

THE BOARD OF SUPERVISORS OF THE COUNTY OF STANISLAUS  
ACTION AGENDA SUMMARY

DEPT: Environmental Resources

BOARD AGENDA # \*B-8

Urgent  Routine

AGENDA DATE December 8, 2015

CEO Concurs with Recommendation YES  NO   
(Information Attached)

4/5 Vote Required YES  NO

SUBJECT:

Approval of Amendment No. 3 to the Master Agreement for Professional Design Services with Tetra Tech, BAS, Inc., for Environmental Monitoring, Testing, and Reporting Services at the Geer Road Landfill

STAFF RECOMMENDATIONS:

1. Approve Amendment No. 3 to the Master Agreement for Professional Design Services at Geer Road Landfill with Tetra Tech, BAS, Inc., for Environmental Monitoring, Testing, and Reporting Services at the Geer Road Landfill for a not to exceed amount of \$6,934,215.
2. Authorize the Chairman of the Board of Supervisors to sign Amendment No. 3 to the Master Agreement for Professional Design Services at Geer Road Landfill with Tetra Tech, BAS, Inc.

(Continued on next page)

FISCAL IMPACT:

The Master Agreement with Tetra Tech, BAS, Inc., currently has a not to exceed amount of \$3,991,945.

(Continued on next page)

BOARD ACTION AS FOLLOWS:

No. 2015-602

On motion of Supervisor Chiesa, Seconded by Supervisor O'Brien  
and approved by the following vote,

Ayes: Supervisors: O'Brien, Chiesa, Monteith, DeMartini, and Chairman Withrow

Noes: Supervisors: None

Excused or Absent: Supervisors: None

Abstaining: Supervisor: None

1) X Approved as recommended

2) \_\_\_\_\_ Denied

3) \_\_\_\_\_ Approved as amended

4) \_\_\_\_\_ Other:

MOTION:

ATTEST: CHRISTINE FERRARO TALLMAN, Clerk

File No.

Approval of Amendment No. 3 to the Master Agreement for Professional Design Services with Tetra Tech, BAS, Inc., for Environmental Monitoring, Testing, and Reporting Services at the Geer Road Landfill

**STAFF RECOMMENDATIONS (Continued):**

3. Authorize the Director of Environmental Resources, or designee, to sign individual Project Authorizations during calendar years 2016 and 2017 providing that the cumulative total does not exceed the contract amount.
4. Authorize the Director of Environmental Resources, or designee, to sign amendments to the Master Agreement for an overall total not to exceed amount of \$7,034,215, which includes a contingency of \$100,000.
5. Direct the Auditor-Controller to increase appropriations and revenue as detailed in the attached Budget Journal.

**FISCAL IMPACT (Continued):**

This Amendment No. 3 to the Agreement increases the contract by \$2,942,270 for additional professional consultant services extended through December 31, 2017, as follows: \$1,606,520 in basic services; \$734,000 for emergency and other necessary, non-routine services; \$203,900 for work to be completed on the Groundwater Extraction System's aeration channel beginning in January 2016; \$400,000 for future Groundwater Extraction System work; and offset by \$2,150 that is available from Projects that came in under budget. Additionally, a contingency of \$100,000 has been added for the funding of any required but unanticipated contract changes and has been factored into the overall total not to exceed amount of \$7,034,215 as follows: \$3,991,945 (current not to exceed amount) + \$2,942,270 (2016-2017 contract amount) + \$100,000 (contingency).

As of October 31, 2015, the cash balance in the Geer Road Closure Fund is \$2,134,479. With the requested transfer of \$250,000, the remaining cash balance will be \$1,884,479. With the attached budget journal considered, sufficient appropriations exist in the Fiscal Year 2015-2016 Legal Budget for Environmental Resources Geer Road Landfill budget to cover the cost of this contract amendment.

**DISCUSSION:**

The Department of Environmental Resources (Department), Landfill Division, maintains and operates the Geer Road and Fink Road Landfills. Some of the maintenance at the Geer Road site is performed by in-house staff, however, specialized services and expertise are needed in the area of environmental monitoring, testing, analyzing, reporting, maintenance (routine and non-routine), repairs, surveying, construction oversight, certain specific non-routine service calls, emergency services, development of plans, specifications, and engineers estimates, work plans, and construction quality assurance and Health and Safety Plans. For those specialized services, the Department has historically hired specialized outside expertise. On December 11, 2012, the Department contracted with Tetra Tech, BAS, Inc., for these

Approval of Amendment No. 3 to the Master Agreement for Professional Design Services with Tetra Tech, BAS, Inc., for Environmental Monitoring, Testing, and Reporting Services at the Geer Road Landfill

specialized services through the end of 2015 through a Master Agreement for Professional Design Services (Agreement). Continuation of these services is required to maintain compliance with California's solid waste and groundwater regulatory requirements.

On September 1, 2015, the Director of Environmental Resources approved and signed Amendment No. 2 to this Agreement. This Amendment No. 2 did not increase the overall contract amount, but simply addressed minor issues related to fees schedules present in the original agreement.

Accordingly, the current Agreement with Tetra Tech, BAS, Inc., will naturally terminate on December 31, 2015, unless it is extended. The original Agreement, however, allows up to two, one-year extensions to the Agreement at the conclusion of the calendar years 2015 and 2016 for a maximum contract length of five years, ending on December 31, 2017. The proposed Amendment includes services for both 2016 and 2017. This proposed Amendment for the continuation of professional design services by this provider, including and with specificity to its two year duration, is recommended by staff because of its efficiency.

This Amendment No. 3 to the Master Agreement for Professional Design Services (Amendment) not only incorporates an extension of contract duration but also an increase in total contract amount. The Amendment increases the contract by \$2,942,270 for additional professional consultant services through December 31, 2017. In addition, a contingency amount of \$100,000 has been included for required but unanticipated contract changes. This contingency amount consists of the previously approved, but unused contingency funding of \$67,587 plus an additional \$32,413 for a maximum not to exceed contingency of \$100,000. The Amendment and contingency amounts bring the not to exceed total of this Agreement to \$7,034,215.

As of October 31, 2015, \$1,404,550 remains unencumbered in the Geer Road Landfill Operations Fund for contracts for Fiscal Year 2015-2016. With the transfer of funds outlined in the attached budget journal, \$1,654,550 may be used for the obligations outlined in this Amendment. The appropriation increase plus the unencumbered/unexpended balance in the contract line item will be sufficient to cover the expected increase in contract costs for the remainder of the fiscal year.

**POLICY ISSUE:**

The recommended actions are consistent with the Board's priorities of A Safe Community, A Healthy Community, A Well Planned Infrastructure System, and the Efficient Delivery of Public Services. Landfill services are critical to supporting the Department's mission to promote a safe and healthy environment and improve the quality of life in the community through a balance of science, education, partnerships and environmental regulation.

**STAFFING IMPACTS:**

Existing department staff will continue to oversee the work related to this Master Agreement.

Approval of Amendment No. 3 to the Master Agreement for Professional Design Services with Tetra Tech, BAS, Inc., for Environmental Monitoring, Testing, and Reporting Services at the Geer Road Landfill

**CONTACT PERSON:**

Jami Aggers, Director of Environmental Resources, Telephone: 209-525-6770  
Darryl Yorkey, Asst. Director of Environmental Resources, Telephone: 209-525-6740

**ATTACHMENTS:**

1. Amendment No. 3 to the Master Agreement for Professional Design Services at Geer Road Landfill with Tetra Tech, BAS, Inc.
2. Budget Journal

Database FMSDBPRD.CO.STANISLAUS.CA.US.PROD  
 Balance Type Budget  
 Data Access Set County of Stanislaus

Ledger \* List - Text County of Stanislaus  
 Budget List - Text LEGAL BUDGET  
 Category \* List - Text Budget  
 Source \* List - Text DER AJH  
 Currency \* List - Text USD  
 Period List - Text DEC-15  
 Batch Name Text  
 Journal Name Text ER AJH JV21205 11/20/15  
 Journal Description Text NEW CONTRACT FOR GEER RD LANDFILL  
 Journal Reference Text  
 Organization List - Text Stanislaus Budget Org  
 Chart Of Accounts Accounting Flexfield

Upl	Fund (4 char)	Org (7 char)	Account (5 char)	GL Project (7 char)	Location (6 char)	Misc. (6 char)	Other (5 char)	Debit Incr appropriations decr est revenue * Number	Credit decr appropriations incr est revenue * Number	Line Description Text
	4031	0041200	63280	0000000	000000	000000	00000	250,000.00		Contracts - Geer Rd Landfill
	4031	0041200	46600	0000000	000000	000000	00000		250,000.00	Geer Rd Landfill Operating Transf
	6016	0063100	85850	0000000	000000	000000	00000	250,000.00		Operating Trans Out Post Closure
								500,000.00	250,000.00	Totals:

Tip: This is not the end of the Template. Unprotect the sheet and insert as many rows as needed.

Explanation: Transfer money from Fund 6016 Geer Rd Landfill Post Closure Fund Operating Transfer Out to Fund 4031 Geer Rd Landfill Operating Fund Operating Transfer In and increase appropriations for Contracts by \$250,000.00 per Board Order

Requesting Department Arlene Hamrick	CEO T. Cleinberg	Data Entry	Auditors Office Only
Prepared by 11/20/2015	Approved By 11/20/15	Keyed by	Prepared By 11/24/2015
Date 11/20/15	Date 12/1/15	Date	Date



DEPARTMENT OF ENVIRONMENTAL RESOURCES
3800 Cornucopia Way, Suite C, Modesto, CA 95358
Phone: (209) 525-6770
Fax: (209) 525-6773

AMENDMENT NO. 3
TO
AMENDED AND RESTATED MASTER AGREEMENT
FOR
PROFESSIONAL DESIGN SERVICES AT GEER ROAD LANDFILL
TETRA TECH BAS, INC.

This Amendment No. 3 to the Agreement for Professional Design Services ("Amendment No. 3") by and between the County of Stanislaus ("County") and Tetra Tech BAS Inc. ("Consultant" is made and entered into on December, 8, 2015.

WHEREAS, as of December 11, 2012, (the "Effective Date") the County of Stanislaus ("County") and Tetra Tech BAS Inc., ("Consultant"), have entered into a certain Agreement relating to the provisions of monitoring, sampling and reporting services (the "Original Master Agreement"); and

WHEREAS the Original Master Agreement for Professional Design Services number A101412 entered into on December 11, 2012, was amended and restated under Agreement number A101412AR on January 6, 2015, to allow "as needed", Prevailing Wage Work to be performed for maintenance, surveying, construction oversight, inspection, observation, repairs, non-routine service calls, and emergency services; and the Original Agreement failed to recognize that work requiring the payment of Prevailing Wage would be required under the Agreement; and

WHEREAS, Section 5.2 – Contract Extension, provides that the Agreement term may be extended to December 31, 2017, and Section 8.20 – Amendments, provides that the Agreement may be amended in writing; and

WHEREAS, the County has a need to extend this Agreement for an additional two years; and

WHEREAS, the County has a need to increase the Master Agreement's not to exceed amount by \$2,942,269.86 to compensate Consultant for services to continue under this Agreement for an additional two years; and

WHEREAS, this amendment is for the mutual benefit of County and Consultant;

NOW, THEREFORE, the County and Consultant agree as follows:

- 1. Section 5.1. – Term is amended as follows:

"5.1 Term: The initial term of this Agreement shall commence January 1, 2013, and continue until December 31, 2015, or until all work on each Project Authorization let during this period is completed, unless previously terminated as provided herein or as otherwise agreed to in writing by the parties.

5.2 Contract Extension: An extended term of this Agreement shall be for a period commencing upon January 1, 2016, and continuing until December 31, 2017. In no case shall the renewal of this Agreement extend beyond December 31, 2017, two (2) years from the expiration date of the original Agreement."

- 2. Section 3.1 - Compensation is amended as follows:

"3.1. Compensation: For each task or project authorization let under this Agreement, Consultant shall be paid in accordance with the fee schedule set forth in Exhibit "C", attached hereto and made a part of this Agreement (the "Fee Schedule"). Consultant will be compensated on a time and

materials basis, based on the hours worked by the Consultant's employees or subcontractors at the hourly rates specified in the Fee Schedule. Fee Schedule rates shall include direct salary costs, employee benefits, and overhead. The rates stated in the Fee Schedule are not adjustable during the term of this Agreement. Consultant's compensation under this Amended and Restated Master Agreement shall in no case exceed **Six Million Nine Hundred Thirty Four Thousand Two Hundred Fourteen Dollars and Eighty-Six Cents (6,934,214.86)**. This Amended and Restated Master Agreement's not to exceed amount includes the Original Agreement amount as amended by Amendment 1 and Amendment 2 to the Original Agreement. The County may retain ten percent (10%) of all periodic or progress payments made to the Consultant until completion and acceptance of all work tasks and County shall have right to withhold payment from Consultant for any unsatisfactory service until such time service is performed satisfactorily."

