Meeting Notes: Community Advisory Group - Aerojet Superfund Issues, July 25, 2007

1. Attendees

Kevin Mayer, (EPA), Alex MacDonald (RWQCB), Janis Heple, Jean Young (SCWA), Mike Girard (Aerojet), Paul Schubert (GSWC), Tom Gray (FOWD), Konnie Salmouneh Larry Ladd, Travis Anderson (GSWC), Chauncey Batchelon, Tricia Carter (Recorder, CH2M HILL),

2. Approval of Meeting Minutes

The May meeting minutes were accepted as final.

3. Aerojet Community Updates: Mike Girard, Aerojet

Mike Girard provided several dates for upcoming meetings and major milestones:

- August 15 – Lease approval for GET L and Area 4. The Board of Supervisors will adopt the CEQA documentation.

- Public Meetings – Several public meetings will be conducted over the next several months associated with installing extractions wells within the Fair Oaks Water District. This is a collaborative effort between the Fair Oaks Water District and Aerojet.

4. Update from the May 2007 Meeting Regarding Major Milestones in OU-3 and Outside of OU-3: Kevin Mayer, EPA

Kevin provided an update as summarized below. In addition, a more comprehensive summary is provided in item #5 below.

- GET K Site – Efforts are underway for the construction of the new GET K treatment system. The initial effort includes early installation of a portion of the pipeline along Coloma Road ahead of its planned resurfacing. In addition, installation of extraction wells will commence soon. Letters will be going out to residences near the pipeline and extraction well locations. Aerojet is working on the treatment plant building permit process. The building permit will be submitted to the City of Rancho Cordova in mid-September for approval by November or December.

- GETS A and B are under a partial consent decree (no waste discharge requirements). There is a NPDES permit for which discharge limits need to be met.

- The outlet into the River for GET K has changed because the City requested that it be moved.

- Bahamont Treatment Plant – Startup is on schedule. Hydraulic testing will be conducted in August. Startup is anticipated for September.

- Island OU – 80 new groundwater monitoring wells will be installed in the Island OU. The existing monitoring wells will be sampled in the Fall in support of the remedial investigation. Soil samples will be collected next summer.

- OU-5 – OU-5 , also known as the Perimeter OU, is nearing the completion o the feasibility study. Work for this OU has been conducted under the Partial Consent Decree. A Proposed Plan and Record of Decision will be developed for this Operable Unit in 2008.

5. General Aerojet Cleanup Overview: Alex MacDonald, RWQCB

Alex reviewed the following items:

A GET L1 Construction: Facility being constructed on Bahamont Way behind the Carmichael Water District's water treatment facility. Facility on schedule to commence operation the first week of September 2007.

B GET L Construction: The CEQA document for this facility has been certified by Carmichael Water District. Lease will go to Board of Supervisors for approval in the middle of August. Design on-going. Field construction to start in Spring 08.

C GET KA: Revised zoning may be approved by Rancho Cordova. Extraction wells will be constructed this Summer/Fall. Some of the pipeline has been constructed along Ambassador Drive so as not to interfere with scheduled paving.

D Interim GET H Dismantling: The two temporary treatment systems have been dismantled. The facility walls adjacent to Kaiser will remain and Kaiser will use as a storage facility.

E New Monitor Wells:

i) Three new monitor well clusters have been completed in the vicinity of the Chettenham Well. The wells are being used to provide additional information to evaluate capture of the plume of pollution in the vicinity of the Chettenham Well. The wells have been sampled, but results are not yet available. These wells were requested by the regulatory agencies.

ii) In Fair Oaks, monitor wells are being constructed near the locations of proposed extraction wells. The wells will initially provide information on whether the proposed locations for the extraction wells are appropriate. Later the wells will be used to provide information on the capture zone of the extraction wells.

iii) Monitor wells to be constructed in the American River parkway near Iron Point Road are awaiting State Parks approval.

iv) Monitor wells in Zone 3 near Off Highway Vehicle Park to be used to help locate Layers E and F extraction wells. Will be drilled later this summer.

v) Approximately 25 of a planned 70 monitor wells have been constructed in the interior part of Aerojet as par of the Island Operable unit. The wells are being used to refine plumes and allow for locating extraction for containing the high concentrations of solvents and perchlorate near source areas.

F Chettenham Well Testing Continues: Aerojet ceased pumping the Chettenham well on 7/20/2007 while awaiting renewal of an access agreement with Cal-American Water Company, the well owner. Resin for removal of perchlorate being replaced, as was scheduled. The well will resume pumping with renewal of the agreement. The concentrations of perchlorate in the well are approximately 20 ppb, down from initial concentrations of over 90 ppb.

