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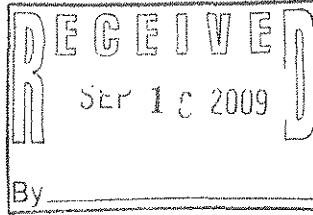
**AMEC Geomatrix, September 15, 2009, Progress Letter Report from  
Hassan Amini, Ph.D., Project Coordinator to DTSC**



September 15, 2009

Project 9967.000.0

Mr. Jose Diaz  
Department of Toxic Substances Control  
Site Mitigation Branch  
9211 Oakdale Avenue  
Chatsworth, CA 91311



**Re: Former Whittaker-Bermite Facility, Santa Clarita, CA  
Summary Report for Month of August 2009**

Dear Mr. Diaz:

This letter constitutes a progress report for the month of August 2009, prepared pursuant to Task 4 and Section 6.3 of the "Imminent and Substantial Endangerment Determination and Order and Remedial Action Order" (the Order) that the Department of Toxic Substances Control (DTSC) issued on November 22, 2002, for the former Whittaker-Bermite facility (site) in Santa Clarita, California.

### SECTION I – SOIL ISSUES

Specific actions taken on behalf of the respondent, actions expected to be undertaken, and planned activities for soil issues are summarized in the following sections:

#### OU1 REMEDIATION

##### **Activities for This Report Period (1)**

All excavation, bio-treatment, backfilling, and slope restoration activities for the OU1 remediation program were completed during previous reporting periods. During this reporting period, CDM worked on the preparation of the closure report documenting the soil remediation operations for OU1.

##### ***Anticipated Activities for This Month***

Work on the closure report documenting the soil remediation operations for OU1.

##### ***Long-Term Actions***

Complete the closure report documenting the soil remediation operations for OU1 and submit to DTSC for review.

##### **Activities for This Report Period (2)**

Operated the primary soil vapor extraction (SVE) system at Area 43 and the secondary (hi-vacuum) SVE system at Building 329.

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**AMEC Geomatrix**



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### **Anticipated Activities for This Month**

Continue operation and optimization of SVE systems at Building 329 and Area 43.

### ***Long-Term Actions***

Continue the SVE operations until volatile organic compound levels are eliminated or reduced to appropriate levels or until asymptotic levels are reached.

### **REMEDIAL ACTION PLAN**

#### **Activities for This Report Period**

CDM completed the third draft of the Remedial Action Plan (RAP) for OU2 through OU6 soils (Site-Wide Soils RAP), which was submitted to DTSC on August 14, 2009. The DTSC issued preliminary review comments via email on August 24, 2009. DTSC's preliminary review comments were incorporated and the third draft of the RAP was resubmitted to DTSC on August 31, 2009.

#### ***Anticipated Activities for This Month***

Allow DTSC review of the Site-Wide Soils RAP. Address DTSC's comments, if any received.

#### ***Long-Term Actions***

Work with DTSC to finalize the Site-Wide Soils RAP and present for public review.

### **PILOT STUDIES (SVE)**

#### **Activities for This Report Period**

CDM had previously prepared a pilot study work plan for SVE. DTSC approved the revised SVE work plan in a letter dated October 22, 2008.

The field pilot programs for Areas 2, 4, 27, 31/45, 53/54/72, Area 14-South, and Hula Bowl Canyon I were completed during prior reporting periods. During this reporting period the field pilot program for Area 14-Central was completed. However, due to the large amount of VOC mass removal achieved for both Area 14-South and 14-Central using the G.E.O. cryogenic/condenser system, the operations in Area 14 were extended for an additional two months while evaluations are completed to determine if further operation of the G.E.O. system with the existing well configuration is warranted prior to scale up of the pilot study operations.

#### ***Anticipated Activities for This Month***

Prepare the report documenting the results of the pilot studies, and extended SVE pilot operations in Area 14.



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### ***Long-Term Actions***

Complete planned pilot study activities and prepare documentation reports for submittal to DTSC. Incorporate the results of the SVE Pilot Study to the Site-Wide RAP and the Remedial Design document.

### **PILOT STUDIES (GEDIT)**

#### **Activities for This Report Period**

CDM had previously prepared pilot study work plan for in-situ bioremediation of perchlorate impact to deep soils via Gaseous Electron Donor Injection Technology (GEDIT). DTSC provided conditional approval of the GEDIT work plan on November 14, 2008.

The laboratory bench-scale treatability study for the GEDIT pilot study was initiated at CDM's laboratory in Bellevue, Washington, during a previous reporting period. The bench-scale study was continued during this reporting period.

