

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

DEPT: Environmental Resources

BOARD AGENDA # \*B-13

Urgent

Routine

AGENDA DATE June 28, 2011

CEO Concurs with Recommendation YES  NO

4/5 Vote Required YES  NO

(Information Attached)

SUBJECT:

Approval to Extend the Term and Increase the Total Amount of the Agreement with ATC Associates, for Soil and Groundwater Investigation and Clean-Up, at 402 Downey Avenue, Modesto

STAFF RECOMMENDATIONS:

1. Approve an amendment to Master Agreement No. A081908, with ATC Associates to extend the contract for a two-year period from September 23, 2011, through September 22, 2013, and to increase the not to exceed contract amount to \$350,000, for the investigation and clean-up of contaminated property located at 402 Downey Avenue, Modesto.
2. Authorize the Director of the Department of Environmental Resources, or her designee, to amend Master Agreement No. A081908.
3. Authorize the Director of Environmental Resources, or her designee, to sign individual Project Authorizations for the duration of the Agreement providing that the cumulative total does not exceed the total contract amount of \$350,000.

FISCAL IMPACT:

Funds are available from within the Department of Environmental Resources' main budget to fund site clean-up activities. The State Water Resources Control Board (SWRCB) will provide reimbursement for all work completed as part of this contract with monies allocated from the Underground Storage Tank Clean Up Fund's Emergency, Abandoned, and Recalcitrant Site Account. The site located at 402 Downey Avenue, Modesto, is currently under a Letter of Award Agreement with the SWRCB for monies up to \$1,050,000. If necessary, this Award can be amended for up to the maximum of \$1,500,000. To date, approximately \$813,784 has been spent on this project. (Continued on Page 2)

BOARD ACTION AS FOLLOWS:

No. 2011-393

On motion of Supervisor O'Brien, Seconded by Supervisor Chiesa

and approved by the following vote,

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

Noes: Supervisors: None

Excused or Absent: Supervisors: None

Abstaining: Supervisor: None

1)  Approved as recommended

2)  Denied

3)  Approved as amended

4)  Other:

MOTION:

*Christine Ferraro*

ATTEST:

CHRISTINE FERRARO TALLMAN, Clerk

File No.

Approval to Extend the Term and Increase the Total Amount of the Agreement with ATC Associates, for Soil and Groundwater Investigation and Clean-Up, at 402 Downey Avenue, Modesto

FISCAL IMPACT: (Continued)

The current cumulative three-year Master Agreement total with ATC Associates is \$200,000. The total amount expended to date for this Agreement is \$66,202. Approval of this amendment adds \$150,000 to the Agreement through fiscal years 2011-2012 to 2013-2014, for a cumulative five-year total amount not to exceed \$350,000. If the extension is approved, a total of \$283,798 would be available for additional site investigation and cleanup activities necessary for the site to be granted closure. Estimated costs to complete anticipated site assessment and remediation activities is within the monies allotted under the current SWRCB Letter of Award Agreement.

DISCUSSION:

Chapter 6.75 of the California Health and Safety Code authorizes the State Water Resources Control Board (SWRCB) to provide Underground Storage Tank (UST) Clean-up Funds to Regional Water Quality Control Boards (RWQCB) and local UST agencies for contaminated sites with emergency situations, and abandoned or recalcitrant owners. The money is dispensed through the Emergency, Abandoned, and Recalcitrant (EAR) Site Account. These funds allow the RWQCB or a local agency to hire an environmental contractor to do investigations and remedial work at sites.

The Board of Supervisors previously authorized the Director of the Department of Environmental Resources (Department) to enter into a contract with the SWRCB for the clean-up of soil and groundwater contamination at 402 Downey Avenue, Modesto, on January 5, 1999. The SWRCB Letter of Award currently authorizes \$1,050,000 for costs incurred during the clean-up process. The site is eligible for up to a maximum of \$1,500,000.

Following a competitive procurement process in 2008, ATC Associates was selected as the most qualified, responsive and responsible environmental consultant for the EAR site located at 402 Downey Avenue, Modesto, CA. On September 23, 2008, the Board approved a three-year Master Agreement with ATC Associates that is set to expire on September 22, 2011. Groundwater monitoring and reporting, as well as the operation of a remediation system for soil and groundwater contamination has been ongoing during the term of this agreement. Groundwater monitoring costs decreased at the site due to a reduction of the frequency in monitoring events from quarterly to semi-annually, in accordance with SWRCB Resolution Number 2009-0042.

Petroleum hydrocarbon constituents associated with the former gasoline tanks at this site have significantly contaminated the soil and groundwater. A remediation system using ozone sparging for groundwater and vapor extraction for soil has been in operation for four (4) years. Analytical data indicates that although the remediation system has been successful in reducing the concentrations of contaminants both in soil and groundwater, a significant source of contamination is still present in soil outside the influence of the current system. Since soil contamination continues to contribute to groundwater contamination via leaching, site conditions are not yet ready for closure.

Approval of the amendment for environmental consulting services with ATC Associates (Attachment A), allows the Department to quickly complete additional site assessment necessary to quantify and remediate remaining onsite soil contamination, as well as perform required groundwater monitoring and remediation system operation as needed. Site investigation performed under this amendment

Approval to Extend the Term and Increase the Total Amount of the Agreement with ATC Associates, for Soil and Groundwater Investigation and Clean-Up, at 402 Downey Avenue, Modesto

will allow the Department to prepare this site for a potential low-risk closure evaluation within the next two years.

The proposed Project Authorization includes performing site assessment work necessary to quantify and remediate remaining onsite soil contamination. The total cost associated with this scope of work is \$39,961. The proposed scope of work and associated costs has been approved by the SWRCB (Attachment B). Additional project authorizations will include the cost of groundwater monitoring and operation and maintenance costs for the ozone sparging groundwater remediation system for a 12-month period.

**POLICY ISSUE:**

Approval of this agenda item to extend the term and increase the total amount of the Agreement with ATC Associates for soil and groundwater investigation and clean-up at 402 Downey Avenue, Modesto, is consistent with the Board's priorities of A Safe Community, A Healthy Community, and A Well Planned Infrastructure System. This amendment will also assist the Department in meeting the Board priority of closing 7% of identified urban pollution sites this year.

**STAFFING IMPACTS:**

There are no staffing impacts associated with this item.

**CONTACT PERSON:**

Sonya K. Harrigfeld, Director of Environmental Resources

Telephone: 209-525-6770



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

**AMENDMENT NO. 1**  
**TO**  
**INDEPENDENT CONTRACTOR SERVICES**  
**ATC ASSOCIATES INC.**

This Amendment No.1 to the Master Agreement for Independent Contractor Services ("Amendment No. 1") by and between the County of Stanislaus ("County") and ATC Associates Inc., ("Contractor") is made and entered into on June 28, 2011.

Whereas, the County and Contractor entered into a Master Agreement for Independent Contractor Services dated October 1, 2008 ("the Agreement"); and

Whereas, Paragraph 16 of the Master Agreement provides for the Agreement to be amended, modified, changed, added or subtracted from by mutual consent of both parties; and

Whereas, the County desires to extend the Master Agreement for two (2) years to complete the cleanup of 402 Downey Avenue; and

Whereas, the County has a need to increase the Master Agreement by \$150,000.00 to compensate the Contractor for completed work during the two (2) year extension; and

Whereas this amendment is for the mutual benefit of County and Contractor;

Now, therefore, the County and Contractor agree as follows:

1. Section 3 – Term is amended as follows:

"**Term:** The initial term of the Agreement shall be from September 23, 2008, until September 22, 2011. An extended term of the Agreement shall be for a period commencing on September 23, 2011, and end September 22, 2013, or until all work on each Project Authorization let during the twenty-four (24) month period is completed, unless previously terminated as provided herein or as otherwise agreed to in writing by the parties."

2. Exhibit A, Section E, 2. – "Compensation" is amended as follows:


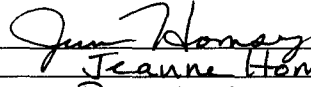
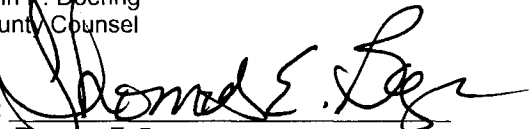
"2. The parties hereto acknowledge the maximum amount to be paid by the County for the initial services provided shall not exceed \$200,000.00, including, without limitation, the cost of any subcontractors, consultants, experts or investigators retained by the Contractor to perform or to assist in the performance of its work under this Agreement.

The maximum amount to be paid by the County for the additional services provided shall not exceed \$150,000.00, including, without limitation, the cost of any subcontractors, consultants, experts or investigators retained by the Consultant to perform or to assist in the performance of its work under this Agreement.

The total cumulative compensation to Consultant under this Agreement shall not exceed \$350,000.00."

3. 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.

