

Final Meeting Notes: Community Advisory Group (CAG)  
Aerojet General Corporation Superfund Site Issues  
Meeting Date: July 27, 2016

**1. Introductions and Attendees**

Janis Heple, CAG Chair, began the meeting with introductions.

Attendees:

- Alex MacDonald, RWQCB
- Allen Quynn, City of Rancho Cordova
- Arthur Morrill, Community Member
- Brian Rinde, Golden State Water Company
- Chris Fennessy, Aerojet Rocketdyne (Aerojet)
- Daniel Wolfe, City of Folsom
- Jackie Lane, U.S. Environmental Protection Agency (EPA)
- Janis Heple, CAG Chair
- Jim Rohrer, Department of Toxic Substances Control (DTSC)
- Jimmy Spearow, Community Member
- Julie Santiago-Ocasio, U.S. Environmental Protection Agency (EPA)
- Kevin Thomas, Sacramento Suburban Water District
- Kim Pallari, HDR – EPA Contractor
- Lynn Keller, U.S. Environmental Protection Agency (EPA)
- Stan Wallace, EA Engineering, Science, and Technology, Inc. – EPA Contractor
- Stephen Green, SARA

Draft Meeting Notes from May 18, 2016 (C. Fennessy made clarifications on the minutes)

- HDR to incorporate Chris's comments and then resend a final draft to CAG members for a 10-day review period.

**2. Aerojet Community Update – Chris Fennessy, Aerojet**

- An incident occurred at Aerojet yesterday (July 26, 2016) around 4:00 p.m. A delivery intended for AMPAC Fine Chemicals (which leases multiple buildings within Aerojet) arrived with a cylinder that contained anhydrous hydrogen bromide (a hazard to inhale). The cylinder had a leak so everyone had to evacuate. Aerojet Emergency Hazmat contacted the Sacramento Metro Fire. The entire campus (approximately 200 people) was evacuated around 11:00 p.m. The evacuation was lifted at 2:30 a.m. without any injuries or incidents.
- Aerojet Rocketdyne is engaged in “right-sizing” their facility as part of the merger. They are relocating solid rocket motor manufacturing to Camden, Arkansas as part of the ongoing effort.

**3. EPA Update – Julie Santiago-Ocasio & Lynn Keller, EPA**

- EPA Drinking Water Health Advisories for PFOA and PFOS, May 2016 ([www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos](http://www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos))
- 70 ppt is the estimated no adverse health risk value for PFOA and PFOS individually or together and there are a few water purveyors that exceed this value. California American

(Cal Am) Water has a well near Mather fire facility that has been identified as exceeding 70 ppt. The well has been shut down.

- Alex: In June, RWQCB staff conducted testing for perfluorinated compounds at Aerojet Rocketdyne's GET AB and GET EF facilities. GET AB was found to have PFOS and PFOA at concentrations right around the detection level of 2 ppt. GET EF was above 70 ppt for PFOS. Aerojet Rocketdyne has been requested to propose and conduct a study of perfluorinated compounds starting with their GET facilities. The first goal is to test whether or not the initial samples are supported by additional testing. If supported, the next step will be to test the extraction wells in the extraction field to see where the perfluorinated compounds are coming from. The chemical is usually found in firefighting foam but not sure how it was used at Aerojet, possibly at the chemical manufacturing plants. On Mather there was a firefighting training facility or area where this particular type of foam was used. At Aerojet the initial concern is discharge under the NPDES permit. At the found concentrations at GET EF, there is not a health-related adverse impact on the American River due to the large amount of dilution provided by the river.

**Are all of the water purveyors aware of this issue?**

*A. MacDonald: A notice will go out to all of the water purveyors within the next 24 hours as per requirement.*

**Many Americans have exposure to these compounds in many household items (in Teflon, Gortex, pizza boxes). Are they doing anything to take precautions and change current uses?**

*L. Keller: PFCs may have ubiquitous exposure for people, not only within the drinking water system. So far only Health Advisories are out.*

**Didn't the Congress pass a law that requires all chemicals to be analyzed?**

*L. Keller: There is an update to TSCA which discusses the latest changes.*

EPA is targeting a few activities to be completed before the end of the Fiscal Year (September 30<sup>th</sup>):

Five Year Review Report

- It has been five years since the remedy was put in place for OU3 (Western Groundwater).
- The report will look at everything that has been done for OU3 and OU5 (Perimeter Groundwater). It is a holistic view of the groundwater remedy so far (groundwater and soil contamination).
- There are several newspaper publications that promoted the availability of the five year review, including the *Grapevine Independent*, *Carmichael Times*, and *Folsom Telegraph*.

OU6 Scope of Work

- The OU6 enforcement order and scope of work is being drafted by EPA.
- There are three different sections within the scope, including Pre-Design Investigation, Remedial Design, and Remedial Action.

- There are four different remedies components that are included, which make the remedy multi-faceted. Some of the remedies will require more time due to existing buildings that would need to be removed prior to the cleanup.

