

Meeting Notes: Community Advisory Group - Aerojet Superfund Issues, January 28, 2009

### **1. Attendees**

Janis Heple, Cindy Caulk (Aerojet), Rick Bettis (Sierra Club) Kevin Mayer (EPA), Travis Anderson (GSWC), David Lancaster (CDPH), Thomas Skaug (DTSC), Fashad Vakili (DTSC), Alex Mac Donald (RWQCB), Gary Riley (EPA) Emmett Cartier, Larry Ladd, Claudette Altamirano (Recorder, Weston Solutions, Inc.).

### **2. Approval of Meeting Minutes**

The November and September meeting minutes were approved with noted correction to the September minutes.

### **3. Proposed Renewal of the Hazardous Waste Post-Closure Permit and Storage and Treatment Permit. Farshad Vakili and Tom Skaug , DTSC.**

Mr. Vakili presented information regarding two permits. The first is a post closure permit for injection wells that operated in the 1960's and 1970's. The post closure plan calls for monitoring of the injection zone and above the injection zone of the closed wells. Questions regarding the monitoring wells were asked and answered with the following information. A series of monitoring wells have been installed within the injection zone (1000-1300 feet bgs), above the injection zone (830-1000 feet bfgs, and below the injection zone (1300-1400 feet bgs.) A total of 13 monitor wells comprise the groundwater monitoring network for the closed wells. Aerojet had asked for revision of some monitoring parameters based on the results of previous monitoring and the fact that the waste is a dense material (brine) which interferes with many analytical methods. DTSC agreed to provide the memorandum of the request and response by email. Concern was expressed regarding the disposal of the waste material before the injection wells were operational. The wastes discharged from Chemical Plant 1 went to ponds and Chem Plant 2 wastes went to the injection wells. There were instances when the wells were not operational and the wastes went to an old dredger pond in violation of waste discharge requirements. The discharge to the injection wells was regulated by waste discharge requirements (WDRs) issued by the water board in 1976 and these requirements have not changed.

The second permit is for drum storage at the RCRA C unit, and treatment of water at the RCRA J unit. There were originally 20 former treatment and storage areas at the site and only these two units remain active. The RCRA J unit is an evaporative tank with a maximum capacity of 153,178 gallons with capacity for freeboard and rainwater. Information from the referenced material provides this description:

“Unit 1 is an evaporative storage and treatment tank which handles aqueous hazardous wastewater. The evaporative storage and treatment tank is manually fed by tanker trucks or containers. The wastewater in the tank may be treated to adjust the pH to within a range of 4 to 10. Hazardous waste, acids and/or ,alkaline solutions are fed to adjust the pH. After pH balancing, the wastewater is evaporated by solar and mechanical means. Mechanical evaporation is accomplished by a cooling tower system. This system consists of a pump, controls, PVC pipes and cooling towers. An

anti-foam agent is intermittently added to the tank to control foaming generated by the cooling tower.”

SMAQMD has issued an air permit for the tank.

The RCRA C unit, is a drum storage building that may store material in containers for up to one year before it is picked up for disposal. The wastes include explosives, solid and liquid propellants, ignitable, reactive and toxic wastes.

A CEQA notice of exemption for issuing this permit has been distributed for agency comment. Only one comment regarding the permit renewal had been received so far and a public meeting was not planned.

#### **4. Aerojet Community Updates: Cindy Caulk, Aerojet**

Cindy Caulk summarized the following:

Fair Oaks – A second public meeting was held on December 9, 2008 regarding the installation of a monitoring and extraction well. This meeting addressed the search for alternate locations for the extraction well. After further research the alternative locations were not found to be feasible. The resident closest to the well has the most concern. Aerojet is working with this resident and the community on acceptable ways to minimize impacts of the project. Aerojet is going forward with the installation of the monitoring well and are working on improving the aesthetics of the installation. Two alternatives for a pipeline route are undergoing an engineering review and Aerojet will notify the public of its routing decision.

The next public meeting will be scheduled when the Perimeter Operable Unit Proposed Plan issued.

Kevin Mayer added that EPA will put together the Administrative Record and write a Proposed Plan (approx 8 page summary of alternatives and cost) and then hold two public meetings. One meeting will be an informational meeting and the other meeting will be for submission of official written and oral comments. The comments and responses will be incorporated into the record of decision.

#### **4. General Aerojet Cleanup Overview: Alex MacDonald (handout)**

- A GET L1 Construction: NO CHANGES. Facility completed and operation commenced the first week of September. Extracting and treating at approximately 600 gpm. Influent concentration is around 0.009 ppb NDMA
- B GET L Construction: Carmichael will no longer be constructing a reservoir beneath the facility. Going out to bid in April. Construction beginning in May
- C GET KA: NO CHANGES. Plant should be functional by March, with landscaping and other such items completed by April. AC-7 will be rebuilt with a new 8” casing being installed in the old well. AC-7 property has been transferred from Golden State Water Company to Aerojet – waiting close of escrow. Will start building new well at AC-7 beginning middle to end of February. Golden State will be requesting

permission of CDPH to add a treatment system to AC-6 to remove perchlorate. Extraction wells in parkway along Ambassador are having work done on them to prepare them for extraction.

D GET H: NO CHANGES.

E GET J – New UV equipment and backwash tank have been installed. Hydrogen peroxide tank installation is awaiting permit. Layer E well is back in operation – located at the treatment plant.

F GET B – GET B will be expanded to accept transfer of GET A facility to the GET B location and to accept water from new extraction wells located in southern Zone 3 near Teichert. Pipeline is being constructed.

