SSFL WATER

WED. JULY 26 | 6:30 PM | ONLINE

Guest Speaker: Michael Rincon
Research & Policy Manager,
Physicians for Social Responsibility-
Los Angeles

Acknowledgements

Parents Against SSFL acknowledges the original inhabitants of the land that the Santa Susana Field Lab encompasses. The 2,850 acres of land that constitutes SSFL has been utilized by the Ventureño Chumash, the Tongva, and Fernandeno Tataviam Band of Mission Indians indigenous communities for time immemorial.

We acknowledge and honor the original inhabitants and seek meaningful partnership and inclusion in the stewardship and protection of their cultural resources and homelands.

Acknowledgements

Parents Against SSFL wishes to acknowledges the expertise and dedication of **Dan Hirsch**, President of Committee to Bridge the Gap, and **Denise Duffield**, Associate Director of Physicians for Social Responsibility of Los Angeles.

We wouldn’t be here without their tireless advocacy and leadership.

SSFL WATER

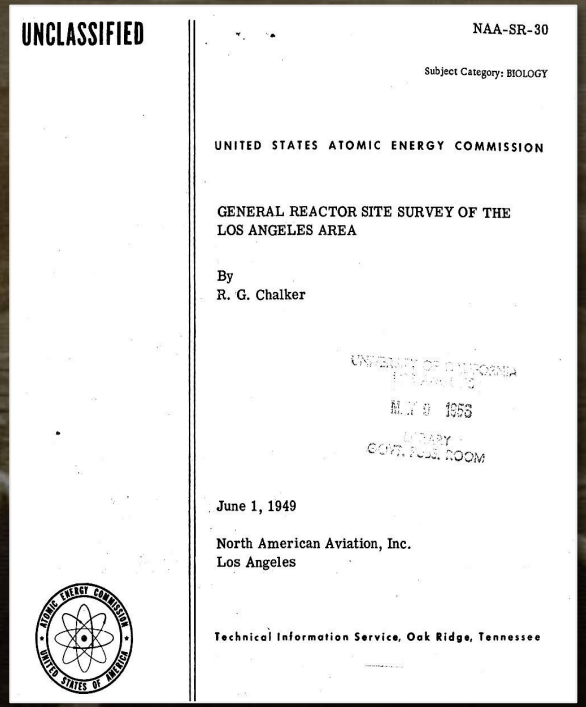
Site Overview

Jeni Knack
Parents Against SSFL

Santa Susana Field Laboratory

(Formerly known as Rocketdyne)

- Established late 1940s for rocket testing
- In 1949, Atomic Energy Commission looked for a remote nuclear testing lab for work too dangerous to do in populated areas
- SSFL area ranked 5th out of 6 for meteorological safety criteria
- Picked due to driving time to UCLA & USC



UNCLASSIFIED

NAA-SR-30

Subject Category: BIOLOGY

UNITED STATES ATOMIC ENERGY COMMISSION

GENERAL REACTOR SITE SURVEY OF THE LOS ANGELES AREA

By
R. G. Chalker

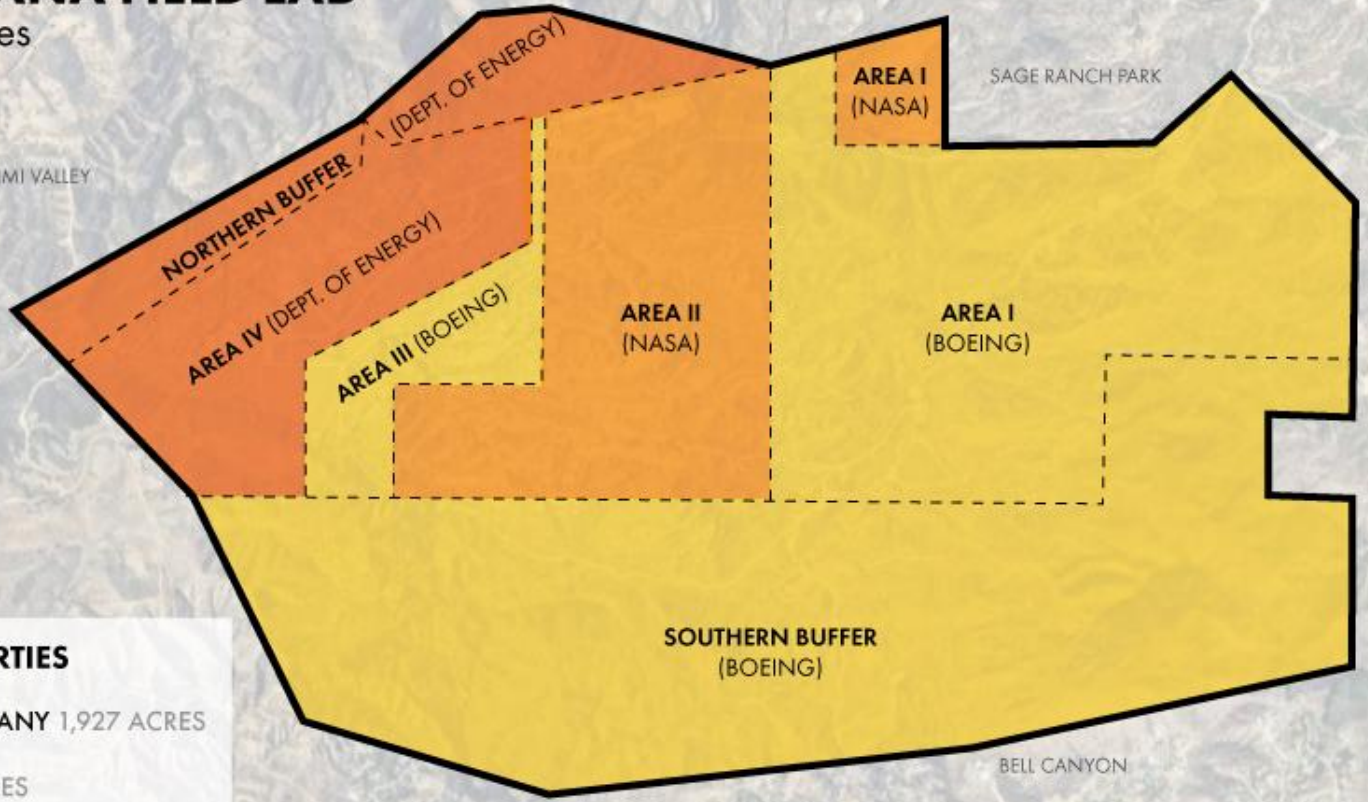
June 1, 1949

North American Aviation, Inc.
Los Angeles

Technical Information Service, Oak Ridge, Tennessee

SANTA SUSANA FIELD LAB

Responsible Parties



RESPONSIBLE PARTIES

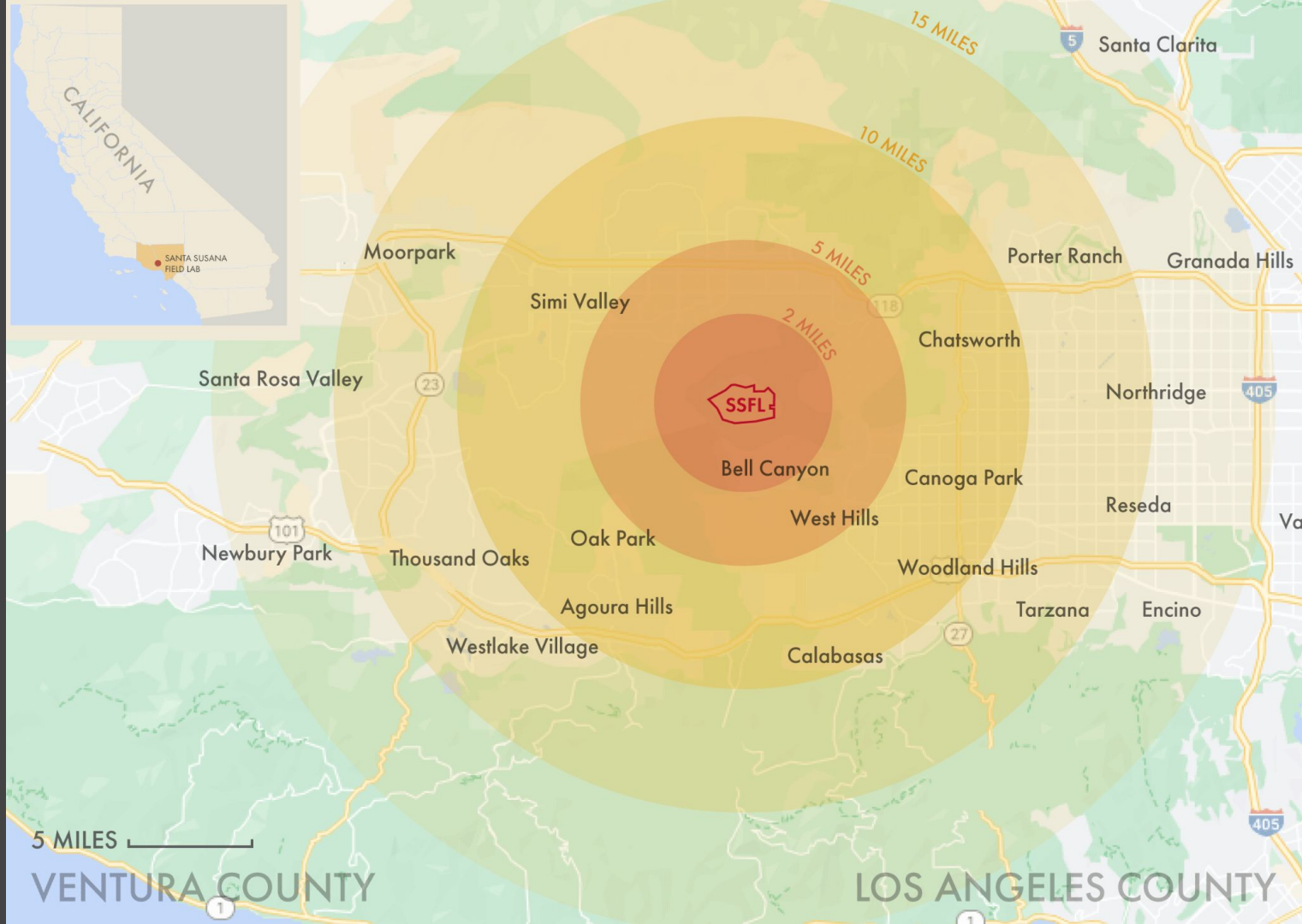
- **BOEING COMPANY** 1,927 ACRES
- **NASA** 451 ACRES
- **DEPT. OF ENERGY** 472 ACRES

Map by Parents Against SSFL | 2023

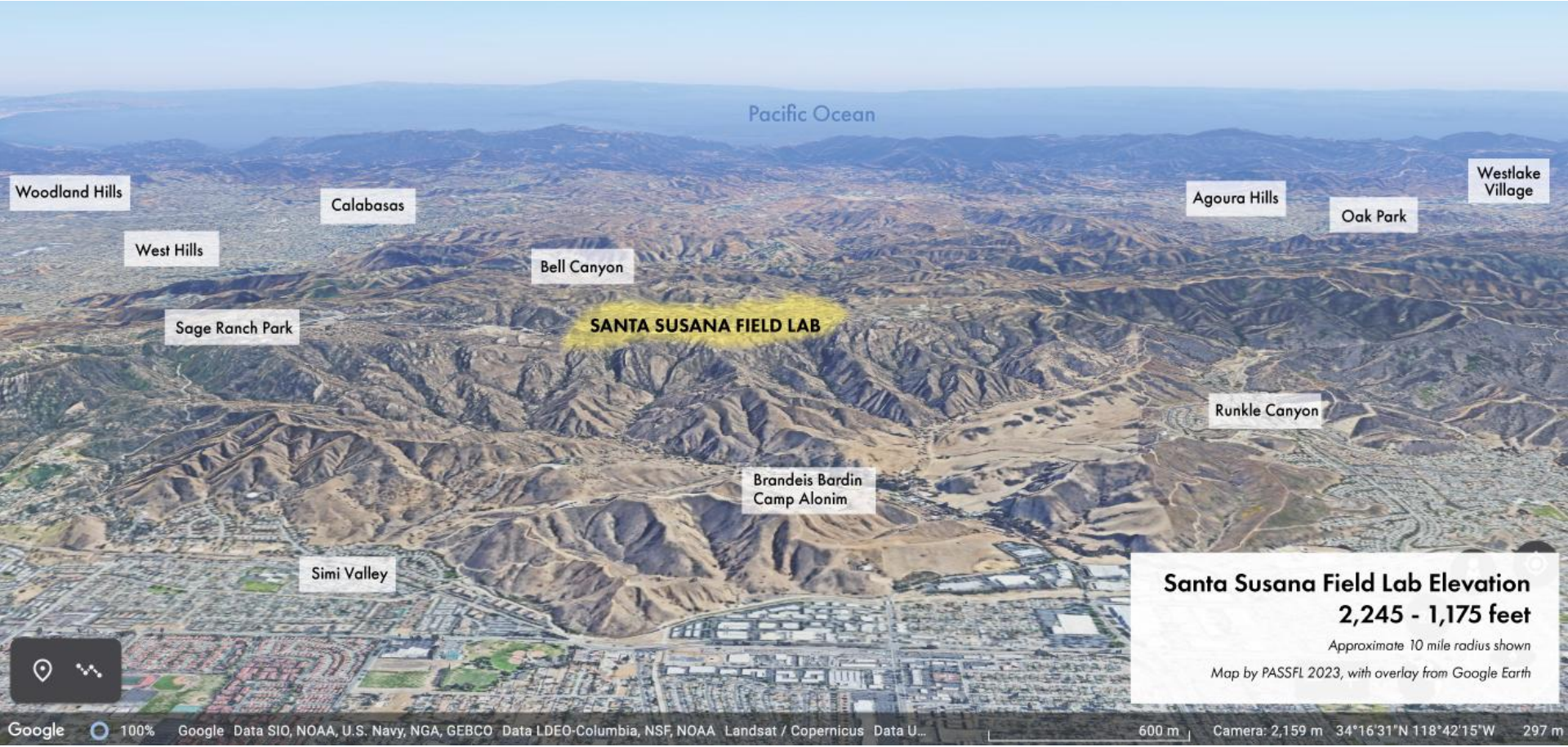
Google

Location:

Over 700,000 people live within 10 miles of the SSFL



Location: Located on Plateau Above Communities



Rocket Engine Testing

Over 30,000 rocket engine tests conducted

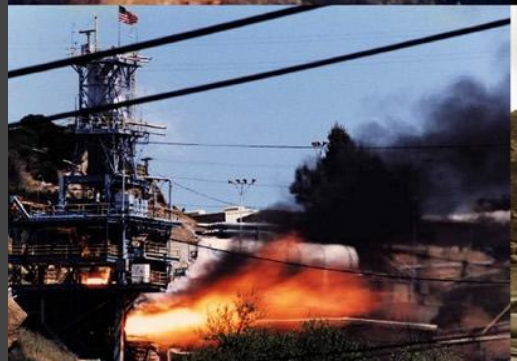
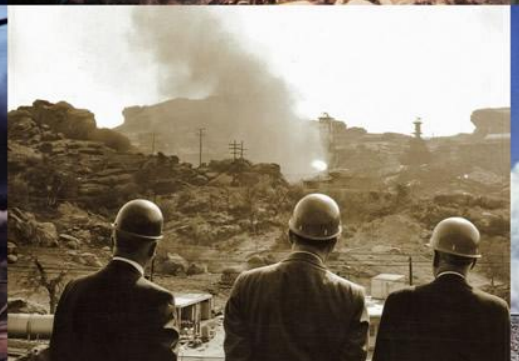
800,000 gallons of toxic Trichloroethylene (TCE) was lost into soil