<p><b>COUNTY OF STANISLAUS</b> DEPARTMENT OF ENVIRONMENTAL RESOURCES</p> <p>By: <u></u> Sonya K. Harrigfeld Director</p> <p>"County"</p>	<p><b>ATC ASSOCIATES INC.</b></p> <p>By: <u></u> Name: <u>Jeanne Homsey</u> Title: <u>Branch Manager</u></p> <p>"Contractor"</p>
<p>APPROVED AS TO FORM: John R. Doering County Counsel</p> <p>By: <u></u> Thomas E. Boze Deputy County Counsel</p>	



# State Water Resources Control Board



Linda S. Adams  
Secretary for  
Environmental Protection

Division of Financial Assistance  
1001 I Street • Sacramento, California 95814  
P.O. Box 944212 • Sacramento, California • 94244-2120  
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Edmund G. Brown, Jr.,  
Governor

Mrs. Nicole Damin  
c/o Stanislaus County  
Department of Environmental Resources  
3800 Cornucopia Way, Suite C  
Modesto, CA 95358



## PRE-APPROVAL OF CORRECTIVE ACTION COSTS FOR FILE NO. R98-028, SITE ADDRESS: 402 DOWNEY AVENUE, MODESTO, CA.

I have reviewed your request, received on February 17, 2011, for pre-approval of corrective action costs.

With the following provisions, total cost pre-approved as eligible for reimbursement for completing corrective action submitted by Stanislaus County, Department of Environmental Resources, is \$39,961.00; see the table below for a breakdown of costs.

Be aware that this pre-approval does not constitute a decision on reimbursement: necessary (as determined by the Fund) corrective action costs for work directed and approved by the Regional Board will be eligible for reimbursement at costs consistent with those pre-approved in this letter. However, depending on what happens in the field, some costs may not actually be necessary. If the Fund agrees that they were in fact necessary, the Fund will reimburse at reasonable rates (rates consistent with those pre-approved.)

*In order for future costs for corrective action to be part of the expedited reimbursement process, they must be pre-approved in writing by Fund staff.*

*All costs for corrective action must meet the requirements of Article 11, Chapter 16, Underground Storage Tank Regulations in order to be eligible for reimbursement.*

### COST PRE-APPROVAL BREAKDOWN

Task 1: Preparation Activities- Assessment and Well Replacements	Quantity/ Unit	Unit Rate	Amount	Subtotal
<i>1.1 Workplan Preparation</i>				
Project Manager	4 hrs	\$95.00	\$380.00	
Staff Geologist	16 hrs	\$65.00	\$1,040.00	
Draftperson	2 hrs	\$55.00	\$110.00	
Administrative	2 hrs	\$45.00	\$90.00	
<i>1.2 Permitting</i>				
Project Manager	2 hrs	\$95.00	\$190.00	
Staff Geologist	8 hrs	\$65.00	\$520.00	
Administrative	2 hrs	\$45.00	\$90.00	

California Environmental Protection Agency

Task 1: Preparation Activities- Assessment and Well Replacements	Quantity/ Unit	Unit Rate	Amount	Subtotal
City Permit Fees	1 each	\$1,313.00	\$1,313.00	
1.2 Utility Locating				
Staff Geologist	3 hrs	\$65.00	\$195.00	
Private Utility Locator	3 hrs	\$193.00	\$578.00	
			Task Total	\$4,506.00

Task 2: Delineation of the Remaining Contaminant mass (MIP)	Quantity/ Unit	Unit Rate	Amount	Subtotal
Project Manager	4 hrs	\$95.00	\$1,200.00	
Staff Geologist	40 hrs	\$65.00	\$1,350.00	
Drilling Subcontractor (C-57)	1 ea	\$22,957.00	\$725.00	
Field Vehicle	4 days	\$60.00	\$2,760.00	
			Task Total	\$28,177.00

Task 3: Replacement of Well MW2	Quantity/ Unit	Unit Rate	Amount	Subtotal
Project Manager	2 hrs	\$95.00	\$190.00	
Staff Geologist	16 hrs	\$65.00	\$1,040.00	
Drilling Subcontractor (C-57)	1 ea	\$3,735.00	\$3,735.00	
Field Vehicle	1 day	\$60.00	\$60.00	
Photionization Detector	1 day	\$100.00	\$100.00	
			Task Total	\$5,125.00

Task 4: Summary Report of Investigation	Quantity/ Unit	Unit Rate	Amount	Subtotal
Project Manager	5 hrs	\$95.00	\$475.00	
Staff Geologist	30 hrs	\$65.00	\$1,950.00	
Draftperson	5 hrs	\$55.00	\$275.00	
Administrative	2 hrs	\$45.00	\$90.00	
			Task Total	\$2,790.00

Task 5: Geotracker Database Upload	Quantity/ Unit	Unit Rate	Amount	Subtotal
Staff Geologist	4 hrs	\$65.00	\$260.00	
			Task Total	\$260.00

Task 6: Investigative Derived Waste Disposal	Quantity/ Unit	Unit Rate	Amount	Subtotal
Project Manager	1 hrs	\$95.00	\$95.00	
Staff Geologist	4 hrs	\$65.00	\$260.00	
Administrative	1 hr	\$45.00	\$45.00	
Labor Analysis	1 sample	\$154.00	\$154.00	
IDW Disposal Subcontractor	1 drums	\$138.00	\$550.00	
			Task Total	\$1,104.00

Task 6: Investigative Derived Waste Disposal	Quantity/ Unit	Unit Rate	Amount	Subtotal
			PROJECT TOTAL	\$39,961.00

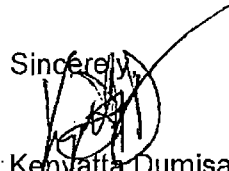
- Task descriptions are the same as those identified in the February 17, 2011 cost estimate.
- Only the tasks/costs reflected on the above table are pre-approved at this time. The Fund will review any tasks/costs that go beyond the pre-approved amount to be determined if the additional tasks and costs are necessary and reasonable. However, if costs exceed the above pre-approved amounts, the Fund will be unable to expedite your Reimbursement Request.
- The work products must be acceptable to the Stanislaus County, Department of Environmental Resources.
- If a different scope of work becomes necessary, then you must request pre-approval of costs on the new scope of work.
- Although I have referred to the Applied Engineering and Geology, Inc. proposal in the pre-approval above, please be aware that you will be entering into a private contract. The State of California cannot compel you to sign any specific contract. This letter pre-approves the costs as presented in the proposal dated February 17, 2011, by ATC Engineering, Inc. for conducting the work approved by the Stanislaus County, Department of Environmental Resources.

Please remember that it is still necessary to submit the actual costs of the work as explained in the Reimbursement Request Instructions to confirm that the costs are consistent with this pre-approval before you will be reimbursed. ***Please insure that your consultant prepares their invoices to include the required breakdown of costs on a time and materials basis, that invoiced tasks are consistent with the original proposal, and that reasonable explanations are provided for any changes made in the scope of work or increases in the costs. When the invoices are submitted you must include copies of all:***

- *subcontractor invoices,*
- *technical reports, when available, and*
- *applicable correspondence from the Regional Board.*

Should you have any questions, please feel free to contact me at [kdumisani@waterboards.ca.gov](mailto:kdumisani@waterboards.ca.gov), or by phone at (916) 341-5824

Sincerely,

  
Kenyatta Dumisani,  
Water Resources Control Engineer  
Technical Review Unit  
Underground Storage Tank Cleanup Fund

cc:

Michael D. Sonke  
ATC Associates, Inc.  
1117 Lone Palm Avenue, Suite 201  
Modesto, CA 95351





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

**Site Assessment and Monitoring Well Replacement  
At  
402 Downey Avenue, Modesto, CA**

**PROJECT NO. 11 -01-SMG**

**A. Terms and Conditions**

Except as hereinafter provided, the services provided by the Contractor under this Project Authorization shall be subject to the terms and conditions set forth in the *Master Agreement For Independent Contractor* made and entered into by and between the County of Stanislaus ("County") and ATC Associates Inc., ("Contractor"), on October 1, 2008.

**B. Site History**

In 1987, the implementation of a new state regulation that mandated fuel inventory reconciliation, led to the suspicion that the operating Underground Storage Tank (UST) system may be releasing product at the site. In July 1987, an investigation of the site's gasoline supply line piping resulted in the discovery of petroleum-impacted soils and a leak between the USTs and the dispensers, near the south fueling island. The leak was repaired and the station remained in operation. Facility records estimated the release size to be approximately 600 gallons of gasoline. In correspondence dated July 23, 1987, the County's Department of Environmental Resources (SCDER) requested that the lateral and vertical extent of contamination be assessed.

In October 1990, the three underground gasoline storage tanks, (USTs) were removed. The concentration of gasoline and BTEX in soil samples collected beneath each end of each tank was below the laboratory-reporting limit.