3. Exhibit C – Fee Schedule, Section 1.2 Prevailing Wage Rates is amended to read as follows:

CATEGORY	*REGULAR HOURLY RATE	*OVERTIME HOURLY RATE	*HOLIDAY/ DOUBLE TIME HOURLY RATE
Operating Engineer (Heavy and Highway Work)	\$132	\$177	\$218
Pipe Fusion Technician	\$124	\$168	\$205
Senior Electrician	\$142	\$193	\$235
Junior Electrician	\$124	\$168	\$205
Technician	\$101	\$137	\$167
Senior Technician	\$118	\$160	\$195
Equipment Operator	\$132	\$168	\$205
Construction Inspector/Construction Manager	\$160	\$217	\$264
Surveyor	\$132	\$169	\$207
Chief of Survey Parties (CSP)	\$158	\$202	\$247
3-Man Survey Party (SP-3M)	\$345	\$444	\$541
2-Man Survey Party (SP-2M)	\$285	\$367	\$448
1-Man Survey Party with GPS	\$219	\$282	\$344

\*These rates are based on published prevailing wage determinations for Northern California including "For Commercial Building, Highway, Heavy Construction and Dredging Project" – Craft: # Operating Engineer (Heavy and Highway Work) Area 1, Group 4; Craft (Laborer and Related Classifications): Area 2, Group 1 (Pipe layer and pressure pipe tester); and Operating Engineers (Area 2, Group 3), and the rates are all inclusive of GS&A, overhead and profit."

4. Exhibit C – Fee Schedule, Section 1.3 Professional Service Fee Schedule is amended to read as follows:

"(Effective January 1, 2016, through December 31, 2017). Rates include overhead, administration and profit.

PERSONNEL	HOURLY RATE 2016 - 2017
Principal (P)	\$278
Principal Engineer (PRE)	\$237
Principal Solid Waste Planner	\$225
Division Engineer (DE)	\$224
Principal Administrator (PA)	\$215
Senior Project Manager (SM)/Chief Engineer (CE)	\$208
Project Manager (PM)	\$197
Project Engineer (PE) / Administrator (PAD)	\$176
Engineer V (E-V)	\$160
Engineer IV (E-IV)	\$144

**PROFESSIONAL SERVICE FEE SCHEDULE CONTINUED**

<b>PERSONNEL</b>	<b>HOURLY RATE 2016 - 2017</b>
Engineer III (E-III)	\$136
Engineer II (E-II)	\$129
Engineer I (E-I)	\$109
Engineer (E)	\$102
Senior Project Designer (SPD)	\$171
Project Designer (PD)	\$157
Senior Designer (SDD)	\$144
CADD Designer/Drafter (CD)	\$140
Designer (DD)	\$135
Senior Drafter (SD)	\$124
Drafter (D)	\$109
Senior CADD Operator (SCO)	\$102
CADD Operator (CO)	\$84
Regulatory Compliance Manager (RCM)	\$165
Senior Regulatory Compliance Specialist (SRS)	\$155
Regulatory Compliance Specialist (RS)	\$131
Senior Environmental Scientist (SNS)	\$164
Senior Environmental Specialist (SES)	\$143
Environmental Specialist II (ES-II)	\$132
Environmental Specialist I (ES-I)	\$115
Environmental Specialist (ES)	\$103
Estimator (E)/Specification Writer (SW)	\$137
Landscape Architect (LA)	\$134
Project Accountant/Analyst (AA)	\$94
Senior Project Coordinator (SPC)	\$137
Project Coordinator (PC)	\$118
Senior Technical Editor (STE)	\$101
Administrative Assistant (ADA)	\$105
Data (DP)/Word Processing Secretary (WP)	\$93
Office Services Clerk (OS)	\$91
General Clerk (C)/Typist (Y)	\$72
Data Analyst (DA)	\$104
Construction Manager (CM)	\$182
Construction Supervisor (CS)	\$154
Construction Engineering Technician (CET)	\$144
Chief Engineering Technician (CT)	\$134
Engineering Technician V (ET-V)	\$118
Engineering Technician IV (ET-IV)	\$105
Engineering Technician III (ET-III)	\$92
Engineering Technician II (ET-II)	\$80
Engineering Technician I (ET-I)	\$68



**PROFESSIONAL SERVICE FEE SCHEDULE CONTINUED**

<b>PERSONNEL</b>	<b>HOURLY RATE 2016 - 2017</b>
Engineering Technician (ET)	\$45
Chief of Survey Parties (CSP)	\$150
3-Man Survey Party (SP-3M)	\$328
2-Man Survey Party (SP-2M)	\$271
1-Man Survey Party with GPS (1M-GPS)	\$208

5. Exhibit C – Fee Schedule, Section 1.6 Cost Summary is amended to include the attached fee schedule for January 1, 2016 – December 31, 2017.
6. Exhibit C – Fee Schedule, Section 1.7 is amended to include the following:

“The following is a summary of the routine budget table for both prevailing wage and non-prevailing wage routine work listed in the Fee Schedule attached to this Amendment for January 1, 2016 – December 31, 2017.

<b>MAJOR WORK ITEM</b>	<b>2016</b>	<b>2017</b>	<b>TOTAL</b>
<b>NON-PREVAILING WAGE</b>			
<b><u>GROUNDWATER</u></b> (Items a, b, c, d, e, f, h, l, j, r, s)	\$431,060	\$466,940	\$898,000
<b><u>LANDFILL GAS</u></b> (Items g, k, l, m, n, o, p, q)	\$354,260	\$354,260	\$708,520
<b>TOTAL (Non-Prevailing Wage)</b>	<b>\$785,320</b>	<b>\$821,200</b>	<b>\$1,606,520</b>
<b>PREVAILING WAGE</b>			
<b><u>GROUNDWATER</u></b> (Item f)	\$142,000	\$142,000	\$284,000
<b><u>LANDFILL GAS</u></b> (Item g)	\$75,000	\$75,000	\$150,000
<b>TOTAL (Prevailing Wage)</b>	<b>\$217,000</b>	<b>\$217,000</b>	<b>\$434,000</b>
<b>COMBINED</b>			
<b><u>GROUNDWATER</u></b> (Items a, b, c, d, e, f, h, l, j, r, s)	\$573,060	\$608,940	\$1,182,000
<b><u>LANDFILL GAS</u></b> (Items g, k, l, m, n, o, p, q)	\$429,260	\$429,260	\$858,520
<b>TOTAL (Combined)</b>	<b>\$1,002,320</b>	<b>\$1,038,200</b>	<b>\$2,040,520</b>

7. Except as stated herein, all other terms and conditions of the Agreement remain unchanged.

IN WITNESS WHEREOF, the parties have executed this Amendment on the date written above.

COUNTY OF STANISLAUS

By: [Signature]  
Terrance Withrow  
Chair of The Board of Supervisors

Date: 12/8/15

"County"

TETRA TECH BAS, INC.

By: [Signature]  
Bryan A. Stirat  
President

"Consultant"

ATTEST: Christine Ferraro Tallman  
Clerk of the Board of Supervisors of the County of Stanislaus, State of California

By: [Signature]  
Deputy Clerk

Date: 12/8/15

APPROVED AS TO CONTENT:  
Department of Environmental Resources

By: [Signature]  
Jari Aggers  
Director

Date: 11/18/15

APPROVED AS TO FORM:  
John P. Doering  
County Counsel

By: [Signature]  
Thomas E. Boze  
Assistant County Counsel

Date: 11/13/15

**EXHIBIT C – FEE SCHEDULE**  
**Geer Road Landfill**  
**Environmental Monitoring, Testing, Sampling and Reporting**  
**2-YEAR COST SUMMARY PA 13-001AR and PA 13-004AR**

DESCRIPTION	TOTAL ANNUAL COST 2016	TOTAL ANNUAL COST 2017	TOTAL 2 YEAR COST
<b>GROUNDWATER TASKS</b>			
<b>a. Leachate Monitoring (2 Wells Monthly)</b>			
Monthly Liquid Level Monitoring	\$7,830	\$7,830	\$15,660
	\$7,830	\$7,830	\$15,660
<b>b/c Groundwater Monitoring (57 Monitoring Wells, 2 Domestic Wells, 2 Mobil Home Park Wells)</b>			
Quarterly Monitoring & WLS - All Parameters	\$53,720	\$53,720	\$107,440
Semi-Annual Monitoring & WLS - All Parameters	\$65,340	\$32,670	\$98,010
5-Year COC Monitoring & WLS - All Parameters (Fall 2017)		\$68,550	\$68,550
	\$119,060	\$154,940	\$274,000
<b>d/e. Surface Water Monitoring</b>			
Sampling Sedimentation Basin & River	\$12,580	\$12,580	\$25,160
	\$12,580	\$12,580	\$25,160
<b>f. GWETS System Monitoring &amp; Monthly Reporting</b>			
Weekly Monitoring	\$206,500	\$206,500	\$413,000
Monthly Sampling	\$72,380	\$72,380	\$144,760
	\$278,880	\$278,880	\$557,760
<b>h. Groundwater Monitoring (Resampling - AS NEEDED COST PENDING)</b>			
Quarterly Monitoring - Non-VOCs & WLS COC Round Sampling (Q4 - 2015)	COST FOR THIS ITEM NOT PROVIDED DUE TO VARIABILITY DEPENDING ON THE QUANTITY OF WELLS REQUIRING RESAMPLE		
<b>i. Monitoring Reports</b>			
Quarterly Monitoring Report	\$91,070	\$91,070	\$182,140
Annual Monitoring Report	\$40,630	\$40,630	\$81,260
	\$131,700	\$131,700	\$263,400
<b>j. NPDES - SWPPP Report (Scope of Support Not Defined)</b>			
Annual Report	COST FOR THIS ITEM NOT PROVIDED DUE TO UNDEFINED SCOPE		
Winterization Report			
<b>r. Health and Safety Plan</b>			
Site Specific HSP	\$990	\$990	\$1,980
	\$990	\$990	\$1,980
<b>s. Regulatory Meetings (2 per year) - Total Annual</b>			
Sacramento Meetings (w/ RWQCB: Total 2)	\$11,010	\$11,010	\$22,020
Modesto Meeting (County Offices: Total 2)	\$11,010	\$11,010	\$22,020
	\$22,020	\$22,020	\$44,040
	\$573,060	\$608,940	\$1,182,000

LANDFILL GAS TASKS			
<b>g. Landfill Gas Monitoring</b>			
Monthly Monitoring (LFG Plant, Extr. Wells, Probes)	\$312,810	\$312,810	\$625,620
Semi Annual Sampling (LFG Plant & Wells)	\$12,760	\$12,760	\$25,520
Reporting (Annual - for inclusion in site report)	\$7,580	\$7,580	\$15,160
	\$333,150	\$333,150	\$666,300
<b>k. Surface Emission Monitoring (Assumes no detections during first four Quarterly events)</b>			
Instantaneous Surface Monitoring (Annual)	\$10,360	\$10,360	\$20,720
Integrated Surface Sampling (Annual)	\$11,410	\$11,410	\$22,820
	\$21,770	\$21,770	\$43,540
<b>i. Leak Monitoring at Blower Flare Station</b>			
Monitoring of pressurized piping	\$11,640	\$11,640	\$23,280
	\$11,640	\$11,640	\$23,280
<b>m. Non-Methane Organic Compound Testing</b>			
Tier 2 NMOC Testing (June 2016)	COST FOR THIS ITEM NOT PROVIDED DUE TO UNDEFINED SCOPE AND POTENTIAL FOR NON-OCCURRENCE		
<b>n. Greenhouse Gas Reports</b>			
EPA Annual Report (Annually in March)	\$2,830	\$2,830	\$5,660
LMR Annual Report (Annually in March)	\$2,830	\$2,830	\$5,660
	\$5,660	\$5,660	\$11,320
<b>o. Source Testing</b>			
Source Testing & Reporting	\$14,250	\$14,250	\$28,500
	\$14,250	\$14,250	\$28,500
<b>p. Title V Reporting</b>			
Semi-Annual Reports for RRM (June / Dec.)	\$8,350	\$8,350	\$16,700
Annual COC Report (June)	\$2,540	\$2,540	\$5,080
	\$10,890	\$10,890	\$21,780
<b>q. Landfill Gas Extraction System Performance Monitoring</b>			
Annual Monitoring	\$31,900	\$31,900	\$63,800
	\$31,900	\$31,900	\$63,800
	\$429,260	\$429,260	\$858,520
<b>TOTAL</b>	<b>\$1,002,320</b>	<b>\$1,038,200</b>	<b>\$2,040,520</b>



DEPARTMENT OF ENVIRONMENTAL RESOURCES  
3800 Cornucopia Way, Suite C, Modesto, CA 95358  
Phone: (209) 525-6770  
Fax: (209) 525-6773

**AMENDED AND RESTATED PROJECT AUTHORIZATION**

**For**

**Monitoring, Sampling, Testing and Reporting at Geer Road Landfill**

**Project Number 13-001AR-SMG**

**Amendment No. 2**

WHEREAS, as of December 11, 2012, (the "Effective Date") the County of Stanislaus ("County") and Tetra Tech BAS Inc., ("Consultant") have entered into a certain Agreement relating to the provisions of monitoring, sampling and reporting services (the "Original Master Agreement"); and

WHEREAS the original *Master Agreement for Professional Design Services* number A101412 entered into on December 11, 2012, was amended and restated under Agreement number A101412AR on January 6, 2015, as the Original Agreement failed to recognize that work requiring the payment of Prevailing Wage would be required under the Agreement; and

WHEREAS, as of January 1, 2013, (the "Project Authorization Effective Date") the County and Consultant have entered into a certain Project Authorization Agreement relating to the Implementation of the Monitoring, Sampling, Testing and Reporting at Geer Road Landfill (the "Original Project Authorization"); and

WHEREAS, the Master Agreement Section 5.2 – Contract Extension, provides that the Agreement term may be extended to December 31, 2017, and the Master Agreement Section 8.20 – Amendments, provides that the Agreement may be amended in writing; and

WHEREAS, the County has a need to extend this Project Authorization for an additional two years; and

WHEREAS, work under PA 13-003AR, PA 14-001AR and PA 14-002AR has been completed for a final amount of \$130,276.13, \$90,101.65 and \$50,094.08, which did not exceed the amount authorized to be spent under these Project Authorizations, and the County has a need to transfer the remaining funds of \$2,150.14 to this Project Authorization; and

WHEREAS, the County has a need to increase this Project Authorization by \$1,606,520 to allow service to continue for an additional two years; and

WHEREAS, this Amendment is for the mutual benefit of the County and the Consultant; and

NOW, THEREFORE, the County and the Consultant agree as follows:

1. Section D – Project Authorization Period is amended as follows:

"Services shall commence on or about **January 1, 2013**, and continue until **December 31, 2017**, or until all work let during this period is completed, unless previously terminated as provided herein or as otherwise agreed to in writing by the parties."