**When did the Sacramento Bee announcement go out and were there contacts included?**

*J. Lane: The Five Year Review notice was published in the Carmichael Times and Grapevine Independent (June 24, 2016) as well as the Folsom Telegraph (June 29, 2016). It only included L. Keller’s name as the contact. I will make sure the Aerojet CAG is emailed a copy of the published notices.*

**Did anyone call yet?**

*J. Lane: No.*

**ACTION ITEMS:**

- Send a copy of what was in the papers to CAG members
- Make the Water Forum office aware of announcements

K. Pallari discussed the different tools for outreaching to the community to get the word out more, such as the City website, Nextdoor and other social media sites as well as working with neighborhood associations and civic organizations.

**4. Potential for ATSDR Involvement – Discussion**

The Agency for Toxic Substances and Disease Registry (ATSDR) is an agency that studies public health and works with the Centers for Disease Control under a grant program with the California Department of Health to study different issues. They are a tool for the CAG to use if there are any concerns about public health. If interested, ATSDR can attend the September CAG meeting as long as advanced notice is given (along with a list of issues/concerns so they can come prepared). ATSDR staff has attended a CAG meeting in the past when health risks associated with perchlorate became a concern.

An ATSDR letter was distributed to members that included a link that talks about the perchlorate contamination of drinking water. Reports are located at: [www.atsdr.cdc.gov/HAC/PHA/HCPHA.asp?State=CA](http://www.atsdr.cdc.gov/HAC/PHA/HCPHA.asp?State=CA)

J. Heple asked the group if they felt it would be valuable to have ATSDR out here and L. Keller said that it could be useful for the CAG as this group is more educated on the health risk concerns. J. Santiago-Ocasio thought the ATSDR could help to address some of L. Ladd’s concerns that he continues to express (they often work with local doctors to share information and education).

**Does ATSDR currently have access to good data?**

*C. Fennessy: Yes, they have access to all data via Aerojet.*

What ATSDR would do for this group is ask “what are your concerns?” and then they would look at the data and that particular issue before sharing their findings and recommendations. They would analyze a concern.

**Would ATSDR look at public health data or cases? The population incidents and exposed area incidents?**

*C. Fennessy: That is not what they offered to J. Heple so don't believe that is what they would do if requested to work with CAG. It really seems like it would be useful as the community starts to have concerns. Alex answers a lot of questions and EPA receives questions and refers a lot of them to the ATSDR.*

*J. Heple: In the past as we were working on the OU6 comments, there were a lot of discussions on issues surrounding the properties in the future – the turnaround of the property and opportunity for future development. That was when we engaged other agencies to assist with responses. At this time it doesn't seem to be necessary to engage ATSDR. I suggest reading the materials and becoming familiar with them.*

*EPA: If and when the CAG decides they want to engage the ATSDR, we can let them know, but make sure you get your questions/focus issues into EPA prior to the meeting so ATSDR can plan their time and prepare.*

**5. Landfill Waste Management – Chris Fennessy, Aerojet and Alex MacDonald, RWQCB**

- Aerojet has a proposal to remove the existing closed landfill and then haul it off as early as next year, but it could be delayed based on development schedules and regulatory concerns. The landfill currently is capped under an approved closure plan.
- Aerojet completed pilot tests to see what they would run into and how they would segregate the debris. There were lots of cobble piles (more rock than debris) present within the landfill. They figured out how deep and thick the debris is then they filled it back up with the excavated materials and replaced the cap.
- Aerojet solicited bids for the removal. They want to dispose of the waste material after segregating and reusing as much as they can (cobble and rock). Aerojet needs the materials and foundation to be stable for development in the future. [Showed photo that illustrated the separation of the debris]: They are working to minimize the amount of debris before hauling away off site.
- The cost and environmental impact of truck traffic/transport to other landfills is high so Aerojet prefers to build their own new landfill on the property and use that instead, which will reduce truck trips and the carbon footprint.
- The new landfill will have to meet all of the environmental requirements which would be an improvement from the existing landfill. This new landfill would only take Aerojet's own waste; no waste from outside sources would be accepted. Potentially, a new landfill could also accept nonhazardous waste from other cleanup sites at Aerojet.
- Aerojet identified six potential landfill locations: the three potential already contaminated locations include one within OU6, one in Central OU, and one in Island OU. The two potential uncontaminated locations would need to be assessed. The White Rock Road North Dump may be the easiest in terms of regulatory requirements.
- Each location has their own issues: one of these sites is within Boundary OU, two in Central OU, one in Island OU, one in Eastern OU and the last one, White Rock Road North is the easiest in terms of regulatory concerns.
- White Rock Road dump site is A. MacDonald's personal choice due to it needing to be capped already and other regulatory hurdles at the other locations. C. Fennessy's

preference is the location within the Island OU near Line 3 because it is already very contaminated.

- The landfill has about 700K cubic yards of waste before screening, about 450K yards will need to be disposed of. The waste is primarily nonhazardous materials but there is some perchlorate, PCBs and metals, and an asbestos cell.
- One concern: If they choose to use this site to bring debris from cleanup, what kinds of hazards does that offer?
- Barring a new landfill on Aerojet property, the majority of the waste materials will go to a Class 2 facility.

