



August 26, 2011

Dr. Teklewold Ayalew  
Regional Water Quality Control Board, Los Angeles Region  
320 West Fourth Street, Suite 200  
Los Angeles, California 90013

**Subject: Addendum 2 to Pilot Test Work Plan  
Remedial Excavation and In-Situ Treatment Pilot Testing  
Former Kast Property  
Carson, California  
Site Cleanup No. 1230, Site ID 2040330**

Dear Dr. Ayalew,

The additional information you requested regarding pilot test monitoring and mitigation measures during our telephone conversation on August 23, 2011 is provided below. In addition, information requested by Mr. Unger and Ms. Williams during a call on August 24, 2011 is also included.

**Noise Mitigation Measures:**

Contractors performing the pilot test excavation work will be required to utilize well-maintained equipment fitted with properly functioning mufflers. In selecting equipment to be used, contractors will be directed to utilize the smallest, quietest equipment capable of effectively and safely completing planned excavation tasks. If necessary, equipment will be retrofitted with sound damping materials and exhaust and intake mufflers.

Truck operators will be directed to shut down engines when trucks are staged or during soil loading if they are stationary for a period of 5 minutes or longer.

To the extent practicable and where it can be done safely, sound attenuation barriers or blankets will be used between the area of the property where excavation is conducted and adjacent properties. Sound attenuation barriers may be constructed onsite using wood framing for support and plywood covered with sound absorbing materials, or sound blankets supported on metal frames may be used. Depending on the site physical layout and excavation location, use of such sound attenuation barriers may require modification of excavation areas and layout. Sound attenuation barriers will not be placed between the excavation area and the street due to the need for equipment to operate, excavate, and transfer soil to trucks staged in the street.

If noise levels at adjacent residential structures exceed applicable City of Carson or County of Los Angeles noise standards, work will be temporarily halted so that further noise mitigation measures can be evaluated and implemented. If noise levels cannot be mitigated to a level acceptable to the City of Carson, an alternate noise mitigation approach that may be used is to



Dr. Teklewold Ayalew  
Addendum 2 to Pilot Test Work Plan  
August 26, 2011  
Page 2

relocate residents from adjacent properties during periods when excavation and backfill operations are conducted as described in Section 7.0 of the Work Plan. This period of potential relocation is not expected to exceed one week for each property where pilot test excavations are conducted.

### **Vibration Mitigation Measures:**

Vibration monitoring will be conducted by a qualified, California-licensed Civil Engineer or Registered Geophysicist to monitor for potentially structural damaging ground vibration associated with excavation, shoring, moving of heavy equipment, and other construction-related activities. Monitoring will be conducted during excavation and backfilling phases of the excavation pilot test. Data will be recorded for peak particle velocity, peak acceleration, peak displacement, and peak vector sum and frequency. These factors will be compared against the U. S. Bureau of Mines (USBM) Report of Investigations 8507 publication *Structure Response and Damage Produced by Ground Vibration from Surface Mine Blasting*, or the Federal Transit Administration guidelines, which are used within the State of California.

If recorded vibration levels exceed USBM vibration damage threshold curves, excavation and materials management procedures will be modified to reduce induced vibrations. The most likely source of vibration that may exceed the USBM standard is breaking of subsurface concrete using an excavator bucket. Alternative methods, such as using a hydraulic breaker, will be used if activities such as this induce potentially damaging vibrations. It should be noted, however, that use of a hydraulic breaker may result in short-term increases in noise levels. If modified excavation and materials management procedures do not result in reductions in vibration levels to below the USBM standard, the element of the work resulting in excessive vibration will be terminated.

Prior to conducting pilot test excavations and after excavation and backfilling is completed, property condition surveys will be conducted at the subject properties, as described in Section 5.13.1 of the Pilot Test Work Plan. Existing cracks in hardscape features or structures will be documented and measured. If new cracks develop as a result of Pilot Test activities, or existing cracks are expanded, SOPUS will repair the cracks as a mitigation measure.