2. Section E – Compensation 1.2 is amended as follows:

**"PROJECT TOTAL NOT TO EXCEED: \$3,849,262.00"**

3. Except as stated herein, all other terms and conditions of the Project Authorization remain unchanged.

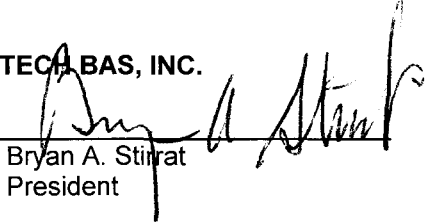
IN WITNESS WHEREOF, the parties have executed this Amendment 2 to the Amended and Restated Project Authorization Number 13-001AR-SMG on December 9, 2015.

**COUNTY OF STANISLAUS**  
Department of Environmental Resources

By:   
\_\_\_\_\_  
Jami Aggers  
Director

"County"

**TETRA TECH, INC.**

By:   
\_\_\_\_\_  
Bryan A. Stirrat  
President

"Consultant"

APPROVED AS TO FORM:

John P. Doering  
County Counsel

By:   
\_\_\_\_\_  
Thomas E. Boze  
Assistant County Counsel



DEPARTMENT OF ENVIRONMENTAL RESOURCES  
3800 Cornucopia Way, Suite C, Modesto, CA 95358  
Phone: (209) 525-6770  
Fax: (209) 525-6773

**AMENDED AND RESTATED PROJECT AUTHORIZATION**

**For**

**Implementation of the New Report of Waste Discharge at Geer Road Landfill**

**Project Number 13-002AR-SMG**

**Amendment No. 3**

WHEREAS, as of December 11, 2012, (the "Effective Date") the County of Stanislaus ("County") and Tetra Tech BAS Inc., ("Consultant") have entered into a certain Agreement relating to the provisions of monitoring, sampling and reporting services (the "Original Master Agreement"); and

WHEREAS the original *Master Agreement for Professional Design Services* number A101412 entered into on December 11, 2012, was amended and restated under Agreement number A101412AR on January 6, 2015, as the Original Agreement failed to recognize that work requiring the payment of Prevailing Wage would be required under the Agreement; and

WHEREAS, as of June 27, 2013, (the "Project Authorization Effective Date") the County and Consultant have entered into a certain Project Authorization Agreement relating to the implementation of the new report of waste discharge at Geer Road Landfill (the "Original Project Authorization"); and

WHEREAS, the Master Agreement Section 5.2 – Contract Extension, provides that the Agreement term may be extended to December 31, 2017, and the Master Agreement Section 8.20 – Amendments, provides that the Agreement may be amended in writing; and

WHEREAS, the County has a need to extend this Project Authorization for an additional two years; and

WHEREAS, this Amendment is for the mutual benefit of the County and the Consultant; and

NOW, THEREFORE, the County and the Consultant agree as follows:

1. Section D – Project Authorization Period is amended as follows:

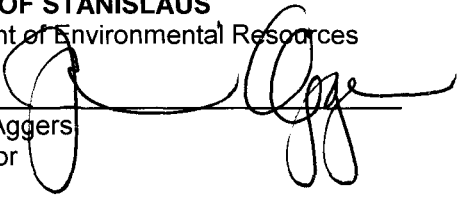
"Services shall commence on **June 1, 2013**, and continue until **December 31, 2017**, or upon completing the agreed upon services."

2. Except as stated herein, all other terms and conditions of the Project Authorization remain unchanged.

IN WITNESS WHEREOF, the parties have executed this Amendment 3 to the Amended and Restated Project Authorization Number 13-002AR-SMG on December 9, 2015.

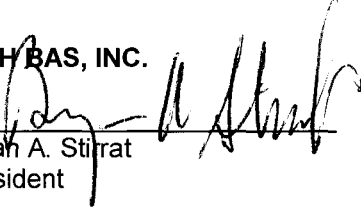
[Signatures appear on next page]

**COUNTY OF STANISLAUS**  
Department of Environmental Resources

By:   
\_\_\_\_\_  
Jami Aggers  
Director

"County"

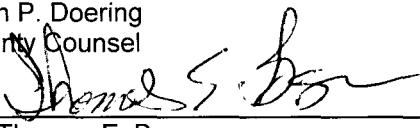
**TETRA TECH BAS, INC.**

By:   
\_\_\_\_\_  
Bryan A. Stirrat  
President

"Consultant"

APPROVED AS TO FORM:

John P. Doering  
County Counsel

By:   
\_\_\_\_\_  
Thomas E. Boze  
Assistant County Counsel





DEPARTMENT OF ENVIRONMENTAL RESOURCES  
3800 Cornucopia Way, Suite C, Modesto, CA 95358  
Phone: (209) 525-6770  
Fax: (209) 525-6773

**AMENDED AND RESTATED PROJECT AUTHORIZATION**

**For**

**Landfill Gas Collection and Control System Expansion Design at Geer Road Landfill**

**Project Number 13-003AR-SMG**

**Amendment No. 2**

WHEREAS, as of December 11, 2012, (the "Effective Date") the County of Stanislaus ("County") and Tetra Tech BAS Inc., ("Consultant") have entered into a certain Agreement relating to the provisions of monitoring, sampling and reporting services (the "Original Master Agreement"); and

WHEREAS the original *Master Agreement for Professional Design Services* number A101412 entered into on December 11, 2012, was amended and restated under Agreement number A101412AR on January 6, 2015, as the Original Agreement failed to recognize that work requiring the payment of Prevailing Wage would be required under the Agreement; and

WHEREAS, as of August 1, 2013, (the "Project Authorization Effective Date") the County and Consultant have entered into a certain Project Authorization Agreement relating to the landfill gas collection and control system expansion design at the Geer Road Landfill (the "Original Project Authorization"); and

WHEREAS, the Master Agreement Section 8.20 – Amendments, provides that the Agreement may be amended in writing; and

WHEREAS, the work under this Project Authorization has been completed and the County has a need to transfer the unspent balance of \$621.87 from this Project Authorization to PA 13-001AR; and

WHEREAS, this Amendment is for the mutual benefit of the County and the Consultant; and

NOW, THEREFORE, the County and the Consultant agree as follows:

1. Section H – Compensation 1.5 is amended as follows:  
**"PROJECT TOTAL SHALL NOT EXCEED: \$130,276.13"**
2. Except as stated herein, all other terms and conditions of the Project Authorization remain unchanged.

IN WITNESS WHEREOF, the parties have executed this Amendment 2 to the Amended and Restated Project Authorization Number 13-003AR-SMG on December 9, 2015.

[Signatures appear on next page]

**COUNTY OF STANISLAUS**  
Department of Environmental Resources

By:   
Jami Aggers  
Director

"County"

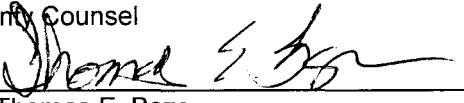
**TETRA TECH/BAS, INC.**

By:   
Bryan A. Stirrat  
President

"Consultant"

APPROVED AS TO FORM:

John P. Doering  
County Counsel

By:   
Thomas E. Boze  
Assistant County Counsel



DEPARTMENT OF ENVIRONMENTAL RESOURCES  
3800 Cornucopia Way, Suite C, Modesto, CA 95358  
Phone: (209) 525-6770  
Fax: (209) 525-6773

**AMENDED AND RESTATED PROJECT AUTHORIZATION**

**For**

**Maintenance, Emergency Services, Repairs and Non-Routine Services at Geer Road Landfill**

**Project Number 13-004AR-SMG**

**Amendment No. 2**

WHEREAS, as of December 11, 2012, (the "Effective Date") the County of Stanislaus ("County") and Tetra Tech BAS Inc., ("Consultant") have entered into a certain Agreement relating to the provisions of monitoring, sampling and reporting services (the "Original Master Agreement"); and

WHEREAS the original *Master Agreement for Professional Design Services* number A101412 entered into on December 11, 2012, was amended and restated under Agreement number A101412AR on January 6, 2015, as the Original Agreement failed to recognize that work requiring the payment of Prevailing Wage would be required under the Agreement; and

WHEREAS, as of January 1, 2013, (the "Project Authorization Effective Date") the County and Consultant have entered into a certain original Project Authorization Agreement number PA 13-001 which included funding for emergency/non-routine services at the Geer Road Landfill (the "Original Project Authorization"); and

WHEREAS, as of January 6, 2015, the County transferred funding from the Original Project Authorization 13-001 to the Amended and Restated Project Authorization 13-004AR for maintenance, surveying, construction oversight, repairs, non-routine service calls and emergency services; and

WHEREAS, the Master Agreement Section 5.2 – Contract Extension, provides that the Agreement term may be extended to December 31, 2017, and the Master Agreement Section 8.20 – Amendments, provides that the Agreement may be amended in writing; and

WHEREAS, the County has a need to extend this Project Authorization for an additional two years; and

WHEREAS, the County has a need to increase this Project Authorization by \$734,000 to allow service to continue for an additional two years; and

WHEREAS, this Amendment is for the mutual benefit of the County and the Consultant; and

NOW, THEREFORE, the County and the Consultant agree as follows:

1. Section D – Project Authorization Period is amended as follows:

"Services shall commence on or about **January 1, 2013**, and continue until **December 31, 2017**, or until all work let during this period is completed, unless previously terminated as provided herein or as otherwise agreed to in writing by the parties."

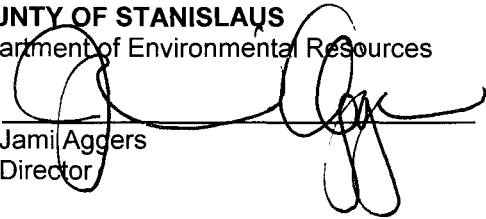
2. Section F – Compensation 1.4 is amended as follows:

**"PROJECT TOTAL NOT TO EXCEED: \$1,681,286.00"**

3. Except as stated herein, all other terms and conditions of the Project Authorization remain unchanged.

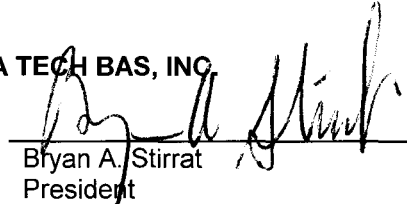
IN WITNESS WHEREOF, the parties have executed this Amendment 2 to the Amended and Restated Project Authorization Number 13-004AR-SMG on December 9, 2015.

**COUNTY OF STANISLAUS**  
Department of Environmental Resources

By:   
\_\_\_\_\_  
Jami Aggers  
Director

"County"

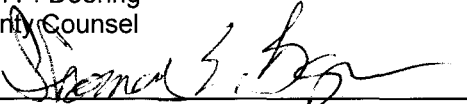
**TETRA TECH BAS, INC.**

By:   
\_\_\_\_\_  
Bryan A. Stirrat  
President

"Consultant"

APPROVED AS TO FORM:

John P. Doering  
County Counsel

By:   
\_\_\_\_\_  
Thomas E. Boze  
Assistant County Counsel



DEPARTMENT OF ENVIRONMENTAL RESOURCES  
3800 Cornucopia Way, Suite C, Modesto, CA 95358  
Phone: (209) 525-6770  
Fax: (209) 525-6773

**AMENDED AND RESTATED PROJECT AUTHORIZATION**

**For**

**Construction Management and Construction Quality Assurance Services for Geer Road Landfill Gas Collection  
and Control System Phase III Expansion**

**Project Number 14-001AR**

**Amendment No. 2**

WHEREAS, as of December 11, 2012, (the "Effective Date") the County of Stanislaus ("County") and Tetra Tech BAS Inc., ("Consultant") have entered into a certain Agreement relating to the provisions of monitoring, sampling and reporting services (the "Original Master Agreement"); and

WHEREAS the original *Master Agreement for Professional Design Services* number A101412 entered into on December 11, 2012, was amended and restated under Agreement number A101412AR on January 6, 2015, as the Original Agreement failed to recognize that work requiring the payment of Prevailing Wage would be required under the Agreement; and

WHEREAS, as of July 16, 2014, (the "Project Authorization Effective Date") the County and Consultant have entered into a certain original Project Authorization Agreement relating to the provision of Construction Management and Construction Quality Assurance services for the Geer Road Landfill Gas Collection and Control System Phase III Expansion (the "Original Project Authorization"); and

WHEREAS, the Master Agreement Section 8.20 – Amendments, provides that the Agreement may be amended in writing; and

WHEREAS, the work under this Project Authorization has been completed and the County has a need to transfer the unspent balance of \$1,465.35 from this Project Authorization to PA 13-001AR; and

WHEREAS, this Amendment is for the mutual benefit of the County and the Consultant; and

NOW, THEREFORE, the County and the Consultant agree as follows:

1. Section G – Compensation 1.2.6 is amended as follows:

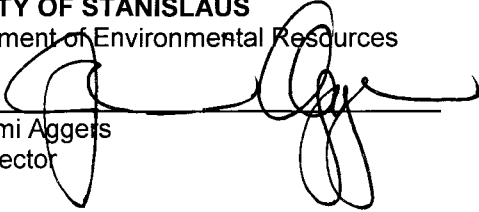
**"TOTAL NOT TO EXCEED FEE: \$90,101.65"**

2. Except as stated herein, all other terms and conditions of the Project Authorization remain unchanged.

IN WITNESS WHEREOF, the parties have executed this Amendment 2 to the Amended and Restated Project Authorization Number 14-001AR on December 9, 2015.

