Final Meeting Notes: Community Advisory Group (CAG) - Aerojet Superfund Issues, July 17, 2013

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

1. Introductions and Attendees

Attendees: Alex MacDonald (RWQCB), Allen Tsao (CAG), Alta Tura (Sacramento Area Creeks Council), Burt Hodges (Save the American River Association), Chris Fennessy (Aerojet), Dan Waligora, Don Nottoli (Supervisor – District 5), Gary Riley (Environmental Protection Agency [EPA]), Jackie Lane (EPA), Janis Heple (CAG), Jessica Cooper (Recorder, Sullivan International Group, Inc.), Jimmy Spearow (CAG), Kathy Lawson (Golden State Water Company), Kevin Mayer (EPA), Larry Ladd, Rick Bettis (Sierra Club and others), Stephen Green (Save the American River Association), Steve Nugent (Carmichael Water District), Steven Ross (Department of Toxic Substances Control [DTSC]), and Tom Lae (CH2M HILL).

A public hearing for the Boundary Operable Unit (OU6) was held during the last regularly scheduled Aerojet CAG meeting on May 15, 2013.

The April 17, 2013 draft minutes were finalized.

2. Aerojet Community Update – Tim Murphy, Aerojet

Aerojet was merged with Rocketdyne to form "Aerojet Rocketdyne." The merger has increased employees from approximately 3,600 to 5,200.

Question: Have the research and development offices in Southern California been retained?
Answer: Yes, these offices have been acquired.

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

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

Aerojet is continually modifying their groundwater extraction treatment (GET) systems. American River Groundwater Extraction and Treatment (ARGET) system will be expanded to include the GET D facility. Also, ion exchange units will be added.

GET A and GET B, in the far eastern portion of the property, will be expanded by adding additional extraction wells, remediation for N-Nitrosodimethylamine (NDMA), and additional ion-exchange units. Currently, it's pumping at a rate of 1500 gallons per minute (gpm) and [is] expected to pump at approximately 3000 gpm after expansion is completed in March 2014. By March 2014, Aerojet expects to change from discharging to the ground, to discharging into Buffalo Creek. GET E/F will be expanded by installing

ion-exchange units for perchlorate removal and separating influent waters containing higher and lower concentrations of perchlorate to allow more efficient treatment of perchlorate

Aerojet has installed new monitoring wells and extraction wells. They are awaiting sampling results from the new Gold River wells, which were installed to delineate the extent of the plume in that area. At the White Rock Road North Dump, 3 monitor wells were destroyed as part of the White Rock Road widening project and were replaced.

Question: If a well is no longer used, how is it taken out of service?
Alex MacDonald: A well can be decommissioned by filling it up with cement.

A couple of extraction wells, south of GET D, were installed to control the NDMA plume. In the Western Groundwater OU, a larger pump was installed in water supply well number 1159 to increase plume capture and will be pumping at 300 gpm soon. This well is treated and the water used to fill the pond in Sailor Bar Park.

Several soil removals have occurred at Aerojet. Soil excavation and backfilling is complete at Area C41. In the far west portion of Aerojet, at Area C4, there have been two or three rounds of soil excavations. There was one confirmation sample with lead detected above the cleanup level, and soil excavation will occur in this area; then, the entire site will be sampled for dioxins. At Area 49000, soil vapor wells are being installed to delineate the extent of TCE and to evaluate a vapor extraction system design.

For Island OU 7, Aerojet is waiting for a few comments on the Remedial Investigation report and they then will proceed with a Response to Comments document.

There have not been too many changes to the on-going treatability studies. Encapsulated bacteria for NDMA destruction is being studied at GET E/F.

At the Inactive Rancho Cordova Test Site, former White Rock Road Landfills 1 and 2 are being closed and the closure is out to bid. Construction is expected to start this fall.

Sacramento County and the City of Rancho Cordova have been working to alleviate flooding problems south of Douglas Road in the new development. This could impact the Southern Groundwater Study Area Treatment System. Two options are being evaluated – replacing the pipeline from the extraction wells to the treatment system and adding an additional treatment system south of Douglas Road.

Question: Did they ever get back to you regarding the herbicides and pesticides?
Alex MacDonald: No. However, Aerojet and the regulatory agencies meet on an annual basis to discuss all the data and to discuss the plan for the upcoming year.
Kevin Mayer: Aerojet has such a convoluted system, so Aerojet and the agencies hold an annual technical summit to examine and analyze the effectiveness of the groundwater systems. Generally, plans to install additional monitoring wells have resulted from those meetings.