500,000 gallons of TCE remain in Chatsworth Aquifer








Open Air Burn Pits

Burned chemical and radioactive waste at two locations at SSFL

Huge plumes of contaminated smoke spread to local communities

Violated known environmental laws

Nuclear Work in Area IV

10 Nuclear Reactors

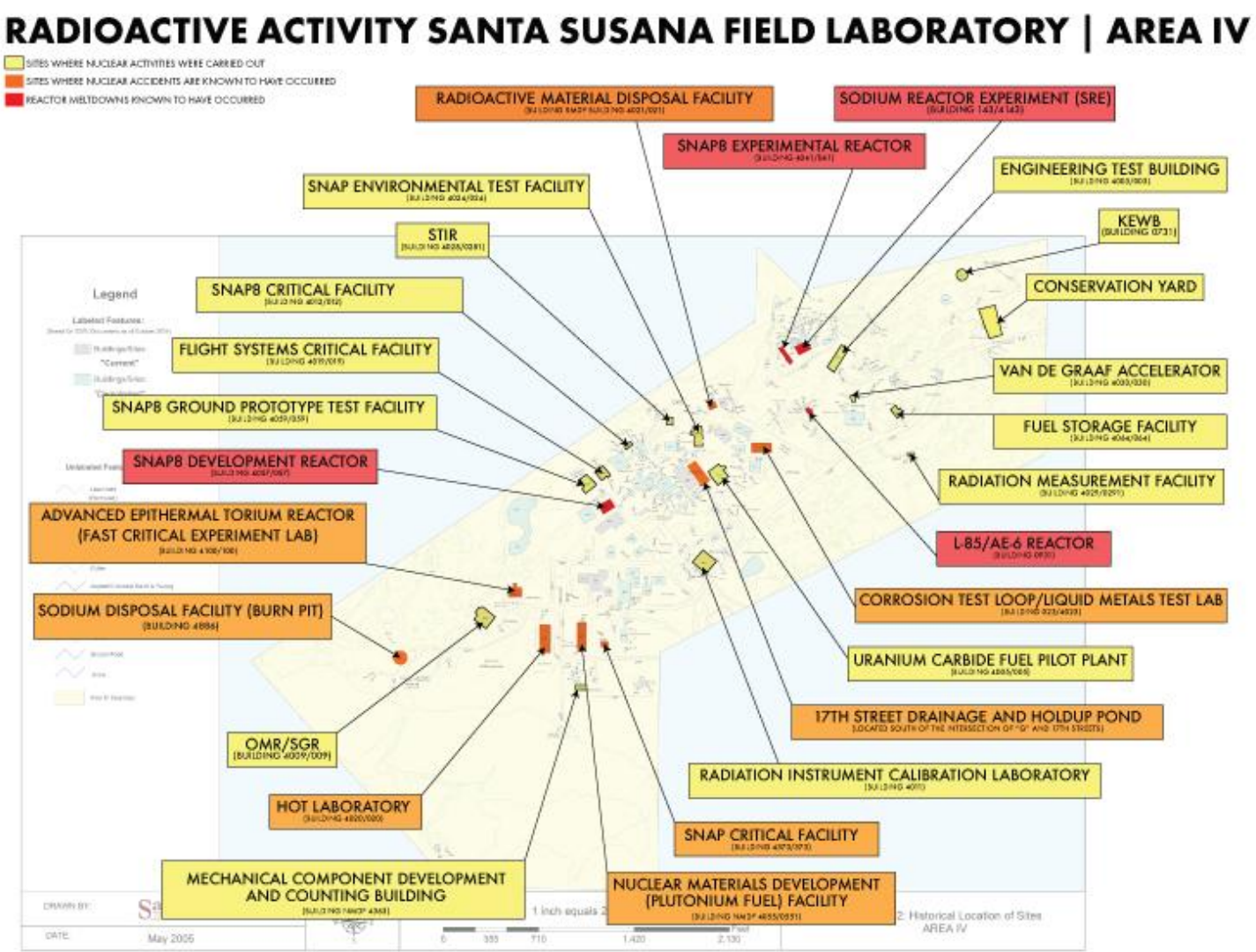
1 Reactor meltdown

3 Reactor accidents

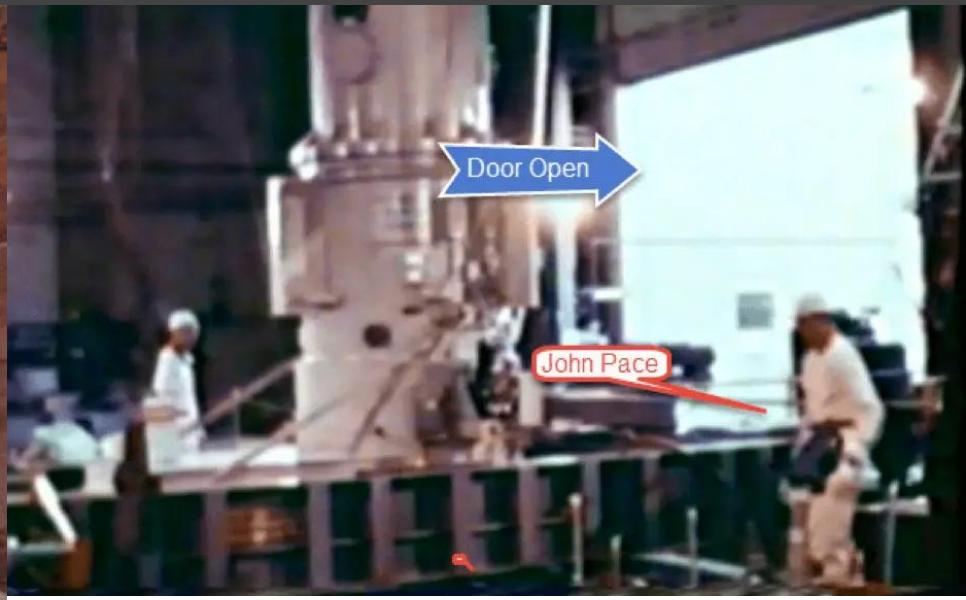
Plutonium and Uranium Fuel Facilities

Area IV had radioactive accidents, explosions, spills, leaks and fires

Open air burn pits



Sodium Reactor Experiment (SRE): 1959



"...13 of 43 fuel elements in the SRE reactor core failed due to overheating when the cooling flow provided by liquid sodium was blocked or partially blocked by tetralin that had leaked into the primary sodium loop during prior power runs..."

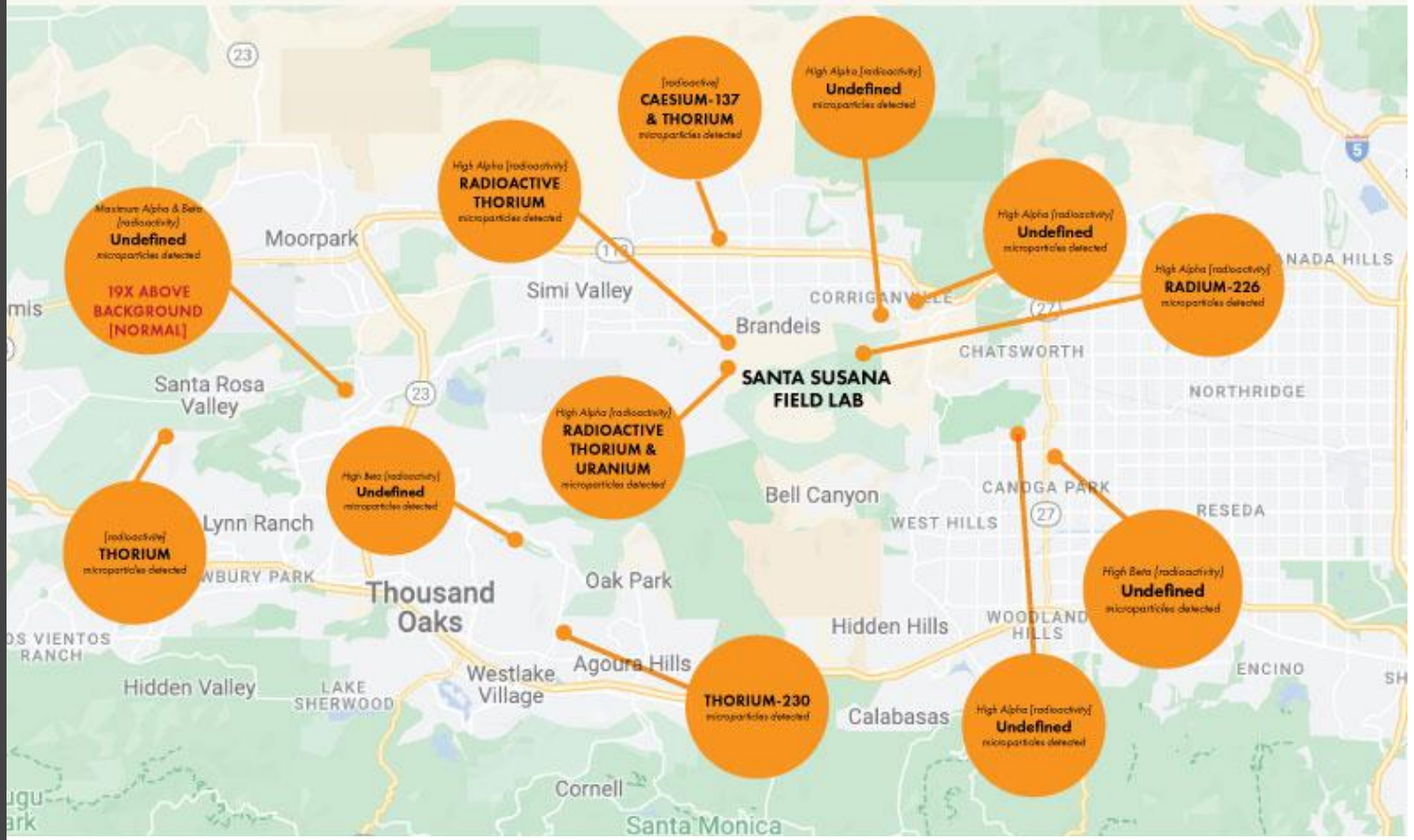
An Assessment of Potential Pathways for Release of Gaseous Radiation

Contaminants Migrate Offsite: Soil

Independent study found radioactive contamination after the the Woolsey Fire

APPROXIMATE LOCATIONS OF RADIOACTIVE SAMPLES

WOOLSEY FIRE SOIL STUDY 2018-2019



www.parentsagainstSSFL.com/Woolsey

2022 Settlement Agreement: Health Impacts

Want to learn more about the PEIR's impacts on human health... especially women and children?

Save the Date!

Wednesday, Aug 2nd at 6:30pm

SSFL WATER

Surface Water

Melissa Bumstead
Parents Against SSFL

Surface Water & Rain Runoff

IMPACTS: Groundwater | Watersheds | Drinking Water | Crop Irrigation | Wildlife | Water Recreation | Pacific Ocean

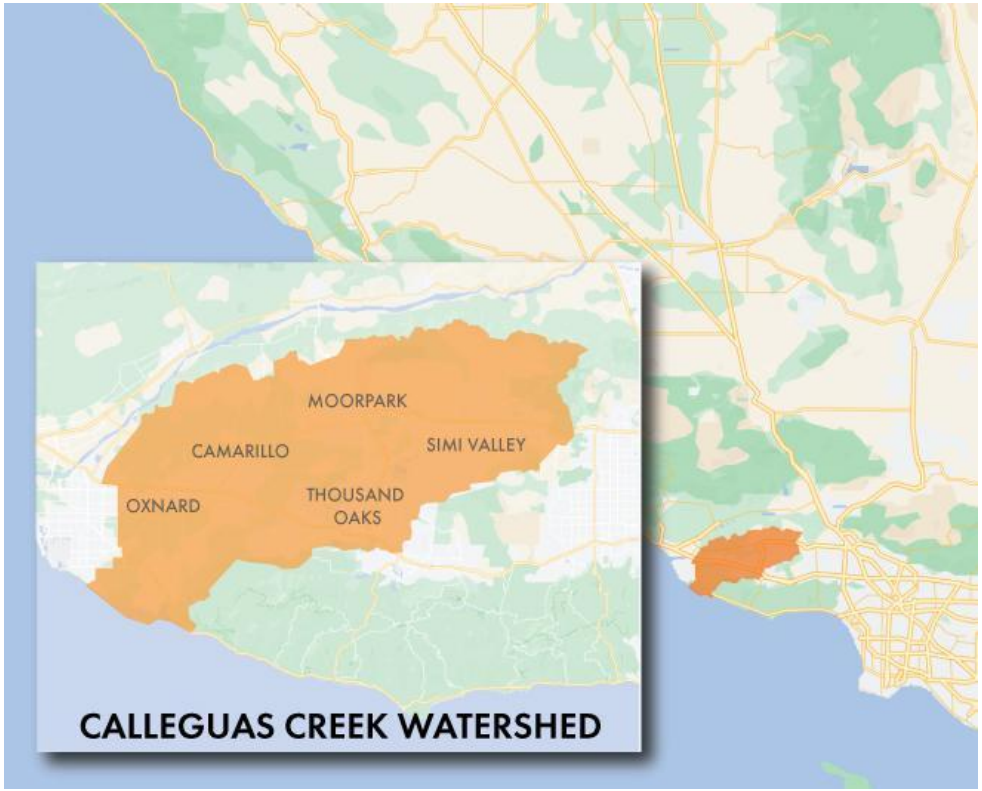
Surface Water: SSFL impacts Los Angeles River

"The SSFL has the potential… to discharge approximately 187,000,000 gallons per day of stormwater runoff that may contain pollutants from the facility. Approximately 60% of the discharge exits the property…to Bell Creek, a tributary to the Los Angeles River."

Boeing's Tentative NPDES Permit, PDF Page 97

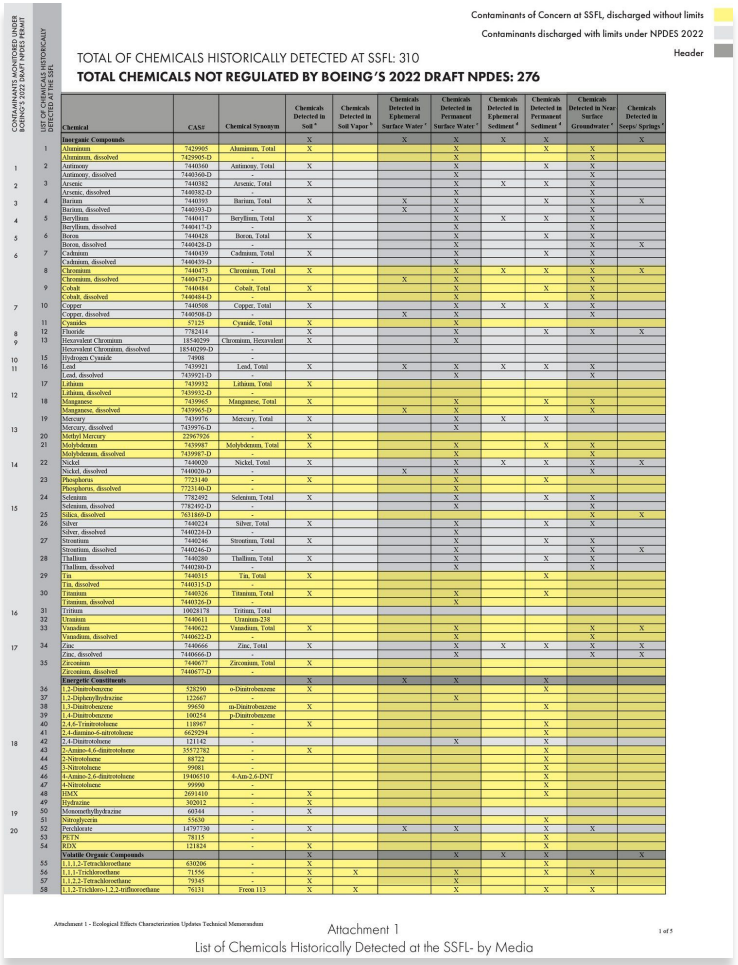
Surface Water: Calleguas Creek Watershed

"Surface water discharges from the northwest edge of SSFL are directed to Arroyo Simi, a tributary located in the Calleguas Creek Watershed. Supplies of groundwater are critical to agricultural operations …much of the population in the watershed relies upon groundwater for drinking."



