

Laura Rainey, Senior Engineering Geologist

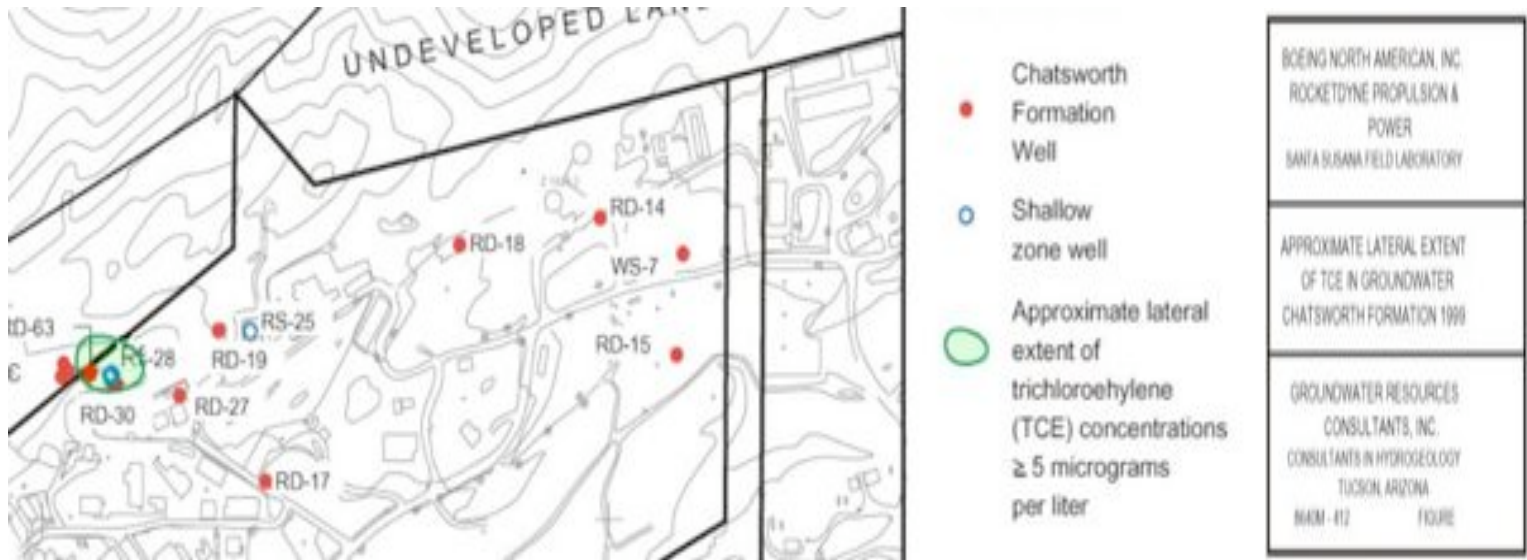
California Department of Toxic Substances Control (DTSC) 5796 Corporate Avenue, Cypress, CA 90630-4732 (Via U.S. Mail and E-mail)

Comments on the Group 7 RCRA Facility Investigation (RFI)

4/1/2010

ACME (Aerospace Cancer Museum of Education) has provided the below comments for the Group 7 Resource Conservation and Recovery Act (RCRA) Facility Investigation Report of the Santa Susana Field Laboratory (SSFL) AREA IV portion. This was/is primarily Nuclear Research/Storage Areas, yet many chemicals were associated with operations. Trichloroethylene (TCE) has been a site-wide issue and from the illustration below indicates a Group 7 issue as well. This is a major concern (aside from the radionuclide contamination) as it drains into the American Jewish University’s Brandeis-Bardin Campus, releasing into the Arroyo Simi and eventually the ocean. The majority of the surface drainage of the SSFL drains into the Los Angeles River via Bell Creek, yet this reporting area is the 257 acre portion of the 2850 acres that drain onto the Simi Valley side of “The Hill” http://www.rocketdynearchives.com/images/The_Hill_brochure_rocketdyne_archives_boeing_ssfl_santa_susana_field_lab_nuclear_laboratory.pdf

Yet we have to consider the Radioactive Materials Handling Facility (RMHF) has/had pipelines that run through Building 4133 past the Sodium Reactor Experiment (SRE) complex into the Boeing owned AREA III Silvernale Pond that is currently being treated and pumped, bypassing the Los Angeles Regional Water Quality Control Board (RWQCB) National Pollutant Discharge Elimination System (NPDES) Permitted Outfall no. 18 into the L.A. River, meaning, the Group 7 area could be a San Fernando Valley issue as well.