G New Extraction Wells:

i) Extraction wells will be constructed soon as part of Area 3 system along Ambassador Drive near River Vista Way.
ii) A new extraction well has been drilled on the Aerojet property west of Hazel Avenue to provide capture of the pollution in Layer D in Zone 1.
iii) Drilling of an extraction well for Zone 3 at the Teichert facility began last week.

H Soil Gas Sampling:

i) Soil gas sampling wells have and will be installed on and off Aerojet property to provide additional information for the evaluation of the potential for indoor air intrusion of volatile organic compounds (VOCs) from groundwater. The locations of the wells were selected to represent various geologic conditions overlying significant concentrations of VOCs in groundwater. Groundwater is less than 100 feet below ground surface. Some of the sites were selected as initial modeling efforts indicated that there may be a concern at those locations. Awaiting results of the sampling of the wells.

I Treatability Studies:

i) Line 04 – testing has been completed on a HiPOx treatment unit and the evaluation of the results is being performed. System was tested to determine if it was a cost-effective means of treating high levels of VOCs. Preliminary indications are that it was successful in reducing the VOCs to acceptable levels.

ii) Line 03 – system has been installed to evaluate the ability to bioremediate very high concentrations of VOCs, with perchlorate, in-situ below the water table. The system will extract and recharge groundwater in a recirculation loop. The groundwater will be amended with an edible oil to provide an electron donor/food source to stimulate biological growth. No change from last update.

iii) Area 40: 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 19,000 to 3,700 ppb in the first wall and from 1,400 to 120 ppb in the second wall. Awaiting results of second round of sampling.

J Inactive Rancho Cordova Test Site

i) Sigma Complex In-situ Bioremediation of Groundwater. Boeing has applied for waste discharge requirements for an in-situ remediation of high concentrations on perchlorate in groundwater at the Sigma Complex. Will be recirculating groundwater and adding an electron donor (citric acid) to stimulate biological growth and reduction of perchlorate. Initially one extraction and one recharge 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. Waste discharge requirements will be considered at the Regional Board meeting on Friday.
ii) Granite has applied for waste discharge requirements to operate an existing water supply well on the IRCTS property and use the water for dust control on their proposed gravel mining operation. The well is at the Sigma Complex. A final CEQA document was recently issued by the City of Rancho Cordova. Responding to our comments, Granite

modified their plan and will be using water from the Boeing treatment system on the IRCTS for its water supply.

iii) EX-27, EX-20, and EX-21 are all operational and the water is being treated at the EX-25 treatment system.

iv) An in-situ perchlorate remediation system is proposed for pilot testing at the Propellant Burn Area. A gaseous electron donor, hydrogen, will be used. The work plan for the project was just received. Will commence construction and operation in September 2007.

v) Boeing will be constructing two additional extraction wells on Mather Field just east of the runway along the roadway. The wells will be completed in Layers C and D.

K Miscellaneous

i) Aerojet/Golden State Water Company/City of Folsom signed a water agreement. The main elements include Aerojet letting the City have back a portion of the water that was to be provided under their 2036 agreement and was used by Aerojet for its industrial operations. Aerojet will be looking at using the water generated by its GET A and GET B facilities for the source of the industrial water supply. The City of Folsom would supply water to the new Aerojet development east of the Aerojet Road (within the City limits) and Golden State would serve the Aerojet development in the western part of Aerojet. Have not seen a copy of the agreement.

6. Review of GET J Data: Alex MacDonald, RWQCB

Alex came prepared to discuss GET J data and answered questions from the CAG.

Larry Ladd asked for a full list of chemicals that were being analyzed. Alex had supplied Larry with a spreadsheet providing the influent and effluent data from GET J, with TIC data separated out.

- GET J – Groundwater enters the GET J treatment plant from different depths of the aquifer. Analyses are run on the influent and effluent for a whole list of chemicals including tentatively identified compounds (TICs). Up to nine different phthalates have been identified and up to three unknowns. Out of 30 samples, 12 samples identified unknown compounds. It should be noted that an unknown compound identified as "Unknown #1" in one sample may not be the same "Unknown #1" detected in another. The next step is to go back to the chromatograph to distinguish between these unknowns (i.e. Unknown #1 vs. Unknown #2) and also check the QA/QC for the analyses during the periods when the unknowns were detected. Larry expressed his concern with regard to the unknowns getting through the carbon filters and into the effluent and the frequency at which these unknown compounds are detected.

7. Next Meeting

Next meeting: Wednesday, November 28, 2007, City Hall, 2729 Prospect Park Drive, Rancho Cordova, 7 p.m. to 9 p.m.