Boeing's Tentative NPDES Permit, PDF Page 113/176

Chemicals of Historical Concern at SSFL



Contaminants of Concern at SSFL, discharged without limits

Contaminants discharged with limits under NPDES 2022

Header

TOTAL OF CHEMICALS HISTORICALLY DETECTED AT SSFL: 310

TOTAL CHEMICALS NOT REGULATED BY BOEING'S 2022 DRAFT NPDES: 276

CONTAMINANTS MONITORED UNDER BOEING'S 2022 DRAFT NPDES PERMIT

LIST OF CHEMICALS HISTORICALLY DETECTED AT THE SSFL

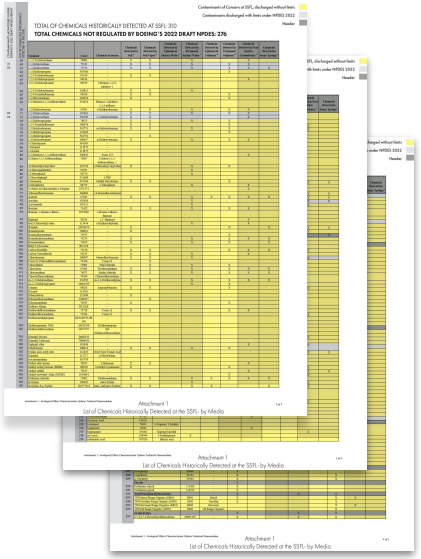
		Chemical	CAS#	Chemical Synonym	Chemicals Detected in Soil [a]	Chemicals Detected in Soil Vapor [b]	Chemicals Detected in Ephemeral Surface Water [c]	Chemicals Detected in Permanent Surface Water [c]	Chemicals Detected in Ephemeral Sediment [d]	Chemicals Detected in Permanent Sediment [d]	Chemicals Detected in Near Surface Groundwater [e]	Chemicals Detected in Seeps/ Springs [f]
		Inorganic Compounds			X		X	X	X	X		X
	1	Aluminum	7429905	Aluminum, Total	X			X		X	X	
		Aluminum, dissolved	7429905-D	-				X				
1	2	Antimony	7440360	Antimony, Total	X			X		X	X	
		Antimony, dissolved	7440360-D	-				X			X	
2	3	Arsenic	7440382	Arsenic, Total	X			X	X	X	X	
		Arsenic, dissolved	7440382-D	-				X			X	
3	4	Barium	7440393	Barium, Total	X		X	X		X	X	X
		Barium, dissolved	7440393-D	-			X	X			X	
4	5	Beryllium	7440417	Beryllium, Total	X			X	X	X	X	
		Beryllium, dissolved	7440417-D	-				X			X	
5	6	Boron	7440428	Boron, Total	X			X		X	X	
		Boron, dissolved	7440428-D	-				X			X	X
6	7	Cadmium	7440439	Cadmium, Total	X			X		X	X	
		Cadmium, dissolved	7440439-D	-				X			X	
	8	Chromium	7440473	Chromium, Total	X			X	X	X	X	X
		Chromium, dissolved	7440473-D	-			X	X			X	
7	9	Cobalt	7440484	Cobalt, Total	X			X		X	X	
		Cobalt, dissolved	7440484-D	-				X			X	
	10	Copper	7440508	Copper, Total	X			X	X	X	X	
		Copper, dissolved	7440508-D	-			X	X			X	
	11	Cyanides	57125	Cyanide, Total	X			X				
8	12	Fluoride	7782414	-	X			X		X	X	X
9	13	Hexavalent Chromium	18540299	Chromium, Hexavalent	X			X				
		Hexavalent Chromium, dissolved	18540299-D	-								
10	15	Hydrogen Cyanide	74908	-								
11	16	Lead	7439921	Lead, Total	X		X	X	X	X	X	
		Lead, dissolved	7439921-D	-				X			X	
	17	Lithium	7439932	Lithium, Total	X							
12		Lithium, dissolved	7439932-D	-								
	18	Manganese	7439965	Manganese, Total	X			X		X	X	
		Manganese, dissolved	7439965-D	-			X	X			X	
	19	Mercury	7439976	Mercury, Total	X			X	X	X		
13		Mercury, dissolved	7439976-D	-				X				
	20	Methyl Mercury	22967926	-	X							
	21	Molybdenum	7439987	Molybdenum, Total	X			X		X	X	
		Molybdenum, dissolved	7439987-D	-				X			X	
14	22	Nickel	7440020	Nickel, Total	X			X	X	X	X	X
		Nickel, dissolved	7440020-D	-			X	X			X	
	23	Phosphorus	7723140	-	X			X		X		
		Phosphorus, dissolved	7723140-D	-				X				
	24	Selenium	7782492	Selenium, Total	X			X		X	X	
15		Selenium, dissolved	7782492-D	-				X			X	
	25	Silica, dissolved	7631869-D	-							X	X
	26	Silver	7440224	Silver, Total	X			X		X	X	
		Silver, dissolved	7440224-D	-				X				
	27	Strontium	7440246	Strontium, Total	X			X		X	X	
		Strontium, dissolved	7440246-D	-				X				X
	28	Thallium	7440280	Thallium, Total	X			X		X	X	
		Thallium, dissolved	7440280-D	-				X			X	
	29	Tin	7440315	Tin, Total	X					X		
		Tin, dissolved	7440315-D	-								
	30	Titanium	7440326	Titanium, Total	X			X		X		
		Titanium, dissolved	7440326-D	-				X				
16	31	Tritium	10028178	Tritium, Total								
	32	Uranium	7440611	Uranium-238								
	33	Vanadium	7440622	Vanadium, Total	X			X			X	X
		Vanadium, dissolved	7440622-D	-				X			X	
17	34	Zinc	7440666	Zinc, Total	X			X	X	X	X	X
		Zinc, dissolved	7440666-D	-				X			X	X
	35	Zirconium	7440677	Zirconium, Total	X							
		Zirconium, dissolved	7440677-D	-								
		Energetic Constituents			X		X	X		X		
	36	1,2-Dinitrobenzene	528290	o-Dinitrobenzene	X					X		
	37	1,2-Diphenylhydrazine	122667	-				X				
	38	1,3-Dinitrobenzene	99650	m-Dinitrobenzene	X					X		
	39	1,4-Dinitrobenzene	100254	p-Dinitrobenzene								
	40	2,4,6-Trinitrotoluene	118967	-	X					X		
	41	2,4-diamino-6-nitrotoluene	6629294	-						X		
18	42	2,4-Dinitrotoluene	121142	-				X		X		
	43	2-Amino-4,6-dinitrotoluene	35572782	-	X					X		
	44	2-Nitrotoluene	88722	-						X		
	45	3-Nitrotoluene	99081	-						X		
	46	4-Amino-2,6-dinitrotoluene	19406510	4-Am-2,6-DNT						X		
	47	4-Nitrotoluene	99990	-						X		
	48	HMX	2691410	-	X					X		
	49	Hydrazine	302012	-	X							
19	50	Monomethylhydrazine	60344	-	X							
	51	Nitroglycerin	55630	-						X		
20	52	Perchlorate	14797730	-	X			X	X	X	X	
	53	PETN	78115	-						X		
	54	RDX	121824	-	X					X		
		Volatile Organic Compounds			X			X	X	X		X
	55	1,1,1,2-Tetrachloroethane	630206	-	X					X		
	56	1,1,1-Trichloroethane	71556	-	X	X		X		X	X	
	57	1,1,2,2-Tetrachloroethane	79345	-	X			X				
	58	1,1,2-Trichloro-1,2,2-trifluoroethane	76131	Freon 113	X	X		X		X	X	

Attachment 1 - Ecological Effects Characterization Updates Technical Memorandum

Attachment 1

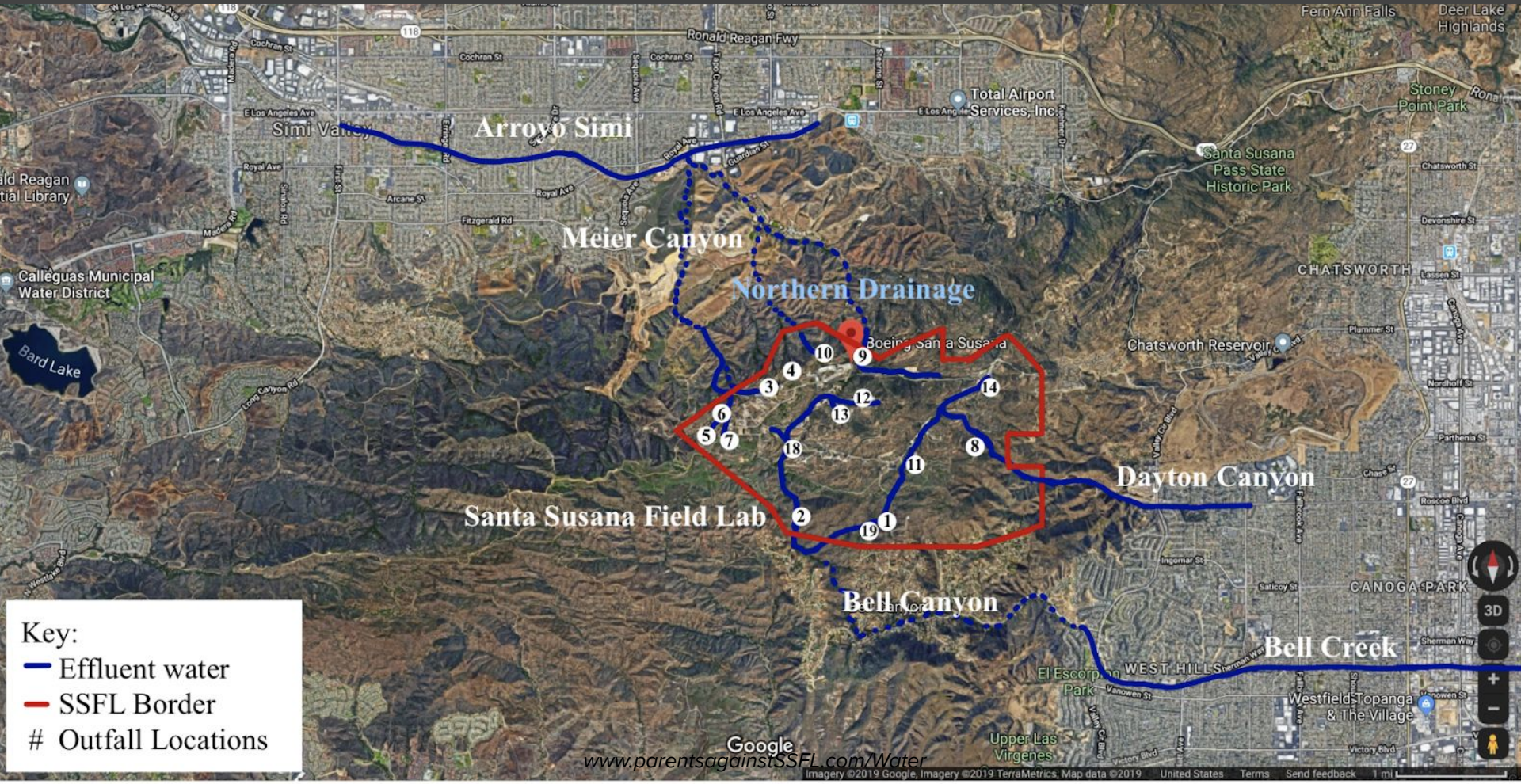
List of Chemicals Historically Detected at the SSFL- by Media

1 of 5



Over 300 chemicals of concern have been detected in SSFL soil, groundwater and/or surface water. Only 35 of these are being monitored in Boeing's current NPDES permit. We don't know how many GSW is monitoring for at this time.

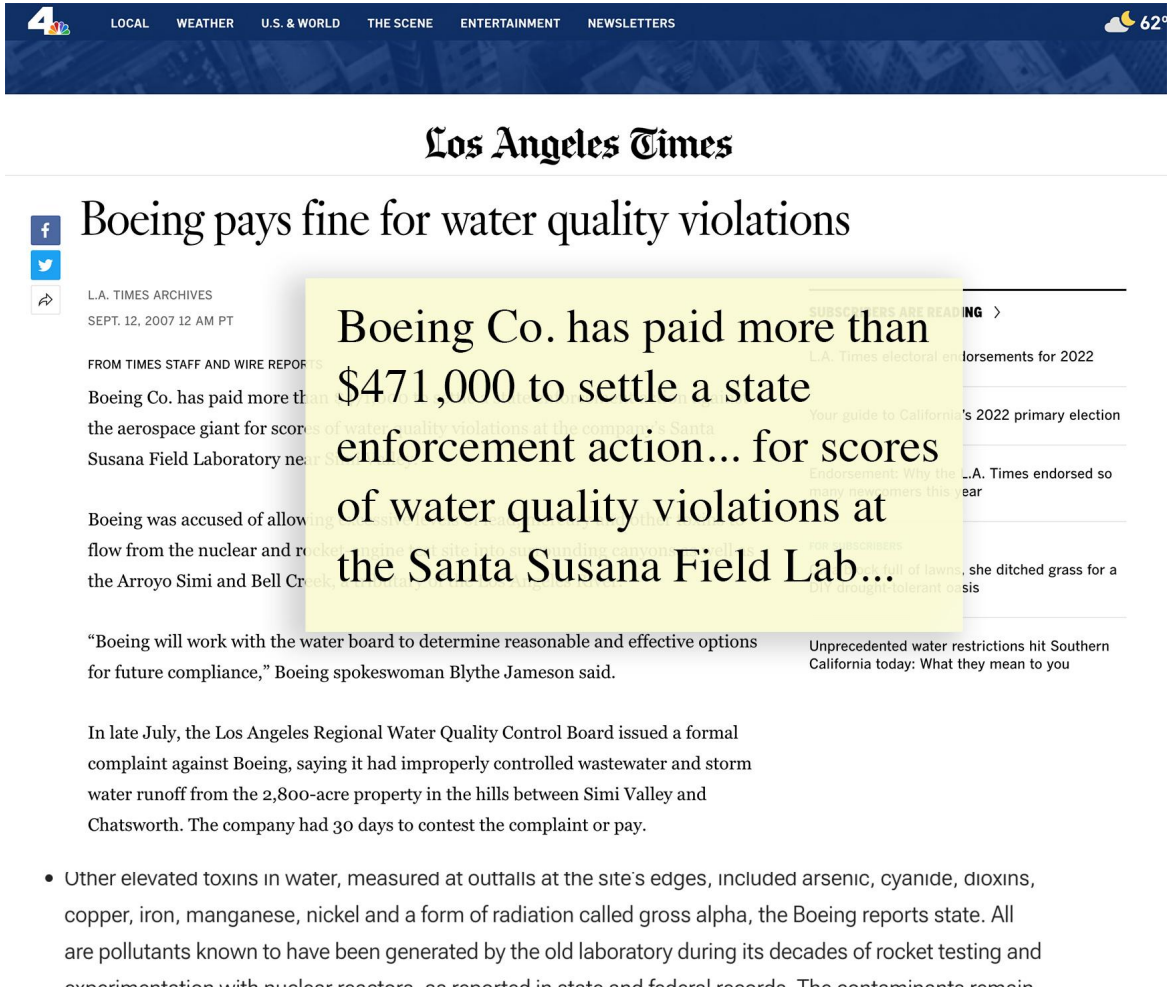
Surface Water: Repeated violations of NPDES brings contamination offsite



www.parentsagainstSSFL.com/Water

Surface Water Runoff Brings Contamination Offsite

National Pollution Discharge Elimination System (NPDES) permit regulates how much contamination can flow offsite during rain events, however, the limits are regularly exceeded. Boeing has been fined over $1M for NPDES violations at the SSFL.



