

### **THIRD AMENDMENT TO AGREEMENT**

THIS THIRD AMENDMENT TO AGREEMENT ("Amendment") made and entered into as of this \_\_\_\_ day of December, 2014, amends the Agreement heretofore entered into between the CITY OF FRESNO, a municipal corporation, ("CITY"), and CDM Smith Inc. formerly known as Camp, Dresser & McKee, Inc., a Massachusetts corporation ("CONSULTANT"). CITY and CONSULTANT are sometimes referred to individually as a Party and collectively as Parties.

### **RECITALS**

CITY and CONSULTANT entered into an Agreement, dated September 29, 2011 and as amended on December 20, 2012 and as amended December 20, 2013, for professional groundwater remedial action services for the City of Fresno Sanitary Landfill ("Agreement"); and

CITY now desires to modify the scope of work, therein, by requiring additional services.

### **AGREEMENT**

NOW, THEREFORE, in consideration of the above recitals, which recitals are contractual in nature, the mutual promises herein conditioned, and for other good and valuable consideration hereby acknowledge, the Parties agree that the Agreement be amended as follows:

1. CONSULTANT shall provide additional services as described in **Attachment "A"**, attached hereto and incorporated herein by reference. Such additional services shall be completed by December 31, 2015, following execution of this Amendment by both parties.

2. CONSULTANT's sole compensation for satisfactory performance of all services required or rendered pursuant to this Amendment shall be a total fee of \$265,600.00.

3. In the event of any conflict between the body of this Amendment and any Exhibit or Attachment hereto, the terms and conditions of the body of this Amendment shall control and take precedence over the terms and conditions expressed within the Exhibit or Attachment. Furthermore, any terms or conditions contained within any Exhibit or Attachment hereto which purport to modify the allocation of risk between the parties, provided for within the body of this Amendment, shall be null and void.

4. Except as otherwise provided herein, the Agreement entered into by CITY and CONSULTANT, dated September 29, 2011, and as amended on December 20, 2012, and as amended on December 20, 2013 remains in full force and effect.

IN WITNESS WHEREOF, the parties have executed this Amendment at Fresno, California, the day and year first above written.

CITY OF FRESNO,  
a municipal corporation

By \_\_\_\_\_

Name \_\_\_\_\_

Title \_\_\_\_\_

ATTEST:

YVONNE SPENCE, CMC  
City Clerk

By: \_\_\_\_\_  
Deputy

APPROVED AS TO FORM:  
Douglas Sloan  
City Attorney

By: \_\_\_\_\_  
Brandon M. Collet      Date  
Deputy

Attachment: Exhibit "A" – Scope of Services

BMC:prn [63370prn/agt] 11-20-13

CDM Smith, Inc.,  
a Massachusetts corporation

By Paul F. Meyerhofer  
Name PAUL F. MEYERHOFER

Title SENIOR VICE PRESIDENT

By \_\_\_\_\_

Name \_\_\_\_\_

Title \_\_\_\_\_

REVIEWED BY:

\_\_\_\_\_  
Jerry L. Schuber, Sr.  
Assistant Director of the  
Department of Public Utilities

## **Exhibit A**

### **SCOPE OF SERVICES**

**Consultant Service Agreement between City of Fresno (“City”)**

**And CDM Smith (“Consultant”)**

Fresno Sanitary Landfill Groundwater Testing

PROJECT TITLE

#### **Year 4 (Amendment No. 3) Scope of Work and Budget (2015) Fresno Sanitary Landfill (Operable Unit 2) Groundwater Testing**

### **Introduction**

Provided below are descriptions of work tasks to be performed by CDM Smith on behalf of the City of Fresno (City) as part of the ongoing operations of the groundwater remediation system (Operable Unit No. 2) at the Fresno Sanitary Landfill (FSL). This work is being performed as an element of the formal closure of the FSL Superfund Site under the oversight of the U.S. Environmental Protection Agency (USEPA).

This scope of work presented below reflects work to be performed during Year 4 of the current contract between the City and CDM Smith, dated September 29, 2011, and covers the period January through December 2015. Work on the project is defined in terms of six project tasks, consistent with work performed under this contract between the City and CDM Smith during Year 1 of the existing contract:

Task 1 – Design and Construction Oversight – Well Decommissioning

Task 2 – Groundwater Monitoring Program

Task 3 – Groundwater Remedial Action Operations Assistance

Task 4 – Performance Monitoring Program Reporting

Task 5 – Project Reports

Task 6 – Project Management/Project Meetings

The Table 1 consists of a summary of the estimated costs for this scope of work. The total cost for this work is \$265,600.