During the period of January 1988 and 2001, ten monitoring wells were installed both on and off-site to assist in defining the vertical and lateral extent of the release.

In the fall of 2003, a soil vapor extraction (SVE) system was installed at the site. The SVE system was started on December 2, 2003 and currently continues to operate. During this operation period, the SVE System removed an estimated 140,195.80 pounds of liquid phase and adsorbed phase hydrocarbons (LPH and APH) from the vadose zone and capillary fringe. This is the equivalent of 22,431 gallons of gasoline from the subsurface. The SVE system was restarted on May 26, 2010 and currently continues to operate. The most recent report on SVE operation estimates current hydrocarbon removal rates of approximately 8 pounds per day.

In the spring of 2007, an ozone injection system was installed at the site. The system's main function is to control dissolved phase hydrocarbons (DPH) from migrating. The ozone injection system was started in June of 2007 and continues to operate to date to control the off-site migration of DPH.

Between April and June 2008, a series of injection of hydrogen peroxide were made into the saturated zone via existing monitoring wells. The effects were immediate with dramatic reductions in detected DPH, however, the reduction in DPH was not sustained and over time DPH concentrations have returned to pre-injection levels.

On July 11, 2008, Contractor discovered that the casing of MW2 was split at approximately 42 feet below the top of the casing and had filled in with sediment. Photo images from a down-hole camera showed that this

casing damage occurred during installation but went unnoticed until the monitoring well filled with sediment.

### Current Site Conditions

#### Continued Remediation Actions:

The operation of the SVE system has been effective at removing a substantial liquid phase hydrocarbons (LPH) and adsorbed phase hydrocarbons (APH) that was present in the vadose zone. This mass extended from the release point a few feet below the ground surface to the surface of the groundwater and the capillary fringe across the site. The continued propagation of the DPH plume suggests that a hydrocarbon mass may exist outside the influence of the SVE and ozone injection systems. This mass slowly dissolves into groundwater producing the DPH plume. The continued operation of the ozone sparge system appears to be controlling the off-site migration of the sustained DPH plume.

#### Current Site Conditions:

##### *Submerged Hydrocarbon Mass*

The operation of the SVE system has been effective at removing the substantial LPH and APH mass that was present in the vadose zone. This mass extended from the release point in the vadose zone down to the surface of the groundwater and the capillary fringe across the site. The continued propagation of the DPH plume suggests that a hydrocarbon mass exists that is outside the influence of the SVE system. A submerged hydrocarbon mass generally develops on sites with large releases that over time have experienced substantial fluctuations in groundwater levels, primary due to drought cycles. Once the remaining submerged mass is located and remediated, the water quality will improve and the site can move toward closure.

### **C. Scope of Work**

The Contractor shall provide all the labor, material, supervision, supplies and equipment to replace Monitoring Well 2 (MW2) and assess the hydrocarbon mass that remains at the site utilizing MIP technology. Work shall include subsurface investigation radiating from the source area utilizing Membrane Interface Probe (MIP) technology. The purpose is to evaluate the concentration and vertical/lateral distribution of the remaining hydrocarbon mass, both in the vadose and phreatic zone. Once Contractor locates the remaining mass, the appropriate mix of ongoing and additional remediation actions shall be proposed by the Contractor. Once remediation occurs and sufficient hydrocarbon mass is removed or destroyed, the water quality will improve and the site can be closed. Also included in the scope of work is Contractor providing drilling of the wells, development of wells, laboratory analytical services, Private Utility Locator through Underground Service Alert, and waste hauling.

MW2 provides critical groundwater quality data near the source area that is used to assess the progression of site remediation. Currently the well is non-functional and needs to be destroyed and replaced.

#### 1. Preparation Activities

##### 1.1. Workplan Preparation

Contractor shall prepare a workplan for a subsurface investigation. The workplan shall include both the replacement of MW2 and the subsurface investigation. This workplan shall conform to the requirements of the County. Contractor shall submit the workplan to the County for review and approval.

Contractor's investigation shall be conducted using the MIP advanced characterization system to delineate the vertical and lateral extent of the hydrocarbon mass that remains in the subsurface, above and below the current groundwater

surface. The MIP is a screening tool with semi-quantitative capabilities acting as an interface between the contaminants in the subsurface and gas phase detectors at the surface. Contractor shall use a Geoprobe® direct push drill rig to advance the MIP. Contractor shall continuously log the contaminant mass distribution versus lithology to provide a better understanding of vertical and horizontal extent and distribution of any remaining hydrocarbon mass.

The MIP is equipped for source zone and plume identification at concentrations above 1 part per million for petroleum hydrocarbons. Contractor shall use the information collected in the subsurface investigation to determine target injection intervals for remediation.

#### 1.2. Permitting

Contractor shall obtain drilling permits from the City of Modesto for both the direct push MIP investigation and the replacement of MW2.

#### 1.3 Utility Locating

Contractor shall schedule field personnel and equipment, notify Underground Services Alert to locate underground utilities as required by law, and perform other necessary field preparation and job start-up activities.

#### 2. Delineation of the Remaining Hydrocarbon Mass

Contractor shall oversee the delineation of the concentration and vertical and lateral distribution of the remaining hydrocarbon mass a MIP-equipped direct push drill rig. The MIP work allows for 4 days of drilling (approximately 10 to 12 borings to 70 feet below ground surface) utilizing a grid pattern radiating from the source area. Contractor's drilling shall be conducted by a State-licensed C57 drilling company. Contractor shall have their field geologist present to supervise drilling activities.

Contractor shall monitor soil cuttings, if any, with a photoionization detector. Contractor shall store any generated soil cuttings in Department of Transportation (DOT) approved 55-gallon drums and label as non-hazardous waste and leave on-site pending laboratory analyses and proper disposal.

#### 3. Replacement of Well MW2

Contractor shall replace MW2 which includes Contractor's oversight of the overdrilling of damaged well MW2 with a hollow-stemmed auger rig equipped with 8-inch augers. Contractor shall construct the replacement monitoring well within the same borehole with similar screen, sand, and grout intervals.

Contractor shall ensure that all drilling is conducted by a State-licensed C57 drilling company. Contractor's field geologist shall be present to supervise drilling activities.

Contractor shall store any generated soil cuttings shall stored in DOT approved 55-gallon drums and label as non-hazardous waste and leave on-site pending laboratory analyses and proper disposal.

#### Summary Report of Investigation:

Contractor shall prepare and submit a summary report to the County. The report shall include a description of field activities, a synthesized three-dimensional rendering of the remaining hydrocarbon mass that will form the basis for targeting further remedial actions, conclusions, recommendations, and supporting data.

#### 4. GeoTracker Database Upload

Contractor shall upload the report and laboratory data into the Geotracker database.

5. Post Investigative Derived Waste Disposal

Contractor shall collect one soil sample and submit to an analytical laboratory as required for profiling and disposal. Upon receipt of laboratory results, Contractor shall profile soil cuttings and rinse water and dispose of the soil cuttings and rinse water at an approved facility. The cost for disposal of up to ten 55-gallon drums assumes all materials will be classified as non-hazardous.

**C. Compensation**

The Contractor shall be compensated for the services provided under the Agreement and this scope of work as follows:

1. Contractor shall be compensated on a time and material basis, not to exceed the total amount per task and at the rates set forth below and in Exhibit C of the Master Agreement.
2. The parties hereto acknowledge the maximum amount to be paid by the County for services provided **shall not exceed \$38,574.00** including, without limitation, the cost of any subcontractors, consultants, experts or investigators retained by the Contractor to perform or to assist in the performance of its work under this Agreement.
3. The following are the time and material not to exceed totals for Tasks 1-6.