LOCAL WEATHER U.S. & WORLD THE SCENE ENTERTAINMENT NEWSLETTERS 62°

Los Angeles Times

Boeing pays fine for water quality violations

L.A. TIMES ARCHIVES
SEPT. 12, 2007 12 AM PT

FROM TIMES STAFF AND WIRE REPOR

Boeing Co. has paid more th
the aerospace giant for scor
Susana Field Laboratory ne

Boeing was accused of allow
flow from the nuclear and r
the Arroyo Simi and Bell Cr

Boeing Co. has paid more than $471,000 to settle a state enforcement action... for scores of water quality violations at the Santa Susana Field Lab...

"Boeing will work with the water board to determine reasonable and effective options for future compliance," Boeing spokeswoman Blythe Jameson said.

In late July, the Los Angeles Regional Water Quality Control Board issued a formal complaint against Boeing, saying it had improperly controlled wastewater and storm water runoff from the 2,800-acre property in the hills between Simi Valley and Chatsworth. The company had 30 days to contest the complaint or pay.

- Other elevated toxins in water, measured at outfalls at the site's edges, included arsenic, cyanide, dioxins, copper, iron, manganese, nickel and a form of radiation called gross alpha, the Boeing reports state. All are pollutants known to have been generated by the old laboratory during its decades of rocket testing and experimentation with nuclear reactors, as reported in state and federal records. The contaminants remain

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she ditched grass for a DIY drought-tolerant oasis

Unprecedented water restrictions hit Southern California today: What they mean to you

www.parentsagainstSSFL.com/Water

NPDES Violations after Woolsey Fire

- 57 exceedances of pollution limits relating to surface water leaving SSFL were reported after the Woolsey fire at SSFL
- The limits exceeded were established by the Los Angeles Regional Water Quality Control Board in Boeing's National Pollutant Discharge Elimination System (NPDES) permit as essential to protect public health and the environment.
- The increase in number of exceedances were attributed to the fire. The Water Board waived the fines saying the fire was an act of God, but if Boeing had been cleaned up the site there would have been no exceedances.

Contaminant	Regional Water Quality Control Board Limit	Reported Exceedance Value	How much larger was the exceedance than the limit?
Copper	14 µg/L	52 µg/L	**4 times the limit**
Iron	0.3 mg/L	98 mg/L	**327 times the limit**
Lead	5.2 mg/L	88 mg/L	**17 times the limit**
Selenium	8.2 µg/L	11 µg/L	**1.3 times the limit**
Zinc	119 µg/L	430 µg/L	**4 times the limit**
Cyanide	9.5 µg/L	15 µg/L	**1.6 times the limit**
TCDD	2.8E-08 µg/L	1.7E-07 µg/L	**6 times the limit**
Gross Alpha	15 pCi/L	60.7±14.7 pCi/L	**4 to 5 times the limit**
E. Coli	235 MPN/100mL	5,300 MPN/100mL	**23 times the limit**
Manganese	50 µg/L	920 µg/L	**18 times the limit**
Arsenic	10.0 µg/L	17 µg/L	**1.7 times the limit**
Nickel	86 µg/L	170 µg/L	**2 times the limit**

Save the Date

Boeing's Proposed SSFL NPDES Permit

Date: September 28, 2023

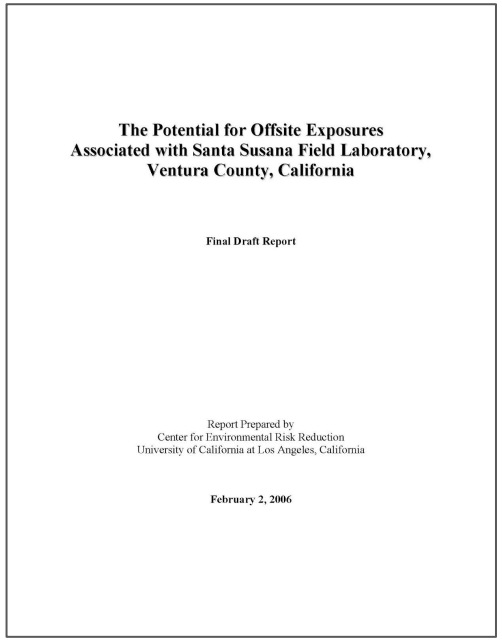
Time: 9am

Where: Ventura County Government Hall of Justice
Board Of Supervisors Hearing Room
800 South Victoria Avenue, Ventura CA 93009

https://www.waterboards.ca.gov/losangeles/board_decisions/tentative_orders/individual/npdes/Boeing_Santa_Susana_Field_Lab/index.html

Surface Water: PCBs in Bell Canyon 2023

Surface Water: PCBs in Bell Canyon 2023



The Potential for Offsite Exposures
Associated with Santa Susana Field Laboratory,
Ventura County, California

Final Draft Report

Report Prepared by
Center for Environmental Risk Reduction
University of California at Los Angeles, California

February 2, 2006

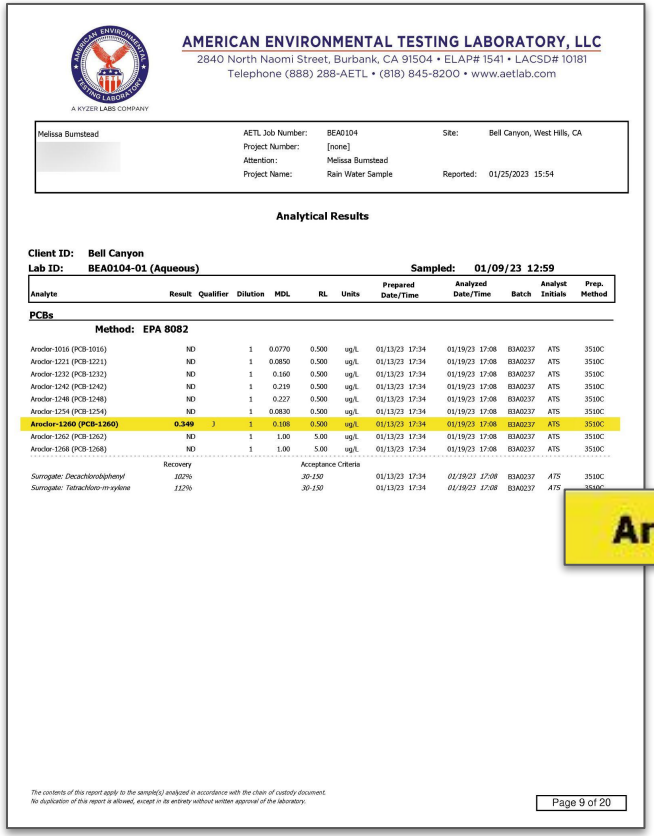
"There are numerous surface runoff channels in the neighborhoods surrounding Bell Creek that are easily accessible to children. Surface water runoff of contaminants from SSFL to Bell Creek was detected in NPDES outfalls that run into Bell Creek."

Potential for Offsite Exposure, UCLA 2006

Preliminary Assessment/Site Inspection Report Santa Susana Field Laboratory, Simi Valley, California. Prepared for: U.S. Environmental Protection Agency Region 9, November 2007. (PDF page 13)

Surface Water: PCBs in Bell Canyon 2023

Surface Water: PCBs in Bell Canyon 2023



AMERICAN ENVIRONMENTAL TESTING LABORATORY, LLC
2840 North Naomi Street, Burbank, CA 91504 • ELAP# 1541 • LACSD# 10181
Telephone (888) 288-AETL • (818) 845-8200 • www.aetlab.com
A KYZER LABS COMPANY

Melissa Bumstead

AETL Job Number: BEA0104 Site: Bell Canyon, West Hills, CA
Project Number: [none]
Attention: Melissa Bumstead
Project Name: Rain Water Sample Reported: 01/25/2023 15:54

Analytical Results

Client ID: Bell Canyon
Lab ID: BEA0104-01 (Aqueous) **Sampled:** 01/09/23 12:59

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
PCBs											
Method: EPA 8082											
Aroclor-1016 (PCB-1016)	ND		1	0.0770	0.500	ug/L	01/13/23 17:34	01/19/23 17:08	B3A0237	ATS	3510C
Aroclor-1221 (PCB-1221)	ND		1	0.0850	0.500	ug/L	01/13/23 17:34	01/19/23 17:08	B3A0237	ATS	3510C
Aroclor-1232 (PCB-1232)	ND		1	0.160	0.500	ug/L	01/13/23 17:34	01/19/23 17:08	B3A0237	ATS	3510C
Aroclor-1242 (PCB-1242)	ND		1	0.219	0.500	ug/L	01/13/23 17:34	01/19/23 17:08	B3A0237	ATS	3510C
Aroclor-1248 (PCB-1248)	ND		1	0.227	0.500	ug/L	01/13/23 17:34	01/19/23 17:08	B3A0237	ATS	3510C
Aroclor-1254 (PCB-1254)	ND		1	0.0830	0.500	ug/L	01/13/23 17:34	01/19/23 17:08	B3A0237	ATS	3510C
Aroclor-1260 (PCB-1260)	**0.349**	)	1	0.108	0.500	ug/L	01/13/23 17:34	01/19/23 17:08	B3A0237	ATS	3510C
Aroclor-1262 (PCB-1262)	ND		1	1.00	5.00	ug/L	01/13/23 17:34	01/19/23 17:08	B3A0237	ATS	3510C
Aroclor-1268 (PCB-1268)	ND		1	1.00	5.00	ug/L	01/13/23 17:34	01/19/23 17:08	B3A0237	ATS	3510C
	Recovery				Acceptance Criteria						
Surrogate: Decachlorobiphenyl	*102%*				*30-150*		01/13/23 17:34	*01/19/23 17:08*	B3A0237	ATS	3510C
Surrogate: Tetrachloro-m-xylene	*112%*				*30-150*		01/13/23 17:34	*01/19/23 17:08*	B3A0237	ATS	3510C

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. No duplication of this report is allowed, except in its entirety without written approval of the laboratory.

Page 9 of 20

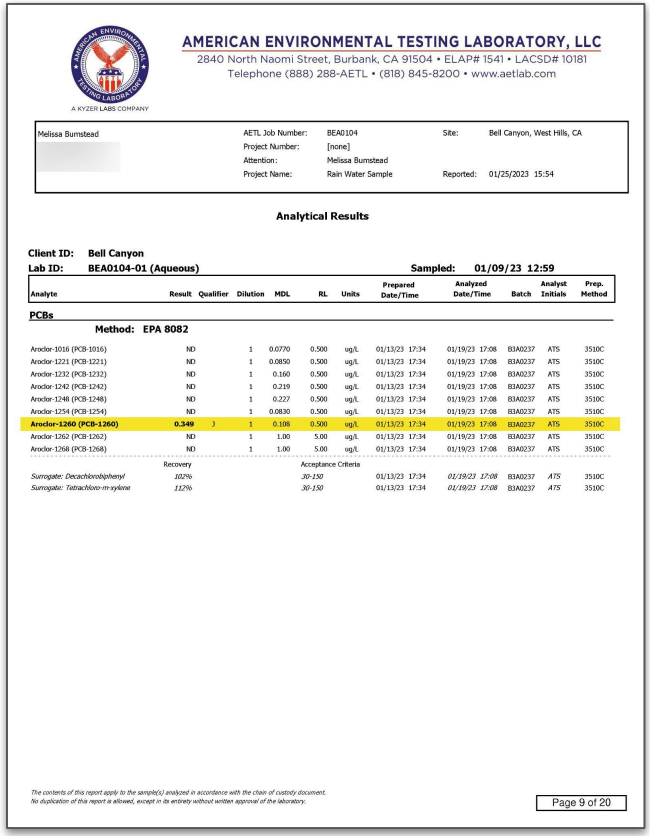
"3.11. There shall be no discharge of polychlorinated biphenyl (PCB) compounds, such as those once commonly used for transformer fluid, unless specifically authorized elsewhere in this Order."

Aroclor-1260 (PCB-1260) 0.349

EPA's enforceable MCL for PCBs in public drinking-water systems is 0.0005 ppm.

Boeing Proposed NPDES Permit 2022 PDF page 6:
www.waterboards.ca.gov/losangeles/board_decisions/tentative_orders/individual/npdes/Boeing_Santa_Susana_Field_Lab/CA0001309DraftTentativeRequi
https://www.atsdr.cdc.gov/csem/polychlorinated-biphenyls/standards.html#:~:text=EPA's%20enforceable%20MCL%20for%20PCBs,between%200.2%20and%203%20ppm.

Surface Water: PCBs in Bell Canyon 2023



AMERICAN ENVIRONMENTAL TESTING LABORATORY, LLC
2840 North Naomi Street, Burbank, CA 91504 • ELAP# 1541 • LACSD# 10181
Telephone (888) 288-AETL • (818) 845-8200 • www.aetlab.com
A KYZER LABS COMPANY

Melissa Bumstead

AETL Job Number: BEA0104 Site: Bell Canyon, West Hills, CA
Project Number: [none]
Attention: Melissa Bumstead
Project Name: Rain Water Sample Reported: 01/25/2023 15:54

Analytical Results

Client ID: Bell Canyon
Lab ID: BEA0104-01 (Aqueous) **Sampled:** 01/09/23 12:59

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
PCBs											
Method: EPA 8082											
Aroclor-1016 (PCB-1016)	ND		1	0.0770	0.500	ug/L	01/13/23 17:34	01/19/23 17:08	B3A0237	ATS	3510C
Aroclor-1221 (PCB-1221)	ND		1	0.0850	0.500	ug/L	01/13/23 17:34	01/19/23 17:08	B3A0237	ATS	3510C
Aroclor-1232 (PCB-1232)	ND		1	0.160	0.500	ug/L	01/13/23 17:34	01/19/23 17:08	B3A0237	ATS	3510C
Aroclor-1242 (PCB-1242)	ND		1	0.219	0.500	ug/L	01/13/23 17:34	01/19/23 17:08	B3A0237	ATS	3510C
Aroclor-1248 (PCB-1248)	ND		1	0.227	0.500	ug/L	01/13/23 17:34	01/19/23 17:08	B3A0237	ATS	3510C
Aroclor-1254 (PCB-1254)	ND		1	0.0830	0.500	ug/L	01/13/23 17:34	01/19/23 17:08	B3A0237	ATS	3510C
Aroclor-1260 (PCB-1260)	**0.349**	)	1	0.108	0.500	ug/L	01/13/23 17:34	01/19/23 17:08	B3A0237	ATS	3510C
Aroclor-1262 (PCB-1262)	ND		1	1.00	5.00	ug/L	01/13/23 17:34	01/19/23 17:08	B3A0237	ATS	3510C
Aroclor-1268 (PCB-1268)	ND		1	1.00	5.00	ug/L	01/13/23 17:34	01/19/23 17:08	B3A0237	ATS	3510C
	Recovery				Acceptance Criteria						
Surrogate: Decachlorobiphenyl	*102%*				*30-150*		01/13/23 17:34	*01/19/23 17:08*	B3A0237	*ATS*	3510C
Surrogate: Tetrachloro-m-xylene	*112%*				*30-150*		01/13/23 17:34	*01/19/23 17:08*	B3A0237	*ATS*	3510C

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document. No duplication of this report is allowed, except in its entirety without written approval of the laboratory.