### **Task 1 – Design and Construction Oversight – Well Decommissioning**

#### ***Objective***

The objective of this task is to properly decommission six inoperable monitoring wells and to complete rehabilitation of one currently operating B-aquifer extraction well. At the FSL, there are eight A-aquifer groundwater monitoring wells and four A-aquifer extraction wells that are

inoperable due to declining water levels in the A-aquifer zone. During 2014, CDM Smith prepared specifications for properly decommissioning wells in accordance with California State requirements. Tentative plans are to decommission the inoperable wells over a period of several years. Six groundwater monitoring wells are targeted for decommissioning during 2015. In addition, one operating B-aquifer extraction well will undergo well rehabilitation activities. The intent is to utilize specifications prepared during 2014 as a specifications template for future well decommissioning efforts. The specifications direct the drilling contractor to drill-out the PVC well casing and to grout the resulting borehole with a sand-cement slurry.

### ***Activities***

The well decommissioning program to be initiated during 2015 will consist of the following element of work:

Assist City staff to identify groundwater monitoring wells to include in the well decommissioning program and to identify drilling contractors that have the necessary experience in performing well decommissioning operations. The priority is to identify drillers in the Fresno area with relevant experience.

Obtain permits required for well decommissioning and prepare Department of Water Resources Water Well Drillers Reports.

Assist the City in preparing bid documents, which will include the technical specifications prepared by CDM Smith during 2014.

Provide assistance to City staff during the contractor bid period. Bid period assistance will include participation in the pre-bid conference, preparation of formal responses to questions from prospective contractors, and review of contractor bids (as requested by City staff).

Provide construction period services during implementation of the well decommissioning and well rehabilitation program. Construction period services will include review of contractor submittals and oversight of all well decommissioning activities.

### ***Assumptions***

- Six A-aquifer groundwater monitoring wells will be decommissioned and one extraction well will undergo well rehabilitation during 2015.
- Downhole video logging or casing perforation operations will not be included as part of the well decommissioning procedures.
- Decommissioning activities are expected to require one day of field work per monitoring well. The well rehabilitation for PW-1B is expected to require up to 10 days of field work.
- Cost estimate for this task includes travel and per diem expenses for meetings at the Site and during oversight of the drilling contractor during well decommissioning activities.

### ***Deliverables***

- Technical specifications for the well decommissioning and well rehabilitation activities were completed during 2014.

- Technical memorandum to document the well decommissioning activities will be prepared as an element under Task 5 (below).

## **Task 2 – Groundwater Monitoring Program**

### ***Objectives***

The Groundwater Monitoring Program at the FSL has been ongoing for a number of years. City personnel have assumed primary responsibility for performing the quarterly field sampling activities, including making arrangements with the analytical laboratory (analyses, sampling containers, delivery of sampling containers to the site) and sample collection from the groundwater monitoring wells and the groundwater treatment plant (GTP) influent and effluent lines. CDM Smith will coordinate with City staff in the ongoing implementation of this program.

### ***Activities***

Quarterly sampling events are scheduled to be performed in January, April, July, and October 2015. As part of this Task 2, CDM Smith will be responsible for the following activities:

Coordinate with the City field personnel during field sampling events to be performed in January, April, July, and October 2015. This includes making City staff aware of updates/modifications to the performance monitoring program activities and assisting in incorporation of modifications into the program (Note: Recommended modifications to the sampling program, such as increasing/decreasing frequency of sampling for individual monitoring wells, is typically proposed as part of the annual performance monitoring report).

During the April 2015 monitoring event, assist City staff during water level measurement, groundwater sampling, and GTP influent and effluent sampling activities. The objective of this annual effort will be to ensure consistency with procedures defined in the Performance Monitoring Program, Operable Unit 2, dated November 30, 2000 (CDM Smith) and recommend changes in procedures, as necessary.

Maintain the environmental database, including upload of analytical data upon receipt from the analytical laboratory following each quarterly sampling round. Database management will include performing queries on the data and preparing data summary tables that will be included in the interim data transfer report and the annual performance monitoring program report.

### ***Assumptions***

Estimated budget for this task includes sampling equipment and supplies, travel expenses, and per diem for the April 2015 monitoring round.

Analysis of organic constituents will be performed by an analytical laboratory under contract directly with the City.

Analysis of inorganic constituents will be performed by the City of Fresno Wastewater Division Analytical Laboratory, the cost of which will be billed directly to the City.

### ***Deliverables***

The deliverables associated with the performance monitoring program are described under Task 4 (below).

### **Task 3 – Groundwater Remedial Action Operations Assistance**

#### ***Objectives***

The objective of this task is to continue providing assistance to City staff in the ongoing operations and maintenance of the groundwater remediation system at the FSL.