Task	Description	Quantity of Hours	Unit of Measure	Rate	Not To Exceed Total
<b>1</b>	<b>Preparation Activities – Assessment and Well Replacement</b>				
1.1	<i>Workplan Preparation</i>				
	Project Manager	4	Hour	\$95.00	\$380.00
	Staff Geologist	16	Hour	\$55.00	\$880.00
	Draftsperson	2	Hour	\$55.00	\$110.00
	Administrative	2	Hour	\$45.00	\$90.00
	<i>Subtotal</i>				<i>\$1,460.00</i>
1.2	<i>Permitting</i>				
	Project Manager	2	Hour	\$95.00	\$190.00
	Staff Geologist	8	Hour	\$55.00	\$440.00
	Administrative	2	Hour	\$45.00	\$90.00
	City Permit Fees	1	Each	\$1,313.00	\$1,313.00
	<i>Subtotal</i>				<i>\$2,033.00</i>
1.3	<i>Utility Locating</i>				
	Staff Geologist	3	Hour	\$55.00	\$165.00
	Private Utility Locator	3	Hour	\$193.00	\$578.00
	<i>Subtotal</i>				<i>\$744.00</i>
	<b>Task 1 Total</b>				<b>\$3,517.00</b>
<b>2</b>	<b>Delineation of the Remaining Contaminant Mass (MIP)</b>				
	Project Manager	4	Hour	\$95.00	\$380.00
	Staff Geologist	40	Hour	\$55.00	\$2,200.00
	Subcontractor – Drilling C57	1	Each	\$22,957.00	\$22,957.00
	Field Vehicle	4	Day	\$50.00	\$200.00
	<b>Task 2 Total</b>				<b>\$25,737.00</b>

<b>Task</b>	<b>Description</b>	<b>Quantity of Hours</b>	<b>Unit of Measure</b>	<b>Rate</b>	<b>Not To Exceed Total</b>
<b>3</b>	<b>Replacement of Well MW2</b>				
	Project Manager	2	Hour	\$95.00	\$190.00
	Staff Geologist	16	Hour	\$55.00	\$880.00
	Drilling Subcontractor (C57)	1	Each	\$3,735.00	\$3,735.00
	Field Vehicle	1	Day	\$50.00	\$50.00
	Photoionization	1	Day	\$100.00	\$100.00
	<b>Task 3 Total</b>				<b>\$4,955.00</b>
<b>4</b>	<b>Summary Report of Investigation</b>				
	Project Manager	5	Hour	\$95.00	\$475.00
	Staff Geologist	30	Hour	\$55.00	\$1,650.00
	Draftsperson	5	Hour	\$55.00	\$275.00
	Administrative	2	Hour	\$45.00	\$90.00
	<b>Task 4 Total</b>				<b>\$2,490.00</b>
<b>5</b>	<b>Geo Tracker Database Upload</b>				
	Staff Geologist	4	Hour	\$55.00	\$220.00
	<b>Task 5 Total</b>				<b>\$220.00</b>
<b>6</b>	<b>Investigative Derived Waste Disposal</b>				
	Project Manager	1	Hour	\$95.00	\$95.00
	Staff Geologist	4	Hour	\$55.00	\$220.00
	Administrative	1	Hour	\$45.00	\$45.00
	Laboratory Analysis	1	Sample	\$135.00	\$135.00
	IDW Disposal Subcontractor	4	Drum	\$110.00	\$440.00
	<b>Task 6 Total</b>				<b>\$935.00</b>
	<b>PROJECT TOTAL</b>				<b>\$38,574.00</b>

**D. Payment and Invoicing**

1. Contractor 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 total amount per task for the work performed and services provided.
2. The terms of payment are Net 30 days after approval of the invoice.
3. Contractor shall submit a detailed invoice upon completion of each task. The invoice is to include but not be limited to the following information: hours worked by Contractor's Staff, the title of the Staff, billable rate, item rental equipment, number of days rented and rate of rental, task, staff and reimbursable items.
4. For Sub-Contracted work, Contractor shall attach to their original invoice submitted to the County for payment, a copy of the actual invoice from subcontractor as back up documentation.

Invoices shall be mailed or delivered to the Department indicated below. The remit to address is:

Stanislaus County  
 Department of Environmental Resources  
 Attention: Accounts Payable  
 3800 Cornucopia Way, Suite C  
 Modesto, CA 95358

**E. Project Authorization Period**


Services will commence on or about April 15, 2011 and continue until work under this Project Authorization is completed.

**F. Timeline and Scheduling**

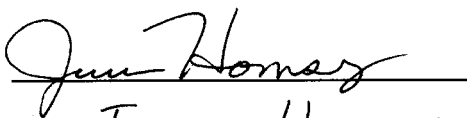
Description	Duration
Initial Workplan Preparation	1 week from the notice to proceed
Collection of information for permitting in the City of Modesto with scheduling and completing the utility clearance	2 weeks from the notice to proceed
Field activities – Contractor shall notify the County at least 48 hours prior to beginning field activities.	Shall start upon workplan and permits achieving regulatory approval.
Completion of field activities	1 week from workplan and permits achieving regulatory approval.
Data Analysis and Reporting	4 – 6 weeks from the notice to proceed
Completion of entire project	6 months from the notice to proceed

IN WITNESS WHEREOF, the parties have executed this Project Authorization number 11-01-SMG on June 28, 2011.

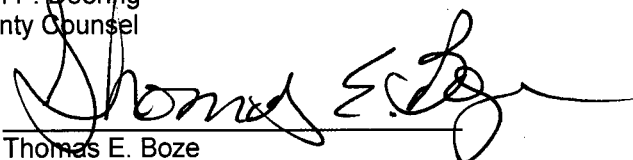
**COUNTY OF STANISLAUS**  
 Department of Environmental Resources

By:   
 Sonya K. Harrigfeld  
 Director  
 "County"

**ATC ASSOCIATES INC.**

By:   
 Name: Jeanne Homsey  
 (Printed)  
 Title: Branch Manager  
 "Contractor"

APPROVED AS TO FORM:  
 John P. Doering  
 County Counsel

By:   
 Thomas E. Boze  
 Deputy County Counsel



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

**Site Assessment and Monitoring Well Replacement  
At  
402 Downey Avenue, Modesto, CA**

**PROJECT NO. 11 -02-SMG**

**A. Terms and Conditions**

Except as hereinafter provided, the services provided by the Contractor under this Project Authorization shall be subject to the terms and conditions set forth in the *Master Agreement For Independent Contractor* made and entered into by and between the County of Stanislaus ("County") and ATC Associates Inc., ("Contractor"), on October 1, 2008.

**B. Site History**

In 1987, the implementation of a new state regulation that mandated fuel inventory reconciliation, led to the suspicion that the operating Underground Storage Tank (UST) system may be releasing product at the site. In July 1987, an investigation of the site's gasoline supply line piping resulted in the discovery of petroleum-impacted soils and a leak between the USTs and the dispensers, near the south fueling island. The leak was repaired and the station remained in operation. Facility records estimated the release size to be approximately 600 gallons of gasoline. In correspondence dated July 23, 1987, the County's Department of Environmental Resources (SCDER) requested that the lateral and vertical extent of contamination be assessed.

In October 1990, the three underground gasoline storage tanks, (USTs) were removed. The concentration of gasoline and BTEX in soil samples collected beneath each end of each tank was below the laboratory-reporting limit.

During the period of January 1988 and 2001, ten monitoring wells were installed both on and off-site to assist in defining the vertical and lateral extent of the release.

In the fall of 2003, a soil vapor extraction (SVE) system was installed at the site. The SVE system was started on December 2, 2003 and currently continues to operate. During this operation period, the SVE System removed an estimated 140,195.80 pounds of liquid phase and adsorbed phase hydrocarbons (LPH and APH) from the vadose zone and capillary fringe. This is the equivalent of 22,431 gallons of gasoline from the subsurface. The SVE system was restarted on May 26, 2010 and currently continues to operate. The most recent report on SVE operation estimates current hydrocarbon removal rates of approximately 8 pounds per day.

In the spring of 2007, an ozone injection system was installed at the site. The system's main function is to control dissolved phase hydrocarbons (DPH) from migrating. The ozone injection system was started in June of 2007 and continues to operate to date to control the off-site migration of DPH.

Between April and June 2008, a series of injection of hydrogen peroxide were made into the saturated zone via existing monitoring wells. The effects were immediate with dramatic reductions in detected DPH, however, the reduction in DPH was not sustained and over time DPH concentrations have returned to pre-injection levels.

On July 11, 2008, Contractor discovered that the casing of MW2 was split at approximately 42 feet below the top of the casing and had filled in with sediment. Photo images from a down-hole camera showed that this

casing damage occurred during installation but went unnoticed until the monitoring well filled with sediment.

Current Site Conditions

Continued Remediation Actions:

The operation of the SVE system has been effective at removing a substantial liquid phase hydrocarbons (LPH) and adsorbed phase hydrocarbons (APH) that was present in the vadose zone. This mass extended from the release point a few feet below the ground surface to the surface of the groundwater and the capillary fringe across the site. The continued propagation of the DPH plume suggests that a hydrocarbon mass may exist outside the influence of the SVE and ozone injection systems. This mass slowly dissolves into groundwater producing the DPH plume. The continued operation of the ozone sparge system appears to be controlling the off-site migration of the sustained DPH plume.

Current Site Conditions:

*Submerged Hydrocarbon Mass*

The operation of the SVE system has been effective at removing the substantial LPH and APH mass that was present in the vadose zone. This mass extended from the release point in the vadose zone down to the surface of the groundwater and the capillary fringe across the site. The continued propagation of the DPH plume suggests that a hydrocarbon mass exists that is outside the influence of the SVE system. A submerged hydrocarbon mass generally develops on sites with large releases that over time have experienced substantial fluctuations in groundwater levels, primary due to drought cycles. Once the remaining submerged mass is located and remediated, the water quality will improve and the site can move toward closure.

**C. Scope of Work**

The Contractor shall provide all the labor, material, supervision, supplies and equipment to perform one (1) year of semiannual monitoring and sampling and operation and maintenance of the remediation systems at Contamination Site EAR #2135 – T&t Arco 402 Downey Avenue, Modesto, California.