4. Boundary Operable Unit (OU) 6 Proposed Plan Working Session Technical Assistance Services for Communities
– Blair Stone-Schneider and Miranda Maupin (Skeo Solutions)

After the OU 6 Proposed Plan Public Hearing on May 15, 2013 ("Public Hearing"), the CAG expressed the need for more time to review the information and data to put together comments; therefore, the EPA agreed to extend the public comment period to September 20, 2013. The CAG has worked with Skeo Solutions to plan the presentation for this meeting, and they [Skeo] will assist the CAG with preparing comments on the OU 6 Proposed Plan.

Kevin Mayer: Based on the CAG comments during the Public Hearing, there was a lot of technical detail provided and there was not enough time to review and digest the information; therefore, the EPA can have someone help interpret technical information to the community.

Jackie Lane: EPA can provide contractual technical assistance to help the community develop comments, which must be submitted formally to the EPA by September 20, 2013. Comments stated during this CAG meeting cannot be accepted as formal comments to the OU 6 Proposed Plan because we do not have a court reporter to record formal meeting minutes.

Miranda Maupin presented the technical assistance brochure and other handouts discussed in these meeting notes (see attachments with final minutes). She stated that Blair Stone-Schneider will record notes and questions from the CAG and they will assist with answering any questions after the meeting.

Ms. Maupin provided an overview of the following remedial alternatives as presented in the handouts.

Remedial Alternatives:
1. No Action – this was not selected.
2. Institutional Controls (ICs) – such as a vapor barrier for residential land use.
3. Containment – capping.
4. Source Reduction and Removal – excavation or extracting vapors from the soil.

The handouts included two figures overlaying the recommended remedial alternatives with the proposed residential land use. The first figure included Buffalo Creek, Line 2, Line 5, and West Lake Open Space Areas. The second figure included the Administration Area.

Question: Are the areas without a remedial alternative shaded considered "No Action" sites?
Alex McDonald: No, these are areas that were either screened out (as non-detect or low-risk) during the Remedial Investigation (RI) / Feasibility Study (FS) process or, they are

areas where action may be taken or considered as part of another site. For example, Aerojet will be excavating soil to remediate lead contamination in OU 5, which is not depicted on this map or in the Proposed Plan for OU 6.

Question: Is "low-risk" (as mentioned above) within the EPA risk management range?
Gary Riley: Yes, it could be within the 1×10^{-6} risk management range, which is quantitatively presented in the Feasibility Study. Clarifying comment by Gary Riley: This response includes areas that are non-detect, could be detected but less than 10^-6, or possibly slightly above 10^-6.

Question: Have the new toxicity criteria been used to evaluate these areas of No Action?
Answer: Yes, these areas have been re-screened using the current toxicity criteria.
Clarifying comment by Gary Riley: Areas were re-screened post FS for changed toxicity criteria for TCE and lead.

Question: On the remediation alternatives handout under "Areas Not Retained for Remedial Action" and the last bullet, "Contamination is believed to be naturally occurring," does this refer to something such as areas where there may be contaminants from mining activities that will not or have not been retained as areas for further consideration or investigation?
Gary Riley: EPA has studied all areas, even if used for mining. Background levels of contamination were evaluated as well, and cleanup was not proposed for concentrations detected below background levels.

Question: On the Remedial Alternatives handout under "Areas Not Retained for Remedial Action" and the second-to-last bullet, "Sample location indicated limited human exposure (e.g., a drainage ditch)," exposure to benthic organisms or invertebrates seems likely, so if concentrations fall within this bullet, does that mean those areas have not been evaluated?
Gary Riley: No, all locations have been screened for human health and ecological risk, particularly where ecological receptors are likely present. This bullet should include ecological exposure as well, not just human exposure.

Ms. Maupin discussed ICs; some areas have proposed excavation and vapor extraction in addition to ICs.

Question: Is a soil vapor barrier allowed for residential purposes?
Steven Ross: The feasibility of a vapor barrier must be evaluated, and guidance documents will be used.

Question: How to do you know if a vapor barrier continues to be effective; is there any sampling?
Steven Ross: We determine a remedy, conduct sampling, and identify any restrictions that may need to be included into land-use covenants.