Page 9 of 20

Contaminated water from the SSFL shouldn't be going into Bell Canyon...

But it is.

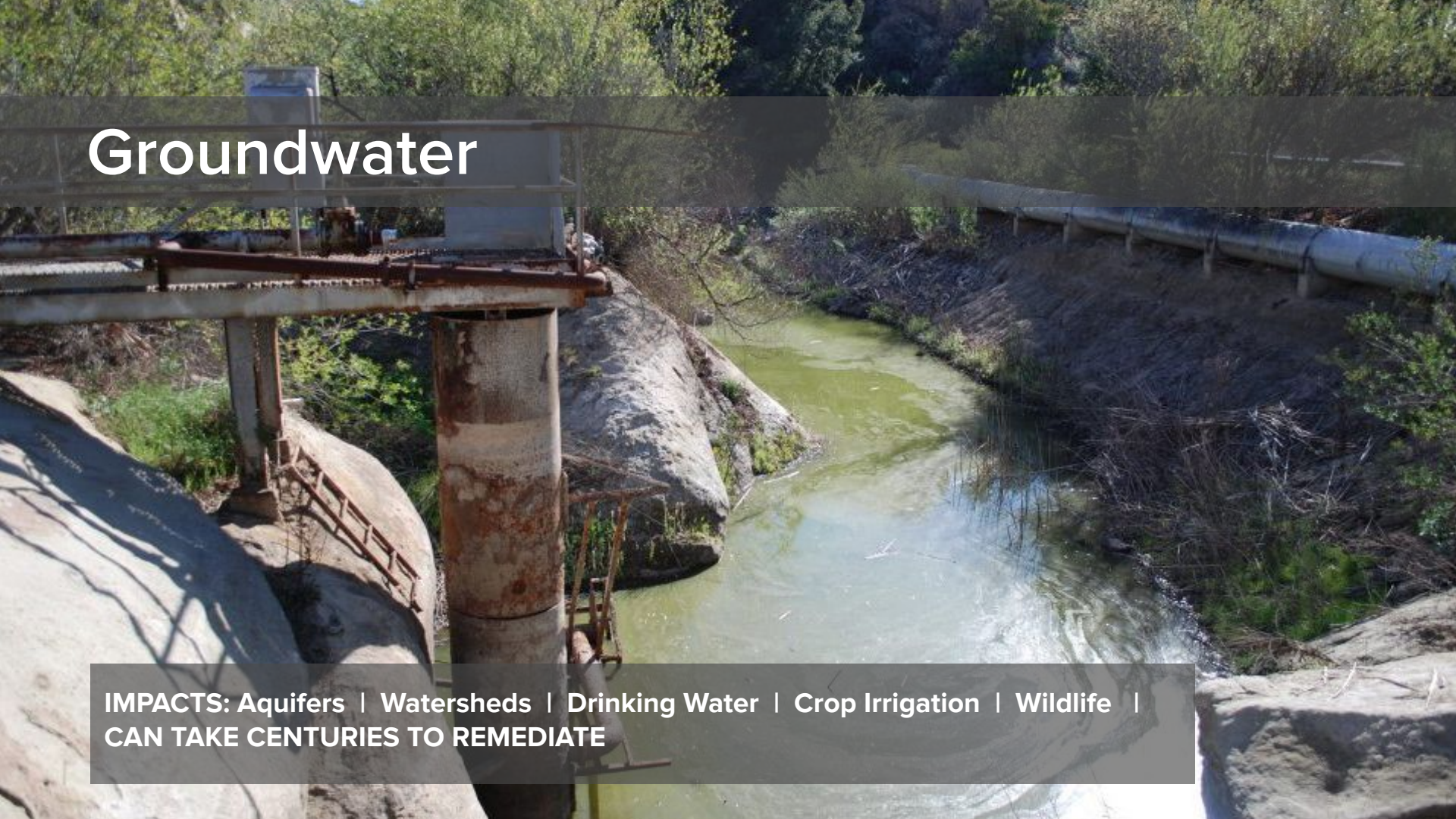
Boeing Proposed NPDES Permit 2022 PDF page 6:
www.waterboards.ca.gov/losangeles/board_decisions/tentative_orders/individual/npdes/Boeing_Santa_Susana_Field_Lab/CA0001309DraftTentativeRequirements-ADA.pdf

SSFL WATER

Groundwater

Jeni Knack
Parents Against SSFL

Groundwater



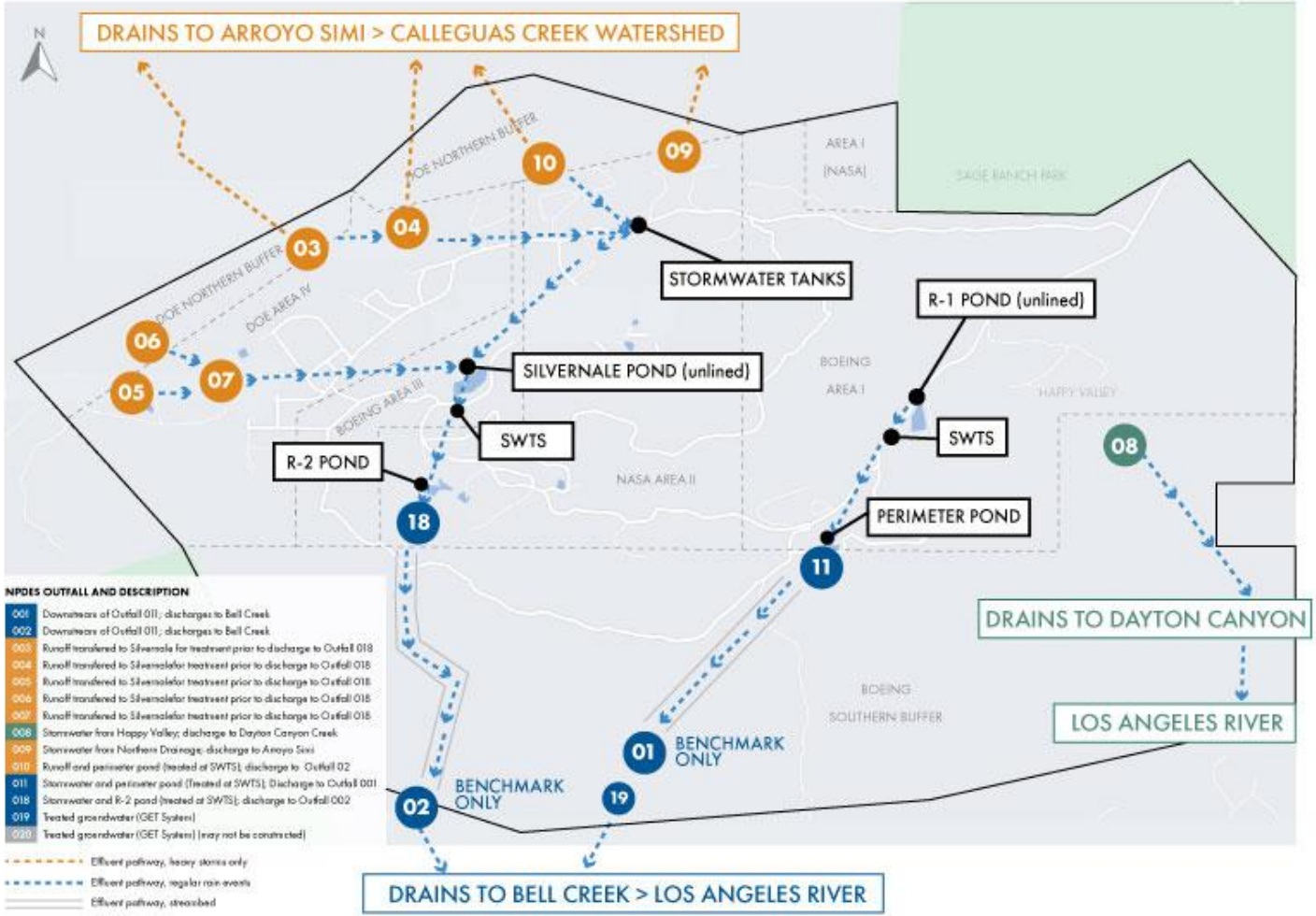
IMPACTS: Aquifers | Watersheds | Drinking Water | Crop Irrigation | Wildlife | CAN TAKE CENTURIES TO REMEDIATE

Groundwater: Remediation

"Compared to surface water pollution, investigation and remediation of groundwater are often more difficult, costly, and extremely slow."

Boeing Proposed NPDES Permit 2022 PDF page 114:
www.waterboards.ca.gov/losangeles/board_decisions/tentative_orders/individual/npdes/Boeing_Santa_Susana_Field_Lab/CA0001309DraftTentativeRequirements-ADA.pdf

Groundwater: Re-Polluting Silvernale Pond



Groundwater: BMP Removal at Silvernale Pond

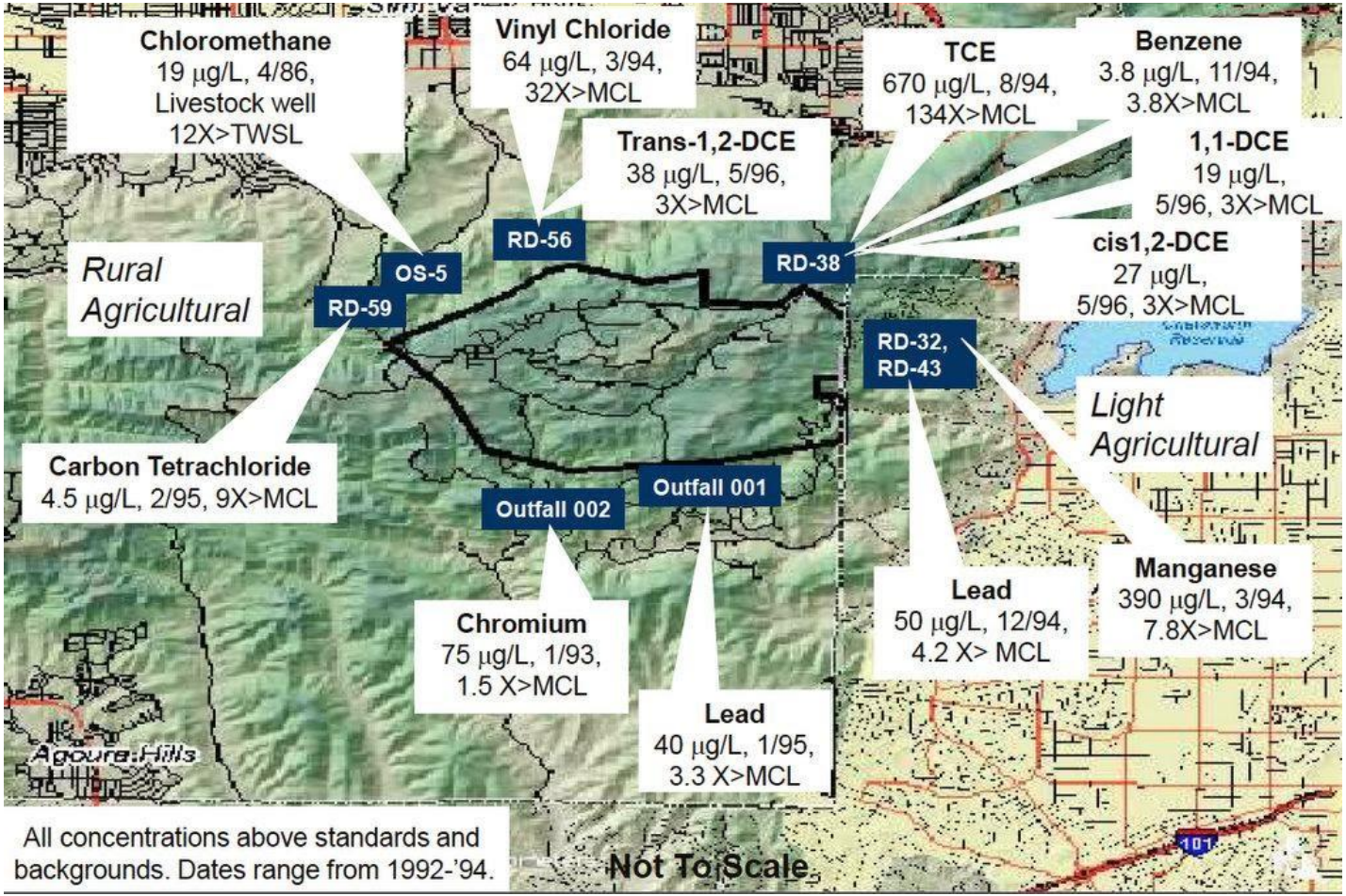
Water doesn't get extracted for treatment until the entire pond reaches a depth of eight feet, That means contaminated storm and surface water from other areas are brought here to accumulate and percolate into the groundwater until that arbitrary marker is met.