#### ***Anticipated Activities for This Month***

Continue tracking and monitoring of bench-scale study.

### ***Long-Term Actions***

Complete planned pilot study activities and prepare documentation reports for submittal to DTSC. Incorporate the results of the GEDIT Pilot Study to the Site-Wide RAP and the Remedial Design document.

### **SOILS INTERIM REMEDIAL MEASURES (IRMS) AND REMOVAL ACTIONS**

#### **Depleted Uranium (DU) Investigation and Clearance Activities**

##### **Activities for this Report Period**

Continued to maintain close contact with California Department of Public Health-Radiological Health Branch (CDPH-RHB) regarding the review of the Work Plan and have provided preliminary information to address requests made by CDPH-RHB. Site visit by CDPH-RHB has not been scheduled at this time and is being coordinated by Mr. Jerry Hensley at RHB along with Mr. Jose Diaz at DTSC. Meeting with California Department of Fish and Game representative was completed on August 24<sup>th</sup> resulting in approval of permit for brush removal as described in our notification. Development of the project Health and Safety Plan (HASP) as well as the Final Status Survey Plan (FSSP) have also been started during this period. Finalization of both plans will be pending information received from CDPH-RHB review of Work Plan.



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### ***Anticipated Activities for this Month***

It is anticipated that a site visit will be scheduled by CDPH-RHB and DTSC as part of the Work Plan review process. This visit will provide supporting information pertinent to the review of the submitted Work Plan. Pending comments from CDPH-RHB, changes may be necessary to the Work Plan. Work on both the HASP and FSSP will be continued during this period. We are awaiting approval from ACOE and RWQCB prior to moving forward with the brush removal. We expect to initiate coordination for brush removal during this period.

### ***Long Term Actions***

Once approval is confirmed with ACOE and RWQCB the brush removal and UXO clearance survey can be coordinated. Pending necessary changes to the Work Plan, submittal of the FSSP to CDPH-RHB will be required. A specific schedule will be developed for brush removal, UXO clearance, DU removal and Final Status Surveys.

## **UXO/OE Investigation and Clearance Activities**

### **Activities for This Report Period**

EODT completed the following activities during this reporting period.

#### Work Plan Addendum (WPA) Further Investigation and No Further Action Areas

The EODT Work Plan Addendum (WPA) and associated Conceptual Site Model were submitted for DTSC and stakeholders review on July 23, 2009. The WPA field work will characterize the Further Investigations Areas and confirm the No Further Action status of the areas not affected by Munitions and Explosives of Concerns (MEC) as originally referenced in the 2006 Historical Site Assessment (HSA) Report.

#### Munitions and Explosives of Concern Clearance Activities at Hula Bowl II and III Associated Drainage Area, and the Depleted Uranium (DU) Impacted Area

The Hula Bowl II and III and DU Work Plan Addenda were approved with comments by DTSC in June 2008. EODT continues to coordinate with the DU-Impacted Area contractor Energy Solutions and AMEC Geomatrix to refine a phased removal plan consisting of an initial surface clearance to be followed by a removal to depth in the footprint of the DU excavation. After the MEC surface clearance is complete and actual site conditions are known, along with DTSC, the subsurface removal action alternatives will be planned and completed. Fish and Game permit application has been submitted and approved for brush clearance in the DU clearance area.

#### Hula Bowl II and III Drainage

EODT is tracking the landfill drainage so the clearance is completed after the drainage 'dam' is in place (so new items do not enter the drainage).



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### **Anticipated Activities for This Month**

#### Work Plan Addendum Further Investigation and No Further Action Areas

Anticipate planning for the field work execution and staffing in coordination with DTSC and the stakeholders.

#### Munitions and Explosives of Concern Clearance Activities at Hula Bowl II and III Associated Drainage Area, and the Depleted Uranium Impacted Area

Track the progress on the Hula Bowl II and III drainage 'dam' to determine the appropriate time for surface removal.

#### DU area MEC clearance

EODT will continue to track the progress of the review and approval process and refine the schedule for the surface clearance.

## **SECTION III – GROUNDWATER AND SURFACE WATER ISSUES**

Specific actions taken on behalf of the respondent, action expected to be undertaken and planned activities for groundwater and surface water issues are summarized in the following sections:

### **GROUNDWATER (OU7) FEASIBILITY STUDY (FS)**

#### **Activities for This Report Period (1)**

The Draft OU-7 FS report has been prepared and is under internal review. To support the OU-7 FS evaluations, step drawdown testing was conducted in selected OU2/OU6 perched zone wells to assess hydraulic properties.

