include:

Environmental Consulting / Remediation

- Phase I/Phase II Site assessment and investigations
- Remedial investigations/ Feasibility studies
- Remediation design and engineering studies
- Remediation construction/ implementation
- Remediation system operation & maintenance
- Remedial system optimization
- Brownfield redevelopment
- Risk based approaches/ risk assessments
- UST related services
- USEPA Region 2/ NJDEP/ NYSDEC Coordination
- Tank management and fueling system upgrades
- Regulatory permitting and compliance

Environmental Consulting

- Facility health and safety services
- NJDEP ISRA services
- Landfill / solid waste engineering
- Hazardous materials management
- Pollution prevention
- Air quality engineering and management
- Environmental Management System
- Natural resource damage assessments
- Facility health and safety services
- Data management / GIS
- Experience in remedial systems

5.1 References

The Tetra Tech team is proud of our record of past performance and we encourage NJ DEP to contact any or all of the client references listed on the following pages regarding our performance. We are confident they will provide positive input, allowing for a fair evaluation regarding the quality, timeliness, cost control, and overall performance of the Tetra Tech team.

NEW JERSEY HAZARD MITIGATION PLANNING AND SUPPORT	
Client:	Various State, County and Municipal
Primary Point of Contact:	Lt. Robert Little, New Jersey State Hazard Mitigation Officer Tel: (609) 963-6963 E-mail: lpp4895@gw.njsp.org
Secondary Point of Contact:	Marty Pagliughi, Director, Cape May County Emergency Management Tel: (609) 463-6570 E-mail: mpagliughi@co.cape-may.nj.us
Contract Value:	$1.8 million
Period of Performance:	September 2006 to Present

ENVIRONMENTAL IMPACT STATEMENT CONSULTING SUPPORT	
Client:	U.S. Navy, NAVFAC Atlantic
Primary Point of Contact:	Mandy Shoemaker [mandy.shoemaker@navy.mil – 757-322-4555]
Secondary Point of Contact:	Nora Gluch [nora.gluch@navy.mil – 757-322-4769]
Contract Value:	$1.9 million
Period of Performance:	March 2010 – September 2014

SUPPLEMENTAL PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT (SPEIS) FOR TRANSFORMATION OF THE NUCLEAR WEAPONS COMPLEX	
Client:	Department of Energy, National Nuclear Security Administration
Primary Point of Contact:	Ted Wyka theodore.wyka@nnsa.doe.gov; 202-586-3519
Secondary Point of Contact:	Carol Borgstrom carol.borgstrom@hq.doe.gov; 202-586-4600
Contract Value:	$3,767,833
Period of Performance:	08/14/2006-12/31/2012

ENVIRONMENTAL CONSULTING HAZARDOUS MATERIAL SERVICES - MULTIPLE NEW YORK CITY PUBLIC SCHOOL LOCATIONS, NY	
Client:	New York City School Construction Authority
Primary Point of Contact:	Bob Kanaparthi - 718-472-8620
Secondary Point of Contact:	Bob Kanaparthi - 718-472-8620
Contract Value:	$4 million
Period of Performance:	2010

BOOKER T. WASHINGTON COMMUNITY SERVICE CENTER ENVIRONMENTAL ASSESSMENT	
Client:	San Francisco Mayor's Office of Housing
Primary Point of Contact:	Eugene Flannery, HUD Environmental Review Officer – (415) 701-5598
Secondary Point of Contact:	Booker T Washington Community Service Center. Patricia Scott, Executive Director (415)-928-6596
Contract Value:	6/23/2010 – 9/30/2010
Period of Performance:	$22,190.61

PHELAN LOOP AFFORDABLE HOUSING PROJECT ENVIRONMENTAL ASSESSMENT	
Client:	San Francisco Mayor's Office of Housing
Primary Point of Contact:	William Ho (415) 206-2140
Secondary Point of Contact:	Housing Services Affiliate of the Bernal Heights Neighborhood Center - Joseph Smooke, Executive Director – (415) 206-2140
Contract Value:	$34,290.61
Period of Performance:	June 26 2010 – August 26 2010

HUNTERS VIEW REDEVELOPMENT PLAN ENVIRONMENTAL ASSESSMENT	
Client:	San Francisco Mayor's Office of Housing
Primary Point of Contact:	Eugene Flannery – (415) 701-5598
Secondary Point of Contact:	Eugene Flannery – (415) 701-5598
Contract Value:	$18,000.00
Period of Performance:	November 2, 2009 to February 2, 2010

HUNTERS VIEW REDEVELOPMENT PLAN ENVIRONMENTAL ASSESSMENT	
Client:	The John Stewart Company
Primary Point of Contact:	Margaret Campbell, 415-345-4400
Secondary Point of Contact:	Jack Gardner, 415-345-4400
Contract Value:	$40,661
Period of Performance:	August 29, 2011 to December 31, 2011

EDWARD II INN ENVIRONMENTAL ASSESSMENT	
Client:	San Francisco Mayor's Office of Housing
Primary Point of Contact:	Eugene Flannery (415) 701-5598
Secondary Point of Contact:	David Schnur, (415)-852-5300
Contract Value:	$12,000
Period of Performance:	October 2010 to August 2011

SANSOME-BROADWAY FAMILY HOUSING ENVIRONMENTAL ASSESSMENT	
Client:	San Francisco Mayor's Office of Housing
Primary Point of Contact:	Teresa Yanga, 415-701-5515
Secondary Point of Contact:	Sirena McCart, Chinatown Community Development Center, 415-926-1026
Contract Value:	$5,600
Period of Performance:	July 2010 to August 2010

5.2 Contract Organization

Exhibit 4 on the following page illustrates the proposed contract organization structure. **Exhibit 5** lists the Tetra Tech team's management and key personnel, illustrating their relevant experience.

EXHIBIT 4: PROPOSED CONTRACT ORGANIZATION CHART

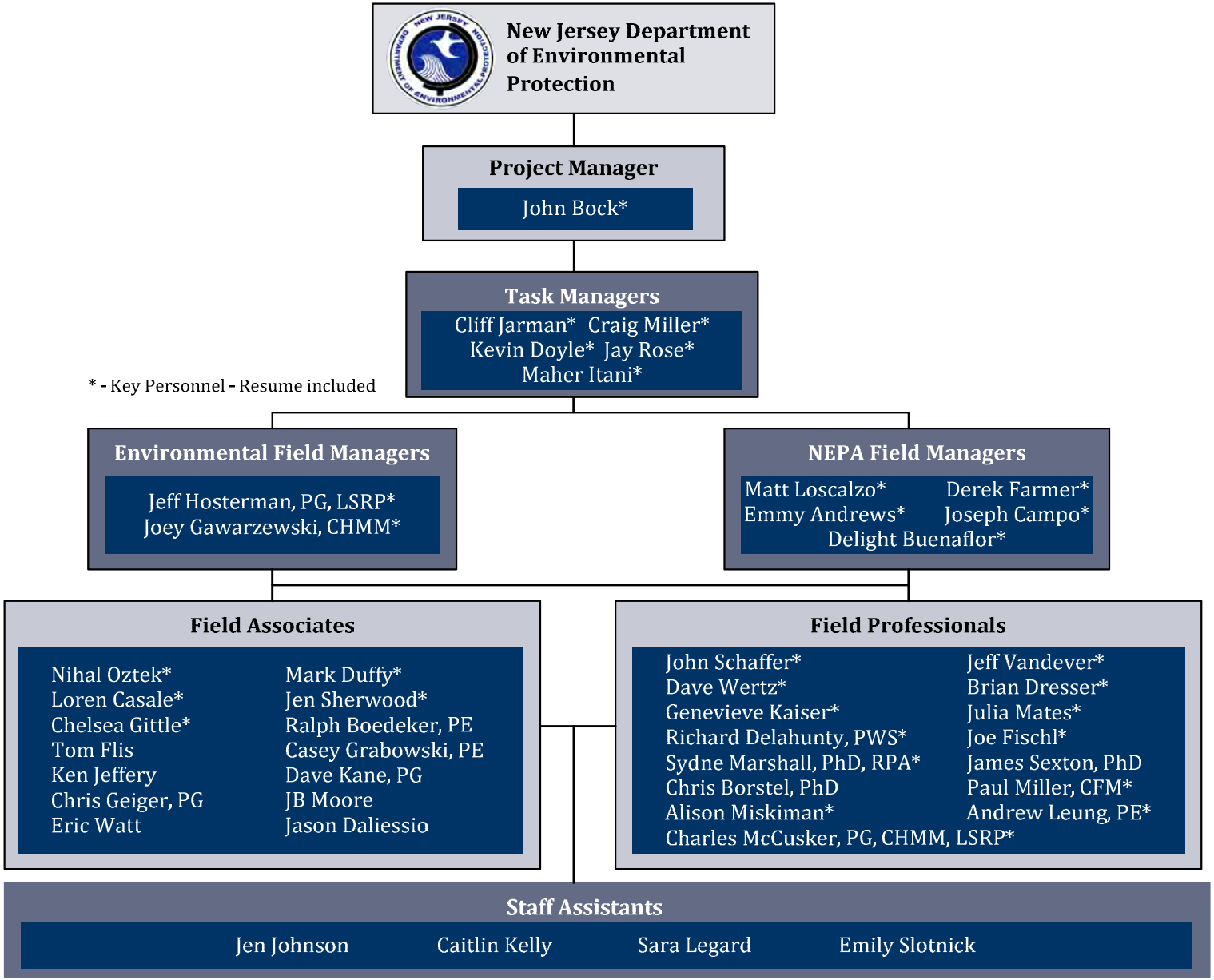


EXHIBIT 5: MANAGEMENT AND KEY PERSONNEL MATRIX

Staff Name	Labor Category	Firm	Location	Degree	Yrs. Experience	Specialty
John Bock*	Project Manager	Tetra Tech	Oakland, CA/Morris Plains, NJ	B.S., Environmental Toxicology	19	Project Management, Program Management, National Environmental Policy Act, California Environmental Quality Act
Cliff Jarman*	Task Manager	Tetra Tech	Oakland, CA	MS, Geophysics, BS, Geology	22	Project Management, NEPA Documents and Compliance, Soils, Minerals, Geology
Craig Miller*	Task Manager	Tetra Tech	Oakland, CA	M.S., Wildlife Biology, B.S., Wildlife and Fisheries Biology	20	Project Management, NEPA compliance, Endangered Species Act, Clean Water Act, Migratory Bird Treaty Act compliance, Biological resources
Kevin Doyle*	Task Manager	Tetra Tech	Oakland, CA	BA, Sociology, Continuing Studies in Anthropology, Historic Preservation, and Cultural Resource Management	27	Cultural Resource Management, NEPA Project Management Emphasis
Jay Rose*	Task Manager	Tetra Tech	Oakland, CA	BS-Ocean Engineering, Law	25	NEPA, EIS, Engineering
Maher Itani*	Task Manager	Tetra Tech	Arlington, VA	BS-Civil Engineering, MEA-Engineering Admin.	25	NEPA, Environmental Engineering, QA/QC, EIS, FERC
Matt Loscalzo*	Field Manager	Tetra Tech	Boulder, CO	M.S., Environmental Studies/ Public Lands Management, B.A., Political Science	8	Project/Task Management, NEPA Compliance, Field Surveys, Environmental Site Assessments, Recreation Planning, Visual Resource Impact Assessment, Land Use, Energy Development, Special Designations
Derek Farmer*	Field Manager	Tetra Tech	Boulder, CO	M.S. Urban Planning, B.A., Communications Design	15	Housing and Residential Development, Land Use, California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), Traffic and Transportation, Airport Land Use Planning, Educational Facility Planning
Emmy Andrews*	Field Manager	Tetra Tech	Oakland, CA	MS, Environmental Management, BA, Art and Art History	10	California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), Hazardous materials management, Site characterization and remediation, Biological assessments, Technical report preparation and review/technical editing, Due diligence Permitting
Delight Buenaflor*	Field Manager	Tetra Tech	Arlington, VA	BA-Biology	15	NEPA, GIS, Socioeconomics, EIS, EA
Joseph Campo*	Field Manager	Tetra Tech	Norfolk, VA	BS-Forestry, MS & PhD-Wildlife Ecology	29	Natural Resources, NEPA, Environmental Compliance, Project management
Dave Wertz*	Field Professional	Tetra Tech	Arlington, VA	BS-Environmental Science	10	NEPA, Geology, Hydrogeology, Site Investigations
Brian Dresser*	Field Professional	Tetra Tech	Manchester, NH	MS-Ecology, BS-Biology	17	NEPA, Permitting, EIS, MRA, EFH, BA
Genevieve Kaiser*	Field Professional	Tetra Tech	Boulder, CO	M.S., Energy Management and Planning, B.A., Economics, Minor in Geology	23	Socioeconomics and environmental justice research and writing Research, analysis, writing and report preparation and review for NEPA Environmental Impact Statements, Environmental Assessments, and Categorical Exclusions and for CEQA Environmental Impact Reports and Initial Studies/Negative Declarations GIS environmental impact analysis, constraints analysis, and map preparation FERC documents Resource Management Plans and DOD Integrated Resource Management Plans Phase I Environmental Site Assessments and Environmental Records Reviews
Julia Mates*	Field Professional	Tetra Tech	Oakland, CA	M.A., History/Public History, B.A., History	14	Section 106 of National Historic Preservation Act California Environmental Quality Act (CEQA) National Environmental Policy Act (NEPA) United States Secretary of the Interior's Guidelines for Historic Preservation
Richard Delahunty, PWS*	Field Professional	Tetra Tech	Morris Plains, NJ	BS, Environmental & Systematic	19	PWS, Wetland Delineation and permitting, environmental compliance; ecological site

Staff Name	Labor Category	Firm	Location	Degree	Yrs. Experience	Specialty
				Biology, AAS, Biology		characterization; ESAs; Baseline Ecological Assessments; Environmental Assessments
Joe Fischl*	Field Professional	Tetra Tech	Morris Plains, NJ	MS, Ecology, BS, Wildlife Biology	30	Terrestrial Ecology, Permitting and wetland regulations Critical Issues Analysis
Sydne Marshall, PhD, RPA*	Field Professional	Tetra Tech	Morris Plains, NJ	PhD, Anthropology, MPhil, Anthropology, MA, Anthropology, BA, Anthropology	30	Cultural resources including archeological and architectural properties, NHPA Section 106 review studies, developing NRHP nominations, and designing/implementing field investigations
James Sexton, PhD	Field Professional	Tetra Tech	Morris Plains, NJ	BA, MA, & PhD-History of Art	20	Designing and implementing field investigations and surveys, researching and writing Historic Structure Reports for culturally and historically significant properties, preparing National Register of Historic Places and National Historic Landmark nominations for significant historic properties and districts, and providing research for proposed Local Historic Districts
Chris Borstel, PhD	Field Professional	Tetra Tech	Morris Plains, NJ	PhD-Anthropology, MS, Quaternary Studies, BA, Anthropology	30	Field archeology (survey and excavation), Geoarcheology, Lithic technology, and Documentary research
Nihal Oztek*	Field Associate	Tetra Tech	Oakland, CA	B.A., Environmental Sustainability and Social Justice	6	Environmental site assessments, NEPA/CEQA studies, environmental planning, soil and groundwater remediation, biological monitoring; and hazardous materials compliance.
Mark Duffy*	Field Associate	Tetra Tech	Oakland, CA	B.S., Geology,	8	National Registry of Environmental Professionals, Registered Environmental Property Assessor (REPA), No. 324405, April 2013, Soil and groundwater investigation, environmental site assessment, and environmental compliance.
Loren Casale*	Field Associate	Tetra Tech	Morris Plains, NJ	MEM, BS, Chemistry	12	ESAs, EA,s, Environmental Audits
Jen Sherwood*	Field Associate	Tetra Tech	Morris Plains, NJ	BS-Environmental Science	8	Terrestrial Ecology, Wetland identification and delineation, Critical Issues Analysis
Chelsea Gittle	Field Associate	Tetra Tech	Boulder, CO	B.S., Ecology and Natural Resources	5	Wetland and marine biological surveys, Phase I Environmental Site Assessments, technical report writing, field sampling, environmental due diligence, and storm water management planning and inspections.
John Schaffer*	Field Professional	Tetra Tech	Morris Plains, NJ	MA, Biology, BS, Biology	24	Aquatic Ecology, Design and Implementation of ecological risk assessment programs, Preparation of Baseline Ecological evaluations (BEEs)
Jeff Vandever*	Field Professional	Tetra Tech	Morris Plains, NJ	AS-Environmental Health & Safety, BS-Coastal Geology/GIS, MS-Environmental Geology	12	PG, GIS, Hydrogeologist
Joey Gawazewski, CHMM*	Field Manager	Tetra Tech	Newark, DE	BS-Environmental Science	13	EA, HazMat, EPA, Emergency Response
Jeff Hosterman, PG, LSRP*	Task Manager	Tetra Tech	Newark, DE	BS-Geosciences	18	PG, LSRP, ESA, RI/RA
Andrew Leung, PE*	Field Professional	Yu & Associates	Elmwood Park, NJ	BS-Civil Engineering, MS-Geotechnical Engineering	30	EA, Remedial design, geotechnical engineering, geophysical survey
Charles McCusker, PG, CHMM, LSRP*	Field Professional	Yu & Associates	Elmwood Park, NJ	BS-Geology	27	PG, LSRP, EA, RI/RA
Ralph Boedeker, PE	Field Associate	Tetra Tech	Newark, DE	BS-Construction Engineering, ME-Civil Engineer	29	PE, Geotechnician, Environmental Investigations, Feasibility Studies, Remedial Design, Remedial Construction, Operation and Maintenance, Construction Inspection and Testing, Construction Management
Tom Flis	Field Associate	Tetra Tech	Newark, DE	B.S., Environmental Engineering Technology	15	Marine Safety, Marine Security and Marine Environmental Protection and Response Expert, Emergency Environmental Response, Technical Report Preparation and Review, Field Sampling and Analysis, Environmental Remediation, Spill Prevention, Control and Countermeasure (SPCC) Plan Development, ESA, Environmental Compliance Audits, Environmental, Disaster Management, and Security Exercise Development, Planning,

Staff Name	Labor Category	Firm	Location	Degree	Yrs. Experience	Specialty
						Execution and Evaluation, Port Facility Security Assessment; Security Plan Development; Security Audits, Exercises, and Training
Casey Grabowski, PE	Field Associate	Tetra Tech	Newark, DE	B.S., Civil Engineering	11	Civil engineer: site assessment, site design, site planning, minor and major subdivisions, storm water management, utility routing, and acquiring regulatory approvals, GIS, GPS, surface modeling
Ken Jeffery	Field Associate	Tetra Tech	Newark, DE	AAS, Civil Engineering Technology	23	Certified Construction Reviewer, Certified in Nuclear Density Gauge (Troxler), and Gold Certified in Sediment and Stormwater Management, construction management/inspection
Dave Kane, PG	Field Associate	Tetra Tech	Newark, DE	BS-Earth Science, BS-Business Admin.	20	PG, site investigation, feasibility studies, remedial design, and compliance monitoring, projects for state and federal clients
Chris Geiger, PG	Field Associate	Tetra Tech	Newark, DE	B.A., Geology	21	PG, geology, hydrology, environmental assessments, and site investigations
JB Moore	Field Associate	Tetra Tech	Newark, DE	B.A.S., Engineering Technology and Technical Management, A.A.S., Architectural Engineering Technology	23	Engineering Intern, engineering and design experience of municipal, industrial, and hazardous wastewater collection and treatment systems
Eric Watt	Field Associate	Tetra Tech	Newark, DE	B.S., Geology	10	Environmental science, geology, and geotechnical services
Jason Daliessio	Field Associate	Tetra Tech	Newark, DE	BS, Liberal Studies/Concentration Geology, BS, Geology	10	Groundwater/soil sampling, site characterization, remedial investigations, site surveying, monitoring well installation, rock coring, test pit installation, field analysis
Paul Miller, CFM*	Field Professional	Tetra Tech	Morris Plains, NJ	BS-Health, Physical Ed, MA-Education, FBI Academy	26	CFM, HazMat, Emergency Response
Alison Miskiman, CFM*	Field Professional	Tetra Tech	Morris Plains, NJ	BS-Environmental Science, MS-Earth Science/Geochemical Systems	10	CFM, GIS, HAZUS-MH, FEMA BCA

***** Resumes included in Appendix A

Tab 6. Resumes

The Tetra Tech team offers NJ DEP a team of firms that collectively brings more than 14,000 personnel resources to the State of New Jersey. The Team maintains nearly a dozen office locations throughout New Jersey and offers New Jersey-based resources familiar with NJ DEP operations and personnel with previous HUD and FEMA environmental projects. Further, the Team brings a stellar reputation of providing similar technical support services to New Jersey counties and local jurisdictions across the state.

Full resumes for management, supervisory, and key personnel are provided as **Appendix A.**

Tab 7. Experience of Bidder on Contracts of a Similar Size and Scope

Tetra Tech is one of the leading technical consulting and engineering firms. The following pages present a comprehensive list of contracts and projects of similar size and scope to the NJ DEP project. This listing demonstrates the Tetra Tech team's ability to successfully complete the services required by this RFQ.

NEW JERSEY HAZARD MITIGATION PLANNING AND SUPPORT

Client:	Various State, County and Municipal
Primary Point of Contact:	Lt. Robert Little, New Jersey State Hazard Mitigation Officer Tel: (609) 963-6963 E-mail: lpp4895@gw.njsp.org
Secondary Point of Contact:	Marty Pagliughi, Director, Cape May County Emergency Management Tel: (609) 463-6570 E-mail: mpagliughi@co.cape-may.nj.us
Contract Value:	~$1.8MM
Period of Performance:	September 2006 - Present

Tetra Tech has a long and recognized history supporting hazard mitigation planning, plan implementation, and associated mitigation support services in the State of New Jersey.

With regard to local hazard mitigation planning, Tetra Tech prepared the original countywide multi-jurisdictional hazard mitigation plans (HMP) for Cape May, Hudson, and Somerset counties, and is currently supporting regulatory plan updates in Burlington and Somerset counties. These planning efforts address the vast range of geographic and demographic variety present in the state that results in the wide variation in type and extent of risk experienced, and requires a flexible, all-disciplines approach to effective mitigation planning.

In these projects, Tetra Tech's mitigation planning processes are conducted to achieve the following objectives:

- Developing robust, quantitative risk assessments to design strong mitigation strategies, using the best available data and state-of-the-art tools and methodologies
- Identifying and developing well-defined, cost-effective mitigation strategies that are readily implementable
- Facilitating broad outreach to stakeholders at all levels of government
- Promoting constructive public input
- Building regional and local mitigation and recovery capabilities
- Meeting multi-programmatic criteria (e.g. Disaster Mitigation Act of 2000 [DMA 200], National Flood Insurance Program [NFIP] Community Rating System [CRS], and MS4 stormwater management)

Tetra Tech is currently preparing the 2014 New Jersey State Hazard Mitigation Plan to support Enhanced State Plan status, and meet Emergency Management Accreditation Program (EMAP) criteria. As New Jersey recovers from Superstorm Sandy, this plan update is being developed to address the many statewide recovery and building issues; document the many regulatory, programmatic and even governmental changes that affect mitigation in the state; and establish the state's long-term mitigation strategy with consideration of such issues as climate change, sea-level rise ,and coastal resiliency. Key to this update effort is conducting effective outreach to the broad range of state and regional mitigation stakeholders, including FEMA Region II; U.S. Army Corps of Engineers; NJ Office of Emergency Management; NJ Governor's Office of Recovery and Rebuilding; NJ Office of Homeland Security and Preparedness; NJ Department of Community Affairs; NJ Department of State; NJ Department of Environmental Protection; NJ Department of Law and Public Safety; NJ Department of Transportation; Board of Public Utilities; NJ League of Municipalities; and numerous commissions and non-profits.

In addition to supporting the state with the state plan update, Tetra Tech is currently contracted with Burlington County and Somerset County to perform the regulatory 5-year updates to their local HMPs. Tetra Tech has recently completed multi-jurisdictional plan update projects in FEMA Region II (NY, NJ, and PR/USVI); some of the first in the region to be reviewed

NEW JERSEY HAZARD MITIGATION PLANNING AND SUPPORT

and approved in accordance with the updated FEMA plan review guidance. The updates will focus primarily on improving their local mitigation strategies, and promoting the implementation of their plans through integration with other local planning mechanisms such as comprehensive plans, redevelopment plans, and capital improvement plans.

In addition to mitigation planning, Tetra Tech supports New Jersey counties and municipalities with the implementation of their mitigation strategies through grant application support and project benefit-cost analysis, grant administration, and project management in Cape May, Monmouth, and Somerset Counties.

Tetra Tech's knowledge of the FEMA Mitigation Grant Programs having garnered over $12 million on behalf of New Jersey communities under the Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation Program (PDM), Severe Repetitive Loss Program (SRL), and Repetitive Loss Program (RLP) programs over the past years. This has been possible from our extensive experience measuring the cost-effectiveness of mitigation projects using FEMA's benefit cost methodology (BCAR), having performed hundreds of benefit/cost analyses for projects ranging from structural elevation and acquisitions to local flood control projects.

Tetra Tech has been providing grant administration support and project management support for large-scale residential acquisitions in several of New Jersey's Repetitive and Severe Repetitive Loss communities. These efforts have been led by staff member Paul Miller who served as the former New Jersey State Hazard Mitigation Officer, and presided over the management and implementation of all federal mitigation grant programs in the state for several years.

New Jersey communities have benefited from Tetra Tech's status as a national leader in providing technical support to communities wishing to maximize their CRS potential and consequently reduce their residential and commercial NFIP flood insurance premium rates. The methodology we apply to all planning and update efforts is based on the elements within the CRS 10-step planning approach which has resulted in our plans scoring well through the DMA and CRS program evaluation criteria. This is critical in this post-Sandy era where the impending increases in flood insurance premiums due to recent NFIP reforms may be offset by premium reductions due to the local community's CRS rating. Further, by addressing potential state-level activities that could increase the uniform state CRS credits, Tetra Tech is working to promote increased CRS ratings for participating municipalities.

Tetra Tech's service to hazard mitigation in New Jersey does not extend only to our contract clients. Tetra Tech's New Jersey mitigation team is dedicated to mitigation planning and implementation, and is fully invested in the program. All of our mitigation staff are active members in the national Association of State Flood Plain Managers (ASFPM), and are ASFPM Certified Floodplain Managers (CFM) who maintain their certification through regular continuing education. Members of our staff are active members of the New Jersey Association for Floodplain Management (NJAFM) chairing their Community Rating System Subcommittee, and sit on the New Jersey Department of Environmental Protection's Climate Change Adaptation Task Force. Further through our various New Jersey mitigation projects, our staff regularly works with key New Jersey associations and chapters including the American Planning Association – NJ Chapter, the Raritan-Millstone Flood Commission, the Raritan Engineering Council, NJFuture, and the Delaware River Basin Commission (DRBC).

ENVIRONMENTAL IMPACT STATEMENT CONSULTING SUPPORT

Client:	U.S. Navy, NAVFAC Atlantic
Primary Point of Contact:	Mandy Shoemaker [mandy.shoemaker@navy.mil – 757-322-4555]
Secondary Point of Contact:	Nora Gluch [nora.gluch@navy.mil – 757-322-4769]
Contract Value:	$1.9 million
Period of Performance:	March 2010 – September 2014

Tetra Tech has been supporting NAVFAC Atlantic in the preparation of the Affected Environment and Environmental Consequences sections for the AFTT Draft and Final EIS/OEIS to address impacts of U.S. Navy training and testing activities on marine biological resources. This effort was part of the Phase II Tactical Training Theater Assessment and Planning Program (TAP).

The Study Area encompasses 2.6 million square nautical miles, covering most of the northwestern Atlantic Ocean, including the entire east coast of North America, the Gulf of Mexico, and the Caribbean, which resulted in a complex approach to analyze the diverse marine resources contained in the exceptionally large study area. The biological resource sections of the EIS/OEIS include marine mammals, sea turtles, sea birds, marine vegetation, invertebrates, fish, Essential Fish Habitat (EFH), marine habitats, and marine protected areas. The environmental stressors that were evaluated for each resource include; electromagnetic energy sources, high-energy laser weapons, entanglement and ingestion of military expended materials, vessel strike, and munitions strike. Tetra Tech used biogeographic classification systems to describe and characterize marine resources within the study area in order to provide an ecological context for framing the potential impacts of Navy activities. Tetra Tech further developed this approach into a state-of-the-science ecosystem technical report that set the framework of the Navy's training and testing within the context of the National Ocean Policy (EO 13547). This report was extremely well-received by Navy senior reviewers.

Tetra Tech incorporated the Navy's existing and updated marine resource GIS data into a newly developed global ecoregional framework. Tetra Tech's systematic GIS approach began with data evaluation and organization, and culminated with electronic delivery of the newly produced geographic data and cartographic products. In addition to overhauling existing GIS databases, Tetra Tech developed species occurrence maps, critical habitat maps, and other maps using GIS standards and protocols compliant with Spatial Data Standards for Facilities, Infrastructure, and Environment (SDSFIE), and made these GIS layers fully-operational within the Navy's Environmental Information Management System (EIMS), resulting in substantial efficiencies for map generation for all teaming partners.

Tetra Tech also developed protocols to fully integrate the use of EndNote® as a tool for resource authors and Navy end-users of the deliverables and administrative record. Tetra Tech developed customized tools that facilitated the search and retrieval of best available science using a combination of biological resource keywords, Navy-specific environmental stressors, and ecoregional tags to build integrated EndNote libraries for each marine resource section in support of the Administrative Record. This innovative approach continues to be incorporated into Navy technology applications, such as the Modeling Acoustic Research, Library & Information Network (MARLIN).

Substantial coordination between the client and contractor teaming partners was successfully facilitated by the Project Manager throughout this project. Five scheduled Draft EIS section deliverables, and dozens of interim technical section deliverables, were prepared between March 2010 and May 2012 for the public release of the Draft EIS/OEIS. As a follow-on to the Draft EIS/OEIS Task Order, Tetra Tech received a separate Task Order in September 2011 to support NAVFAC in the preparation of the AFTT Final EIS through December 2013. Three scheduled Final EIS section deliverables were prepared between July 2012 and June 2013.

Tetra Tech was part of the AFTT team that won the Chief of Naval Operations and Secretary of the Navy environmental awards for the Draft EIS/OEIS during FY-2012.

SUPPLEMENTAL PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT (SPEIS) FOR TRANSFORMATION OF THE NUCLEAR WEAPONS COMPLEX

Client:	Department of Energy, National Nuclear Security Administration
Primary Point of Contact:	Ted Wyka theodore.wyka@nnsa.doe.gov; 202-586-3519
Secondary Point of Contact:	Carol Borgstrom carol.borgstrom@hq.doe.gov; 202-586-4600
Contract Value:	$3,767,833
Period of Performance:	08/14/2006-12/31/2012

Tetra Tech prepared the Transformation SPEIS, which assessed the reasonable alternatives for continuing the modernization and consolidation of nuclear weapons activities at all major sites in the nuclear weapons complex (except the non-nuclear production operations at the Kansas City Plant, for which the General Services Administration is preparing a separate Environmental Assessment). The following sites were addressed in the Transformation SPEIS: LANL, LLNL, NTS, Pantex, SNL/NM, SRS, Tonopah Test Range, and Y-12. The Transformation SPEIS assessed alternatives related to plutonium production; highly enriched uranium operations; assembly/disassembly/high explosives; special nuclear materials consolidation; high explosives R&D; tritium R&D; hydrotesting; flight testing; and environmental test facilities. Tetra Tech conducted scoping meetings, prepared all portions of the Transformation SPEIS, and conducted the public hearings. The Draft Transformation SPEIS received the highest possible rating from the EPA.

This was a complicated multi-site EIS involving technically challenging subject matters and multiple programmatic and site-specific alternatives. Task required in-depth interactions with program and site personnel, as well as subject-matter experts to develop alternatives and data for analyses. Significant work was required to ensure consistency with program/policy documents, including Congressional direction, NNSA strategic planning, and site-specific planning. Task required work on all possible levels, including policy implementation, project development, and site-specific analyses. Many unique issues arose during preparation of this SPEIS, including receipt and management of more than 100,000 comments. This represented the most public comments ever received on an NNSA NEPA document.

ENVIRONMENTAL CONSULTING HAZARDOUS MATERIAL SERVICES MULTIPLE NEW YORK CITY PUBLIC SCHOOL LOCATIONS, NY

Client:	New York City School Construction Authority
Primary Point of Contact:	Bob Kanaparthi 718-472-8620
Secondary Point of Contact:	Bob Kanaparthi 718-472-8620
Contract Value:	$4 million
Period of Performance:	2010

Tetra Tech provided full-service, on-call environmental consulting and engineering in support of the siting and expansion of schools in the New York City public school system. We were involved with over 29 sites, performing multiple/concurrent Phase I ***Environmental Site Assessments*** (ESAs); Phase II ESAs; remedial alternatives analyses; ***soil, vapor, and groundwater remedial designs***; and ***oversight of remedial construction*** throughout the City's boroughs. In addition, Tetra Tech personnel conducted ***air quality assessments***, emergency spill and odor response, and oversaw ***UST investigations and closures***. This work included all project planning aspects, ***cost estimates***, procurement, site work, and reporting and recommendations. Specifically, we performed 19 Phase I ESAs; 8 Phase II ESAs; 4 indoor air assessments; 3 outdoor air assessments; 5 UST investigations; and 4 design projects.

Environmental Assessments. Tetra Tech conducted environmental due diligence activities to identify conditions that would have the potential to impact the value of the site or the development, and use of the site as a public school facility. Phase I ESAs were performed in conformance with the scope and limitations of ASTM Practice E 1527-05 and the requirements of the NYCSCA at current schools or private property locations in Manhattan, Brooklyn, Bronx, and Queens. With a typical turnaround time of three weeks for a draft, we completed reviews of facility information, collected independent environmental information (such as a database search, historical aerial photographs, Sanborn fire insurance maps, and historical USGS topographic maps), performed site reconnaissance visits, and reviewed potential environmental issues. The reports discussed the recognized environmental conditions and other environmental concerns (e.g., presence of suspect ***asbestos-containing material, lead-based paint, polychlorinated biphenyls [PCBs], mold,*** etc.) associated with the property and provided recommendations.

Based on the results of the Phase I ESA, further ***investigation and testing*** was recommended for several of the sites, and Tetra Tech performed comprehensive Phase II ESAs at eight of these properties, with draft reports typically submitted within five weeks of notice to proceed. We prepared investigation work plans, proposed sampling location maps, and ***cost estimates*** for each of the assessments. To facilitate the work process, we set up basic ordering agreements with multiple subcontractors, including geophysical, drilling, and New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified laboratory firms. This enabled us to assign work to the various subcontractors quickly and efficiently. In addition, as Tetra Tech and NYCSCA were very concerned with Health and Safety, any work at a current school location had to be performed only when no children were present (e.g., nights, weekends, or holidays). Typical tasks generally consisted of the following:

- Geophysical surveys to verify the proposed sample locations were clear of subsurface structures and utilities and to identify subsurface features;
- Vapor intrusion investigations to determine the concentration of volatile organic compounds (VOCs), including concurrent sub-slab soil vapor, indoor air, and ambient air sampling, in conformance with the applicable procedures described in ASTM E2600-08 Standard Practice for Assessment of Vapor Intrusion into Structures on Property Involved in Real Estate Transactions and the NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006);

ENVIRONMENTAL CONSULTING HAZARDOUS MATERIAL SERVICES
MULTIPLE NEW YORK CITY PUBLIC SCHOOL LOCATIONS, NY

- Geologic investigations, including advancement of borings using direct push drilling methods (i.e., Geoprobe™) utilizing a track-mounted direct drive rig, field screening, and soil sampling and testing, to assess the current environmental condition of subsurface soils and characterize subsurface soil at the Site;
- Hydrogeologic investigations to assess the current environmental condition of groundwater within the proposed site area, including installation of monitoring wells via air rotary drilling methods or temporary well points by direct push drilling methods, groundwater flow direction determination, field screening, and groundwater sampling and testing; and
- Collection and analysis of soil, groundwater, and dry well (storm water drainage system) sediment samples, plus associated field QC duplicates and blanks, for target analytical parameters [VOCs, semi-volatile organic compounds (SVOCs), pesticides, PCBs, and/or metals].

At select locations, we had to obtain sidewalk opening permits which necessitated coordination with NYCSCA, the drilling subcontractor, and the City of New York. In addition, a few of the properties being investigated abutted M and R Metropolitan Transit Authority (MTA) subway lines. Tetra Tech reviewed subway construction drawings and prepared figures with "line of no impact" determinations in relation to applicable sample locations, which were subsequently sealed by our professional engineer licensed in New York State, based on the MTA's procedure for submittal and approval prior to boring advancement.

Air Quality Assessments. In addition to the vapor intrusion investigations described above, we also performed indoor and outdoor air quality assessments. The indoor investigations included the sampling and analysis for petroleum- and chlorinated solvent-related VOCs inside site buildings utilizing 6-liter stainless steel SUMMA™ canisters equipped with laboratory-calibrated flow regulators. At some properties, Tetra Tech personnel also used meters for determination of VOCs, hydrogen sulfide, lower explosive limit, carbon monoxide, and oxygen. Prior to placement and collection of the samples, a pre-sampling inspection and chemical product inventory of potential VOC-containing products (i.e., solvents, cleaning supplies, bleaches, soaps, and paints) was conducted, as specified in the NYSDOH Guidance. For each site, a NYSDOH indoor air quality questionnaire and building inventory form was completed. Outdoor air assessments were conducted in accordance with the American Society of Heating, Refrigeration, and Air-Conditioning Engineers Standard 62.1-2004, Section 4.0: Outdoor Air Quality. Each assessment consisted of a qualitative evaluation of regional air quality from regulatory compliance status reports and local air quality through a survey of the site and surrounding properties.

Remedial Actions. Tetra Tech designed and/or conducted various remedial actions throughout the contract. For these tasks, work generally included ***preparation of specifications, drawings, plans, and engineering estimates***. ***Tank tightness testing and UST closure activities*** were performed, including specifications for tank decommissioning and removal, engineering estimates, and reviewing demolition drawings. At a site in the Bronx, we engaged a subcontractor to perform a tank tightness test on an UST and associated underground fill lines using the Horner EZY 3 Locator Plus method, which placed the tank under negative pressure, then measured the decay of the vacuum. In addition, a microphone was placed within the UST cavity to detect sounds associated with the incursion of air or water into the tank. A report outlining the testing procedure and results was prepared and submitted to NYCSCA. Due to failure of the tank during tightness testing, a ***UST investigation*** (i.e., geophysical survey, direct push boring advancement, soil sample collection and analysis) was subsequently conducted by Tetra Tech for this tank.

We also ***designed vapor barriers and sub-slab decompression systems*** to prevent chlorinated solvents from entering school buildings. Tetra Tech utilized 60% design documents produced by the client's design architect/engineer (A&E), and developed the necessary ***environmental specifications and drawings*** (e.g., a gas vapor barrier during construction of a building addition) for incorporation into the overall design. We then verified these specifications and drawings were correctly integrated into the A&E's 100% design documents. All specifications and drawings prepared by Tetra Tech were in conformance with the NYCSCA Standard Contract Documents, as well as all applicable New York State

ENVIRONMENTAL CONSULTING HAZARDOUS MATERIAL SERVICES MULTIPLE NEW YORK CITY PUBLIC SCHOOL LOCATIONS, NY

laws, rules, regulations, and guidelines and the final versions of the specifications were sealed and signed by a professional engineer licensed in New York State. We also were in attendance at project meetings with NYCSCA, their A&E contractor, and other representatives.