#### ***Activities***

Under this task, CDM Smith will provide assistance to City staff in ongoing operations and maintenance of the groundwater treatment system. This task will consist of on-site and office activities necessary to maintain effective operation of the groundwater collection and treatment system. This task includes the following activities:

Operations Assistance – Consistent with activities performed during the prior contract (2006 through 2014) activities, CDM Smith staff will travel to the site on a periodic basis to assist City staff in optimizing operations of the groundwater collection and treatment system (including extraction pump operations, GTP operations, and monitoring of instrumentation and controls). CDM Smith staff will also be available to respond to requests for assistance from City staff to address GTP operational problems or to respond to questions regarding technical or regulatory issues.

Annual Evaluation of Extraction Well Performance – CDM Smith will perform an evaluation of the performance of each well on an annual basis. Performance factors to be considered during the performance evaluation will include specific capacity (pumping rate per foot of drawdown) and changes in pumping rate over time, with comparison to historical data.

As-Needed Site Services – The cost includes funds for tasks that cannot specifically be identified at this time. The City will request that CDM Smith perform these tasks prior to initiating work. Activities under this task will be performed on an as-needed basis. These currently undefined tasks may include, but are not limited to, the following:

- Develop an estimate of future costs associated with GTP operations under various operational scenarios.
- Develop estimates for capital cost expenditures at the FSL as part of rate studies prepared by City staff.
- Collect supplemental samples from the groundwater monitoring wells or the GTP.
- Provide technical review and input on the Five-Year Review Report (to be prepared by USEPA).
- Respond to requests for information from the USEPA, or other regulatory agencies involved in oversight at the FSL.

#### ***Assumptions***

Consultant will initiate efforts on as-needed tasks upon request from the City..

The cost associated with the individual subtasks may include expenses for travel to the Site.

### ***Deliverables***

No deliverables are expected to be prepared for the Operations Assistance subtask.

Technical Memorandum will be prepared to document the annual well performance evaluation.

No deliverables have been defined for the As-Needed Services subtask.

## **Task 4 – Performance Monitoring Program Reporting**

### ***Objective***

The objective of this task is to document the performance monitoring activities (July and October 2014 and January and April 2015) and laboratory analytical results with submittal of an annual report and an interim data submittal during 2015.

### ***Activities***

This task will consist of data compilation, data evaluation, and reporting associated with the Annual Performance Monitoring Program Report. The Interim Data Transmittal (submittal to USEPA in January 2015) will consist of data summary tables and figures for the July and October 2014 monitoring rounds. The 2015 Annual Performance Monitoring Report (submittal to USEPA in July 2015) will cover the July and October 2015 and January and April 2015 monitoring rounds. The Annual Report will include the following elements:

Compilation of quarterly monitoring data (field and analytical laboratory data) and groundwater treatment plant operational data.

Preparation of data summary tables and graphics. Data summary tables shall include groundwater extraction well operational data, groundwater treatment unit performance monitoring data, VOC mass removal, groundwater level measurements, head differential measurements (well clusters), VOC analytical data, inorganic constituent data, and quality control data. Graphics shall include groundwater level contours for each monitoring round, concentration contours for selected VOC constituents, and VOC concentration trend plots.

Monitoring Program Optimization – Based on the Long Term Monitoring Optimization Plan (Plan) (CDM Smith, 2007), CDM Smith will perform an evaluation of the groundwater monitoring wells included in the monitoring program and will make recommendations in accordance with the criteria defined in the Plan. This evaluation will be completed following the April performance monitoring round. The results of this evaluation will be documented in the July 2015 Annual Performance Monitoring Program Report.

### ***Assumptions***

Interim data transmittal will consist of data summary tables and groundwater elevation contour figures and will be transmitted to USEPA via e-mail. Submittal date for the Interim data transmittal is January 2015.

Annual Performance Monitoring Report content and format will be consistent with the annual reports dated July 2013 and July 2014. Submittal date for the Annual Performance Monitoring Program Report is July 2015.

### ***Deliverables***

Interim Data Transmittal. The Interim Data Transmittal will report field and analytical data collected during the July and October 2015 monitoring rounds and will consist of data summary tables and figures and will be submitted directly to USEPA.

2015 Annual Performance Monitoring Program Report. A draft document will be submitted for review by City staff. CDM Smith will incorporate revisions from City staff and prepare final report for submittal to the USEPA.

## **Task 5 – Project Reports**

### ***Objective***

The objective of this task is to prepare formal reports for submittal to USEPA.

### ***Activities***

Task 5 activities will include preparation of several distinct technical documents/reports.

Response to USEPA Technical Review – This task includes developing comment/response documents in response to technical review comments provided by USEPA on project submittals. Additionally, this task is to be used for responding to USEPA requests for information.