Issues:

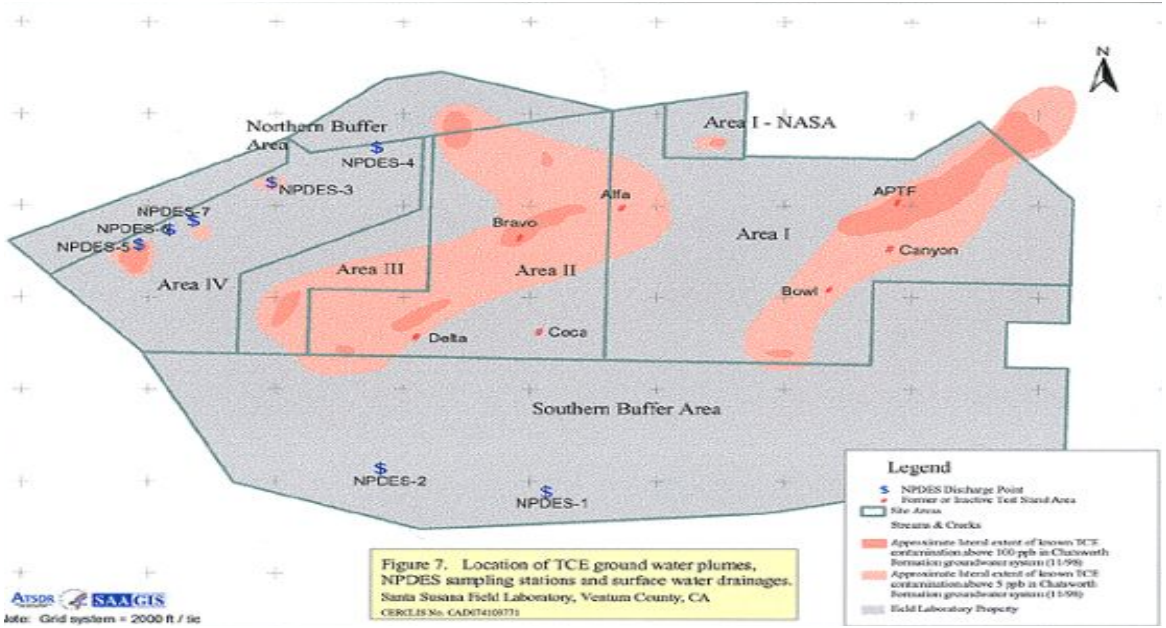
- Extraction happens once pipe is sufficiently elevated and contaminants have had the chance to settle on the bottom
- Flow from smaller rain events don't get treated, and is left
- Volume loss to groundwater hasn't been monitored or measured
- Expert Panel claims "clay" soil prevents contamination from leaching into groundwater
- Silvernale sediment has not been test[illegible]r contamination

Contaminants Migrate Offsite: Groundwater

Located offsite in numerous locations in offsite wells, seeps and springs



Groundwater: TCE Plume



TCE is the contaminant present in the largest quantity throughout all of the SSFL sources. Estimates indicate that up to 800,000 gallons of TCE were used during the engine flushing procedures. Cooling and rinse water containing TCE entered the surface impoundments, ultimately resulting in contamination of the underlying soil and groundwater. Recent estimates indicate that over 500,000 gallons of TCE were discharged to the ground at the SSFL site during its operation.

2007 Preliminary Assessment/Site Inspection Report Santa Susana Field Laboratory Simi Valley, California

Groundwater: Known Contaminants

1.3 Investigation and Remediation Activities. The Property has been investigated by the Covenanter and the Department of Energy ("DOE")[1] under the Department's oversight. That investigation found that hazardous materials, including volatile organic compounds, semi-volatile organic compounds, petroleum hydrocarbons, metals, perchlorate and other inorganic compounds, polychlorinated biphenyls, dioxins and furans, and pesticides and herbicides, as well as energetics and radionuclides, are located in the groundwater at the Property at levels above drinking water standards and are unacceptable for unrestricted use. In connection with such investigation, the Department approved (i) a Final Groundwater Resource Conservation and Recovery Act ("RCRA") Facility Investigation Report for the groundwater located in Areas I, III, and the SUL; (ii) a Final RCRA Facility Investigation Data Summary and Findings

https://peer.org/wp-content/uploads/2022/11/11_22_22_Covenant_Boeing_GW_LUC_AGREEMENT.pdf

Groundwater: Key Facts About Tritium

- Forms Radioactive Water: HTO (one of the hydrogen atoms in the water molecule is radioactive)
  - It is not dissolved in the water; it is the water.
  - Can’t be filtered out.
- 12.3 year half life (dangerous for approximately 250 years)
- Permissible level in drinking water: 20,000 pico-Curies per liter (pCi/L)
- Background tritium levels are approximately 10 pCi/L
- As of 2006: >20 wells have had statistically significant levels of tritium in groundwater samples, exceeding background
- Tritium levels are currently as high as 119,000 pCi/L
- More than 110 samples have tested positive for elevated tritium

https://www.ssflworkgroup.org/files/4-06-SSFLwater-Hirsch.pdf

Groundwater: SSFL Perchlorate Study

Perchlorate is a component of solid rocket fuel

California MCL perchlorate: 6 ppb
California Public Health Goal perchlorate: 1 ppb

Perchlorate was discovered in a groundwater sample obtained from the dewatering project area in the western end of Simi Valley...

...in stream-bed sediments [Dayton Canyon] collected in May 2005, perchlorate with concentrations of up to 62,000,000 ppb was measured in sediments of Dayton Creek.

...Although other putative sources of perchlorate in the soils and water resources of the area have been suggested, the SSFL is the only confirmed industrial area where perchlorate compounds have been used, stored, and disposed of that represents a plausible source for perchlorate contamination in the area...

http://www.ssflpanel.org/files/Tabidian.pdf

Groundwater: Wildlife

Contamination can reach wildlife through naturally occurring springs, seeps and artesian wells near the SSFL.

"As a result, contaminated groundwater of the area can potentially flow in several directions toward local valley floors and lowland areas, including groundwater discharge zones and could appear as seeps, springs, and flowing (artesian) wells on hillsides and surrounding valley floors."

http://www.ssflpanel.org/files/Tabidian.pdf

Groundwater: Wildlife

"SSFL has been and continues to pollute the surrounding watershed and groundwater basins for decades, causing irreparable harm to sensitive plants, wildlife and residents of the nearby areas."

Tevin Schmitt
Watershed Scientist,
Wishtoyo Chumash Foundation

Groundwater: 2023 Groundwater Report

Quarterly Report on Groundwater Monitoring, Area IV, Quarter 1, 2023

Sample Results Evaluation

Some analytes were reported for the first time and above the associated SSFL screening criteria in wells with established historical data during 2023:

Question: Why are there new and higher levels of contaminants in the groundwater?

Shows that contamination in groundwater isn't consistent, needs to be tested often.

Quarterly Report on Groundwater Monitoring, Area IV, Quarter 1, 2023

Groundwater: 2023 Groundwater Report

Sample Results Evaluation

Some analytes were reported for the first time and above the associated SSFL screening crite with established historical data during 2023:

3.24 µg/L (dissolved) and 3.24 µg/L (total); and well DD-159 at 3.27 µg/L (dissolved) a (total).

- Strontium in well RD-91 at 843 µg/L (dissolved) and 850 µg/L (total).

Trichloroethene in well DD-157 at 9.96 µg/L (total).

- Uranium-235/236 in well DD-158 at 0.584 pCi/L; well DS-45 at 0.582 pCi/L; and well F 0.863 pCi/L. Note that there is no SSFL screening criterion for uranium-235/236.

These first-time detections above the relevant screening levels may result from statistical var from future sampling rounds will be used to evaluate potential trends.

Some analytes were reported at a new maximum concentration and above the associated SSF criteria in wells with established historical data during 2023:

Fluoride in well RD-34B at 1 mg/L. Data from future sampling rounds will be used to evaluate potential trends.

- Gross beta in well DD-158 at 118 /J pCi/L. The increase may be transitory and attributed to decay of radium and/or uranium isotopes detected in groundwater from these wells. Data from future sampling

> "The strontium-90 is astronomical; fifteen times the legal limit."
>
> *Dan Hirsch, Committee to Bridge the Gap*

evaluate potential trends.

- Radium-226 had new maximum detections in RD-98 (6.45 pCi/L dissolved) and RS-28 (7.17 pCi/L dissolved).
- Strontium-90 had a new maximum detection in RD-98 (119 pCi/L total).
- Uranium-235/236 had new maximum detections in PZ-162 (0.468 pCi/L dissolved and 0.656 pCi/L total), RD-07 (0.483 pCi/L total), RD-19 (0.845 pCi/L total), RD-30 (0.7 pCi/L total), RD-34A (0.919 pCi/L total), RD-94 (1.07 pCi/L dissolved), RD-96 (0.551 pCi/L total), and RD-98 (0.546 pCi/L dissolved and 0.454 pCi/L total). There is no screening level for uranium-235/236.

Nitrate in PZ-005 at 14.3 QH/J mg/L. There is no screening criterion for nitrate.

Off-site wells RD-59A and RD-59B were not sampled in Q1 2023 due to dangerous access conditions caused by significant rainfall events across the region.

[Quarterly Report on Groundwater Monitoring, Area IV, Quarter 1, 2023]

Groundwater: Boeing-DTSC's 2022 Groundwater Covenant

This reverses the state's longstanding position that protecting public health required a complete groundwater cleanup.

- Leaving groundwater untreated for an indeterminate period –Further imperils drinking and agricultural water supplies in Ventura County, where contaminants from the Santa Susana aquifer are already appearing;
- Ignores further migration of contaminated water from the Santa Susana aquifer to other neighboring aquifers
- Would allow Boeing to continue to apply the groundwater onsite for "dust suppression and irrigation" possibly creating a new surface water threat.

"This deal condemns Santa Susana to serve as a perpetual sacrifice zone dedicated to corporate convenience," stated Pacific PEER Director Jeff Ruch, pointing out that any timelines for cleaning the groundwater have evaporated in the state's latest deal with Boeing. "Bottling up a toxic plume for eternity and then walking away is a deal most polluters would love."

https://peer.org/wp-content/uploads/2022/11/11_22_22_Covenant_Boeing_GW_LUC_AGREEMENT.pdf

SSFL WATER

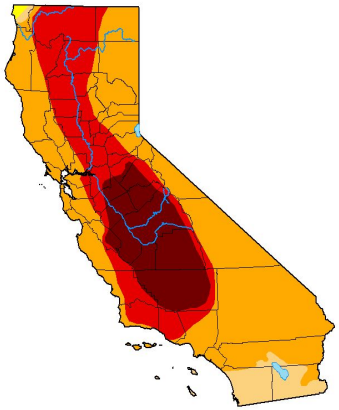
Drinking Water Risks

Michael Rincon
PSR-LA

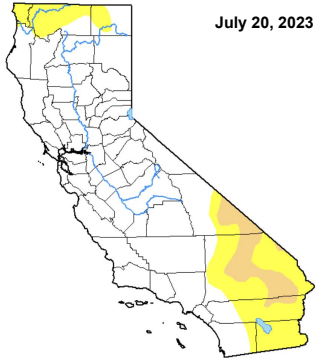
Photo Credit: Bill Bowling

Drinking Water: State of California

September 27, 2022



July 20, 2023



CLIMATE & ENVIRONMENT

The Colorado River is overused and shrinking. Inside the crisis transforming the Southwest

Los Angeles Times

CALIFORNIA

Drought cripples a California coastal paradise: 'We need water. We don't have it'

LETTERS TO THE EDITOR

Letters to the Editor: The drought is over? Tell that to Californians whose wells are dry

In unincorporated Fresno County, many residents rely on bottled water deliveries because their wells have run dry. Above, a water delivery in Sanger, Calif., on Feb. 21. (Gary Coronado / Los Angeles Times)

CAL MATTERS Donate

ENVIRONMENT

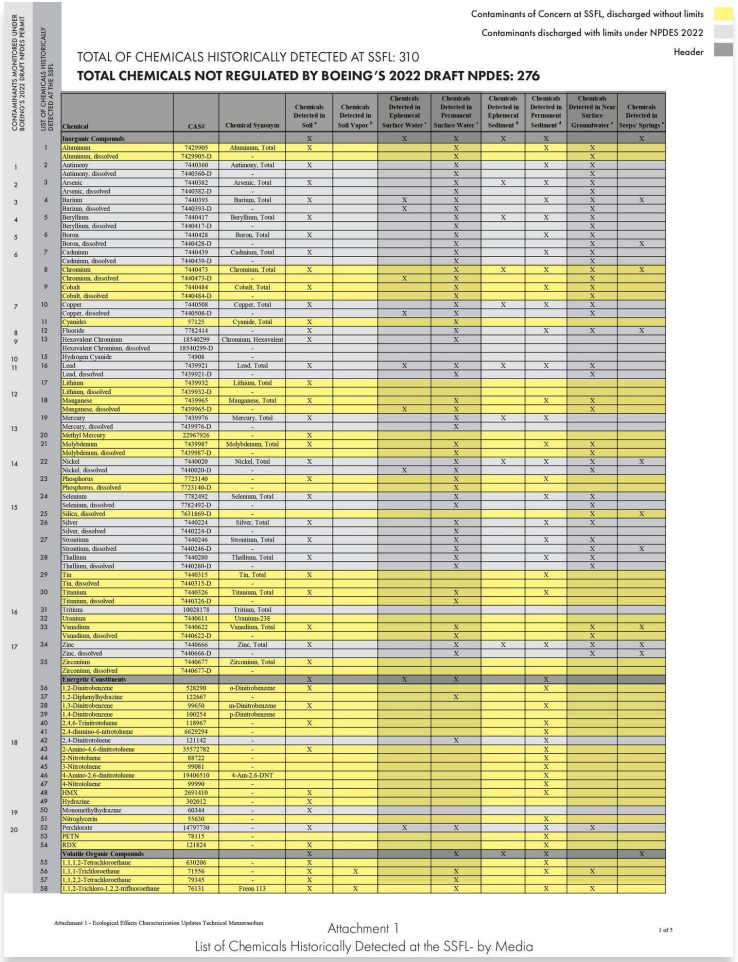
California lifts target for 15% water conservation as yet another storm approaches

"Even though reservoirs are recovering, groundwater aquifers remain depleted. The Colorado River — a major water source for Southern California — is also facing a massive deficit," Cooley said. "The reality is we don't have water to waste in California. We need to continue investing in water efficiency to prepare for a hotter, drier future and more intense droughts."

Drinking Water: State of California

SSFL sits, unfortunately, in a significant location that can affect local hydrology.