At one site, we ***designed and performed soil excavation and disposal, and in-situ treatment*** via Oxygen Release Compound® (ORC) injection. Based on data obtained during previous environmental investigations conducted by another contractor and Tetra Tech on behalf of NYCSCA, the removal of petroleum-impacted soil followed by the application of ORC (to add oxygen to the groundwater, which in turn will accelerate the aerobic biodegradation of any residual contamination left in place following the soil removal effort) was recommended to remove residual petroleum contamination resulting from a former petroleum spill. Tetra Tech coordinated the soil removal subcontractor and ***performed engineering oversight*** of their work. In addition, we implemented a community air monitoring plan and a soil erosion and sediment control program, conducted endpoint sampling from the excavation sidewalls in accordance with the New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation's Technical Guidance for Site Investigation and Remediation (DER-10), and performed site restoration activities. Soil exhibiting no field evidence of contamination was separated during the remedial action and later re-used as backfill during site restoration activities, which reduced project costs.

BOOKER T. WASHINGTON COMMUNITY SERVICE CENTER ENVIRONMENTAL ASSESSMENT

Client:	San Francisco Mayor's Office of Housing
Primary Point of Contact:	Eugene Flannery, HUD Environmental Review Officer – (415) 701-5598
Secondary Point of Contact:	Booker T Washington Community Service Center. Patricia Scott, Executive Director (415)-928-6596
Contract Value:	6/23/2010 – 9/30/2010
Period of Performance:	$22,190.61

This project is a mixed-use development and includes an enlarged community service center and mixed income residential facility. It would continue the mission of the Booker T. Washington Community Service Center and provide new housing, particularly affordable housing, close to educational institutions, employment, and transit. The project includes demolishing the four-story community center and constructing a five-story structure that would combine 50 residential units and community-serving uses on the site. Tetra Tech is preparing the EA for the proposed project to meet the requirements for HUD funding. Major environmental issues of the proposed project are the potential adverse impact on a historic resource, impacts on archaeological resources, and potential impacts from the presence of hazardous materials in the existing building. The building to be demolished was determined to be eligible for inclusion on the NRHP and the CRHR. Tetra Tech is assisting the MOH with compliance with the PA. In addition, the project required a reclassification of the subject property's existing height and bulk district by the Board of Supervisors, as the proposed building would be up to 55 feet tall along Presidio Avenue, up to 15 feet taller than was previously permitted. This project has involved close coordination with the Mayor's Office of Housing (MOH).

PHELAN LOOP AFFORDABLE HOUSING PROJECT ENVIRONMENTAL ASSESSMENT

Client:	San Francisco Mayor's Office of Housing
Primary Point of Contact:	William Ho (415) 206-2140
Secondary Point of Contact:	Housing Services Affiliate of the Bernal Heights Neighborhood Center - Joseph Smooke, Executive Director – (415) 206-2140
Contract Value:	$34,290.61
Period of Performance:	June 26 2010 – August 26 2010

Tetra Tech prepared the EA to meet HUD NEPA requirements. Major environmental issues for this project included traffic, air quality, and noise impacts.

The project encompasses construction and operation of 71 residential units in a five-story building, approximately 7,261 gross square feet of retail space (shops and cafes), and residential lobbies. The project would include five parking spaces: one car share space, one vanpool space, and three spaces for residential use. The project would provide two spaces for trucks to load and unload in the garage and driveway area. The project would provide housing for families and transitional aged youth. The 71 residential units would encompass 13 three-bedroom units, 21 two-bedroom units, 18 one-bedroom units, 18 studios, and a two-bedroom manager's unit. Commercial space would be designed to complement the neighborhood and enhance the shopping experience on Ocean Avenue. The proposed development would also include a separate City-managed development of about 10,204 square feet of public open space—the Phelan Loop plaza—next to the east boundaries of the project site. The Phelan Loop plaza may be acquired by the SF Recreation and Park Department. A new bus layover facility would be built immediately around the fire station along Phelan and Ocean Avenues to replace the Phelan Loop bus facility. The proposed mixed-use building would be up to 55 feet high. The development of the Phelan Loop site would include widened sidewalks on Ocean Avenue and an extension of Harold and Lee Avenues north of Ocean Avenue to be completed by other developers.

The proposed project would result in a maximum of 180 residents and 35 employees working in the retail shops or managing the residential buildings.

HUNTERS VIEW REDEVELOPMENT PLAN ENVIRONMENTAL ASSESSMENT

Client:	San Francisco Mayor's Office of Housing
Primary Point of Contact:	Eugene Flannery – (415) 701-5598
Secondary Point of Contact:	Eugene Flannery – (415) 701-5598
Contract Value:	$18,000.00
Period of Performance:	November 2, 2009 to February 2, 2010

The redevelopment of the Hunters View Public Housing site is one of the most important projects for the Mayor's Office of Housing (MOH) and the San Francisco Redevelopment Agency and symbolizes the decades-long transition of public housing in San Francisco from isolated sites to thriving mixed-use developments, incorporating both public and private housing and including a mix of retail and community-serving uses. Tetra Tech prepared the EA using the format and guidelines outlined in the Environmental Assessment for HUD-funded Proposals form (recommended format per 24 CFR 58.36, revised March 2005) for developing 267 units of replacement public housing and 202 units of market-rate and below-market rate units, plus community-serving retail, office, and parks and recreation uses. Commercial space would be approximately 6,400 square feet in three to six different spaces. Potential retailers include a deli, a dry cleaner, and a coffee shop. Community facilities would include a community room, a computer learning facility, a childcare/Head Start center, children's play areas, and a senior center. Major environmental issues included traffic, air quality, noise, and hazardous materials. For the EA, we coordinated the findings of several outside technical analyses, including geotechnical and transportation. The transportation study for this project was prepared by Fehr and Peers.

HUNTERS VIEW REDEVELOPMENT PLAN ENVIRONMENTAL ASSESSMENT

Client:	The John Stewart Company
Primary Point of Contact:	Margaret Campbell, 415-345-4400
Secondary Point of Contact:	Jack Gardner
Contract Value:	$40,661
Period of Performance:	August 29, 2011 to December 31, 2011

Tetra Tech is preparing an EA for a redevelopment proposal at the Hunters View site that would provide a higher density of housing than the previous proposal. In January 2011, the San Francisco Housing Authority informed MOH of the revised proposal, and additional environmental review was begun, in accordance with 24 CFR, Section 58.47, reevaluation of environmental assessments and other environmental findings. The current proposal would replace 267 public housing units on a one-for-one basis and add up to 533 additional housing units in a range of mixed-income housing types, for a total of 800 units. The retail space would consist of approximately 6,400 square feet divided among three to six different ground-floor locations. Potential retailers include a deli, a dry cleaner, and a coffee shop. Community facilities would consist of approximately 21,600 gross square feet and 58,000 gross square feet of public open space, a community room, a computer learning facility, an 8,500-square-foot child care/Head Start facility, children's play areas, and a senior center. The project would include up to 800 total new residential units, off-street parking, neighborhood-serving commercial space, and community facilities. Major environmental issues associated with the project are traffic, air quality, noise, and hazardous materials. For the EA, we also prepared an air quality analysis, in accordance with Bay Area Air Quality Management District (BAAQMD) requirements and coordinated the findings of the outside transportation technical analyses.

EDWARD II INN ENVIRONMENTAL ASSESSMENT

Client:	San Francisco Mayor's Office of Housing
Primary Point of Contact:	Eugene Flannery (415) 701-5598
Secondary Point of Contact:	David Schnur, (415)-852-5300
Contract Value:	$12.000
Period of Performance:	October 2010 to August 2011

This project would convert the recently closed Edward II Inn into a 25-room residential facility for transitional-age youth, 18 to 24 years old. The facility would house youth who are transitioning out of foster care and into adulthood by providing an environment that includes housing as well as counseling and job-training services in an area close to education, recreation, and employment opportunities. Major environmental issues associated with this project include potential cultural resources impacts from the renovation of the Edward II Inn (constructed in 1914), potential noise and air quality impacts due to the proximity of the project site to US Highway 101, and increased residential density associated with the creation of the Lombard and Scott Street Special Use District. As part of the NEPA compliance, Tetra Tech prepared an EA that included historic preservation analysis, in accordance with the PA. MOH submitted a request to the San Francisco Planning Department, identified in the PA as the Certified Local Government, for a determination of eligibility of the building for listing on the National Register of Historic Places. Under the PA, the City consulted with the SHPO and the Advisory Council on Historic Preservation, which establishes the City's Section 106 responsibilities for administering undertakings that could affect historic properties. The Planning Department determined that the building is ineligible for listing on the NRHP. Tetra Tech was also involved in organizing and responding to public comments on the EA. We prepared an Initial Study and Mitigated Negative Declaration for the project, under CEQA; the Planning Director adopted that document, and this was upheld by both the Planning Commission and the Board of Supervisors.

SANSOME-BROADWAY FAMILY HOUSING ENVIRONMENTAL ASSESSMENT

Client:	San Francisco Mayor's Office of Housing
Primary Point of Contact:	Teresa Yanga, 415-701-5515
Secondary Point of Contact:	Sirena McCart, Chinatown Community Development Center, 415-926-1026
Contract Value:	$5,600
Period of Performance:	July 2010 to August 2010

The project involves constructing a seven- to eight-story building of 75 affordable apartments for large families with children. Family apartment units would include 10 studios, 36 one-bedroom units, 24 two bedroom units, and 5 three-bedroom units. Retail space would include approximately 1,331 square feet of neighborhood-serving retail on the corner of Broadway and Battery Streets and 1,571 square feet on the corner of Broadway and Sansome Streets. Environmental issues include potential impacts on cultural resources due to the project's location in Chinatown, as well as potential impacts from traffic and ambient noise.

DCH AUTO GROUP (DCH), BLOOMFIELD, ESSEX COUNTY, NEW JERSEY

Client:	DCH Auto Group, 955 Route 9 North, South Amboy, NJ 08879
Primary Point of Contact:	James A. Weingartner Email: [redacted]
Secondary Point of Contact:	Rehab Attia Email: [redacted]
Contract Value:	$25,000
Period of Performance:	2010-2011

YU conducted a Phase I Environmental Site Assessment (ESA) for the Site to identify existing or potential Recognized Environmental Conditions (RECs) in connection with the property. RECs identified at the Site included presence of paint spraying booth, oil and other vehicle maintenance fluid, floor trench drain and UST.

As part of Phase II investigation at the Site, YU performed geophysical survey, soil borings and temporary well installation. Soil samples from the first round of investigation were analyzed for Target Compound List (TCL) Volatile Organic Compounds (VOCs), TCL Semi-Volatile Organic Compounds (SVOCs), Target Analyte List (TAL) Metals, Pesticides, Poly Chlorinated Biphenyls (PCBs), Total Cyanide, and Total Petroleum Hydrocarbons (TPHs). Soil samples from the second round of investigation were analyzed for TAL Metals and Poly Aromatic Hydrocarbons (PAHs). The groundwater sample was analyzed for TCL VOCs, TCL SVOCs, and TAL Metals. The soil and groundwater analytical results were compared to the regulatory standards. A Phase II Investigation Report was summarized which includes the recommendations for the RECs.

RFK BRIDGE REHABILITATION RANDALLS ISLAND, NEW YORK

Client:	WSP-SELLS 555 Pleasantville Road Briarcliff Manor, NY 10510
Primary Point of Contact:	Bernard Kalus Email: [redacted]
Secondary Point of Contact:	Frank R Conti Email: [redacted]
Contract Value:	$ 430,000
Period of Performance:	2011- Ongoing

YU & Associates, Inc. (YU) is working with Metropolitan Transportation Authority (MTA) Bridges and Tunnels and WSP SELLS-HNTB joint venture for the rehabilitation at RFK Bridge located in Randall's Island, NY. The work includes reconstruction of the Bronx Toll Plaza and interim repairs to the Manhattan Plaza and the adjacent ramps.

YU is preparing an Environmental Assessment (EA) for the proposed reconstruction work in order to comply with the State Environmental Quality Review (SEQR) regulations, and will serve TBTA/MTA Bridges and Tunnels to coordinate the SEQR and CEQR environmental review with the regulatory agencies. YU's accessing the impact of the proposed reconstruction and repair activities on the social, economic and environmental conditions at Randalls Island. These include study of hazardous materials, traffic, noise, community facilities, historical and cultural resources, natural resources, parks and recreational facilities, wetlands, and coastal waterfront policies. YU will prepare permit applications including land conveyance approval from the City of New York, wetland permits from NYSDEC, and Rivers and Harbors Act permits from the USACE, and will assist the TBTA/MTA Bridges and Tunnels in acquiring permits prior to the construction of the project. A Stormwater Pollution Prevention Plan (SWPPP), erosion plan and Beneficial Use Determination (BUD) plan will also be developed by YU considering all aspects of the construction.

We are also assisting the project team as the environmental and hazardous materials consultant for the design phase of the project. YU conducted an extensive asbestos, lead and universal wastes survey and sampling at the Manhattan Plaza and associated substructures to determine and locate asbestos and lead containing materials. YU developed comprehensive hazmat abatement design and specifications to eliminate the asbestos and lead exposure during the construction phase to protect public health and environment.

PETER RODINO FEDERAL BUILDING, NEWARK, NEW JERSEY

Client:	Dattner Architects 130 west 57th Street New York, NY
Primary Point of Contact:	Jeffery Dugan [redacted]
Secondary Point of Contact:	Kristin Nelson [redacted]
Contract Value:	$140,000
Period of Performance:	2006-2010

YU & Associates Inc. (YU) performed an asbestos survey at the Peter W. Rodino Federal Building (PRFB) in Newark, NJ. The purpose of this survey was to identify asbestos containing material (ACM) within the building elements and subsequently develop an abatement design. Analytical results have shown friable sprayed-on ceiling materials and other non-friable ACM. Recommendations were made to abate these materials prior to building modernization.

The asbestos survey was performed in accordance with the USEPA AHERA regulations published in the Federal Register in 40 CFR Part 763. Field information was organized as per the AHERA concept of Homogeneous Area (HA). The Bulk samples of suspect ACM collected were analyzed by Polarized Light Microscopy (PLM) with dispersion staining, as described in 40 CFR Part 763 and the National Emissions Standard for Hazardous Air Pollutants (NESHAPS).

This Project received General Services Administration Award for the Design Excellence of 2010.

Tab 8. Additional Experience of Bidder

8.1 a) Knowledge of NEPA requirements, 24 CFR Part 58; 24 CFR, Part 55 and other federal laws and authorities, including, but not limited to the following:

Tetra Tech possesses an in-depth comprehension of the requirements of NEPA, as well as corresponding state environmental impact assessment regulations. Our staff has successfully completed thousands of NEPA projects over the last 30 years. Our interdisciplinary approach enables us to perform all aspects of NEPA analysis, from scoping and public involvement, issue identification, alternative development, effects analysis, EIS or EA documentation to preparing Records of Decision. We offer insight and methods developed from work on high-profile NEPA projects, and an understanding of the intricacies of working in an arena where opposition is often intense; a proven track record of completing NEPA documents within tight time schedules, including completion within one year; in-depth, on-the-ground, and practical experience in natural resources issues; the ability to foresee agency and public involvement issues and to address them appropriately as they arise and the proven procedures that ensure issue resolution BEFORE an EIS is released.

We regularly provide regulatory support to our clients, assessing their regulatory needs and assisting them with the record keeping requirements that are found in a wide variety of federal, state, and local laws and regulations. We have over 80 personnel on staff with regulatory and compliance experience and they often have established relationships with regulators. They work directly with our project personnel throughout the project to determine the impact of applicable regulations to the proposed activities and provide the options available. Our regulatory staff also regularly support and train our field personnel in the relevant aspects of the local regulations to ensure they have the appropriate knowledge to comply with the applicable regulations. Our regulatory experience includes the following regulations:

- National Historic Preservation Act (36 CFR Part 800)
- Floodplain Management (Executive Order 11988; 24 CFR Part 55)
- Wetland Protection (Executive Order 11990; 3 CFR 2, 5)
- Coastal Zone Management Act (16 USC 1451, 307(c), (d))
- Sole Source Aquifers (40 CFR Part 149)
- Endangered Species Act (50 CFR Part 402)
- Wild and Scenic Rivers Act (16 USC 1271, 7(b), (c))
- Clean Air Act (40 CFR Parts 6, 51, 93)
- Farmland Protection Policy Act (7 CFR Part 658)
- Environmental Justice (Executive Order 12898)
- Noise Abatement and Control (24 CFR Part 51, Subpart B)
- Explosive and Flammable Operations (24 CFR Part 51, Subpart C)
- Toxic Chemicals and Radioactive Materials (24 CFR Part 58, 5(i)2)
- Airport Clear Zones and Accident Potential Zones (24 CFR Part 51, Subpart D)
- FEMA statutory requirements at 44 CFR Part 10
- Applicable New Jersey laws

Knowledge and experience with these regulations and the content of 24 CFR Part 58 imparts on the Tetra Tech team the ability to both facilitate regulatory compliance and assist decision making related to the appropriate level of environmental review.

Tetra Tech also is familiar with the other HUD regulations associated with the environmental review process, including 24 CFR Part 50 (Protection and Enhancement of Environmental Quality), 24 CFR Part 51 (Environmental Criteria and Standards), and 24 CFR Part 55 (Floodplain Management).

8.2 b) Experience in working with federal, state or local governments in the area of environmental reviews for HUD projects and FEMA compliance reviews

Tetra Tech has prepared 6 EAs and 39 Statutory Checklists in accordance with the HUD NEPA regulations and one categorical exclusion under the FEMA NEPA regulations. Listed below are the HUD NEPA documents we have prepared since 2007:

- Booker T. Washington Community Service Center EA
- Hunters View Redevelopment EAs (2 separate EAs)
- Edward II EA
- Sansome-Broadway EA
- Phelan Loop EA
- Berkeley Housing Authority Property Disposal (15 Statutory Checklists)
- 1750 McAllister Statutory Checklist
- Ping Yuen Statutory Checklist
- 538 Holloway Statutory Checklist
- 473 Ellis Street Statutory Checklist
- Dolores Street Hotel Statutory Checklist
- Brava Center Statutory Checklist
- 1290 Fillmore Statutory Checklist
- Frandelja Statutory Checklist
- 940 Washington Street Statutory Checklist
- Self-Help for the Elderly Statutory Checklist
- Lavender Youth Recreation and Information Center Statutory Checklist
- Southwest Community Corporation Statutory Checklist
- Central City Hospitality House Statutory Checklist
- SF Conservation Corps Statutory Checklist
- Child Development Centers Statutory Checklist
- Women's Clinic Statutory Checklist
- Bay Oaks Homes Statutory Checklist
- Vietnamese Youth Development Center Statutory Checklist
- Charity Cultural Community Center Statutory Checklist
- Columbia Park Boys and Girls Club Statutory Checklist
- Florence Crittenton Center Statutory Checklist
- Bayview Opera House Statutory Checklist
- Chinatown Community Development Center Statutory Checklist
- Glide Foundation Statutory Checklist

8.3 c) Years of experience with HUD Environmental Review Records for governmental agencies

Tetra Tech has been providing ERR services since 2007.

8.4 d) Experience in completing at least twenty (20) HUD Environmental Review Records in the past five years

As presented in Section 8.2, Tetra Tech has prepared 45 ERRs since 2007, with well over 20 of those completed within the past five years.

8.5 e) Experience producing professional quality environmental reports, including GIS-based maps;

Tetra Tech has an outstanding record of responsive, timely, high quality deliverables exceeding client expectations. Our clients have repeatedly recognized our technical achievements through the contracting of additional work, along with commendations and awards. We have experience in providing a range of environmental records, from letter reports and checklists to multi-volume documents. We continually integrate diverse platforms for presentation of results (e.g., ESRI® ArcGIS, Bentley gINT®, GISKey®, and AutoCAD software), depending on applicability and client requirements. Tetra Tech's position is that quality is the primary responsibility of those performing the work and not the sole domain of a single quality group or person. All members of our Project Teams are responsible for quality, and are expected to follow available guidance (e.g., regulatory requirements, project plans) to ensure the quality of their work products. In addition, each work product produced by Tetra Tech undergoes an appropriate level of technical review and approval by qualified professional(s) other than the originator(s), to ensure concepts, assumptions, features, methods, analyses, and details are appropriate, complete, fully coordinated, and correct; results and recommendations are reasonable, within policy guidelines, and supported in the deliverable; and deliverables are in compliance with plans, policy, guidance, and standards with deviations appropriately identified and properly approved.

During our >20 year tenure at the Roebling Steel Company Superfund Site (Roebling, New Jersey), we prepared multiple plans and reports for submittal to EPA Region 2, NJDEP, NOAA, and USFWS. Tetra Tech worked closely with the stakeholders during document completion to address any regulator comments. For larger deliverables, we achieved great success using an iterative process: completing one step in the document production process, submitting the draft to the stakeholders, meeting with all parties to discuss the findings, and when all parties were in agreement, proceeding with the next step in the same fashion. We were commended by EPA Region 2 as "[providing] outstanding technical competence…[Tetra Tech] prepared several deliverables that were well written, organized, technically accurate and thorough."

Tetra Tech maintains the highest level of GIS technology, and we have applied GIS solutions to hundreds of thousands of projects across the United States. We operate one of the larger private-sector GIS departments in the environmental services industry, with more than 580 GIS practitioners located nationally and equipped with the latest Windows workstations running the full suite of ESRI's GIS products, AutoCAD, and ERDAS Imagine. Our GIS staff is experienced in database design, data compilation, map production and spatial analysis. Our technicians can capture data from a variety of sources, including paper maps, aerial photography, and satellite imagery, along with using GPS equipment in the field. We apply these and other GIS technologies as tools to produce accurate site maps; compile and manage large, multi-disciplinary environmental databases; analyze data in a spatial context; control data quality; develop public communication materials; and produce publication-quality maps and reports. Personnel have pioneered many innovative GIS solutions for our clients, including: managing environmental data collected for complex site investigations, EISs, watershed management and land use planning within watersheds and basins; modeling wildlife habitat, sensitive areas, and forest succession; predicting future conditions within watersheds based on existing land use, natural resources and water quality; monitoring environmental regulation compliance along linear construction corridors; modeling the change in wildlife habitat as a function of time and alternative land use practices; and analysis and mapping of endangered species habitat using aerial videography.

8.6 f) Experience performing environmental assessments or cultural resource surveys using state of the art equipment

Tetra Tech has the knowledge and expertise to support and direct all aspects of environmental assessments. We provide many distinct advantages to our clients. We are highly experienced in conducting the entire due diligence process, which ranges from pre-due diligence to the pre- and post-closing resolution of environmental issues. We have a large staff with environmental assessment experience, which allows for multiple teams working on multiple sites concurrently. Tetra Tech has provided support on hundreds of environmental assessments. Our highly qualified staff includes local New Jersey-experienced personnel who can provide a practical understanding of the industry standards, within the timeframe required. Tetra Tech is well versed in regulatory impacts which affect the acquisition and divestiture process, especially the needs of both buyers and sellers.

Our environmental assessments are typically performed in accordance with ASTM Standard E1527 and/or the All Appropriate Inquiry Rule. They included performance of site inspections using experienced and qualified personnel; interviews with individuals possessing relevant knowledge of the facilities activities and history; a review of pertinent historic information, such as building plans, fire insurance maps, city directories, etc.; reviews of previous environmental reports performed by others; and a review of federal, state and local records for the properties and their surrounding area. All information gathered during the investigation was compiled into a professional, easily followed report and appropriate guidance was provided to Tetra Tech's clients based on the findings of the reports.

Multiple Port Facilities, Multiple States. Tetra Tech performed environmental assessments on multiple Port Facilities located along the US Eastern Seaboard and Gulf Coast. The facilities consisted of active port facilities located in Newark, New Jersey; Philadelphia, Pennsylvania; Baltimore, Maryland; Miami, Florida; New Orleans, Louisiana; Lake Charles, Louisiana; and Houston, Texas, and ranged in size from 18 acres to 194 acres. Facility operations included container shipping, liquid and solid bulk cargo shipping, truck and ship refueling operations, truck and container repair, waste management, and rail and trucking. Information gathered during the investigation was used to provide the client with a summary of Recognized Environmental Conditions (RECs) that were used to determine additional operation and remedial costs associated with the investigated properties.

Cultural resource issues are often on the critical path for government remediation, restoration, and construction-related projects. Tetra Tech provides a full range of planning and management services to successfully address cultural resource issues. We work in a wide variety of geographic settings on projects ranging from sensitivity assessments to large-scale monitoring and data recovery. Our full-service capabilities allow us to incorporate cultural resources staff into project teams to ensure seamless integration of cultural awareness in all aspects of project planning and execution. While regulatory compliance with Sections 106 and 110 of the National Historic Preservation Act (NHPA) is at the core of the services we provide, we also assist clients in all aspects of compliance with other statutes, including the Native American Graves Protection and Repatriation Act (NAGPRA), Executive Order 13007, CERCLA/SARA, NEPA, and state environmental assessment laws and regulations. We maintain relationships with regulators, agencies, and tribes in many states.

Brindle Lake, Fort Dix, NJ. Tetra Tech conducted a Phase I and II archeological survey of the project area for the proposed replacement of Brindle Lake Dam. The project's area of potential effects (APE) covered an area of 5.5 acres and included the dam, two laydown areas, and access roads. The field investigation included a pedestrian reconnaissance, systematic surface survey of areas of bare ground, shovel testing, slot trenching, and test unit excavation. Investigations in one laydown area identified a buried building foundation, and shovel tests and test units recovered over 1,360 artifacts including architectural materials, vessel glass, and ceramics.

For Enterprise Wind and Solar, we performed Critical Issues Analysis (CIA) on three separate sites in Southern New Jersey. The CIA consisted of mapping a number of different datasets in and around the potential project areas in order to determine the viability of the potential projects, including flood hazard areas, state and federal wetlands, state hydrography data, land use/land cover, prime farmland, environmentally sensitive areas, Pinelands management area, and large scale wind development constraints (environmental sensitive) areas. Our GIS evaluation for this project resulted in the ability to visualize vast amounts of data for better site analysis and determination of viability of project(s).

Geospatial analysis played a major role in the development of the Metaltec/Aerosystems Superfund Site (Sussex County, New Jersey) project. Spatial data was used to determine flood hazard areas in and around the project site. Proposed monitoring well locations were plotted on high resolution ortho photography for better site analysis. Other spatial data such as land cover, state and federal wetlands, and hydrography were also mapped for site analysis purposes. Freely available LiDAR point cloud data was collected and filtered to extract only class 2 (ground) points. From this data, a high resolution digital elevation model (DEM) of the site was produced. The DEM was then used to delineate a drainage area for site analysis.

8.7 g) Experience using web-based tools to conduct and document HUD 24 CFR Part 58 and 24 CFR Part 55 and FEMA 44 CFR Part 10 reviews

As part of its extensive experience under the HUD and FEMA NEPA regulations, Tetra Tech has utilized a wide variety of web-based tools. These include HUD's Assessment Tools for Environmental Compliance (ATECs), such as the Day Night Noise Level Calculator. We also use FEMA's Flood Insurance Rate Maps and other online tools. Tetra Tech also uses web-based data available from non-federal government agencies, including state mapping of cleanup sites and sources of potential contamination and of health and safety hazards. Tetra Tech is also familiar with the web-based Environmental Guidance that HUD offers for New Jersey related to the requirements of 24 CFR Part 58.5.

8.8 h) Integrating web-based data entry with GIS mapping and field data collection and potential updating online and field-based data entry tools, databases, and forms;

Tetra Tech has merged project data coordination and display for over 15 projects, designing a system to integrate project GIS databases with the data, querying, and viewing capabilities of Google Maps. Our staff has expertise with GeoManager, an internet-based, interactive information management system that Tetra Tech has available for project data coordination and display. The GeoManager's core capabilities facilitate mapping, queries, reporting, and database edits through a Web browser. With the GeoManager, any project data can be viewed over Google Maps/Google Earth reference datasets, such as street maps and aerial photography. In addition to the standard Internet GIS capabilities of pan and zoom, data query, line and area measurement, and layer display control, notable features of the application include the ability to update attribute data of land parcels through the browser; custom user "geo notes" that allow project staff to add comments at any location (free floating) or attach them to a parcel; and ability to attach images, such as scanned documents or photographs to geo notes.

We have enhanced GeoManager for some clients to include cultural resources, right-of-entry (ROE), and geotechnical custom reports; data entry forms; special access restrictions and custom queries for field staff; links to a "landowner comments" database by land parcel; tools to select parcels by attribute and date; an Excel export

tool, and more. The result is a powerful and flexible tool our clients can use to view, query, update and report on project information through an easy-to-use interface. Benefits of the application are its ability to be accessed through a Web browser and does not require additional software installation on the user's personal computer; ease of use (i.e., significant training is not necessary for most users); provides version control with data and maps managed by a central server; and contains password protected and secure system information.

We are currently employing GeoManager to aid in the siting of the Gateway West Transmission Line Project, currently the longest transmission line development in the U.S. Five versions (Parcel Edit, Company Viewer, LSI Viewer, Geotech, Cultural) are available for viewing by multiple stakeholders in real-time.

8.9 i) Capability of managing paperless environmental workflows including online preparation and review of documents and maps, and management of subcontractors via extranet workflow software

Tetra Tech typically employs Microsoft's SharePoint software on our projects for managing files and documents, as well as document production activities, in a paperless environment. SharePoint is a web-based collaboration application, which is fully configurable by the end user, depending on permissions and access rights provided. Secure access can be assigned by group or individual down to the file level. As a web application, the SharePoint site can be accessed via a web browser (Internet Explorer), allowing users to access files and data from any Internet connection. This is particularly useful for users who travel throughout the State to project sites.

SharePoint is not just software, but a service where the program is tailored to each user, with their logos, looks, and features. It is particularly useful on projects with multiple assignments producing multiple pieces of work with interlocking deadlines. SharePoint allows each participant in the project to clearly see their ongoing responsibilities, due dates, and interactions. The other major benefit is version control. When multiple people are supporting an assignment, ensuring version control is vital. SharePoint requires documents to be checked in and out for edits, and tracks who has edited a document and when.

Benefits of a SharePoint system include:

- Round-the-clock access to project files from any computer with Internet access
- No IT firewall issues
- No file size limits (important for embedded graphics, modeling files, etc.)
- Organizes team early
- Accountability of product delivery
- Collaboration for multiple dispersed organizations
- Dashboard with instantaneous status information
- Structured workflow includes all steps of document flow
- Optimizes version control
- Avoids lost files
- Consistency throughout multiple documents
- Enhances Quality Control
- Tailored to your project
- Construction of an administrative record
- Provide controlled public access (disclosures, meeting notes, etc.)

BICC Cable Project, Yonkers, NY. We created a SharePoint site for this project involving site investigations and remediation of PCB-contaminated sediments in the Hudson River. There are multiple

stakeholders involved, and the SharePoint site allows the project team to share documents and maps quickly with all interested parties. Our client provides comments directly through the site, allowing quick response to any issues that arise.

8.10 j) Proof of previous experience in writing Environmental Review Records by submitting two (2) completed HUD (24 CFR Part 58) Environmental Review Records of a CENST, CEST, and Environmental Assessment (a tiered and non-tiered), with at least one including an 8-Step Floodplain or 8-step wetlands analysis, and two (2) completed (36 CFR Part 800)Cultural Resource Review Records

See Appendix B for requested documentation.

8.11 k) Proof of previous experience in completing FEMA Environmental Reviews by submitting two completed FEMA Records of Environmental Consideration

See Appendix B for requested documentation.

8.12 l) Expertise and resources to directly enter data and upload the full ERR into the ERMS including individuals who have the necessary federal and State and local licenses, certification and training to conduct any and all services required to perform the scope of services within this RFQ. Documentation of required licenses and certifications must be provided before authorization to conduct reviews can commence

Tetra Tech manages millions of data points for our projects with both governmental (federal, state and local) and commercial clients. We routinely receive, generate or otherwise derive data for use in subsequent reporting. Information is stored and managed as per contract requirements by Tetra Tech staff. In addition, for multiple contracts, the electronic information is also uploaded into regulatory or client-specific databases.

For our Navy contracts, we utilize the Navy Installation Restoration Information Solution (NIRIS), which is a web-based system that manages the Navy's environmental documents, data, and records related to cleanup of hazardous waste sites. NIRIS provides the Navy's remedial project managers (RPMs) and other environmental professionals with tools to effectively analyze, visualize, and present analytical and spatial data. To streamline review/comment schedules, documents are posted directly to the NIRIS system. The database is also utilized for location, sample, and analytical chemical data.

To provide the best possible performance on this contact, Tetra Tech has proposed a team of professionals who offer a full suite of experience and expertise. Based on their position, our team has the specialized experience, registrations, and certifications to perform the scope of services. As shown in Tab 5 and **Appendix A**, our staff includes Professional Wetland Scientists (PWSs); Registered Professional Archaeologists; Licensed Geologists; Certified Ecologists; NEPA Resource Specialists with expertise in many natural resources and the associated federal regulations, including but not limited to surface and groundwater, soils, minerals, cultural, historical, biological, recreation, visual, land use, traffic and transportation, hazardous materials, socioeconomics and environmental justice. Some of the federal regulations our resource specialist work with include but are not limited to the Endangered Species Act, Clean Water Act, Migratory Bird Treaty Act, and National Historic and Preservation Act (including Section 106) and Clean Water, including Section 404 permitting.

8.13 m) Oversight and management experience of elements a through l

Tetra Tech is proposing staff for this contract that have been involved with both the program and project management of the elements discussed above. Through this management experience, we have developed tools and techniques to expedite preparation of ERRs and will bring that experience to the development of similar components for the time-sensitive and cost-effective delivery of the ERRs under this contact. For the Berkeley Housing Authority project, this included managing the simultaneous preparation of 15 Statutory Checklists.

Tab 9. Subcontractors

The value of a team of companies cannot be maximized without proper management and coordination of their combined resources. The Tetra Tech team was designed to include a very simple but effective approach to managing our partner subcontractor, the basis of which is an integrated team under a single Subcontract Manager.

Tetra Tech's contract compliance manager, Ms. Kathleen McDougall will be the final authority on team subcontractor assignments, and will be responsible for monitoring subcontractor work performance through her project managers. Additional responsibilities of the Subcontract Manager will include:

- Establishing communication and coordination protocols for all team subcontractors
- Ensuring that an integrated team approach is implemented to meet the needs of the client
- Conducting regular meetings with team subcontractors to discuss workload, resource, personnel, and equipment issues
- Monitoring the performance of all team subcontractor personnel and the firm's overall contribution to the success of the contract

Tetra Tech also received commitment letters from our team subcontractors stating that their staff will act under the direction given them by the Tetra Tech Subcontractor Manager. For this contract, Ms. McDougall will have the ability and authority to access and commit necessary company and team subcontractor personnel and services to successfully staff and accomplish the work assigned.

Tetra Tech has entered into teaming agreements with our team subcontractor and these agreements clearly describe the scope of work required from each firm and its area and level of responsibility. The teaming agreements were structured in such a way that they can quickly be finalized as formal subcontracts following contract award. These subcontracts will incorporate the terms and conditions of the prime contract. Our approach is designed to maximize the efficiency of the program while ensuring that all subcontractors are fully accountable for the quality, cost, and timeliness of the work they perform.

As introduced in Tab 5 of this proposal and mentioned above, Tetra Tech will have the support of one key subcontractor on this program. Their role in any resulting contract is summarized in **Exhibit 6** below.

EXHIBIT 6: ROLE OF TETRA TECH TEAM SUBCONTRACTORS

Team Firm	Business Type	Primary Role
Yu and Associates	Small Disadvantaged Business	Environmental Investigations

The smooth and efficient integration of team subcontractors into Tetra Tech's program will begin in the planning stage so that a coherent and clear strategy for executing the work is in place even before contract award. After contract award, execution of the plan must include ensuring that subcontractor staff members clearly understand how they are integrated with Tetra Tech's program organization and that they will be equally engaged in supporting NJ DEP's mission.

As needed, qualified personnel from one or more team subcontractors will provide technical and administrative support Tetra Tech will provide training to subcontractor staff on the specifics of the program's technical and administrative procedures at the beginning of the contract. Subcontractor staff will be invited to participate in any ensuing training conducted by Tetra Tech to ensure that they also maintain knowledge of work requirements and procedures.

Tab 10. Subcontractor References

DCH AUTO GROUP (DCH), BLOOMFIELD, ESSEX COUNTY, NEW JERSEY	
Client:	DCH Auto Group, 955 Route 9 North, South Amboy, NJ 08879
Primary Point of Contact:	James A. Weingartner Email: [redacted]
Secondary Point of Contact:	Rehab Attia Email: [redacted]
Contract Value:	$25,000
Period of Performance:	2010-2011

RFK BRIDGE REHABILITATION RANDALLS ISLAND, NEW YORK	
Client:	WSP-SELLS 555 Pleasantville Road Briarcliff Manor, NY 10510
Primary Point of Contact:	Bernard Kalus Email: [redacted]
Secondary Point of Contact:	Frank R Conti Email: [redacted]
Contract Value:	$ 430,000
Period of Performance:	2011- Ongoing

PETER RODINO FEDERAL BUILDING, NEWARK, NEW JERSEY	
Client:	Dattner Architects 130 west 57th Street New York, NY
Primary Point of Contact:	Jeffery Dugan Email: [redacted]
Secondary Point of Contact:	Kristin Nelson Email: [redacted]
Contract Value:	$140,000
Period of Performance:	2006-2010

APPENDIX A

Resumes

TETRA TECH

JOHN BOCK
Project Manager

SUMMARY OF QUALIFICATIONS

Mr. Bock is a senior environmental scientist with over 19 years of experience in environmental impact analysis, project management, environmental decision making, health and safety planning, and natural resource management. He has managed and overseen projects involving the preparation of National Environmental Policy Act documents, California Environmental Quality Act documents, Section 7 consultation support, Section 106 consultation support, Section 404 and 401 permit applications, wetland delineations, biological assessments, sensitive species surveys, and architectural and archaeological resources surveys. He has served as a program manager and project manager under as-needed contracts with Alameda County Public Works Agency, California Department of General Services, US Army Corps of Engineers, US Bureau of Reclamation, and US General Services Administration. For several nationwide multiple-project Army programs for family housing development, Base Realignment and Closure, and lodging privatization, he is the western program manager for Tetra Tech.