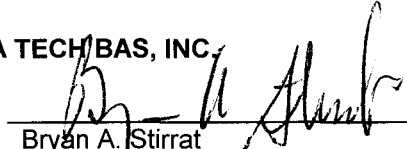
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**COUNTY OF STANISLAUS**  
Department of Environmental Resources

By:   
Jami Aggers  
Director

"County"

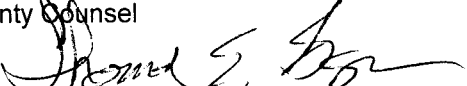
**TETRA TECH/BAS, INC.**

By:   
Bryan A. Stirrat  
President

"Consultant"

APPROVED AS TO FORM:

John P. Doering  
County Counsel

By:   
Thomas E. Boze  
Assistant County Counsel



DEPARTMENT OF ENVIRONMENTAL RESOURCES  
3800 Cornucopia Way, Suite C, Modesto, CA 95358  
Phone: (209) 525-6770  
Fax: (209) 525-6773

**PROJECT AUTHORIZATION UNDER THE AMENDED AND RESTATED MASTER AGREEMENT**

**For**

**Oversight and Reporting of Well and Piezometer Installation at Geer Road Landfill**

**Project Number 14-002AR-SMG**

**Amendment No. 2**

WHEREAS, as of December 11, 2012, (the "Effective Date") the County of Stanislaus ("County") and Tetra Tech BAS Inc., ("Consultant") have entered into a certain Agreement relating to the provisions of monitoring, sampling and reporting services (the "Original Master Agreement"); and

WHEREAS the original *Master Agreement for Professional Design Services* number A101412 entered into on December 11, 2012, was amended and restated under Agreement number A101412AR on January 6, 2015, as the Original Agreement failed to recognize that work requiring the payment of Prevailing Wage would be required under the Agreement; and

WHEREAS, as of April 22, 2015, (the "Project Authorization Effective Date") the County and Consultant have entered into a certain Project Authorization Under the Amended and Restated Master Agreement relating to the provision of oversight and reporting of well and piezometer installation at the Geer Road Landfill (the "Project Authorization"); and

WHEREAS, the Master Agreement Section 8.20 – Amendments, provides that the Agreement may be amended in writing; and

WHEREAS, the work under this Project Authorization has been completed and the County has a need to transfer the unspent balance of \$62.92 from this Project Authorization to PA 13-001AR; and

WHEREAS, this Amendment is for the mutual benefit of the County and the Consultant; and

NOW, THEREFORE, the County and the Consultant agree as follows:

1. Section G – Compensation 1.2 is amended as follows:

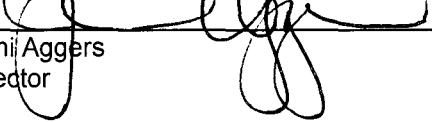
**"TOTAL NOT TO EXCEED FEE: \$50,094.08"**

2. Except as stated herein, all other terms and conditions of the Project Authorization remain unchanged.

IN WITNESS WHEREOF, the parties have executed this Amendment 2 to the Amended and Restated Project Authorization Number 14-002AR-SMG on December 9, 2015.

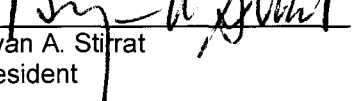
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COUNTY OF STANISLAUS  
Department of Environmental Resources

By:   
Jami Aggers  
Director

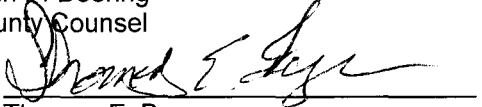
"County"

TETRA TECH/BAS, INC.

By:   
Bryan A. Stirat  
President

"Consultant"

APPROVED AS TO FORM:  
John P. Doering  
County Counsel

By:   
Thomas E. Boze  
Assistant County Counsel





DEPARTMENT OF ENVIRONMENTAL RESOURCES  
3800 Cornucopia Way, Suite C, Modesto, CA 95358  
Phone: (209) 525-6770  
Fax: (209) 525-6773

**PROJECT AUTHORIZATION UNDER THE AMENDED AND RESTATED MASTER AGREEMENT**

**For**

**Storm Water Consulting Services for Industrial General Permit Compliance**

**Project Number 14-003AR-SMG**

**Amendment No. 2**

WHEREAS, as of December 11, 2012, (the "Effective Date") the County of Stanislaus ("County") and Tetra Tech BAS Inc., ("Consultant") have entered into a certain Agreement relating to the provisions of monitoring, sampling and reporting services (the "Original Master Agreement"); and

WHEREAS the original *Master Agreement for Professional Design Services* number A101412 entered into on December 11, 2012, was amended and restated under Agreement number A101412AR on January 6, 2015, as the Original Agreement failed to recognize that work requiring the payment of Prevailing Wage would be required under the Agreement; and

WHEREAS, as of March 3, 2015, (the "Project Authorization Effective Date") the County and Consultant have entered into a certain Project Authorization Under the Amended and Restated Master Agreement relating to the Storm Water Pollution Prevention Plan (SWPP) for compliance with the pending National Pollutant Discharge Elimination System Permit General Permit for Storm Water Discharges Associated with Industrial Activities Order Number CAS000001 (Industrial General Permit, IGP), which became effective on July 1, 2015 at the Geer Road Landfill (the "Project Authorization"); and

WHEREAS, the Master Agreement Section 5.2 – Contract Extension, provides that the Agreement term may be extended to December 31, 2017, and the Master Agreement Section 8.20 – Amendments, provides that the Agreement may be amended in writing; and

WHEREAS, the County has a need to extend this Project Authorization for an additional two years; and

WHEREAS, this Amendment is for the mutual benefit of the County and the Consultant; and

NOW, THEREFORE, the County and the Consultant agree as follows:

- 1. Section D – Project Authorization Period is amended as follows:

"Services shall commence on **February 18, 2015**, or upon the signing of this Agreement, and continue until **December 31, 2017**, or upon completing the agreed upon services."

- 2. Except as stated herein, all other terms and conditions of the Project Authorization remain unchanged.

IN WITNESS WHEREOF, the parties have executed this Amendment 2 to the Amended and Restated Project Authorization Number 14-003AR-SMG on December 9, 2015.

[Signatures appear on next page]

**COUNTY OF STANISLAUS**  
Department of Environmental Resources

By:   
Jami Aggers  
Director

"County"

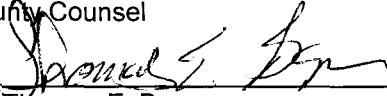
**TETRA TECH BAS, INC.**

By:   
Bryan A. Stirrat  
President

"Consultant"

APPROVED AS TO FORM:

John P. Doering  
County Counsel

By:   
Thomas E. Boze  
Assistant County Counsel



DEPARTMENT OF ENVIRONMENTAL RESOURCES  
3800 Cornucopia Way, Suite C, Modesto, CA 95358  
Phone: (209) 525-6770  
Fax: (209) 525-6773

**PROJECT AUTHORIZATION UNDER THE AMENDED AND RESTATED MASTER AGREEMENT**

**For**

**Bid Level Plans and Specifications and Bid Support for Piping and Aeration Channel Installation  
and Associated Testing at the Geer Road Landfill  
Project Number 14-005AR-SM**

**Amendment No. 2**

WHEREAS, as of December 11, 2012, (the "Effective Date") the County of Stanislaus ("County") and Tetra Tech BAS Inc., ("Consultant") have entered into a certain Agreement relating to the provisions of monitoring, sampling and reporting services (the "Original Master Agreement"); and

WHEREAS the original *Master Agreement for Professional Design Services* number A101412 entered into on December 11, 2012, was amended and restated under Agreement number A101412AR on January 6, 2015, as the Original Agreement failed to recognize that work requiring the payment of Prevailing Wage would be required under the Agreement; and

WHEREAS, as of July 1, 2015, (the "Project Authorization Effective Date") the County and Consultant have entered into a certain Project Authorization Under the Amended and Restated Master Agreement relating to bid level plans and specifications and bid support for the piping and aeration channel installation and associated testing at the Geer Road Landfill (the "Project Authorization"); and

WHEREAS, the Master Agreement Section 5.2 – Contract Extension, provides that the Agreement term may be extended to December 31, 2017, and the Master Agreement Section 8.20 – Amendments, provides that the Agreement may be amended in writing; and

WHEREAS, the County has a need to extend this Project Authorization for an additional six months; and

WHEREAS, this Amendment is for the mutual benefit of the County and the Consultant; and

NOW, THEREFORE, the County and the Consultant agree as follows:

- 1. Section E – Project Authorization Period is amended as follows:

“Services shall commence on **July 6, 2015**, or upon the signing of this Agreement, and continue until **June 16, 2016**, or upon completing the agreed upon services.”

- 2. Except as stated herein, all other terms and conditions of the Project Authorization remain unchanged.

IN WITNESS WHEREOF, the parties have executed this Amendment 2 to the Amended and Restated Project Authorization Number 14-005AR-SM on December 9, 2015.

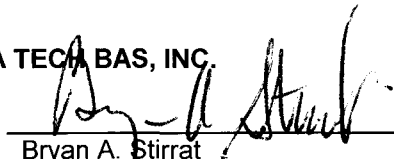
[Signatures appear on next page]

**COUNTY OF STANISLAUS**  
Department of Environmental Resources

By:   
Jami Aggers  
Director

"County"

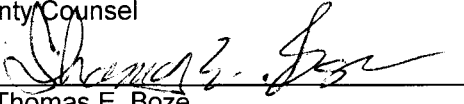
**TETRA TECH BAS, INC.**

By:   
Bryan A. Stirrat  
President

"Consultant"

APPROVED AS TO FORM:

John P. Doering  
County Counsel

By:   
Thomas E. Boze  
Assistant County Counsel



DEPARTMENT OF ENVIRONMENTAL RESOURCES  
 3800 Cornucopia Way, Suite C, Modesto, CA 95358  
 Phone: (209) 525-6770  
 Fax: (209) 525-6773

**UNDER THE AMENDED AND RESTATED MASTER AGREEMENT  
 Project Number 14-006AR**

**For**

**Construction Management for the Construction of an Aeration Channel and Groundwater Conveyance System  
 for the Geer Road Landfill**

**Amendment No. 2**

WHEREAS, as of December 11, 2012, (the "Effective Date") the County of Stanislaus ("County") and Tetra Tech BAS Inc., ("Consultant") have entered into a certain Agreement relating to the provisions of monitoring, sampling and reporting services (the "Original Master Agreement"); and

WHEREAS the original *Master Agreement for Professional Design Services* number A101412 entered into on December 11, 2012, was amended and restated under Agreement number A101412AR on January 6, 2015, as the Original Agreement failed to recognize that work requiring the payment of Prevailing Wage would be required under the Agreement; and

WHEREAS, as of November 16, 2015, (the "Project Authorization Effective Date") the County and Consultant have entered into a certain Project Authorization Agreement relating to the Construction Management for the Construction of an Aeration Channel and Groundwater System Conveyance System at Geer Road Landfill (the "Original Project Authorization"); and

WHEREAS, the Master Agreement Section 5.2 – Contract Extension, provides that the Agreement term may be extended to December 31, 2017, and the Master Agreement Section 8.20 – Amendments, provides that the Agreement may be amended in writing; and

WHEREAS, the County has a need to extend this Project Authorization for an additional six months; and

WHEREAS, the County has a need to increase this Project Authorization by \$203,900 to perform additional work on the Aeration Channel and Groundwater System Conveyance System, including pump testing and aeration channel pilot test support; and

WHEREAS, this Amendment is for the mutual benefit of the County and the Consultant; and

NOW, THEREFORE, the County and the Consultant agree as follows:

1. Section C – Scope of Work Task 2 is amended to read as follows:

"2.1. Consultant shall attend up to four meetings to provide clarification and facilitate regulatory approvals. The meetings shall take place in either Modesto, at the County offices, or in Rancho Cordova at the CVRWQCB offices. Consultant shall be responsible for scheduling and coordinating the meeting with both the County and the CVRWQCB.