**Does it make sense to move this debris to another landfill or keep it all onsite at a new landfill?**

*C. Fennessy: Aerojet has not decided which scenario they will choose.*

*J. Santiago-Ocasio: EPA is in agreement that it is a good idea to have a landfill onsite to manage all site-related soil disposal.*

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

Note: A schedule and map were distributed

- All monitoring wells that were planned to be constructed this year have been completed. Aerojet is looking to put in four more monitoring wells fairly soon.
- Most of those wells are in Carmichael near GET LB. Additional extraction is planned in that area. Extraction wells are not cheap and they require lots of piping so they are using monitoring wells to make sure they get the extraction wells in the right place.
- Due to chloroform concentrations, the fifth air stripper has been purchased and will be installed at GET EF. Once that occurs, Aerojet can operate all their wells in the GET EF system.
- Area 49000 – Soil Vapor Extraction Unit should be getting the second monitoring report in the next few weeks. The system has been built to full-scale.
- No changes in the treatability studies.

Inactive Rancho Cordova Test Site (IRCTS):

- IRCSTS is a State Superfund Site where the Aerojet plume is headed off towards Mather Field.
- Boeing and Aerojet are in the process of constructing additional groundwater monitor wells for plume definition north, south and east of the runways. It is very difficult to work around the airfield. Each of the wells cost approximately \$80,000.
- River West Development is starting to build homes to the east of the IRCSTS and their current water supply is from Sacramento County.

**What is the depth of the plume?**

*A. MacDonald: Level C is somewhere around 80 to 100 feet. Perchlorate and TCE are there.*

Aerojet is gathering data in a special area near the landfill headed towards Lake Natoma.

**What happens to the contamination chemical when it is extracted?**

*A. MacDonald: Perchlorate is removed from the groundwater using an ion exchange treatment system. The ion exchange resin is hauled off to a facility that can either recycle or burn the resin. Usually it is burned, landfilled. Aerojet also uses biological treatment at GET EF to break the perchlorate a part. Biological solids from the process are then taken to the sewer. There are no liquid wastes being hauled off-site.*

**Need clarification and an update on Area 40. Tried to find information on the RI on GeoTracker but some links didn't work and the CAG is confused as to whether Area 40 is still within OU7. Was trying to identify what the risk was going to be to the groundwater. J. Spearow couldn't see how close it was to the residential area.**

*A. MacDonald: I supplied Jimmy with the direct link to the documents on GeoTracker.*

*L. Keller: Area 40 will remain within OU7 until RI/FS is complete and a decision document (RAP/ROD) has been finalized. RD/RA for Area 40 will proceed under new OU10.*

**If you are estimating risk that contamination has leaked into bedrock near community but don't know how close you are to a crack, then how would you know the risk?**

*C. Fennessy: It would most likely show up in a soil vapor test.*

**I understand that they were considering fencing off areas that would become a park. Is this area going to be children's park?**

*C. Fennessy: Fenced-off areas would be access-restricted and not part of the usable park area. TCE is not an acute exposure issue. Unless the same person kept coming back over and over for 30+ years there would not be a concern.*

**There is a concern about short-term exposure to vapor off-gassing during pregnancy. The real estate group is also concerned about aesthetics of this area and what it looks like.**

*C. Fennessy: The area would be fenced-off to prevent public access.*

**If you have high concentrations near the surface, how did you estimate exposure? How do they do the estimate to individuals who would be outside? Exposure for example might be different on a hot day with little wind versus a fall day with lower temps and a breeze?**

*A. MacDonald: You need to talk with the risk assessor to get an understanding of the model that they use to evaluate risk.*

*C. Fennessy: The RI for this area was completed in early 2016; received and responded to comments in early 2016. The agencies are good now and Aerojet is about to resubmit to the agencies for approval. Groundwater and outdoor inhalation (ambient air) are both considerations.*

**Other option is to potentially not even have a fence after remediation of soil and groundwater. Can I get the supplemental RI as well?**

*C. Fennessy: All of the data will be available on CBI public portal. They can provide access if desired.*

*EPA: Not only are we evaluating human health risk in this area but also the ecological impacts which in some ways are more restrictive. There will have to be vapor mitigation and the developer will have to disclose the issue during purchase.*

CAG is concerned with vapor intrusion at the ground and outdoor areas depending on the day.  
Area 40 Process:

A discussion occurred regarding the State-required environmental process known as California Environmental Quality Act (CEQA) and it's relation to the CERCLA process.

- Once Area 40 reaches the Remedial Design/Remedial Action phase, it will be completed as new OU10.
- EPA is currently going through RI/FS CERCLA process (as normal) for Area 40.
- Following the RI/FS, Area 40 will undergo public involvement, preparation of decision documents (RAP for DTSC and mini-ROD for EPA), and CEQA documentation.
- CEQA documentation and the RAP will be prepared concurrently for Area 40 and vetted to the public. EPA will prepare a mini-ROD to fulfill CERCLA decision document requirements and then Area 40 will be transferred to State-lead for RD/RA, with EPA oversight.

#### **7. Next Meeting Date**

- Wednesday, September 21, 2016 (City Hall, American River South Room)