### **Types of Equipment to be Used:**

The specific equipment that will be used is not known, as a contractor has not yet been selected for the work. Equipment that may be used to support excavation work includes:

- 30,000-pound track-mounted excavator (a smaller excavator will be used where practical) or a rubber-tire backhoe
- Small “Bobcat-type” excavator that can traverse side yards of properties
- Rubber tire front-end loader (“wheel loader”)
- Hydraulic breaker (“stinger”)
- Sheepsfoot roller attachment for loader to compact soil backfill



Dr. Teklewold Ayalew  
Addendum 2 to Pilot Test Work Plan  
August 26, 2011  
Page 3

- Geotechnical testing equipment for testing of compacted backfill
- Slide-rail shoring system or box shoring system
- Motorized conveyer belt system for materials handling
- Portable generator
- Water truck or water trailer (“water buffalo”)
- Pump(s) and 55-gallon drums or above-ground tank to manage water that may potentially enter excavations
- Concrete saw
- Hand tools (shovels, electrical power saws, hammers, nail guns)
- End dump trucks
- Soil bins
- Concrete trucks (for 1-sack slurry backfill)
- Monitoring and sampling equipment (PIDs, FIDs, Summa canisters, personal monitoring/sampling devices, dust meters, noise meters, portable meteorological station, vibration monitoring equipment, hand sampling equipment, and other equipment that may be required)
- Dust and odor suppression equipment (water truck, hoses and sprayer, pump sprayer, etc.)
- Decontamination equipment (Visqueen sheeting, chisels, scrapers, shovels, brooms /brushes)

### **Traffic Control Plan**

As described in Sections 5.3.3.3 and 5.8 of the Pilot Test Work Plan, a Traffic Management Plan and traffic control will be provided by a URS subcontractor. The Traffic Management Plan will include and traffic control measures implemented will provide access for emergency vehicles during Pilot Test activities.

### **Odor Monitoring and Mitigation**

Odor monitoring is addressed in Section 5.9.3.4, and mitigation of vapors and odors is addressed in Section 5.10 of the Pilot Test Work Plan. As stated in Section 5.9.3.4, if distinct easily noticeable odors (odor value 3) are detected at the downwind property boundary where excavations are being conducted, mitigation measures will be implemented. Mitigation measures will include application of water spray to the working face and excavated soils, spraying the subject soils with Simple Green using a pump sprayer, using a commercial odor suppressant chemical sold under the brand name Odex, and application of vapor suppressant foam, as required in sequential order. If odors cannot be controlled at adjacent properties to below a level 4 odor value (strong decided odor that might make the air very unpleasant), work will be temporarily halted so that alternative odor control methods can be evaluated and implemented. If further odor control measures are not successful in reducing odor levels to below level 4, adjacent residents may be temporarily relocated as described in Section 7.0 of the



Dr. Teklewold Ayalew  
Addendum 2 to Pilot Test Work Plan  
August 26, 2011  
Page 4

Work Plan. This period of potential relocation is not expected to exceed one week for each property where pilot test excavations are conducted.

#### **Duration of Excavation Pilot Test Work Activities**

The anticipated duration for excavation and backfill for each of the pilot excavation approaches described in Section 4.0 of the Work Plan is approximately one week per location.

If you have any questions, please contact Roy Patterson at 714-433-7699

Sincerely,  
**URS Corporation**

Roy H. Patterson, P.G.  
Vice President and Principal Geologist  
Calif. P.G. Registration No. 3715

I am the Project Manager for Equilon Enterprises LLC doing business as Shell Oil Products US for this project. I am informed and believe that the matters stated in the Addendum to Pilot Test Work Plan dated August 26, 2011 are true, and on that ground I declare, under penalty of perjury in accordance with Water Code section 13267, that the statements contained therein are true and correct.

Cc:

Gene Freed, Shell Oil Products US  
Sam Unger, LARWQCB  
Thizar Williams, LARWQCB