2.2. This task shall be completed on a time and materials basis for a cost not to exceed \$38,900."

2. Section C – Scope of Work is amended to include the following tasks:

**"Task 3 – Prepare Installation Report and As-Built Drawings**

3.1. Consultant shall use the information gathered in Task 1 and the As-Built drawings prepared by County's hired contractor ("Contractor") to prepare an Installation Report for submittal to the CVRWQCB no later than January 28, 2016. Consultant shall submit the Report to the County for review and input prior to submitting to the CVRWQCB. The Installation Report will include a

description of all key elements of the construction of the conveyance pipeline and aeration channel. In addition to the report, Consultant shall prepare As-Built Record Drawings, stamped and signed by a licensed Civil Engineer, and submit drawings to the CVRWQCB.

3.2. This task shall be completed on a time and materials basis for a cost not to exceed \$21,500.

**Task 4 – Aquifer, Percolation and Aeration Testing**

4.1. Consultant shall mobilize to the Geer Road Landfill to provide technical oversight during the aquifer, aeration and percolation testing activities to ensure the Pump Testing and Aeration Channel Pilot Test Support project is performed in accordance with the plans and specifications. Consultant shall be responsible for collecting all data and samples during the various tests so that sufficient information is available to complete the amendment of the Report of Waste Discharge. Consultant assumes an 8 week timeline for Contractor to complete the scope of work for the Pump Testing and Aeration Channel Pilot Test Support project.

4.2. This task shall be completed on a time and materials basis for a cost not to exceed \$125,400. Direct costs associated with this task include monitoring equipment rental (\$12,500), travel (2 people for 30 nights) and company vehicle costs in accordance with our agreed upon contract rates and the County travel policy.

4.3. Certain work under this task is subject to prevailing wage. Prevailing wage work includes performing corrective action maintenance, implementation of corrective action, adjusting, implementation of remedial action, calibrating, cleaning, repairing, installing, observation, oversight and inspection, etc., as identified in Section 1 and Section 2, Item 2.3 et seq., of the Amended and Restated Master Agreement. Work as described Section 1, Item 1.5 and 1.5.1 of the Amended and Restated Master Agreement shall not be performed under this Agreement.

**Task 5 – Prepare Aquifer Test, Geotechnical and Percolation Report**

5.1. Consultant shall prepare and submit a Report to the CVRWQCB no later than April 21, 2016, detailing the findings of the proposed tests. Consultant shall provide a summary of the tests including projected volatile organic carbon (VOC) emissions during the pilot test. Consultant shall submit Report to County for review and input prior to submitting to the CVRWQCB.

5.2. County shall be responsible to pay any permit fees directly.

5.3. Consultant shall complete this task on a time and materials basis for a cost not to exceed \$24,500.”

3. Section D – Project Authorization Period is amended to read as follows:

“Services shall commence on **November 16, 2015**, or the signing of this Project Authorization, and continue until **June 16, 2016**, or upon completing the agreed upon services.”

4. Section F – Compensation 1.2 is amended to read as follows:

Task	Title	Amount
1	Construction Management for Installation of Aeration Channel and Groundwater Conveyance System	\$93,000
2	Project Management	\$38,900
3	Prepare Installation Report and As-Built Drawings	\$21,500
4	Aquifer, Percolation and Aeration Testing	\$125,400
5	Prepare Aquifer Test, Geotechnical and Percolation Report	\$24,500
<b>Total Not to Exceed Fee:</b>		<b>\$303,300”</b>

- 5. Exhibit 1 Project Authorization Fee Schedule is amended to include the attached.
- 6. Except as stated herein, all other terms and conditions of the Project Authorization remain unchanged.

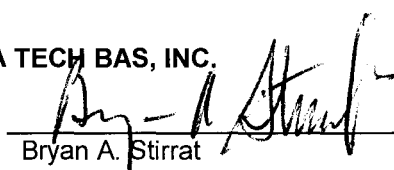
IN WITNESS WHEREOF, the parties have executed this Amendment 2 to the Amended and Restated Project Authorization Number 14-006AR on December 9, 2015.

COUNTY OF STANISLAUS  
Department of Environmental Resources

By:   
Jami Aggers  
Director

"County"

TETRA TECH BAS, INC.

By:   
Bryan A. Stirrat  
President

"Consultant"

APPROVED AS TO FORM:

John P. Doering  
County Counsel

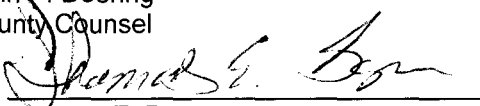
By:   
Thomas E. Boze  
Assistant County Counsel

EXHIBIT 1

PROJECT AUTHORIZATION FEE SCHEDULE

The Consultant shall be compensated in accordance with this Project Authorization and the Master Agreement Exhibit "C", for services rendered and accepted under this Agreement and shall be paid for charges that are reasonable, on a time and material basis not to exceed the per-task totals as follows:

**Detailed Task Fee Schedule:**

- Exhibit 1 Fee Schedule, Task 2 is amended to include the following:

Item	LABOR COSTS												DIRECT COSTS					TOTAL	
	Princ.	Div. Eng.	Proj. Eng.	Constr. Inspector Prevailing Wage		CADD Dsgn.	Snr. Env. Sci.	Eng. III	Eng. I	Adm. Asst.	Total Hrs	Total Labor Cost	Lab	Other Direct Costs**	Lodging	Equip/Supplies	Per Diem	Vehicle Use	TOTAL COSTS
				S.T.*	O.T.*														
	hr. \$278	hr. \$224	hr. \$176	hr. \$160	hr. \$217	hr. \$140	hr. \$164	hr. \$136	hr. \$109	hr. \$105			Cost + 10%	Cost + 10%	County Rates		County Rates	County Rates	
<b>2. Additional Project Management Work</b>																			
Additional Project Management Work (3 Meetings)	20	40	48				40				148	\$29,528		\$2,972					\$32,500
<b>SUBTOTAL ADDITIONAL WORK UNDER TASK 2</b>																			<b>\$32,500</b>
<b>TOTAL NOT TO EXCEED AMOUNT TASK 2</b>																			<b>\$38,900</b>

Exhibit 1 Fee Schedule is amended to include the following:

Item	LABOR COSTS												DIRECT COSTS					TOTAL	
	Princ.	Div. Eng.	Proj. Eng.	Constr. Inspector Prevailing Wage		CADD Dsgn.	Snr. Env. Sci.	Eng. III	Eng. I	Adm. Asst.	Total Hrs	Total Labor Cost	Lab	Other Direct Costs	Lodging	Equip/Supplies	Per Diem	Vehicle Use	TOTAL COSTS
				S.T.*	O.T.*														
	hr. \$278	hr. \$224	hr. \$176	hr. \$160	hr. \$217	hr. \$140	hr. \$164	hr. \$136	hr. \$109	hr. \$105			Cost + 10%	Cost + 10%	County Rates		County Rates	County Rates	
<b>3. Installation Report</b>																			
Prepare Installation Report Summary of Construction As-Built Drawings.	4	8	24			20		48	16	16	136	\$19,880		\$1,620					\$21,500
<b>SUBTOTAL TASK 3</b>																			<b>\$21,500</b>
<b>4. Aquifer, Percolation, and Aeration Testing</b>																			
Perform Aquifer Testing (2 weeks per location)					64		336				400	\$68,992	\$3,500	\$208	\$3,000	\$10,000'	\$2,000	\$6,000	\$93,700
Perform Aquifer Channel Treatability Study				60	16			12	12		100	\$16,012	\$3,000	\$388	\$1,000	\$2,500'	\$500	\$1,500	\$24,900



Perform percolation testing at Triangle Ranch				40						40	\$6,400				\$400			\$6,800	
<b>SUBTOTAL TASK 4</b>																		<b>\$125,400</b>	
<b>5. Aquifer Test, Geotechnical and Percolation Test Report</b>																			
Prepare Aquifer Test and Percolation Test Report Evaluation of VOC Treatment System	4	8	32					40	40	24	8	156	\$23,992		\$508				\$24,500
<b>SUBTOTAL TASK 5</b>																		<b>\$24,500</b>	
<b>TOTAL NOT TO EXCEED AMOUNT</b>																		<b>\$303,300</b>	

\*NOTE: S.T. and O.T. Construction Inspector work will be performed by either an Engineer I, Engineer III or Senior Environmental Scientist at prevailing wage rates in accordance with the Labor Code and Department of Industrial Relations published prevailing wage determinations for Northern California. Prevailing wage work includes performing corrective action maintenance, implementation of corrective action, adjusting, implementation of remedial action, calibrating, cleaning, repairing, installing, observation, oversight, inspection, soils testing, surveying, and flagging, etc., as identified in Section 1 and Section 2, Item 2.3 et seq., of the Amended and Restated Master Agreement.

\*\*Other Direct Costs include administrative expenses for travel and document preparation.

<sup>1</sup> Equipment/Supplies category includes the following: Water level meters, transducers, groundwater sampling supplies, and decontamination equipment.



**DEPARTMENT OF ENVIRONMENTAL RESOURCES**

3800 Cornucopia Way, Suite C, Modesto, CA 95358

Phone: (209) 525-6770

Fax: (209) 525-6773

**PROJECT AUTHORIZATION UNDER THE AMENDED AND RESTATED MASTER AGREEMENT  
Project Number 16-001AR-SM**

**For**

**Expanded Site Hydrogeologic Modeling and Treatment Design and Amended Report of Waste  
Discharge for the Geer Road Landfill**

WHEREAS, as of December 11, 2012, (the "Effective Date") the County of Stanislaus ("County") and Tetra Tech BAS Inc., ("Consultant"), have entered into a certain Agreement relating to the provisions of monitoring, sampling and reporting services (the "Original Master Agreement"); and

WHEREAS the Original *Master Agreement for Professional Design Services* number A101412 entered into on December 11, 2012, was amended and restated under Agreement number A101412AR on January 6, 2015, to allow "as needed", Prevailing Wage Work to be performed for maintenance, surveying, construction oversight, inspection, observation, repairs, non-routine service calls, and emergency services; and the Original Agreement failed to recognize that work requiring the payment of Prevailing Wage would be required under the Agreement; and

NOW, THEREFORE, and in consideration of the mutual covenants and conditions contained herein, the parties hereby agree as follows:

**A. Terms and Conditions**

Except as hereinafter provided, the services provided by the Consultant under this Project Authorization, shall be subject to the terms and conditions set forth in the *Amended and Restated Master Agreement for Professional Design Services* number A101412AR and its Exhibits 1, "C" and "D" made and entered into by and between the County of Stanislaus ("County") and Tetra Tech BAS Inc., ("Consultant"), on January 6, 2015.

**B. Background**

The Geer Road Landfill is located approximately 10 miles southeast of the City of Modesto in Stanislaus County, on the northern bluff of Tuolumne River in central Stanislaus County. The 167-acre site is jointly owned by Stanislaus County and the City of Modesto. It is classified as a Class III landfill and is currently closed.

When the landfill was in active operation, it was operated by the Stanislaus County Department of Public Works, and accepted municipal and cannery wastes from November 1970, until July 1990. The site operated as an area/trench fill sanitary landfill between 1970 and 1990. Approximately 144 acres (footprint) were used for refuse disposal. An estimated 4.5 million tons of municipal solid waste was disposed of at the site. The maximum depth of refuse is estimated to range between 50-60 feet. The Stanislaus County Department of Environmental Resources currently maintains the landfill as a closed facility.

The County was required by the Central Valley Regional Water Quality Control Board (CVRWQCB) to prepare an Aeration Channel and Groundwater Conveyance Work Plan, which Consultant submitted to the CVRWQCB on March 27, 2015, documenting the installation of the proposed aeration channels and the groundwater conveyance piping network. The County submitted an addendum to the Work Plan to the CVRWQCB on July 30, 2015.

The Consultant prepared 100% bid level plans and technical specifications for the aeration channel and groundwater conveyance system installation and 100% support specifications for the pump testing and aeration channel pilot test support. Consultant provided technical support to collect and log data generated during the aquifer, aeration and percolation testing.

Aquifer testing at the site, performed as part of the verification testing activities, showed widely varying sustainable pumping rates along the western boundary of the landfill that were significantly lower than those previously predicted. As a result, expanded services related to the Aquifer Test, Geotechnical, and Percolation Testing Report are needed. In accordance with the CVRWQCB, Consultant shall prepare an interim submittal to the CVRWQCB, an expanded and updated site hydrogeologic model, and an expanded design for groundwater treatment. In addition, the Consultant shall prepare an Amended Report of Waste Discharge (ROWD).

The following Scope of Work identifies the Work covered under this Project Authorization.

### C. SCOPE OF WORK

The Consultant shall provide all of the labor, materials and supervision to perform the following Tasks.

