Santa Susana 101

June 25, 2009

ACMELA.ORG

cleanuprocketdyne.org

Welcome to ACME's Santa Susana 101

- Thank you for joining us!
- Special Guests:
  - Gerard Abrams, DTSC
  - Laura Rainey, DTSC
  - Tom Seckington, DTSC
  - Nicole Moutoux, US EPA
  - Craig Cooper, US EPA
  - Aron Miller, Senator Fran Pavley's office

Welcome to ACME's Santa Susana 101

- 6:30-7pm Mixer, Refreshments
- 7-8pm Santa Susana Presentation
- 8-8:30pm Questions and Answers
  - …but if you have a burning question, ASK!
  - We don't want you to forget!
- 8:30-9pm Film shorts (Historical footage)
- 9-10pm Browse the Museum!

Santa Susana 101

– Guest Presenters:

- Gerard Abrams – an overall look at the site, then and now
- Laura Rainey – the history, and how we (she) makes sense of it today.
- Tom Seckington – Groundwater issues
- Nicole Moutoux – the background behind background, why it matters, how we are collaborating as a group
- Craig Cooper – Soil Characterization, the historical site assessment, and the launch from characterization to clean-up

Santa Susana 101

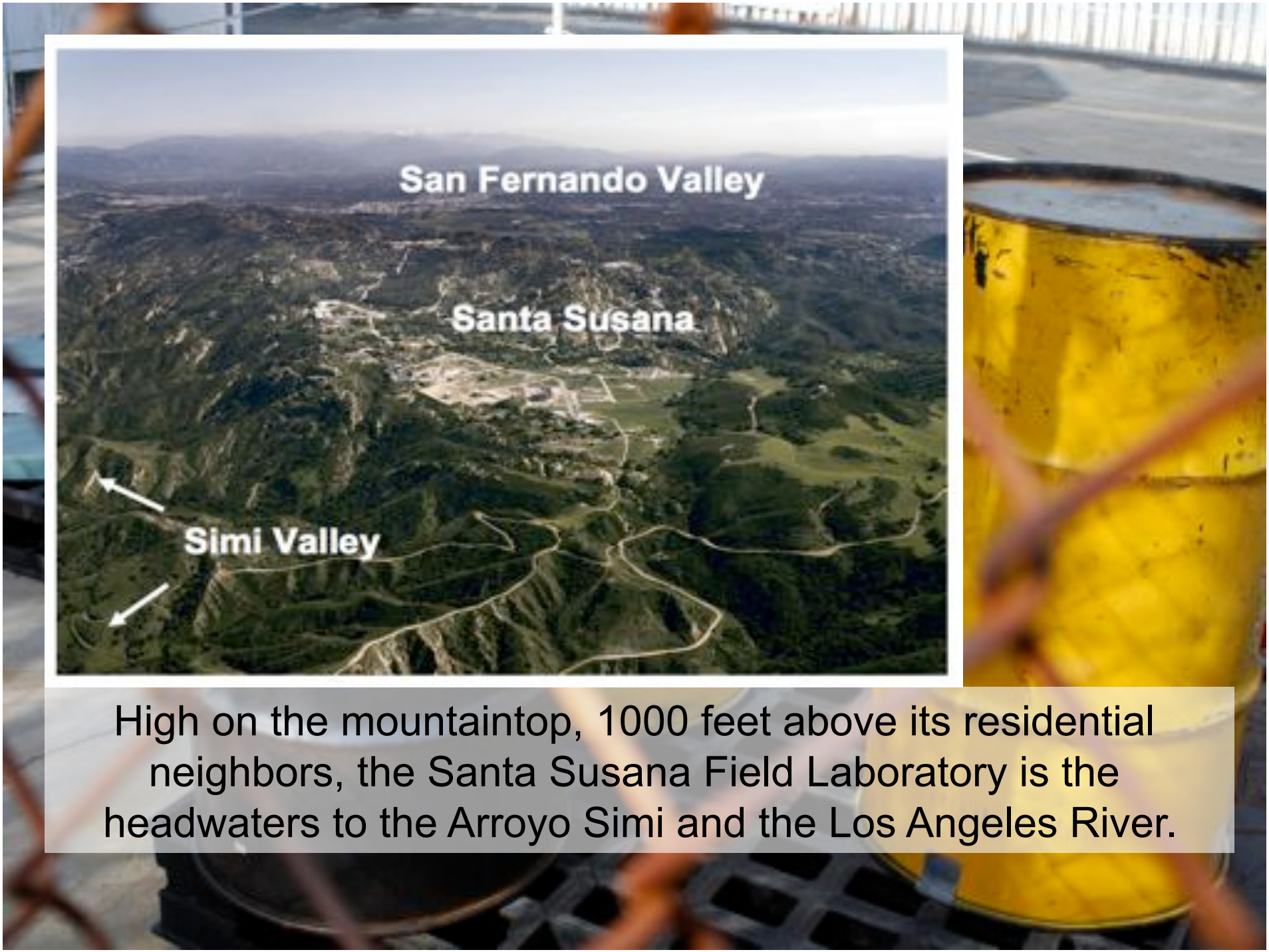
– Guest Presenters:

- Aron Miller, Senator Fran Pavley's office

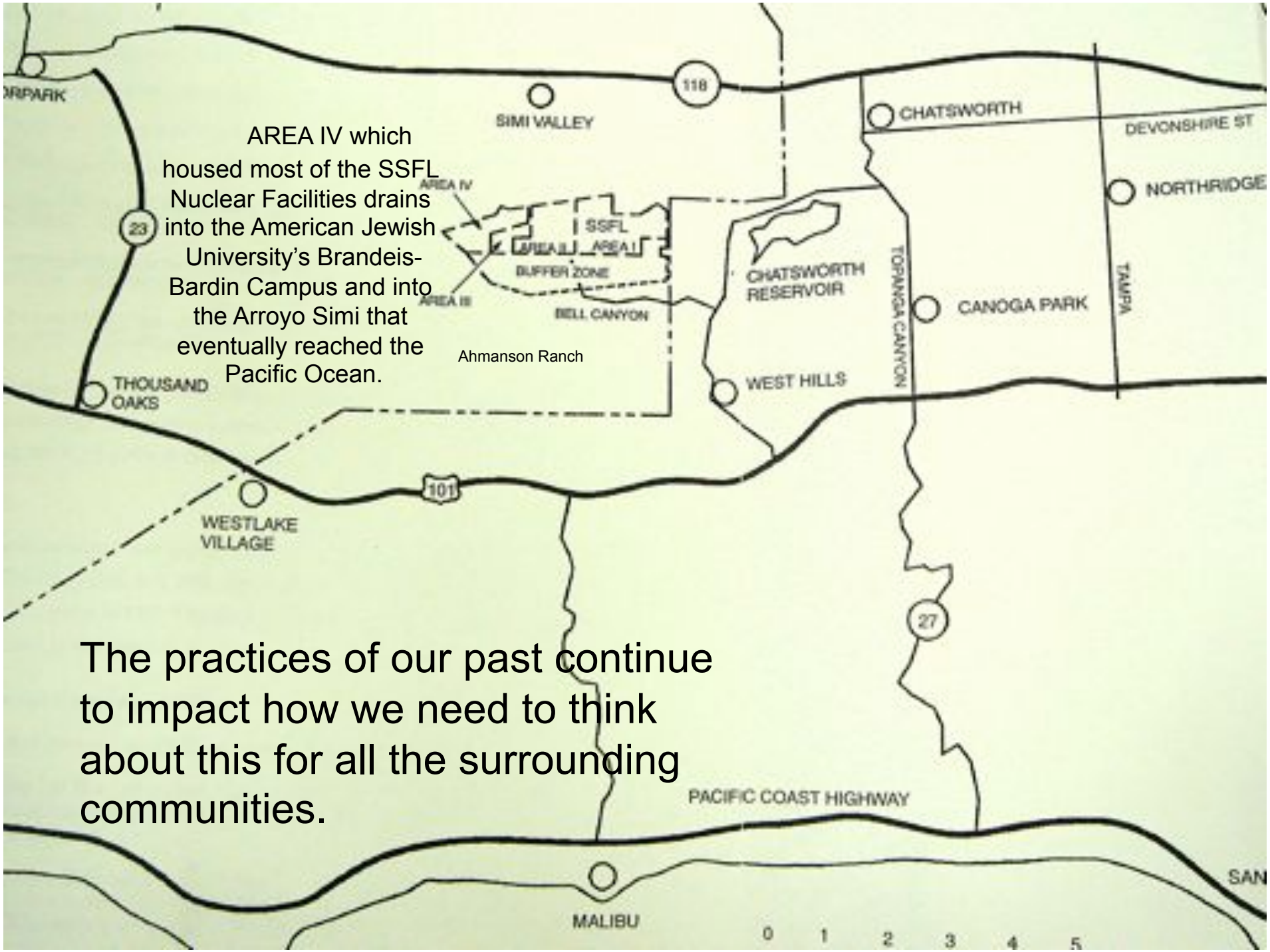
- Special thanks to the elected officials who have stood united, stood bipartisan, and stood in defense of SB990 and the needed clean-up of the site.