As a geologist you may understand the complexity of the Chatsworth Formation, highly jointed and fractured, and as such it does have a secondary permeability and porosity that is much higher than a formation of primary permeability and porosity. Accidents have happened at this site as documented, and we need to follow these spills before they reach the water table. There needs to be further testing to find out the true nature of the groundwater movement, to be sure that it is not moving down into the deeper groundwater. There should be the consideration that there is a very high potential for near surface groundwater or water which infiltrated into the near surface, especially in the holding ponds, to infiltrate into the deeper Chatsworth Formation Operable Unit along the many open and connected joints and fractures.

http://acmela.org/images/DWP_Nahai_to_EPA_Nastri_San_Fernando_Groundwater_March_7_of_2008.pdf

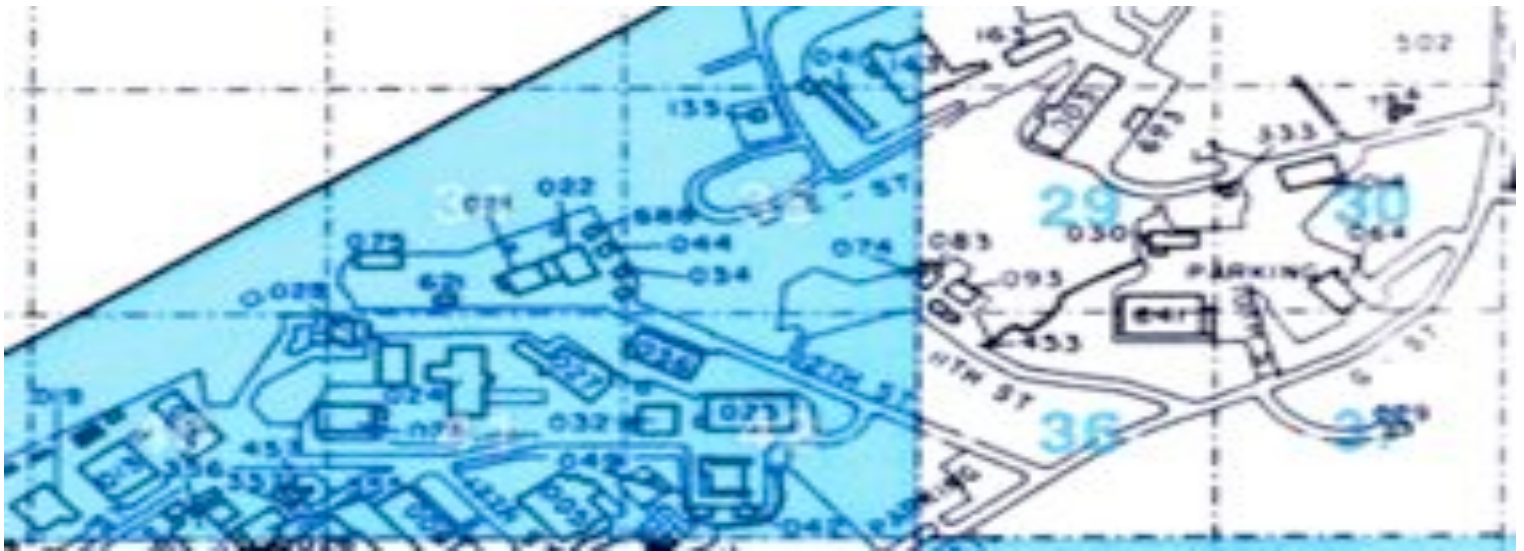
The above link will take you to a March 2008 Letter from then Department of Water and Power (DWP) Chief, H. David Nahai to Wayne Nastri, of the United States Environmental Protection Agency (EPA) that states "The City of Los Angeles has lost the ability to pump 47 percent of its wells in the SFB (San Fernando Basin)" REASON "Increased concentrations of primarily Trichloroethylene (TCE)" this is a product of the Aerospace Industry with a large portion of it coming from the SSFL and the Rocketdyne Canoga Facility located next to the Westfield Topanga Shopping Plaza.