Education:

B.S., Environmental Toxicology, University of California, Davis, Davis, CA, 1993

Years of Experience:

19

Areas of Experience:

Project Management

Program Management

National Environmental Policy Act

California Environmental Quality Act

RELEVANT EXPERIENCE

NEPA Environmental Reviews. Serving as the program manager for the environmental review program for the San Francisco Mayor's Office of Housing. Projects completed under this program include Hunters View Redevelopment Project EA and 22 statutory worksheets, including those for Bayview Opera House, Florence Crittenton Centers, Bay Oaks Homes, and Child Development Centers. The environmental reviews were conducted in compliance with the Department of Housing and Urban Development (HUD) regulations. The analyzes were performed in compliance with factors such as Historic Preservation, Floodplain Management, Wetland Protection, Coastal Zone Management, Sole Source Aquifers, Endangered Species, Wild and Scenic Rivers, Clean Air Act, Farmland Protection Policy Act, Environmental Justice, as well as HUD Environmental Standards such as Noise Abatement and Control, Explosive and Flammable Operations, Hazardous, Toxic, or Radioactive Materials & Substances, and Airport Clear Zones and Accident Potential Zones. (*Client reference: San Francisco Mayor's Office of Housing, One South Van Ness Avenue, Fifth Floor, San Francisco, CA 94103, Eugene Flannery, HUD Environmental Review Officer, (415) 701-5598)*

Berkeley Housing Authority's Portfolio Located on 15 Scattered Parcels Throughout the City of Berkeley (January 2013 – June 2013). Project manager for assisting the City of Berkeley's Health, Housing & Community Services Department comply with the required National Environmental Policy Act (NEPA) review for the preparation of the Environmental Review Record (ERR) for the acquisition of property improvements and rehabilitation of the 75 units in Berkeley Housing Authority's (BHA) portfolio of federal Low-Income Public Housing (LIPH) and state Rental Housing Construction Program (RHCP) located on 15 parcels throughout the City of Berkeley. The portfolio consists of 44 three-bedroom units of approximately 1,075 square feet and 31 four bedroom units of approximately 1,275 square feet. All units are attached one- and two-story townhouses of wood frame construction with private backyards and off-street parking. The project's Environmental Review Record includes the completion of a Noise Study, the Section 106 process, and a Phase I Environmental Site Assessment as related will be acquiring the existing property improvements from BHA and entering into new ground leases with the land owners. Tetra Tech prepared the necessary environmental review to make a determination, advise City staff of any other studies or reports needed to be updated and/or completed for each Statutory Worksheet. *(Client reference: City of Berkeley Housing and Community Services Department, 2180 Milvia Street, 2nd Floor, Berkeley, CA 94704, Be Tran, (510) 981-5442)*

Booker T. Washington Community Service Center EA. (June 2010 – September /2010) Served as project manager for an Environmental Assessment that evaluated the proposed demolition of a four-story community center and construction of a replacement five-story structure that would combine 50 residential units and community-serving

uses on the site. The EA is being performed for the proposed project to meet the requirements for HUD funding. Major environmental issues of the proposed project are the potential adverse impact on a historic resource, impacts on archaeological resources, and potential impacts from the presence of hazardous materials in the existing building. (*Client reference: San Francisco Mayor's Office of Housing, One South Van Ness Avenue, Fifth Floor, San Francisco, CA 94103, Eugene Flannery, HUD Environmental Review Officer, (415) 701-5598)*

PROFESSIONAL MEMBERSHIPS

- National Association of Environmental Professionals
- California Association of Environmental Professionals, Bay Area Chapter

ADDITIONAL TRAINING/CERTIFICATIONS

- None

TETRA TECH

DELIGHT BUENAFLOR

Field Manager

Education and Training:

B.A., Biology, McDaniel College, Westminster, MD (1996)

Project Management

NEPA documentation

Socioeconomics and Environmental Justice analysis

Geographic Information Systems

Ms. Buenaflor is an environmental scientist with over 15 years of experience in environmental and biological technical and regulatory work in the private and public sector. Ms. Buenaflor is proficient in the application of the National Environmental Policy Act (NEPA) and has managed several NEPA documents for the U.S. Forest Service (USFS), U.S. Department of Energy (DOE)/National Nuclear Security Administration (NNSA), and the U.S. Enrichment Corporation (USEC). Her responsibilities have included performing technical analyses, managing data collection efforts, managing public participation activities, coordination and participation in document reviews, preparation of Draft and Final EISs and EAs and comment response documents, and the preparation of the Administrative Record. Ms. Buenaflor has also authored biological resource, land use and visual resource, socioeconomic/environmental justice, and water resource sections for EISs, EAs, and Biological Assessments. Ms. Buenaflor is proficient in the application of Geographic Information Systems (GIS) software (ArcView, ArcInfo, ArcGIS) and has prepared maps displaying natural resource and socioeconomic/environmental justice data. Ms. Buenaflor also has experience providing regulatory support in the maritime industry and performing risk assessments for oil spills.

RELEVANT EXPERIENCE

Deputy Project Manager for the Portsmouth Reuse Environmental Assessment (EA), Portsmouth, OH (November 2011 – current). Ms. Buenaflor is the deputy project manager for this EA, which is evaluating alternatives for reuse of the Portsmouth, Ohio Gaseous Diffusion Facility and site. The EA is evaluating reasonable potential future uses of Portsmouth, including the transfer of real property (land and facilities) to further economic development in the area. As deputy project manager, Ms. Buenaflor is responsible for management of day-to-day project activities, including budget control and labor efforts. In addition, Ms. Buenaflor prepared several resource sections of the EA including Biological Resources, Land Use and Visual Resources, and Socioeconomics and Environmental Justice. *(Client reference: Restoration Services, Inc., Oak Ridge, TN, Leslie Cusick (865)813-2110)*

Senior Technical Editor/Deputy Project Manager for the Complex Transformation Supplemental Programmatic Environmental Impact Statement and continued support to NNSA (SPEIS) (August 2007 – December 2011). As Senior Technical Editor for this large, complex multi-site SPEIS Ms. Buenaflor was responsible for document integration, technical editing, and quality control. As Deputy Project Manager Ms. Buenaflor was responsible for assisting with the management of the Tetra Tech Team, managing data collection efforts, performing technical analyses of proposed alternatives, coordinating and participating in document reviews, and overseeing the maintenance and review of the Administrative Record. After completion of the document, Ms. Buenaflor also managed the continued NEPA support to NNSA. *(Client reference: DOE, 1000 Independence Ave, SW, Washington, DC 20585, Ted Wyka, (202) 287-5502)*

Deputy Project Manager/Technical Editor for the Site-Wide Environmental Impact Statement for the Y-12 National Security Complex (2006 – 2011). Ms. Buenaflor served as the Deputy Project Manager for the preparation of the Y-12 SWEIS, which is assessing alternatives for future operations at Y-12. This SWEIS includes analysis of the HEUMF, which would consolidate Category I/II storage, and the UPS, which would modernize and consolidate HEU operations. Her responsibilities include managing the Tetra Tech Team, managing data collection efforts, performing technical analyses of proposed alternatives, coordinating and participating in document reviews, and overseeing the maintenance and review of the Administrative Record. *(Client reference: DOE, Y-12 Site Office, Oak Ridge, TN, 37831, Pam Gorman, (865) 576-9903)*

Project Manager for the Mississippi Gasification Project Environmental Impact Statement, DOE Loan Guarantee Program (September 2009 – current). Ms. Buenaflor is the project manager for this gasification EIS. She is responsible for managing data collection efforts, performing technical analyses of proposed alternatives, coordinating and participating in document reviews, and overseeing all interfaces with the client and DOE. *(Client reference: DOE, 1000 Independence Ave, SW, Washington, DC 20585, Todd Stribley, (202) 287-6526)*

Socioeconomics and Environmental Justice Resource Lead for the Supplemental Analysis for the Nuclear Infrastructure Programmatic Environmental Impact Statement for Plutonium-238 Production for Radioisotope Power Systems (October 2012 – current). This SA is being prepared to determine if there are substantial changes to the proposed action, or significant new circumstance or information relevant to environmental concerns and bearing on the proposed action or its impacts from the Final Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility (DOE/EIS-0310). Ms. Buenaflor is responsible for the analysis of socioeconomics which describes impacts on local and regional socioeconomic conditions and factors including employment, economy, population, housing, and community services in the region of influence that includes several counties in Idaho and Tennessee. In addition, Ms. Buenaflor prepared the Environmental Justice section which discusses the presence of minority and low-income population in the region of influence and determines whether possible impacts of the construction and operation of the pipeline will have a disproportionately high and adverse impact on minority or low-income population. *(Client reference: DOE, 1901 Germantown Road, Germantown, MD 20874, Rajendra Sharma, (301)903-2899)*

Socioeconomics and Environmental Justice Resource Lead for the Environmental Impact Statement for the Acquisition of a Natural Gas Pipeline and Natural Gas Pipeline and Natural Gas Utility Service at the Hanford Site, U.S. Department of Energy, Richland, WA (12/2011 – current). This EIS evaluates the alternatives for DOE to provide natural gas to support operations and includes the construction, operation, and maintenance of a natural gas utility delivery system via a natural gas pipeline. Ms. Buenaflor is responsible for the analysis of socioeconomics for the Hanford EIS which describes impacts on local and regional socioeconomic conditions and factors including employment, economy, population, housing, and community services in the region of influence that includes Franklin and Benton Counties, Washington. In addition, Ms. Buenaflor prepared the Environmental Justice section which discusses the presence of minority and low-income population in the region of influence and determines whether possible impacts of the construction and operation of the pipeline will have a disproportionately high and adverse impact on minority or low-income population. *(Client reference: JAD Environmental, LLC, 1835 Terminal Drive, Suite 101, Richland, WA, 99354, Joe Rivers, (619)296-4069)*

Socioeconomics and Environmental Justice Resource Lead for the Bannister Federal Complex Disposition Environmental Impact Statement (1/2011 – present). The EIS will evaluate reasonable potential future uses of the KCP, which could include industrial, warehousing, and commercial/office uses. Ms. Buenaflor is responsible for the analysis of socioeconomics for the BFC EIS which describes impacts on local and regional socioeconomic conditions and factors including employment, economy, population, housing, and community services in the region of influence that includes Franklin and Benton Counties, Washington. In addition, Ms. Buenaflor prepared the Environmental Justice section which discusses the presence of minority and low-income population in the region of influence and determines whether possible impacts of the proposed action will have a disproportionately high and adverse impact on minority or low-income population. *(Client reference: JAD Environmental, LLC, 1835 Terminal Drive, Suite 101, Richland, WA, 99354, Ernie Harr, (301) 828-7342)*

ADDITIONAL TRAINING/CERTIFICATIONS

- 40 Hour Hazardous Waste Site Worker Training
- Introduction to Arc GIS I

TETRA TECH

JOSEPH J. CAMPO, SR

Field Manager

Dr. Campo has 22 years of experience as a contractor for Department of Defense environmental and natural resources programs, including Naval Facilities Engineering Command Atlantic and Pacific, Air Combat Command, U.S. Army Corps of Engineers, U.S. Army, and Air Force Center for Engineering and the Environment. He has 29 years of experience in natural resources management and environmental impact assessment. He has 19 technical manuscripts published in scientific proceedings and journals. He has participated in more than 100 projects including implementation of integrated natural resources management plans, joint training exercises, military construction projects, testing and training range improvements, airfield clear zone management, shoreline stabilization, and recreational development.

Education and Training:

Ph.D., Wildlife Ecology, Texas A&M University, 1983

M.S., Wildlife Ecology, Mississippi State University, 1980

B.S., Forestry, Louisiana State University, 1978

Natural Resources : Integrated Natural Resources Management Plans, Ecological Assessments, Wetlands Delineations, Threatened and Endangered Species Surveys, Habitat Evaluation Procedures, Project Management for Natural Resources Studies, Forest and Wildlife Ecology, Forest Management

Environmental Compliance: Clean Water Act Section 404 Permitting, Endangered Species Act Section 7 Consultation, Coastal Zone Management Act Consistency Determinations

NEPA: Environmental Assessments, Environmental Impact Statements, Public Scoping Meetings, Risk Assessment

RELEVANT EXPERIENCE

U.S. Navy; The Jacksonville Range Complex Environmental Impact Statement/Overseas Environmental Impact Statement; $1,300,000; Norfolk, Virginia; February 2008 to June 2009. As Project Manager, Dr. Campo was responsible for implementing 18 tasks for development of the EIS/OEIS and Record of Decision. The public involvement plan included presentations in 12 regional newspapers and public hearings in three states. Associated studies included a Biological Evaluation and Letter of Authorization in accordance with the Marine Mammal Protection Act, Essential Fish Habitat in accordance with the Magnuson-Stevenson Fisheries Conservation and Management Act, Consistency Analysis in accordance with the Clean Air Act, and Consistency Determination in accordance with the Coastal Zone Management Act.(*Client reference: Naval Facilities Engineering Command Atlantic, 6506 Hampton Blvd., Norfolk, VA, 23508, Kelly Knight, 757-322-4398*)

U.S. Navy; Environmental Impact Statement/Overseas Environmental Impact Statement for the U.S. Navy's Atlantic Fleet Training and Testing; $2,500,000; Norfolk, Virginia; January 2010 to March 2013. As a Section Author, Dr. Campo was responsible for the Regulatory Framework, Additional Regulatory Considerations, and Public Health and Safety. Dr. Campo also contributed to preparation of the purpose and need section, the description of the proposed action and alternatives, and peer reviews for quality assurance.(*Client reference: Naval Facilities Engineering Command Atlantic, 6506 Hampton Blvd., Norfolk, VA, 23508, Kelly Knight, 757-322-4398*)

U. S. Navy; Ecological Assessment of the Beaches and Dunes Management Unit, Naval Amphibious Base Little Creek, Virginia Beach, Virginia; $129,306; May 1999 to July 2000. As Project Manager, Dr. Campo coordinated and developed baseline data on the physical and biological features to establish a baseline for assessing military training and other land use impacts in the beaches and dunes area. A full digital terrain model was created from digital orthophotography and permanent benchmarks were established to facilitate future land surveys. Dr. Campo identified maritime communities and wetlands from photo-interpretation and ground transects. Permanent monitoring plots were established to develop a biological baseline for vegetation, small mammals, birds, reptiles, and amphibians. A 10-year monitoring protocol was developed for assessing land use impacts. (*Client reference: Naval Facilities Engineering Command Atlantic, 6506 Hampton Blvd., Norfolk, VA, 23508, David James, 757-322-4883*)

ADDITIONAL TRAINING/CERTIFICATIONS

- Habitat Evaluation Procedures, U.S. Fish and Wildlife Service, 40 hour course, 1988
- Basic Wetland Delineation, Wetland Training Institute, 40 hour course, 1992
- Performance Measures for Ecosystem Management, The Wildlife Society, 8 hour course, 2002
- Threatened and Endangered Species Workshop, U.S. Fish and Wildlife Service, 8 hour course, 2003

- How to Manage the NEPA Process, Shipley Group, 40 hour course, 2000
- Hydric Soils, Virginia Association of Wetland Professionals, 8 hour course, 2007
- Certified Wildlife Biologist, The Wildlife Society, 1991
- Professional Wetland Scientist, Society of Wetland Scientist, 1995, Certificate No.000913 (1995-2011, renewal pending)
- Certified Environmental Professional, Academy of Board Certified Environmental Professionals, 2007
- Certified Project Manager, Parsons Senior Management Program, 2008

TETRA TECH

LOREN CASALE
Field Associate

Education and Training:

MEM (Master of Engineering Management), Pennsylvania State University, expected 2013 *(in progress)*

BS, Chemistry, Pennsylvania State University (2001)

Due diligence activities including Phase I ESAs and audits

Ms. Casale has is an Associate Chemist with 12 years of experience. Responsibilities have included technical and project management support, performance of Phase I Environmental Site Assessments (ESAs), inspections of sites for deed notice and classified exception area (CEA) evaluations, field analysis of volatile organic compounds in groundwater, and sampling. Ms. Casale has prepared project plans, a data evaluation report, subcontractor procurement specifications; biennial certification reports for deed notice and CEA sites, split sampling reports, and sampling trip reports. In addition, she has interfaced with client personnel and subcontractors on technical and scheduling issues, and manages an in-house database containing chemical, geological, and hydrological data for numerous projects. Prior experience includes more than three years as an analytical chemist and one year as an inorganic synthetic chemist.

RELEVANT EXPERIENCE

University Initiative Program, Stevens Institute of Technology, Hoboken, NJ (2011). Conducted an environmental audit of selected buildings and operations at the campus located in Hoboken, New Jersey. The purpose of the audit was to assist Stevens Institute of Technology in assessing potential non-compliance with applicable federal and state environmental laws and regulations. Reviewed the college's compliance with the following federal and New Jersey environmental regulations: air quality regulations pursuant to the Clean Air Act (CAA); wastewater discharge regulations pursuant to the Clean Water Act (CWA); solid and hazardous waste regulations pursuant to the federal Resource Conservation and Recovery Act (RCRA) and State Solid Waste Management Act; discharge/release reporting regulations pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the state Spill Compensation and Control Act; petroleum storage regulations pursuant to the CWA; and community right-to-know regulations pursuant to the Emergency Planning and Community Right-to-Know Act. (*Client reference: Stevens Institute of Technology, Castle Point on Hudson, Hoboken, NJ 07030, Jane Cannavale, 201-216-5275)*

Chemtura Corporation, Newark, NJ (2010). Performed a Phase I ESA for the potential sale of a 5.2-acre former chemical manufacturing facility located in Newark, New Jersey. Tetra Tech provided an independent third-party assessment of the facility, which is currently undergoing remediation and demolition. The facility was assessed through the ASTM Phase I ESA methodology to determine the potential impacts to the environment from past and current practices. The due diligence activities included review of facility information, collection of independent environmental information, site reconnaissance, and review of potential environmental issues. The independent environmental information was comprised of a database search, review of historical environmental reports, historical aerial photographs, Sanborn fire insurance maps, and/or historical USGS topographic maps. (*Client reference: Chemtura Corporation,* 199 Benson Road - Mail Stop 2-4, Middlebury, CT 06749*, Paul Meyer,* 203-573-3545*)*

ADDITIONAL TRAINING/CERTIFICATIONS

- 30-Hour, 40-Hour, and Supervisor OSHA Hazardous Waste Health and Safety Training
- 8-Hour OSHA Hazardous Waste Health and Safety Refresher, Current
- First Aid and Adult CPR/AED, Current

TETRA TECH

RICHARD J. DELAHUNTY, PWS

Field Professional

Mr. Delahunty is a Professional Wetland Scientist (PWS) with over 19 years of environmental consulting experience, including 8 years serving in the role of project manager. His consulting/management experience includes wetland delineation, mitigation/restoration design, and permitting; threatened and endangered species surveys; invasive species surveys; environmental compliance; ecological site characterization; Phase I Environmental Site Assessments; Baseline Ecological Assessments; Environmental Assessments; and training and supervision of field staff.

Education and Training:

BS, Environmental & Systematic Biology, California Polytechnic State University, 1993

AAS, Biology, County College of Morris, 1989

Wetland Delineation and permitting

Mr. Delahunty currently manages a wide range of projects, including state and federal wetland permitting and third party environmental compliance for a wind power development project, and environmental site investigation and remedial action efforts associated with a former industrial site in accordance with the State of New Jersey Industrial Site Recovery Act.

RELEVANT EXPERIENCE

Horizon Wind Energy, Marble River Wind Farm, September 2005 – Present

Responsible for the management of a $2.0 million state and federal wetland permitting effort for the Marble River Wind Farm, located in Clinton County, New York. The proposed project occupies approximately 18,500 acres and includes the construction of up to 99 wind driven turbines. The field effort included the delineation of over 450 wetlands and 100 surface waterbodies using both US Army Corps of Engineers (USACE) and New York State Department of Environmental Conservation (NYSDEC) methodology. Other surveys performed in support of the permit effort included Rare Plant Surveys, Invasive Plant Surveys and Orchid Surveys. Supporting documentation prepared for the associated USACE and NYSDEC Joint Wetland Permit Application included Wetland Delineation Reports (including the preparation of USACE Jurisdictional Determination Forms) and addendums, Wetland Functions and Values Assessment, Wetland Quality Functional Assessment, and Numerical Functional Assessment for Permanent Canopy Removal in Forested Wetlands and a Wetland Mitigation Plan. Also responsible for the development of an environmental compliance program in support of construction activities. Effort included review and compilation of environmental permits authorizations, plans and other applicable documents; generating a construction implementation strategy; and development of a Construction Environmental Monitoring Implementation (CEMI) book.

Northern Pass Transmission, LLC, Northern Pass Transmission Line Project, May – July 2010

Delineated wetlands and other surface waterbodies along the proposed Northern Pass Transmission Line project. Proposed project includes the construction of a high voltage, direct current transmission line from northern to southern New Hampshire for the purpose of enabling the flow of low carbon electricity from Quebec to the New England region. Surveys allowed for the identification of wetland and stream resources for the purpose of project impact avoidance and minimization. *(Client Reference, Normandeau Associates, 25 Nashua Road Bedford, NH 03110, Curt Thalken 603-472-5191)*

Invenergy Wind LLC, Hardin Wind Farm October 2009 – February 2010

Delineated wetlands associated with a proposed 300 megawatt (MW) wind farm in Hardin County, Ohio and prepared Wetland Delineation Reports for incorporation into the associated United States Army Corps of Engineers (USACE) Jurisdictional Determination applications. Wetlands were delineated using the Corps of Engineers 1987 Wetland Delineation Manual and the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region. State wetland and stream data were documented in accordance with the State of Ohio Environmental Protection Agency Division of Surface Water Ohio Rapid Assessment Method (ORAM), and Qualitative Habitat Evaluation Index (QHEI) and Primary Headwater Habitat Evaluation Index (HHEI), respectively. (*Client Reference, Invenergy LLC, One South Wacker Drive, Suite 1900, Chicago, IL 60606, James Molholm, 312-582-1506)*

ADDITIONAL TRAINING/CERTIFICATIONS

- Professional Wetland Scientist, Number 1665

TRAINING

- Erosion and Sediment Control Training; NYSDEC Division of Water; 2011
- Freshwater Wetland Construction; Rutgers University; 2004
- Green Building Design and Construction: The LEED Implementation Process; 2008
- Hydrology of Wetlands; Rutgers University; 2011
- Planning Hydrology for Wetland Construction; Rutgers University; 2002
- Practical Applications of the NJ Site Remediation Program; Rutgers University; 2011
- Wetland Certification Training Program; Rutgers University; 1998
- Wind 101 and SEQR Training; Tetra Tech; 2008
- Wind Mentor Protégé© Program; Tetra Tech; 2008

TETRA TECH

BRIAN DRESSER
Field Professional

Mr. Dresser is a Senior Scientist and Project Manager with 17 years of experience. His expertise includes aquatic ecology, fisheries, permitting, data management, environmental assessments, and field work. Mr. Dresser is experienced with environmental planning (NEPA) and permitting, including: Environmental Impact Statements (EIS), Marine Resource Assessments (MRA), Essential Fish Habitat (EFH) Assessments, and Biological Assessments (BA). Mr. Dresser serves as a Project Coordinator and Lead Scientist conducting fish impingement and entrainment impact assessments, fish protection technology evaluations, and NPDES permitting for once-through cooling water intake structures, as related to Section 316(a) and (b) of the Clean Water Act. Tasks include; NPDES/SPDES renewals, Fish Protection Technology Evaluations, Proposal for Information Collection, Comprehensive Demonstration Studies, Design Construction & Technology Plans, and Storm water Monitoring.

Education and Training:

MS, Ecology, University of Georgia, Odum School of Ecology, Athens, GA (2003)

BS, Biology, Plymouth State University, Plymouth, NH (1996)

Permitting projects with potential impacts to fisheries and aquatic ecology resources.

NEPA project management and effects analysis.

Endangered species biological assessments and Essential Fish Habitat (EFH) assessments.

RELEVANT EXPERIENCE

Amboy Aggregates, Inc., Environmental Permitting in Support of Offshore Sand Mining Operations (October 2012 – March 2013) Mr. Dresser served as Tetra Tech project manager to develop Essential Fish Habitat (EFH) assessment and Biological Assessment (BA) documents in support of a sand mining operation within the Ambrose Channel in New York Harbor. Prepared an Essential Fish Habitat (EFH) Assessment and Biological Assessment (BA) in support of a commercial sand mining operation within the federally maintained Ambrose Channel in Lower New York Bay. The documents evaluated the federally managed fish species and ESA-listed species (marine mammals, sea turtles, fish) that occur within the project area. The EFH Assessment was prepared on a very compressed schedule (6-weeks) that included Draft and Final submittals. Mr. Dresser was successful in developing the required permitting documentation submittals to the USACE New York District and NMFS to obtain the dredging permits in a timely manner. (*Client reference: Amboy Aggregates, P.O. Box 3220, Lower Main St., South Amboy, NJ 08879-3220, Brad Simek, 732-525-0620*)

U.S. Navy, Atlantic Fleet Training and Testing Environmental Impact Statement (March 2010 - Present)) Mr. Dresser servs as Tetra Tech project manager for a $1.9M contract with NAVFAC Atlantic to develop the biological resource sections for the Atlantic Fleet Training and Testing (AFTT) EIS/OEIS. Mr. Dresser is coordinating a team of scientists and resource analysts in preparing the Affected Environment and Environmental Consequences sections of an EIS/OEIS to address impacts of U.S. Navy training, research, development, testing, and evaluation activities on marine biological resources. The Study Area encompasses 2.6 million square nautical miles, covering most of the northwestern Atlantic Ocean, including seven Large Marine Ecosystems (LMEs) along the east coast of North America, the Gulf of Mexico, and the Caribbean. This effort has been coordinated within Tetra Tech's diverse resource expertise including specialists in the following disciplines: oceanography, marine mammals, sea turtles, seabirds, marine vegetation, marine invertebrates, marine fishes, and marine protected areas. Mr. Dresser is responsible for analyzing the potential impacts to marine fishes. He also developed species selection criteria, ecosystem analysis plans, a draft Essential Fish Habitat (EFH) assessment, and other integral components of the EIS/OEIS. (*Client reference: U.S. Navy, Naval Facilities Engineering Command Atlantic, 6506 Hampton Blvd., Norfolk, VA, 23508, Mandy Shoemaker, 757-322-4555*)

ADDITIONAL TRAINING/CERTIFICATIONS

- OSHA 40-hour HAZWOPER Training (with annual 8-hour refreshers), University of Massachusetts-Lowell (2006)

TETRA TECH

JOSEPH FISCHL
Field Professional

Mr. Fischl has 30 years of experience in technical management/consulting and research activities involving both private and public sectors. His consulting/management experience includes ecological site characterization/mapping; threatened and endangered species surveys; wetland delineation, mitigation/restoration design, and permitting; preparation of environmental assessments and environmental impact statements; training and supervision of field research assistants. Mr. Fischl's research experience includes design and implementation of field studies investigating avian behavior and population dynamics, and the analysis and interpretation of results.

Education and Training :

MS (Master of Science), Ecology, Rutgers University, 1983

BS (Bachelor of Science), Wildlife Biology, Rutgers University, 1976

Terrestrial Ecology
Permitting and wetland regulations
Critical Issues Analysis

Mr. Fischl is currently the Biological Sciences Group Technical Lead in Morris Plains and also provides guidance for northeast region staff. He supervises biological sciences staff; reviews biological, ecological and environmental assessments and reports evaluating physical and/or chemical impacts to the environment resulting from the construction of new facilities, or the remediation of contaminated or disturbed sites. He also provides technical direction, recommendations, and evaluations for field sampling procedures for terrestrial and aquatic, vegetation and wildlife resources.

RELEVANT EXPERIENCE

Critical Issues Analyses for Potential Renewable Energy Sites in Cumberland, Salem, Gloucester Counties, NJ, 2010-2012

Project Manager for critical issues analyses (CIAs) assessing constraints associated with key resources at proposed renewable energy facilities, including wind and solar, in three counties in southern New Jersey. Analyses focused on issues that would likely affect the feasibility, cost, and schedule of project development; and that would be addressed during the environmental review and permitting process. Key resources evaluated included biological, cultural, land use, and interconnection options.
(*Client reference: Morgan Stanley Wealth Management, 140 Central Avenue, PO Box 2157, Westfield, NJ 07091-2157, Mark Rodrick, 908-518-3790*)

PSE&G Services Corporation, Former Hackensack Gas Works Site, 2009-2011

Prepared all necessary federal Section 10 and Section 404 permits and state land use regulation permits for activities required to remediate oil impacted soils at the Former Hackensack Gas Works Site located in Hackensack, Bergen County, New Jersey. State permits included a Waterfront Development General Permit, a Tidelands License, a Freshwater Wetlands General Permit and Transition Area Waiver, and a compliance with Flood Hazard Area requirements. Responsibilities also included coordination with federal and state agencies. Efforts also included assessment compensatory wetland mitigation required for both temporary and permanent impacts. (*Client reference: PSE&G, 80 Park Plaza, Newark, NJ, 07101, Richard Blackman, 973-430-8278)*

U.S. Environmental Protection Agency Region II, Roebling Superfund Site, 2002

Supervised the preparation of biological assessments (BA) to determine the direct and indirect effects of proposed remedial activities at the Roebling Superfund Site, on the bald eagle (*Haliaeetus leucocephalus*) and the shortnose sturgeon (*Acipenser brevirostrum*). The BAs addressed direct and indirect effects associated with remedial activities and subsequent redevelopment; exposure to environmental contaminants during remediation; and exposure to environmental contaminants following remediation. The assessments were prepared in accordance with 50CFR402.12 and guidance provided by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. (*Client reference: USEPA, Tammi Rossi?)*

ADDITIONAL TRAINING/CERTIFICATIONS

Habitat Evaluation Procedures (USFWS), US, Earned 3/1/91

TETRA TECH

JOSEPH GAWARZEWSKI

Field Manager

Mr. Gawarzewski joined Tetra Tech in September 2000 as an environmental scientist and training specialist. Mr. Gawarzewski has over 13 years of professional experience, with a focus on emergency response, removal, and training in emergency response and preparedness activities. For the 10 years, he has been a member of the EPA Region 3 START team, during which time he has managed and participated in nearly 20 emergency response actions, several long-term removal actions, and preparedness and prevention activities. Mr. Gawarzewski has used his direct emergency and removal response experience to develop and present several training courses under a contract with the EPA Office of Superfund Remediation and Technology Innovation. He has developed curriculum for the Readiness Training Program, facilitated meetings of the Readiness Training Board, and prepared and delivered emergency response and removal field operations courses for EPA's CERCLA Education Center.

RELEVANT EXPERIENCE

Price Battery (October 2001 – June 2010). Starting in 2001, Mr. Gawarzewski was involved with this long term residential lead clean-up site in Hamburg, Pennsylvania. During soil removal operations in the yards, Mr. Gawarzewski led sampling efforts and distributed information to the operators to delineate excavation. Mr. Gawarzewski was responsible for maintaining a database that tracks activities planned and completed for all affected properties. The database contained records for over 1,100 properties and included access agreements, clean-up dates, sampling dates and all analytical results for each property. Mr. Gawarzewski also completed pre and post cleanup photo and video documentation. In addition to the support activities identified above, Mr. Gawarzewski assisted EPA in the preparation of property owner access agreements, pollution reports and letters to residents explaining sample results. (*Client reference: U.S. Environmental Protection Agency Region 3, 1650 Arch Street, Philadelphia, PA, 19103, John Banks, 215-814-3214*)

Chemical Metals Industries (July 2010). Mr. Gawarzewski oversaw a soil investigation at the Chemical Metals Industries site in Baltimore, Maryland, a former precious metals recovery operation. Mr. Gawarzewski organized a surface and subsurface soil-sampling event using Geoprobe equipment to determine the presence and extent of hazardous materials, organic compounds, metals, and cyanide. (*Client reference: U.S. Environmental Protection Agency Region 3, 1650 Arch Street, Philadelphia, PA, 19103, Greg Ham, 410-305-2776)*

Boulevard Cleaners Site (September – October 2009). Mr. Gawarzewski was the project manager of this removal site evaluation at a former dry cleaning facility site in Hampton, Virginia. Mr. Gawarzewski performed an inventory of several hundred containers; conducted field screening of containers, fixtures, and storage locations with unknown contents; and collected multimedia samples in and around the site. The field screening led to the identification of hazardous substances, primarily dry-cleaning agents within several containers. Mr. Gawarzewski's field team used membrane interface probe (MIP) technology to screen for the presence of dry-cleaning agents, such as PCE, TCE, and VC, in the subsurface soils. The use of MIP technology allowed instantaneous subsurface screening and expedited the determination of whether dry-cleaning chemicals had been released to the environment. Raw data and maps produced during the MIP screening expedited sample collection and decreased the number of samples collected throughout the site. Mr. Gawarzewski's ability to rapidly locate and identify contaminants reduced uncertainty in project decisions and allowed EPA to see real-time

Education and Training:

B.S., Environmental Science, Saint Joseph's University, Philadelphia, 2000

Minor Certificate, Spanish, Saint Joseph's University, Philadelphia, 2000

40-hour OSHA Health and Safety Training, 29 CFR 1910.120, 2000

8-hour OSHA Annual Refresher Course, 2001 through 2013

Certified Hazardous Materials Manager, 2009

OSHA Supervisor Training, 2004

10-hour OSHA Construction Safety Training, 2012

CPR, First Aid, Lifesaving Certification, 2012

SHPO Trained for the State of New Jersey, 2000

Niton Portable XRF Training for Lead and RCRA Metals, 2001

Incident Command System – Level 200, 2004

Emergency and Counter Terrorism Response Training, 2004

Methamphetamine and Clandestine Drug Lab Response Training, 2004

Level A Personal Protection Training, 2004

Hazard Categorization Training, 2004

Mark I Kit Training, 2006

Air Monitoring Training, 2009

Forms II Lite Training, 2009

Asbestos Training, 2009

Areas of Experience:

Project Management

Emergency Environmental Response

Environmental Remediation Management

Technical Report Preparation and Review

results during the investigation. (*Client reference: U.S. Environmental Protection Agency Region 3, 1650 Arch Street, Philadelphia, PA, 19103, Laura Casillas, 215-814-3253*)

Crossley Farm Site (June 2006 – May 2010). Mr. Gawarzewski was the project manager of the removal site evaluation and subsequent removal action at the Crossley Farm site in Pennsylvania. Mr. Gawarzewski was responsible for conducting several 24-hour indoor air sampling events and assisting EPA ERT in its assessment of 20 homes located near the site. Mr. Gawarzewski coordinated the removal of potential VOC-containing household items from areas near sampling locations and surveyed each residence by completing indoor air quality questionnaires. As part of the removal action, Mr. Gawarzewski oversaw the repair of basements and installation of vapor systems to prevent the infiltration of vapors into two residences impacted by TCE. In addition, Mr. Gawarzewski provided site health and safety support, prepared GIS maps, performed site cost tracking, and attended several community meetings about concern for TCE vapor issues. (*Client reference: U.S. Environmental Protection Agency Region 3, 1650 Arch Street, Philadelphia, PA, 19103, Ann Didonato, 215-814-3311*)

Technical Support

Willow Grove Naval Air Station Field Activity Support (October 2008 – May 2012). Mr. Gawarzewski participated as part of the field sampling team during the investigation of potential jet fuel contamination within the Right-of-Way for three high pressure natural gas pipelines located adjacent to an Air Reserve Base in Willow Grove, Pennsylvania. For the past three years, Mr. Gawarzewski has served as the field sampling lead for groundwater events for compliance and investigative purposes. These events involve the coordination with stakeholders, the arrangement of equipment and laboratory needs, and the collection of groundwater and surface water samples both on and off base for laboratory and field analysis. (*Client reference: Willow Grove Air Reserve Station, 1120 Fairchild Street, Willow Grove, PA, Al Ferkel, 215-443-1732*)

Tranguch Gasoline Spill Site Removal Support (December 2000 – May 2002). Mr. Gawarzewski was involved for more than 2 years at the Tranguch gasoline spill site in Hazleton, Pennsylvania, in which 50,000 gallons of gasoline leaked into the community. During this time, Mr. Gawarzewski managed several multimedia sampling events, including residential air sampling, soil gas sampling, monitoring well sampling, and sewer/cleanout sampling. This OPA site included more than 400 properties, and Mr. Gawarzewski was directly involved in over 400 SUMMA air samples, 300 post vent samples, and 150 soil gas samples. This complex site also involved a wide variety of data management and high community involvement activities. Mr. Gawarzewski also helped operate the groundwater treatment system, a system that has treated over 4 million gallons of contaminated groundwater. (*Client reference: U.S. Environmental Protection Agency Region 3, 1650 Arch Street, Philadelphia, PA, 19103, Steve Jarvela, 215-814-3259*)

Standard Chlorine of Delaware Removal Support (May 2003 – June 2004). For longer than a year, Mr. Gawarzewski was the START on-site project manager for 24-hour-a-day removal operations at the Standard Chlorine of Delaware site in Delaware City. He provided technical support in the removal and remediation of more than 43 million pounds of chemicals throughout the facility. Support included performing multimedia sampling, preparing a cleanup alternative feasibility study, and evaluating transportation and disposal options. Mr. Gawarzewski also served as the subject expert on air sampling for dioxins throughout the site, for which he calibrated, maintained, and operated polyurethane foam (PUF) sampling houses throughout the site. He also performed screening and the lockout of several radiation sources at the site. During the winter months, Mr. Gawarzewski served as the site lead the overnight shift (7:00 pm to 7:00 am) to ensure site health and safety and reduce risks posed by the site by transferring the chemicals from tanks and vessels to the most secure containers. Mr. Gawarzewski also focused on the off-site disposal of wastes and the cleaning of remaining vessels. The transportation of commercially valuable materials into the stream of commerce generated more than $200,000 for site operation, and this action has saved more than $3 million in disposal costs. (*Client reference: U.S. Environmental Protection Agency Region 3, 1650 Arch Street, Philadelphia, PA, 19103, Brad White, 215-814-3217*)

Aladdin Plating CERCLA Site Removal Support (May 2004 – May 2010). For a removal action project at the Aladdin Plating site in Clarks Summit, Pennsylvania, Mr. Gawarzewski served as the START sampling lead, responsible for planning and performing bi-annual sampling events at a former electroplating facility. Over the past four events, Mr. Gawarzewski has performed both monitoring well and residential well sampling and continues to assist EPA in groundwater monitoring of hexavalent chromium. With each round of sampling, Mr. Gawarzewski has improved the efficiency of site operations. An event

that once took well over 2 weeks has been streamlined to a week and a half while still meeting the constraint of 24-hour hold time for hexavalent chromium samples. Mr. Gawarzewski also helped in the modeling of site geology and trend analysis report writing. (*Client reference: U.S. Environmental Protection Agency Region 3, 1650 Arch Street, Philadelphia, PA, 19103, Ann Didonato, 215-814-3182*)

Emergency Response

Pentagon Disaster Emergency Response (September 2001). Mr. Gawarzewski participated in both day and night operations during the START emergency response support to EPA immediately following the September 11 terrorist attack on the Pentagon. Activities included 24-hour monitoring of air quality both inside the impact zone and the crime scene for such contaminants as asbestos, silica, and volatile organic compounds. In addition, Mr. Gawarzewski provided environmental site safety to countless workers and worked directly in the rubble piles with such groups such as the Federal Bureau of Investigations, U.S. Army, and other local entities. He was part of the monitoring team that delineated the presence of jet fuel within the rubble piles before recovery workers began their searches. These sampling efforts of Mr. Gawarzewski served as an origin of environmental data that was disseminated through several federal agencies working at the site. (*Client reference: U.S. Environmental Protection Agency Region 3, 1650 Arch Street, Philadelphia, PA, 19103, Rich Rupert, 215-814-3463*)

Hurricane Katrina Disaster Response (January – March 2005). Mr. Gawarzewski served as the Situation Unit Leader for EPA emergency response operations within Harrison County, Mississippi during the aftermath of Hurricane Katrina. Mr. Gawarzewski was responsible for directing removal teams within his Division as they collected hazardous household waste (2,000 items daily on average). Working every day, Mr. Gawarzewski also prepared the Incident Action Plan, daily and weekly Situation Reports, and coordinated the data between his Division, Incident Command, and the GIS branch. Mr. Gawarzewski also participated with local and state agencies during the entry and recovery of over 300 items in a locked Connex box and the response to a transformer PCB spill during his time in Mississippi. (*Client reference: U.S. Environmental Protection Agency Region 4, 61 Forsyth Street, Atlanta, GA, Art Smith, 502-905-7559*)

TMS Diesel Fuel Spill Response (April 2010). Mr. Gawarzewski was an initial responder activated to respond to a fuel release at the TMS site in Richmond, Virginia. At this site, diesel fuel had been released through a storm drain and into open gutters along a residential road. Fuel reached an unnamed stream but did not reach major waterways. Mr. Gawarzewski's responsibilities included providing logbook and photographic documentation, conducting air monitoring, and collecting multimedia samples to help define the extent of the release and confirm the adequacy of cleanup operations. Working in PPE Levels B and C, Mr. Gawarzewski collected surface water, sediment, soil, and drum samples, and characterized the contents of more than 20 drums stored on site. (*Client reference: U.S. Environmental Protection Agency Region 3, 1650 Arch Street, Philadelphia, PA, 19103, Christine Wagner, 215-814-3261*)

TETRA TECH

JEFFREY L. HOSTERMAN, PG, LSRP

Task Manager

Mr. Hosterman has over 18 years' experience in the environmental consulting industry. Mr. Hosterman has acted as a third-party consultant and principle project contact primarily for petroleum marketers, but also for other clients including the EPA and city and county government, law firms, and various financial institutions. Projects have involved geological and hydrogeological investigations in Pennsylvania, New Jersey, New York, and Connecticut. Primary responsibilities have included project/liability management, resource management, preparation of work proposals, assessment and remedial activities, technical guidance, and report preparation for Remedial Investigation / Remedial Action projects, Phase I and Phase II Environmental Site Assessments and an EPA Superfund site. Knowledge of health and safety, field instrumentation and sampling, environmental regulations, UST compliance, risk-based decision making, liability management, and subsurface remediation of petroleum hydrocarbons.