The work in general consists of the following tasks:

1. Perform two (2) events of semiannual monitoring and sampling;
2. Twelve months of operations and maintenance of the ozone injection system;
3. Twelve months of operation and maintenance of the vapor extraction system; and
4. Conducting Project Management and Scheduling Activities

The work under this Project Authorization does not include tasks required for site closure such as vapor intrusion studies, verifications oil borings, preparation of a closure request, or well destruction and site restoration. Specific task descriptions are included in the following paragraphs.

Task 1 – Perform Two (2) Events of Semiannual Monitoring Sampling

Contractor shall perform semiannual site visits to complete monitoring and sampling activities. Piro to purging the groundwater wells, the depth to water wells MW1 through MW10 shall be measured to evaluate the direction and magnitude of the groundwater gradient beneath the site. A minimum of three (3) well volumes (casing and sand pack) shall be purges from each well before groundwater samples collected. Temperature, pH, water elevation, and electric conductivity shall be measure and allowed to stabilize. Water samples shall be collected using disposable bailers, one dedicated to each well. After groundwater samples are collected, dissolved oxygen shall be measured in each well.

Groundwater samples collected shall be submitted using chain-of-custody record to a State-certified laboratory.



Groundwater samples, ten (10) total, shall be analyzed for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethyl benzene, and xylenes (BTEX), methyl tertiary butyl ether, (MTBE), ethyl dibromide (EDB), 1,2-dichloroethane (1,2-DCA), tertiary butyl alcohol (TBA), tertiary amyl ether (TAME), di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE) by EPA method 8260. Purge water shall be stored in 55-gallon drums approved for hazardous liquid storage pending laboratory analysis. Purge water shall be transported and disposed of at licensed liquid recycling facility.

Contractor shall prepare a report following each event that shall include a summary of site activities, groundwater data in tabular form, site plans, and laboratory report sheets. The report shall be submitted to the County and the Central Valley Regional Water Quality Control Board (CVRWQCB). In addition, Contractor shall upload all monitoring data into the State Water Resources Control Board (SWRCB) Geotracker database.

Task 2 – Remediation System Operation and Maintenance (One Year)

Contractor shall provide all the labor required to perform routine Operation and Maintenance and system monitoring. Costs estimates reflect one (1) year of operation of the ozone injection system and operation of the vapor extraction system. Routine operation and maintenance and system monitoring shall be conducted monthly or as require by site conditions and permit. This task does not include labor for unscheduled down-time due to system malfunction but includes labor for scheduled down time (e.g., one (1) event annually to change out aboveground ozone injection lines which chemically degrade or become brittle when exposed to ozone over time and routing maintenance indicated by the equipment manufacturer).

Supplemental fuel costs and electrical costs shall vary throughout the remediation and shall be invoiced at cost plus ten percent.

Task 3 – Conduct Project Management and Scheduling Activities

Consultant shall schedule the fieldwork and issue notifications to the appropriate parties.

**C. Compensation**

The Contractor shall be compensated for the services provided under the Agreement and this scope of work as follows:

1. Contractor shall be compensated on a time and material basis, not to exceed the total amount per task and at the rates set forth below and in Exhibit C of the Master Agreement.
2. The parties hereto acknowledge the maximum amount to be paid by the County for services provided **shall not exceed \$54,245.00** including, without limitation, the cost of any subcontractors, consultants, experts or investigators retained by the Contractor to perform or to assist in the performance of its work under this Agreement.
3. The following are the time and material not to exceed totals for Tasks 1-3.

Task	Description	Quantity of Hours	Unit of Measure	Rate	Not To Exceed Total
1	<b>Perform Two (2) Events of Semiannual Monitoring Sampling</b>				
	Project Manager	6	Hour	\$95.00	\$570.00
	Senior Engineer/Scientist	6	Hour	\$75.00	\$600.00
	Staff Geologist	24	Hour	\$55.00	\$1,320.00
	Draftsman	3	Hour	\$55.00	\$165.00

Task	Description	Quantity of Hours	Unit of Measure	Rate	Not To Exceed Total
<b>1</b>	<b>Perform Two (2) Events of Semiannual Monitoring Sampling (continued)</b>				
	Field Technician	32		\$50.00	\$1,600.00
	Administrative/ Accounting	4		\$45.00	\$180.00
	<i>Subtotal Labor</i>				<i>\$4,435.00</i>
	<i>Reimbursables</i>				
	Sub Contractor – Drum Disposal	6	Each	\$110.00	\$660.00
	Equipment – Truck	2	Days	\$50.00	\$100.00
	<i>Instruments</i>				
	pH/tem/cond meter	2	Each/Day	\$25.00	\$50.00
	WLP	2	Each/Day	\$25.00	\$50.00
	Bailers	20	Each	\$8.00	\$160.00
	Gloves	40	Each	\$1.00	\$40.00
	Pumps	2	Day	\$50.00	\$100.00
	Drums	4	Day	\$25.00	\$100.00
	<i>Laboratory Analyses</i>				
	TPHg/BTEX/Oxygenates*	20	Each	\$154.00	\$3,080.00
	<i>Subtotal Reimbursable</i>				<i>4,340.00</i>
	<b>Task 1 Total</b>				<b>\$8,775.00</b>
<b>2</b>	<b>Remediation System Routine O&amp; M (12 months)</b>				
	<i>Professional Services</i>				
	Project Manager	24	Hour	\$95.00	\$2,280.00
	Senior Engineer/Scientist	24	Hour	\$75.00	\$1,800.00
	Field Technician	85	Hour	\$50.00	\$4,250.00
	<i>Subtotal Labor</i>				<i>\$8,330.00</i>
	<i>Reimbursables</i>				
	Equipment – Truck (24 half days)	6	Day	\$60.00	\$360.00
	Energy Costs – Electricity, Gas				\$33,900.00
	<i>Subtotal Reimbursable</i>				
	<b>Task 2 Total</b>				<b>\$42,590.00</b>
<b>3</b>	<b>Project Management and Scheduling</b>				
	<i>Professional Services</i>				
	Senior Engineer Scientist	24	Hour	\$75.00	\$1,800.00
	Administrative / Accounting	24	Hour	\$45.00	\$1,080.00
	<i>Subtotal Labor Task 3</i>				<i>\$2,880.00</i>
	<b>PROJECT TOTAL</b>				<b>\$54,245.00</b>

\*Note: Price includes 10% mark up.

**D. Payment and Invoicing**

- Contractor 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 total amount per task for the work performed and services provided.

2. The terms of payment are Net 30 days after approval of the invoice.
3. Contractor shall submit a detailed invoice upon completion of each task. The invoice is to include but not be limited to the following information: hours worked by Contractor's Staff, the title of the Staff, billable rate, item rental equipment, number of days rented and rate of rental, task, staff and reimbursable items.
4. For Sub-Contracted work, Contractor shall attach to their original invoice submitted to the County for payment, a copy of the actual invoice from subcontractor as back up documentation.

Invoices shall be mailed or delivered to the Department indicated below. The remit to address is:

Stanislaus County  
 Department of Environmental Resources  
 Attention: Accounts Payable  
 3800 Cornucopia Way, Suite C  
 Modesto, CA 95358

**E. Project Authorization Period**

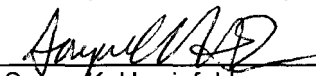
Services will commence on execution of this Agreement and continue until work under this Project Authorization is completed.

**F. Timeline and Scheduling**

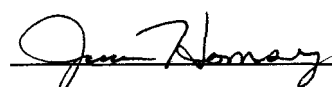
Description	Duration
Tasks 1-3	18 months

IN WITNESS WHEREOF, the parties have executed this Project Authorization number 11-02-SMG on March 20, 2012.

**COUNTY OF STANISLAUS**  
 Department of Environmental Resources

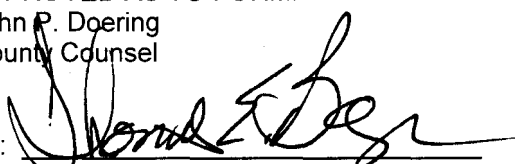
By:   
 Sonya K. Harrigfeld  
 Director  
 "County"

**ATC ASSOCIATES INC.**

By:   
 Name: Jeanne Homsey  
 (Printed)  
 Title: Branch Manager, PE  
 "Contractor"

APPROVED AS TO FORM:

John P. Doering  
 County Counsel

By:   
 Thomas E. Boze  
 Deputy County Counsel



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

**Soil Vapor Intrusion Survey and Workplan  
At  
402 Downey Avenue, Modesto, CA**

**PROJECT NO. 13 -01-SMG**

**A. Terms and Conditions**

Except as hereinafter provided, the services provided by the Contractor under this Project Authorization shall be subject to the terms and conditions set forth in the *Master Agreement For Independent Contractor* made and entered into by and between the County of Stanislaus ("County") and ATC Group Services., DBA Cardno ATC ("Contractor"), on October 1, 2008.

