

AMENDMENT NUMBER 1 TO
AGREEMENT FOR PROFESSIONAL SERVICES
BETWEEN
TETRA TECH, INC. (formerly known as TETRA TECH GEO, INC.)
AND
THE CITY OF ANN ARBOR

The City of Ann Arbor, a Michigan municipal corporation, with offices at 301 E. Huron Street, Ann Arbor, Michigan 48107-8647 ("City") and Tetra Tech, Inc. (formerly known as Tetra Tech GEO, Inc.), a Virginia Corporation, having its offices at 710 Avis Drive, Ann Arbor, Michigan 48108 ("Consultant") agree to amend the professional services agreement executed by the parties dated July 2, 2012 as follows:

Article III.A., SERVICES, is amended to read as follows: The Consultant agrees to provide professional engineering services ("Services") in connection with the Project as described in Exhibit A and, together with Exhibit A2, which is attached hereto. The City retains the right to make changes to the quantities of service within the general scope of the Agreement at any time by a written order. If the changes add to or deduct from the extent of the services, the contract sum shall be adjusted accordingly. All such changes shall be executed under the conditions of the original Agreement.

Article IV.A., The Consultant shall be paid in the manner set forth in Exhibit B, together with Exhibit B2, which is attached hereto. Payment shall be made monthly, unless another payment term is specified in Exhibit B or Exhibit B2, following receipt of invoices submitted by the Consultant, and approved by the Contract Administrator.

All terms, conditions, and provisions of the original agreement between the parties executed July 2, 2012, unless specifically amended above, are to apply to this amendment and are made a part of this amendment as though expressly rewritten, incorporated, and included herein.

This amendment to the agreement between the parties shall be binding on the heirs, successors and assigns of the parties.

Dated this July 15, 2013.

FOR CONSULTANT

By _____

Its: _____

FOR THE CITY OF ANN ARBOR

By: _____
John Hieftje, Mayor

By: _____
Jacqueline Beaudry, City Clerk

Approved as to substance

Steven D. Powers, City Administrator

Craig Hupy,
Public Services Area Administrator

Approved as to form and content

Stephen K. Postema, City Attorney

EXHIBIT A2 SCOPE OF SERVICES

Task 1: Offsite Remedial Action Plan & Coordination with MDEQ

This task shall include the preparation of a presentation of the draft offsite Remedial Action Plan (RAP) to the Michigan Department of Environmental Quality (MDEQ) Remedial Action Team (RAT), prior to the submittal of the offsite RAP for final review and approval. In addition, the consultant will be asked to prepare a letter in response to RAT comments. This task shall also include the review of historical inorganic data, the drafting of figures and the final production of the offsite RAP for submittal to the MDEQ. This task shall also include the completion of minor RAP revisions based on MDEQ feedback, coordinate with MDOT for I-94 restrictive covenant deed and provide public meeting assistance to the City.

Task 2: Directional Drilling and Well Abandonments for Purge Wells

This task shall include the cost for completing the directional drilling and oversight for the new PW-3R-01 discharge line. In addition, this task includes obtaining the necessary Washtenaw County Well permits. This task shall include the preparation and submittal of the Well Abandonment Report to MDEQ, City of Ann Arbor and the Washtenaw County. This task includes the complete site restoration activities in Southeast Area Park. In addition, this task shall include coordination with City personnel for repairs, inspection, solar panel system and flow meters and coordination with Forest Hills for moving a gas monitoring well to accommodate a new entry sign.

Task 3: Greenhouse Gas Weekly Readings

This task shall include the collection of weekly readings at the gas systems and database management. This task also includes coordination of corrective actions with Landfill Energy Systems (LES) to correct system downtime or failures.

Task 4: NSMCS Maintenance, Industrial User Permit and Lillie Park Sampling

This task includes the completion and submittal of the Industrial User Permit inspection forms for City of Ann Arbor Wastewater Treatment Plant. In addition, this task includes the trouble shooting and coordination of maintenance repairs at the north side methane collection system (NSMCS) and MDEQ notification of system outage. This task also shall include the Lillie Park coordination with Pittsfield Township for sampling drinking water fountain and the cost of laboratory analytical costs.

Task 5: Landfill Cap Tree Removals – Coordination with City, Repairs and Restoration

This task includes the completion of hand augers to verify if 2-feet of clay is present under the sandy soil. This task assumes topsoil will be required to complete site restoration needs and that no subcontractor and no clay will be required.