RELEVANT EXPERIENCE

Camden County Technical Schools, Gloucester Township Campus Remedial Investigation / Remedial Action (April 2008 – current) As Program Manager and Licensed Site Remediation Professional (LSRP), Mr. Hosterman is responsible for ongoing remedial investigation and remedial action activities under the Site Remediation Reform Act (SRRA), Tank Regulations and Technical Regulations at the campus. The activities are associated with historical releases from a fueling station and fuel oil and waste oil USTs that were located on the campus. Remedial action activities included operation and maintenance of a soil and groundwater treatment system, chemical oxidation, and aerobic bioremediation. *(Client reference: Camden County Technical Schools, Gloucester Township Campus, 343 Berlin Cross Keys Road, Sicklerville, NJ, 08081-4000, James Clark, 856-767-7000)*

Paul Hastings LLP / Various Environmental Projects throughout the United States (June 2008 – December 2012) As Program Manager and Principal Geologist/LSRP, Mr. Hosterman was responsible for remedial investigation and remedial action activities under the SRRA, Tank Regulations and Technical Regulations for a retail car rental facility with multiple petroleum releases at the Newark Liberty International Airport in Newark, New Jersey. Remedial action activities consisted of regularly scheduled short-duration, multi-phase extraction events at one area of concern and a natural remediation compliance program at a separate area of concern.

Projects also included management of wastewater discharge permit plans for a retail car rental facility in Louisiana, quarterly wastewater sampling for a retail car rental facility at the Los Angeles International Airport, and due diligence investigations and remedial investigations of facilities located in Arkansas, Colorado, Hawaii, Indiana, Louisiana, Ohio, Pennsylvania and Texas. *(Client reference: Paul Hastings LLP, 875 15th Street, N.W., Washington, DC, 20005, Michael Lukens, 202-551-1826)*

Wolff & Samson PC, Montrose Molders Corporation Preliminary Assessment, Site Investigation and Remedial Action (June 2012 – January 2013) As LSRP, Mr. Hosterman oversaw the Industrial Site Recovery Act (ISRA) Preliminary Assessment and subsequent Site

Education and Training:

B.S., Earth Sciences (Geosciences), Pennsylvania State University, University Park, Pennsylvania, 1993

2001 - Professional Geologist, Pennsylvania *(License No. 3888)*

2009 – Licensed Site Remediation Professional, New Jersey *(Permanent License No. 574859)*

1994 - 40 Hour HAZWOPER – 29 CFR 1910.120 (e)

2002 - HAZWOPER Supervisor Course – 29 CFR 1910.120 (e)

2009 – Tetra Tech Project Management Training – Level 2

2009 – New Jersey Department of Environmental Protection Industrial Site Recovery Act Training

2012, 2009, 2006, 2003, 2000, 1997 - New Jersey Department of Environmental Protection Underground Storage Tanks Training

2009 – Emergency Management Institute, Introduction to the Incident Command System (ICS) Training, ICS-100 & ICS for Single Resources and Initial Action Incidents Training, ICS-200

2010 – National Enforcement Training Institute Web-Based Basic Training for Inspectors

2011 – Understanding Site Remediation in New Jersey, Part 1 and Part 2

2012 – 30 Hour OSHA Construction Safety

2012 – American Heart Association First Aid, CPR and AED Training

Areas of Experience:

Project Management

Geological and hydrogeological investigations

Remedial Investigation / Remedial Action

Project/liability management

Investigation and remedial action for an industrial property located in South Plainfield, New Jersey. Upon completion of the remedial action, Mr. Hosterman issued a Response Action Outcome (RAO) for unrestricted use of the entire site. The RAO was petitioned by a 3rd party and subsequently reviewed and supported by the NJDEP. *(Client reference: Wolff Samson PC, One Boland Drive, West Orange, NJ, 07052, Todd Terhune, 973-530-2091)*

Teva Pharmaceuticals, Barr Laboratories Inc. Preliminary Assessment (March 2013 – June 2013) As LSRP, Mr. Hosterman oversaw the ISRA Preliminary Assessment for an industrial property located in Northvale, New Jersey. Upon completion of the Preliminary Assessment, Mr. Hosterman issued a RAO for unrestricted use of the entire site. *(Client reference: Teva Pharmaceuticals, 1090 Horsham Road, P.O. Box 1090, North Wales, PA, 19454-1090, Carolyn Straton, 215-591-8511)*

Stinson Morrison Hecker LLP, Inergy Propane – Newark Facility Preliminary Assessment (November 2012 – June 2013) As LSRP, Mr. Hosterman oversaw the ISRA Preliminary Assessment for an industrial property located in Newark, New Jersey. Upon completion of the Preliminary Assessment, Mr. Hosterman issued a RAO for unrestricted use of the entire site. *(Client reference: Stinson Morrison Hecker LLP, 1201 Walnut Street, Suite 2900, Kansas City, MO, 64106-2150, Kyle Foote, 816-691-3391)*

New York City Mayoral Office of Environmental Remediation, On-Call Environmental Consulting Services (January 2012 – current) As Project Manager for an on-call environmental consulting services contract, Mr. Hosterman is responsible for ensuring all tasks are completed within the budget and schedule outlined in the work plan. He ensures adequate staff, facilities, equipment and administrative support is provided. Mr. Hosterman is a central point of contact for Office of Environmental Remediation staff. *(Client reference: New York City Mayoral Office of Environmental Remediation, 253 Broadway, 14th Floor, New York, NY, 10007, Cavy Chu, 212-788-3774)*

EPA - Region III, Douglassville Disposal Superfund Site Remedy Assessment (April 2008 – June 2010) Mr. Hosterman was the Project Manager for the EPA Region 3 Superfund site undergoing a remedy assessment. The former waste oil recycling facility had soil, soil gas, sediment and groundwater contaminated with volatile organic compounds, polynuclear aromatic hydrocarbons, PCBs and/or several inorganic compounds including lead. Mr. Hosterman was responsible for supervising bedrock monitoring well installation and abandonment, and bi-annual monitoring well, residential well, surface water and sub-slab, soil gas sampling events, for disposing of purge and decontamination water, for reviewing analytical results and preparing trip reports, and for maintaining communication with the EPA and with area residents. *(Client reference: EPA - Region III, 1650 Arch Street, Philadelphia, PA, 19103, Romuald Roman, 215-814-3212)*

Liesch Associates, Inc., Former Union Metal Corporation Site Investigation (May 2009 – current) As Principal Geologist, Mr. Hosterman is responsible for ongoing site investigation activities under the Land Recycling Program (Act 2). The activities are associated with historical use of the site as a manufacturing facility of aluminum and concrete light poles. Contaminants include chlorinated compounds. Responsibilities have included coordination of soil and groundwater investigation activities including installation of deep groundwater monitoring wells, coordination of groundwater sampling, review and interpretation of site stratigraphy, and review of the Site Investigation Work Plan and the Site Investigation Report. *(Client reference: Liesch Associates, Inc., 13400 – 15th Avenue N., Minneapolis, MN, 55441, Dana Wagner, 763-489-3100)*

Moore & VanAllen, PLLC, Former Horne Ford Remedial Investigation (July 2010 – current) As Project Manager and Principal Geologist, Mr. Hosterman is responsible for ongoing site characterization and remediation investigation activities for a former automobile dealership located in Florence, South Carolina. Contaminants include petroleum hydrocarbon and chlorinated compounds. Responsibilities have included coordination of soil sampling, monitoring well installation, groundwater sampling, receptor survey, and preparation of the Receptor Survey Report,

Groundwater Monitoring Plan, and Site Conceptual Model. *(Client reference: Moore & VanAllen, PLLC, 100 North Tryon Street, Charlotte, NC, 28202-4003, Peter McGrath, Jr., 704-331-1081)*

OTHER EXPERIENCE

Ford Motor Company (subsidiaries) / Various Locations throughout the United States – As Program Manager, Mr. Hosterman was responsible for due diligence investigations including Phase I and Phase II Environmental Site Assessments at automobile dealerships located in Georgia, New Jersey, New York and South Carolina.

Hess Corporation / Pennsylvania Portfolio — As Senior Project Manager, Mr. Hosterman was responsible for a portfolio of approximately forty Remedial Investigation / Remedial Action projects in Pennsylvania under the Tank Regulations and the Land Recycling Program (Act 2). Mr. Hosterman was responsible for a team of five professionals. The project types included site assessment (soil, groundwater and soil gas), interim response measures, remediation system design, remediation system operation and maintenance, and ground water monitoring.

BP Petroleum Products North America, Inc. / New Jersey Portfolio – As Portfolio Manager, Mr. Hosterman was responsible for a portfolio of approximately 120 Remedial Investigation / Remedial Action projects in New Jersey under the Tank Regulations and Technical Regulations. The portfolio of sites included an active bulk fuel terminal in Carteret, New Jersey. Mr. Hosterman was responsible for a team of as many as 13 professionals including as many as four Project Managers. Project types included site assessment (soil, groundwater, surface water, soil gas and indoor air), interim response measures, remedial excavation, remediation system design and installation, remediation system operation and maintenance, bio-enhancement, and ground water monitoring. Responsibilities also included emergency response coordination and environmental support for real estate acquisitions and divestitures, property redevelopment including UST removals, suspected release investigations and legal claims.

BP Petroleum Products North America, Inc. / Pennsylvania Portfolio – As Senior Project Manager, Mr. Hosterman was responsible for a portfolio of approximately 60 Remedial Investigation / Remedial Action projects in Pennsylvania under the Tank Regulations and the Land Recycling Program (Act 2). The portfolio of sites included a few inactive bulk fuel terminals. Mr. Hosterman was responsible for a team of as many as 11 professionals including as many as two Project Managers. The project types included site assessment (soil, groundwater, and surface water), interim response measures, remedial excavation, remediation system design and installation, remediation system operation and maintenance, bio-enhancement, and ground water monitoring. Responsibilities also included emergency response coordination and environmental support for real estate acquisitions and divestitures and property redevelopment including UST removals, and suspected release investigations.

BP Petroleum Products North America, Inc. / Various locations in New York and Connecticut – Mr. Hosterman managed approximately 20 Remedial Investigation / Remedial Action projects in New York and Connecticut. Responsible for a team of four professionals. Project types included site assessment (soil, groundwater, surface water, and soil gas), interim response measures, remediation system design and installation, remediation system operation and maintenance, chemical oxidation, bio-enhancement, and ground water monitoring. Responsibilities also included preparation of spill prevention training materials for UST system operators, computer modeling, report preparation, emergency response coordination, and environmental support for real estate acquisitions and divestitures and property redevelopment including UST removals, and suspected release investigations. Divestiture support included a 26-site Phase II assessment completed in less than 60 days.

Field work performed by Mr. Hosterman included site inspections, receptor surveys, soil boring installation and sampling, monitoring and recovery well installation and sampling, aquifer testing, and well sealing.

Various Commercial Clients including Beazer, Kimber Petroleum, Midland Bank, and 73 Development / Various Locations in New Jersey – As Staff Geologist, Mr. Hosterman assisted with Phase I and Phase II Environmental Site Assessments and Remedial Investigation / Remedial Action projects. Responsibilities included site inspections, receptor surveys, soil boring installation, and sampling, monitoring well installation and sampling, aquifer testing, and well sealing. Mr. Hosterman also assisted with preparation of work proposals, waste disposal coordination, data reduction, and report preparation.

PROFESSIONAL ORGANIZATIONS/ASSOCIATIONS

- Member, Pennsylvania Council of Professional Geologists
- Member, New Jersey Licensed Site Remediation Professionals Association

TETRA TECH

MAHER ITANI

Task Manager

Mr. Itani is a senior Project Manager with more than 25 years of experience with NEPA and environmental engineering. He has served as project manager, technical lead, and quality assurance officer for more than 25 NEPA documents. Over the last 10 years Mr. Itani has successfully managed the preparation of three complex nationwide programmatic EISs, each of which included analyses related to floodplains, wetlands, and climate change. Mr. Itani's expertise is in commercial construction management and environmental engineering. He has worked extensively on local and Federal government projects ranging in size from $9 to $70 million. He has experience in project and subcontractor management, planning, scheduling, negotiating, directing work, and developing and interpreting plans and specifications. Mr. Itani also has experience in providing technical and managerial support in the preparation of NEPA documentation for a variety of other Federal customers including the Federal Energy Regulatory Commission, the U.S. Army Corps of Engineers, and the US Bureau of Land Management.

Education and Training:

M.E.A., Engineering Administration, George Washington University, 1987

B.S., Civil Engineering, George Washington University, 1985

Project Manager for several Programmatic NEPA documents

Multi-site NEPA Project Manager

Extensive experience working Energy Projects

Expertise in commercial construction management and environmental engineering

RELEVANT EXPERIENCE

Project Manager, Indiana Gasification Project Environmental Impact Statement, Department of Energy, Loan Program Office. (September 2009 to Ongoing). Mr. Itani is the project manager for this gasification EIS. He is responsible for managing data collection efforts, performing technical analyses of proposed alternatives, coordinating and participating in document reviews, and overseeing all interfaces with the client and DOE. The EIS is to evaluate the potential environmental impacts of issuing a Federal loan guarantee to Indiana Gasification, LLC (IG), which submitted an application to DOE under the Federal loan guarantee program pursuant to the Energy Policy Act of 2005 to design, construct and operate a coal-to-substitute natural gas facility in Rockport, Indiana, and a 400 mile carbon dioxide pipeline. The IG proposes to develop the Facility on a 1,300-acre parcel of land near the Ohio River. The Facility would utilize gasification technology with Illinois Basin coal as the feedstock to produce SNG. The EIS includes a detailed floodplain and wetland assessment and an analysis of the impacts associated with greenhouse gas emissions and climate change. Todd Stribley, Document Manager, U.S. Department of Energy, Loan Programs Office, (202) 287-6526

Project Manager, Modern Pit Facility Environmental Impact Statement, U.S. DOE. (August 2002 to February 2007). Mr. Itani was the Project Manager responsible for the overall management and coordination of this $1.7 million multi-site project. Responsibilities included managing the Tetra Tech Team, managing data collection efforts, performing technical analyses of proposed alternatives, managing and taking part in all public participation activities, and coordinating and participating in all document reviews, the preparation of the Draft and Final EIS, and the preparation of the Administrative Record. Jim Sanderson, DOE, 1000 Independence Ave, SW, Washington, DC 20585; (202) 586-1402.

Project Manager, Site-wide Environmental Impact Statement for Continued Operation of Lawrence National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement, U.S. DOE (December 2002 to November 2005) Mr. Itani was the Project Manager responsible for the overall management and coordination of this $5 million site wide NEPA document. This complex project included analysis of all operations at LLNL and incorporates three project-specific NEPA analyses. Responsibilities included managing the Tetra Tech Team, managing data collection efforts, performing technical analyses of proposed alternatives, managing and taking part in all public participation activities, and coordinating and participating in all document reviews, the preparation of the Draft and Final EIS, and the preparation of the Administrative Record. Thomas Grim, Document Manager, Lawrence Livermore National Laboratory, Mail Stop: L-293 ,7000 East Avenue, Livermore, CA 94551, (925) 422-0704

Program Manager, Post-Certification Compliance Inspections, FERC, Washignton, DC, (March 2012 to Ongoing**).** Mr. Itani is the Program Manager for Tetra Tech's 5-year $4-million contract providing technical, management, and administrative support to FERC to provide post-certificate construction inspection for the interstate transportation of natural gas. The principal focus of these assigned and regimented project inspections are to ensure compliance with the FERC's Upland Erosion Control, Revegetation, and Maintenance Plan, Wetlands and Waterbody Construction and Mitigation Procedures, and other conditions required by the Commission's Order. Tetra Tech Team performs field inspections and prepares technical reports summarizing the construction and restoration conditions of natural gas pipeline facilities nationwide. Glenn Emig, Contracting Officer, FERC Office of the Executive Director, 888 First Street NE, Washington, DC 20426, (202) 502-8669

Program Manager, Environmental Compliance Services Support Contract, U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Nationwide. (September 2007 to Onging) Program Manager for this 5-year contract to support USDA APHIS to ensure that developers of regulated genetically engineered organisms maintain and adhere to all permit conditions and Federal regulations through consistent quality inspections, comprehensive document tracking and reporting, and assistance with quality assurance. Edward M. Jhee, Ph.D., Director, Regulatory Operations Program, USDA-APHIS-BRS, 4700 River Road, Unit 91, Riverdale, MD 20737, (301) 851-3948

Program Manager, National Environmental Policy Act Post-Certificate/Licensing Compliance Activities Program, FERC (February 2000 to February 2005). Mr. Itani was the Program Manager for Tetra Tech's 5-year $10-million contract providing technical, management, and administrative support to FERC. Tasks under this contract included providing post-certificate construction inspection for the interstate transportation of natural gas; researching and documenting a database for FERC hydropower facilities; and reviewing and assessing wetland construction and mitigation activities for FERC's certificated pipeline projects. Glenn Emig, Contracting Officer, FERC Office of the Executive Director, 888 First Street NE, Washington, DC 20426, (202) 502-8669

ADDITIONAL TRAINING/CERTIFICATIONS

- 40-Hour OSHA Hazardous Waste Site Worker Certification
- 10-Hour OSHA Construction Safety and Health
- Federal Energy Regulatory Commission Compliance Training
- Member of George Washington University, Department of Civil and Environmental Engineering Board of Advisory 2006-Present

TETRA TECH

SYDNE MARSHALL, PhD, RPA

Field Professional

Dr. Marshall has over 30 years of experience in the investigation and management of cultural resources including archeological and architectural properties. She serves as Cultural Resources Discipline Lead, responsible for evaluating technical requirements of projects and assisting project managers in addressing cultural resources issues on their projects. Her technical responsibilities include performing NHPA Section 106 review studies, developing National Register of Historic Places nominations for significant historic properties, designing and implementing field investigations, performing peer reviews of staff and subcontracted deliverables, providing environmental input to engineers, and developing project impact assessments. Management activities include project management, responsibility for technical work completed by staff and subcontractors, and coordination of cultural resources studies with multidisciplinary environmental analyses.

Education and Training:

PhD, Anthropology, Columbia University (1981)

MPhil, Anthropology, Columbia University (1975)

MA, Anthropology, Columbia University (1974)

BA, Anthropology, The American University (1972)

Cultural resources including archeological and architectural properties

NHPA Section 106 review studies, developing NRHP nominations, and designing/implementing field investigations

RELEVANT EXPERIENCE

Fort Dix Army Base, Architectural Investigation, Fort Dix, NJ (2012 – Present). Working with a team of architectural historians to perform an architectural investigation of numerous World War II-era structures at Fort Dix. Work is being performed in accordance with Sections 106 and 110 of the National Historic Preservation Act, Army Regulations 420-40, Advisory Council on Historic Preservation implementing regulations at 36CFR800, NEPA, and the NJ Pinelands Comprehensive Management Plan. A recommendation regarding National Register eligibility pursuant to 36CFR60.4 will be made for each structure. The report will be reviewed by NJ Historic Preservation Office (HPO), Fort Dix HPO, and NJ Pinelands Commission. (Client reference: United States Joint Base McGuire-Dix-Lakehurst, 87th Air Base Wing, CES/CEAN, 2401 Vandenberg Avenue, New Jersey, 08641, Ellis Rod Tozour, 609-562-4959)

USACE New England District, Investigation, Remedial Action, and Restoration of Davids Island/Fort Slocum, New Rochelle, Westchester County, NY (2005-2010). Responsible for assisting the USACE in compliance with NEPA and Section 106 of the National Historic Preservation Act. Cultural resources tasks performed by a team of archeologists and architectural historians include: working with Interested Parties to understand and address their concerns about the prehistoric and historic period cultural resources located on Davids Island; developing and implementing a program of cultural resource identification and evaluation for eligibility to the National Register of Historic Places through archeological fieldwork and historic architecture analyses of standing structural remains; considering potential preservation in place of structures and/or salvaging of building elements for structures that are slated for demolition; documenting NRHP-eligible resources that comprise the Fort Slocum Historic and Archeological District prior to their demolition; preparing a historic context for Fort Slocum; video documenting extant structures on Davids Island related to Fort Slocum and the Nike Missile Program; working as part of a team of Interested Parties to create a digital virtual exhibit entitled 'The Army's Century on Davids Island, Fort Slocum, New Rochelle, New York' that may be viewed on the Internet at http://davidsisland.westchesterarchives.com; and implementing an oral history program geared to recording the experiences of civilians, military personnel, and children of military families who worked and lived on Davids Island. (Client reference: USACE New York District, CENAN-PP-E, Room 1811, 26 Federal Plaza, New York, New York, 10278, Greg Goepfert, 917-790-8235)

ADDITIONAL TRAINING/CERTIFICATIONS

- Registered Professional Archaeologist, Earned 8/6/85

TETRA TECH

PAUL M. MILLER, CFM
Field Professional

Mr. Miller has more than 26 years of experience as a manager and leader in the areas of hazard mitigation planning, emergency response, disaster recovery, and homeland security operations. Most of his experience was gained while serving at increasing levels of responsibility and on numerous assignments with the New Jersey State Police, including serving as chief of the Recovery Bureau within the Emergency Management Section, Homeland Security Branch of the New Jersey State Police. Mr. Miller possesses extensive experience in disaster response and recovery as well as creating and being responsible for state hazard mitigation plans. He served as state hazard mitigation officer for 2 years, during which time he was responsible for obtaining funding for federal mitigation planning and project grants. Mr. Miller has been responsible for leading, planning, directing, and coordinating response and recovery operations within New Jersey; preparing time-sensitive significant documents and reports for the state director and governor; assessing unforeseen developments, additional hazards, new phenomena, and difficulties encountered; and recommending changes in direction and approach. He has the proven ability to improve operations during disaster recovery, which most recently included accelerated reimbursement to applicants within the FEMA/State Public Assistance Program, as well as developing the nation's first accelerated mitigation "buy out" program in conjunction with FEMA. Mr. Miller served as the state coordinating officer for four federal disasters, including Hurricane Irene. He was also designated as the New Jersey State Police liaison to the law enforcement working group during his deployment to New Orleans during the Hurricane Katrina response effort.

Education and Training:

FBI National Academy Graduate, Quantico, Virginia, June 2009

M.A., Education, Seton Hall University, 1990

B.S., Health, Physical Education, and Recreation, Trenton State College, 1986

Certified Floodplain Manager, Association of State Floodplain Managers

Hazardous Materials Awareness

Incident Command System Courses – ICS100, IS-100HCb, ICS 200

New Jersey Police Training Commission Instructor Certificate

New Jersey Standard Teaching Certificate in Health and Physical Education

State and Federal Hazard Mitigation programs

Coordination of disaster response and recovery operations in New Jersey

Development of state, county, and local all-hazard mitigation plans

RELEVANT EXPERIENCE

Township of Pequannock, Flood Mitigation Acquisition Project (April 2013 – Current). Mr. Miller currently serves as grant reimbursement and administrative support manager for the Township of Pequannock HMGP, SRL and Morris County Flood Mitigation program projects. These projects consists of the acquisition of over 30 repetitive flood prone properties. Mr. Miller is responsible for coordinating, creating and submitting all grant reimbursement packages for the Township. (*Client reference: Township of Pequannock, 530 Newark-Pompton Turnpike, Pequannock, NJ 07444 David Hollberg, 973-897-0410 dhollberg@peqtwp.org*)

Borough of Manville, Flood Recovery Acquisition Project (April 2012 – Current). Mr. Miller currently serves as project manager for the Borough of Manville Acquisition project. This project consists of the acquisition of 15 repetitive flood prone homes. Mr. Miller is responsible for coordinating with flood victims, banks, lenders, attorneys, title companies, and real estate personnel. This project is the first in the state to close on homes using Hurricane Irene funding. Mr. Miller has also successfully obtained reimbursement and advance of closing funds to avoid budget shortfalls for the borough. (*Client reference: Borough of Manville, 325 North Main Street, Manville, NJ 08835, Gary Garwacke, 908-725-9478 x. 103, GGarwacke@manvillenj.org*)

State of New Jersey, Disaster Response and Recovery Operations (2003 – 2012). While with the New Jersey State Police, Mr. Miller served as the state hazard mitigation officer and state coordinating officer during federally declared disasters. He was appointed by the governor as state coordinating officer for four declared federal disasters, including Hurricane Irene, with damages totaling over half a billion dollars. Mr. Miller reported directly to the governor's authorized representative and received accolades from the FEMA federal coordinating cadre out of Washington, DC. His ability to improve operations during disaster recovery included accelerating reimbursement to applicants within the FEMA/State Public Assistance Program and developing the nation's first accelerated mitigation "buy out" program in conjunction with FEMA. (*Client reference: New Jersey State Office of Emergency Management, Box 7068 River Road, West Trenton, NJ, Lt. Colonel Jerome Hatfield 609-882-2000 x. 2378, lppkupib@gw.njsp.org*)

TETRA TECH

ALISON M. MISKIMAN, CFM

Field Professional

Alison Miskiman has over 10 years of experience in the environmental field. She has extensive experience in hazard mitigation planning and conducting risk assessments utilizing geographic information systems (GIS) including FEMA's Hazards U.S. - Multi-Hazard (HAZUS-MH). She is proficient in FEMA's HAZUS-MH flood, wind and earthquake models; FEMA's Benefit Cost Analysis software; and relational database management. Additionally, she has experience evaluating releases of hazardous substances that may endanger the environment and/or public health. Ms. Miskiman has supported and managed numerous programs and projects for state, local, and federal government agencies, including FEMA, and U.S. Environmental Protection Agency (EPA), various states and counties, and international and private sector clients. Ms. Miskiman has designed and executed multi-media sampling investigations for EPA's Region I Site Assessment Program, prepared draft Hazard Ranking System (HRS) evaluations, and coordinated and managed multi-disciplinary teams in the field.

Ms. Miskiman is currently the lead risk assessor for FEMA Region 1, 2, 3 and 6 Local and State Hazard Mitigation Plan (HMP) projects regulated under the Disaster Mitigation Act of 2000 (DMA 2000). As lead risk assessor, Ms. Miskiman conducts vulnerability assessments evaluating exposure and estimating population, structure and economic losses using the FEMA HAZUS earthquake, wind and flood (riverine and coastal) models. In addition to mitigation planning, Ms. Miskiman is knowledgeable in the support of county and local governments throughout New York and New Jersey with plan implementation, including grant application and BCA support utilizing FEMA's BCA module.

Education and Training:

M.S. Earth Science/Geochemical Systems, University of New Hampshire

B.S. Environmental Science, University of Scranton

ASFM Certified Floodplain Manager

ESRI ArcGIS 9.0 courses (Introduction to ArcGIS I, II, Advanced Analysis with ArcGIS)

FEMA Hazards U.S. – Multi-Hazard (HAZUS-MH)

FEMA, Benefit-Cost Analysis Course (BCA), September 2008 and Updated September 2009

EPA CAMEO software suite

Hazard Mitigation

Risk Assessment

Benefit Cost Analysis

Strategic Planning

GIS/HAZUS-MH

RELEVANT EXPERIENCE

Hudson County, New Jersey (2011 to 2012). Ms. Miskiman designed and assisted in the development of a Google Earth mapping application for Hudson County's functional needs facilities. The program is designed to assist emergency responders with identifying resources (location of entrances/exists, photographs, plans, surveys, etc.) available in an emergency setting in a portable GIS program. *(Client reference: Hudson County, Office of Emergency Management, 595 County Avenue, Secaucus, NJ 07094, (201) 319-3871, jhurley@hcnj.us)*

Hazard Risk Assessment and Mitigation Planning (DMA 2000) (2006 – Present). Ms. Miskiman is a Certified Floodplain Manager and supports All-Hazard Mitigation Plan projects for states, counties and single jurisdictions. These plans include working with the New York State Office of Emergency Management, New Jersey State Police – Office of Emergency Management, and various federal, county and local agencies and organizations to identify hazards, collect relevant data, prepare loss estimates/risk assessments, and develop appropriate mitigation strategies. Ms. Miskiman is proficient in FEMA's Hazards U.S. – Multi-Hazard (HAZUS-MH) GIS extension for conducting hazard analysis/risk assessment for the flood (riverine and coastal), wind, and earthquake hazards; and has received formal FEMA training in its use and application. Further, Ms. Miskiman is the technical lead for the Risk and Vulnerability Assessment sections for coastal erosion, drought, earthquake, extreme temperature, flood (riverine and coastal), landslide, wind (hurricane, nor'easter, severe storms, coastal storms), wildfire, winter storms hazards for FEMA-approved HMPs. Ms. Miskiman has worked on the following HMPs in FEMA Region 2 alone. *(Client reference: Suffolk County Dept. Fire, Rescue and Emergency Services (FRES), P.O. Box 127, Yaphank, New York 11980-0127, Bob Sheron, 631-852-4909, Robert.Sheron@suffolkcountyny.gov).*

New Jersey

- Cape May County, New Jersey (2009-2010);
- Hudson County, New Jersey (2006-2008);
- Somerset County, New Jersey (2007-2008);
- Burlington County, New Jersey (2013–Present).
- State of New Jersey Hazard Mitigation Plan Update (2012–Present)

New York

- Village of Briarcliff Manor, New York (2006-2007);
- Town and Villages of Greenburgh, New York (2010-2011);

- Town of New Castle, New York (2008-2009);
- City Port Jervis, New York (2008-2009);
- Village of Scarsdale, New York (2010-2011):
- Chenango County, New York (2006-2008);
- Cortland County, New York (2010-2011);
- Montgomery County, New York (2008-2009);
- Fulton County, New York (2009-2011);
- Greene County, New York (2007-2009);
- Onondaga County, New York (2009-2010);
- Saratoga County, New York (2008-2011)
- Suffolk County, New York (2006-2008);
- Town of New Rochelle, New York (2011);
- Delaware County, New York (2011-2012);
- Town of East Fishkill, New York (2012-Present);
- Town of Southampton, New York (2012-Present);
- Town of Blooming Grove, New York (2012-Present);
- Town of Shandaken, New York (2012-Present);
- Tioga County, New York (2012);
- Broome County, New York (2012);
- Cayuga County, New York (2012-Present)

FEMA HMGP Grant Consultant (2013 – Present). Ms. Miskiman is the project manager and lead grant application author and BCA analyst for the Township of Neptune New Jersey's FEMA HMGP grant application needs. Ms. Miskiman is working with the Township to prepare all of their grant applications and full benefit-cost analyses for post-Hurricane Sandy projects to mitigate flooding and hurricane-related hazards. Further, Ms. Miskiman will coordinate with the State and FEMA through project award. *(Client Reference: Township of Neptune, New Jersey, 25 Neptune Blvd, Neptune, 07753 NJ, Ms. Leanne Hoffmann, Director of Engineering and Planning, 732-988-5200 x228 lhoffmann@neptunetownship.org).*

FEMA BCA and HMA Grant Applications (2009 – Present). Ms. Miskiman has conducted benefit cost analyses for municipalities in New York, New Jersey and Idaho seeking Hazard Mitigation Assistance funding using FEMA's Benefit Cost Analysis software for the following project types: structural elevations; acquisitions, stormwater drainage improvements; bulkheading and tide-check valve projects; rock revetment/bank stabilization projects and pumping stations. In addition, Ms. Miskiman has prepared Pre-Disaster Mitigation-Competitive (PDM), Flood Mitigation Assistance (FMA) and Severe Repetitive Loss (SRL) grant applications in E-Grants and New Jersey Hazard Mitigation Grant Program (HMGP) applications. *(Client Reference: see references associated with projects below).*

- Neptune, Monmouth County, New Jersey - BCA Analyst and Author of HMA Pre-Disaster Mitigation-Competitive Grant Application – (2009 - 2010). Ms. Miskiman conducted the benefit cost analysis and prepared the 2010 PDM grant application in E-Grants for the Township of Neptune, New Jersey to mitigate flooding in the northern portion of South Riverside Drive neighborhood along the Shark River. Low lying areas along the Shark River frequently flood due to the low elevation and location of outfall pipes and adjacent roads. Losses include road closing/response costs in addition to detours and preventing residents from accessing their homes numerous times per year. The proposed solution is to install valves at the outfall pipe ends and install bulkheads made of composite material. The 2010 PDM Grant was awarded in September 2010. *(Client Reference: Township of Neptune, New Jersey, 25 Neptune Blvd, Neptune, 07753 NJ, Ms. Leanne Hoffmann, Director of Engineering and Planning, 732-988-5200 x228 lhoffmann@neptunetownship.org).*
- Neptune, Monmouth County, New Jersey - BCA Analyst and Author of HMA Flood Mitigation Assistance Grant Application Support (2009 - 2010). Ms. Miskiman conducted the benefit cost analysis and prepared the 2010 FMA grant application in E-Grants for the Township of Neptune, New Jersey to mitigate flooding in the South Concourse neighborhood along the Shark River. Low lying areas along the Shark River frequently flood due to the low elevation and location of outfall pipes and adjacent roads. The flooding causes damage to and closure of the roads, not only due to storm surges but also at high tides, approximately two-to-three times per month, 12 months per year. Losses from these repetitive flood events exceed $15,000 per year in road closing/response costs in addition to forcing residents from their homes several times per month to wait out the flood waters on high ground. The proposed solution is to install valves at the outfall pipe ends and

install bulkheads at street-ends made of composite material. The 2010 FMA Grant was awarded in September 2010. *(Client Reference: Township of Neptune, New Jersey, 25 Neptune Blvd, Neptune, 07753 NJ, Ms. Leanne Hoffmann, Director of Engineering and Planning, 732-988-5200 x228 lhoffmann@neptunetownship.org).*

- *Ocean City, Cape May County, New Jersey - Author of Hazard Mitigation Grant Program Grant (2010).* Ms. Miskiman prepared the HMGP application for Ocean City New Jersey to mitigate flooding. The proposed flood mitigation project is to install a pump station on 3rd Street between Haven Avenue and Simpson Avenue to assist in the discharge of rain water from 1st Street to the 8th Street and from the Bay Bulkhead to Atlantic Avenue and partially reconstruct and reroute stormwater to the pump station. *(Client Reference: City of Ocean City, New Jersey, 861 Asbury Avenue , Ocean City, NJ 08226, Frank Donato, Director of Financial Management, CFO and Emergency Management Coordinator, 609-525-9350; fdonato@ocnj.us).*
- *Borough of Manville, Somerset County, New Jersey - BCA for HMGP Grant Application (2011).* Ms. Miskiman conducted the benefit cost analysis in support of the HMGP grant application for the Borough of Manville to acquire residential homes along the Millstone River. Tetra Tech worked with the Borough, New Jersey Office of Emergency Management and FEMA Region II to successfully complete the analysis. The HMGP application was awarded in January 2012. (*Client reference: Borough of Manville, 325 North Main Street, Manville, NJ 08835, Gary Garwacke, 908-725-9478 x. 103, GGarwacke@manvillenj.org*)
- *Town of Riverhead, New York – BCA Analyst (2011).* Ms. Miskiman performed two separate BCAs (structural acquisitions and stormwater management project) in support of the PDM 2011 and HMGP grant application for the Town of Riverhead New York to mitigate flooding. Tetra Tech worked with the Town, the State of New York Office of Emergency Management and FEMA Region II to successfully complete the analysis. The goal of the project is to mitigate the flood hazard in the Horton Avenue area, thereby reducing or eliminating the potential for future damages, including physical damage, loss of function and emergency management costs. The project had two key objectives: 1) To acquire and demolish nine (9) properties containing 12 single family home, thereby eliminating the flood hazard that has placed the residents at risk of loss and injury for decades, and eliminating future use of federal disaster funds; and 2) To implement a two phase stormwater management project that will reduce stormwater runoff and improve stormwater quality by reducing volume and sediment. The HMGP application was awarded. *(Client Reference: Town of Riverhead, 200 Howell Avenue Riverhead, NY 11901, Chief David Hegermiller, Chief of Police Town of Riverhead, 631-727-3200).*

TETRA TECH

JAY ROSE
Task Manager

Mr. Rose is an engineer and lawyer with over 25 years of experience in engineering and the management of NEPA documents for DOE and other Federal government customers. He retired from the National Nuclear Security Administration (NNSA) as the Deputy NEPA Compliance Officer. During his Federal career, he was the NEPA Document Manager for five major EISs and numerous EAs. His responsibilities on all of these documents included directing a contractor team, managing data collection efforts, performing technical analyses of proposed alternatives, managing and participating in all public participation activities, coordinating and participating in all document reviews, the preparation of the Draft, Final EIS, CRD, and the preparation of the AR, and coordinating approval actions within the government. Currently, Mr. Rose is the Tetra Tech Program Manager for DOE NEPA Projects.

Education and Training:

U.S. Naval Academy, B.S., Ocean Engineering, 1983

Catholic Univ., Columbus School of Law, J.D., 1996

NEPA

Project Management

Project Engineering

RELEVANT EXPERIENCE

Tetra Tech NEPA Program Manager for Department of Energy (DOE) Projects—Nationwide (2004-Present)
Mr. Rose is Tetra Tech's Program Manager for all DOE Projects and Initiatives. In this role, he oversees and manages all DOE NEPA projects performed by the Tetra Tech team. Projects occur nationwide and involve a wide range of activities, including nuclear weapons projects, linear projects (pipelines and transmission lines), energy projects, environmental restoration projects, and infrastructure/ modernization projects. Mr. Rose manages a core team of approximately 25 personnel, encompassing a broad range of technical disciplines. Mr. Rose oversees and manages a wide variety of NEPA documents, from Environmental Assessments to Programmatic EISs. Mr. Rose personally manages many of the complex NEPA documents performed by the Tetra Tech team. These documents have included the Tucson Electric Power Transmission Line EIS (2005), Complex Transformation Supplemental Programmatic EIS (2008), 2 Gasification EISs, and the Y-12 Site-wide EIS (2011). Cost: approximately $6M annually. Reference: Carol Borgstrom, DOE, 1000 Independence Ave, SW, Washington, DC 20585; (202) 586-4600.

Project Manager for the Y-12 Site-wide Environmental Impact Statement (SWEIS). Mr. Rose was the project manager responsible for the overall management and preparation of this SWEIS, which evaluated the reasonable alternatives for the continued operation of the Y-12 Plant. Four action alternatives were considered in the SWEIS in addition to the No Action Alternative (Alternative 1). Alternative 2 involved a new, fully modernized manufacturing facility optimized for safety, security and efficiency, Alternative 3 involved upgrading the existing facilities to attain the highest level of safety, security, and efficiency possible without construction new facilities; and Alternatives 4 and 5 involved a reduction in the production capacity of Y-12 to support smaller stockpile requirements. The Y-12 SWEIS included a detailed floodplain and wetland analysis for both the site-wide activities and the project-specific proposals. In addition, the SWEIS included an assessment of the potential impacts associated with greenhouse gases (climate change). Reference: Pam Gorman, DOE, Y-12 Site Office, Oak Ridge, TN, 37831; (865) 576-9903.

Project Manager for Complex Transformation Supplemental Programmatic Environmental Impact Statement (SPEIS). Mr. Rose was the project manager responsible for the overall management and preparation of this SPEIS, which evaluated the reasonable alternatives for the continued transformation of the Nation's nuclear weapons complex. This was one of the most complicated NEPA documents ever prepared within the NNSA, and involved actions/alternatives at all major NNSA sites for approximately the next 25 years. Mr. Rose was responsible for interfacing with senior managers throughout NNSA and coordinating with many technical experts at the sites to develop alternatives, data, and perform the technical analyses. The Draft SPEIS was completed on schedule and below budget and received the highest rating from the Environmental protection Agency. Many unique issues arose during preparation of this SPEIS, including receipt and management of more than 100,000 comments. This represented the most public comments ever received on an NNSA NEPA document. The Final SPEIS was also completed on schedule and below budget. For each site and project analyzed, the SPEIS included, as appropriate, a

floodplain and wetland analysis and an analysis of the potential impacts from greenhouse gases (climate change). Reference: Ted Wyka, DOE, 1000 Independence Ave, SW, Washington, DC 20585; (202) 287-5502.