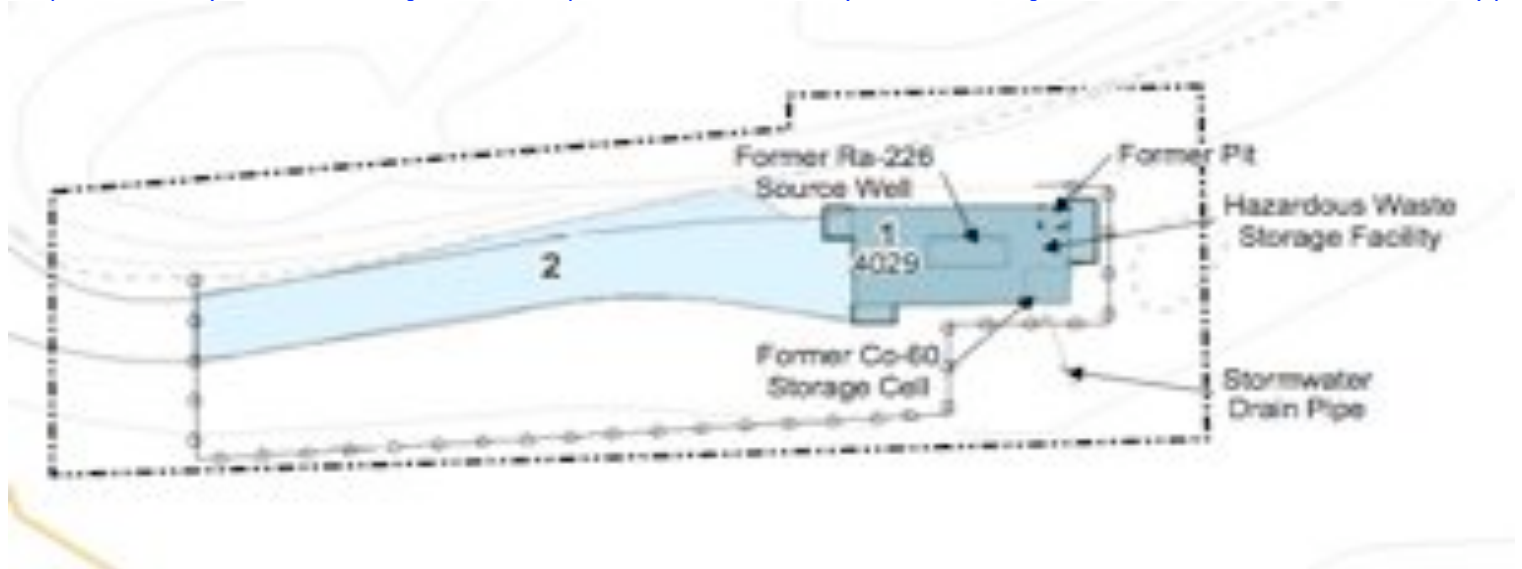
A major concern that sticks out like a sore thumb is the separate circle of Group 7 that surrounds Building 4029. These RFI areas were divided up into surface water drainage...



...areas and are all included together, except this one. It is almost like this facility was of a great concern and they came back to it lumping into a non-associated grouping. According the Facilities Engineering Map created in 1984 by R.K. Boyles for Rockwell International, it indicates this building was/is to be used for Hazardous Waste Storage...