Task 6: LES Generator – Resizing and Recosting Estimate

This task includes the review of gas curves and system data. In addition a site visit to inspect the equipment will be required. The Consultant will provide options for continuing methane recovery with associated budgetary costs. This task will include a meeting with the City to discuss the options in detail.

Task 7: Installation of Purge Well Sampling Ports on PW-1R-12 and PW-3R-12

This shall include the installation of sampling ports on the new purge wells to reduce sampling time onsite.

Task 8: North side Methane Collection System (NSMCS) Blower Repairs

This task will address the blower repairs resulting from the bearings inside the blower which have flattened with use over time, causing friction, overheating and the eventual system shutdown. This task will cover the replacement of these bearings including the parts and labor for a subcontractor to replace the bearings and inspect the blower for any additional operational and maintenance issues.

Task 9: Revise the Hydrogeological Monitoring Plan (HMP)

This task includes the preparation and submittal of the HMP to MDEQ, which shall result in a reduction of the frequency of sampling, removes chloride from the plan, and optimizes well sampling locations for the parameters of interest.

Task 10: Well Abandonment and Repairs**Task 10.1 Well Abandonments**

This task includes the abandonment of approximately 20 wells, including two 6-inch wells that were former extraction wells. The remaining 18 wells are assumed to be 2-inch wells made of stainless steel, to an approximately depth of 40 feet and will require removal to just below grade. It is assumed that this work will include the removal of the infrastructure (bladder pump, drop pipe, etc.) within all of the wells. The casing and annular space shall be backfilled with cement grout. Site restoration will include topsoil and grass seed in residential and park areas. This work shall be completed in approximately 10 days. The Consultant will provide contractor oversight and complete well abandonment logs and will coordinate with City surveyor to update database layers.

Task 10.2 Well Repairs

This task includes the general repair to existing monitoring wells and will require two days to complete. The Consultant will provide contractor oversight.

Task 10.3 Well Abandonment Reporting

This task shall include the preparation and submit of field reports to the MDEQ and Washtenaw County summarizing the well abandonment activities. The Consultant shall update the well log binder for the City of Ann Arbor.

Task 11: Additional Bioremediation

This task includes the cost to complete an additional bioremediation EOS injection pilot test. This task shall include the installation of six injection wells and obtaining the necessary well permits from Washtenaw County. In addition, this task includes the purchase of emulsified vegetable oil and *Dehalococcoides* for amending the aquifer. These injections will be completed separately in two different field mobilizations. This task will require the use of a City fire hydrant and includes the cost of permit and water usage. Gas and groundwater monitoring per previous MDEQ requirements shall be included in task. The preparation and submittal of a letter report summarizing pilot test and results will be submitted to MDEQ.

Task 12: Scanning Documents in Royal Oak Storage

This task includes the estimated administrative and intern personnel costs for scanning the documents in the Royal Oak Storage. Documents shall be scanned and provided to the City in an electronic format, eliminating the need for storage of paper copies. The documents shall be delivered to Consultants office.

EXHIBIT B2
FEE SCHEDULE

		Task Number	Total Project Cost 2012 - 2015
CITY OF ANN ARBOR LANDFILL			
ADDITIONAL TASKS			
Offsite Remedial Action Plan & Coordination with MDEQ	1	\$	49,836
Directional Drilling and Well Abandonments for Purge Wells	2	\$	16,397
Greenhouse Gas Weekly Readings	3	\$	4,449
NSMCS Maintenance, Industrial User Permit and Lillie Park Sampling	4	\$	5,512
Landfill Cap Tree Removals - Coordination with City, Repairs and Restoration	5	\$	4,360
Landfill Energy Systems (LES) Generator - Resizing and Recosting Estimate	6	\$	6,036
Installation of Purge Well Sampling Ports	7	\$	5,379
Northside Methane Collection System (NSMCS) Blower Repairs	8	\$	6,896
Revise Hydrogeological Monitoring Plan (HMP)	9	\$	4,218
Well Abandonments	10.1	\$	21,500
Well Repairs	10.2	\$	6,799
Well Abandonment Report	10.3	\$	3,624
Additional Bioremediation	11	\$	33,597
Scanning Documents in Royal Oak Storage	12	\$	9,993
TOTAL		\$	178,596