Project Manager for Tucson Electric Power Environmental Impact Statement (TEP EIS). Mr. Rose managed the finalization of the TEP EIS, which assessed alternatives corridors for a new 65 mile 345-kV transmission line between Tucson and Mexico. The EIS was completed in February 2005. Reference: Jim Daniel, DOE, 1000 Independence Ave, SW, Washington, DC 20585; (202) 586-4600.

Program Manager, Indiana Gasification Project Environmental Impact Statement. Mr. Rose is the program manager for this gasification EIS. He is responsible for managing data collection efforts, performing technical analyses of proposed alternatives, coordinating and participating in document reviews, and overseeing all interfaces with the client and DOE. The EIS is to evaluate the potential environmental impacts of issuing a Federal loan guarantee to Indiana Gasification, LLC (IG), which submitted an application to DOE under the Federal loan guarantee program pursuant to the *Energy Policy Act* of 2005 to design, construct and operate a coal-to-substitute natural gas facility in Rockport, Indiana, and a 400 mile carbon dioxide pipeline. The IG proposes to develop the Facility on a 1,300-acre parcel of land near the Ohio River. The Facility would utilize gasification technology with Illinois Basin coal as the feedstock to produce synthetic natural gas (SNG). The EIS includes a detailed floodplain and wetland assessment and an analysis of the impacts associated with greenhouse gas emissions and climate change. Reference: Jim Daniel, DOE, 1000 Independence Ave, SW, Washington, DC 20585; (202) 586-4600.

Deputy Project Manager for Global Nuclear Energy Partnership Programmatic Environmental Impact Statement. Mr. Rose was the deputy project manager and chief technical manager for the GNEP PEIS, which evaluated the reasonable alternatives for closing the nuclear fuel cycle. Mr. Rose led the efforts to develop the programmatic fuel cycle requirements, assumptions, alternatives, analyses, and comparisons. This was a very complicated NEPA document as it was the first NEPA document that has compared nuclear fuel cycle technologies. Mr. Rose also developed the approach for comparing the fuel cycle alternatives across metrics such as uranium utilization, enrichment requirements, and wastes generated. Reference: Carol Borgstrom, DOE, 1000 Independence Ave, SW, Washington, DC 20585; (202) 586-4600

DOE/NNSA Document Manager, Modern Pit Facility Environmental Impact Statement (MPF EIS), U.S. DOE/NNSA. Mr. Rose was the Federal document manager responsible for the overall management and coordination of the NEPA documentation for this complex, controversial, multi-billion dollar project. Mr. Rose and the Tetra Tech team produced a Draft EIS which received the highest rating possible from the Environmental Protection Agency, and earned specific praise from the DOE Assistant Secretary for Environment, Safety, and Health. Reference: Jim Sanderson, DOE, 1000 Independence Ave, SW, Washington, DC 20585; (202) 586-1402.

DOE/NNSA Document Manager, Stockpile Stewardship and Management Programmatic Environmental Impact Statement (SSM PEIS), U.S. DOE/NNSA. Mr. Rose was the Federal document manager responsible for the overall management and coordination of the most complicated and controversial NEPA documentation ever prepared within the NNSA. This PEIS evaluated the reasonable alternatives for the continued operation of the Nation's nuclear weapons complex in order to maintain the safety of the nuclear weapons stockpile in the absence of underground nuclear testing. Seven major DOE sites, including SNL/NM, were assessed in this PEIS, which required vast coordination and unprecedented public involvement. Reference: Jim Daniel, DOE, 1000 Independence Ave, SW, Washington, DC 20585; (202) 586-4600.

ADDITIONAL TRAINING/CERTIFICATIONS

- U.S. Navy Nuclear Power Training.

TETRA TECH

JOHN D. SCHAFFER, CHMM

Field Professional

Over twenty-four years of experience as a professional ecologist with specializations in aquatic ecology, ecological risk assessment, marine and freshwater fisheries and aquatic impact evaluations for hazardous waste sites, large sediment projects and energy-related ecological investigations. Mr. Schaffer is actively involved in studies of pollutant and habitat alteration effects on marine and freshwater structure and function in fish and benthic macroinvertebrate communities, submerged aquatic vegetation (SAV), bivalves and freshwater mussels. He has designed and implemented ecological field programs and risk assessments in USEPA Regions I, II, III, IV and V with incorporation of region specific guidance and national guidelines for environmental impact assessments and for field studies supporting ecological risk assessments. Environmental impact assessments include supervision of field sampling programs in support of NEPA related projects. Mr. Schaffer has contributed to the preparation of ecological risk assessments for mega sediment sites, including the Hudson River, the Roebling Steel Company Site on the Delaware River, and is currently a consulting scientist on the Lower Passaic River project.

Education and Training:

MA (Master of Arts), Biology, The William Paterson College of New Jersey, 1987

BS (Bachelor of Science), Biology, The William Paterson College of New Jersey, 1980

Aquatic Ecology

Design and Implementation of ecological risk assessment programs.

Preparation of Baseline Ecological evaluations (BEEs) in New Jersey.

RELEVANT EXPERIENCE

Excelerate Energy, Inc., Aguirre Liquefied Natural Gas (LNG) Gasport, February 2012 – Present

Task Manager and principal author for Resource Report No. 2 Water Quality and Quantity of the FERC pre-application submittal for the proposed Excelerate Energy LNG Gasport berthing platform located three miles off shore from the Aguirre Power Station on Jobos Bay, Puerto Rico. Responsible for the management and coordination of ichthyoplankton surveys and thermal plume modeling in support of Section 316(b) of the National Pollutant Discharge Elimination System (NPDES) permit application. Managed subcontract laboratories for quantification of ichthyoplankton samples and quality assurance and quality control (QA/QC) processing. The project is proposed to supply LNG to the Aguirre Power Facility through a conversion from the existing plant from fuel oil to natural gas. The project considered the use of a Floating Solid Regasification Unit (FSRU) and scheduled liquified natural gas carriers (LNGCs) to supply natural gas to the existing Aguirre Power Station. The fixed berthing of the FSRU and routine deliveries of LNG required consideration of the proposed 2013 Vessel General Permit provisions. (Client Reference Director of Environmental Affairs, Excelerate Energy, 1450 Lake Robbins, Suite 200, The Woodlands, TX 77380 Michael Trammel 832-813-7629)

Georgia Pacific Corporation, General Permit 4 Hazardous Site Wetland Mitigation Application, Former Georgia Pacific Warren Glen and Hughesville Pulp Mills, January 2011 – Present

Project manager for preparation of a General Permit 4 (GP4) application for mitigation of wetland impacts related to the remediation of polycyclic aromatic hydrocarbons (PAH) and heavy metal impacted soils in palustrine forested and emergent wetlands within the riparian zone of the Musconetcong River. Coordinated wetland scientists and field geologists for wetland delineation, surveying and preparation of GP4 permits for both facilities. (Tetra Tech Program Lead, Operations Lead, Tetra Tech Inc., One Salem Square, 295 Route 22 East, Suite 104E, Whitehouse Station, New Jersey 08889 Martha Mackie 908-534-2303)

ADDITIONAL TRAINING/CERTIFICATIONS

Certified Marine and Freshwater Boat Operator, NJ, Number SZ-10-17-26
Certified Hazardous Materials Manager, Number 15718, Earned 7/6/11, Expires 7/6/16
Certified Ecologist, Ecological Society of America, Earned 6/1/10, Expires 6/1/15

TETRA TECH

JENNIFER SHERWOOD

Field Associate

Education and Training:

BT, Environmental Science, State University of New York, 2004

Terrestrial Ecology

Wetland identification and delineation

Critical Issues Analysis

Ms. Vitella is a Biologist with eight years of experience in natural resource management for government and private organizations conducting botanical surveys, wetland and stream delineations, and designing ecological field studies. She has a technical background in environmental science with an emphasis on plant science. She is experienced conducting botanical inventories, plant community mapping, wetland mitigation, habitat restoration, and noxious weed management in a variety of habitats including wetland and terrestrial grassland, shrubland, and forest communities. Client services and responsibilities have included task management, designing and employing vegetation inventory and mapping assessments for noxious plant species, rare plant surveys, wetland and surface water delineations, wetlands functions assessments, and permitting support. She has successfully procured state and Federal wetland and water permits in New York, New Jersey, Ohio, and Pennsylvania, and assisted with the acquisition of transmission line certifications in New York. She has experience with database management, GPS data collection, GIS applications, and technical report writing. She has utilized her experience and provided project level support for energy development projects, environmental site assessments, and remedial investigations and cleanup.

RELEVANT EXPERIENCE

BP Wind Energy/Cape Vincent Wind Power, LLC, Cape Vincent Wind Farm September 2012 – March 2013
Field lead conducting field assessments and mapping of wetlands, streams, and incidental terrestrial and aquatic species observations within approximately 10,000-acres of privately leased land associated with a proposed wind energy project located Jefferson County, New York. The field assessment was designed to meet the substantive requirements in support of the New York State Department of Environmental Conservation (NYSDEC) Article 10 Certification process. Wetlands were delineated in accordance with routine methodology set forth in the USACE Wetland Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0). Responsibilities for planning and executing the field assessment involved training and leading field crew, coordinating with project managers and support staff remotely, managing and maintaining survey resources based on project revisions, and coordinating with the BP's Lands Manager to acquire property access. Completed a desktop analysis using GIS of wetlands and hydrography in portions of the survey area where property was inaccessible. (*Client Reference: BP Wind Energy, 700 Louisiana Street, 33rd Floor, Houston, TX 77002, Richard Chandler, Director, Business Development, 713-354-2107)*

Central Hudson Gas and Electric, SC & KB Transmission Line Project, April – July 2012
Performed wetland and waterbody delineations and baseline invasive species surveys along a 2-mile segment of a 115kV transmission line located in Dutchess County, New York to support the NYS Part 102 process. Wetlands were delineated in accordance with routine methodology set forth in the USACE Wetland Delineation Manual (USACE 1987) and the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0). (*Client Reference: Central Hudson Gas & Electric Corporation, 284 South Avenue, Poughkeepsie, NY 12601, Chris DeRoberts, 845-486-5734*)

Iberdrola USA/Rochester Gas and Electric/New York State Electric and Gas, Rochester Area Reliability Project June 2012
Performed delineations of wetlands and water bodies and conducted a focused habitat assessment to identify the presence of silver maple-ash swamp communities, a state listed rare community, to support Article VII Certification processes for a 30-mile long proposed transmission line located in Monroe County, New York. Wetlands were delineated using the routine methodology set forth in the USACE Wetland Delineation Manual (USACE 1987) and the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0). *(Client Reference: NYSEG/RG&E, 18 Link Drive, P.O. Box 5224,Binghamton, NY 13902-5224, Carol A. Howland, CPESC, PE, 607-762-8881)*

ADDITIONAL TRAINING/CERTIFICATIONS

Creating, Editing, and Managing Geodatabases for ArcGIS Desktop; ESRI; 2010
Customizing ArcPad; ESRI; 2010
Designing Natural Resource Monitoring Surveys; USGS; 2010
Vegetation Management in Monitoring Context; Natural Areas Training Academy; 2009
Wetland Delineation with Field Practicum; Wetland Training Institute; 2004

TETRA TECH

EMMY ANDREWS
Environmental Scientist

SUMMARY OF QUALIFICATIONS

Ms. Andrews has extensive experience with National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) documentation and has authored and/or participated in the management of multiple Environmental Impact Statements, Environmental Assessments, Environmental Impact Reports, Initial Studies, Negative Declarations, and categorical exclusion documents. Ms. Andrews has the technical experience to author a variety of sections, including air quality, greenhouse gas emissions, noise, transportation and traffic, hazardous materials, utilities and infrastructure, and public health and safety. In addition, Ms. Andrews has a GIS Certificate and extensive experience in GIS data analysis and project management. Ms. Andrews manages and prepares Phase I Environmental Site Assessments and meets the definition of an Environmental Professional in the Environmental Protection Agency's All Appropriate Inquiries Rule.

Education:

MS, Environmental Management, University of San Francisco, CA (2005)

BA, Art and Art History, Duke University, Durham, NC (1998)

Years of Experience:

18

Areas of Experience:

Project management

Environmental planning

National Environmental Policy Act (NEPA) analysis and documentation

Hazardous materials management

Site characterization and remediation,

Biological assessments,

Technical report preparation and review/technical editing,

Due diligence,

Permitting

RELEVANT EXPERIENCE

Hunters View Redevelopment Plan Environmental Assessment, Mayor's Office of Housing, San Francisco, CA. September 2011-March 2012. Tetra Tech is preparing an EA for the proposed redevelopment of the Hunters View housing area in accordance with the requirements of the National Environmental Policy Act (NEPA). Ms. Andrews is the author of the air quality, noise, and transportation and traffic sections of the document. *(Client reference: The John Stewart Company, 1388 Sutter Street, San Francisco, CA, 94109, Margaret Campbell, 415-345-4400)*

Environmental Assessment for Privatization of Army Lodging at BT Collins Army Reserve Center, US Army Corps of Engineers, Mobile District. January 2012 to December 2012. Ms. Andrews is the Project Manager of an environmental assessment (EA) for the Army's efforts to privatize lodging at BT Collins Army Reserve Center in California. The project would entail renovating an existing lodging building, constructing a new lodging building, and then partially demolishing the older lodging building. Ms. Andrews coordinated multiple authors to write the EA and responded to comments on the draft EA. Ms. Andrews managed public involvement process by preparing and publishing the Notice of Availability and distributing hard copies of the document to relevant agencies and other interested parties. Ms. Andrews managed the Native American consultation, including preparing two letters to 16 tribal representatives and following up with emails and calls. She also prepared a consultation package for the State Historic Preservation Office. (*Client reference: U.S. Army Corps of Engineers, Mobile District, Mobile, Alabama, Mr. Joe Hand, 251-694-3881*)

Environmental Assessment, US Army Combat Aviation Brigade (CAB) Area Development Plan, US Army Corps of Engineers, Honolulu Engineering District, HI. November 2010 to March 2011. Ms. Andrews is the author of the sections on air quality and noise for this EA to construct facilities for the Combat Aviation Brigade at Wheeler Army Airfield. This action includes constructing new site infrastructure, aviation maintenance and storage hangars, aircraft maintenance aprons, company operation facilities, rotary parallel taxiway, tactical equipment maintenance facilities, barracks, hot refueling pads, parking areas, dining facility, central plant, flight control tower, remote switch center, and an access control point. (*Client reference: U.S. Army Corps of Engineers, 1048 Iwaena Street, Ste. 210A, Alea, Hawaii, 88701, Myounghee Noh, 808-484-9214)*

PUBLICATIONS

Zoidis, Ann M., E. Andrews, J. Mire. 2012. Innovative Approaches to Simplifying a Complex Biological Assessment: Simplification Made Simple. Published in the proceedings of the annual conference of the National Association of Environmental Professionals.

ADDITIONAL TRAINING/CERTIFICATIONS

- Professional Certificate, Geographic Information Systems (GIS), San Francisco State University, 2005
- 40-Hour OSHA Environmental Health and Safety for Hazardous Waste Site Operations (HAZWOPER), 2006, Refresher 2012
- Environmental Protection Agency (EPA) All Appropriate Inquiries (AAI) Training, 2007
- Asbestos Hazard and Emergency Response Act (AHERA) Building Inspection and Management Planning for Asbestos, 2007
- CPR and Standard First Aid Training, 2007
- Technical Writing Workshop, 2012

TETRA TECH

MARK DUFFY
Environmental Geologist

SUMMARY OF QUALIFICATIONS

Mr. Duffy is a Geologist who specializes in soil and groundwater investigation, environmental site assessment, and environmental compliance. Mr. Duffy is currently involved in site and remedial investigations, underground storage tank removal compliance, storm water assessment and NEPA/CEQA document writing. Mr. Duffy has prior experience coordinating and conducting large scale groundwater monitoring events and subsurface soil investigation/remediation projects. Mr. Duffy also has experience with aquifer characterization, operation and maintenance of groundwater extraction systems, and lithologic interpretation. His soil and groundwater investigation experience includes LNAPL, DNAPL, pesticides, perchlorate, and PCB contamination. Mr. Duffy is working toward becoming a licensed Professional Geologist in the State of California.

Education:

BS, Geology, State University of New York at Cortland

Geology Field Program, State University of New York at Buffalo

Years of Experience:

7+

Areas of Experience:

Project Management

Scientific Research

Technical Report preparation and review

Field Geology: core logging and drilling

Groundwater and soil investigation

Geology and Hydrology

RELEVANT EXPERIENCE

San Francisco Department of Public Works, 17th Street and Folsom Street Site, Soil and Groundwater Investigation, San Francisco, CA, March 2010 to July 2011. The site is planned for redevelopment by the San Francisco Recreation and Parks Department, for future use as a public park and recreation area. The purpose of the investigation was to evaluate the soil and groundwater at the Site to assess conditions that may affect its future use, and pose risks to human health. Mr. Duffy was responsible for cost proposal preparation, scheduling, permitting, field work, and report preparation. As field geologist, Mr. Duffy oversaw the installation of twelve soil borings and five temporary groundwater wells at the site. Additional field activities included the collection of soil samples, groundwater samples, water levels, and photoionization detector data. Mr. Duffy prepared the Soil and Groundwater Investigation report, interpreted analytical results, and prepared the soil boring logs. The work was performed in March and April of 2010. Based on the results of the investigation, additional work including soil boring installation (eight), groundwater and soil sample collection, and waste disposal characterization was performed in May 2011. Three groundwater monitoring wells were destroyed in July 2011.

Remedial Investigation and Feasibility Study. Hickam Communities LLC, Joint Base Pearl Harbor-Hickam, Honolulu, Hawaii, 2010. Mr. Duffy served as the filed geologist for the ongoing Remedial Investigation and Feasibility study (RI/FS) at Joint Base Pearl Harbor-Hickam in Hawai'i. This RI/FS addresses impact to soil by organochlorine pesticides. Mr. Duffy performed the multi-incremental soil sampling, tabulated data, and helped prepare technical reports.

Confirmatory Soil Sampling, Van Voorhis Neighborhood, Areas 18 & 19, Knox Hills LLC, Fort Knox, Kentucky. January 2012. The purpose of the investigation was: 1) to obtain baseline soil quality data to determine if there was evidence that pesticides were present in soil beyond the driplines of existing buildings; and 2) to evaluate soils within the footprints of former buildings that were previously demolished at the site. The soil quality data was used to evaluate soil management requirements and options for development of new housing in the project area, and to help identify the location and volume of soil that will need to be addressed by the design/build contractor(s). Mr. Duffy served as the field geologist, performed the multi-incremental soil sample collection, and authored the report.

Sausalito Marin City Sanitary District Environmental Assessment, Marin County, California. July 2012–Present. Mr. Duffy wrote the Geologic, Water, and Coastal Resources sections for the Environmental Assessment. The analysis was conducted according to NEPA and CEQA, serving as a planning mechanism to evaluate any environmental impacts that might be caused by proposed upgrades to the Sausalito Marin City Sanitary District, Sewage Treatment Plant. The work was performed in February of 2013. *(Client reference: Sausalito-Marin City Sanitary District, 1 East Road, Sausalito, CA, 94965, Craig Justice, 415-332-0244.)*

PUBLICATIONS

Eaton G.F., White C.B., and Duffy M. (2010) Application of ISCO to Petroleum Hydrocarbon Impacted Soil at a South San Francisco LUST Site. Battelle, Seventh International Conference, Remediation of Chlorinated and Recalcitrant Compounds. May 2010.

Duffy, Mark. "Application of ISCO to Petroleum Hydrocarbon Impacted Soil at a South San Francisco LUST Site", Association for Environmental Health and Sciences Foundation conference, Poster Presentation, San Diego, CA, March 2010.

TRAINING/REGISTRATIONS/CERTIFICATIONS

- National Registry of Environmental Professionals, Registered Environmental Property Assessor (REPA), No. 324405, April 2013
- ASHI approved CPR training
- First-Aid training from Safety Training Seminars, July 2012
- OSHA 8-Hour HAZWOPER Refresher-July, 2012
- 40 Hour HAZWOPER Training [29 CFR 1910.120(e)] February 6th, 2004
- 30 Hour OSHA Construction Safety and Health Training December 10, 2012
- 40-Hour EM-385 Construction Hazard and Safety Training, March 1, 2013
- Groundwater Resource Association of California, Low-Yield Aquifer Testing Training, 2004
- U.S EPA Region 9, Incremental Sampling Methodology Training and Workshop, 2012
- Groundwater Resources Association, San Francisco Bay Branch (2004-2006)
- Association for Environmental Health and Sciences Foundation (2010)

TETRA TECH

GENEVIEVE KAISER

Senior Environmental Planner/GIS Specialist

SUMMARY OF QUALIFICATIONS

Ms. Kaiser has 23 years of experience, specializing in socioeconomics and GIS, and has conducted various aspects of natural resources-related research; GIS coordination, data development, and analysis; and report preparation. These analyses have included obtaining and creating geospatial data layers, developing analytical protocols, and applying GIS software to analyze environmental impacts and to produce report graphics. She also has conducted assessments of potential impacts to population, housing, quality of life, environmental justice, employment, land use, and regional economics for resource management plans, the reuse of military lands, highway construction projects, utility line routing studies, and wildlife habitat restoration/preservation projects. She also has used common economic models to forecast effects and has developed GIS tools to use as a decision model for BLM transportation planning.

Education:

M.S., Energy Management and Planning, University of Pennsylvania, Philadelphia, PA, (1988)

B.A., Economics, Minor in Geology, College of William and Mary, Williamsburg, VA, (1986)

Years of Experience:

23

Areas of Experience:

Socioeconomics and environmental justice research and writing; Research, analysis, writing and report preparation and review for NEPA Environmental Impact Statements, Environmental Assessments, and Categorical Exclusions and for CEQA Environmental Impact Reports and Initial Studies/Negative Declarations; GIS environmental impact analysis, constraints analysis, and map preparation; FERC documents; Resource Management Plans and DOD Integrated Resource Management Plans; Phase I Environmental Site Assessments and Environmental Records Reviews

RELEVANT EXPERIENCE

Glenwood Springs and Kremmling EIS/Resource Management Plan Revisions and Wild and Scenic Rivers Study, BLM, Glenwood Springs and Kremmling Field Offices, CO, January 2010 to Present. GIS specialist that compiled, managed, and developed GIS data and analysis tools for all aspects of the project, including baseline RMP data, RMP alternatives, EIS, socioeconomic baseline report, travel management plan, and wild and scenic rivers eligibility and suitability studies. Managed a complex array of data, updated periodically by various authors, to ensure that the most current and accurate information was available to the project team. Developed the GIS for the wild and scenic rivers segments for both eligibility and suitability studies. Developed the data layers for minerals stipulations for project alternatives. Created and implemented a spatial data analysis procedure for examining alternative route uses and designations for the project travel management planning process. Produced all project-related mapping, in accordance with BLM mapping standards, for use by resource authors and publication in project reports. Conducted the socioeconomic baseline study and economic impact analysis for the two planning areas. The baseline analysis identified existing conditions, trends and projections for income, employment, industry sectors, degree of dependence on BLM resources, revenue sources, demographics, social values and beliefs, lifestyles, and adaptability, as well as land use patterns and infrastructure. The impact assessment described the projected changes in socioeconomic indicators on the local and regional economies and social systems over the 20 year planning period for each RMP alternative, using multipliers to calculate the total direct, indirect, and induced changes in sales, income, employment and taxes resulting from changes in sales in the industries affected by BLM land management decisions. . (*Client reference: Bureau of Land Management, Colorado River Valley Field Office, 2300 River Frontage Road Silt, CO 81652, Allen Crockett, 970-876-9005 94103, Mr. Eugene Flannery, 415-701-5598)*

Environmental Assessment for Kalakaua Phase 3 Housing Development, Island Palm Communities, Army Residential Communities Initiative, Schofield Barracks, Hawai`I, January 2011 to April 2011. For a NEPA environmental assessment in accordance with Army regulations and RCI guidance, prepared the description of existing conditions for transportation and circulation and analyzed the potential impacts resulting from an addition of housing units. Island Palm Communities and the Army are proposing to add approximately 41.8 acres of the South Range area of Schofield Barracks to a 50-year ground lease held by Island Palm Communities. On this undeveloped parcel, 230 units of multifamily housing would be constructed as part of the Kalakaua Phase 3 Housing Development. The proposed build-out would be an increase of 155 units to the Schofield Barracks RCI housing, which would result

in additional vehicle and pedestrian traffic and a much larger potential cumulative increase in traffic congestion. *(Client reference: U.S. Army Corps of Engineers, Mobile District, Mobile, Alabama, Beverley Stout, 251-694-4637)*

Categorical Exclusions (CatExs), Proposed Solar Development at Military Housing Areas, Holloman Air Force Base, NM, and Schriever Air Force Base and Peterson Air Force Base, CO, June 2011 to July 2011. Obtained GIS imagery and spatial data, digitized site-specific data, rectified and adapted data provided by the client, and produced project mapping for CatExs in support of proposed solar development on rooftops and in ground arrays. Through communication with the Air Force bases, it was determined that the projects would qualify for Categorical Exclusion under the category of similar actions previously analyzed under NEPA and found to have no significant impact (Category A2.3.11). All elements of the CatExs were prepared in accordance with Air Force guidelines (32 CFR Part 989). *(Client reference: Confidential)*

Environmental Management Plans (EMPs) for Privatized Army Lodging (PAL), Group B, Rest Easy LLC, 11 sites in the US, March 2011 to November 2011. Researched state- and site-specific regulations and environmental regulating authorities and prepared management plans for use by military lodging management personnel for 11 military installations in Alaska, Arizona, Georgia, Kentucky, Missouri, New Mexico, New York and Puerto Rico on an extremely tight deadline. The 11 plans address asbestos, lead, radon, mold, pest control, spill response, pesticide-impacted soils, natural resources, hazardous materials and waste, PCBs, and mercury. (*Client reference: Confidential)*

ADDITIONAL TRAINING/CERTIFICATIONS

- GIS-P, GIS Professional Certification (2-year program), University of Denver, Denver, CO, 2001

TETRA TECH

JULIA MATES

Historian/Architectural Historian

SUMMARY OF QUALIFICATIONS

Ms. Mates has practiced the fields of history/architectural history and cultural resource management since 1999. Ms. Mates has served as a consulting historian on historical research investigations for federal, state and local governments. Her experience includes the inventory, recordation, and evaluation of historic resources using National Register of Historic Places and California Register of Historic Resources guidelines. Her environmental planning experience includes preparing reports for and making recommendations to federal, state, municipal and private entities regarding Section 106 review and compliance, including consultation with various State Historic Preservation Officers. She has experience with Section 106 of the National Historic Preservation Act, National Environmental Policy Act (NEPA), and the California Environmental Quality Act (CEQA). As a cultural resources project manager at Tetra Tech, she has served as a consulting historian, principal investigator, and resource author. Ms. Mates has contributed to planning and cultural resources management projects in California, Oklahoma, Alaska, Nevada, Massachusetts, North Carolina, New Jersey, and Michigan. She has evaluated various types of historical resources for eligibility for National and State Registers and has written numerous technical reports and compliance documents, such as historic survey reports, findings of effect, determinations of eligibility and Historic American Buildings Survey / Historic Architectural and Engineering Record documentation.

Education:

M.A., History/Public History, California State University, Sacramento, CA (2001)

B.A., History, University of California, Los Angeles, CA (1993)

Years of Experience:

13

Areas of Experience:

Section 106 of National Historic Preservation Act,

National Environmental Policy Act (NEPA),

United States Secretary of the Interior's Guidelines for Historic Preservation

RELEVANT EXPERIENCE

Booker T. Washington Recreational Center, San Francisco Mayor's Office of Housing, San Francisco, California, June 2010 to August 2011. Ms. Mates serves as the author for the cultural resources section of this Environmental Assessment for this project which involves demolition of the current building and construction of a new recreational center in its place. The building is eligible for the California Register of Historical Resources and the National Register of Historic Places under Criteria 2 and B, respectively. Ms. Mates analyzed the project activities on this historic resource, developed mitigation measures, conducted State Historic Preservation Office consultation as well as Native American and tribal consultation. The project is in compliance with the NEPA regulation and the Department of Housing and Urban Development. (*Client reference: San Francisco Mayor's Office of Housing, One South Van Ness Avenue, Fifth Floor, San Francisco, CA 94103, Mr. Eugene Flannery, 415-701-5598*)

Phelan Loop, Environmental Assessment, San Francisco Mayor's Office of Housing, San Francisco, California, to March 2011. Ms. Mates was the author for the cultural resources section of this Environmental Assessment for this project which entailed construction of a housing development at Phelan Loop. The project was in compliance with the NEPA regulation and the Department of Housing and Urban Development. Ms. Mates also conducted consultations with the State Historic Preservation Officer in compliance with Section 106 of the National Historic Preservation Act. (*Client reference: San Francisco Mayor's Office of Housing, One South Van Ness Avenue, Fifth Floor, San Francisco, CA 94103, William Ho, Sr. Project Manager, 415-206-2140 ext. 147)*

San Francisco Mayor's Office of Housing, Hunters View Redevelopment Project Environmental Assessment, Cultural Resources Author, San Francisco, CA, September 2011 to March 2012. Ms. Mates analyzed the impacts on cultural resources on the proposed project—the demolition and construction of a multi-building affordable housing development in Hunters Point in San Francisco—under NEPA guidelines. The EA was also written to address requirements of the California Environmental Quality Act. Ms. Mates wrote the Cultural Resources section of the document and assisted with tribal consultations. (*Client reference: The John Stewart Company, 1388 Sutter Street, San Francisco, CA, 94109, Margaret, Margaret Campbell, 415-345-4490*)

PROFESSIONAL ASSOCIATIONS

- National Trust for Historic Preservation
- California Preservation Foundation
- San Francisco Planning and Urban Research Association

ADDITIONAL TRAINING/CERTIFICATIONS

- Section 106: A Review for Experienced Practitioners (ACHP, May 2008)
- Identifying Historical Integrity (CPF, November 2008)
- Historian/Architectural Historian, California Historic Resource Information System
- CEQA Basics Workshop Series (AEP, Fall 2007)
- CEQA Advanced Workshop Series (AEP, Summer 2011)

TETRA TECH

CRAIG MILLER
Task Manager

SUMMARY OF QUALIFICATIONS

Mr. Miller is a Project Manager, NEPA Specialist, and Biologist with over 20 years of natural resource experience specializing in NEPA, endangered species, wildlife, and wetlands. He spent the early part of his career working in wildlife field research, land management, and federal regulations with the US Fish and Wildlife Service. This experience has given him a realistic perspective on the interaction of the regulatory world, land management, and science, which has proved invaluable as a consultant. Mr. Miller has served as project manager, task manager, resource expert and editor in preparation of numerous NEPA documents for land use planning, transportation, energy, land development, water, and natural resource management. Mr. Miller also has significant experience working with threatened and endangered species across the country including piping plovers in New Jersey. Mr. Miller authored and implemented the first habitat conservation plan (HCP)/ environmental assessment in Colorado, and managed the first NEPA compliance project for a regional HCP. He has also conducted numerous endangered species and wetland habitat evaluations, conducted wetland delineations, drafted Section 404 permit applications and mitigation plans, and conducted wildlife research. Mr. Miller is certified by The Wildlife Society as an Associate Wildlife Biologist. He is recognized by the US Army Corps of Engineers as a qualified wetland delineation surveyor. Mr. Miller's past clients include the BLM; Bureau of Reclamation; Corps of Engineers; Valles Caldera Trust; Colorado, Oklahoma and Montana Departments of Transportation; City of Tulsa; as well as several municipalities; and land development companies.

Education:

M.S., Wildlife Biology, Clemson University, Clemson, SC, 1996

B.S., Wildlife and Fisheries Biology, University of Vermont, Burlington, VT, 1990

Years of Experience:

20+

Areas of Experience:

Project Management

National Environmental Policy Act (NEPA) compliance

Endangered Species Act, Clean Water Act, Migratory Bird Treaty Act compliance

Biological resources

QA/QC

RELEVANT EXPERIENCE

US Bureau of Land Management, RMP and EIS for Winnemucca District, Project Manager, Winnemucca, Nevada. November 2011 – present. Mr. Miller served as the project manager for a programmatic RMP/EIS for 7.3 million acres of land administered by the Winnemucca District in northern Nevada. Issues include sage-grouse, wild horse and burros, livestock grazing, recreation, and minerals. (*Client reference: US Bureau of Land Management, Winnemucca District, 5100 E. Winnemucca Blvd., Winnemucca, NV, 89445, Zwaantje Rorex, 775-623-1503*)

Valles Caldera Trust, Environmental Impact Statement (EIS) for Public Access and Use Planning, Project Manager, Valles Caldera National Preserve, Jemez Springs, New Mexico. 2009 – 2010. Mr. Miller served as the project manager for this EIS to analyze the impacts of developing visitor use facilities at the Valles Caldera National Preserve including both programmatic and implementation level decisions. Project included preparation of an EIS, public involvement, alternative development, transportation planning, and economic analysis. Goals for site development and management include protecting and preserving resources and values; providing multiple uses, sustained yield of renewable resources, public access and use, and benefits to local communities and businesses; enhancing the objectives of surrounding forest service land, and optimizing revenues. (*Client reference: Valles Caldera National Preserve, PO Box 359, Jemez Springs, NM 87025, Marie Rodriguez, 505-428-7728*)

US Bureau of Reclamation, EA for Havasupai Tribe Bar Four Project, Deputy Project Manager, Havasupai Reservation, Arizona. 2001 – 2003. Mr. Miller served as the deputy project manager and primary author for preparation of an EA for residential and commercial development of a portion of the Havasupai Indian Reservation near the Grand Canyon, Arizona. Worked with the Bureau of Reclamation, Bureau of Indian Affairs, Indian Health Service, and Housing and Urban Development (HUD). (*Client reference: US Bureau of Reclamation, PO Box 61470, Boulder City, NV 89006, Eric Watkins, 702-293-8000*)

ADDITIONAL TRAINING/CERTIFICATIONS

- Permits to trap federally threatened Preble's meadow jumping mouse, US Fish and Wildlife Service, Colorado Division of Wildlife, 1999
- Recognized as a qualified wetlands delineator, US Army Corps of Engineers, Littleton, Colorado, 2000
- Recognized as a qualified Ute ladies'-tresses orchid surveyor, US Fish and Wildlife Service, US Army Corps of Engineers, 1999
- Certified Associate Wildlife Biologist, The Wildlife Society, Bethesda, Maryland, 1995
- NDOR Certified NEPA Consultant Training, 2011
- Effective Tribal Consultation, US Institute for Environmental Conflict Resolution, 2011
- Wind Power Project Siting Workshop, AWEA, 2010
- Regional Supplement Update Training, Wetland Training Institute, 2008
- FacWet Wetland Evaluation Methodology, CDOT, 2008
- Principles of Project Management, David Evans and Associates, Inc. 2008
- The Oz Principle, Accountability Training, Partners in Leadership, 2007
- Risk Management, David Evans and Associates, Inc., 2007
- Project Management, Tetra Tech, 2007
- Individual Permit Workshop, US Army Corps of Engineers, 2005
- NEPA and Natural Resources, Tetra Tech, 2001

TETRA TECH

NIHAL OZTEK
Environmental Scientist

SUMMARY OF QUALIFICATIONS

Ms. Oztek has six years of environmental consulting experience specializing in site assessments, NEPA/CEQA studies, environmental planning, soil and groundwater remediation, biological monitoring; and hazardous materials compliance. She provides technical support as an environmental scientist for clients in the government and private sectors, and has extensive experience in preparing documents that evaluate the presence, release or potential release of hazardous materials to the environment prior to property lease or transfer. Ms. Oztek is a key author of Environmental Impact Statements and Environmental Assessments for US Department of Housing and Urban Development-Assisted projects, and is an expert in preparing Records Research Reports for Formerly Used Defense Sites (FUDS). Project support includes project and task management; technical report writing; peer review of technical documents; environmental field sampling; project planning; and client communication.

Education:

B.A., Environmental Sustainability and Social Justice, San Francisco State University, San Francisco, CA (2006)

Years of Experience:

6

Areas of Experience:

Project Management

National Environmental Policy Act Technical Report preparation and review

Environmental Site Assessments

RELEVANT EXPERIENCE

Booker T. Washington Community Service Center EA. June 2010 – September 2010. Environmental Planner for an Environmental Assessment that evaluated the proposed demolition of a four-story community center and construction of a replacement five-story structure that would combine 50 residential units and community-serving uses on the site. The EA is being performed for the proposed project to meet the requirements for HUD funding. Ms. Oztek completed the Statutory Worksheet for this EA, and authored the land development, community services, and hazardous materials impact analyses. (*Client reference: San Francisco Mayor's Office of Housing, One South Van Ness Avenue, Fifth Floor, San Francisco, CA 94103, Eugene Flannery, HUD Environmental Review Officer, (415) 701-5598)*

Due Diligence and Environmental Management for Privatized Army Lodging (PAL) Program, Various Army Installations. 2009-present. Ms. Oztek currently serves as Deputy Project Manager for the PAL program. Her responsibilities include regulatory and client communications, budget tracking, overseeing field personnel conducting ESA site visits and historical research, and peer review of Phase I ESA reports. These investigations evaluate the presence, release or potential release of hazardous materials to the environment prior to property lease or transfer. Many of the proposed lodging areas were located on or adjacent to Military Munitions Response Program (MMRP) sites and required critical analysis. She oversees completion of Phase II investigations for soil and groundwater testing, geophysical surveys, and subsequent unexploded ordnance and debris removal. As part of the program, Ms. Oztek managed the preparation of site-specific Environmental Management Plans for 21 installations that addressed issues such as natural resources, pest management, mold and indoor air quality, hazardous and universal waste, and pesticide-impacted soil. (*Client reference: Confidential)*

Berkeley Housing Authority's Portfolio Located on 15 Scattered Parcels Throughout the City of Berkeley. January 2013 – June 2013. Environmental Planner for assisting the City of Berkeley's Health, Housing & Community Services Department comply with the required National Environmental Policy Act (NEPA) review for the preparation of the Environmental Review Record (ERR) for the acquisition of property improvements and rehabilitation of the 75 units in Berkeley Housing Authority's (BHA) portfolio of federal Low-Income Public Housing (LIPH) and state Rental Housing Construction Program (RHCP) located on 15 parcels throughout the City of Berkeley. The portfolio consists of 44 three-bedroom units of approximately 1,075 square feet and 31 four bedroom units of approximately 1,275 square feet. All units are attached one- and two-story townhouses of wood frame construction with private backyards and off-street parking. The project's Environmental Review Record includes the completion of a Noise Study, the Section 106 process, and a Phase I Environmental Site Assessment as related will be acquiring the existing property improvements from BHA and entering into new ground leases with the land owners. Tetra Tech prepared the necessary environmental review to make a determination, advise City staff of any

other studies or reports needed to be updated and/or completed for each Statutory Worksheet. *(Client reference: City of Berkeley Housing and Community Services Department, 2180 Milvia Street, 2nd Floor, Berkeley, CA 94704, Be Tran, (510) 981-5442)*

Hunters View Redevelopment Plan Environmental Assessment, Mayor's Office of Housing, San Francisco, CA. September 2011-March 2012. Tetra Tech is prepared an EA for the proposed redevelopment of the Hunters View housing area in accordance with the requirements of NEPA. Ms. Oztek is the author of the hazardous materials and toxic substances, land development, and community facilities and services, sections of the document. (*Client reference: The John Stewart Company, One South Van Ness Avenue, Fifth Floor, San Francisco, CA 94103, Margaret Campbell, 415-345-4490*)

Phelan Loop, Environmental Assessment, San Francisco Mayor's Office of Housing, San Francisco, California. June 2010 – August 2010. Tetra Tech completed the EA in compliance with NEPA regulation and HUD. The EA followed HUD Environmental Standards and included a traffic analysis, a statutory checklist, and discussion of significant impacts. Ms. Oztek authored the toxics and hazardous substances sections. (*Client reference: San Francisco Mayor's Office of Housing, One South Van Ness Avenue, Fifth Floor, San Francisco, CA 94103, William Ho, Sr. Project Manager, 415-206-2140 ext. 147)*

Project Manager – Statutory Worksheets, San Francisco Mayor's Office of Housing, San Francisco, CA. 2007 to 2010. Ms. Oztek authored 22 statutory worksheets for the San Francisco Mayor's Office of Housing, including those for Bayview Opera House, Florence Crittenton Centers, Bay Oaks Homes, and Child Development Centers. The analyzes were performed in compliance with factors such as Historic Preservation, Floodplain Management, Wetland Protection, Coastal Zone Management, Endangered Species, and the Clean Air Act, as well as HUD Environmental Standards. The intent of these investigations was to determine their exemption per Section 58.34(a) (12) of 24 CFR Part 58. (*Client reference: San Francisco Mayor's Office of Housing, One South Van Ness Avenue, Fifth Floor, San Francisco, CA 94103, Mr. Eugene Flannery, 415-701-5598*)

ADDITIONAL TRAINING/CERTIFICATIONS

- 40-hour HAZWOPER Training
- CPR and Standard First Aid Training
- Project Management 2 Training

TETRA TECH

KEVIN DOYLE
Task Manager

SUMMARY OF QUALIFICATIONS

Mr. Doyle has 28 years of experience in archaeology, cultural resource management and NEPA documentation and project management. He has successfully managed or assisted in the management of NEPA documents for Federal agencies including Department of Energy, Bureau of Reclamation, US Air Force, US Army Corps of Engineers, Federal Energy Regulatory Commission and for third-party customers such as municipalities, telecommunications companies, energy companies, and a Native American group. He is very familiar with NEPA CEQ requirements and the NEPA implementing regulations of various Federal agencies. He has a strong interdisciplinary understanding of environmental impact issues and has provided technical support and resource analyses for a variety of resources. His resource specialties are cultural resource management including archaeology, historic preservation, Native American resources and cultural resource law; socioeconomics, environmental justice and land use. He has conducted public involvement activities, consultation activities, and agency coordination, tracked and prepared comment responses and represented Tetra Tech at DOE headquarters in review of a major EIS. In conjunction with NEPA projects he has managed budgets, teams of resource specialists and subcontractors; he has edited documents and coordinated document production and distribution; and has maintained project administrative records. His relevant experience is described below.

