Final Meeting Notes: Community Advisory Group (CAG)
– Aerojet General Corporation Superfund Site Issues, March 19, 2014

1. Introductions and Attendees

Janis Heple, CAG Chair, began the meeting with introductions at 7:00 p.m.

Attendees:

Alex MacDonald (Regional Water Quality Control Board [RWQCB])
Allen Tsao (CAG)
Blair Stone-Schneider (Skeo Solutions) (via telephone)
Brit Snipes (City of Rancho Cordova)
Burt Hodges (Save the American River Association)
Caleb Shaffer (U.S. Environmental Protection Agency [EPA])
Gary Riley (EPA)
George Waegell (Morrison Creek Group)
Jackie Lane (EPA)
Janis Heple (CAG Chair)
Jessica Cooper (Recorder, Sullivan International Group, Inc.)
Jimmy Spearow (CAG)
Julie Santiago (EPA)
Kathy Lawson (Golden State Water Company)
Kevin Mayer (EPA)
Larry Ladd (CAG)
Rick Bettis (Sierra Club and others)
Roy Brewer (Aerojet Rocketdyne [Aerojet])
Stephen Green (Save the American River Association)
Steven Ross (Department of Toxic Substances Control [DTSC])
Tim Murphy (Aerojet)

The January 15, 2014, Draft Meeting Notes were finalized.

Ms. Heple said that the next CAG meeting will be held at Rancho Cordova City Hall.

Ms. Heple introduced two CAG members who had announcements for the CAG:

- Mr. Green announced that California Assembly Bill 2442 was introduced by Assemblymember Richard Gordon of Menlo Park and includes an amendment to the Porter-Cologne Water Quality Control Act.
- Mr. Ladd, who investigates incidents of cancer and the possible correlation with contaminants of concern, announced that a teenager was diagnosed with nasopharyngeal cancer, which has been linked to eating picked foods and also fish with high N-Nitrosodimethylamine (NDMA) content. Mr. Ladd emphasized the importance of continually re-examining remediation effectiveness.

2. Aerojet Community Update – Tim Murphy, Aerojet

Mr. Murphy said that there have been drilling activities at Aerojet, and that more extraction and monitoring wells are scoped for 2014.

Mr. Mayer pointed out that Aerojet is building out the Perimeter Groundwater Operable Unit (PGOU) from its existing infrastructure and that the remedial design is progressing. More than a dozen extraction wells are scoped to be installed for Operable Unit 5 (OU5) this year, including all the groundwater monitoring wells that go along with them. Ongoing work is approved by regulatory agencies.

Question: Will there be extraction on the north side of the river?

Answer: Mr. MacDonald said that this will be discussed later in the meeting.

Question: Have the agencies commented on the remedial design for OU5 and if yes, may the CAG receive a copy of the comments?

Answer: Mr. MacDonald responded in the affirmative, and added that comments are public record. Ms. Heple indicated the CAG also hopes EPA will be better at presenting all documents and document schedules. Mr. Mayer said that sometimes documents are not straightforward and context often needs to be explained. He said he will check on how the process for distributing agency comments might work.

3. Aerojet Cleanup Updates – Julie Santiago, EPA

Ms. Santiago said EPA is moving towards the Record of Decision (ROD) and EPA is working on the responsiveness summary for Boundary Operable Unit 6 (OU6). She said Mr. Riley, has been working on the responsiveness summary. Once this is complete, EPA can incorporate changes into the ROD and hopes to finalize the document by September 2014. Mr. Mayer asked how many comments were received and Mr. Riley said that the total number is not certain yet. Mr. Riley said the responsiveness summary is approximately 57 pages and may possibly become longer (easily more than 60 pages). Ms. Santiago indicated different EPA members are addressing different comments (for example, a risk assessment comment will be addressed by an EPA risk assessor). Mr. Mayer mentioned that the responsiveness summary for OU6 is roughly twice the size of that for OU5, adding that, in the past, a responsiveness summary was more "summarized" and now EPA is adding more detail. If there are similar comments, references to detailed answered are included. Ms. Heple asked when the responsiveness summary will be released and Mr. Mayer said that it accompanies the ROD and that is expected to be completed in September 2014. Mr. Mayer said EPA headquarters reviewed some of the comments and responses for consistency so as to provide an "agency" response, rather than just a "project manager" response (EPA does not want to promise something upon which it can't deliver).