#### ***Anticipated Activities for This Month***

Continue the OU-7 FS evaluations. The Draft OU-7 FS report is under review and will be submitted to DTSC in October 2009.

Review the step drawdown testing results for selected OU2/OU6 perched zone wells. This information will be used in the OU-7 FS evaluation of groundwater extraction and dewatering options for the perched groundwater zone.

#### ***Long-Term Actions***

Prepare the Remedial Action Plan for OU-7.



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## INTERIM REMEDIAL MEASURES (IRMS) AND PILOT PROGRAMS FOR GROUNDWATER

### SAUGUS AQUIFER EXTRACTION PILOT PROGRAM

#### **Activities for This Report Period**

The Work Plan, Saugus Aquifer Pilot Remediation Well Network, Operable Unit 7 was submitted to DTSC on September 22, 2008. DTSC provided comments on November 18, 2008 and subsequently provided conditional approval of the Work Plan on December 31, 2008. A request for qualifications and proposals (RFQ/RFP) for implementation of the Saugus Extraction Pilot program was issued during March and a site tour was given to the bidders on March 25<sup>th</sup>. Responses to RFQ/RFP were received from five firms on the proposal deadline of April 23. Following review of the proposals, presentations and interviews were conducted with the five companies on May 27, 2009. Whittaker team has entered into contract negotiations with the front runner firm for implementation of the Saugus Extraction Pilot program.

#### ***Anticipated Activities for This Month***

Whittaker team will continue negotiations with the front runner firm and execute a mutually agreeable contract so that the scope of work outlined in the Work Plan, Saugus Aquifer Pilot Remediation Well Network is implemented. DTSC comments on the Pilot Saugus Groundwater Remediation Work Plan will be incorporated as the Work Plan is implemented.

#### ***Long-Term Actions***

Implement the Saugus Aquifer Extraction Pilot Program. Incorporate the results of the pilot work to the groundwater (OU7) RAP and design document.

## NORTHERN ALLUVIUM GROUNDWATER TREATMENT SYSTEM OPERATION

#### **Activities for This Report Period (1)**

A Pilot Remediation Pumping Program was started in Northern Alluvium Areas 11, 67, and 75, in 2006. An alternate extraction well 75-MW-35 for higher groundwater extraction and six hot spot wells were connected to the new higher capacity groundwater treatment system in 2007. Sustained pumping of the extraction well 75-MW-35 that began in mid-October 2007 continues to date, with the exception of a brief period of shut down for treatment system maintenance. As of August 31, 2009, approximately 23,017,700 gallons of impacted water have been treated and discharged.

The August monthly compliance sample was collected on August 3, 2009. The sampling results indicated that the system was in compliance during May. Media were replaced in the treatment vessels as follows:

- August 6, 2009 – Removed/replaced perchlorate media in lead vessel.



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- August 31, 2009 – Removed/replaced nitrate media in lead vessel.

After replacement, the nitrate and perchlorate treatment vessels were reconfigured to have the old lag vessel as the lead and the new vessel with fresh media as the lag vessel. Because of a cracked valve on the GAC manifold, only the lead GAC vessel is in operation. Siemens is working on a solution to repair the leaky manifold.

The system was operated routinely throughout the month. The low flow wells were shut down during the routine quarterly sampling event (August 5 to August 12, 2009), however, the high flow well remained on during this time. As of August 31, 2009, approximately 23,017,700 gallons of impacted water have been treated and discharged. Approximately 91 percent of the treated volume was from the extraction wells of the Northern Alluvium pumping system; the remaining 9 percent is from IDW water collected during the quarterly sampling events, storm water collected from various areas of the site, and Saugus well development water.

#### ***Anticipated Activities for This Month***

Continue the pumping, treatment, and discharge system operation and routine weekly and monthly NPDES compliance sampling and media change outs as needed.

Monitoring of the aquifer response to pumping from the alternate extraction well 75-MW-35 and the downgradient site boundary low flow extraction wells will continue.

Repair GAC manifold and put the second GAC treatment vessel back into service.

#### ***Long-Term Actions***

Continue operating the extraction and treatment system and conduct additional performance monitoring.

#### **Activities for This Report Period (2)**

Potential application of remedial technologies for Northern Alluvium groundwater hot spots, including evaluation of the Area 75 boundary containment established by sustained operation of the low flow pumping wells is being addressed in the OU7 FS.