Education:

BA, Sociology, University of California, Santa Barbara

Continuing Studies in Anthropology, Historic Preservation, and Cultural Resource Management; California State University, Los Angeles; University of California, Los Angeles; University of Southern California, School of Architecture; and University of Nevada, Reno

Years of Experience:

28

Areas of Experience:

Cultural Resource Management, NEPA Project Management

RELEVANT EXPERIENCE

Isabella Lake Dam Safety Modification Project, Environmental Impact Statement, Kern County, CA. US Army Corps of Engineers, Sacramento District, Deputy Project Manager. September 2010 to January 2013. Mr. Doyle was the Deputy Project Manager for an EIS addressing risk reduction measures to remediate existing seismic, seepage and hydrologic deficiencies on two dams and spillway on the Kern River above the City of Bakersfield, CA. The two dams form Isabella Lake near the confluence of two forks of the Kern River. The primary access to Isabella Lake, towns surrounding the lake and recreational facilities is through a narrow canyon. The identified risks associated with the project are among the highest of all dams managed by the Army Corps. As Deputy Project Manager, Mr. Doyle worked closely with the Project Manager and Corps staff in all aspects of this critical project including developing the project purpose and need, identifying data needs for the alternative analysis, coordinating the Tetra Tech Team and subcontractors, reviewing and authoring multiple sections of the EIS, and preparing public involvement materials. Mr. Doyle was also the Technical Lead for cultural resources. Major issues associated with the proposed project include construction impacts to Air Quality, Noise, Recreation, Socioeconomics and Traffic. He also contributed to and reviewed several supporting studies including visual resources, noise, air quality, economics, biological, and traffic. Work was conducted on a fast track schedule to address critical downstream safety concerns. *(Client reference: US Army Corps of Engineers, Sacramento District, 1325 J Street, Room 1350., Sacramento, California 95814 , Mitch Stewart, 916-557-6734)*

Pecos River Restoration at the Overflow Wetlands, Chaves County, NM, combination Environmental and Biological Assessment. Deputy Project Manager, EMPS / Bureau of Reclamation, Pecos River, NM. January 2010 to March 2013. Deputy Project Manager and principal author for an EA to analyze the effects of a proposed restoration project on the Pecos River. The project includes removing non-native vegetation and lowering river banks. The goal of this work is to improve the native fish and riparian habitat by restoring the river channel and flows to more dynamic conditions. Reclamation committed to conduct river restoration projects as part of the Biological Opinion on the Carlsbad Project Water Operations. (*Client reference: US Bureau of Reclamation 555 Broadway NE, Suite 100. Albuquerque, NM 87102-2352. Hector Garcia, 505-462-3550).*

Conveyance and Transfer, Environmental Impact Statement, Los Alamos National Laboratory. Deputy Project Manager and Document Manager, DOE, Los Alamos & Santa Fe Counties, New Mexico. May 1998 to June 2000. Deputy Project Manager and Document Manager for the CTEIS. The EIS examined the environmental impacts of the conveyance or transfer of 10 land tracts and excess facilities on over 4700 acres from the Department of Energy and their subsequent use by Los Alamos County or San Ildefonso Pueblo. Mr. Doyle assisted the Project Manager in project coordination; subcontractor supervision; comment identification, tracking and response; technical writing and editing; agency contact; and in managing document preparation and production. Mr. Doyle was also a Technical Specialist for the preparation of cultural resource analysis and documentation. *(Client reference: Department of Energy, LAAO, 528 35th Street, Los Alamos, NM. 87544, Elizabeth Withers, (Retired), 505-667-8690*

ADDITIONAL TRAINING/CERTIFICATIONS

- 2011, Southwestern Willow Flycatcher, Protocol Training; Conducted by the USFWS, Ecological Services, Albuquerque, NM
- 2008, National Historic Trails, Tracks and Trails Preservation Training, Conducted by the Oregon-California Trails Association, Socorro, NM.
- 8-Hour Occupational Safety and Health Administration (OSHA) Hazardous Waste Health and Safety Training Annual Refresher Course (Maintained annually since 1992). Albuquerque, New Mexico.
- Standard Red Cross First Aid and Adult CPR Training. (Maintained annually since 1992) Albuquerque, New Mexico.
- 2002, Advanced Section 106 Training: Agreement Documents, NEPA and Public Outreach A workshop presented by Dr. Lynne Sebastian, in cooperation with Environmental Section of the New Mexico State Highway and Transportation Department, Santa Fe, New Mexico.
- 2001, Wildfires and Cultural Resources. Presented by New Mexico Archaeological Council, Santa Fe National Forest, Department of Energy, and Bandelier National Monument. Santa Fe, New Mexico.
- 2001, Section 106 in the New Regulatory Environment. A workshop presented by Dr. Lynne Sebastian, in cooperation with Environmental Section of the New Mexico State Highway and Transportation Department, Santa Fe, New Mexico.
- 2001, Preservation Law: Historic Resources and Cultural Landscapes. Presented by New Mexico Heritage Preservation Alliance. Santa Fe, New Mexico.
- 2000, Risk Communication, Los Alamos National Laboratory, Los Alamos, New Mexico.
- 1999, The New 36 CFR Part 800: Highlights of Changes. The Advisory Council on Historic Preservation, Albuquerque, New Mexico.
- 1997, Historic Designed Landscapes. University of Southern California, School of Architecture. Los Angeles, California.
- 1997, Computers in Preservation. University of Southern California, School of Architecture. Los Angeles, California.
- 1997, Preservation Law and Planning. University of Southern California, School of Architecture. Los Angeles, California.
- 1997, Historic Site Documentation. University of Southern California, School of Architecture. Los Angeles, California.
- 1996, Cultural Resource Management Plans: Preparation and Implementation. National Preservation Institute in cooperation with Arizona State University, Public History Program, Tempe, Arizona.
- 1996, Cultural Resources and the National Environmental Policy Act. University of Nevada, Reno, Division of Continuing Education. Houston, Texas.
- 1995, The Native American Graves Protection and Repatriation Act (NAGPRA): Implications and Practical Applications. University of Nevada, Reno, Natchitoches, Louisiana.
- 1995, First Californians: Archaeology of the Golden State. University of California, Los Angeles.

- 1995, Introduction to the California Environmental Quality Act (CEQA). University of California, Los Angeles.
- 1994, The National Environmental Planning Act (NEPA): A Step-by-Approach to Successful Compliance. University of California, Los Angeles.
- 1994, Advanced Seminar on Preparing Agreement Documents Under Section 106 of the National Historic Preservation Act. Pasadena, California.
- 1994, 16-Hour Occupational Safety and Health Administration (OSHA) Hazardous Waste Health and Safety Training Upgrade for Completion of the 40-Hour Hazardous Waste Training. San Bernardino, California.
- 1994, Strategies of Archaeology: Method and Theory. University of California, Los Angeles.
- 1994, Project Management for Environmental Professionals. University of California, Los Angeles.
- 1994, Stone Tools in Human Society: Lithic Analysis. University of California, Los Angeles.
- 1993, Cultural Resources Management. California State University, Los Angeles.

TETRA TECH

DEREK FARMER
Task Manager

SUMMARY OF QUALIFICATIONS

Mr. Farmer is a senior environmental planner with over 15 years of experience in environmental impact analysis, project management, airport land use planning, facilities planning, and housing development experience in both the public and private sectors. He has managed and overseen projects involving the preparation of California Environmental Quality Act and National Environmental Policy Act documents, Section 404 and 401 permit applications, Airport Comprehensive Land Use Plans, wetland delineations, biological assessments, traffic impact analyses, and related technical studies. He has worked with various Federal, State and local agencies including the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game, California Department of Transportation (Caltrans), California Energy Commission, California Division of Aeronautics, Bay Coastal Development Commission, and various local redevelopment agencies. He has also worked extensively with the California Department of Real Estate setting up budgets, disclosures, and related incorporation documents for various housing developments, and has served as the president of homeowners associations. In addition, Mr. Farmer has demonstrated excellent communication and presentation skills before city councils, planning commissions, design review boards, homeowners associations and community groups. He has the ability to manage budgets and contracts in a timely and accountable manner, and can understand and interpret local, state and federal codes, ordinances, and complex environmental regulations.

Education:

Master of Urban Planning, San Jose State University, San Jose, CA.

B.A., Communications Design, California State University, Chico, Chico, CA

Years of Experience:

15

Areas of Experience:

Project Management

Land Use

National Environmental Policy Act (NEPA)

Traffic and Transportation

Airport Land Use Planning

Educational Facility Planning

Housing and Residential Development

RELEVANT EXPERIENCE

Hunters View Redevelopment Plan Environmental Assessment, Mayor's Office of Housing, San Francisco, CA. September 2011-March 2012. Tetra Tech prepared a HUD EA for a redevelopment proposal at the Hunters View site in San Francisco that would replace the existing 267 public housing units on a one-for-one basis and add up to 533 additional housing units in a range of mixed-income housing types. The project would include up to 800 total new residential units, off-street parking, neighborhood-serving commercial space, and community facilities. Major environmental issues included traffic, air quality, noise, and hazardous materials. This EA included preparing air quality analysis per current BAAQMD requirements and coordinating the findings of the outside transportation technical analyses. Mr. Farmer served as the Project Manager. *(Client reference: The John Stewart Company, 1388 Sutter Street, San Francisco, CA, 94109, Margaret Campbell, 415-345-4400)*

Edward II CEQA Analysis, San Francisco Planning Department, San Francisco, California. October 2010–August 2011. (Tetra Tech prepared an Initial Study for the conversion of a potentially historic structure from a 29-room tourist hotel to a 25-room group housing facility. This involved alterations to the interior and exterior of the building and creation of the Lombard and Scott Street Affordable Group Housing Special Use District (SUD). The proposed project would provide housing for transitional-age youth (ages 18 to 24), who age out of foster care, who are homeless, or who are at risk of becoming homeless. Project components included the preparation of an air quality and health risk assessment, construction emissions analysis, and various other technical studies. Mr. Farmer served as the Project Manager. *(Client reference: Community Housing Partnership. 20 Jones Street, Ste. 200, San Francisco, CA, 94102, David Schnur, 415-852-5300)*

Environmental Assessment, US Army Combat Aviation Brigade (CAB) Area Development Plan, US Army Corps of Engineers, Honolulu Engineering District, HI. November 2010-March 2011. Tetra Tech prepared an EA to construct facilities for the Combat Aviation Brigade at Wheeler Army Airfield. This action includes constructing new site infrastructure, aviation maintenance and storage hangars, aircraft maintenance aprons, company operation

facilities, rotary parallel taxiway, tactical equipment maintenance facilities, barracks, hot refueling pads, parking areas, dining facility, central plant, flight control tower, remote switch center, and an access control point. Mr. Farmer served as a technical lead and resource author. *(Client reference: U.S. Army Corps of Engineers, 1048 Iwaena Street, Ste. 210A, Alea, Hawaii, 88701, Myounghee Noh, 808-484-9214)*

Sausalito Marin City Sanitary District Treatment Plant Upgrade, National Park Service, Golden Gate National Recreation Area, California. November 2012-Present. Tetra Tech is preparing a combined EA/Initial Study for an upgrade to the Sausalito-Marin City Sanitary District's wastewater treatment facility at Fort Baker, within the Golden Gate National Recreation Area (GGNRA). This project would upgrade the wastewater treatment facility, thereby improving the quality of water discharges and improving the District's ability to prevent sanitary sewage spills into the San Francisco Bay. The upgrades to the wastewater treatment process include the facility's treatment and conveyance systems to improve the quality of the water discharging into San Francisco Bay and minimize wet-weather in-plant bypasses. Project issues include potential archaeological and cultural resources impacts from construction at the location of a suspected cemetery site containing the unmarked remains of sailors from the 19th and early 20th century. Preparation of the EA/Initial Study includes an archaeological survey report to document the reasons supporting the suspected location of the sailor's cemetery, as well as recommended testing and excavation methods for confirming the presence or absence of human remains. Mr. Farmer is serving as the Project Manager. *(Client reference: Sausalito-Marin City Sanitary District, 1 East Road, Sausalito, CA, 94965, Craig Justice, 415-332-0244.)*

Richmond Bay Campus Long Range Development Plan Environmental Impact Report, University of California, Berkeley. July 2012–Present. The University of California proposes to implement a Long Range Development Plan (LRDP) to establish a new major research campus, at properties it owns in Richmond, California, for consolidation of biosciences projects and activities managed or led by the University of California Lawrence Berkeley National Laboratory (LBNL) and for development of additional facilities for both LBNL and UC Berkeley for research and development focused on energy, environment, and health. Total building space on the Richmond Bay Campus (RBC) is projected to increase from approximately 1,050,000 square feet at the present time to 5,400,000 square feet at full implementation of the LRDP. The University expects the campus population to increase incrementally over time as the RBC is developed over the approximately 40-year horizon of the LRDP, from approximately 300 persons in 2012 to approximately 10,000 persons in 2050. Tetra Tech is preparing an EIR that includes programmatic analysis for the full development of the RBC, as well as project-level analysis for Phase 1 of the LRDP, which will add 600,000 square feet and approximately 1,000 faculty, staff, and students. Mr. Farmer is serving as the CEQA Project Manager. *(Client reference: Lawrence Berkeley National Laboratory, One Cyclotron Road, Berkeley, CA, 94720, Doug Lockhart, 510-486-5120)*

ADDITIONAL TRAINING/CERTIFICATIONS

- U.S Dept. of Housing and Urban Development - NEPA/Part 58 Environmental Review Procedures Training
- Federal Aviation Administration Workshop –Environmental Planning and Design Issues for Development Projects on or Near Airports

TETRA TECH

CLIFF JARMAN
Task Manager

SUMMARY OF QUALIFICATIONS

Mr. Cliff Jarman is a Senior Environmental Scientist with 24 years of experience in the environmental field, including National Environmental Policy Act (NEPA) compliance, documentation, and training including guidance on the management of and response to public comments. Mr. Jarman has managed 11 EISs and 13 EAs, and worked on, or was part of the QA or compliance review of another 17 EISs and over 50 EAs. Mr. Jarman's experience includes Resource Management Plans; minerals assessments; geothermal energy leasing and applications; geological and geophysical site investigations; assessments of seismic risk; paleontological resources; and Resource Conservation and Recovery Act (RCRA) Facility Investigations, documentation and permit review. Experience includes working with many different lead and cooperating agencies including the Bureau of Land Management (BLM), Bureau of Reclamation (Reclamation), General Services Administration/Homeland Security Dept. (GSA\HSD), Federal Highway Administration (FHA), U.S. Army Corps. of Engineers (USACE), U. S. Air Force (USAF), Department of Energy (DOE), U.S. Forest Service (USFS), National Park Service, U.S. Fish and Wildlife Service, numerous state agencies, and several Indian Tribes. Much of this experience was with third party private applicant contracts.

Education:

MS, Geophysics, New Mexico Institute of Mining and Technology, NM, 1989

BS, Geology, University of New Mexico, NM, 1985

Years of Experience:

24

Areas of Experience:

Project Management

NEPA Documents and Compliance

Seismic Risk

Geotechnical/Minerals

Mr. Jarman is a NEPA instructor and has written NEPA guidance documents on the management of and response to public comments, site-wide NEPA documents, and aircraft crash modeling for accident analysis. He also provides Quality Assurance/Quality Control review for EISs and EAs. His expertise includes management of environmental programs; program and procedure development, documentation, and training; and tracking the development of environmental regulations. He has broad management experience in the environmental field, including staffing, scheduling, budgeting, and managing a variety of projects.

RELEVANT EXPERIENCE

Resource Management Plan (RMP)/EIS for Colorado River Valley BLM Field Office, CO. January 2010 to Present. Serving as Project Manager. This project involves assisting the Colorado River Valley Field Office, Colorado BLM, in the revision of their RMP (current plans are from 1984) and preparation of an EIS for the BLM-administered public lands within the Field Office regarding BLM management strategy for land, recreation, mineral and energy resources. *(Client reference: US Bureau of Land Management, Colorado River Valley Field Office, 2300 River Frontage Road Silt, CO 81652, Allen Crockett, 970-876-9005)*

RMP/EIS for Reclamation Newlands Project, Fallon, NV. January 2009 to Present. Serving as Project Manager and Author for Geology, Soils, and Minerals resource sections. RMP supports Reclamation's management strategy for water, infrastructure land, recreation, mineral and energy resources for Reclamation land surrounding Newlands Project near Reno, NV. *(Client reference: Bureau of Reclamation, 705 N. Plaza Street, Room 320, Carson City, NV 89701, Bob Edwards, 775-884-8342)*

RMP/EIS for Winnemucca BLM Field Office, NV. June 2007 to Present. Serving as Author for Minerals, Geology, Soils, and Paleontology resource sections. RMP supports BLM management strategy for land, recreation, mineral and energy resources for 7 million acres of land administered by the Winnemucca Field Office in northwestern Nevada. (*Client reference: US Bureau of Land Management, Winnemucca District, 5100 E. Winnemucca Blvd., Winnemucca, NV, 89445, Zwaantje Rorex, 775-623-1503*)

RMP/EIS for Reclamation New Melones Lake Area, CA. March 2009 to April 2010. Served as Author for Geology and Soils resource section. RMP supports Reclamation's management strategy for 27,000 acres of land at New

Melones Lake in northern California to reflect the changing needs of the planning area over the next 15 to 20 years. Issues included recreation and transportation. *(Client reference: Bureau of Reclamation, Central California Area Office, 7794 Folsom Dam Road, Folsom, CA 95630, Melissa Brockman-Vignau, 916-989-7182)*

ADDITIONAL TRAINING/CERTIFICATIONS

- ASCE Continuing Education Course, NEPA Bootcamp!, Instructor, San Antonio, TX, 2008
- ASCE Continuing Education Course, NEPA Bootcamp!, Instructor, Hyannis, MA, 2008
- Tetra Tech Corporate Training, Implementing NEPA Workshop, Instructor, 2008
- Tetra Tech NEPA Workshop, Instructor, Honolulu, HI, 2007
- Corporate Conference and Workshop on Homeland Security, 2002
- Risk Communication, Los Alamos National Laboratory, 2000
- Department of Energy Operational Readiness Review Training Course, 1995
- DOE National Environmental Policy Act Compliance Officers Conference and Workshop, 1994
- In-Situ Remediation Techniques Seminar and Workshop, 1993

TETRA TECH

MATT LOSCALZO
Task Manager

SUMMARY OF QUALIFICATIONS

Mr. Loscalzo is a skilled National Environmental Policy Act (NEPA) environmental planner and project manager at Tetra Tech's Boulder, Colorado office. He has more than seven years of professional NEPA experience preparing environmental impact statements (EISs) and environmental assessments (EAs). He has experience managing projects and staff, and coordinating with clients and federal agencies during the NEPA process to ensure timely and scientifically thorough preparation and maintenance of project documents. In addition to project leadership and oversight, Mr. Loscalzo specializes in recreation, socioeconomic and visual impact analyses. Oftentimes, project analysis requires Mr. Loscalzo to combine his resource expertise by providing insight on the impacts that recreation and visual resources may have on the socioeconomics of a specific region. This analysis requires a full understanding of the latest lead agency policies, rules, and legislation.

Education:

M.S., Environmental Studies/ Public Lands Management, University of Colorado

B.A., Political Science, Binghamton University

Years of Experience:

8

Areas of Experience:

Project Management

Public Involvement

NEPA Compliance

Recreation Planning

Visual Impact Analysis

Special Resource Designations

RELEVANT EXPERIENCE

Pocatello Resource Management Plan and Environmental Impact Statement, Project Manager, BLM, Pocatello, ID. July 2010 – July 2013. Project manager for the development of a revised Resource Management Plan (RMP) and associated Environmental Impact Statement (EIS) for the 613,800-acre BLM Pocatello Field Office planning area covering nine southeastern Idaho counties. Duties include guiding the BLM through the NEPA regulatory process, maintaining project scheduling and budget, addressing client comments and needs on the analysis, ensuring the analysis meets all federal, state, and local regulations, preparing monthly progress reports, coordinating document production, and assisting the BLM in preparing the Record of Decision and Final Approved RMP. Key issues include recreation, livestock grazing, and sage-grouse habitat management. *(Client reference: US Bureau of Land Management, Pocatello Field Office, 4350 Cliffs Drive, Pocatello, ID 83204, Terry Smith, 208-478-6340)*

Environmental Assessment for the Wildland Urban Interface Program Management Plan for the Morongo Band of Mission Indians, Project Manager, Banning, CA. June 2010 - May 2013. – Project manager for the development of an EA to implement a WUI Program on the Morongo Reservation. The WUI program is a comprehensive approach to managing and mitigating risks to human lives, property, cultural and religious resources, and other critical and key resources over the next 10-15 years. *(Client reference: Morongo Band of Mission Indians, 49750 Seminole Dr. Cabazon, CA 92230, David Munro, 951-849-2836)*

Community Wildfire Protection Plan for the Morongo Band of Mission Indians, Project Manager, Morongo Band of Mission Indians, Banning, CA. November 2011 - June 2012. – Project manager for the development of a comprehensive Community Wildfire Protection Plan (CWPP) covering the 6,800-acre Wildland Urban Interface Zone (WUI) in the Morongo Reservation in southern California. A CWPP is a community-based, collaborative planning effort that was created in response to the 2003 Healthy Forest Protection Act which directs communities-at-risk for wildfire to develop a risk assessment and mitigation plan. Project tasks include coordinating agency and public involvement, developing and understanding the wildfire risk on the Reservation, mapping and analysis of the potential threat and severity of impacts if a wildfire occurs on the Reservation, and developing an action plan and strategy for controlling the potential wildfire environment. *(Client reference: Morongo Band of Mission Indians, 49750 Seminole Dr. Cabazon, CA 92230, David Munro, 951-849-2836)*

Privatization of Army Lodging NEPA documents. January 2012 to December 2012. Served as an Environmental Planner for NEPA compliance on a nationwide Army lodging privatization program. This program involved Army partnerships with private developers and lodging managers for the rehabilitation and construction of transient lodging facilities. Under this program, NEPA documents were prepared concurrently for projects in Arizona and Hawaii and

during a second phase for projects in Alaska and Arizona. These task orders also involved concurrent preparation of Environmental Condition of Property reports. *(Client reference: U.S. Army Corps of Engineers, Mobile District, Mobile, Alabama, Mr. Joe Hand, 251-694-3881)*

Environmental Management Plans (EMPs) for Privatized Army Lodging (PAL), Group B, Rest Easy LLC, 11 sites in the US, March 2011 to November 2011. Researched state- and site-specific regulations and environmental regulating authorities and prepared management plans for use by military lodging management personnel for 11 military installations in Alaska, Arizona, Georgia, Kentucky, Missouri, New Mexico, New York and Puerto Rico on an extremely tight deadline. The 11 plans address asbestos, lead, radon, mold, pest control, spill response, pesticide-impacted soils, natural resources, hazardous materials and waste, PCBs, and mercury. (*Client reference: Confidential)*

Isabella Lake Dam Safety Modification Project, Environmental Impact Statement, Kern County, CA. US Army Corps of Engineers, Sacramento District, Deputy Project Manager. September 2010 - January 2013. Recreation planner responsible for evaluating impacts on recreation resources in and around Lake Isabella from a proposal to reconfigure the Lake Isabella Dam. At issue are impacts to land and aquatics-based recreation activities such as camping, off-highway vehicle driving, fishing, and lake access, which are important economic resources for the region. *(Client reference: US Army Corps of Engineers, Sacramento District, 1325 J Street, Room 1350., Sacramento, California 95814, Mitch Stewart, 916-557-6734)*

Environmental Assessment for Kalakaua Phase 3 Housing Development; Visual Resource Planner; Island Palm Communities, Army Residential Communities Initiative; US Army Corps of Engineers, Schofield Barracks, HI. January 2011 - April 2011. Visual resource planner for a NEPA environmental assessment in accordance with Army regulations and guidance. Island Palm Communities and the Army proposed to add approximately 41.8 acres of the South Range area of Schofield Barracks to a 50-year ground lease held by Island Palm Communities. On this undeveloped parcel, 230 units of multifamily housing would be constructed as part of the Kalakaua Phase 3 Housing Development. The proposed build-out would be an increase of 155 units to the total housing inventory at the installation. Duties include documenting the existing visual landscape in and around the project area, and analyze potential changes and associated impacts to the landscape from implementation of the proposed action. *(Client reference: U.S. Army Corps of Engineers, Mobile District, Mobile, Alabama, Beverley Stout, 251-694-4637)*

Environmental Assessment for the Proposed Construction of US Army Combat Aviation Brigade Facilities at Wheeler Army Airfield — Oahu, HI. US Army Corps of Engineers, Oahu, HI. November 2010 - March 2011. Visual resource planner for an EA in accordance with Army regulations and guidance. Duties include understanding the visual aspect of the natural and altered landscape and analyzing potential changes to the landscape from implementation of the proposed action. The EA evaluates the environmental impacts of the proposed construction of multiple facilities for the Combat Aviation Brigade at Wheeler Army Airfield. *(Client reference: U.S. Army Corps of Engineers, 1048 Iwaena Street, Ste. 210A, Alea, Hawaii, 88701, Myounghee Noh, 808-484-9214)*

ADDITIONAL TRAINING/CERTIFICATIONS

- Tetra Tech Project Management 1 and 2 Certification, Denver, CO 2013
- OSHA 40-Hour HAZWOPER Certification, Denver, CO, 2012
- U.S. Bureau of Land Management Visual Resource Management Certification, Casper, WY, 2011
- Tetra Tech Cash Management and Contract Change Management; Denver, CO, 2009
- SWCA Advanced NEPA Training, Denver, CO, 2009
- PSMJ Resources, Inc., Project Management Training; Phoenix, AZ, 2008
- SWCA Comprehensive NEPA Training; Salt Lake City, UT, 2008

TETRA TECH

JEFF VANDEVER
Field Professional

Mr. Vandever is a Licensed Professional Geologist/Project Manager with 12+ years of experience developing and implementing environmental management programs and projects, health & safety, site characterizations and remedial investigations, fate & transport evaluation/quantification, GIS – Remote Sensing, coastal compartment analysis, estuary studies and research, permitting and construction services for federal, state and private clients including CERCLA in the Mid-Atlantic region. His work experience includes ISRA/TRSR in NJ, Chap 245/250/Act 2 in PA, and VRP /AFCEE/USACE/DoD/WERC/ECOS in multiple states, including LA/VA/PA/NJ/NC/NY.

Education and Training:

MS, Environmental Geology, Old Dominion University (2003)

BS, Coastal Geology/GIS, Old Dominion University (2001)

AS, Environmental Health and Safety, Northampton County College (1996)

Developing and implementing Environmental Management Programs

Groundwater modeling

RELEVANT EXPERIENCE

United States Army Corps of Engineers, Fried Industries Superfund Site, East Brunswick, NJ (2011 to Present)
Developed and implemented SOPs for extraction well installation, development and aquifer testing. Provided field oversight for borehole drilling, pump testing, rock coring, RQD collection, downhole geophysics, borehole reaming, and well construction. (*Client reference: USACE Kansas City District, 601 East 12th Street, Kansas City, MO 64106, Dan Hearnen, 816-389-3578*)

U.S. Army Corps of Engineers, Peninsula Boulevard Superfund Site, Hempstead, NY (2011 to Present)
Developed hydrogeologic, geologic and groundwater modeling sections of the Remedial Work Plan (for a PCE-contaminated EPA Region 2 NPL site). Prepared SOPs for aquifer testing regime, groundwater capture analysis and optimization, and hydrogeologic models (GWV6-ModFLow) for the Long Island coastal aquifer. (*Client reference: USACE Kansas City District, 601 East 12th Street, Kansas City, MO 64106, Todd Daniels, 816-389-3584*)

TransCanada Corporation, Ravenswood Generating Facility, Queens, NY (2011 to Present)
Prepared, implemented and provided oversight of RI-related field activities including drilling (coring and well installs), sampling and monitoring, groundwater reporting, and site communications. (*Client reference: Trans Canada Corporation, 38-54 Vernon Blvd.Long Island City, NY 11101, Greg Pryor, 718-706-2863*

Foster Wheeler Corporation, Church Road TCE Site, Mountain Top, PA (2011 to Present)
Providing senior-level technical support for RI Program related to chlorinated VOC contamination at this EPA Region 3 NPL site. Provided oversight for field drilling and investigation activities (RI/FS), bedrock fracture analysis, RQD, downhole geophysics, Rockworks-fracture analysis/CSM, and subsurface profile development. (*Client reference: Foster Wheeler Corporation, 53 Frontage Road, Hampton, NJ, 08827, Douglas Stout, 908-730-4104*)

ADDITIONAL TRAINING/CERTIFICATIONS

- Licensed Geologist, PA, Number PG004760
- Licensed Geologist, VA, Number 2801001678
- Certified Subsurface Evaluator, NJ, NJ

TETRA TECH

DAVID WERTZ

Field Professional

Mr. Wertz has ten years of experience in the environmental field, primarily as a geologist/hydro geologist for site characterizations/investigations, environmental assessments, and environmental impact statements ranging in cost from $20,000 to over $1,000,000. He has a broad knowledge of environmental regulations including National Environmental Policy Act (NEPA), Comprehensive Environmental Resource, Compensation, and Liability Act (CERCLA)/Superfund Amendment and Reauthorization Act (SARA), Resource Conservation and Recovery Act (RCRA), Clean Water Act (CWA), and Toxic Substances Control Act (TSCA). Mr. Wertz has had a variety of environmental field experience including geophysical surveying, advancement/installation of borings/wells, lithologic logging, soil/groundwater/gas sampling, soil excavation, pump tests, groundwater and light non-aqueous phase liquid (LNAPL) gauging, and environmental and construction inspections.

Education and Training:

University of Rochester, B.S., Environmental Science, 1998

Boston College, M.S., Geophysics, 2001

NEPA

Geology/Hydrogeology

Site Investigation

RELEVANT EXPERIENCE

Technical Support, Y-12 Site-Wide EIS (SWEIS), Department of Energy (DOE); (January 2009 – July 2011)—The DOE/National Nuclear Security Administration decided to downsize and modernize Y-12 (in Oak Ridge, Tennessee) while continuing to maintain the capability and capacity to fabricate nuclear weapons secondaries, limited-life components, and case parts in support of the nuclear weapons stockpile. This SWEIS evaluates the potential direct, indirect, and cumulative impacts associated with the reasonable alternatives to continue implementing those decisions. Mr. Wertz addressed comments from DOE, contributed to overall document consistency, and provided technical expertise for the geology and water resource sections. Reference: Pam Gorman, DOE, Y-12 Site Office, Oak Ridge, TN, 37831; (865) 576-9903.

Technical Support, Department of Energy (DOE) Headquarters; (September 2010 – December 2011)—Mr. Wertz served as an on-site contractor to support various aspects of the NEPA process for federally-funded projects under the Department of Energy. Mr. Wertz has reviewed a number of Environmental Impact Statements and Environmental Assessments to determine the environmental impacts on specific resource areas, such as geology and water resources for various ongoing and upcoming projects at Department of Energy National Laboratories including Y-12, Los Alamos National Laboratory, Nevada National Security Site, and the Savannah River Site. Reference: Mary Martin, DOE, 1000 Independence Ave, SW, Washington, DC 20585; (202) 586-4600

Technical Lead for Affected Environment, Global Nuclear Energy Partnership (GNEP) EIS, Department of Energy (DOE); (September 2007 – June 2008). The GNEP programmatic EIS evaluates the impacts of reprocessing spent nuclear fuel (SNF) for distribution to other countries in the world for use as fuel in advanced nuclear power facilities. The reprocessing of SNF would allow for more efficient use of nuclear fuel, mitigate SNF as a means for producing nuclear arms, and would reduce the amount of radioactive waste produced. As the technical lead for the affected environment chapter, Mr. Wertz disseminated information to on-site and off-site authors, helped address comments from DOE, helped with overall document consistency, and was responsible for the geology resource. The affected environment included five separate DOE facilities across the United States. At each facility an experimental Advanced Fuel Cycle Facility (AFCF) was proposed for the purpose of performing highly technical experiments to evaluate SNF recycling processes and the ability to commercialize SNF recycling processes for the global market. As affected environment lead, Mr. Wertz coordinated with more than 10 separate resource leads to describe the affected environment for the proposed AFCF location sites. Reference: Carol Borgstrom, DOE, 1000 Independence Ave, SW, Washington, DC 20585; (202) 586-4600

Technical Support, Bannister Federal Complex Environmental Assessment (BFC EA), Department of Energy (DOE); (January-August 2012)—The DOE/National Nuclear Security Administration decided to dispose of the Bannister Federal Complex in Kansas City, Missouri. This facility was used to assemble and manufacture non-nuclear components for nuclear weapons. Legacy contamination associated with historic operations at the site exists, and has been identified as solid waste management units (SWMUs) that are managed by the site's Hazardous Waste Management Facility Permit. Although some SWMUs have been remediated, some soil

contamination has been left in place. Several property transfer alternatives and future use scenarios are being analyzed. Varying levels of demolition of site buildings and remediation of contaminated areas were considered as part of several proposed property transfer alternatives ranging from "green space" use such as a park to high intensity use such as manufacturing. A mixed use residential/commercial alternative was also considered. This EA evaluates the potential direct, indirect, and cumulative impacts associated with the proposed alternatives. Mr. Wertz authored the affected environment and impacts sections for land use, aesthetics and geology and soils at the BFC.

Technical Support, Supplemental Environmental Impact Statement (SEIS) for Production of Tritium in a Commercial Light Water Reactor (CLWR), Department of Energy (DOE); (January-August 2012)—Mr. Wertz provided technical support for this document which analyzes the impacts of irradiating tritium producing burnable absorber rods at the Watts Bar Nuclear plant in Spring City, Tennessee and the Sequoyah Nuclear Plant in Soddy-Daisy, Tennessee. Mr. Wertz authored the geology and soils affected environment and impact sections for the two nuclear power plants.

Environmental Compliance Inspections for Natural Gas Pipelines, Federal Energy Regulatory Commission (FERC), (July 2009-Present)–Mr. Wertz has completed several construction and restoration inspections on behalf of FERC for natural gas pipeline projects in West Virginia, Pennsylvania, Delaware, and Colorado.

Field Operations Leader, Remedial Investigation of SS-27, U.S. Air Force, Andrews Air Force Base, Maryland; (June 2006 – January 2007)—As Site Supervisor, Mr. Wertz was responsible for the overall implementation of the field investigation at SS-27 (former dry cleaner). The investigation approach consisted of a flexible and dynamic sampling program that utilized test kits and mobile laboratory data to obtain real-time data sets which were used to strategically guide future sampling locations to more accurately delineate the extent of chlorinated solvent in soil and groundwater at SS-27 while maximizing cost efficiency and sample throughput. The field program resulted in the delineation of chlorinated solvents in the dry cleaner footprint area, and lead to the discovery of a chlorinated solvent hotspot in an unexpected area north of the building footprint. Because of the high sampling productivity, a more detailed picture of site contamination was achieved, which aided in groundwater monitoring well placement and reduced cost in the subsequent remediation phase of the project.

ADDITIONAL TRAINING/CERTIFICATIONS

- 40-Hour Hazardous Materials Site Worker Certification in Accordance with 29 CFR 1910.120

ANDREW LEUNG, P.E.
Field Professional

EDUCATION AND TRAINING
University of Illinois, Master of Science in Geotechnical Engineering -1982
University of London, University College, Bachelor of Science in Civil Engineering -1980

Special Courses:
Designing with Geosynthetics, Geosynthetic Research Institute - 1990
Various Geosynthetics Research Institute Round tables and Seminars -1991 to 1995
CSX Corporation Rail Safety Training - October 2007

REGISTRATION
Professional Engineer - New York, New Jersey, 1985

EXPERIENCE SUMMARY
Mr. Leung has over 30 years of technical and project management experience in environmental and geotechnical engineering for the planning, design, construction, and rehabilitation of various civil works. His experience includes all phases of hazardous and solid waste management projects. His technical experience has focused mainly on environmental assessment, remedial design, groundwater monitoring, hydrologic and hydraulic evaluations, and geotechnical and geophysical investigations. Types of projects include housing, transportation infrastructure design, airports, port, waterfront, sanitary landfills, dams, and residential and commercial buildings.