Question: Is the design included in the Record of Decision (ROD) before the Remedial Design?
Steven Ross: In general, we try not to be specific, because we need flexibility to implement a ROD.

Question: Does a Remedial Design need to be approved by the regulators before development begins?
Steve Ross: Yes, there is potential for the agencies to provide a response document.
Gary Riley: ICs and barriers to prevent vapor intrusion (VI) of volatile organic compounds (VOCs) are methods that may be implemented; there would not be a vapor barrier alone.

Question: How do we know if contamination has or has not migrated from OU 7 to OU 6? The CAG has not seen data or fate-and-transport modeling for OU 7; therefore, how does the CAG evaluate risk to OU 6 if the potential concentrations of contaminants that could migrate are unknown? Additionally, if development is already approved, is it possible for land use to change?
Tim Murphy: The General Plan was approved by the County Board, and any changes in land use would need to go through a General Plan amendment.

Question: If contamination is discovered in the future, is it possible to change land use to protect human health?
Gary Riley: A change in zoning would not change ICs. ICs require the property owner and developer to comply with controls and, therefore, must comply with any environmental requirements from the DTSC and other regulatory agencies.

Question: Within the building permit process, at which stage are ICs adopted?
Kevin Mayer: ICs or land use covenants are placed on a deed and always shown when a property title changes.

Question: How can we be confident there are controls in place before development? Are the controls strong enough, especially against the County and developers—who generally wish for more development to support a larger tax base?
Gary Riley: ICs require a land owner to comply, and direct reporting to agencies is required.
Janis Heple: The EPA held meetings with the County and the City of Rancho Cordova in 2009 and it is not certain if the County and the City of Rancho Cordova understand site conditions and the resulting restrictions.
Miranda Maupin: There is a potential to follow up with the CAG regarding ICs and how they are implemented.

Question: Are complying with ICs Aerojet's responsibility?
Gary Riley: No, ICs are placed in a deed that requires current and future property owners to comply.

Don Nottoli: Ms. Trisha Stevens, from the County Planning Department, can answer questions regarding the development and ICs process. Mr. Nottoli offered his office to help facilitate a discussion and formulate a question and answer session.

Question: Does Aerojet know who future property owners might be?
Tim Murphy: Aerojet cannot comment on that.

Burt Hodgens: I would like to have Skeo Solutions to help develop comments.

Question: Will 5-Year Reviews re-evaluate effectiveness of a remediation? Will development in the OU 6 area start before the effectiveness of the remediation is known through the 5-year review process?

Gary Riley: The entire Aerojet site is already subject to 5-Year Reviews and the next one is scheduled for 2016, which includes the ongoing requirement to ensure protectiveness is maintained. .

Steve Ross: There would be an annual inspection. The property owner is the Responsible Party and therefore required to comply with regulatory agencies.
Gary Riley: In land use covenants, there are more frequent inspections. During a 5-year review, we look at whether standards have changed, review the site to ensure protectiveness, and take action if needed to ensure protectiveness.

Question: How will ICs be tested, for example, after residential homes are developed?
Gary Riley: Sampling and evaluation of the integrity of remedial actions as outlined in the ROD will be conducted.

Question: People may be alarmed once they discover their property was built on a Superfund Site. Does the County take the lead on communicating with the property owner in this kind of situation?
Janis Heple: The County Environmental Management Department receives the planning documents, but does not review plans that are involved with a Superfund site. Would a property owner talk to the County Health and Human Services Department?
Don Nottoli: Yes, this communication would be coordinated with the County.

Question: TCE and other contaminants have been thoroughly studied; however, more sophisticated methods to address the presence of a wide range of related compounds have not.

Question: Not all proposed residential land use areas are under recommended IC areas, for example, under OU 5 or OU 7. Are no ICs or some sort of remedial measure planned for these areas?
Gary Riley: No, areas that need mitigation will be addressed under those specific sites, not under OU 6.

Question: In the 5-Year Review, if something is identified as “not effective,” how is this addressed?
Gary Riley: If toxicity standards change, 5-Year Review requires the remediation to be protective to and take action if it does not meet changes in standards. With ICs, there is a potential for more frequent inspections, such as annual inspections.
Steven Ross: The evaluation of the condition of the property is outlined and worked out with the property owner.

Question: Who pays for this re-evaluation, such as the annual effectiveness monitoring?
Gary Riley: The Responsible Parties.
Steve Ross: DTSC is working with attorneys and cannot comment in depth. The property owner(s) would have to agree to costs. We are still working this out.