#### 1. Task 1: Expanded Services related to the Aquifer Test, Geotechnical, and Percolation Testing Report

- 1.1. Aquifer testing at the site, performed as part of the verification testing activities, showed widely varying sustainable pumping rates along the western boundary of the landfill that were significantly lower than those previously predicted. As a result, a more rigorous reworking of the site hydrogeologic model and particle tracking shall be performed in order to properly locate extraction wells and size the extraction pumps. This shall include a recalibration of the model to match new information gathered during the test regarding site lithology, and the measured response to pumping in both the extraction and observation wells. The results and recommendations from the new model shall be included in the Aquifer Test, Geotechnical and Percolation Testing Report and shall contain an evaluation to expand the Site's groundwater treatment system to ensure complete capture of all constituents of concern. Consultant shall submit the Aquifer Test, Geotechnical and Percolation Testing Report to the RWQCB by June 15, 2016, and shall be available to respond to any comments received from the RWQCB regarding the report.
- 1.2. Aeration Channel testing performed as part of the verification testing activities showed 100% removal of only some of the volatile organic compounds (VOCs) in the water extracted from well NEW-1, with others experiencing significant reductions, but not complete removal. Given these results, an alternate treatment technology shall be identified and designed for VOC removal. Consultant shall utilize the results of the aquifer testing and the resulting hydraulic and VOC loads to design the new VOC removal system.
- 1.3. Consultant shall prepare an interim submittal to the RWQCB, titled Verification Testing Data Report, which shall summarize field activities completed during the aquifer testing at 4 wells (NEW-9, NEW-8, EX-13, and NEW-1) along the western site boundary of the Geer Road Landfill, percolation testing within the adjacent Triangle Ranch Property and aeration channel pilot testing conducted on the western slope of the landfill, above the Triangle Ranch Property.
- 1.4. There are no site visits or vehicle charges associated with this Task.
- 1.5. This task shall be completed on a time and materials basis, for a cost not exceed \$55,120.

#### 2. **Task 2: Preparation of an Amended Report of Waste Discharge**

- 2.1. Consultant shall use the information gathered in Task 1 of this Project Authorization to generate an Amended ROWD. Consultant shall submit the Amended ROWD to the WRWQCB for approval by August 15, 2016, and shall be available to respond to any comments received from the RWQCB regarding the Amendment.
- 2.2. As part of the amended ROWD, Consultant shall include bid ready plans and specifications for the expansion of the site's groundwater extraction treatment system. Consultant shall initially provide 90% level plans and technical specifications for the treatment system for County review and comment. Once County comments are incorporated, the bid level plans and technical specifications shall be provided to the County, along with an engineer's estimate of the construction costs. The final plan set submittal shall include a total of two (2) full size plan sets, one (1) full size mylar plan set, two (2) half size (11x17) plan sets, and an electronic (PDF) plan set. Final Technical Specifications, bid level plans and engineer estimate shall be wet stamped (signed and sealed) by a California registered Professional Engineer in accordance with the California Business and Professions Code Section 6735.
- 2.3. In addition to the plans and specifications, Consultant shall provide a schedule for installation, testing, operation, and disposal for all treated water.
- 2.4. Other direct costs for Task 2 include reproduction and delivery charges for the plans and specifications described in Task 2.2. There are no site visits or vehicle charges associated with this Task.
- 2.5. This task shall be completed on a time and materials basis, for a cost not to exceed \$126,000.

**3. Project Management**

- 3.1. As part of the work effort, it is assumed that two meetings shall be attended by Consultant's key team members to provide clarification and facilitate regulatory approvals. The meetings are assumed to take place in either Modesto, at the offices of the County, or in Rancho Cordova, at the offices of the Regional Water Quality Control Board.
- 3.2. This task shall be completed on a time and materials basis for a cost not to exceed \$16,250.

**D. Project Authorization Period**

Services shall commence on **May 12, 2016**, or upon the signing of this Agreement, and continue until **September 16, 2016**, or upon completing the agreed upon services.

**E. Compensation**

Consultant shall be compensated for the services provided under this Project Authorization as follows:

**1. Project Price**

1.1 The below project pricing is devised to allow the County the ability to identify costs associated with the frequency of tasks performed in a given project. The Consultant shall be compensated on a time and material basis, based on the rates set forth in the Master Agreement Exhibit "C" – Fee Schedule and Exhibit 1 of the Project Authorization, to perform the work associated with each task, not to exceed the amounts listed below. Maximum Total Task Price includes fees and reimbursable expenses that have been agreed to by the both parties in accordance with the Master Agreement, Exhibit "C" – Fee Schedule. The County shall not reimburse for fax, phone, postage or copies and other items as identified in the Master Agreement Exhibit "C" – Fee Schedule. The County shall

not pay a mark-up on travel expenses and items identified in Exhibit “C” – Fee Schedule of the Master Agreement. Consultant shall include all receipts for travel expense reimbursement. Travel expense reimbursement shall be in accordance with Master Agreement Exhibit “C” – Fee Schedule and the County’s travel policy.

1.2 The not to exceed total for this Project Authorization consists of the following not to exceed fees:

Task	Title	Amount
1.	Expanded Services for Aquifer Test, Geotechnical, and Percolation Testing Report	\$55,120
2.	Prepare an Amended ROWD	\$126,000
3.	Project Management	\$16,250
<b>Total Not Exceed Fee</b>		<b>\$197,370</b>

\*Note: Invoices submitted for payment under the above categories shall be in accordance with this Project Authorization, Exhibit “1” to this Project Authorization and the Master Agreement Exhibit “C”.

1.3 A detailed breakdown of the Fee Schedule for this Project Authorization is in the attached Exhibit 1 – Fee Schedule.

**F. Payment and Invoicing**

1. The terms of payment are Net 30 days after approval of the invoice.
2. Consultant shall submit a detailed invoice for work actually completed. The invoice is to include but not be limited to the following information: Hours worked by Consultant’s Staff, the title of the Staff, billable rate, actual copies of equipment rental invoices, detailed information on equipment being rented, if prevailing wage work is performed payroll records in accordance with Section 2.3 of the Amended and Restated Master Agreement, and reimbursable items that are reasonable, necessary and actually incurred by the Consultant in connection with the services. All invoices including reimbursable items shall have appropriate back up documents (i.e., copies of receipts) attached to the invoices. No mark-up is allowed on travel reimbursement and copies of all receipts must accompany the invoice. Travel expenses shall be reimbursed in accordance with Master Agreement Exhibit “C” – Fee Schedule and the County’s travel policy which is incorporated herein by reference. Consultant shall be compensated for services rendered and accepted under this Agreement and shall be paid monthly, in arrears, on a time and material basis not to exceed the per-task totals for work performed and services provided. The County’s project authorization number shall be submitted on the invoice in order for payment to be made.
3. The County shall pay the Consultant 30 days after approval of the invoice. Invoices shall be mailed or delivered to the remit to address indicated below.

Stanislaus County  
 Department of Environmental Resources Landfill  
 Attention: Jami Aggers (A101412AR PA 16-001AR-SM)  
 3800 Cornucopia Way, Suite C  
 Modesto, California 95358

**G. Representatives**

The County's representatives are Jami Aggers, (209) 525-6786. The Consultant’s representatives are Bryan Stirrat as the primary contact, Greg Acosta as Landfill Gas contact.

**H. Counterparts**

This Agreement may be executed in one or more counterparts, each of which shall be deemed an original. All counterparts shall be construed together and shall constitute one agreement.

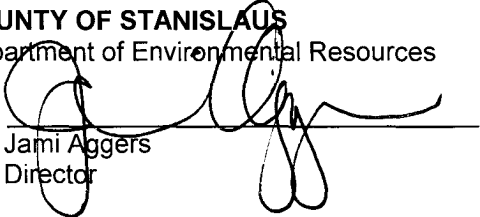
**I. Professional Services**

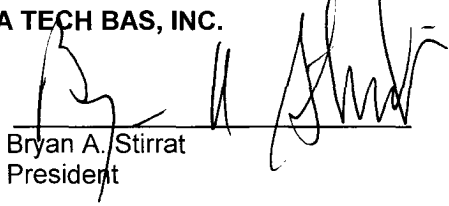
All professional services to be provided by Consultant pursuant to this Agreement shall be provided by personnel experienced in their respective fields and in a manner consistent with the standards of care, diligence and skill ordinarily exercised by professional consultants in similar fields and circumstances in accordance with sound professional practices. Consultant also represents that it is familiar with all laws that may affect its performance of this Agreement and shall advise County of any changes in any laws that may affect Consultant's performance of this Agreement.

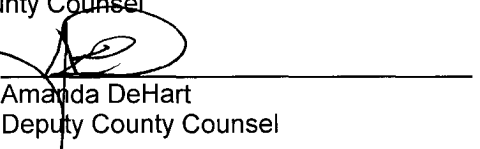
**J. Prevailing Wage**

Prevailing Wage Laws as defined in Section 1720 of the California Labor Code, et seq., and 1770 et seq., as well as California Code of Regulations, Title 8, Section 16000 et seq., ("Prevailing Wage Laws"), require the payment of prevailing wage rates and the performance of other requirements on certain "public work" and "maintenance" projects. This shall include certain work performed during the design and preconstruction phase of construction including, but not limited to, inspection, observation and land surveying work. Work shall also be in accordance with Section 2.3 of the Amended and Restated Master Agreement. Public Projects Forty-five Thousand dollars (\$45,000) or more are not to be performed under this Agreement in accordance with the State of California Public Contract Code and will be let by a separate contract.

IN WITNESS WHEREOF, the parties have executed this Project No. 16-001AR-SM on May 12, 2016.

**COUNTY OF STANISLAUS**  
Department of Environmental Resources  
By:   
Jami Aggers  
Director  
"County"

**TETRA TECH BAS, INC.**  
By:   
Bryan A. Stirrat  
President  
"Consultant"

APPROVED AS TO FORM:  
John P. Doering  
County Counsel  
By:   
Amanda DeHart  
Deputy County Counsel

**EXHIBIT 1  
PROJECT AUTHORIZATION FEE SCHEDULE**

The Consultant shall be compensated in accordance with this Project Authorization and the Master Agreement Exhibit C, for services rendered and accepted under this Agreement and shall be paid for charges that are reasonable, on a time and material basis not to exceed the per-task totals as follows:

The following is the detailed fees for the maximum not to exceed Task totals:

Item	LABOR COSTS										Total Labor Cost	Other Direct Costs	TOTAL COSTS
	Principal	Div. Eng.	Proj. Eng.	CADD Designer	Snr. Env. Sci.	Env. Spec. II	Eng III	Eng. I	Adm Assist.	Total Hours			
	hr. \$278	hr. \$224	hr. \$176	hr. \$140	hr. \$164	hr. \$132	hr. \$136						
<b>1. Expanded Services Related to the Aquifer Test, Geotechnical, and Percolation Testing Report</b>													
Prepare Aquifer Test and Percolation Report. Evaluation of VOC treatment by aeration. Recommendations to expand the treatment system.		8	24	24	24	32	24	16	8	160	\$23,384	\$1,281	\$24,665
Site model with particle tracking and calibration.	50	8	12	8	40	8	20	10	1	157	\$30,455		\$30,455
<b>SUBTOTAL TASK 1</b>												<b>\$55,120</b>	
<b>2. Prepare an Amended Report of Waste Discharge</b>													
Evaluation of treated water discharge, permitting and reporting.	6	24	40		40		40	100	8	258	\$37,824		\$37,824
Preparation of bid ready plans and specifications for expansion of treatment system.	4	16	100	60	40		120	120		460	\$66,656	\$3,120	\$69,776
Schedule for installation, testing, operation and disposal of all treated water.		16	16		30		20	40		122	\$18,400		\$18,400
<b>SUBTOTAL TASK 2</b>												<b>\$126,000</b>	
<b>3. Project Management</b>													
Project Management (2 meetings)	10	20	24		20					74	\$14,764	\$1,486	\$16,250
<b>SUBTOTAL TASK 3</b>												<b>\$16,250</b>	
<b>Total Hours</b>	<b>70</b>	<b>92</b>	<b>216</b>	<b>92</b>	<b>194</b>	<b>40</b>	<b>224</b>	<b>286</b>	<b>17</b>	<b>1,231</b>			
<b>Total Cost</b>	<b>\$19,460</b>	<b>\$20,608</b>	<b>\$38,016</b>	<b>\$12,880</b>	<b>\$31,816</b>	<b>\$5,280</b>	<b>\$30,464</b>	<b>\$31,174</b>	<b>\$1,785</b>		<b>\$191,483</b>	<b>\$5,887</b>	<b>\$197,370</b>

\*All travel expenses shall be reimbursed in accordance with the County's travel policy.