**B. Site History**

In 1987, the implementation of a new state regulation that mandated fuel inventory reconciliation, led to the suspicion that the operating Underground Storage Tank (UST) system may be releasing product at the site. In July 1987, an investigation of the site's gasoline supply line piping resulted in the discovery of petroleum-impacted soils and a leak between the USTs and the dispensers, near the south fueling island. The leak was repaired and the station remained in operation. Facility records estimated the release size to be approximately 600 gallons of gasoline. In correspondence dated July 23, 1987, the County's Department of Environmental Resources (SCDER) requested that the lateral and vertical extent of contamination be assessed.

In October 1990, the three underground gasoline storage tanks, (USTs) were removed. The concentration of gasoline and BTEX in soil samples collected beneath each end of each tank was below the laboratory-reporting limit.

During the period of January 1988, and 2001, ten monitoring wells were installed both on and off-site to assist in defining the vertical and lateral extent of the release.

In the fall of 2003, a soil vapor extraction (SVE) system was installed at the site. The SVE system was started on December 2, 2003, and discontinued operation on July 11, 2008. During this operation period, the SVE System removed an estimated 140,195.80 pounds of liquid phase and adsorbed phase hydrocarbons (LPH and APH) from the vadose zone and capillary fringe. This is the equivalent of 22,431 gallons of gasoline from the subsurface. The SVE system was restarted on May 26, 2010, and discontinued operation on July 1, 2011. A total of 144,864 pounds of hydrocarbons were removed from the subsurface by the SVE system.

In the spring of 2007, an ozone injection system was installed at the site. The system's main function is to control dissolved phase hydrocarbons (DPH) from migrating. The ozone injection system was started in June of 2007, and discontinued operation on May 30, 2012.

Between April and June 2008, a series of injection of hydrogen peroxide were made into the saturated zone via existing monitoring wells. The effects were immediate with dramatic reductions in detected DPH, however, the reduction in DPH was not sustained and over time DPH concentrations have returned to pre-injection levels.

On July 11, 2008, Contractor discovered that the casing of MW2 was split at approximately 42 feet below the top of the casing and had filled in with sediment. Photo images from a down-hole camera showed that this

casing damage occurred during installation but went unnoticed until the monitoring well filled with sediment.

### Current Site Conditions

This site meets the criteria for the Low Threat UST Case Closure Policy. At this time, the Department intends to move this site towards closure. In order to proceed with case closure, a soil vapor survey must be completed and all groundwater monitoring and remediation wells must be destroyed.

## **C. Scope of Work**

### **PHASE I - Soil Vapor Intrusion Survey**

#### 1. Workplan Preparation

Under this task, Contractor shall prepare a workplan for preparing a human health risk assessment with emphasis on the vapor intrusion pathway. The workplan shall conform to the requirements of the Regional Water Quality Control Board (RWQCB), the Underground Storage Tank Cleanup Fund (USTCF), and the Stanislaus County Department of Environmental Resources (DER). The workplan shall be submitted to the County for review and approval.

#### 2. Permitting and Utility Locating

Consultant confirmed that soil boring permits are not required by the City of Modesto or the County for the installation of three (3) temporary soil vapor points. Contractor shall schedule and supervise a private utility locator to locate underground lines in the area of the proposed soil borings. To reduce costs, Contractor shall have the private locator also locate underground lines in the vicinity of the drilling locations described in Phase II of this Project Authorization. In addition, the Contractor's personnel shall conduct a site walk and mark the surface of the site for Underground Services Alert (USA). As required by law, USA shall be contacted at least 48 hours prior to advancing any soil borings to allow time for utility companies to identify underground lines, pipes, or cables that may be affected by the drilling activities.

#### 3. Soil Vapor Intrusion Study

##### 3.1 Installation and Sampling of Temporary Soil Vapor Points

This task includes mobilization to the site, advancing three (3) soil borings to be completed as temporary soil vapor points, collecting soil vapor samples, and abandoning the borings according to the County guidelines. The soil vapor points are intended to evaluate potential health risk to the occupants resulting from soil vapor intrusion. The drilling services shall be performed by a subcontracted C57-licensed drilling company. The subcontractor understands that this is a prevailing wage job and they are required to submit a certificate of insurance naming Stanislaus County as an additional insured and the certificate shall include a waiver of subrogation.

The soil borings shall be advanced to estimated depths between four and six feet bgs using direct push technology. A discrete soil sample shall be collected at the base of each boring. Each soil sample shall be characterized by the field geologist and screened with a photoionization detector. The data obtained from these screenings shall be useful for vapor intrusion sampling. Upon completion of each boring, a temporary vapor probe assembly shall then be installed by the subcontractor.

Each vapor probe shall be constructed using 0.25-inch outer diameter (OD) Teflon tubing fitted with an ESP brand stainless steel wire screen tip implant at the base of the vapor probe. The aboveground Teflon vapor probe tubing shall be fitted with a swaglok valve for future purging and vapor sample collection. The annulus shall be backfilled with six inches of 2/12 Monterey sand

and overlain with hydrated granular bentonite to seal the annular space above the sampling interval to prevent ambient air intrusion within the boring annulus. Each aboveground vapor probe assembly shall be secured directly below the ground surface.

In an effort to appropriately conduct soil vapor sampling on site, the Contractor shall follow the guidelines established by the Los Angeles Regional Water Quality Control Board (LARWQCB) and the Department of Toxic Substances Control (DTSC) in documents titled Advisory – Active Soil Gas Investigations, dated April 2012, and Final – Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air, dated October 2011.

After each soil gas sampling probe assembly is complete, Contractor shall immediately proceed with the collection of vapor samples. Once the gas sampling points have been allowed to stabilize, the above ground sample collection equipment shall be assembled. A vacuum/pressure gauge shall be fitted to the three-way sample port assembly to measure the vacuum while purging is conducted. Three (3) purge volumes, using a 60-millimeter (ml) plastic syringe, shall be removed from the vapor probe assembly. The purge shall be calculated based on the internal volume of tubing and annular space around the probe tip and the tubing volume of the above ground assembly.

Once purging is complete a 400 ml Summa canister, fitted with a 200 ml/minute flow restrictor, shall be connected to the vapor probe assembly and samples of soil gas shall be collected in the Summa canisters. Prior to installation and sampling, a shut-in test shall be conducted on the sampling assembly. This test consists of applying a vacuum of approximately 10 to 15 inches of mercury to the soil gas sampling apparatus for approximately 10 minutes to evaluate the integrity of the sampling apparatus.

To ensure leakage of ambient air is not diluting the oil gas sample, a leak test utilizing the vapor leak check compound 1,1 difluoroethane (1,1-DFA) shall be conducted at each location of potential ambient air intrusion including sample system connections, surface bentonite seals, and the top of the temporary soil gas point. The leak check compound shall be applied during purging and sampling activities at the soil gas sampling point location. The flow rates shall be monitored to ensure a sampling rate of 100 to 200 mL/min.

Purge volume testing shall not be conducted. Sample collection shall take place after three (3) purge volumes, calculated from the dimensions of the sandpack and the length of the sampling assembly, have been removed from the installed points.

Soil cuttings, if any, shall be stored on-site in DOT approved 55-gallon drums and labeled as non-hazardous waste pending laboratory analyses. When laboratory results are received, the soil cuttings and rinse water shall be profiled and disposed of at an approved facility. The costs for disposal assume the soil shall be classified as non-hazardous and are included in Phase I, Task 3.

### 3.2 Laboratory Analysis

Soil vapor samples collected from the soil vapor probes shall be labeled and submitted utilizing chain-of-custody procedures to a State-certified laboratory. Each soil vapor sample shall be analyzed for TPHg using EPA Method TO-3 and for BTEX, MTBE, TBA, DIPE, ETBE, TAME, 1,2-DCA, and EDB using EPA Method TO-15. The soil vapor samples shall also be analyzed for the leak check compound, using a method detection limit of less than 10 micrograms per liter ( $\mu\text{g/l}$ ). Each sample shall be screened at the laboratory for elevated concentrations. EPA Method 8260B may be employed for some samples to prevent an elevated dilution factor, which would affect the detection limit of some of the compounds. Additionally, one vapor sample shall be collected and analyzed for methane by EPA Method 8015M and for oxygen and carbon dioxide content by ASTM 1945-96.

For Quality Assurance/Quality Control purposes a minimum of one duplicate sample shall be

collected immediately after the original sample from a selected vapor probe location. One trip blank provided by the analytical laboratory shall be analyzed for target compounds.