G White Rock Road North Dump – NO CHANGES. Pipelines have been completed. System to be operational by Spring 2009. Still need to do some wellhead modifications at the extraction wells

H New Monitor Wells:

- i) Monitor wells completed in the American River parkway near Iron Point Road.
- ii) Monitor completed in Rossmoor Bar Park D and E Layer wells. No NDMA in E Layer Well.
- iii) Monitor Well planned in Fair Oaks prior to extraction well. Should be drilled soon
- iv) New Monitor well planned west of Haggin Park. Put in at the request of Sacramento Suburban Water as an early warning well upgradient of their well field north of the American River

I Chettenham Well Testing Continues: NO CHANGES. The concentrations of perchlorate in the well have dropped to approximately 4-5 ppb, down from initial concentrations of over 90 ppb. Aerojet has reached an agreement with Cal-American Water Company concerning the Chettenham Well.

J New Extraction Wells:

- i) One proposed extraction well in Fair Oaks – will be contingent on construction and testing of monitor well. Adjacent property owners have issues with the well location. Two public meetings have taken place. ting private property access agreements. The well is near Park and Winding Way.
- ii) Aerojet is proposing a revision to its Area 1 extraction field and will no longer use AC5 to provide containment. Dedicated extraction wells will be constructed a bit farther to the west. The well locations are in the vicinity of White Rock Park and Folsom and Coloma Road.

- K Well Destruction: NOTHING TO REPORT THIS TIME
- L Soil Gas Sampling: NO ACTIVITIES TO REPORT AT THIS TIME
- M Island OU Remedial Investigation Field Work: Second round of field work is complete.
- N Eastern Operable Unit – field work has commenced.
- O Treatability Studies:
- i) Line 04 – NO CHANGES. Treat study completed and report submitted showing that the HiPOx treatment unit successfully treated the high concentrations of TCE in the extracted water. The testing was also utilized to see what extraction rates are needed to control the groundwater around source areas. In this particular case, flowrates on the order of 7-10 gpm were sufficient to provide capture. This information will be useful in planning types and sizes of treatment systems that will be needed.
  - ii) Line 03. In-situ bio system is on hold while a micromembrane filtration system is evaluated. Uses hydrogen to reduce perchlorate. It is working to reduce perchlorate from 20,000 ppb to less than 4 ppb. Dropping TCE from 19,000 ppb to 190 ppb. So adding known TCE-reducing bacteria to help. Will be conducting the testing for the next 4-5 months.
  - iii) Area 40: NO CHANGES. Interim report completed and submitted to the agencies showing success in destruction of perchlorate and TCE in the groundwater. Two permeable reactive barriers were installed across a portion of the shallow groundwater plume at Area 40. The first wall is an iron filings wall for the reduction of TCE. The second wall injects molasses in to stimulate bioremediation of perchlorate. Initial test results show that TCE is being reduced from 63,000 ppb to around 1.1 ppb in the wall and perchlorate is reduced from 40,000 to less than 4 ppb. The item of special interest is the fact that the concentrations of perchlorate are being significantly reduced in the iron filing wall. Has not been determined why this is occurring.
  - iv) HOGOUT – NO CHANGES. Treatability study on-going to look at in-situ treatment of soils and groundwater. Various difficulties have arisen over the last couple of years of the study – lack of native bacteria able to degrade perchlorate, pH of soils is not optimum to allow bacteria to degrade perchlorate, low permeability of soils – among the issues causing problems. Aerojet has constructed an in-situ bioremediation well where the water is amended, released at the bottom of the well, the water moves up through the well filled with packing material that provides media to support bacterial growth, the water reaches the top and overflows back down the well and into

the subsurface and groundwater. Flowrate is down to around 0.5 gpm due to lowering water table.

**J Inactive Rancho Cordova Test Site – NO CHANGES in FIELD WORK.**

- i) Sigma Complex In-situ Bioremediation of Groundwater. System has been operational for several months. Boeing is adding an electron donor to remediate high concentrations on perchlorate in groundwater at the Sigma Complex. Boeing is recirculating groundwater and adding an electron donor (acetic acid) to stimulate biological growth and reduction of perchlorate. Initially the system will include one extraction and one recharge well, and several monitor wells. System is working very well. The system will be expanded after obtaining operational data from the initial wells to deal with the high concentrations of perchlorate (>4000 µg/L) in the upper groundwater.
- ii) An in-situ perchlorate remediation system has been constructed for pilot testing at the Propellant Burn Area. A gaseous electron donor, hydrogen, along with propane and nitrogen is being used. System operational with no results to report at this time. Switching to a propane-only injection to evaluate its use.
- iii) Granite Construction has received necessary Rancho Cordova permits and has commenced the processing of rock from specified clean areas on the IRCTS for sale processing and selling of aggregate from various clean portions of the IRCTS not being mined by Teichert. Granite will be using water from the EX-25 treatment plant for dust control.
- iv) Boeing finishing construction of monitor wells along International, just north of the Mather Main Base area.
- v) Will be starting pumping from Extraction Well in north part of the Mather Main Base area.
- vi) Looking at constructing extraction well at the head of the perchlorate plume on the south side of the main runway.

**5. Update on the Remedial Investigation Availability of the Boundary . Operable Unit. Gary Riley, EPA**

The Boundary OU covers the outermost areas. Eight total volumes of the RI/FS were submitted for agency review in late November/early December 2008. The document is going through agency review and the agencies will give their comments to Aerojet in February/March 2009. Then the revised document is prepared approximately in June, it is then checked to see if the agency comments were incorporated and in August/September a draft final RI/FS issued with a copy available for CAG review. The Island operable unit will follow approximately one year later.

Additional follow- information regarding perchlorate was given by Kevin Mayer. The perchlorate issue will be reviewed by a NAS committee and the 5 year health review is due in 2010

6. Next meeting date May 27, 2009.