Where are we?

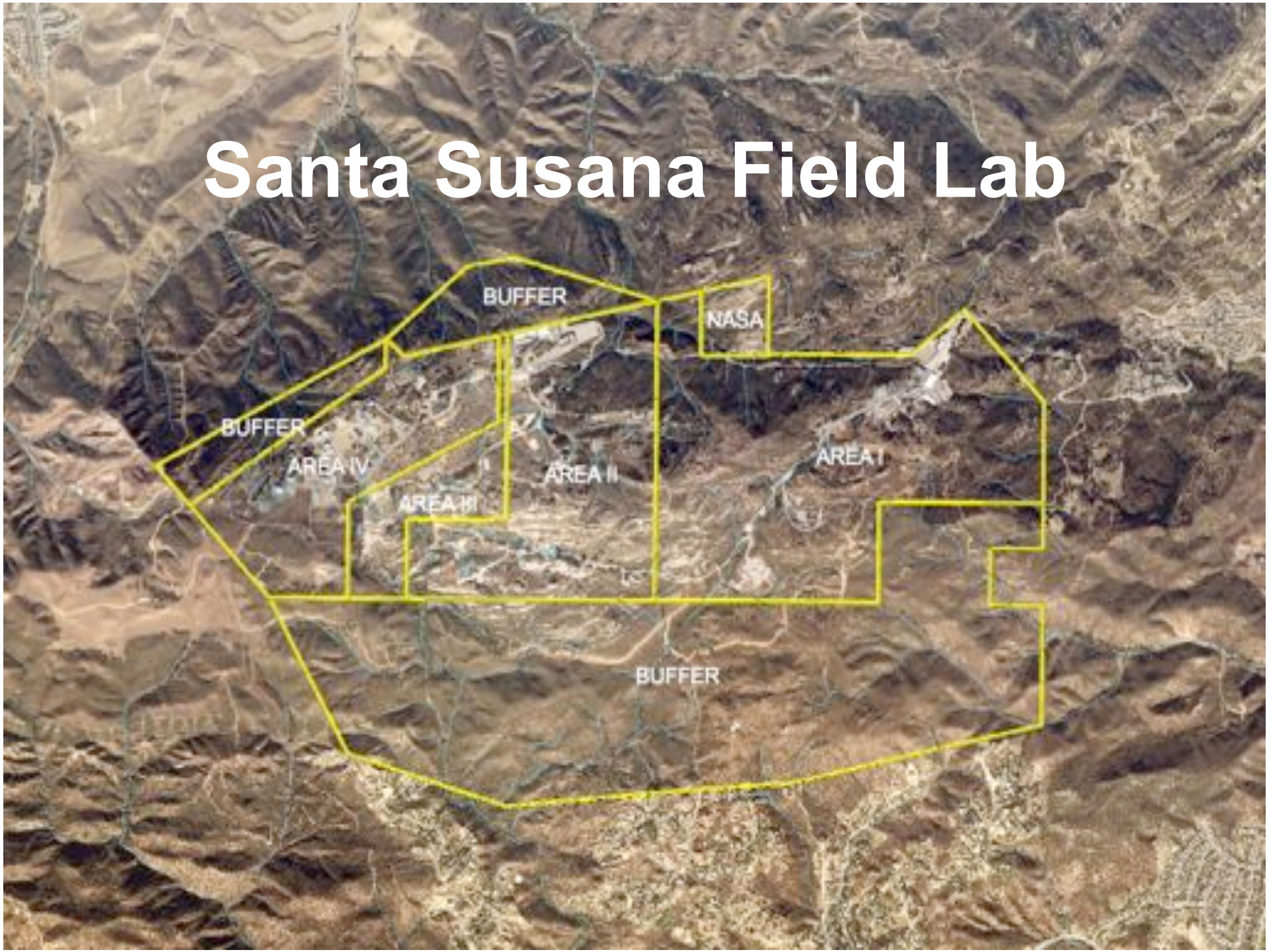
It is important that we understand where we work, live and breathe, in relationship to the SSFL and the potential impacts over the many decades of operations…