4. Summary Report Preparation

Upon completion of the soil vapor sampling activities, a summary report shall be prepared and shall include a description of field activities, laboratory analytical data in tabular form, boring logs, site plans, laboratory report sheets, a comparison of soil vapor analytical data to the RWQCB San Francisco Bay Region ESLs and CHHSLs, and any additional modeling if necessary. The report shall be prepared in general accordance with the RWQCB reporting guidelines and shall be submitted to the County and the RWQCB.

A tiered evaluation shall be conducted using the laboratory analytical data. The soil vapor data shall be compared to the interim values listed in Table E-2 of the Tier 1 ESLs as published by the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) in May 2013, and the California Human Health Screening Levels (CHHSLs) published by the California Environmental Protection Agency (CAL EPA) IN January 2005. If any of the analytes of interest exceed the ESLs and/or CHHSLs, these analytes shall be evaluated utilizing the Tier 2 Modeling program. Contractor shall use the appropriate Johnson and Ettinger Vapor Intrusion Model. Analytes of interest detected in the vapor samples at concentrations above laboratory method detection limits shall be inputted into the model to evaluate the Hazard Quotient for carcinogens and non-carcinogens. For the purpose of this indoor air risk assessment, Consultant shall assume the buildings are slab on-grade construction. Consultant shall compare Hazard Quotient Ratios to conservative and action levels established by the SFBRWQCB and evaluate if additional sampling and/or modeling is necessary.

5. Closure Request Report Preparation

If results of the soil vapor sampling activities indicate that vapor intrusion is not a concern, the summary report shall also include closure rationale and a request for No Further Action. The request shall provide a comprehensive justification that the site is a clear candidate for regulatory case closure.

**PHASE II - Well Destruction Activities**

Upon approval of the No Further Action request by the County and the RWQCB, the Contractor shall perform well destruction activities. Contractor understands that the County shall bid and contract directly with a C57 licensed drilling company to perform the drilling associated with well destruction activities described below in Phase II.

1. Work Plan Preparation

Under this task, Contractor shall prepare a workplan for the destruction of the groundwater monitoring wells and remedial wells associated with the site. The workplan shall conform to the requirements of the RWQCB, the USTCF, and the County and shall be submitted to the County for review and approval.

2. Permitting and Utility Locating

Contractor shall complete a well destruction permit for submittal to the City of Modesto. Contractor shall work with the County's contracted drilling company to ensure the proper signatures are included on the permit application. The submittal to the City of Modesto shall also include a traffic control plan for wells located in the right-of-way. The Contractor's personnel shall conduct a site walk and mark the surface of the site for Underground Services Alert (USA). As required by law, USA shall be contacted at least 48 hours prior to initiating well destruction activities to allow time for utility companies to identify underground pipes or cables that may be affected by the drilling activities.

3. Well Destruction

This task includes mobilization to the site and Contractor shall supervise the County's contracted drilling company in the destruction of 36 wells (MW1, MW2R, MW3 through MW10; VW1, VW2, VW3; PZ1a-s, PZ1a-d, PZ1b-s, PZ1b-d; AS1, AS1s, AS1d, AS2, AS2s, AS2d, AS3, AS3s, AS3d, AS4, AS4s, AS4d, AS5, AS5s, AS5d, AS6, AS7, AS7a and AS8). All the wells shall be destroyed by pressure grouting. The well vaults associated with each well shall be removed and an area equal to or greater than the original borehole shall be excavated around the well casing to approximately five feet below ground surface (bgs). The upper portion of each well casing shall be cut off at a depth approximately five feet bgs and removed. A tremie pipe shall be placed into each well casing and neat cement grout slurry shall be pumped from the bottom of the casing to the top and maintained at approximately 20 pounds per square inch for at least five (5) minutes. Cement grout shall subsequently be added to the excavation and brought to grade. Soil cuttings and rinsate shall be stored on-site in DOT approved 55-gallon drums and labeled as non-hazardous waste pending laboratory analyses. Following receipt of laboratory results, the soil cuttings and rinse water shall be profiled and disposed of at an approved facility.

4. Well Destruction Report Preparation

Upon completion of the well destruction activities, a summary report shall be prepared that shall include a description of the well destruction field activities associated with the site, including records of waste disposal. Contractor shall also work with the County's drilling contractor to ensure well destruction logs are submitted to the Department of Water Resources.

**D. Compensation**

The Contractor shall be compensated for the services provided under the Agreement and this scope of work as follows:

1. Contractor shall be compensated on a time and material basis, not to exceed the total amount per task and at the rates set forth below, in Section E of this Project Authorization, and in Exhibit C of the Master Agreement.
2. The parties hereto acknowledge the maximum amount to be paid by the County for services provided **shall not exceed Thirty-Two Thousand, Six-Hundred and Seventy-Nine dollars (\$32,679.00)** including, without limitation, the cost of any subcontractors, Contractors, experts or investigators retained by the Contractor to perform or to assist in the performance of its work under this Agreement.
3. 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 work performed during the design and preconstruction phase of construction including, but not limited to, inspection and land surveying work. Notwithstanding any other term of this Project Authorization or the Master Agreement, the compensation for this Project Authorization includes the cost for prevailing wage.
4. The following are the time and material not to exceed totals:

Task	Description	Amount	Not To Exceed Total
<b>PHASE I – Soil Vapor Intrusion Study</b>			
1	Workplan Preparation	\$690.00	\$690.00
2	Permitting and Utility Locating	\$700.00	\$700.00
3	Soil Vapor Intrusion Study		
3.1	Installation and Sampling of Temporary Soil Vapor Points	\$3,705.00	\$3,705.00



3.2	Laboratory Analysis	\$1,261.00	\$1,261.00
4	Summary Report Preparation	\$1,435.00	\$1,435.00
5	Closure Request Report Preparation	\$2,020.00	\$2,020.00
<b>SUBTOTAL PHASE I \$9,811.00</b>			
<b>PHASE II – Well Destruction Activities</b>			
1	Workplan Preparation	\$515.00	\$515.00
2	Permitting and Utility Locating	\$5,440.00	\$5,440.00
3	Well Destruction	\$16,273.00	\$16,273.00
4.	Well Destruction Report Preparation	\$640.00	\$640.00
<b>SUBTOTAL PHASE II \$22,868.00</b>			
<b>PROJECT NOT TO EXCEED TOTAL \$32,679.00</b>			

The following is a detailed breakdown of the above totals:

Task	Title	Quantity of Hours	Unit of Measure	Billable Rate	Not To Exceed Total
<b>1</b>	<b>Workplan Preparation</b>				
	Professional Engineer or Geologist	1	Hour	\$125	\$125.00
	Project Manager	1	Hour	\$95	\$95.00
	Staff Geologist	6	Hour	\$55	\$330.00
	Draftsperson	1	Hour	\$50	\$50.00
	Administrative Assistant	2	Hour	\$45	\$90.00
				<b>Sub-Total</b>	<b>\$690.00</b>
<b>2</b>	<b>Permitting and Utility Locating</b>				
	Project Manager	1	Hour	\$95	\$95.00
	Staff Geologist	4	Hour	\$55	\$220.00
	Subcontractor - Private Locator	1	Each	\$385	\$385.00
				<b>Sub-Total</b>	<b>\$700.00</b>
<b>3</b>	<b>Soil Vapor Intrusion Study</b>				
3.1	Installation and Sampling of Temporary Soil Vapor Points				
	Project Manager	1	Hour	\$95	\$95.00
	Staff Geologist	12	Hour	\$55	\$660.00
	Subcontractor – Driller C57	1	Each	\$2,850	\$2,850.00