DEPARTMENT OF ENVIRONMENTAL RESOURCES  
 3800 Cornucopia Way, Suite C, Modesto, CA 95358  
 Phone: (209) 525-6770  
 Fax: (209) 525-6773

**UNDER THE AMENDED AND RESTATED MASTER AGREEMENT**

**Project Number 16-001AR**

**For**

**Expanded Site Hydrogeologic Modeling and Treatment Design and Amended Report of Waste Discharge for the Geer Road Landfill**

**Amendment No. 1**

WHEREAS, as of December 11, 2012, (the "Effective Date") the County of Stanislaus ("County") and Tetra Tech BAS Inc., ("Consultant") have entered into a certain Agreement relating to the provisions of monitoring, sampling and reporting services (the "Original Master Agreement"); and

WHEREAS the original *Master Agreement for Professional Design Services* number A101412 entered into on December 11, 2012, was amended and restated under Agreement number A101412AR on January 6, 2015, as the Original Agreement failed to recognize that work requiring the payment of Prevailing Wage would be required under the Agreement; and

WHEREAS, as of May 12, 2016, (the "Project Authorization Effective Date") the County and Consultant have entered into a certain Project Authorization Agreement relating to expanding the site hydrogeologic modeling and treatment design at Geer Road Landfill, and amending the Report of Waste Discharge (the "Original Project Authorization"); and

WHEREAS, the Master Agreement Section 5.2 – Contract Extension, provides that the Agreement term may be extended to December 31, 2017, and the Master Agreement Section 8.20 – Amendments, provides that the Agreement may be amended in writing; and

WHEREAS, the County has a need to increase this Project Authorization by \$230,436 to have Consultant prepare a proposal for the Groundwater Remedial System Work Plan, in accordance with comments received from the Central Valley Regional Water Quality Control Board (RWQCB) on August 31, 2016; and

WHEREAS, this Amendment is for the mutual benefit of the County and the Consultant; and

NOW, THEREFORE, the County and the Consultant agree as follows:

1. Section C – Scope of Work is amended to include the following tasks:

**4. Task 4 – Address RWQCB comments**

On August 31, 2016, the RWQCB provided comments to the County based on their review of the following documents:

- Aeration Channel and Groundwater Conveyance System Installation Construction Completion Report (Consultant; 1/28/16);
- Verification Testing Data Report (Consultant; 4/29/16);
- Aquifer Test, Geotechnical, and Percolation Testing Report (Consultant; 6/15/16);
- Twenty First Progress Report (County; 6/15/16); and
- Amended Report of Waste Discharge (Consultant; 8/15/16).

In general, the RWQCB concurred with Consultant's recommendations presented in the above listed reports with a few exceptions. As part of the Aquifer Test, Geotechnical, and Percolation Testing Report, Consultant generated a recalibrated site hydrogeologic model with particle tracking based on



information gathered during verification testing activities. The site model concluded that a total of nineteen (19) extraction wells will be required along the western point of compliance boundary. In the August 31, 2016 letter, the RWQCB required that extraction from two existing groundwater monitoring wells from the center of the landfill (MW-14SR and MW-7S) be evaluated using the updated model developed for the site. Consultant shall re-run a simulation of the current model with these two wells incorporated into the groundwater extraction network. Due to the unknown anticipated extraction rates from MW-14SR and MW-7S, Consultant shall assign a conservative flow rate for the evaluation. If it is determined that incorporation of these wells is to the benefit of the County, and after consultation with the County, the proposed groundwater treatment system shall be modified accordingly.

Consultant shall also evaluate using larger diameter borings for the construction of the new groundwater extraction well network to increase extraction rates and consequently capture zones. The evaluations required by the RWQCB will be addressed and incorporated in the Groundwater Remedial System Work Plan.

There are no site visits or vehicle charges associated with this Task. This task shall be completed on a time and materials basis, for a cost not to exceed \$19,664.

#### **5. Task 5 – Prepare a Groundwater Remedial System Work Plan**

In accordance with the August 31, 2016 RWQCB letter, Consultant shall prepare a Groundwater Remedial System Work Plan (Work Plan) which shall include all of the following:

- 5.1. Detailed plan to drill, install, and maintain each proposed groundwater extraction well, and a maintenance schedule;
- 5.2. Proposed well completion details for each extraction well, including boring diameter, well diameter, screen length, and pump placement;
- 5.3. Proposed sieve analysis of the screen interval to properly design screen slot size and filter pack size;
- 5.4. Detailed plan to construct, test, operate, and optimize the groundwater treatment system;
- 5.5. Detailed plan to install, operate, and maintain the proposed infiltration gallery;
- 5.6. Updated cross-section of the site showing the location and screen interval of each proposed extraction well;
- 5.7. Map showing the estimated radius of influence from each proposed groundwater extraction well with the extraction rates proposed in the Amended ROWD;
- 5.8. Proposed monitoring network to verify the achieved radius of influence for each extraction well;
- 5.9. Capture zone map showing the predicted capture zone outside the landfill footprint;
- 5.10. Updated project schedule; and
- 5.11. Completed Notice of Intent to discharge treated groundwater to land under General Waste Discharge Requirements Order No. R5-2015-0012.

Consultant shall provide bid ready plans, technical specifications, and operations & maintenance (O&M) manuals for submission of the Work Plan to the RWQCB. These items will be prepared with the data known at this given time. Due to the anticipated variability in extraction rates and groundwater chemistry at the site, modifications to certain design elements will be required prior to the County releasing the plans for pump installation, conveyance system, electrical and treatment system construction for bid. Consultant shall evaluate the data collected from the installation/testing of the new extraction wells and modify these other system components accordingly. Consultant shall finalized the plans, technical specifications, and O&M manual based on the gathered data for inclusion in the County's bid documents. 100% Plans, Specifications, and Engineer's estimate shall be wet stamped (signed and sealed) by a California registered Professional Engineer.

Other direct costs included in this work Task are for reproduction and delivery charges for the plans and specifications. There are no site visits or vehicle charges associated with this Task. This task shall be completed on a time and materials basis, for a cost not to exceed \$171,420.

#### **6. Task 6 – Project Management and Bid Support**

As part of the work effort, it is assumed that two meetings will be attended by Consultant's key team members to provide clarification and facilitate regulatory approvals. The meetings are assumed to take place in either Modesto, at the offices of the County, or in Rancho Cordova, at the offices of the Regional Water Quality Control Board.

Consultant will support the County during the bidding and contractor selection process for the new extraction well installation and construction of the new groundwater extraction and treatment system. Consultant will attend a pre-bid site walk hosted by the County, and provide technical support in reviewing and responding to bidder requests for information and clarifications for both bid solicitations. Once bids are received by the County, Consultant will review the bids for consistency with the plans, specifications and engineer's estimate, and will provide input to the County on bidder responsiveness. Other direct costs included in this work Task are for reproduction and delivery charges. This task includes two site visits, one for each of the bid solicitations.

Additionally, Consultant shall be available to review and revise the design documents if required, due to discrepancies which resulted from negligence of the design plans.

Travel and vehicle costs associated with meetings and site visits are included and shall be reimbursed in accordance with the County's travel policy. This task shall be completed on a time and materials basis, for a cost not to exceed \$39,352."

2. Section D – Project Authorization Period is amended to read as follows:

"Services shall commence on **May 12, 2016**, or the signing of this Project Authorization, and continue until December 31, 2017, or upon completing the agreed upon services."

3. Section E – Compensation, Section 1.2 is amended to read as follows:

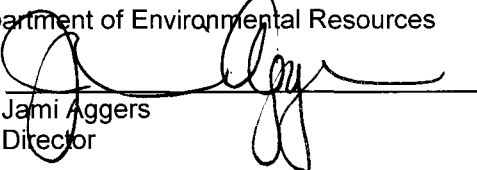
"Task	Title	Amount
1.	Expanded Services for Aquifer Test, Geotechnical, and Percolation Testing Report	\$55,120
2.	Prepare an Amended ROWD	\$126,000
3.	Project Management	\$16,250
4.	Address RWQCB comments	\$19,664
5.	Prepare a Groundwater Remedial System Work Plan	\$171,420
6.	Project Management and Bid Support	\$39,352
<b>Total Not to Exceed Fee:</b>		<b>\$427,806"</b>

4. Exhibit 1 Project Authorization Fee Schedule is amended to include the attached Geer Road Landfill Groundwater Remedial System Work Plan Cost Breakdown.
5. Except as stated herein, all other terms and conditions of the Project Authorization remain unchanged.

IN WITNESS WHEREOF, the parties have executed this Amendment 1 to the Amended and Restated Project Authorization Number 16-001AR on October 24, 2016.


[Signatures appear on next page]

**COUNTY OF STANISLAUS**  
Department of Environmental Resources

By:   
Jami Aggers  
Director

"County"

**TETRA TECH BAS, INC.**

By:   
~~Bryan A. Stirrat~~ ~~President~~ *JEFFREY M WILLIAMS*  
*VICE PRESIDENT*

"Consultant"

APPROVED AS TO FORM:  
John P. Doering  
County Counsel

By:   
Amanda DeHart  
Deputy County Counsel

**STANISLAUS COUNTY  
GEER ROAD LANDFILL GROUNDWATER REMEDIAL SYSTEM WORK PLAN  
COST BREAKDOWN**

Work Item	LABOR COSTS										Total Labor Cost	Other Direct Costs* cost+ 10%	TOTAL COSTS		
	Principal	Div. Engineer	Proj. Eng.	Snr. Env. Sc.	Env. Spec. II	Eng. III	Eng. I	Adm Assistant	Total Hours						
	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.							
<b>TASK 4: Address RWQCB Comments</b>															
Address RWQCB Comment #1 - Evaluation of extraction of groundwater from existing wells MW-145R and MW-7S. Includes using existing site numerical model with updated particle tracking.	40	4	4	20	4	2				74	\$16,800		\$16,800		
Address RWCB Comment #2 - Evaluation/discussion regarding use of larger diameter borings of new extraction wells NEW-1A through NEW-8B.			2	4	12	2				20	\$2,864		\$2,864		
Address RWCB Comment #3 - Groundwater remedial system shall be expandable.	This the work associated with this item is addressed in Task 2(E)														
<b>TASK 4 Subtotal:</b>												<b>\$19,664</b>			
<b>TASK 5: Groundwater Remedial System Work Plan</b>															
(A) - Address RWQCB Comments.	This the work associated with this item is addressed in Task 1														
(B) - Well Installation Plan - Detailed plan to drill, install, develop, and maintain each proposed groundwater extraction well. A maintenance schedule will be included.		4	4	10	30	8	8			64	\$9,160		\$9,160		
(C) - Well Completion Details - Details for each proposed extraction well including boring diameter, well diameter, screen length, and pump placement			2	2	8		8			20	\$2,608		\$2,608		
(D) - Sieve Analysis - Propose sieve analysis of the screen interval to support screen slot size and filter pack size.	This the work associated with this item is addressed in Task 2(B)														
(E1) - Groundwater Remedial System Installation Plan - Includes installation plan for all conveyance piping, electrical conduits, cleanouts, and treatment system components.	2	4	12	4		40	40	2		104	\$14,230	\$1,000	\$15,230		
(E2) - Bid Level Design Drawings for Groundwater Remedial System	1	4	20	4		80	80	2		191	\$25,160	\$500	\$25,660		
(E3) - Technical Specifications - bid level technical specifications for construction of the groundwater remedial system.	1	4	10	2		20	32	2		71	\$9,680		\$9,680		
(E4) - Operations and maintenance manual for groundwater remedial system.	1	4	10	10		20	32	2		79	\$10,992		\$10,992		
(E5) Electrical design - Includes coordination for electrical service and design of all electrical components and controls.										0	\$0	\$39,000	\$39,000		
(E6) Geotechnical Investigation - Geotechnical investigation in proposed area of the groundwater treatment system.	2	2	2	40		16				62	\$10,092	\$5,000	\$15,092		
(E7) Data Evaluation and Design Finalization - Includes evaluation of extraction rates and groundwater chemistry of new extraction wells.	1	4	20	4		20	30	2		81	\$11,550		\$11,550		
(F) - Work Plan - Detailed plan to install, operate, and maintain the infiltration gallery for the discharge of treated groundwater.		4	8			16	24			52	\$7,096		\$7,096		
(G) - Expanded Cross-Section - Revised cross-section showing the location and screen interval of each proposed extraction well along with the new surrounding soil types				8	24	2	20			54	\$6,932		\$6,932		
(H) - Radius of Influence Map - Map showing the estimated radius of influence from each proposed groundwater extraction well with the proposed extraction rates.	This the work associated with this item is addressed in Task 1														
(I) - Monitoring Network - Proposed monitoring network to verify the achieved radius of influence for each extraction well.	4	4		8	24	2	8			50	\$7,632		\$7,632		
(J) - Capture Zone Map - Create map that shows predicted capture zone outside the landfill footprint.	10	4		4	12		8			38	\$6,788		\$6,788		
(K) - Installation Schedule		2	2	4		4				12	\$2,000		\$2,000		
(L) - Notice of Intent		2	2	4		4				12	\$2,000		\$2,000		
<b>TASK 5 Subtotal:</b>												<b>\$171,420</b>			
<b>TASK 6: Project Management and Bid Support</b>															
Project Management (2 Meetings w/RWQCB)	16	16	2	16		16				66	\$13,184	\$3,000	\$16,184		
Well Installation Bid Support (1 site walk)		10		40						50	\$8,800	\$1,200	\$10,000		
Treatment System Construction Bid Support		10	12			56				78	\$11,968	\$1,200	\$13,168		
<b>TASK 6 Subtotal:</b>												<b>\$39,352</b>			
<b>Total Hours</b>	<b>78</b>	<b>82</b>	<b>112</b>	<b>184</b>	<b>114</b>	<b>308</b>	<b>290</b>	<b>10</b>	<b>1178</b>						
<b>Total Cost</b>	<b>\$21,684</b>	<b>\$18,368</b>	<b>\$19,712</b>	<b>\$30,176</b>	<b>\$15,048</b>	<b>\$41,888</b>	<b>\$31,610</b>	<b>\$1,050</b>			<b>\$179,536</b>	<b>\$50,900</b>	<b>\$230,436</b>		

\*All travel expenses shall be reimbursed in accordance with the County's travel policy



**DEPARTMENT OF ENVIRONMENTAL RESOURCES**  
3800 Cornucopia Way, Suite C, Modesto, CA 95358  
Phone: (209) 525-6770  
Fax: (209) 525-6773

**PROJECT AUTHORIZATION UNDER THE AMENDED AND RESTATED MASTER AGREEMENT**  
**Project Number 17-002AR-SM**

**For**  
**Treated Water Discharge Analysis of Alternatives and Report for the Geer Road Landfill**

WHEREAS, as of December 11, 2012, (the "Effective Date") the County of Stanislaus ("County") and Tetra Tech BAS Inc., ("Consultant"), have entered into a certain Agreement relating to the provisions of monitoring, sampling and reporting services (the "Original Master Agreement"); and

WHEREAS the Original *Master Agreement for Professional Design Services* number A101412 entered into on December 11, 2012, was amended and restated under Agreement number A101412AR on January 6, 2015, to allow "as needed", Prevailing Wage Work to be performed for maintenance, surveying, construction oversight, inspection, observation, repairs, non-routine service calls, and emergency services; and the Original Agreement failed to recognize that work requiring the payment of Prevailing Wage would be required under the Agreement; and

NOW, THEREFORE, and in consideration of the mutual covenants and conditions contained herein, the parties hereby agree as follows:

**A. Terms and Conditions**

Except as hereinafter provided, the services provided by the Consultant under this Project Authorization, shall be subject to the terms and conditions set forth in the *Amended and Restated Master Agreement for Professional Design Services* number A101412AR and its Exhibits 1, "C" and "D" made and entered into by and between the County of Stanislaus ("County") and Tetra Tech BAS Inc., ("Consultant"), on January 6, 2015.