Question: Hypothetically, if a property owner built a home and contaminants migrated under their property from OU 7 in 50 years from now, and… How do they decide if a vapor barrier is needed?
Alex MacDonald: The Institutional Controls will be developed and applied based on current groundwater contaminant concentrations and anticipated future concentrations; groundwater controls will be required for anything over 5 ppb. OU 7 groundwater flows southwest and the current analysis has not indicated that there is an unacceptable risk in that direction as the groundwater is getting deeper. To the west the groundwater is over 100 feet below ground surface.

Question: What is the definition of low-, medium-, and high-density residential land use?
Alex MacDonald: The larger the density, the bigger the property lot size, units, and population.

Question: What if there are any below-ground pools built?
Alex MacDonald: The top 10-12 feet would be OK. That would only be an issue if shallow soil is a risk.

Question: Has there ever been an instance of relocating a property owner due to change in concentrations?
Kevin Mayer: There have been instances where a property owner was temporarily relocated while a vapor-mitigation system was installed for active remediation. There have been some instances where a property owner was bought out by the Primary Responsible Party for a permanent relocation based on risk.
Alex MacDonald: Note that vapor has not been an exposure pathway in previous RODs and has only been recognized and evaluated within the last decade.
Miranda Maupin: ICs for this site are primarily used to protect human health and the environment from groundwater and off-gassing from groundwater.

Question: On Page 14 of the Proposed Plan, what does “may” refer to in the following sentence. “Alternative 2 would restrict land use such that property may not be used for sensitive uses such as single family homes, daycare centers, healthcare centers, or schools.” Does “may” refer to “might” not or “shall” not?

Gary Riley: This means a prohibition on sensitive uses.
Response: It was stated that “may” should be changed to “shall” not be used for sensitive uses.

Comment: The maps presented by Skeo Solutions have been helpful.
Miranda Maupin: Skeo Solutions will coordinate with Ms. Heple regarding answering questions resulting from the meeting and developing comments to the EPA.

Janis Heple: I would like to review land use planning, in particular, how land use would be moved from Aerojet to developers and how it relates to Superfund lands.
Tim Murphy: Once the property is transferred, the land is removed from Superfund designation; for example, the “carve-out” lands.
Gary Riley: The Boundary Operable Unit is evaluated under Superfund, but following cleanup, Aerojet may request EPA to “de-designate” it as Superfund through a partial deletion.
Janis Heple: Do you have a map of the “carve-out” lands?
Alex MacDonald: Yes, it has been presented to the CAG in the past.
Janis Heple: Lands outside of Superfund designation will be turned over to a developer. And then will the developer become the RP; therefore, the RP will be responsible for remediation such as a Soil Vapor Extraction (SVE) system, etc.?
Answer: The developer would install the system.
Gary Riley: The intent is to do any remediation, such as operating an SVE system, before the RP becomes responsible.

Question: What is the next stage of development and cleanup?
Alex MacDonald: Cleanup is happening presently and Aerojet has agreed to cleanup under EPA Administrative Orders for OUs 3 and 5.

Question: Hypothetically, if a school is built on a “carve-out” land and 10 years later, there are incidences of cancer in children, who responds? What agency is responsible for responding?
Gary Riley: The County, particularly the Health and Human Services Department.
Don Nottoli: Our health officer takes these kinds of complaints. The County is the first responder.

Question: Did the “carve-out” lands have remediation or mitigation, such as a vapor barrier?
Alex MacDonald: No, the “carve-out” lands had ICs to restrict residential use to areas where there was an acceptable estimated risk from contaminants in groundwater (vapor intrusion) In addition, there are deed restrictions for the installation of water in the carve-out lands
Tim Murphy: Remediation needs to be completed before developing a property.

Janis Heple: There is still a concern that the County or Cities do not understand the restrictions and potential work to come. Also, the OU 6 Proposed Plan was not released yet, before the master planning documents were created.

Tim Murphy: They are aware, and they were involved in the master planning documents.
Alex MacDonald: They also were presented the data.

5. Tentative 2013 Meeting Dates – Action Items

The next Aerojet CAG meeting is scheduled for September 18, 2013. Tentative dates for 2013 are shown below:
Next meeting date: September 18, 2013

- Tentative meeting date: November 20, 2013