#### ***Anticipated Activities for This Month***

Evaluation of potential pilot studies for the Northern Alluvium area of the site will continue. The results presented in the Shaw Technology Demonstration Summary Report for Area 11 will be reviewed for potential applicability to other areas in the Northern Alluvium.





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### ***Long-Term Actions***

Additional source control measures in Northern Alluvium will be considered and recommended where determined to be necessary.

### **GROUNDWATER AND MONITORING**

#### **Activities for This Report Period (1)**

Data review and preparation of the report is in progress for the Second Quarter 2009 quarterly groundwater monitoring. Sampling for the Third Quarter 2009 monitoring event was conducted during August.

#### ***Anticipated Activities for This Month***

Data review and preparation of the report is in progress for the Second Quarter 2009 quarterly groundwater monitoring.

#### ***Long-Term Actions***

Continue monitoring and reporting of the proposed network of monitoring wells on the updated schedule presented in Technical Memorandum No. 8.

#### **Activities for This Report Period (2)**

RCRA groundwater monitoring of the Area 1 (former Building 317) continues on schedule. Data from the Second Quarter 2009 groundwater monitoring event conducted in May 2009 is being reviewed. Sampling for the Third Quarter 2009 monitoring event was conducted during August.

#### ***Anticipated Activities for This Month***

Data from the Second Quarter 2009 groundwater monitoring event conducted in May 2009 is being reviewed and report preparation is in progress.

#### ***Long-Term Actions***

The current RCRA groundwater monitoring program will be modified to include the proposed wells and frequency and DTSC input to the monitoring plan.

### **STORM WATER MONITORING**

#### **Activities for This Report Period**

Pursuant to the site Storm Water Pollution Prevention Plan, Environ continued coordinating the implementation of short-term surface water run-off mitigation measures. Implementation of the short-term mitigation measures is being coordinated with CDM, particularly in the areas of the site where soil remediation activities have occurred.



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### ***Anticipated Activities for This Month***

Upgrades to the short-term mitigation measures will continue as necessary. CDM is working on a plan for upgrading the short-term mitigation measures. Surface water run-off sampling will be conducted following significant rainfall events in accordance with the site-wide surface water runoff sampling plan.

### ***Long-Term Actions***

Long-term mitigation of the drainages and excavations will be conducted in conjunction with the soil remediation.

## **SECTION IV – REQUIREMENTS UNDER THE ORDER THAT WERE NOT COMPLETED**

All requirements of the Order were completed. Whittaker has met or exceeded all the substantive requirements of the Order.

## **SECTION V – PROBLEMS OR ANTICIPATED PROBLEMS IN COMPLYING WITH THE ORDER**

Following DTSC's agreement with Whittaker's proposed modifications to implementation plans in compliance with the Order reflected in the letter dated September 28, 2004, DTSC's letter dated July 11, 2005, included a schedule for submitting a number of documents. All deadlines have been met and documents have been submitted per requested schedule.

## **SECTION VI – RESULTS OF SAMPLE ANALYSIS, TESTS, AND OTHER DATA**

Whittaker has instructed its contractors to continue to provide DTSC staff with raw data sets for ongoing quarterly groundwater monitoring events and RI/FS work upon receipt from the lab.

Sincerely yours,  
AMEC Geomatrix, Inc.

Hassan Amini, PhD, CHG  
Project Coordinator

cc: Eric Lardiere, Esq., Whittaker Corp; Joseph Armao, Winston & Strawn, LLP; William Weaver, CDM; Jessica Donovan, ENVIRON; Paul Bergstrom, Knight Piésold; Larry Sievers, EODT; Tim Bricker, Santa Clarita L.L.C.; Megan Trend, Chubb Financial Solutions; Cindy Hunter, MariKay Fish, Julie Diebenow, AIG Insurance; Vitthal Hosangadi, NOREAS; John Carty, Zurich North America; Hal Dash, Cerrell Associates; Jeff Hogan, City of Santa Clarita; Yueh



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Chuang, CH2M Hill; Kathy Stryker Anderson, US Army Corps of Engineers; Robert DiPrimio, Valencia Water Company; Lynn Takaichi, and Meredith Durant, Kennedy Jenks; David Bacharowski, RWQCB; James Leserman, Castaic Lake Water Agency; Steve Cole, Newhall County Water District; Mauricio Guardado, Santa Clarita Water; Neil Elsey, Avion Holdings LLC; Alisa Lacey, Stinson Morrison Hecker LLP; Jeff O'Keefe, Department of Public Health.