Drinking Water: Chemicals of Concern at SSFL



Contaminants of Concern at SSFL, discharged without limits

Contaminants discharged with limits under NPDES 2022

Header

TOTAL OF CHEMICALS HISTORICALLY DETECTED AT SSFL: 310

TOTAL CHEMICALS NOT REGULATED BY BOING'S 2022 DRAFT NPDES: 276

CONTAMINANTS MONITORED UNDER BOEING'S 2022 DRAFT NPDES PERMIT

LIST OF CHEMICALS HISTORICALLY DETECTED AT THE SSFL

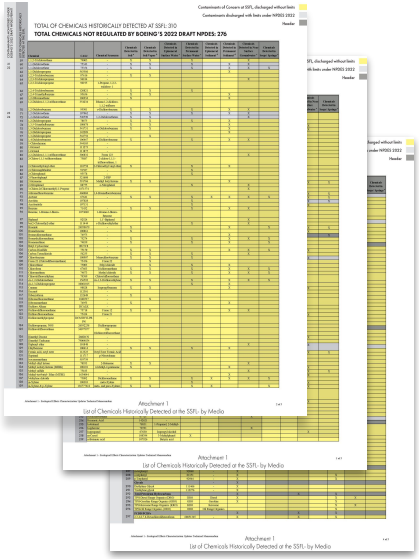
	Chemical	CAS#	Chemical Synonym	Chemicals Detected in Soil [a]	Chemicals Detected in Soil Vapor [b]	Chemicals Detected in Ephemeral Surface Water [c]	Chemicals Detected in Permanent Surface Water [c]	Chemicals Detected in Ephemeral Sediment [d]	Chemicals Detected in Permanent Sediment [d]	Chemicals Detected in Near Surface Groundwater [e]	Chemicals Detected in Seeps/ Springs [f]
	Inorganic Compounds			X		X	X	X	X		X
1	Aluminum	7429905	Aluminum, Total	X			X		X	X	
	Aluminum, dissolved	7429905-D	-				X				
1	Antimony	7440360	Antimony, Total	X			X		X	X	
	Antimony, dissolved	7440360-D	-				X			X	
2	Arsenic	7440382	Arsenic, Total	X			X	X	X	X	
	Arsenic, dissolved	7440382-D	-				X			X	
3	Barium	7440393	Barium, Total	X		X	X		X	X	X
	Barium, dissolved	7440393-D	-			X	X			X	
4	Beryllium	7440417	Beryllium, Total	X			X	X	X	X	
	Beryllium, dissolved	7440417-D	-				X			X	
5	Boron	7440428	Boron, Total	X			X		X	X	
	Boron, dissolved	7440428-D	-				X			X	X
6	Cadmium	7440439	Cadmium, Total	X			X		X	X	
	Cadmium, dissolved	7440439-D	-				X			X	
7	Chromium	7440473	Chromium, Total	X			X	X	X	X	X
	Chromium, dissolved	7440473-D	-			X	X			X	
8	Cobalt	7440484	Cobalt, Total	X			X		X	X	
	Cobalt, dissolved	7440484-D	-				X			X	
9	Copper	7440508	Copper, Total	X			X	X	X	X	
	Copper, dissolved	7440508-D	-			X	X			X	
10	Cyanides	57125	Cyanide, Total	X			X				
11	Fluoride	7782414	-	X			X		X	X	X
12	Hexavalent Chromium	18540299	Chromium, Hexavalent	X			X				
	Hexavalent Chromium, dissolved	18540299-D	-								
13	Hydrogen Cyanide	74908	-								
14	Lead	7439921	Lead, Total	X		X	X	X	X	X	
	Lead, dissolved	7439921-D	-				X			X	
15	Lithium	7439932	Lithium, Total	X							
	Lithium, dissolved	7439932-D	-								
16	Manganese	7439965	Manganese, Total	X			X		X	X	
	Manganese, dissolved	7439965-D	-			X	X			X	
17	Mercury	7439976	Mercury, Total	X			X	X	X		
	Mercury, dissolved	7439976-D	-				X				
18	Methyl Mercury	22967926	-	X							
19	Molybdenum	7439987	Molybdenum, Total	X			X		X	X	
	Molybdenum, dissolved	7439987-D	-				X			X	
20	Nickel	7440020	Nickel, Total	X			X	X	X	X	X
21	Nickel, dissolved	7440020-D	-			X	X		X	X	
	Phosphorus	7723140	-	X			X		X		
	Phosphorus, dissolved	7723140-D	-				X				
22	Selenium	7782492	Selenium, Total	X			X		X	X	
	Selenium, dissolved	7782492-D	-				X			X	
23	Silica, dissolved	7631869-D	-							X	X
24	Silver	7440224	Silver, Total	X			X		X	X	
	Silver, dissolved	7440224-D	-				X				
25	Strontium	7440246	Strontium, Total	X			X		X	X	
	Strontium, dissolved	7440246-D	-				X				X
26	Thallium	7440280	Thallium, Total	X			X		X	X	
	Thallium, dissolved	7440280-D	-				X			X	
27	Tin	7440315	Tin, Total	X					X		
28	Tin, dissolved	7440315-D	-								
29	Titanium	7440326	Titanium, Total	X			X		X		
	Titanium, dissolved	7440326-D	-				X				
30	Tritium	10028178	Tritium, Total								
31	Uranium	7440611	Uranium-238								
32	Vanadium	7440622	Vanadium, Total	X			X		X	X	X
33	Vanadium, dissolved	7440622-D	-				X			X	
34	Zinc	7440666	Zinc, Total	X			X	X	X	X	X
	Zinc, dissolved	7440666-D	-				X			X	X
35	Zirconium	7440677	Zirconium, Total	X							
	Zirconium, dissolved	7440677-D	-								
	Energetic Constituents			X		X	X		X		
36	1,2-Dinitrobenzene	528290	o-Dinitrobenzene	X					X		
37	1,2-Diphenylhydrazine	122667	-				X				
38	1,3-Dinitrobenzene	99650	m-Dinitrobenzene	X					X		
39	1,4-Dinitrobenzene	100254	p-Dinitrobenzene								
40	2,4,6-Trinitrotoluene	118967	-	X					X		
41	2,4-diamino-6-nitrotoluene	6629294	-						X		
42	2,4-Dinitrotoluene	121142	-				X		X		
43	2-Amino-4,6-dinitrotoluene	35572782	-	X					X		
44	2-Nitrotoluene	88722	-						X		
45	3-Nitrotoluene	99081	-						X		
46	4-Amino-2,6-dinitrotoluene	19406510	4-Am-2,6-DNT						X		
47	4-Nitrotoluene	99990	-						X		
48	HMX	2691410	-	X					X		
49	Hydrazine	302012	-	X							
50	Monomethylhydrazine	60344	-	X							
51	Nitroglycerin	55630	-						X		
52	Perchlorate	14797730	-	X		X	X		X	X	
53	PETN	78115	-						X		
54	RDX	121824	-	X					X		
	Volatile Organic Compounds			X			X	X	X		X
55	1,1,1,2-Tetrachloroethane	630206	-	X					X		
56	1,1,1-Trichloroethane	71556	-	X	X		X		X	X	
57	1,1,2,2-Tetrachloroethane	79345	-	X			X				
58	1,1,2-Trichloro-1,2,2-trifluoroethane	76131	Freon 113	X	X		X		X	X	

Attachment 1 - Ecological Effects Characterization Updates Technical Memorandum

Attachment 1

List of Chemicals Historically Detected at the SSFL- by Media

1 of 5



Over 300 chemicals of concern have been detected in SSFL soil, groundwater and/or surface water. Only 35 of these are being monitored in Boeing's current NPDES permit. We don't know how many GSW is monitoring for at this time.

Drinking Water: MCLs and PHGs

Maximum Contamination Limits (MCL)

- Trichloroethylene (TCE) 5 ppb
- Perchlorate 6 ppb
- Lead 15 ppb
- Arsenic 10 ppb
- Gross Alpha Particle Activity 15 pCi/L
- Gross Beta Particle Activity 50 pCi/L
- Strontium-90 8 pCi/L
- Tritium 20,000 pCi/L

California Public Health Goal (PHG)

- Trichloroethylene (TCE) 1.7 ppb
- Perchlorate 1 ppb
- Lead 0.2 ppb
- Arsenic 0.0004 ppb
- Gross Alpha Particle Activity N/A
- Gross Beta Particle Activity N/A
- Strontium-90 0.35 pCi/L
- Tritium 400 pCi/L

PPB is equivalent to 1 drop in 1 billion gallons. Picocuries per liter (pCi/L) is a common unit of measurement for the concentration of radioactivity in a gas. A picocurie per liter corresponds to 0.037 radioactive disintegrations per second in every liter of air.

Public Health Goal | *California Maximum Contamination Limits* | *EPA Converting Lab Units to Consumer Confidence Report Units*

Drinking Water: Response Levels (RLs)

1. A Response Level is set for all drinking water sources when an MCL has not yet been established for a contaminant.
2. States that if a contaminant exceeds the Response Level then that water source can not be used as a drinking water supply until conditions improve, or the water purveyor can prove it can remove the contaminant to safer levels.

California State Water Resources Control Board, Division of Drinking Water "Drinking Water Notification Levels and Response Levels: An Overview" November 2022.

Drinking Water: MCLs and PHGs

Maximum Contamination Limits (MCL)

- Trichloroethylene (TCE) 5 ppb
- Perchlorate 6 ppb
- Lead 15 ppb
- Arsenic 10 ppb
- Gross Alpha Particle Activity 15 pCi/L
- Gross Beta Particle Activity 50 pCi/L
- Strontium-90 8 pCi/L
- Tritium 20,000 pCi/L

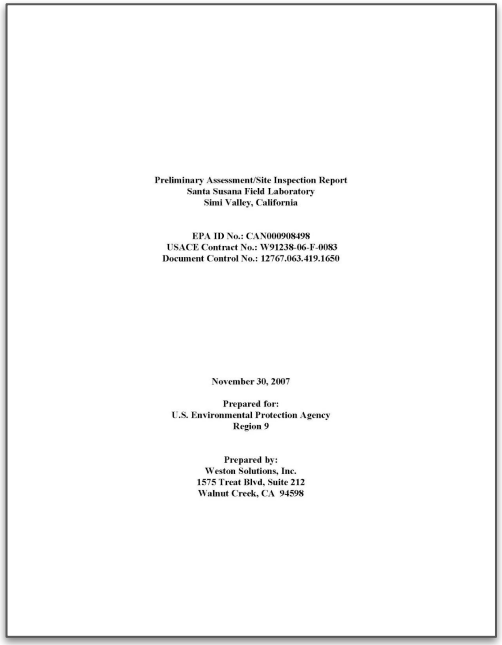
California Public Health Goal (PHG)

- Trichloroethylene (TCE) 1.7 ppb
- Perchlorate 1 ppb
- Lead 0.2 ppb
- Arsenic 0.0004 ppb
- Gross Alpha Particle Activity N/A
- Gross Beta Particle Activity N/A
- Strontium-90 0.35 pCi/L
- Tritium 400 pCi/L

PPB is equivalent to 1 drop in 1 billion gallons. Picocuries per liter (pCi/L) is a common unit of measurement for the concentration of radioactivity in a gas. A picocurie per liter corresponds to 0.037 radioactive disintegrations per second in every liter of air.

Public Health Goal | *California Maximum Contamination Limits* | *EPA Converting Lab Units to Consumer Confidence Report Units*

Drinking Water: EPA, “Contamination Near to Local Drinking Water Supply”



Preliminary Assessment/Site Inspection Report
Santa Susana Field Laboratory
Simi Valley, California

EPA ID No.: CAN000908498
USACE Contract No.: W91238-06-F-0083
Document Control No.: 12767.063.419.1650

November 30, 2007

Prepared for:
U.S. Environmental Protection Agency
Region 9

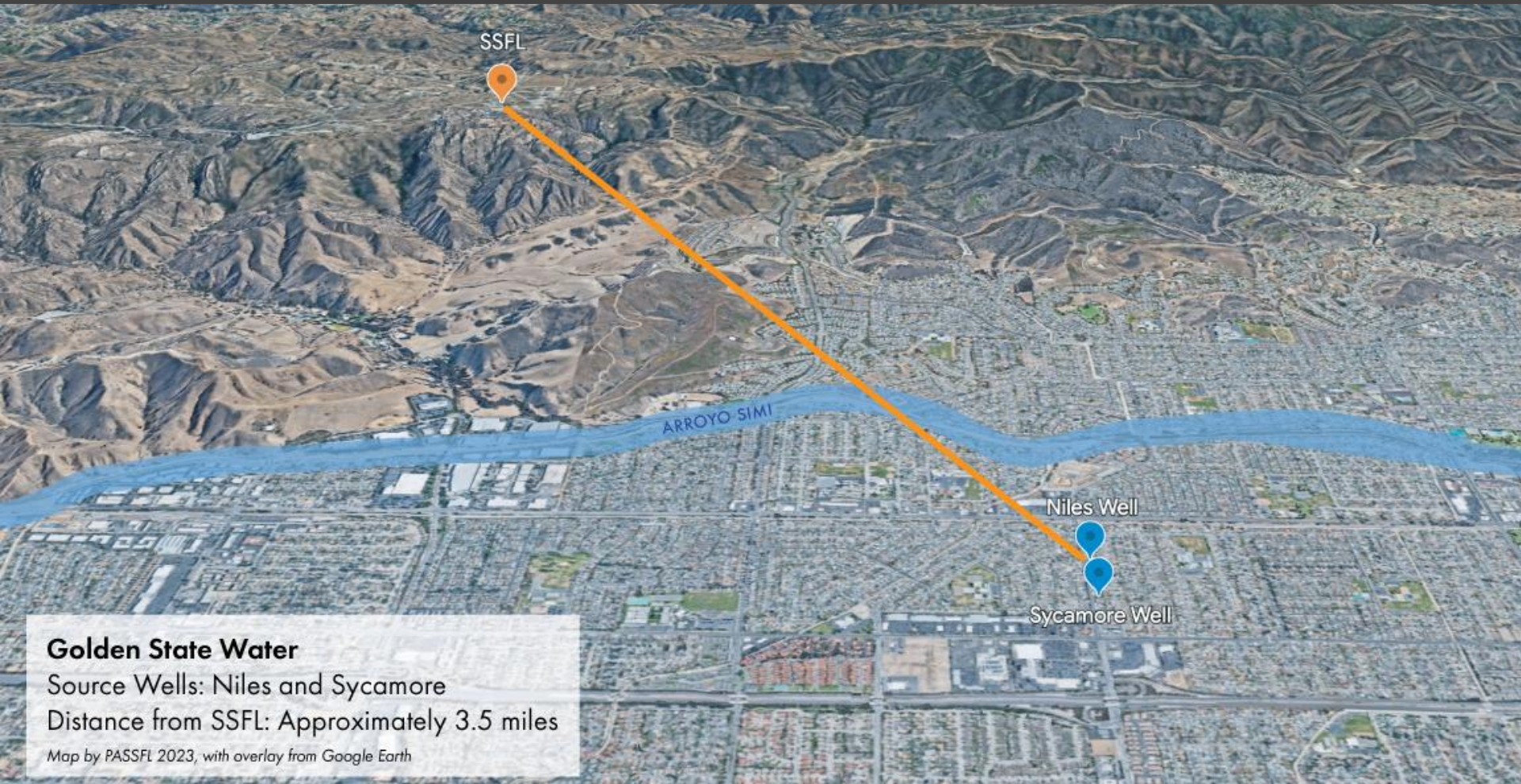
Prepared by:
Weston Solutions, Inc.
1575 Treat Blvd, Suite 212
Walnut Creek, CA 94598

Golden State Water Company operates two municipal drinking water wells (Niles Well and Sycamore Well) that are located between a 3-4 mile radius to the northwest of the SSFL site. ...Although TCE has not been detected in the Golden State Water Company municipal drinking water supply, the above population may be subjected to potential future contamination from the SSFL site. The aforementioned wells [Golden State Water Niles and Sycamore] are located near areas where perchlorate in groundwater resources has been detected at concentrations of up to about 15 ppb.