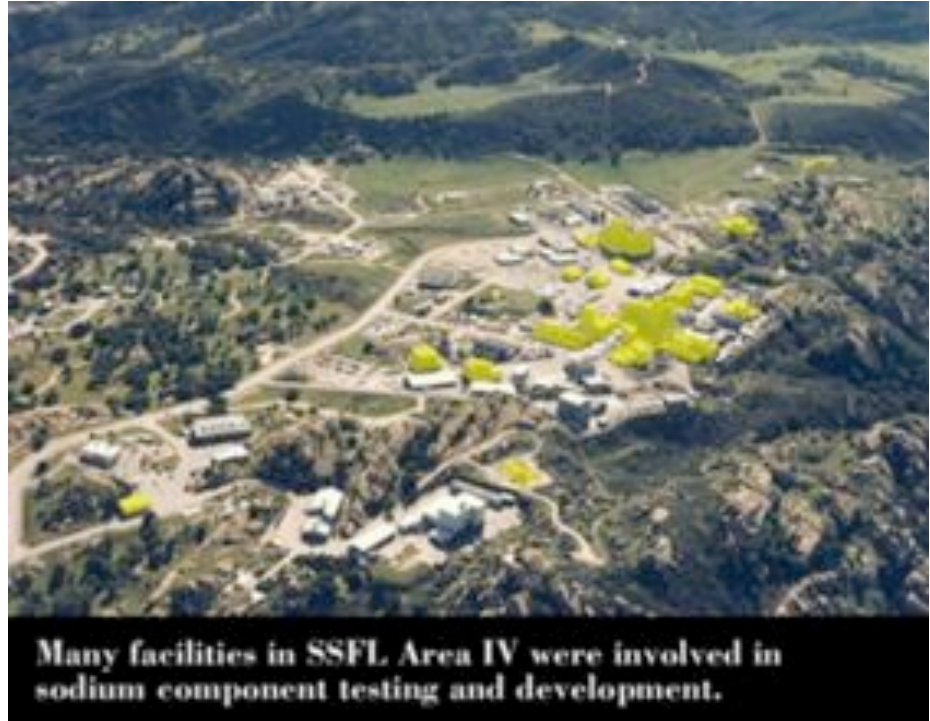
http://www.rocketydynearchives.com/images/Rockwell_Map_of_the_SSFL_1984_Rocketdyne_archives_boeing_ssfl_santa_susana_field_lab_nuclear_laboratory.pdf



From reading the table of metals associated with Building 4029 we see hits of Barium, Beryllium, Chromium, Cobalt to name a few as well as high concentrations Sodium and Aluminum which could be byproducts of the Nuclear work done in this area. Many of the Radioactive Fuel Rods were "Cladded" or encased in Aluminum tubing and Sodium was used in various operations in AREA IV including cooling Nuclear Reactors. The fact that this building was built behind a Rock bigger than the Facility itself indicates that they were pushing it's dangers out of site and around a natural barrier.

What is Sodium?

- Sodium is a metal.
- Elemental sodium is not found in nature.
- Metallic sodium appears silver to light gray and at room temperature is as hard as cold butter.
- An example of a compound containing sodium is table salt (NaCl).
- Metallic sodium reacts with water.
- Sodium melts at 208° F and boils at 1618° F.



Many facilities in SSFL Area IV were involved in sodium component testing and development.

From the Aerial Photo on the Right we see Group 7's Building 133 was Sodium associated

Where Was The Testing Done?



Sodium Component Test Installation (SCTI)

- Used to test large steam generators and other sodium system components
- Supplied steam to an on-site co-generation facility.
- Was the largest steam generator test facility in the world.

Large Leak Test Facility

- Investigated safe operating margins for sodium to water steam generators.
- Improved our knowledge of sodium system safety.



Sodium Pump Test Facility

- Tested large scale sodium pumps.
- Largest sodium pump test facility in the world.
- Capable of circulating 55,000 gallons of sodium per minute at temperatures up to 1,100° F.



Small Component Test Loop

- Used to test small scale sodium pumps, valves and flow control devices.
- Capable of 3,500 gallons per minute at 1,200° F.



Liquid Metal Development Laboratory (LMDL 1 & 2)

- Used for the development of sodium systems instrumentation, friction and wear testing of bearings and seals.
- Developed and tested safe heat removal systems.