Ms. Heple asked if there was anything else on the horizon other than OU5 and OU6 and Mr. Mayer responded in the affirmative: EPA is looking forward to a performance evaluation at Western Groundwater Operable Unit 3 (OU3) because, at the end of the 5-year review period, EPA expects to have a good plan for the entire groundwater issue from Aerojet. He said EPA does not report to the CAG on a lot of pending or in-progress work.

Ms. Heple asked what was happening with Island Operable Unit 7 (OU7) and Ms. Santiago said that the remedial investigation with risk assessment is not expected to be ready for presentation by the next CAG meeting, but hopefully in time for the November 2014 CAG meeting. Ms. Santiago indicated that EPA is evaluating lessons learned for how long information was presented for OU6 and EPA will use that feedback for this risk assessment evaluation. It is a challenge because this document will be twice as long as the document for OU6. Mr. Mayer asked how large the OU6 document was and Ms. Santiago said that it was approximately seven binders (containing three volumes). Ms. Santiago reiterated that it will be quite a challenge translating such a massive amount of technical information and data to the community. Ms. Lane said the document may be made available to the public in the information repository, in both hardcopy and electronic formats.

Ms. Santiago said a sampling and analysis plan (which explains how data will be collected for a remedial investigation) is expected to be completed for Operable Unit 4 (OU4) sometime late this year. Ms. Heple asked where area OU4 is located and Ms. Santiago responded: Area 41, outside of Aerojet property, towards the east.

Mr. Mayer said Aerojet and the regulatory agencies are getting a handle on the nature and extent of contamination and there is more data to collect. Mr. MacDonald said data gaps from the remedial investigations completed in the 1990s are being filled. Fractured bedrock is in the area and groundwater flows at a rate of approximately 1 foot per year.

4. Update on Western Groundwater OU3 and Outer Barrier Project Effectiveness– Alex MacDonald, RWQCB

Mr. MacDonald presented an update regarding the OU3 and Outer Barrier Project Effectiveness, which include Areas 1, 2, 3, and 4 (see attachment with final meeting notes). He described the locations of active and closed wells. Mr. Mayer asked what the trigger is for taking drinking water wells out of service; Mr. MacDonald said that it is usually perchlorate, NDMA, and trichloroethylene (TCE).

Question: Has TCE been detected in the Chattenham well?

Answer: Mr. MacDonald said that TCE has not been detected and he can show supporting data to the public.

Mr. MacDonald explained that Aerojet generally has good control of the plume based on estimates involving pumping rates and estimated capture zone, groundwater flow and other factors.

Question: Is the Peter J. Shields well contaminated?

Answer: Mr. MacDonald said yes, there are detections of perchlorate.

Mr. Mayer said the regulatory agencies, Aerojet, and consultants spend hours processing and interpreting data in order to compare different capture zone calculation methods within each layer. There is a lot of overlap with the different methods.

Mr. MacDonald presented information on locations where Aerojet proposes to perform work in the future, and explained that new extraction wells and groundwater monitoring wells will be proposed to further delineate the capture zones.

Question: According to the Sacramento Bee, developers are proposing to build approximately 30,000 homes in the Jackson Highway corridor between Watt and Grant Line Road. I am concerned the additional groundwater pumping could pull Aerojet contamination plumes beyond the extraction wells, especially during droughts. Have groundwater pumping rates for these and other homes been factored into future scenario calculations to ensure that the plumes are captured?

Answer: Mr. MacDonald said Aerojet and the regulatory agencies re-evaluate the plume capture effectiveness each year and this takes into account new groundwater pumping. Ms. Heple said she asked this question during one of the last meetings. She mentioned that during the Water Forum Drought Meeting No. 5, Mr. Rob Swartz (Sacramento Groundwater Authority) explained that his organization uses Aerojet data to evaluate the groundwater pumping and its effects on the plume.

Question: Given that we are in a severe drought now, will treated groundwater be used?

Answer: Mr. MacDonald said he would discuss that later in the presentation.