Task	Title	Quantity of Hours	Unit of Measure	Billable Rate	Not To Exceed Total
	Equipment and Materials – Photo-ionization Detector	1	Day	\$100	\$100.00
<b>Sub-Total</b>					<b>\$3,705.00</b>
3.2	Laboratory Analysis				
	Subcontractor – Vapor Samples				
	Summa Canisters and Kit	1	Each	\$242	\$242.00
	TPHg by to-3	3	Each	\$28	\$84.00
	BTEX and Fuel Oxygenates by TO-15	3	Each	\$220	\$660.00
	Methane by 8015M	1	Each	\$55	\$55.00
	O2 and CO2 by ASTM 1945-96	1	Each	\$55	\$55.00
	Leak check	3	Each	\$55	\$165.00
<b>Sub-Total</b>					<b>\$1,261.00</b>
<b>4</b>	<b>Summary Report Preparation</b>				
	Professional Engineer or Geologist	1	Hour	\$125	\$125.00
	Project Manager	2	Hour	\$95	\$190.00
	Staff Geologist	16	Hour	\$55	\$880.00
	Draftsperson	3	Hour	\$50	\$150.00
	Administrative Assistant	2	Hour	\$45	\$90.00
<b>Sub-Total</b>					<b>\$1,435.00</b>
<b>5</b>	<b>Closure Request Report Preparation</b>				
	Professional Engineer or Geologist	2	Hour	\$125	\$250.00
	Project Manager	4	Hour	\$95	\$380.00
	Staff Geologist	20	Hour	\$55	\$1,100.00
	Draftsperson	4	Hour	\$50	\$200.00
	Administrative Assistant	2	Hour	\$45	\$90.00
<b>Sub-Total</b>					<b>\$2,020.00</b>
<b>PHASE I TOTAL \$9,811.00</b>					
<b>PHASE II – Well Destruction Activities</b>					
1	Workplan Preparation				
	Project Manager	1	Hour	\$95	\$95.00
	Staff Geologist	6	Hour	\$55	\$330.00
	Administrative Assistant	2	Hour	\$45	\$90.00
<b>Sub-Total</b>					<b>\$515.00</b>
2	Permitting and Utility Locating				
	Project Manager	1	Hour	\$95	\$95.00
	Staff Geologist	8	Hour	\$55	\$55.00
	Subcontractor – Private Locator (Cost included in Task 2 of Phase I)	1	Each	\$0.00	\$0.00
	Permit Fees	1	Each	\$4,905	\$4,905.00
<b>Sub-Total</b>					<b>\$5,440.00</b>
3	Well Destruction				
	Project Manager	10	Hour	\$95	\$950.00
	Staff Geologist	120	Hour	\$55	\$6,600.00
	Subcontractor – Traffic Control	1	Each	\$1,995	\$1,995.00
	Subcontractor – Lab Profile	2	Sample	\$174	\$348.00
	Subcontractor - Drum Disposal	40	Drums	\$157	\$6,280.00
	Subcontractor – Traffic Control	1	Day	\$100	\$100.00
<b>Sub-Total</b>					<b>\$16,273.00</b>

Task	Title	Quantity of Hours	Unit of Measure	Billable Rate	Not To Exceed Total
<b>4</b>	<b>Well Destruction Report Preparation</b>				
	Professional Engineer or Geologist	1	Hour	\$125	\$125.00
	Project Manager	1	Hour	\$95	\$95.00
	Staff Geologist	6	Hour	\$55	\$330.00
	Administrative Assistant	2	Hour	\$45	\$90.00
				<b>Sub-Total</b>	<b>\$640.00</b>
				<b>Phase II Not To Exceed Total</b>	<b>\$22,868.00</b>

**E. Payment and Invoicing**

1. Contractor 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 total amount per task for the work performed and services provided.
2. The terms of payment are Net 30 days after approval of the invoice.
3. Contractor shall submit a detailed invoice upon completion of each task. The invoice is to include but not be limited to the following information: hours worked by Contractor's Staff, the title of the Staff, billable rate, item rental equipment, number of days rented and rate of rental, task, staff and reimbursable items.
4. For Sub-Contracted work, Contractor shall attach to their original invoice submitted to the County for payment, a copy of the actual invoice from subcontractor as back up documentation.

Invoices shall be mailed or delivered to the Department indicated below. The remit to address is:

Stanislaus County  
 Department of Environmental Resources  
 Attention: Accounts Payable  
 3800 Cornucopia Way, Suite C  
 Modesto, CA 95358

**F. Prevailing Wage**

- 1.1. **Prevailing Wage:** By execution of this Agreement, Contractor certifies that it is aware of the requirements of California Labor Code Section 1720 et seq. and 1770 et seq., as well as, California Code of Regulations, Title 8, Section 16000 et seq. ("Prevailing Wage Laws"), which require the payment of prevailing wage rates and the performance of other requirements on certain "public work" and "maintenance" projects. Senate Bill 1999 amended Section 1720 of the California Labor Code in part to provide that: "For purposes of this paragraph "construction" includes work performed during the design and preconstruction phase of construction including, but not limited to, inspection and land surveying work". This phase of the project includes pre-construction work that is subject to payment of prevailing wage pursuant to Labor Code section 1720A.
- 1.2. Pursuant to Labor Code Section 1771, the work under this project is subject to the provision 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 per diem wages applicable to the work to be done for straight time, overtime, Saturday, Sunday and holiday work. These wage rates, are set forth by the Director of the Department of Industrial Relations and shall be part of the Agreement.
- 1.3. Pursuant to the provisions of Section 1773 of the Labor Code of the State of California, the Board of Supervisors has obtained the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work in this locality of reach craft, classification, or type of

worker needed to execute this Agreement from the Director of the Department of Industrial Relations. Copies of these rates may be obtained from the State of California Industrial Relations Department Division of Labor, website [www.dir.ca.gov](http://www.dir.ca.gov); Statistic & Research (415/972-8620) or the Department of Transportation (916/445-3520).

- 1.4 If the Scope of Work is being performed as part of an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws in the California Labor Code Section 1720, and if the total compensation is \$1,000 or more, Contractor agrees to fully comply with such Prevailing Wage Laws. Contractor shall make copies of the prevailing rates of per diem wages for each craft, classification or type of worker needed to execute the Scope of Work available to interested parties upon request, and shall post copies at the Contractor's principal place of business and at the project site. Contractor shall also adhere to any other applicable requirements, including but not limited to, those regarding the employment of apprentices, travel and subsistence pay, retention and inspection of payroll records, workers compensation and forfeiture of penalties prescribed in the Labor Code for violations. Contractor shall defend, indemnify and hold the County, its elected officials, officers, employees and agents free and harmless from any claims, liabilities, costs, penalties or interest arising out of any failure or alleged failure to comply with Prevailing Wage Laws. The provisions of Section 1774, 1775, 1776, and 1813 of the Labor Code shall be complied with.
- 1.5 **Wage Rate Penalty:** Pursuant to the provisions of Section 1775 of the Labor Code, Contractor and any sub-Contractor, shall forfeit to County, as a penalty, the sum of \$200 for each calendar day, or portion thereof, for each laborer, worker, or mechanic employed, paid less than the stipulated prevailing rates for any work done under this Agreement, by Contractor or by any Contractor sub-Contractors, in violation of the provisions of this Agreement.
- 1.6. **Payroll Records:** Pursuant to the provisions of Section 1776 of the Labor Code:
  - 1.6.1. Contractor and each sub-Contractor performing any portion of the work under this Agreement shall keep an accurate record, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by Contractor in connection with the work.
  - 1.6.2. Said payroll records shall be certified and shall be available for inspection at the principal office of Contractor on the basis set forth in Labor Code Section 1776.
  - 1.6.3. Contractor shall file a certified copy of said payroll records with County within ten (10) days after receipt of a written request therefore from County.
  - 1.6.4. Contractor shall inform County of the location of said payroll records, including the street address, City and County, and shall, within five (5) working days, provide a notice of change of location and address of said payroll records.
  - 1.6.5. It shall be the responsibility of Contractor to ensure the compliance with the provisions of this Clause and the provisions of Labor Code Section 1776.
  - 1.6.6. In the event of noncompliance with the requirements of this Clause of the requirements of Labor Code Section 1776, Contractor shall have ten (10) days in which to comply subsequent to receipt of written notice specifying in what respects Contractor must comply. Should noncompliance exist after said ten (10) day period, Contractor shall, as a penalty to County, forfeit \$25 for each calendar day, or portion thereof, for each worker to whom the noncompliance pertains, until strict compliance is effectuated. Contractor acknowledges that, without limitation as to other remedies of enforcement available to County, upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement of the California Department of Industrial Relations, such

penalties shall be withheld from invoice payments due Contractor for completed task orders.

**E. Project Authorization Period**

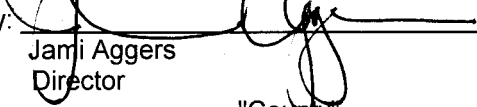
Services will commence on or about September 12, 2013, and continue until work until this Project Authorization is completed.

**F. Timeline and Scheduling**


Description	Duration
<b>Phase I</b>	
Workplan Preparation	November 8, 2013
Soil Vapor Intrusion Study	December 20, 2013
Summary Report Preparation	February 14, 2014
Closure Request Report	April 11, 2014
<b>Phase II</b>	
Workplan Preparation	May 9, 2014
Well Destruction	August 15, 2014
Well Destruction Report Preparation	September 26, 2014

IN WITNESS WHEREOF, the parties have executed this Project Authorization number 13-01-SMG on September 17, 2013.

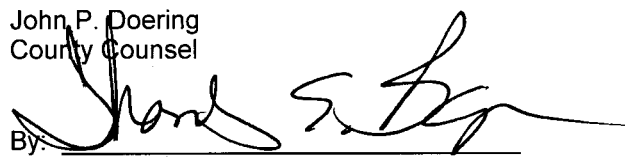
**COUNTY OF STANISLAUS**  
Department of Environmental Resources

By:   
Janji Aggers  
Director  
"County"

**CARDNO ATC**

By:   
Name: Jeanne Homsey  
(Printed)  
Title: Cardno ATC  
"Contractor"

APPROVED AS TO FORM:

John P. Doering  
County Counsel  
  
By: Thomas E. Boze  
Deputy County Counsel