REPRESENTATIVE PROJECTS
Gladys Hillman Jones High School, Newark, NJ - (2003 to 2009) Principal responsible for overseeing geophysical survey, drilling and UST removal operations and preparation of UST closure report. Work involved locating USTs by test pits, prepare UST facility questionnaire, collect post excavation samples after removal of contaminated soil and installation of monitoring well to evaluate ground water quality and coordinate with disposal facility for removal of petroleum impacted soil.
Client Reference: Timber Architect, 1503 Glen Ave. Moorestown, NJ, 08057, Mr. Jeffrey Moon, 609-394-3222

Early Childhood Center 13, Jersey City, New Jersey, NJSCC – (2004) Task Manager responsible for performing a site investigation of properties proposed for acquisition by NJSCC as part of the new early childhood center construction. Investigation included a geophysical survey for UST, and intrusive methods to investigate potential areas of concern including USTs, historical fill, automotive repair facilities and groundwater. Prepared bid specifications and PAECER for properties proposed for acquisition.
Client Reference: NJSDA, One West State Street Trenton, NJ 08608, Mr. Gary Skowronski, 609-3411-5979

New Jersey School Development Corporation, Public School PS 5, West New York, NJ – Project Principal responsible for asbestos, lead paint and PCBs investigations of the exterior elevations. YU team sampled and tested the suspect materials from the façade elevations where potential ACM and LBP were revealed. Cost estimates for several potential options of repair and abatement were contemplated. Hazardous Materials abatement design is ongoing.
Client Reference: NJSDA, Mr. Randall E. Vieser, 609-292-1433

Multiple NJSCC School Projects – (2004/2005 to 2008/2009)Project Engineer responsible for Preliminary Assessment and Site Investigation for multiple proposed schools and school expansions including New North Ward School in Newark, NJ; Early Childhood Development Center No. 13, P.S. No. 35, and P.S. No. 39 in Jersey City, NJ. Projects performed and reported in conformance with NJSCC specifications for feasibility and design phases. Responsibilities included review analytical laboratory report, prepared sampling summary report and delineation of contaminations per NJDEP regulations. Also prepared EO215 and the Property Acquisition Environmental Cost Estimate Reports (PAECERs) for the proposed expansion of school.
Client Reference: NJSDA, One West State Street Trenton, NJ 08608, Mr. Gary Skowronski, 609-3411-5979

Northern Branch Corridor Study, **North Bergen to Tenafly, NJ Transit -** Served as Project Principal responsible for the design and implementation of the environmental investigations program in accordance with NJ Tech Reg. (N.J.A.C. 7:26E) throughout the proposed rail alignment. Provided supervision during the environmental assessment which will be used to develop recommendations for preventing exposure to subsurface and surface contaminants during construction as well as disposal of contaminated soil and groundwater. Preparation of site work plan and site specific health and safety plan, document research, boring and sampling analyses, data evaluation and engineering reports were performed.
Client Reference: HNTB, 5 Penn Plaza, New York, NY 10001, Mr. Stanley Wiecek, 212-594-9717

Montclair State University Parking Garage, Little Falls, NJ – Principal responsible for preparation of the Preliminary Assessment (PA) report for proposed four story parking garage construction. Responsibilities included conducting site reconnaissance and reviewing standard and local agency information, historical Sanborn and topographical maps and preparing a PA report in accordance with NJDEP Technical Regulation.
Client Reference: prismatic Development Corporation, 60 Route 46 east, Fairfield, NJ 07004, Mr. Steve Lang, 973-882-1133

Parking Facilities for the Bronx Parking Development Authority Company, Bronx, NY – Project Manager responsible for activities in relation to the Supplemental Environmental Investigation (SEI) for proposed parking facilities and associated soil disposal activities. SEI responsibilities included development and execution of a field sampling plan, development of a site-specific Health and Safety Plan, subcontractor coordination, observation and contaminant screening of soil borings, soil and groundwater sample collection, preparation of SEI report, data evaluation, and development of soil disposal recommendations and associated specifications. Additional responsibilities included development of a waste classification sampling plan and supplemental delineation sampling plan, disposal facility correspondence and coordination, UST closure and associated Remedial Action Report preparation.
Client Reference: Prismatic Development Corporation, 60 Route 46 east, Fairfield, NJ 07004, Mr. Steve Lang, 973-882-1133

Charles McCusker, P.G., C.H.M.M., L.S.R.P.
Field Professional

EDUCATION
University of Southern Colorado: B.S. Geology (1985)

PROFESSIONAL REGISTRATIONS AND TRAINING
Licensed Site Remediation Professional (NJDEP)
Professional Geologist PA, DE.
Certified Hazardous Materials Manager (Master Level)
Licensed for UST Closure and Subsurface Investigation (NJDEP)
NYSDEC-approved Petroleum Bulk Storage Facility Auditor
Hazardous Waste Site and Supervisor Training: OSHA 29 CFR 1910.120(c)

EXPERIENCE SUMMARY
Mr. McCusker has over 27 years of experience in developing compliance strategies and technical solutions for environmentally impaired properties in 24 States and the U.S. Virgin Islands. He has worked with local, State and Federal officials on environmental projects performed in accordance with CERCLA, TSCA, RCRA, ISRA, CAA, CWA, LUST, and OSHA regulations. He has completed numerous preliminary assessments, site investigations and remediation projects utilizing vapor extraction, low temperature thermal desorption, incineration, bioremediation, in-situ chemical oxidation, and natural attenuation and excavation remedies at manufactured gas plants, dry cleaners, petroleum bulk storage facilities, chemical plants and wood treating facilities. His experience includes extent of contamination studies of organic and inorganic chemicals in soil and groundwater, hydrogeologic investigations of water supply systems, groundwater modeling of contaminated aquifers, installation and maintenance of product recovery systems, pump and treat systems, contractor oversight during removal actions and remedial system installation, preparation of Bid Packages, Bid Specifications, Quality Assurance Work Plans, Health and Safety Plans, Preliminary Assessments, Remedial Investigation Reports, Remedial Action Work Plans, Remedial Action Reports, conducting in house training on representative soil sampling and soil classification, computer applications for word processing, database management, graphic depiction and groundwater modeling.

REPRESENTATIVE PROJECTS
LSRP Services, Midas, Dumont, New Jersey-– Project Manager for delineation and remediation of this former service station site. Developed the HASP, conducted historical research and a facility audit. Implemented public notification, an LNAPL recovery program and designed interim remedial measures to ensure regulatory compliance for the site. Ongoing activities will include off site access negotiations, groundwater delineation and remediation.
Reference: TBC Retail Group, 4280 Professional Center Drive, Palm Beach Gardens, FL 33410 Aaron Engi, (561) 383-3000 x 2517

LSRP Services, Former Hillman's Golfland, Elmwood Park, New Jersey– Provided a review of historical investigation and remedial activities for the prospective buyer. Evaluated the proposed in-situ chemical oxidation proposal and provided reserve estimation for the client. Have assumed the role of the LSRP for this project and will provide ongoing groundwater monitoring for the established Classification Exception Area and will evaluate the remedial progress going forward.
Reference: BF Langan Consultants, LLC200 Riverfront Boulevard, Elmwood Park, New Jersey 07407 George Siller (201) 791-4127

UST Closure & Engineered Cap Inspection, DCH Auto Group, Parking Lot Expansion, Union, New Jersey – Conducted Ground Penetrating Radar and Electromagnetic geophysical surveys of former residential lots acquired for parking lot expansion of the automobile dealership. Located abandoned Underground Storage Tanks, performed tank closure and provided subsurface evaluator services on a fast track basis to keep construction on schedule and ensure that tank closure was performed in accordance with local and state regulations. Provided oversight of the engineered cap construction.
Reference: DCH Auto Group955 Route 9 North, South Amboy, New Jersey 08879 Rehab Attia 732-952-0279

Petroleum Bulk Storage Facility Audits, New York, New York, Auditor for NYCOER/NYCEDC
Auditor of Petroleum Bulk Storage (PBS) facilities for various New York City Mayoral Agencies including NYPD, FDNY, DSNY, DOC, DCAS, DHS, DJJ, DPR and EDC. This work was performed in response to a November 2010 Consent Order with NYSDEC to bring mayoral agency heating oil storage tanks into regulatory compliance, Approximately 693 heating oil storage tanks at approximately 487 project sites were covered under the consent order. This contract included facility audit inspection, tank tightness testing, and PBS registration updates. Reporting consisted of Facility Summary Reports, issuance of Notices of Violation, identification of deficiencies and corrective measures.
Reference: NYCOER, 253 Broadway, 14th Floor, New York, NY 10007 Cavy Chu (212) 788-3774

Miller Property, Mine Hill, New Jersey Senior Project Manager – Conducted a groundwater RI following a release of No. 2 fuel oil from a 550-gallon UST. Prepared a Remedial Action Report (RAR) and RAW to document post excavation soil and groundwater conditions and received approval to address residual impacts in soil beneath the structure using chemical oxidation and to address groundwater impacts using a multi-phase extraction from multiple well points. Chemical Oxidation successfully addressed residual soil contamination beneath the structure and the bioslurper successfully removed free phase oil from the bedrock aquifer. A Revised RAW was submitted and approval was granted by NJDEP to address the remaining groundwater impacts in the bedrock aquifer via bedrock injections (chemical oxidation).
Reference: Allstate Insurance Company, P.O. Box 9, Hackettstown, N.J. 07840 Brad Kehler (retired) (908) 217-7862

Former Giorgis Property, Jersey City, New Jersey Senior Project Manager – Prepared a RAR to document soil removal activities associated with a leaking 550-gallon residential fuel oil UST. A RAW was prepared to address remaining groundwater impacts in the bedrock aquifer with a Groundwater Treatment System (GWTS). Provided effluent monitoring and reporting and a revised RAW was prepared to supplement the GWTS with surfactant flushing.
Reference: Allstate Insurance Company, P.O. Box 3037, Wayne, NJ 07474, Lou Elia (973) 872-8816

Graff Property, Bedminster, New Jersey Senior Project Manager – Conducted a groundwater RI following a release from a 1,000-gallon gasoline UST. This investigation included the installation of 28 bedrock monitoring wells, down hole geophysical logging, quarterly ground water monitoring using low flow and passive diffusion bag sampling. Immediate Environmental Concerns (IECs) were addressed by installation of a Point of Entry Treatment (POET) system, replacement of the potable wells, a vapor intrusion study and installation of Soil Vapor Extraction (SVE) systems. A RASR and a pilot study RAW were prepared to test the efficacy of in-situ chemical oxidation.
Reference: Atlantic Mutual (in receivership), 7 Giralda Farms, Suite 120, Madison, NJ 07940 Michelle Rolleri (973) 408-6053

Berkovitz Property, Teaneck, New Jersey, Senior Project Manager –Provided contractor oversight during the remedial excavation activities which involved structural support using helical piers. Collected post excavation samples and performed a groundwater RI. Groundwater impacts were still present in the bedrock aquifer and a RAW was prepared to address these impacts via in-situ chemical oxidation. NJDEP approved the RAW and two rounds of injections were performed. Groundwater monitoring indicates that the in-situ treatment has been effective in achieving compliance objectives.
Reference: Allstate Insurance Company, P.O. Box 3037, Wayne, NJ 07474, Lou Elia (973) 872-8816

Blake Property, Greenwich, New York, Senior Project Manager – Performed site inspection following a sudden release of fuel oil from a 275-gallon residential fuel oil AST. Provided causation determination of the release, performed a groundwater remedial investigation and provided contractor oversight during groundwater treatment system operation and maintenance. Performed groundwater monitoring and prepared a Remedial Action Report for spill closure.
Reference: Peerless Insurance P.O. Box 4858, 5062 Brittonfield Parkway, Syracuse, NY 13221 Michelle Morelli (315) 431-6139

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov
www.ohp.parks.ca.gov

29 May 2007

In Reply Refer To
COE061207B

Kevin J. Roukey, Chief
Central California/Nevada Section
U.S. Army Engineer District, Sacramento
Corps of Engineers
Department of the Army
1325 J Street
Sacramento, California 95814-2922

RE: REGULATORY BRANCH (200600917) [*SECTION 106 CONSULTATION (RND.01) ON THE **13 CRITICAL LEVEE REPAIR SITES, BRANNAN-ANDRUS ISLAND PROJECT**, SACRAMENTO COUNTY, CALIFORNIA*]

Dear Mr. Roukey:

This letter is a response to Tetra Tech's submission, on behalf of the United States Army Corps of Engineers' (Corps), of a 16 April 2007 update to the California Department of Parks and Recreation 523 series record for an abandoned Brannan Island barge. The Corps' submission and my comment on it here are made pursuant to 36 CFR Part 800, the regulation that implements Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. 470f), as amended, and other applicable regulations.

Your letters of 26 March and 25 April 2007 inform me of the discovery of an abandoned, low-service barge on Brannan Island, and provide documentation for the Corps' National Register of Historic Places (National Register) evaluation of the discovery.

On the basis of the above 523 series record, which is now an unnumbered addendum to the December 2006 *Cultural Resources Survey of Approximately 60 Acres for Levee Maintenance Activities on Brannan Island, Sacramento County, California*, I concur in the Corps' determination that the

Brannan Island Barge (River Mile 13.6, east bank)

is *not* eligible for inclusion in the National Register.

Please direct any questions or concerns that you may have to Project Review Unit archaeologist Mike McGuirt at 916.653.8920 or at mmcgu@parks.ca.gov.

Sincerely,

Susan K Stratton for

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

MWD:MDM:mdm

cc: Julia M. Cheney, Historian—Tetra Tech, Inc., San Francisco

TETRA TECH

Julia M. Cheney
Historian

April 25, 2007

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer
Office of Historic Preservation
California State Department of Parks and Recreation
P.O. Box 942896
Sacramento, CA 95296-0001

Subject: 200600917; Brannan-Andrus Island Levee Repair Project, Thirteen Emergency Erosion Site Fresno and Madera Counties; COE061206A

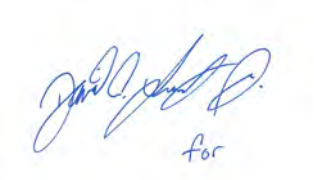
Dear Mr. Donaldson:

Tetra Tech, Inc. is sending this letter on behalf of the Brannan-Andrus Levee Maintenance District. This letter is in reference to an unanticipated discovery for this project, of which Tetra Tech informed your office in a letter dated March 26, 2007. Tetra Tech has evaluated the wood barge and is submitting the evaluation as an addendum to the cultural resources survey report submitted entitled, "*Cultural Resources Survey of Approximately 60 Acres for Levee Maintenance Activities on Brannan Island, Sacramento, California*", submitted to your office December, 2006.

Construction has recently begun on the project and, after having observed the structure at low tide, it appears that what was thought to be debris from a dock is actually debris from an abandoned barge, constructed in the 1930s. We are requesting your expedited review and comments regarding the determination of eligibility for this historic resource. The proponent is the Brannan-Andrus Levee Maintenance District (BALMD) is proposing to remove the barge from the project area.

Please feel free to contact me with any questions you may have at (415) 974-1221. Thank you for your time.

Sincerely,



Julia M. Cheney
Historian

Attachment

Cc: Mr. Gil Labrie, BALMD
Mr. David Lundgren, Tetra Tech, Inc.

Tt Division
180 Howard Street, Suite 250, San Francisco, CA, US 94105
Tel 415.974.1221 Fax 415.974.5914 www.tetratech.com

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 3CS
Other Listings
Review Code Reviewer Date

Page 1 of 6 *Resource Name or #: Brannan Island Barge
P1. Other Identifier:
*P2. Location: ☐ Not for Publication ☐ Unrestricted *a. County: Sacramento
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
*b. USGS 7.5' Quad: Rio Vista Bridge Date: 1999-2006 T ; R ; ¼ of ¼ of Sec ; M.D. B.M.
c. Address: City: Isleton Zip: 95641
d. UTM: Zone: 10 ; mE/ mN (G.P.S.)
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation:

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

This wood barge is on the eastern shore of Brannan-Andrus Levee, on the Sacramento River, less than a mile north of the Rio Vista Bridge. The barge is partially sunken in five feet of water and lies just south of Das Cliff Haus Restaurant. (See continuation sheet.)

P3b. Resource Attributes: (List attributes and codes)
*P4. Resources Present: ☐Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5b. Description of Photo: (View, date, accession #)

*P6. Date Constructed/Age and Sources: ☒ Historic ☐Prehistoric ☐Both

*P7. Owner and Address:

*P8. Recorded by: (Name, affiliation, and address)
Julia Cheney, Erin King
Tetra Tech, Inc.
180 Howard Street, Suite 250
San Francisco, CA 94105

*P9. Date Recorded:
April 16, 2007

*P10. Survey Type: (Describe)
Intensive

*P11. Report Citation: (Cite survey report and other sources, or enter "none.") Addendum to Tetra Tech, "Cultural Resources Survey of Approximately 60 Acres for Levee Maintenance Activities on Brannan Island" 2006.

*Attachments: ☐NONE ☐Location Map ☒Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code**

***Resource Name or #** (Assigned by recorder) Brannan Island Barge

B1. Historic Name: None
B2. Common Name:
B3. Original Use: Low-service barge B4. Present Use: Abandoned
***B5. Architectural Style:**
***B6. Construction History:** (Construction date, alterations, and date of alterations) Original construction c. 1935

***B7. Moved?** ☐**No** ☒ **Yes** ☐**Unknown** **Date:** ____ **Original Location:** Across river at Olympian Shipyard
***B8. Related Features:**

B9a. Architect: Unknown b. Builder: Unknown
***B10. Significance: Theme:** n/a **Area:** n/a
Period of Significance: n/a **Property Type:** n/a **Applicable Criteria:** n/a
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The wood barge at Brannan-Andrus Levee does not appear to meet the criteria for listing on the National Register of Historic Places but does appear to meet the criteria for listing on the California Register of Historical Resources under Criteria 1 and 3. (See continuation sheet.)

B11. Additional Resource Attributes: (List attributes and codes)

***B12. References:** USGS Quadrangle 7.5 *Rio Vista Bridge 1996-2000.* (See continuation sheet.)

B13. Remarks:

***B14. Evaluator:** Julia Mates Cheney

*Date of Evaluation: April 16, 2007

(This space reserved for official comments)

(Sketch Map with north arrow required.)

P3 a. Description (continued):

The barge has a simple rectangular, single-deck, square-end design. It is flat bottomed with a flush deck. It is roughly 65 feet long and 25 feet wide. It is not self propelled and contains two large ballasts at its stern (Photograph 2). It is a deck and tank barge, with five metal tanks that are accessed by round metal covers. Each tank is enclosed in individual wood berths and are connected by metal piping (Photograph 3). The barge is framed with longitudinal keelsons and wood clinker planking sides. The deck of the barge is immersed in water and not visible. Much of the side framing is intact and fastened with metal-riveted support knees. The barge's simple design and square end is because it was constructed for inland use and not for the open sea. Two trees, one of which is a eucalyptus, are growing on the ship's stern. The wood planking along the sides of the barge have decayed, and bare metal bolts protrude from the sides (Photograph 3). The bow of the barge is fully immersed, and it is not possible to determine if it is intact (Photograph 4).

B10. Significance (continued):

Brannan Island has had a history of Euro American settlement, agriculture, and flooding since the 1800s, including two disastrous floods, one in 1906 (NOAA 1907) and one in 1972 (Hayden 1973). The island's general form was carved out naturally by the Sacramento and San Joaquin Rivers and the tributaries and sloughs of the delta.

Levee building in the delta occurred in two stages: the first from the 1850s to the early 1880s and the second from 1880 to the early 1900s. Private landholders in the delta first began levee building on a small scale to create land for agriculture. By 1850 the eastern bank of the Sacramento River had become a string of levees built by "rim landers," farmers who settled along the delta waterways. Most levees were constructed as low berms atop the natural bank formed by the rivers. Reuben Kercheval began the first reclamation project in 1850 on Grand Island, to the north of Brannan Island and across the Sacramento River. Kercheval had attempted to involve his neighbors, but only Sam Brannan of Brannan Island was interested in the endeavor. Even after the flood of 1852, these new levee promoters could not convince other landholders to construct levees along their own properties.

Kercheval employed several ethnic populations, including Native Americans, Chinese, and Hawaiians, to construct a series of levees, which over the years were destroyed by flooding. The larger levees were three feet high, three feet across the top, thirteen feet wide at the base, and twelve miles long. Laborers, known as "wheelbarrow brigades," would move the dirt using wheelbarrows, shovels, planks, and horses.

The results of levee construction were realized by others in the delta, who soon followed Kercheval's efforts. By 1857, George Andrus finished reclaiming neighboring Andrus Island. The system of early levees was referred to as "shoestring" levees because many were only a foot high. In the 1860s, the landowners realized that in order to avoid weak links in the delta levee system they needed to raise sufficient capital. Investors began pooling funds to form corporations, to purchase property, and to reclaim it. Most of the investment companies used Chinese laborers, and according to a Tide Lands Reclamation document, Chinese laborers were used to construct the levees at Rio Vista, Twitchell Island, Brannan Island, and portions of Roberts Island.

The levee was constructed by placing planks supported by short intervals of pilings between a borrow pit and the natural river berm. The laborers would shovel dirt from the borrow pit into wheelbarrows and slowly wheel them up the planks and dump the fill on top of the natural levee. The fill, coming from the marshy islands, was composed of peat and clay. The peat was much lighter than the clay, but when soaked with water it would sink, causing the levees to sink as much as six feet per year.

In 1880 the steam-powered clamshell dredge was introduced as new technology for levee construction and replaced the Chinese wheelbarrow gangs. The dredge was cheaper and faster than the laborers and made it possible to reclaim the central peat islands. Using its two large claw-like buckets, the dredge would scoop dirt from the river bottom and dump it on the top of the levee.

Steam powered dredges were used through the 1950s, although the introduction of gasoline occurred for some dredges between 1905 and 1917. Diesel engines were installed on some dredges in 1923, but it wasn't until the mid-1950s that diesel became the only power source for dredges (Thompson and Dutra 1983).

History of Brannan-Andrus Levee Barge

Little is known about the original construction of the barge at Brannan-Andrus Levee. The vessel registration number has either been removed or is located on a portion of the boat that is under water. The barge is not listed on shipwreck databases and is not mentioned in the historic evidence from the Brannan-Andrus Levee or the Sacramento River area. The reason for the sparse historic record is likely due to the fact that this was a low-service barge that was used to assist the dredging machines and was not an important element within the dredging fleet, compared to the machines it served.

The barge at the Brannan-Andrus levee was constructed in the 1930s for use as a low-service barge for the Olympian Dredging Company. This company was formed by the consolidation of seven dredging companies and operated from 1915 to 1977, when it was purchased by E. A. Dutra Dredging Company. The Olympian Dredging Company hauled the barge by tugboat to provide steam dredges with freshwater before the use of diesel fuel in the 1950s (Thompson and Dutra 1983). Bill Dutra, current CEO of Dutra Construction, confirmed that this barge would carry freshwater as well as chains or a spare digging bucket out to the dredges on the Sacramento River.

This type of wood service barge was commonly used to bring water and supplies to the steam dredges from the late 1930s into the 1950s. These service vessels became unnecessary after the mid-1950s when oil, coal, and diesel fuel was used for the dredges instead of steam, and hauling water to the dredging machines was no longer needed. Eventually, the highway system around the Brannan-Andrus Island was improved, and trucks were used to carry supplies to the construction dredges, instead of transporting equipment on small service barges. The small service boats that were no longer used were either dismantled or moved to portions of the levee to be used as breakwaters. The barge that is the subject of this form was relocated from the Olympian Dredging Company shipyard to its current location, to be used as a breakwater barrier. The owners of Das Cliff Haus wished to have a breakwater at their marina site so that recreational boaters and fishermen might be able to navigate into their dock. The barge was intentionally abandoned during the late 1960s or early 1970s at the site to serve as a breakwater, and over the years has become sanded in and embedded into the berm (Dutra 2007).

Historic Evaluation

Vessels, like other historic resources, are evaluated under Criteria A-D under the National Register of Historic Places (Criteria 1-4 under the California Register of Historic Resources). In the National Register

Bulletin 20, *Nominating Historic Vessels and Shipwrecks to the National Register of Historic Places*, under Criterion A, historic vessels should be evaluated by their association with maritime themes. This barge is therefore associated with the maritime theme of industry, as it supplied water to power steam dredges, and with the theme of commerce because of its association with the building of the levee system in the Sacramento River (NPS 2007). The barge retains some of its historic integrity but lacks significance under National Register criteria.

Under Criterion A, the barge does not appear to demonstrate sufficient importance within the context of dredging or construction of the levee system in the Sacramento River. This barge was one of many small service barges that carried water and supplies to the large steam dredges before the use of diesel fuel. Many types of vessels were used to supply goods and supplies to the dredges and their workers, who would reside on the dredges before the advent of the highway system, which allowed workers to commute to the construction site. This barge's age and historic use does not provide ample evidence to demonstrate how the resource may be associated with its historic context. To be eligible for listing on the National Register, "a property's mere association with historic trends is not enough, in and of itself, to qualify under Criterion A." Vessels and (other resources) must be shown to have a particular importance directly related to events and trends (NPS 1997). According to the historic record, this barge did not have a substantial impact on the construction of the levee system in the Sacramento River nor the Brannan-Andrus Levee. The historic evidence for this barge does not appear to support its eligibility for listing on the National Register under Criterion A.

Although it is not eligible for listing on the National Register, the barge could be eligible for listing on the California Register of Historic Resources under Criterion 1, for its association with levee construction in the 1930s-1950s. Although the vessel's integrity is affected, historic properties can still be eligible for listing on the California Register of Historic Resources even if they have lost elements of historic character or appearance. The barge is associated with construction of the levee, before the use of diesel fuel, when dredges along the levee were fueled with freshwater. The barge is one of the last remaining examples of this type of vessel and is a good example of a low-service barge. Its connection to the history of levee construction renders it eligible for listing on a local register under Criterion 1.

The wood barge is not eligible for listing on the National Register or the California Register under Criterion B because there is nothing found in the historic record to suggest that the barge is associated with significant persons. Historic vessels found eligible for the National Register under Criterion B are usually associated with significant admirals or captains, but this barge was likely pulled by a tugboat. Important historic persons associated the design of the vessels would render the vessels significant under Criterion C, but this barge does not appear to be associated with any known historic persons.

Under Criterion C, the barge would need to be significant for its eligibility under the categories of architecture, art, or engineering. This significance derives from a vessel embodying distinctive characteristics of a type, period, or method of construction or that represent the work of a master, possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction (NPS 2007). This barge is not eligible for its association with art or engineering. Its eligibility can only be considered in terms of its significance within the field of vessel architecture. In order to be significant in the area of architecture, a vessel must be a good representative of naval architecture or a naval architect's work. It does not appear that this barge was the work of a master naval architect, but the barge does represent the distinctive characteristics of a low-service, wood, inland utility barge, with its simple design, square ends, wood material, metal water tanks, and large ballasts used when being pulled by another vessel.

Although this barge does represent the distinct characteristics of a wood service barge constructed in the 1930s, a vessel's eligibility must be evaluated not only by its type, period, and method of construction but also by its important association within its historic context. This attention to important historic associations means that not every service barge used during the construction of the levees in the area can be deemed eligible for listing on the National Register. There is nothing in the historic record to suggest that this barge was in any way *importantly* significant to the dredging and construction of the levee system during the 1930s through the 1950s. Indeed, the fact that the barge was abandoned by the Olympia Dredging Company in the late 1960s or early 1970s and left to deteriorate demonstrates that the vessel was not important to the levee or to its owner. Many of the early dredgers and vessels that were important to the construction of the levee were sold to other dredging companies, recorded in levee construction histories, or kept for a period of time because of their significance with construction activities on the levee; this vessel was not one of those and was, in essence, junked and used as a water break, without any attempt to

preserve it. The barge does not have important associations within its historic context and is therefore not eligible for listing on the National Register of Historic Places under Criterion C.

The vessel is not eligible for listing on the National Register but is eligible for listing on a local register or California State Register of Historic Resources under Criterion 3 for its distinctive characteristics of type, period, or method of construction. Historic properties can still be eligible for listing on the California Register even if the resource has lost elements of its historic character or appearance. This barge is one of the few known wood service barges that remain on the Sacramento River from this period. The barge has enough of its distinctive architectural elements intact to be an example of its type. The barge maintains integrity in design, materials, and workmanship. It is locally unique, and there may be some potential to develop research questions and yield limited historical information on the type of materials used to construct wood barges in the 1930s for use on the Sacramento River. Therefore, this vessel is eligible for state or local listing under Criterion 3.

Under Criterion D (and 4), a vessel is significant if it has yielded or is likely to yield information important to history. Under Criterion D, a vessel or hulk can be significant if it has yielded or is likely to yield information important to history, i.e., the physical characteristics (or remains) of the vessel provide important information about its use, method of construction, design information, and operation. Substantial remains of the barge are present, and there may be some information that could be gained from study and documentation of the intact features. However, it is unlikely that there are historical questions of national importance that could be developed and addressed by this resource. The function, general time period, and location of use of the vessel are established. Information on the methods of construction of this type of vessel is likely available from archival sources, and there is nothing to indicate that there is anything unique about the design. No unique cargos or goods were hauled and it is likely that unique fixtures or artifacts would have been removed before its intentional reuse as a breakwater. It does not appear to be eligible for listing on the NRHP under Criterion D.

As the only known example of this property type in the levee, the hulk may be locally significant if questions could be developed related to features that might be unique to the resource and the local use. However, it does appear that its information potential is limited. In absence of a strong indication that

further research on the hulk would yield important information, it is not recommended as eligible for the California Register under Criterion 4.

Integrity Evaluation

A historic vessel must have retained integrity of location, design, setting, materials, workmanship, feeling, and association in addition to meeting one or more of the National Register criteria. This barge has integrity of location in that it is in the Sacramento River, just across the levee from where it was located during its use as a service boat. Integrity of setting means it was retained in the water. The barge also retains its integrity of design, materials, and workmanship in that it retains its original construction design. Integrity of feeling corresponds to the aesthetic or historic sense of the past that the vessel evokes. This barge's integrity of feeling is compromised because a large portion, including its deck, is completely submerged. A large eucalyptus tree is growing out of a corner of the barge, and a smaller tree is growing adjacent to it. The physical characteristics of the barge that are above water and intact, such as the metal ballasts and the wood sides, do evoke integrity of feeling, but that feeling is compromised by the portion of the barge that is not seen and the foliage and trees that are growing through and around it. The barge no longer retains integrity of feeling and only slightly resembles the service barge it once was. It is not known whether the barge is intact, or if the portions underwater have deteriorated.

This barge in the Brannan-Andrus Levee (site 20051230-039-011) does not appear to be eligible under the NRHP. The barge could be considered eligible under Criterion C (and 3) as it relates to a type, method, or period of construction if it were an important example within its historic context, which it is not. The barge's integrity of feeling has been compromised with its natural deterioration and the fact that it is largely sunken, rendering a view of the entire vessel impossible.

The property is associated with the methods used to maintain dredges constructing the levee from the 1930s until the 1950s. It is eligible for listing on a local or state register under Criterion 1 and 3 for its association with construction of the dredging of the Sacramento River and the construction of the levee system and for its example of a type, period, and method of construction of wood low-service barges. It may retain the potential to be locally significant if questions could be developed related to features that might be unique to the resource and the local use, but it appears that its information potential is limited. It is not recommended as eligible for the California Register under Criterion 4.

Photographs

Photograph 2. Metal ballasts on stern, camera facing northeast.

Photograph 3. Metal tanks on hull of barge, camera facing east

Photograph 4. Drifts and bolts on barge camera facing east

Photographs (continued):

Photograph 4. Stern of barge, camera facing north

B12. References:

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DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO, CALIFORNIA 95814-2922

REPLY TO
ATTENTION OF

December 6, 2006

Regulatory Branch (200600917)

Milford W. Donaldson
State Historic Preservation Officer
Office of Historic Preservation
California State Department of Parks
and Recreation
P.O. Box 942896
Sacramento, California 95296-0001

Dear Mr. Donaldson:

In accordance with Section 106 of the National Historic Preservation Act of 1966, as amended, and all applicable regulations, we are requesting your expedited review and comments regarding the determination of eligibility and effect on cultural properties within the Area of Potential Effect (APE) on the 13 Critical Levee Repair Sites, Brannan-Andrus Island project. The project would affect waters under the jurisdiction of the United States, therefore, the project proponent must meet the requirements of Section 404 of the Clean Water Act. The project applicant is the Brannan-Andrus Levee Maintenance District.

The project is located on the levees of the Sacramento River, Brannan-Andrus Island, Sacramento County. By prior agreement among you, the California Department of Water Resources, and us on March 23, 2006, the Area of Potential Effect (APE) for each of the 13 sites includes the erosion area, the staging area, and any access roads.

Site identification numbers include 20051230-039-001 through 20051230-039-013. River miles for each site, respectively, are 10.9, 11.2, 12.5, 12.5, 12.6, 12.7, 12.8, 12.8, 12.9, 13.4, 13.6, 15.3, and 15.4. The levee maintenance district proposes to repair levee banks at these locations eroded due to recent high river flows and high tides. This levee work is part of the ongoing Public Law 84-99 Rehabilitation Assistance Program (PL 84-99) and is pursuant to Governor Schwarzenegger's February 24, 2006 declaration of a state of emergency due to the imminent threat of catastrophic levee failure and also to his October 3, 2006 Executive Order S-18-06.

The project would restore the levee to the original level of protection by reconstructing the levee embankment to the pre-flood slope and height and by restoring the rock protection on the waterside levee slope. The levee slope will be constructed over a rockfill platform or bench, two feet above the summer high water mark. Materials will include a mix of rock and soil. Whenever feasible, construction will be conducted form

the waterside using a barge with a long arm crane. Accessibility limitations at four sites (001, 002, 010, and 011) will require a landside effort with trucks and other equipment.

A cultural resources inventory has been completed by Tetra Tech, Inc. cultural resources staff. The enclosed report "Cultural Resources Survey of Approximately 60 Acres for Levee Maintenance Activities on Brannan Island, Sacramento County, California" (December 2006) includes findings from the records check at the North Central Information Center, the field pedestrian survey, and Native American consultation. A vicinity map, aerial photos of each site, and engineer drawings of each site are also included.

With the exception of the levee itself, no archeological or structural properties were located within the APE for the levee sites. No sacred sites were reported by the Native American Heritage Commission. No responses to members of the Native American community had been received as of the date of the report preparation. Levee construction in the area began in the 1850's and continued intermittently as interest in land reclamation for farming rose and investors were found to back the proposed work. Andrus Island was reclaimed from marsh land by 1857. Delta levees have been modified considerably through the years as the first attempts proved inadequate and failures were common. The present levee is much higher and wider than the original and is subject to periodic maintenance. For purposes of this undertaking and by prior agreement in the March 23, 2006 agency collaborative meeting, the levee is considered eligible for the National Register of Historic Places under Criterion A, for its role in events important in our history. Because neither the function or the appearance of the levee would be changed by the proposed repair work, we have concluded that there would be no adverse effect to this property as a result of our issuance of a permit to place fill or dredged material in the waters under our jurisdiction.

Please refer to identification number 200600917 in any correspondence concerning this project. If you have any questions, please contact Patti Johnson at our Delta Office, 1325 J Street, Room 1480, Sacramento, California 95814-2922, email *patti.p.johnson@usace.army.mil*, or telephone 916-557-6611.

Sincerely,

ORIGINAL SIGNED

Kevin J. Roukey
Chief, Central California/Nevada
Section

Enclosure(s)

Copy furnished without enclosure(s):

Gil Labrie, P. O. Box 929, Walnut Grove, California 95690
David Lundgren, 180 Howard Street, Suite 250, San Francisco, California 94104

Cultural Resources Survey of Approximately 60 Acres for Levee Maintenance Activities on Brannan Island

Sacramento County, California

Prepared for:

Brannan-Andrus Levee Maintenance District
PO Box 929
Walnut Grove, California 95690

Prepared by:

Tetra Tech, Inc.
180 Howard Street, Suite 250
San Francisco, California 94105
Project Number 100-SFO-T18965

December 2006

USGS 7.5-Minute Topographic Quadrangle: Rio Vista, California (1993)

Information regarding the location, character, or ownership of historic resources is exempt from the Freedom of Information Act. Public disclosure of location information can lead to the damage or destruction of archaeological and other cultural resources.

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APPENDICES

ACRONYMS AND ABBREVIATIONS

Acronym	Full Phrase
AIRFA	American Indian Religious Freedom Act
APE	area of potential effect
ARPA	Archaeological Resources Protection Act
BALMD	Brannan-Andrus Levee Maintenance District
CFR	Code of Federal Regulations
DWR	California Department of Water Resources
EO	Executive Order
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NCIC	North Central Information Center
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
RM	river mile
RPA	Registered Professional Archaeologist
TCP	traditional cultural property
US	United States
USACOE	United States Army Corps of Engineers
USC	United States Code
USGS	United States Geological Survey

MANAGEMENT SUMMARY

This report presents the results of a cultural resources survey and archival and literature research, or Phase 1 survey, of thirteen levee maintenance sites on Brannan Island in the San Joaquin-Sacramento River Delta, in Sacramento County, California. The proposed undertaking by the Brannan-Andrus Island Levee Maintenance District (BALMD) includes placing a riprap and sediment mixture on the river side of the levee to stabilize and repair erosional areas. The proposed project is considered a federal undertaking under the National Historic Preservation Act because of federal funding and the requirement that the BALMD obtain a 404 permit from the US Army Corps of Engineers.

The survey included a prefield records search documenting previously recorded historic properties within half a mile of the project area, research using archival and literature resources, and a pedestrian inspection of the thirteen sites. The records search failed to indicate any historic properties within the area of potential effect; no historic properties were identified within the area of potential effect during the pedestrian survey or through the archival and literature research. However, for the purposes of this project, the levee itself is considered a historic property eligible for the National Register of Historic Places (NRHP) under Criterion A. Since the undertaking would not alter the geometry, location, or purpose of the levee, the qualities that make the levee eligible for the NRHP would not be adversely affected. In fact, the undertaking would protect any subsurface resources, adjacent historic buildings and structures, and the levee from disturbances by erosion and possibly flooding. Therefore, the undertaking would have no adverse effect on historic properties.

ACKNOWLEDGMENTS

The field survey and the report were conducted by Erin King, RPA, of Tetra Tech, Inc., San Francisco. The BALMD provided access to several of the maintenance locations and background information regarding the project and current activities at and near the sites. Patti Johnson of the US Army Corps of Engineers, Sacramento District, provided additional support regarding Section 404 permit requirements and specifics of the emergency levee maintenance program. Kevin Doyle of Tetra Tech, Inc., Boulder, Colorado, provided valuable peer review of this document.

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SECTION 1
INTRODUCTION AND BACKGROUND

The purpose of this cultural resources survey report is to review the proposed action in sufficient detail to determine the extent that it would affect historic properties or Native American traditional resources within or near the area of potential effect (APE).

1.1 BACKGROUND

In late December 2005 and early January 2006, a series of storms struck northern California, resulting in the Sacramento River reaching flood stage. High flows, high tides, and winds were experienced throughout the Sacramento-San Joaquin Delta, damaging a number of levees in the area (ACOE 2006). A Federal Disaster Declaration was issued for 31 California counties due to the storms, flooding, mudslides, and landslides.

On February 24, 2006, Governor Arnold Schwarzenegger declared a state of emergency for California's levee system. The Governor later signed Executive Order S-18-06, directing the California Department of Water Resources (DWR) to identify and repair eroded levee sites on the state/federal levee system to prevent catastrophic flooding and loss of life. The thirteen sites in the Brannan-Andrus Levee Maintenance District (BALMD) have been identified as eligible for PL 84-99 rehabilitation assistance and have been determined to be part of California's highest priority for emergency repairs (ACOE 2006). In order to conduct the repairs, the BALMD is applying for a Section 404 permit from the US Army Corps of Engineers (ACOE). The timeframe is particularly urgent considering the upcoming flood season (ACOE 2006).

The proposed levee restoration is considered an Order 1 repair, meaning that it protects a populated area and is on the verge of imminent failure. Order 1 sites have damage so severe that the levees may fail before the start of the next flood season, leaving the area unprotected. The major problem at each site is erosion of the levee slope. The embankment is very unstable, and a breach in the levee would cause loss of lives and would have a large economic impact on the town of Isleton, as well as on regional agriculture. In addition, Highway 160 runs along the levee and may fail as a result of levee damage (ACOE 2006).

1.2 PROPOSED UNDERTAKING

The BALMD is authorized and funded by the State of California to design, construct, and maintain levees to protect the towns of Isleton, Brannan, and Andrus Islands and Highway 160 from the effects of bank erosion and a breach in the levee system. The BALMD is the project lead and

proponent of the undertaking. The proposed project is considered a federal undertaking under the National Historic Preservation Act (NHPA) because of federal funding and the requirement that the BALMD obtain a 404 permit from the ACOE.

The BALMD proposes to implement emergency levee repairs, as required by the Governor's State of Emergency Declaration and the Federal Disaster Declaration that were issued in February 2006, at thirteen Brannan Island sites along the Sacramento River. Brannan Island is approximately 23 miles northwest of Stockton and twelve miles northeast of Antioch, in the Sacramento-San Joaquin Delta (Figure 1). The purpose of this project is to restore the levee sites to the original level of protection, as directed under the PL 84-99 status, so that the levees may protect life and property along Highway 160. The emergency levee repair work is necessary to prevent or reduce risks to life, health, and property and to prevent the possible severe economic losses discussed above (ACOE 2006).