Chemistry and Instrumentation Laboratory

- Used to support tests and equipment, investigate metal samples and maintain instruments.
- Maintained and calibrated over 7,000 instruments.





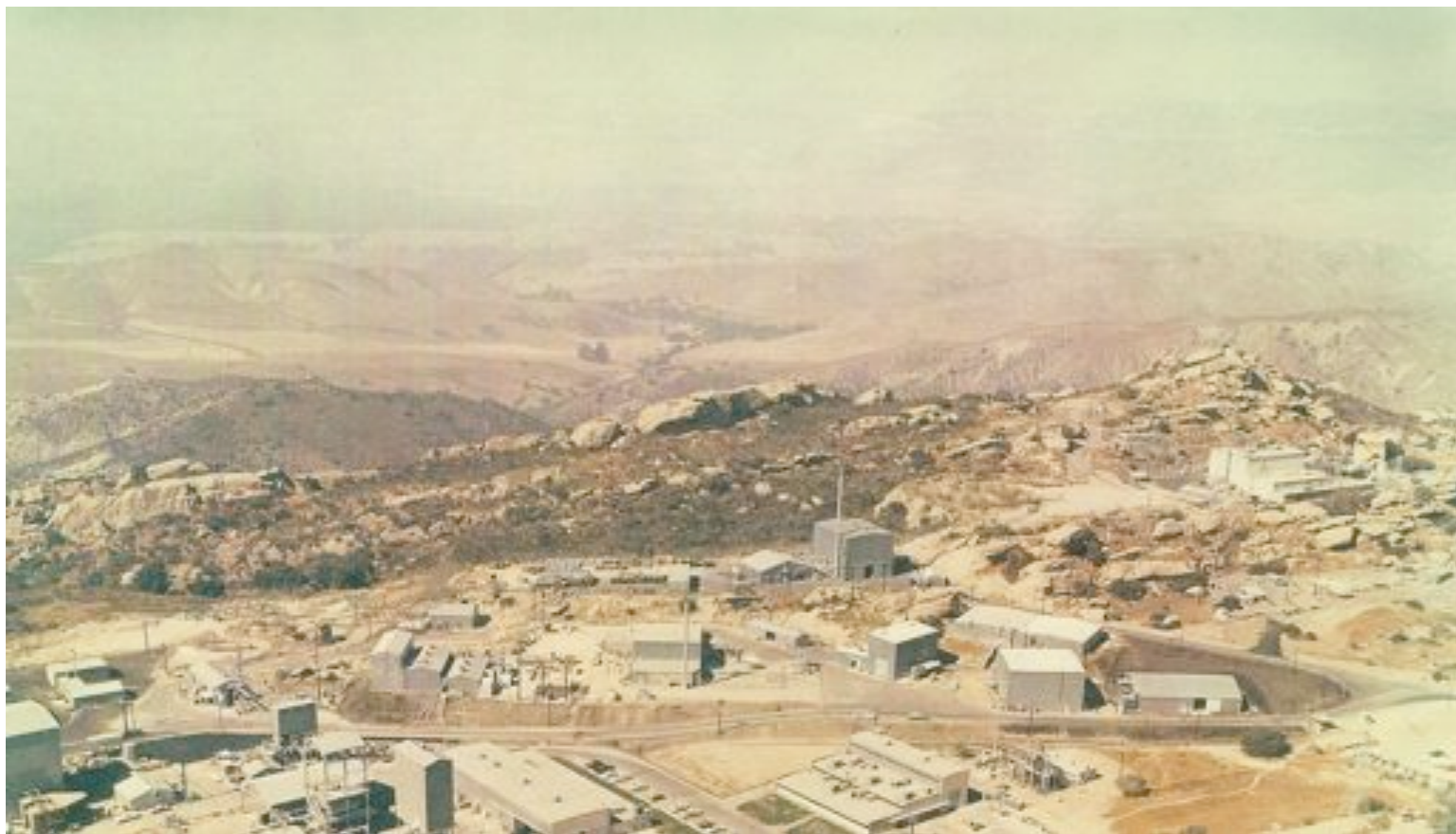
The above photo shows the location of Building 4133 prior to construction. This area is located just above the SRE and it appears a "Tent" is used possibly for an office to log in some of the hazardous waste that you see in the form of 55 Gallon Drums surrounding this "Tent". This entire area needs to be looked into, as it is a very different scene than we are used to in the present (See Photo Below: Building 4133 in 2008).