In regards to the pumping of groundwater, Mr. MacDonald said it is approximately 28,000 gpm (45,000 acre feet per year) for just Aerojet, not including the Inactive Rancho Cordova Test Site (IRCTS). This is the permitted pumping capacity for which Aerojet is pumping at around 65 to 70% of capacity.

Ms. Heple asked if there were any other projects involving the use of treated groundwater for industrial purposes besides the Aerojet project (including 2,000 gpm of AB GET water to be used for Aerojet operations). Mr. MacDonald said treated groundwater from the IRCTS is used by Teichert at its Grant Line Road facility. Golden State Water Company and Carmichael Water District plan to bring treated groundwater that has been discharged water to the American River back to Golden State using collectors operated by Carmichael and utilizing a new pipeline under the river. The water would be treated at a Golden State Water Company facility.

5. Draft Technical Assistance Needs Assessments (TANA) Findings – Blair Stone-Schneider, Skeo Solutions

Ms. Heple and Ms. Lane discussed the possibility of adding a meeting either at another date or right before the next CAG meeting to discuss implementation of the TANA findings and recommendations.

Ms. Stone-Schneider discussed the draft TANA findings and recommendations. She said she presented the recommendations in January, based on community feedback, and that the TANA will be finalized, after which the next steps will be determined.

Ms. Lane said that due to everyone's time constraints, the CAG meeting time may be used to work on implementing the TANA recommendations.

Ms. Stone-Schneider said there were four "big picture" recommendations based on community feedback and interviews.

Comment: The community appreciated the recommendation to provide outreach to a greater range of the community; however, there is still the issue of no coordinates on maps and the public would appreciate understanding where a topic of interest is located on the maps in relation to homes and the community. Mr. Spearow, agreed that extended community outreach is important (e.g., use of flyers might be a great idea). Ms. Heple said it appears that water agencies are succeeding at informing the community regarding issues concerning the drought. Ms. Lawson indicated that Mr. Paul Schubert (Golden State Water Company) is expected to conduct a presentation to the City of Rancho Cordova regarding the drought. She said there is currently heightened attention on these matters.

Mr. Hodges asked if the CAG will be provided the final TANA and Ms. Heple said that it will be sent to CAG members.

Ms. Santiago reiterated that after the final TANA is released, an extended CAG meeting or additional meeting may be held. Ms. Heple said that a time slot in advance of the next CAG meeting (5:30 p.m. to 6:30 p.m., perhaps) may be the best option. Ms. Lane said that once a final decision is made on the dated and time, the CAG will be notified in a timely manner.

Mr. Ladd said a local middle school, Mitchel Middle School, will be doing a project on local water.

6. Regional Board Aerojet Cleanup Overview – Alex MacDonald, RWQCB

Presentation notes and activities map were handed out (see attachments with final meeting notes).

Mr. MacDonald described the extraction well and groundwater monitoring well installations within the various groundwater operable units. He also discussed an investigation at the solid rocket test area. He said that an unexploded ordnance (UXO) consultant – an expert in UXO investigations – found 30 to 40 pieces of UXO and then properly disposed of them. Aerojet will be conducting an excavation at 1 foot below ground surface to remove any remaining pieces (this has to be completed for the required surface grading along the boundary with the proposed development). The area of surface

grading is approximately 150 feet in length of open space along the boundary. He said part of the Eastern Operable Unit will include the UXO investigation and removal action in the remedial investigation report for that OU. Mr. Murphy indicated that the excavation is also a precautionary measure and that none of the UXO pieces found by the consultant were longer than 2 inches. Additionally, nothing was found past the Superfund site boundary. Most of the materials found were materials with perchlorate. In areas where perchlorate was found, a confirmation sample was collected after removal. Mr. MacDonald said the perchlorate was mostly in the form of a gray binding material, which is spongy. Mr. Mayer said that Aerojet and the regulatory agencies go through the entire Superfund site twice a year and these topics will be presented to the public at a time closer to the date of the 5-Year Review.

Question: Which Operable Unit will be included in the 5-Year Review?

Answer: Mr. Mayer said that every Operable Unit will be included in the 5-Year Review.

7. 2014 Meeting Dates

The next CAG meeting is scheduled for Wednesday, May 21, 2014.

There is another meeting tentatively scheduled for Wednesday, July 16, 2014.