Technical Memorandum, Well Decommissioning Activities – The technical memorandum will be prepared for submittal to the USEPA to document the well decommissioning activities to be performed during 2015. The technical memorandum will include construction information for each of the wells and a description of the decommissioning activities performed. The technical memorandum will also include copies of the Department of Water Resources Water Well Drillers Report.

Greenhouse Gas (GHG) Reporting Rule – CDM Smith will prepare assist the City in maintaining compliance with the USEPA's GHG Reporting Rule associated with the landfill gas (LFG) flare system emissions. CDM Smith subtasks to be performed under this contract will include assisting the City in compiling and summarizing operations data required for reporting under 40 CFR 98. CDM Smith will make assumptions and calculations for missing data and consult with USEPA, as needed. CDM Smith will upload the data directly through USEPA's website one week before the reporting deadline (March 31 2015) to allow for review by the City. The final data will be submitted to USEPA by March 30, 2015.

Phase 2 Enhancements Groundwater Remedial Action Evaluation Report – The objective of the report will be to assess the effectiveness of the Phase 2 Enhancements of the Groundwater Remedial Action (RA). Based on analysis performed as part of the evaluation of the Phase 2 Enhancements operations, recommendations may be made to refine the Enhanced Phase 2 extraction and treatment system or to proceed to the next phase of groundwater remedial action. This report will be organized similarly to the *Final Phase 2 Groundwater Remedial*



*Action Evaluation Report #2*, dated November 10, 2010. The performance assessment will be based on the Capture Zone Analysis Guidance available from USEPA. Elements to be included in the report will include:

- Groundwater Treatment Plant Performance
- Extraction System Effectiveness
- Performance Monitoring Data Analysis
- Capture Zone Analysis Modeling
- Uncertainty Evaluation

Groundwater Modeling for the Phase 2 Enhancements Performance Evaluation – As part of this task, supplemental groundwater modeling will be performed. The groundwater modeling analyses will be undertaken to evaluate the degree of hydraulic control along the western perimeter of the landfill in each of the aquifer zones and to assess the influence of the other hydraulic influences in the vicinity of the FSL.

#### ***Assumptions***

City staff will provide operations data for the LFG flare system. CDM Smith staff will compile these data and make necessary assumptions and calculations for filling data gaps.

The Phase 2 Enhancements performance evaluation will cover the period from operations start-up (expected during February 2015) through the October 2015 monitoring round. The report is scheduled for completion during December 2015.

#### ***Deliverables***

Response to Comment document, as needed, to respond to USEPA comments on project deliverables, or to USEPA questions/requests for information.

Technical memorandum to document the well decommissioning activities submitted in draft for City review. Incorporate revisions provided by City staff and prepare final report for submittal to the USEPA.

GHG Report to be submitted using the USEPA on-line system (upload directly through USEPA's website).

Phase 2 Enhancements Groundwater Remedial Action Evaluation Report. A draft document will be submitted for review by City staff. CDM Smith will incorporate revisions from City staff and prepare final report for submittal to the USEPA.

## **Task 6 –Project Management/Project Meetings**

#### ***Objective***

The objective of this task is to manage project scope and budget and to maintain communication with City staff and regulatory staff.

**Activities**

Routine project management activities, including staff oversight, budget management, and coordination with City staff on budget and scope of work development.

Prepare schedule updates, as needed.

Participate in project meetings and project conference calls, including preparing meeting agendas and other handouts.

**Assumptions**

On a quarterly basis, CDM Smith will prepare the draft Quarterly Reports for review by City staff. The City will finalize the Quarterly Report with transmittal to USEPA.

Cost estimate reflects participation in two project status meetings to be held during the period January through December 2014. The cost estimate assumes that subconsultant staff from Denver, Colorado, will participate in one project status meeting, and includes travel and per diem expenses.

**Deliverables**

Project Quarterly Reports prepared during January, April, July, and October 2014.

Monthly invoices to the City documenting CDM Smith work performed.

Agenda and handouts for periodic project meetings or teleconferences.

**Schedule**

The scope of work and budget presented above reflects project duration from January through December 2015. The schedule for major deliverables is provided below:

Quarterly Reports – January, April, July, and October 2015

Interim data transmittal – January 2015

GHG Reporting Rule data upload – March 30, 2015

Annual Performance Monitoring Program Report – July 2015

Phase 2 Enhancements Groundwater Remedial Action Evaluation Report – December 2015

**Cost Estimate**

The cost for the work described above is \$265,600. A cost breakdown is provided on Table 1, Year 3 (2015) Cost Estimate, Groundwater Testing, Fresno Sanitary Landfill (Operable Unit 2). This cost estimate constitutes the budget for Year 4 (Amendment No. 3) of the agreement between the City and CDM Smith.