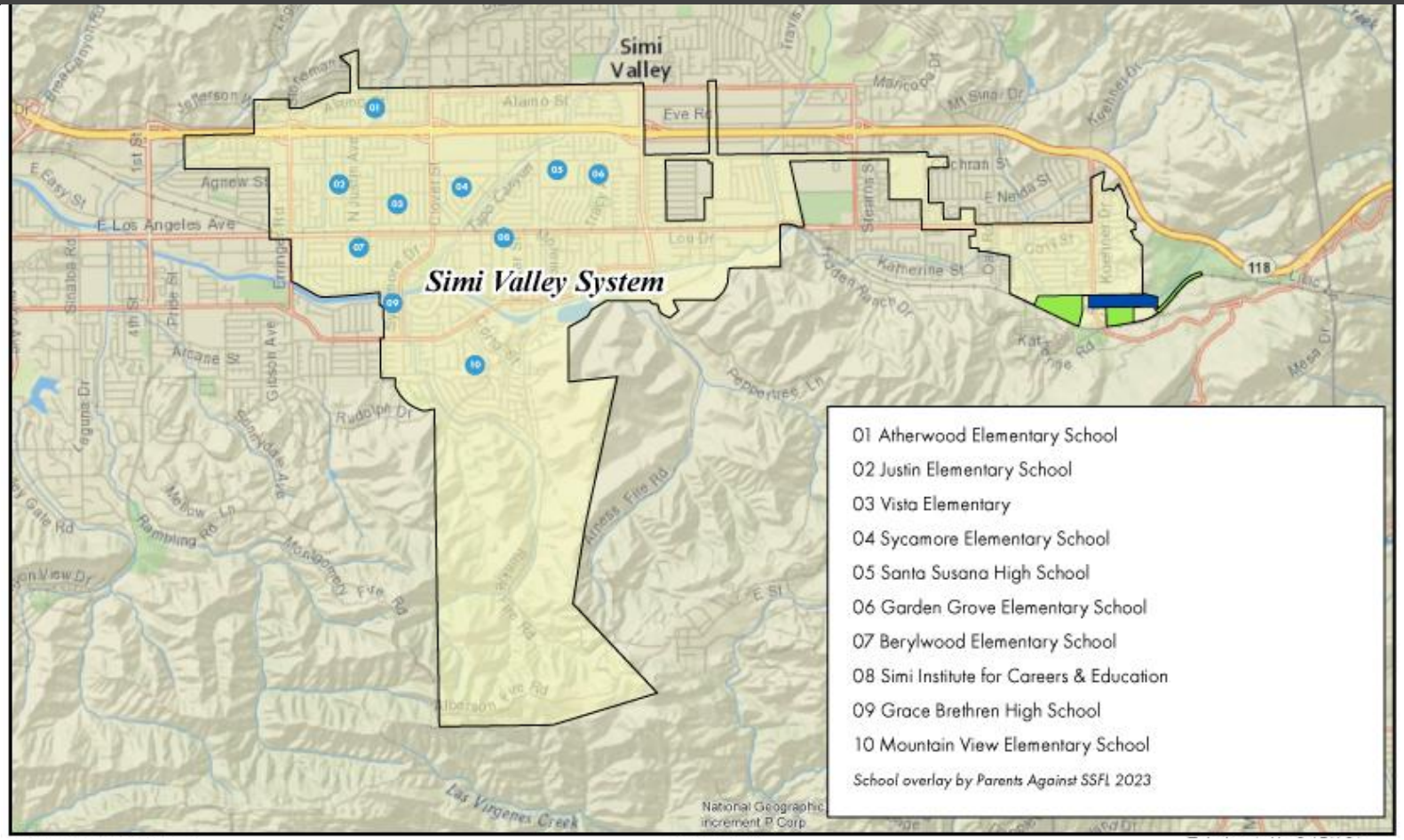
California MCL: 6 ppb
California Public Health Goal: 1 ppb

Preliminary Assessment/Site Inspection Report Santa Susana Field Laboratory, Simi Valley, California. Prepared for: U.S. Environmental Protection Agency Region 9, November 2007. (PDF page 13)

Drinking Water: Golden State Water Source Wells



Drinking Water: Golden State Water Service Area



https://www.gswater.com/sites/main/files/file-attachments/simi-valley-tariff-map-approved.pdf?1603754669

Drinking Water: GSW Treated Source Water

Source Water Assessment

Golden State Water Company conducted a source water assessment in December 2002 for each groundwater well serving the customers of its Simi Valley System.

The groundwater well sources are considered most vulnerable to one or more of the following possible contaminating activities. Contaminants associated with these activities have not been detected in the water supply: corridors-railroads and freeways/ state highways, gas stations, high density housing, known contaminant plumes (perchlorate), parking lots/malls, photo processing, repair shops, transportation and water supply wells.

The groundwater well sources are also considered most vulnerable to one or more of the following activities, which have been associated with contaminants detected in these groundwater sources: dry cleaners and known contaminant plumes (nitrate, perchloroethylene). The **Untreated Groundwater** table presents contaminants detected in the groundwater sources.

A copy of the assessment may be viewed at:

State Water Board Coastal District Office
1180 Eugenia Place, Suite 200, Carpinteria, CA 93013

You may request a summary of the assessment be sent to -you by contacting:

State Water Board Coastal District Office at 1.805.566.1326

For more details, contact Rocio Flores, Water Quality Engineer, at 1.800.999.4033, or email the Customer Service Center at **customerservice@gswater.com**.

In December 2002, the Metropolitan Water District of Southern California (MWD) completed a source water assessment of its Colorado River and State Water Project supplies. Colorado River supplies are considered to be most vulnerable to the following: increasing urbanization in the watershed, recreation, urban/ stormwater runoff, and wastewater.

State Water Project supplies are considered to be most vulnerable to the following: agriculture, recreation, urban/ stormwater runoff, wastewater and wildlife.

A copy of the assessment can be obtained by contacting MWD at 1.213.217.6000.

Golden State Water Company -Simi Valley's Consumer Confidence Report, 2023

2018 Feasibility Study to Develop the Simi Valley Basin as a Potable Water Resource : Alpha Radioactivity

While typically detected below 15 pCi/L, alpha radioactivity has been occasionally detected in the Simi Valley Basin groundwater at concentrations above the primary MCL.

https://www.simivalley.org/home/showdocument?id=18518 Pg. 57

Drinking Water: Golden State Water is NOT ILLEGAL... but is it safe?

http://www.gswater.com/download/Perchlorate-table-2015_2017-rev12212017.pdf

Water System	Perchlorate Levels Detected in Treated Drinking Water 2015-2017
Apple Valley South	Non-detect
Apple Valley North	Non-detect
Arden	Non-detect
Artesia	Non-detect
Barstow	Non-detect
Bay Point	Non-detect
Bell-Bell Gardens	Non-detect
Claremont	Non-detect
Clearlake	Non-detect
Cordova	Non-detect
Cowan Heights	Non-detect
Cypress Ridge	Non-detect
Desert View	Non-detect
Edna Road	Non-detect
Florence-Graham	Non-detect to 4.4 ppb
Hollydale	Non-detect
Lake Marie	Non-detect
Los Osos	Non-detect
Lucerne	Non-detect
Morongo Del Norte	Non-detect
Morongo Del Sur	Non-detect
Nipomo	Non-detect
Norwalk	Non-detect
Orcutt	Non-detect
Placentia	Non-detect
San Dimas	Non-detect
Simi Valley	Non-detect to 4.6 ppb
Sisquoc	Non-detect
South Arcadia	Non-detect

Golden State Water uses a drinking water blend; mixing 10%-67% well water with imported water to stay within the legal Maximum Contamination Limits (MCL).

California MCL perchlorate: 6 ppb

California Public Health Goal perchlorate: 1 ppb

Simi Valley Division of Drinking Water Presentation by Jeff Densmore on 7-11-2019 admitted that Golden State Water may use up to 67% groundwater at times

Drinking Water: GSW Untreated Groundwater

Summary of slide here

Simi Valley Water System – Untreated Groundwater

Primary Standards – Health Based (units)	Primary MCL	PHG (MCLG)	Range of Detection	Average Level	Most Recent Sampling Date	Typical Source of Constituent
Inorganic Constituents						
Arsenic (µg/L)	10	0.004	ND - 2.2	ND	2021	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Fluoride (mg/L)	2	1	0.5 - 0.6	0.6	2021	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate [as N] (mg/L)	10	10	11 - 17	13	2022	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Perchlorate (µg/L)	6	1	ND - 5.6	ND	2022	Perchlorate is an inorganic chemical used in solid rocket propellant, fireworks, explosives, flares, matches, and a variety of industries. It usually gets into drinking water as a result of environmental contamination from historic aerospace or other industrial operations that used or use, store, or dispose of perchlorate and its salts.
Selenium (µg/L)	50	30	30 - 57	41	2022	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)
Volatile Organic Constituents						
Tetrachloroethylene [PCE] (µg/L)	5	0.06	ND - 1	ND	2022	Discharge from factories, dry cleaners, and auto shops (metal degreaser)
Radioactive Constituents						
Gross Alpha Activity (pCi/L)	15(a)	(0)	11 - 14	12	2020	Erosion of natural deposits
Uranium (pCi/L)	20	0.43	14 -17	16	2020	Erosion of natural deposits
Secondary Standards – Aesthetic (units)	**Secondary MCL**	**PHG (MCLG)**	**Range of Detection**	**Average Level**	**Most Recent Sampling Date**	**Typical Source of Constituent**
Chloride (mg/L)	500	n/a	140 - 160	150	2021	Runoff/leaching from natural deposits; seawater influence
Foaming Agents [MBAS] (µg/L)	500	n/a	ND - 100	50	2021	Municipal and industrial waste discharges
Specific Conductance (µS/cm)	1600	n/a	55 - 1900	980	2022	Substances that form ions when in water; seawater influence
Sulfate (mg/L)	500	n/a	630 - 960	790	2022	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (mg/L)	1000	n/a	1500 - 2100	1700	2022	Runoff/leaching from natural deposits
Turbidity (units)	5	n/a	0.4 - 3.3	1.9	2021	Soil runoff
Other Parameters (units)	**Notification Level**	**PHG (MCLG)**	**Range of Detection**	**Average Level**	**Most Recent Sampling Date**	**Typical Source of Constituent**
Alkalinity (mg/L)	n/a	n/a	250 - 270	260	2021	
Calcium (mg/L)	n/a	n/a	220 - 250	240	2021	
Hardness [as CaCO3] (mg/L)	n/a	n/a	840 - 990	920	2021	The sum of polyvalent cations present in the water, generally magnesium and calcium; the cations are usually naturally occurring
Hardness [as CaCO3] (grains/gal)	n/a	n/a	49 - 58	54	2021	
Magnesium (mg/L)	n/a	n/a	72 - 89	80	2021	
pH (pH units)	n/a	n/a	7.5 - 7.7	7.6	2021	
Potassium (mg/L)	n/a	n/a	3.3 - 6.0	4.6	2021	
Sodium (mg/L)	n/a	n/a	140 - 180	160	2021	Refers to the salt present in the water and is generally naturally occurring

(a) MCL is based on Gross Alpha minus Uranium. ND = Not Detected CaCO3 = Calcium Carbonate

This table includes data only of constituents that were detected in raw water. This data is not representative of the water received by customers. The water is blended prior to entering the distribution system.

https://www.gswater.com/sites/main/files/file-attachments/water-quality-simi-valley.pdf?1685572220

Drinking Water: Golden State Water is NOT ILLEGAL… but is it safe?

The State assumes GSW doesn't have to test for some contaminants because they don't change frequently… the 2023 Groundwater Report shows there can be fluctuations and infrequent sampling may not be protective.

Laboratory Analyses

Through the years, we have taken thousands of water samples to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants in your drinking water. The table we provide shows only detected contaminants in the water.

Even though all the substances listed here are under the Maximum Contaminant Level (MCL), we feel it is important that you know exactly what was detected and how much of these substances were present in your water. Compliance (unless otherwise noted) is based on the average level of concentration below the MCL. The state allows us to monitor for some contaminants less than once per year because the concentrations do not change frequently. Some of our data, while representative, is more than a year old.

https://www.gswater.com/sites/main/files/file-attachments/water-quality-simi-valley.pdf?1685572220

While it may be “legal”, the practice still begs the question…

Is it safe enough?

What we don't know:

- What contaminants of concern are they NOT testing for
- How much water from the wells are they using for their sampling data of the blended drinking water? 10%? 20%? 40%? 67%?
- What is the sampling data on contaminants when they are using 67%?
- Since GSW is blending well water with imported water, why aren't they blending enough to reach the more protective Public Health Goals?
- Public Health Goals and Maximum Contamination Limits for many of the Chemicals of concern haven't been established yet.

Protecting Ourselves

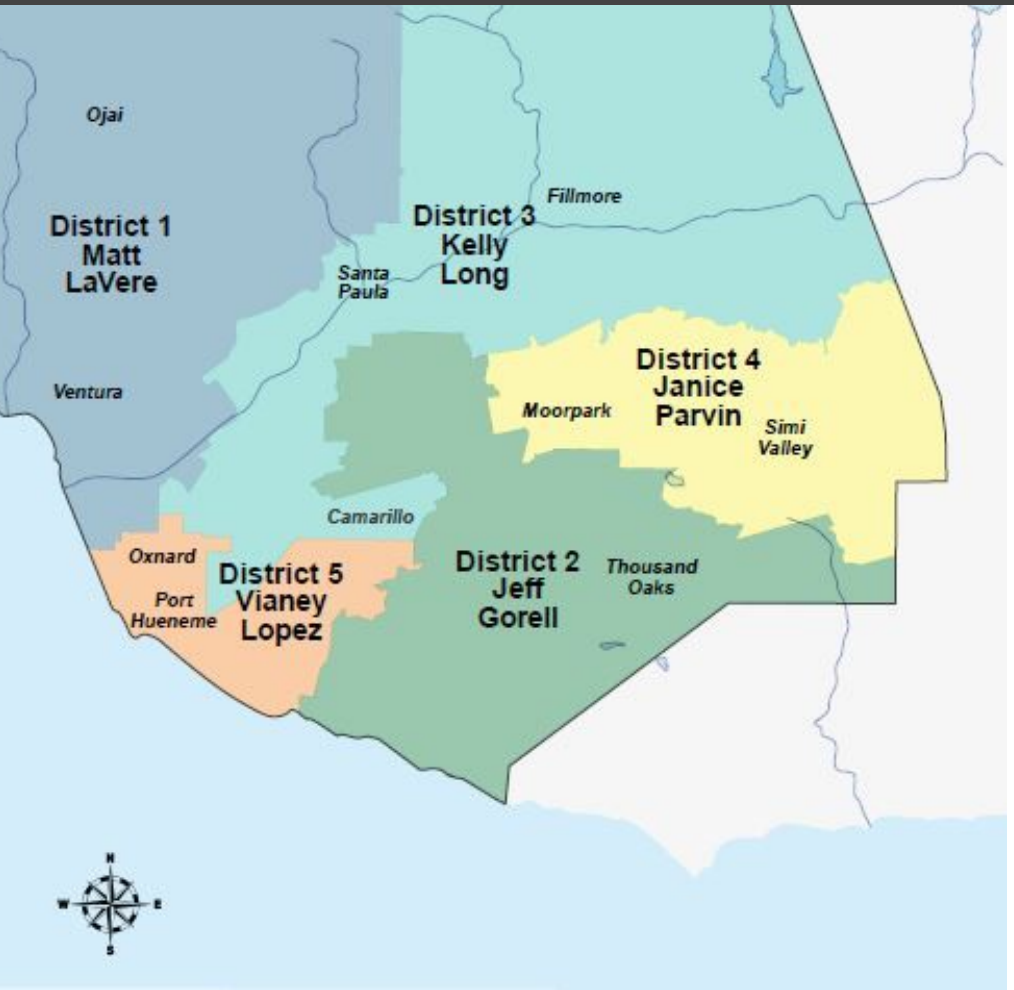
- Alternative drinking water sources
- In home reverse osmosis system;
  - Covers most, but not all contaminants (Tritium)
  - Is more than many local families can afford
- Don’t test your water
  - Expensive
  - Not reliable
- Contact your representatives and let them know you want the full SSFL clean up so that your community isn’t at risk of exposure to SSFL contaminants for the rest of their lives

SSFL WATER

Next Steps

Melissa Bumstead
Parents Against SSFL

Next Steps: Board of Supervisors



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LOS ANGELES COUNTY

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Contact your Elected Officials

Potential Message for elected officials:

“I am concerned about the Department of Toxic Substances Control’s recent SSFL Environmental Impact Report and how it will result in the leaving of over 90% of the soil contamination on site. I support the full clean up of the Santa Susana Field Lab as outlined in the 2010 and 2007 cleanup agreements.”

Copies of motion available on www.parentsagainstssfl.com/cleanupagreements

Next Steps: Stay in touch

Email us:

santasusanacampaign@gmail.com

Join our mailing list:

www.parentsagainstssfl.com/newsletter

Special thanks:

Physicians for Social Responsibility - Los Angeles

“In the Dark of the Valley” Streaming on Peacock TV