From former employee interviews the Building 4133 was used as a Sodium Burn Facility so aside from the traces of Sodium found there should be careful screening of all types of Dioxins that are associated with Sodium Incineration. From other reports I have read there is a large Mercury contamination problem around this facility and should be addressed as well. We do not want to see any traces of chemicals that could impact the surrounding communities and endanger the health and safety of its residents.

Below we see 55 Gallon Salvage Drums of an unknown substance located on the Southeast corner within the gates of the 4133 Facility. This should be noted to Ensure a Proper Cleanup.





The above photo indicates there is a small shack that is located on the Western portion of the 4133 Sodium Burn Facility as we know it today. This photograph also illustrates the Radioactive Materials Handling Facility (RMHF) also known as the Radioactive Materials Disposal Facility (RMDF). The RMHF as it is known today is very different from this 1960's Circa photo. With closer examination of this image we notice hundreds of 55 Gallon Drums being stored at this facility all on exposed dirt and rock. There is not asphalt or concrete pavement present in this photo and deep core-hole samples should be taken so we are certain of what contamination lies underneath the asphalt that is present today.

This also brings me to another issue regarding the pavement of the RMHF. Take a look at the photo on the next page, an Aerial shot of the RMHF pulled off the Department of Energy ETEC website. It shows new asphalt pavement and in the 2 years the SSFL has been open to ACME for private tours it has been paved over twice. I have heard from two sources that inform ACME that was/is to keep the radiation levels intact or hidden in the asphalt. If this is the case, when it comes time for the demolition of this ground cover it should be treated as Radioactive and Chemical Waste. With the illustration of TCE findings in this area one would have to concur that the asphalt is contaminated with TCE somewhere in the Dozens of layers unseen from the surface. TCE can disintegrate asphalt into a "Goo" and there could be some areas in this pavement that TCE has broken through the barrier and into the soil and/or groundwater. Please consider this scenario.



The above photo shows 55 Gallon Drums without lids (Black Drum Un-Marked) that are left outside upside down to drip-dry their contents. This is an area that is located on the Northeast corner of the Radioactive Materials Handling Facility and should be sampled extensively to Ensure a Proper Cleanup.



The above photo shows waste from the RMHF sitting on the Roadway outside the RMHF just above former Building 4036. This roadway should be looked into as a potential source of Chemical and Radioactive Contamination and addressed properly. We need to ensure public health and safety by additional sampling, re-working/re-writing the entire Group 7 RFI Report with the help of comments from former employees who need to be contacted for their comments. The company records should be located and ask these former employees of these facilities what they remember and request that any No Further Action determinations be reconsidered. Every single inch of this site needs to be characterized as it sits above several communities and has the potential to risk one's health every time it rains or the wind blows.

Your hard work on this is truly appreciated as you have shown great attention to detail during the Group 5 RFI process and wish you the same continued success on Group 7.

Sincerely,

William Preston Bowling - ACME (Aerospace Cancer Museum of Education)

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cc: Tom Gallecher - The Boeing Co., Cal EPA Secretary Linda Adams, Craig Cooper - EPA,

Maziar Movassaghi, Rick Brausch & Susan Callery - DTSC, Billie Greer for Governor Arnold Schwarzenegger, Assemblymember

Audra Strickland, Assemblymember Cameron Smyth, Louise Rischoff for Assemblymember Julia Brownley, Rebekah Rodriguez-Lynn for Senator Fran Pavley, Phyllis Winger for Los Angeles County Supervisor Greig Smith, Los Angeles County Supervisor Dennis Zine,

Ventura County Supervisors Linda Parks and Peter Foy, Shelly Backlar - Friends of the Los Angeles River, Millie Jones for Los Angeles County Supervisor Michael Antonovich.