The thirteen PL 84-99 emergency repair sites begin at river mile (RM) 10.9 and extend to RM 15.4. Table 1-1 provides the project site identification number and associated RM (Figure 2). (Sites are referred to in this report by the last three digits in the project identification number.)

Table 1-1. Project Site Identification and River Mile

Project Identification	River Mile
20051230-039-001	10.9
20051230-039-002	11.2
20051230-039-003	12.5
20051230-039-004	12.5
20051230-039-005	12.6
20051230-039-006	12.7
20051230-039-007	12.8
20051230-039-008	12.8
20051230-039-009	12.9
20051230-039-010	13.4
20051230-039-011	13.6
20051230-039-012	15.3
20051230-039-013	15.4

Roger Argus
President, EMI Division

June 27, 2013

Judson Cross
Purchase Bureau
Division of Purchase and Property
Department of the Treasury
33 West State St. P.O. Box 230
Trenton, NJ 08625-0230

Subject: Cost Quote - Response to the Request for Quote: 787923S – Environmental Assessment Field Contractors for Environmental and Historic Preservation Reviews, New Jersey's CDBG-DR Grant Program

Dear Mr. Cross,

Tetra Tech, Inc., (Tetra Tech) is pleased to submit this cost quote in response to the above-referenced Request for Quote: 787923S – Environmental Assessment Field Contractors for Environmental and Historic Preservation Reviews, New Jersey's CDBG-DR Grant Program. This response was prepared in accordance with the RFQ dated June 12, 2013, as clarified by Modification #1 and 2, issued on June 17 and June 19, 2013, respectively.

By my signature below, I assert that I am authorized to legally bind Tetra Tech in submitting this offer. Thank you, and should you or the evaluation panel have any additional questions, or require clarification of our proposal, please contact me directly at (973) 630-8041 or roger.argus@tetratech.com.

Sincerely,

Roger Argus
President – EMI Division

cc: Andrew Mazzeo, Northeast Operations Manager
John Bock, Proposed Project Manager

Tetra Tech, Inc.
1000 The American Rd. | Morris Plains, NJ 07950
Tel 973.630.8041 | Fax 973.630.8304
www.tetratech.com

COST QUOTE

Solicitation For Environmental Assessment Field Contractors

For Environmental and Historic Preservation Reviews New Jersey's CDBG-DR Grant Program

RFQ787923S

June 27, 2013

Prepared by:

TETRA TECH

1000 The American Road
Morris Plain, NJ 07950
Tel: 973.630.8000
Fax: 973.630.8304

Tax ID: 95-4148514

Roger Argus
President – EMI Division
Roger.Argus@tetratech.com
1230 Columbia St.
Ste. 1000
San Diego, CA 92101
Tel: 619.525.7188
Fax: 619.525.7186

www.tetratech.com

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ATTACHMENTS

Tab 1. Executive Summary

Tetra Tech is submitting our cost proposal in response to the New Jersey Department of Environmental Protection Request for Quotation (RFQ) number RFQ787923S under our Environmental Services Contract No. GS-10F-0076K. Tetra Tech includes the following assumptions or narratives:

- Tetra Tech identified SIN 899-1 as the applicable scope area and utilized our labor categories under that SIN.
- Tetra Tech has not discounted our rates.
- Our current environmental schedule is slated for update in December of 2015. We therefore provided DCAA with estimated labor rates for year three of the contract. Tetra Tech escalated the year 15 rates from our current contract by three percent which has been our historically approved escalation factor. If the negotiated rates with GSA are lower, Tetra Tech will provide those rates to DEP for inclusion in the contract for those years.
- Labor costs included for the design and implementation of the fixed price elements is limited to those required to meet the specification included in this RFQ. Unknown requirements, or those not explicitly stated in the Scope of Work or presented in Tab 1 of our technical quote are considered out of scope of the fixed price elements included in this quote.
- Tetra Tech will adhere to the General Services Administration (GSA) Federal Travel Policy and the New Jersey approved mileage rate which is currently approved at $0.31 per mile.
- Tetra Tech applies our general and administrative (G&A) indirect rate currently at 16.01% to all travel costs. The G&A rate is an allowable and allocable cost in accordance with our Environmental Services contract and in compliance with FAR Part 31.
- Other direct costs will be charged to DEP at the actual cost of acquisition and inclusive of our G&A.
- Tetra Tech has chosen Yu and Associates as a team subcontractor to support our efforts in the performance of this assignment. Other subcontractors may be added to achieve the specified small business participation goal.

Tab 2. Cost Schedules

Attachment 1 includes the Cost Quote Price Schedules.

ATTACHMENT 1

Cost Quote Price Schedules

Cost Quote Price Schedule 2 EAF Contractor - Firm Fixed Pricing

Pricing for services required under this RFQ will be a blend of firm fixed rates and the hourly rates. Bidders must complete all price cells within the Price Schedule or be deemed non-responsive.

Line No.	Description	Unit	Estimated Quantity (A)	Year 1 (B)	Year 1 Total (A) * (B)	Year 2 (C)	Year 2 Total (A) * (C)	Year 3 (D)	Year 3 Total (A) * (D)
1	Base Price per application for Exempt (Volume 1 to 100) Section 3.2.2	Each	100	$1,332.59	$133,258.89	N/A	N/A	N/A	N/A
2	Base Price per application for Exempt (Volume 101 to 200) Section 3.2.2	Each	100	$1,332.59	$133,258.89	N/A	N/A	N/A	N/A
3	Base Price per application for Exempt (Volume > 200) Section 3.2.2	Each	100	$1,332.59	$133,258.89	$1,371.60	$137,159.89	$1,411.78	$141,177.89
4	Base Price per application (Fixed Fee) for Categorically Excluded Subject to 58.5 (Volume 1 to 100) Section 3.2.4	Each	100	$3,111.97	$311,196.63	$3,202.35	$320,234.63	$3,295.41	$329,540.63
5	Base Price per application (Fixed Fee) for Categorically Excluded Subject to 58.5 (Volume 101 to 200) Section 3.2.4	Each	100	$3,111.97	$311,196.63	$3,202.35	$320,234.63	$3,295.41	$329,540.63
6	Base Price per application (Fixed Fee) for Categorically Excluded Subject to 58.5 (Volume GT 200) Section 3.2.4	Each	100	$3,111.97	$311,196.63	$3,202.35	$320,234.63	$3,295.41	$329,540.63

Cost Quote Price Schedule 2 EAF Contractor - Firm Fixed Pricing

Pricing for services required under this RFQ will be a blend of firm fixed rates and the hourly rates. Bidders must complete all price cells within the Price Schedule or be deemed non-responsive.

Line No.	Description	Unit	Estimated Quantity (A)	Year 1 (B)	Year 1 Total (A) * (B)	Year 2 (C)	Year 2 Total (A) * (C)	Year 3 (D)	Year 3 Total (A) * (D)
7	Base Price per application (Fixed Fee) for non-tiered Environmental Assessments (Volume 1 to 100) Section 3.2.2	Each	100	$16,833.60	$1,683,359.72	$17,319.88	$1,731,987.72	$17,820.84	$1,782,083.72
8	Base Price per application (Fixed Fee) for non-tiered Environmental Assessments (Volume 101 to 200) Section 3.2.2	Each	100	$16,833.60	$1,683,359.72	$17,319.88	$1,731,987.72	$17,820.84	$1,782,083.72
9	Base Price per application (Fixed Fee) for non-tiered Environmental Assessments (Volume GT 200) Section 3.2.2	Each	100	$16,833.60	$1,683,359.72	$17,319.88	$1,731,987.72	$17,820.84	$1,782,083.72
10	Base Price per application Tier 2 Site Specific Reviews (Volume 1 - 100) Section 3.2.8	Each	100	$25,157.13	$2,515,713.33	$25,824.21	$2,582,421.33	$26,511.25	$2,651,125.33
11	Base Price per application Tier 2 Site Specific Reviews (Volume 101 - 200) Section 3.2.8	Each	100	$25,157.13	$2,515,713.33	$25,824.21	$2,582,421.33	$26,511.25	$2,651,125.33
12	Base Price per application Tier 2 Site Specific Reviews (Volume GT 200) Section 3.2.8	Each	100	$25,157.13	$2,515,713.33	$25,824.21	$2,582,421.33	$26,511.25	$2,651,125.33

Cost Quote Price Schedule 2 EAF Contractor - Firm Fixed Pricing

Pricing for services required under this RFQ will be a blend of firm fixed rates and the hourly rates. Bidders must complete all price cells within the Price Schedule or be deemed non-responsive.

Line No.	Description	Unit	Estimated Quantity (A)	Year 1 (B)	Year 1 Total (A) * (B)	Year 2 (C)	Year 2 Total (A) * (C)	Year 3 (D)	Year 3 Total (A) * (D)
13	FEMA Addendum Section 3.2.3, 3.2.8	Each	UNK	$5,890.81	_	$6,062.03	_	$6,238.31	_
14	Reporting Functions Section 3.2.13, 3.2.14, 3.2.15	Each	12	$5,742.33	$68,907.99	$5,911.29	$70,935.51	$6,085.37	$73,024.47
15	Environmental Impact Statement Fee Section 3.2.2	Each	UNK	$129,555.26	_	$133,143.02	_	$136,839.02	_

Cost Quote Price Schedule 2 EAF Contractor - Loaded hourly Rate Pricing

A bidder must fit its existing personnel and that of proposed subcontractors into the following Labor Titles.

Line #	Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hourly Rate Year 2	Hourly Rate Year 3
Office and Management Staff					
16	Principal	Program Manager	$176.13	$181.41	$186.85
17	Program Director	Program Manager	$176.13	$181.41	$186.85
18	Task Manager	Scientist IV	$150.96	$155.49	$160.15
Project Field Staff					
19	Field Manager	Engineer IV	$136.45	$140.54	$144.76
20	Field Professional	Scientist III	$121.54	$125.19	$128.95
21	Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54	$184.93	$190.48
22	Principal/Senior Biologist	Scientist IV	$150.96	$155.49	$160.15
23	Principal/Senior Historic Preservation Specialist	Scientist III	$121.54	$125.19	$128.95
24	Senior Hydrogeologist	Scientist IV	$150.96	$155.49	$160.15
25	Junior Hydrogeologist	Scientist II	$95.62	$98.49	$101.44
26	Field Associate	Analyst/Planner II	$83.89	$86.41	$89.00
27	Field Observer	Scientist I	$73.64	$75.85	$78.13
28	Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20	$122.78	$126.46
29	Hydrogeologist	Scientist I	$73.64	$75.85	$78.13
30	Senior Technician	Technician II	$68.72	$70.78	$72.90
31	Junior Technician	Technician I	$59.04	$60.81	$62.63
32	Senior GIS Specialist	Computer Graphics Tech III	$117.16	$120.67	$124.29
33	Junior GIS Specialist	Computer Graphics Tech II	$76.87	$79.18	$81.56
34	Administrative Support/Data Entry	Administrative Assistant II	$63.18	$65.08	$67.03

GS-10F-0076K Labor Rates	Year 15	Year 16 *	Year 17 *	Year 18*	Year 19*
Program Manager	$176.13	$181.41	$186.85	$192.46	$198.23
Business Manager	$146.61	$151.01	$155.54	$160.21	$165.02
Administrative Assistant I	$49.29	$50.77	$52.29	$53.86	$55.48
Administrative Assistant II	$63.18	$65.08	$67.03	$69.04	$71.11
Administrative Assistant III	$78.36	$80.71	$83.13	$85.62	$88.19
Scientist I	$73.64	$75.85	$78.13	$80.47	$82.88
Scientist II	$95.62	$98.49	$101.44	$104.48	$107.61
Scientist III	$121.54	$125.19	$128.95	$132.82	$136.80
Scientist IV	$150.96	$155.49	$160.15	$164.95	$169.90
Scientist V	$179.54	$184.93	$190.48	$196.19	$202.08
Engineer I	$78.95	$81.32	$83.76	$86.27	$88.86
Engineer II	$96.80	$99.70	$102.69	$105.77	$108.94
Engineer III	$119.20	$122.78	$126.46	$130.25	$134.16
Engineer IV	$136.45	$140.54	$144.76	$149.10	$153.57
Engineer V	$195.74	$201.61	$207.66	$213.89	$220.31
Computer Graphics Tech I	$58.91	$60.68	$62.50	$64.38	$66.31
Computer Graphics Tech II	$76.87	$79.18	$81.56	$84.01	$86.53
Computer Graphics Tech III	$117.16	$120.67	$124.29	$128.02	$131.86
Computer Programmer I	$70.98	$73.11	$75.30	$77.56	$79.89
Computer Programmer II	$92.12	$94.88	$97.73	$100.66	$103.68
Computer Programmer III	$140.80	$145.02	$149.37	$153.85	$158.47
Technician I	$59.04	$60.81	$62.63	$64.51	$66.45
Technician II	$68.72	$70.78	$72.90	$75.09	$77.34
Database Specialist I	$70.98	$73.11	$75.30	$77.56	$79.89
Database Specialist II	$92.12	$94.88	$97.73	$100.66	$103.68
Database Specialist III	$140.80	$145.02	$149.37	$153.85	$158.47
Analyst/Planner I	$61.29	$63.13	$65.02	$66.97	$68.98
Analyst/Planner II	$83.89	$86.41	$89.00	$91.67	$94.42
Analyst/Planner III	$105.14	$108.29	$111.54	$114.89	$118.34
Analyst/Planner IV	$129.29	$133.17	$137.17	$141.29	$145.53
Analyst/Planner V	$171.09	$176.22	$181.51	$186.96	$192.57
Conference Planner	$102.87	$105.96	$109.14	$112.41	$115.78
Training Specialist	$137.98	$142.12	$146.38	$150.77	$155.29
QA Manager	$154.79	$159.43	$164.21	$169.14	$174.21
Data Analyst	$154.87	$159.52	$164.31	$169.24	$174.32
Technical Editor/Writer I	$73.28	$75.48	$77.74	$80.07	$82.47
Technical Editor/Writer II	$108.39	$111.64	$114.99	$118.44	$121.99
Word Processor	$64.70	$66.64	$68.64	$70.70	$72.82

*Rate for years 16 - 19 were escalated 3% which has been our historical average escalation rate. The actual negotiated rates will be provided once the schedule has been renewed.

Tetra Tech EM Inc.
Cost Estimate For CLIN 1

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1
Principal	Program Manager	$176.13		$0.00
Program Director	Program Manager	$176.13	1.0	$176.13
Task Manager	Scientist IV	$150.96	1.0	$150.96
Field Manager	Engineer IV	$136.45		$0.00
Field Professional	Scientist III	$121.54	8.0	$972.32
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00
Principal/Senior Biologist	Scientist IV	$150.96		$0.00
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54		$0.00
Senior Hydrogeologist	Scientist IV	$150.96		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00
Field Associate	Analyst/Planner II	$83.89		$0.00
Field Observer	Scientist I	$73.64		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00
Senior Technician	Technician II	$68.72		$0.00
Junior Technician	Technician I	$59.04		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16		$0.00
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00
Total Labor			10.0	$1,299.41

Tetra Tech EM Inc.
Cost Estimate For CLIN 1

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1
Other Direct Cost		Rate	Units	
Computer Usage	Per Hour	$2.86	10.0	$28.60
Reproduction	Per Copy	$0.10		$0.00
Fed-ex/Shipping	Per Package	$12.50		$0.00
Total ODCs				$28.60
Travel				
Airfare		$0.00		$0.00
Hotel		$0.00		$0.00
Per Diem		$0.00		$0.00
Car Rental		$0.00		$0.00
Mileage		$0.00		$0.00
Parking		$0.00		$0.00
Other Ground		$0.00		$0.00
Total Travel				$0.00
G&A on Travel & ODCs		16.01%		$4.58
Toal Estimated Cost Clin 1				$1,332.59

Tetra Tech EM Inc.
Cost Estimate For CLIN 2

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1
Principal	Program Manager	$176.13		$0.00
Program Director	Program Manager	$176.13	1.0	$176.13
Task Manager	Scientist IV	$150.96	1.0	$150.96
Field Manager	Engineer IV	$136.45		$0.00
Field Professional	Scientist III	$121.54	8.0	$972.32
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00
Principal/Senior Biologist	Scientist IV	$150.96		$0.00
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54		$0.00
Senior Hydrogeologist	Scientist IV	$150.96		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00
Field Associate	Analyst/Planner II	$83.89		$0.00
Field Observer	Scientist I	$73.64		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00
Senior Technician	Technician II	$68.72		$0.00
Junior Technician	Technician I	$59.04		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16		$0.00
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00
Total Labor			10.0	$1,299.41

Tetra Tech EM Inc.
Cost Estimate For CLIN 2

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1
Other Direct Cost		Rate	Units	
Computer Usage	Per Hour	$2.86	10.0	$28.60
Reproduction	Per Copy	$0.10		$0.00
Fed-ex/Shipping	Per Package	$12.50		$0.00
Total ODCs				$28.60
Travel				
Airfare		$0.00		$0.00
Hotel		$0.00		$0.00
Per Diem		$0.00		$0.00
Car Rental		$0.00		$0.00
Mileage		$0.00		$0.00
Parking		$0.00		$0.00
Other Ground		$0.00		$0.00
Total Travel				$0.00
G&A on Travel & ODCs		16.01%		$4.58
Toal Estimated Cost Clin 2				$1,332.59

Tetra Tech EM Inc.
Cost Estimate For CLIN 3

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	1.0	$176.13	$181.41	1.0	$181.41	$186.85	1.0	$186.85
Task Manager	Scientist IV	$150.96	1.0	$150.96	$155.49	1.0	$155.49	$160.15	1.0	$160.15
Field Manager	Engineer IV	$136.45		$0.00	$140.54		$0.00	$144.76		$0.00
Field Professional	Scientist III	$121.54	8.0	$972.32	$125.19	8.0	$1,001.52	$128.95	8.0	$1,031.60
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54		$0.00	$125.19		$0.00	$128.95		$0.00
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89		$0.00	$86.41		$0.00	$89.00		$0.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16		$0.00	$120.67		$0.00	$124.29		$0.00
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			10.0	$1,299.41		10.0	$1,338.42		10.0	$1,378.60
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	10.0	$28.60		10	$28.60		10.0	$28.60
Reproduction	Per Copy	$0.10		$0.00						

Tetra Tech EM Inc.
Cost Estimate For CLIN 3

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Fed-ex/Shipping	Per Package	$12.50		$0.00						
Total ODCs				$28.60			$28.60			$28.60
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$4.58			$4.58			$4.58
Toal Estimated Cost Clin 3				$1,332.59			$1,371.60			$1,411.78

Tetra Tech EM Inc.
Cost Estimate For CLIN 4

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	2.0	$352.26	$181.41	2.0	$362.82	$186.85	2.0	$373.70
Task Manager	Scientist IV	$150.96	2.0	$301.92	$155.49	2.0	$310.98	$160.15	2.0	$320.30
Field Manager	Engineer IV	$136.45	4.0	$545.80	$140.54	4.0	$562.16	$144.76	4.0	$579.04
Field Professional	Scientist III	$121.54	8.0	$972.32	$125.19	8.0	$1,001.52	$128.95	8.0	$1,031.60
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54		$0.00	$125.19		$0.00	$128.95		$0.00
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	10.0	$838.90	$86.41	10.0	$864.10	$89.00	10.0	$890.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16		$0.00	$120.67		$0.00	$124.29		$0.00
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			26.0	$3,011.20		26.0	$3,101.58		26.0	$3,194.64
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	26.0	$74.36		26	$74.36		26.0	$74.36
Reproduction	Per Copy	$0.10		$0.00						$0.00

Tetra Tech EM Inc.
Cost Estimate For CLIN 4

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1	$12.50		1	$12.50
Total ODCs				$86.86			$86.86			$86.86
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$13.91			$13.91			$13.91
Toal Estimated Cost Clin 4				$3,111.97			$3,202.35			$3,295.41

Tetra Tech EM Inc.
Cost Estimate For CLIN 5

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	2.0	$352.26	$181.41	2.0	$362.82	$186.85	2.0	$373.70
Task Manager	Scientist IV	$150.96	2.0	$301.92	$155.49	2.0	$310.98	$160.15	2.0	$320.30
Field Manager	Engineer IV	$136.45	4.0	$545.80	$140.54	4.0	$562.16	$144.76	4.0	$579.04
Field Professional	Scientist III	$121.54	8.0	$972.32	$125.19	8.0	$1,001.52	$128.95	8.0	$1,031.60
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54		$0.00	$125.19		$0.00	$128.95		$0.00
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	10.0	$838.90	$86.41	10.0	$864.10	$89.00	10.0	$890.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16		$0.00	$120.67		$0.00	$124.29		$0.00
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			26.0	$3,011.20		26.0	$3,101.58		26.0	$3,194.64
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	26.0	$74.36		26	$74.36		26.0	$74.36
Reproduction	Per Copy	$0.10		$0.00						$0.00

Tetra Tech EM Inc.
Cost Estimate For CLIN 5

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1	$12.50		1	$12.50
Total ODCs				$86.86			$86.86			$86.86
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$13.91			$13.91			$13.91
Toal Estimated Cost Clin 5				$3,111.97			$3,202.35			$3,295.41

Tetra Tech EM Inc.
Cost Estimate For CLIN 6

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	2.0	$352.26	$181.41	2.0	$362.82	$186.85	2.0	$373.70
Task Manager	Scientist IV	$150.96	2.0	$301.92	$155.49	2.0	$310.98	$160.15	2.0	$320.30
Field Manager	Engineer IV	$136.45	4.0	$545.80	$140.54	4.0	$562.16	$144.76	4.0	$579.04
Field Professional	Scientist III	$121.54	8.0	$972.32	$125.19	8.0	$1,001.52	$128.95	8.0	$1,031.60
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54		$0.00	$125.19		$0.00	$128.95		$0.00
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	10.0	$838.90	$86.41	10.0	$864.10	$89.00	10.0	$890.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16		$0.00	$120.67		$0.00	$124.29		$0.00
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			26.0	$3,011.20		26.0	$3,101.58		26.0	$3,194.64
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	26.0	$74.36		26	$74.36		26.0	$74.36
Reproduction	Per Copy	$0.10		$0.00						$0.00

Tetra Tech EM Inc.
Cost Estimate For CLIN 6

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1	$12.50		1	$12.50
Total ODCs				$86.86			$86.86			$86.86
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$13.91			$13.91			$13.91
Toal Estimated Cost Clin 6				$3,111.97			$3,202.35			$3,295.41

Tetra Tech EM Inc.
Cost Estimate For CLIN 7

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	8.0	$1,409.04	$181.41	8.0	$1,451.28	$186.85	8.0	$1,494.80
Task Manager	Scientist IV	$150.96	8.0	$1,207.68	$155.49	8.0	$1,243.92	$160.15	8.0	$1,281.20
Field Manager	Engineer IV	$136.45	40.0	$5,458.00	$140.54	40.0	$5,621.60	$144.76	40.0	$5,790.40
Field Professional	Scientist III	$121.54	32.0	$3,889.28	$125.19	32.0	$4,006.08	$128.95	32.0	$4,126.40
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96	4.0	$603.84	$155.49	4.0	$621.96	$160.15	4.0	$640.60
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54	4.0	$486.16	$125.19	4.0	$500.76	$128.95	4.0	$515.80
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	32.0	$2,684.48	$86.41	32.0	$2,765.12	$89.00	32.0	$2,848.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16	4.0	$468.64	$120.67	4.0	$482.68	$124.29	4.0	$497.16
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			132.0	$16,207.12		132.0	$16,693.40		132.0	$17,194.36
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	132.0	$377.52		132	$377.52		132.0	$377.52
Reproduction	Per Copy	$0.10	1,500.0	$150.00		1,500.0	$150.00		1,500.0	$150.00

Tetra Tech EM Inc.
Cost Estimate For CLIN 7

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1.0	$12.50		1.0	$12.50
Total ODCs				$540.02			$540.02			$540.02
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$86.46			$86.46			$86.46
Toal Estimated Cost Clin 7				$16,833.60			$17,319.88			$17,820.84

Tetra Tech EM Inc.
Cost Estimate For CLIN 8

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	8.0	$1,409.04	$181.41	8.0	$1,451.28	$186.85	8.0	$1,494.80
Task Manager	Scientist IV	$150.96	8.0	$1,207.68	$155.49	8.0	$1,243.92	$160.15	8.0	$1,281.20
Field Manager	Engineer IV	$136.45	40.0	$5,458.00	$140.54	40.0	$5,621.60	$144.76	40.0	$5,790.40
Field Professional	Scientist III	$121.54	32.0	$3,889.28	$125.19	32.0	$4,006.08	$128.95	32.0	$4,126.40
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96	4.0	$603.84	$155.49	4.0	$621.96	$160.15	4.0	$640.60
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54	4.0	$486.16	$125.19	4.0	$500.76	$128.95	4.0	$515.80
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	32.0	$2,684.48	$86.41	32.0	$2,765.12	$89.00	32.0	$2,848.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16	4.0	$468.64	$120.67	4.0	$482.68	$124.29	4.0	$497.16
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			132.0	$16,207.12		132.0	$16,693.40		132.0	$17,194.36
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	132.0	$377.52		132	$377.52		132.0	$377.52
Reproduction	Per Copy	$0.10	1,500.0	$150.00		1,500.0	$150.00		1,500.0	$150.00
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1.0	$12.50		1.0	$12.50
Total ODCs				$540.02			$540.02			$540.02

Tetra Tech EM Inc.
Cost Estimate For CLIN 8

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$86.46			$86.46			$86.46
Toal Estimated Cost Clin 8				$16,833.60			$17,319.88			$17,820.84

Tetra Tech EM Inc.
Cost Estimate For CLIN 9

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	8.0	$1,409.04	$181.41	8.0	$1,451.28	$186.85	8.0	$1,494.80
Task Manager	Scientist IV	$150.96	8.0	$1,207.68	$155.49	8.0	$1,243.92	$160.15	8.0	$1,281.20
Field Manager	Engineer IV	$136.45	40.0	$5,458.00	$140.54	40.0	$5,621.60	$144.76	40.0	$5,790.40
Field Professional	Scientist III	$121.54	32.0	$3,889.28	$125.19	32.0	$4,006.08	$128.95	32.0	$4,126.40
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96	4.0	$603.84	$155.49	4.0	$621.96	$160.15	4.0	$640.60
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54	4.0	$486.16	$125.19	4.0	$500.76	$128.95	4.0	$515.80
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	32.0	$2,684.48	$86.41	32.0	$2,765.12	$89.00	32.0	$2,848.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16	4.0	$468.64	$120.67	4.0	$482.68	$124.29	4.0	$497.16
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			132.0	$16,207.12		132.0	$16,693.40		132.0	$17,194.36
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	132.0	$377.52		132	$377.52		132.0	$377.52
Reproduction	Per Copy	$0.10	1,500.0	$150.00		1,500.0	$150.00		1,500.0	$150.00
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1.0	$12.50		1.0	$12.50
Total ODCs				$540.02			$540.02			$540.02

Tetra Tech EM Inc.
Cost Estimate For CLIN 9

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$86.46			$86.46			$86.46
Toal Estimated Cost Clin 9				$16,833.60			$17,319.88			$17,820.84

Tetra Tech EM Inc.
Cost Estimate For CLIN 10

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	8.0	$1,409.04	$181.41	8.0	$1,451.28	$186.85	8.0	$1,494.80
Task Manager	Scientist IV	$150.96	8.0	$1,207.68	$155.49	8.0	$1,243.92	$160.15	8.0	$1,281.20
Field Manager	Engineer IV	$136.45	40.0	$5,458.00	$140.54	40.0	$5,621.60	$144.76	40.0	$5,790.40
Field Professional	Scientist III	$121.54	56.0	$6,806.24	$125.19	56.0	$7,010.64	$128.95	56.0	$7,221.20
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96	8.0	$1,207.68	$155.49	8.0	$1,243.92	$160.15	8.0	$1,281.20
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54	8.0	$972.32	$125.19	8.0	$1,001.52	$128.95	8.0	$1,031.60
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	56.0	$4,697.84	$86.41	56.0	$4,838.96	$89.00	56.0	$4,984.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16	4.0	$468.64	$120.67	4.0	$482.68	$124.29	4.0	$497.16
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			188.0	$22,227.44		188.0	$22,894.52		188.0	$23,581.56
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	188.0	$537.68		188	$537.68		188.0	$537.68
Reproduction	Per Copy	$0.10	1,500.0	$150.00		1,500.0	$150.00		1,500.0	$150.00
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1.0	$12.50		1.0	$12.50
Total ODCs				$700.18			$700.18			$700.18

Tetra Tech EM Inc.
Cost Estimate For CLIN 10

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Travel										
Airfare	New Jersey RT	$500.00	2.0	$1,000.00		2.0	$1,000.00		2.0	$1,000.00
Hotel		$88.55	4.0	$354.20		4.0	$354.20		4.0	$354.20
Per Diem		$46.00	6.0	$276.00		6.0	$276.00		6.0	$276.00
Car Rental		$65.00	3	$195.00		3	$195.00		3	$195.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$1,825.20			$1,825.20			$1,825.20
G&A on Travel & ODCs		16.01%		$404.31			$404.31			$404.31
Toal Estimated Cost Clin 10				$25,157.13			$25,824.21			$26,511.25

Tetra Tech EM Inc.
Cost Estimate For CLIN 11

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	8.0	$1,409.04	$181.41	8.0	$1,451.28	$186.85	8.0	$1,494.80
Task Manager	Scientist IV	$150.96	8.0	$1,207.68	$155.49	8.0	$1,243.92	$160.15	8.0	$1,281.20
Field Manager	Engineer IV	$136.45	40.0	$5,458.00	$140.54	40.0	$5,621.60	$144.76	40.0	$5,790.40
Field Professional	Scientist III	$121.54	56.0	$6,806.24	$125.19	56.0	$7,010.64	$128.95	56.0	$7,221.20
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96	8.0	$1,207.68	$155.49	8.0	$1,243.92	$160.15	8.0	$1,281.20
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54	8.0	$972.32	$125.19	8.0	$1,001.52	$128.95	8.0	$1,031.60
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	56.0	$4,697.84	$86.41	56.0	$4,838.96	$89.00	56.0	$4,984.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16	4.0	$468.64	$120.67	4.0	$482.68	$124.29	4.0	$497.16
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			188.0	$22,227.44		188.0	$22,894.52		188.0	$23,581.56
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	188.0	$537.68		188	$537.68		188.0	$537.68
Reproduction	Per Copy	$0.10	1,500.0	$150.00		1,500.0	$150.00		1,500.0	$150.00
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1.0	$12.50		1.0	$12.50
Total ODCs				$700.18			$700.18			$700.18

Tetra Tech EM Inc.
Cost Estimate For CLIN 11

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Travel										
Airfare	New Jersey RT	$500.00	2.0	$1,000.00		2.0	$1,000.00		2.0	$1,000.00
Hotel		$88.55	4.0	$354.20		4.0	$354.20		4.0	$354.20
Per Diem		$46.00	6.0	$276.00		6.0	$276.00		6.0	$276.00
Car Rental		$65.00	3	$195.00		3	$195.00		3	$195.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$1,825.20			$1,825.20			$1,825.20
G&A on Travel & ODCs		16.01%		$404.31			$404.31			$404.31
Toal Estimated Cost Clin 11				$25,157.13			$25,824.21			$26,511.25

Tetra Tech EM Inc.
Cost Estimate For CLIN 12

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	8.0	$1,409.04	$181.41	8.0	$1,451.28	$186.85	8.0	$1,494.80
Task Manager	Scientist IV	$150.96	8.0	$1,207.68	$155.49	8.0	$1,243.92	$160.15	8.0	$1,281.20
Field Manager	Engineer IV	$136.45	40.0	$5,458.00	$140.54	40.0	$5,621.60	$144.76	40.0	$5,790.40
Field Professional	Scientist III	$121.54	56.0	$6,806.24	$125.19	56.0	$7,010.64	$128.95	56.0	$7,221.20
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96	8.0	$1,207.68	$155.49	8.0	$1,243.92	$160.15	8.0	$1,281.20
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54	8.0	$972.32	$125.19	8.0	$1,001.52	$128.95	8.0	$1,031.60
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	56.0	$4,697.84	$86.41	56.0	$4,838.96	$89.00	56.0	$4,984.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16	4.0	$468.64	$120.67	4.0	$482.68	$124.29	4.0	$497.16
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			188.0	$22,227.44		188.0	$22,894.52		188.0	$23,581.56
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	188.0	$537.68		188	$537.68		188.0	$537.68
Reproduction	Per Copy	$0.10	1,500.0	$150.00		1,500.0	$150.00		1,500.0	$150.00
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1.0	$12.50		1.0	$12.50
Total ODCs				$700.18			$700.18			$700.18

Tetra Tech EM Inc.
Cost Estimate For CLIN 12

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Travel										
Airfare	New Jersey RT	$500.00	2.0	$1,000.00		2.0	$1,000.00		2.0	$1,000.00
Hotel		$88.55	4.0	$354.20		4.0	$354.20		4.0	$354.20
Per Diem		$46.00	6.0	$276.00		6.0	$276.00		6.0	$276.00
Car Rental		$65.00	3	$195.00		3	$195.00		3	$195.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$1,825.20			$1,825.20			$1,825.20
G&A on Travel & ODCs		16.01%		$404.31			$404.31			$404.31
Toal Estimated Cost Clin 12				$25,157.13			$25,824.21			$26,511.25

Tetra Tech EM Inc.
Cost Estimate For CLIN 13

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	2.0	$352.26	$181.41	2.0	$362.82	$186.85	2.0	$373.70
Task Manager	Scientist IV	$150.96	2.0	$301.92	$155.49	2.0	$310.98	$160.15	2.0	$320.30
Field Manager	Engineer IV	$136.45	8.0	$1,091.60	$140.54	8.0	$1,124.32	$144.76	8.0	$1,158.08
Field Professional	Scientist III	$121.54	16.0	$1,944.64	$125.19	16.0	$2,003.04	$128.95	16.0	$2,063.20
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54		$0.00	$125.19		$0.00	$128.95		$0.00
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	24.0	$2,013.36	$86.41	24.0	$2,073.84	$89.00	24.0	$2,136.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16		$0.00	$120.67		$0.00	$124.29		$0.00
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			52.0	$5,703.78		52.0	$5,875.00		52.0	$6,051.28
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	52.0	$148.72		52.0	$148.72		52.0	$148.72
Reproduction	Per Copy	$0.10		$0.00			$0.00			$0.00

Tetra Tech EM Inc.
Cost Estimate For CLIN 13

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Fed-ex/Shipping	Per Package	$12.50	1.0	$12.50		1.0	$12.50		1.0	$12.50
Total ODCs				$161.22			$161.22			$161.22
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$25.81			$25.81			$25.81
Toal Estimated Cost Clin 13				$5,890.81			$6,062.03			$6,238.31

Tetra Tech EM Inc.
Cost Estimate For CLIN 14

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	32.0	$5,636.16	$181.41	$32.00	$5,805.12	$186.85	$32.00	$5,979.20
Task Manager	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Field Manager	Engineer IV	$136.45		$0.00	$140.54		$0.00	$144.76		$0.00
Field Professional	Scientist III	$121.54		$0.00	$125.19		$0.00	$128.95		$0.00
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54		$0.00	$125.19		$0.00	$128.95		$0.00
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89		$0.00	$86.41		$0.00	$89.00		$0.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16		$0.00	$120.67		$0.00	$124.29		$0.00
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			32.0	$5,636.16		32.0	$5,805.12		32.0	$5,979.20
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	32.0	$91.52		32	$91.52		32.0	$91.52
Reproduction	Per Copy	$0.10		$0.00						

Tetra Tech EM Inc.
Cost Estimate For CLIN 14

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Fed-ex/Shipping	Per Package	$12.50		$0.00			$0.00			
Total ODCs				$91.52			$91.52			$91.52
Travel										
Airfare		$0.00		$0.00			$0.00			$0.00
Hotel		$0.00		$0.00			$0.00			$0.00
Per Diem		$0.00		$0.00			$0.00			$0.00
Car Rental		$0.00		$0.00			$0.00			$0.00
Mileage		$0.00		$0.00			$0.00			$0.00
Parking		$0.00		$0.00			$0.00			$0.00
Other Ground		$0.00		$0.00			$0.00			$0.00
Total Travel				$0.00			$0.00			$0.00
G&A on Travel & ODCs		16.01%		$14.65			$14.65			$14.65
Toal Estimated Cost Clin 14				$5,742.33			$5,911.29			$6,085.37

Tetra Tech EM Inc.
Cost Estimate For CLIN 15

Labor Title	Tetra Tech GSA Category	Hourly Rate Year 1	Hours	Amount Year 1	Hourly Rate Year 2	Hours	Amount Year 2	Hourly Rate Year 3	Hours	Amount Year 3
Principal	Program Manager	$176.13		$0.00	$181.41		$0.00	$186.85		$0.00
Program Director	Program Manager	$176.13	24.0	$4,227.12	$181.41	24.0	$4,353.84	$186.85	24.0	$4,484.40
Task Manager	Scientist IV	$150.96	24.0	$3,623.04	$155.49	24.0	$3,731.76	$160.15	24.0	$3,843.60
Field Manager	Engineer IV	$136.45	320.0	$43,664.00	$140.54	320.0	$44,972.80	$144.76	320.0	$46,323.20
Field Professional	Scientist III	$121.54	280.0	$34,031.20	$125.19	280.0	$35,053.20	$128.95	280.0	$36,106.00
Principal/Senior EnvH. Scientist/Engineer/Architect	Scientist V	$179.54		$0.00	$184.93		$0.00	$190.48		$0.00
Principal/Senior Biologist	Scientist IV	$150.96	16.0	$2,415.36	$155.49	16.0	$2,487.84	$160.15	16.0	$2,562.40
Principal/Senior Historic Preservation Specialist	Scientist III	$121.54	16.0	$1,944.64	$125.19	16.0	$2,003.04	$128.95	16.0	$2,063.20
Senior Hydrogeologist	Scientist IV	$150.96		$0.00	$155.49		$0.00	$160.15		$0.00
Junior Hydrogeologist	Scientist II	$95.62		$0.00	$98.49		$0.00	$101.44		$0.00
Field Associate	Analyst/Planner II	$83.89	320.0	$26,844.80	$86.41	320.0	$27,651.20	$89.00	320.0	$28,480.00
Field Observer	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Staff Environmental Scientist, Engineer, Architect	Engineer III	$119.20		$0.00	$122.78		$0.00	$126.46		$0.00
Hydrogeologist	Scientist I	$73.64		$0.00	$75.85		$0.00	$78.13		$0.00
Senior Technician	Technician II	$68.72		$0.00	$70.78		$0.00	$72.90		$0.00
Junior Technician	Technician I	$59.04		$0.00	$60.81		$0.00	$62.63		$0.00
Senior GIS Specialist	Computer Graphics Tech III	$117.16	24.0	$2,811.84	$120.67	24.0	$2,896.08	$124.29	24.0	$2,982.96
Junior GIS Specialist	Computer Graphics Tech II	$76.87		$0.00	$79.18		$0.00	$81.56		$0.00
Administrative Support/Data Entry	Administrative Assistant II	$63.18		$0.00	$65.08		$0.00	$67.03		$0.00
Total Labor			1,024.0	#########		1,024.0	$123,149.76		1,024.0	$126,845.76
Other Direct Cost		Rate	Units			Units			Units	
Computer Usage	Per Hour	$2.86	1,024.0	$2,928.64		1,024.0	$2,928.64		1,024.0	$2,928.64
Reproduction	Per Copy	$0.10	10,000.0	$1,000.00		10,000.0	$1,000.00		10,000.0	$1,000.00
Fed-ex/Shipping	Per Package	$12.50	2.0	$25.00		2.0	$25.00		2.0	$25.00
Total ODCs				$3,953.64			$3,953.64			$3,953.64