**B. Background**

The Geer Road Landfill is located approximately 10 miles southeast of the City of Modesto in Stanislaus County, on the northern bluff of Tuolumne River in central Stanislaus County. The 167-acre site is jointly owned by Stanislaus County and the City of Modesto. It is classified as a Class III landfill and is currently closed.

When the landfill was in active operation, it was operated by the Stanislaus County Department of Public Works, and accepted municipal and cannery wastes from November 1970, until July 1990. The site operated as an area/trench fill sanitary landfill between 1970 and 1990. Approximately 144 acres (footprint) were used for refuse disposal. An estimated 4.5 million tons of municipal solid waste was disposed of at the site. The maximum depth of refuse is estimated to range between 50-60 feet. The Stanislaus County Department of Environmental Resources currently maintains the landfill as a closed facility.

The County is in need of Consultant to prepare a report discussing the seasonal alternatives/options for discharge of treated water from the expanded GWETS in response to requirement #2 of the April 25, 2017 Notice of Violation, Site Inspection and Work Request letter issued by the Central Valley Regional Water Quality Control Board (CVRWQCB). The CVRWQCB has requested that the report be submitted by July 17, 2017.

The following Scope of Work identifies the Work covered under this Project Authorization.

**C. SCOPE OF WORK**

The Consultant shall provide all of the labor, materials and supervision to perform the following Tasks. The scope provided in this proposal addresses the steps need to prepare the Treated Water Discharge Analysis of Alternatives and Report and includes evaluation of the following alternatives:

**1. ALTERNATIVE 1 – NO CHANGE:** This assumes that no design or operational change is needed and that the system will operate as designed, even during periods of flooding of the Triangle Ranch. To evaluate this alternative Consultant shall assess the water quality of the anticipated expanded GWETS discharge against the discharge requirements for the Tuolumne River. This will require contacting the RWQCB to identify those requirements, as well as the permitting requirements.

**2. ALTERNATIVE 2 – DISCHARGE TO THE EXISTING GWETS LEACH FIELD:** To evaluate this alternative Consultant shall perform hydrogeologic modeling reflecting introduction of treated water at the existing GWETS leach field; perform a cost analyses of the impacts of connecting of the new GWETS discharge to the existing GWETS piping system; perform a review of any historical reports relating to previous percolation testing performed for construction of the existing GWETS leach field; and perform percolation testing of the existing GWETS leach field (as needed based on the results of the modeling and cost analysis).

**3. ALTERNATIVE 3 – DISCHARGE TO A NEWLY CONSTRUCTED LEACH FIELD LOCATED ON THE RIDGE ABOVE TRIANGLE RANCH AND IMMEDIATELY WEST OF THE NORTHWEST CORNER OF THE LANDFILL:** To evaluate this alternative Consultant shall perform hydrogeologic modeling reflecting introduction of treated water at the newly proposed location; perform a cost analyses of the impacts of connecting of relocating the leach field; and perform percolation testing of the in the alternative leach field location (as needed based on the results of the modeling and cost analysis).

**4.** The results of these evaluations will be summarized in a report to the CVRWQCB. A draft version of the report will be provided to the County for review and comment prior to submittal.

**5.** Evaluation of Alternatives 2 and 3 may require field work to be conducted at the site. This is anticipated to require between 2 and 3 days to complete depending on whether percolation testing is required at one, or both locations. This work will be considered prevailing wage under our existing agreement.

**D. Project Authorization Period**

Services shall commence on **July 5, 2017**, or upon the signing of this Agreement, and continue until **December 31, 2017**, or upon completing the agreed upon services.

**E. Compensation**

Consultant shall be compensated for the services provided under this Project Authorization as follows:

**1. Project Price**

1.1 The below project pricing is devised to allow the County the ability to identify costs associated with the frequency of tasks performed in a given project. The Consultant shall be compensated on a time and material basis, based on the rates set forth in the Master Agreement Exhibit "C" – Fee Schedule and Exhibit 1 of the Project Authorization, to perform the work associated with each task, not to exceed the amounts listed below. Maximum Total Task Price includes fees and reimbursable expenses that have been agreed to by the both parties in accordance with the Master Agreement, Exhibit "C" – Fee Schedule. The County shall not reimburse for fax, phone, postage or copies and other items as identified in the Master Agreement Exhibit "C" – Fee Schedule. The County shall not pay a mark-up on travel expenses and items identified in Exhibit "C" – Fee Schedule

of the Master Agreement. Consultant shall include all receipts for travel expense reimbursement. Travel expense reimbursement shall be in accordance with Master Agreement Exhibit "C" – Fee Schedule and the County's travel policy.

1.2 The not to exceed total for this Project Authorization consists of the following not to exceed fees:

Task	Title	Amount
1.	Evaluation of No Charge Alternative	\$2,674
2.	Design and Hydrogeologic Modeling of New Alternatives	\$8,416
3.	Infiltration Testing and Field Condition Review	\$7,838
4.	Report Preparation	\$6,120
<b>Total Not Exceed Fee</b>		<b>\$25,048</b>

\*Note: Invoices submitted for payment under the above categories shall be in accordance with this Project Authorization, Exhibit "1" to this Project Authorization and the Master Agreement Exhibit "C".

1.3 A detailed breakdown of the Fee Schedule for this Project Authorization is in the attached Exhibit 1 – Fee Schedule.

**F. Payment and Invoicing**

- The terms of payment are Net 30 days after approval of the invoice.
- Consultant shall submit a detailed invoice for work actually completed. The invoice is to include but not be limited to the following information: Hours worked by Consultant's Staff, the title of the Staff, billable rate, actual copies of equipment rental invoices, detailed information on equipment being rented, if prevailing wage work is performed payroll records in accordance with Section 2.3 of the Amended and Restated Master Agreement, and reimbursable items that are reasonable, necessary and actually incurred by the Consultant in connection with the services. All invoices including reimbursable items shall have appropriate back up documents (i.e., copies of receipts) attached to the invoices. No mark-up is allowed on travel reimbursement and copies of all receipts must accompany the invoice. Travel expenses shall be reimbursed in accordance with Master Agreement Exhibit "C" – Fee Schedule and the County's travel policy which is incorporated herein by reference. Consultant shall be compensated for services rendered and accepted under this Agreement and shall be paid monthly, in arrears, on a time and material basis not to exceed the per-task totals for work performed and services provided. The County's project authorization number shall be submitted on the invoice in order for payment to be made.
- The County shall pay the Consultant 30 days after approval of the invoice. Invoices shall be mailed or delivered to the remit to address indicated below.

Stanislaus County  
 Department of Environmental Resources Landfill  
 Attention: Jami Aggers (A101412AR PA 17-001AR)  
 3800 Cornucopia Way, Suite C  
 Modesto, California 95358

**G. Representatives**

The County's representatives are Jami Aggers, (209) 525-6786. The Consultant's representatives are Bryan Stirrat as the primary contact, Greg Acosta as Consultant's contact.

**H. Counterparts**

This Agreement may be executed in one or more counterparts, each of which shall be deemed an original. All counterparts shall be construed together and shall constitute one agreement.

**I. Professional Services**

All professional services to be provided by Consultant pursuant to this Agreement shall be provided by personnel experienced in their respective fields and in a manner consistent with the standards of care, diligence and skill ordinarily exercised by professional consultants in similar fields and circumstances in accordance with sound professional practices. Consultant also represents that it is familiar with all laws that may affect its performance of this Agreement and shall advise County of any changes in any laws that may affect Consultant's performance of this Agreement.

**J. Prevailing Wage**

Contractor shall comply with all the provisions of state and local laws relating to contracts for the prosecution of public works. Pursuant to law, the County has ascertained the general prevailing rate of per diem wages in the locality of the work for each craft or type of workman required for performance of the contract, which rates are as stated in the Invitation to Bidders, and the Contractor shall be required to pay not less than said prevailing rates. Contractor is required to post a copy of these prevailing wage rates at the job site.

Pursuant to Labor Code section 1771, the work under this Agreement is subject to the provisions of Article 2 (commencing with section 1770) of Chapter 1 of Part 7 of Division 2 of the Labor Code, and the Contractor shall pay all workers the general prevailing rate of per diem wages applicable to the work to be done for straight time, overtime, Saturday, Sunday and holiday work. These wage rates, which are set forth by the Director of the Department of Industrial Relations, are now on file with the Department of Public Works and are a part of this Agreement. The Contractor shall post a copy of these prevailing wage rates on the job site.

**REGISTRATION WITH THE DEPARTMENT OF INDUSTRIAL RELATIONS.** No Contractor or subcontractor may be listed on a bid proposal for a public work project (submitted on or after March 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)]. No contractor or subcontractor may be awarded a contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5. This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

CONTRACTOR HEREBY ATTESTS THAT CONTRACTOR AND ALL SUBCONTRACTORS ARE REGISTERED WITH THE DEPARTMENT OF INDUSTRIAL RELATIONS ("DIR"). Senate Bill 854 requires that all contractors performing work on any public works project valued at more than \$1,000.00 must be registered with the DIR, and that all said contractors submit certified payroll reports directly to the DIR, unless excused. Failure to comply with this sections constitutes a material breach of this contract.

**PAYROLL RECORDS.** Pursuant to and in accordance with the provisions Labor Code section 1776, the Contractor shall keep accurate payroll records of employees performing work under this Agreement and shall make available for inspection certified copies such payroll records.

[SIGNATURES APPEAR ON NEXT PAGE]



IN WITNESS WHEREOF, the parties have executed this Project No. 17-002AR on  
July 11, 2017.

**COUNTY OF STANISLAUS**  
Department of Environmental Resources

By:   
Jami Aggers  
Director


"County"

**TETRA TECH BAS, INC.**

By:   
Bryan A. Stirrat  
President

"Consultant"

APPROVED AS TO FORM:  
John P. Doering  
County Counsel

By:   
Amanda DeHart  
Deputy County Counsel

**EXHIBIT 1  
PROJECT AUTHORIZATION FEE SCHEDULE**

Item	LABOR COSTS										Total Hours	Total Labor Cost	Other Direct Costs	TOTAL COSTS
	Principal Engineer	Div. Eng.	Senior Env. Sci.	Senior Env. Spec.	Eng. II	Const. Insp. (PW)	Eng. Tech IV	Env. Spec.	Adm Assist.					
	hr. \$237	hr. \$224	hr. \$164	hr. \$143	hr. \$129	hr. \$160	hr. \$105	hr. \$103	hr. \$105				cost+ 10%	
Evaluation of No Charge Alternative		2		8	2			8			20	\$2,674		\$2,674
Design and Hydrogeologic Modeling of New Alternatives	12	6	4	2	4						28	\$5,646	\$2,770	\$8,416
Infiltration Testing and Field Condition Review			4	2	4	16	10				36	\$5,068	\$2,770	\$7,838
Report Preparation	4	2	4	2	20			8	2		42	\$5,952	\$168	\$6,120
<b>Total Hours</b>	<b>16</b>	<b>10</b>	<b>12</b>	<b>14</b>	<b>30</b>	<b>16</b>	<b>10</b>	<b>16</b>	<b>2</b>		<b>126</b>			
<b>Total Cost</b>	<b>\$3,792</b>	<b>\$2,240</b>	<b>\$1,968</b>	<b>2,002</b>	<b>\$3,870</b>	<b>\$2,560</b>	<b>\$1,050</b>	<b>\$1,648</b>	<b>\$210</b>			<b>\$19,340</b>	<b>\$5,708</b>	<b>\$25,048</b>

\*All travel shall be reimbursed in accordance with the County's Travel Policy and the Master Agreement.