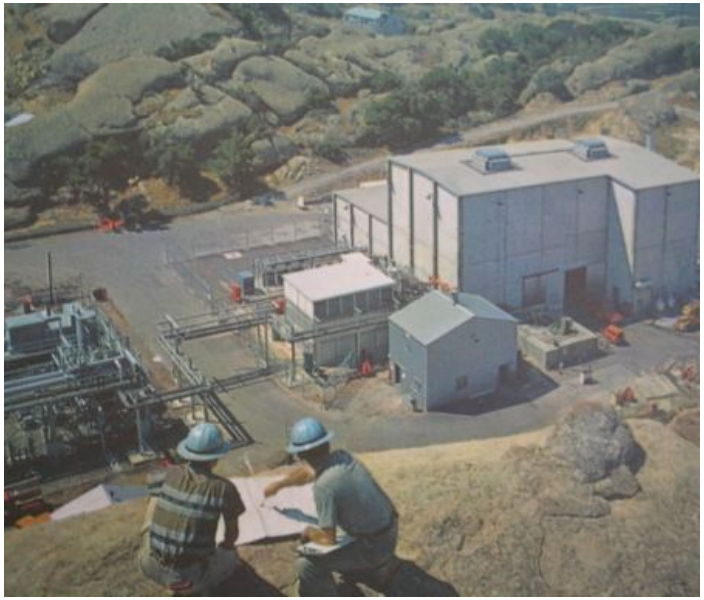


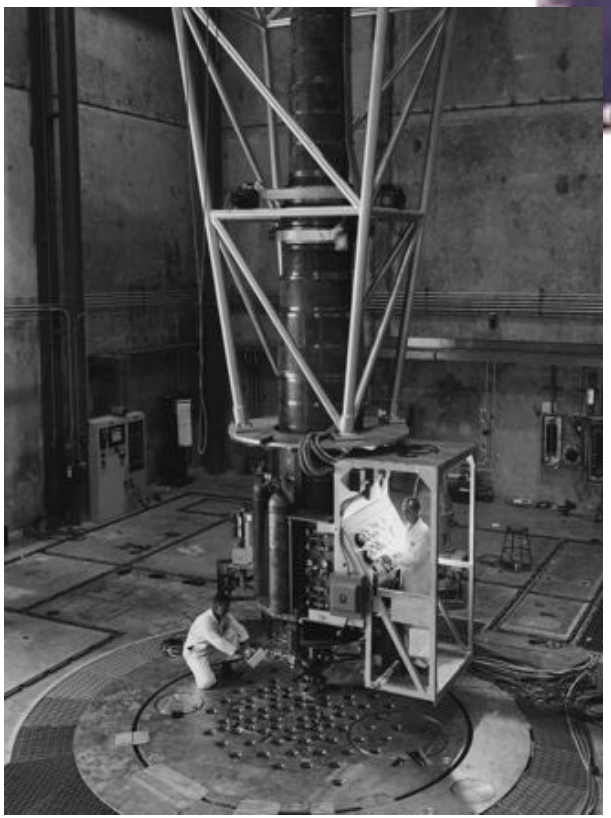
High on the mountaintop, 1000 feet above its residential neighbors, the Santa Susana Field Laboratory is the headwaters to the Arroyo Simi and the Los Angeles River.


AREA IV which housed most of the SSFL Nuclear Facilities drains into the American Jewish University's Brandeis-Bardin Campus and into the Arroyo Simi that eventually reached the Pacific Ocean.
AREA IV
AREA III
SSFL
AREA II
AREA I
BUFFER ZONE
BELL CANYON
Ahmanson Ranch
SIMI VALLEY
118
CHATSWORTH
DEVONSHIRE ST
NORTHRIDGE
23
CHATSWORTH RESERVOIR
TOPANGA CANYON
TAMPA
CANOGA PARK
THOUSAND OAKS
WEST HILLS
101
WESTLAKE VILLAGE
27
PACIFIC COAST HIGHWAY
MALIBU
0 1 2 3 4 5
The practices of our past continue to impact how we need to think about this for all the surrounding communities.

Santa Susana Field Lab







Currently owned by the Boeing Company and NASA, the Santa Susana Field Laboratory or SSFL was home to several Nuclear Research Facilities within the AREA IV portion of the property. AREA IV is leased and operated by the Department of Energy. Decades of operations included several Nuclear Reactors used in Aerospace and Commercial operations.

Laura will speak in more detail about some of the history at the site…

The workers at Rocketdyne, watching President Eisenhauer's speech warning us of the military industrial complex.

Boeing gets cleanup deal for ex-Rocketdyne field lab

CONTRACT / From Page 1

contamination up at the site and walk away from it by 2006. But I don't think they'll actually have it cleaned by 2006," said Lyou.

Boeing and DOE officials countered that regulatory oversight remains in place to monitor the cleanup under the new contract.

"We really have not changed our level of oversight, what we have changed is our method of incentive," said Liddle. "We've not cut any corners. We're not going to leave any contamination on the site."

Liddle said decontamination costs have been adjusted downward because of new technology, such as Boeing's ability to clean up sodium, and because of the company's existing operations there.

The DOE already has spent $75 million cleaning up the site.

"We're able to [clean] down but still do a thorough cleanup that is complete and within regulatory standards," said Rocketdyne spokesman Dan Beck. "We believe it's in everybody's interest to complete the job as quick as we can and do it in the most thorough manner."

The nuclear site is part of the sprawling 2,000-acre field lab in the Simi Hills that continues to conduct rocket testing.

The site has been under a federal cleanup order since 1990, after radiation was found in soil and water samples. Other chemicals have also been found in the area, and a 1997 University of California, Los Angeles, study linked higher cancer rates to workers exposed to radiation.

Feinstein, a California Democrat, stepped in the middle of the Rocketdyne debate recently, joining a list of area politicians who have concerns.

Department of Energy has funded $148 million for the cleanup of this site," said Feinstein in a statement.

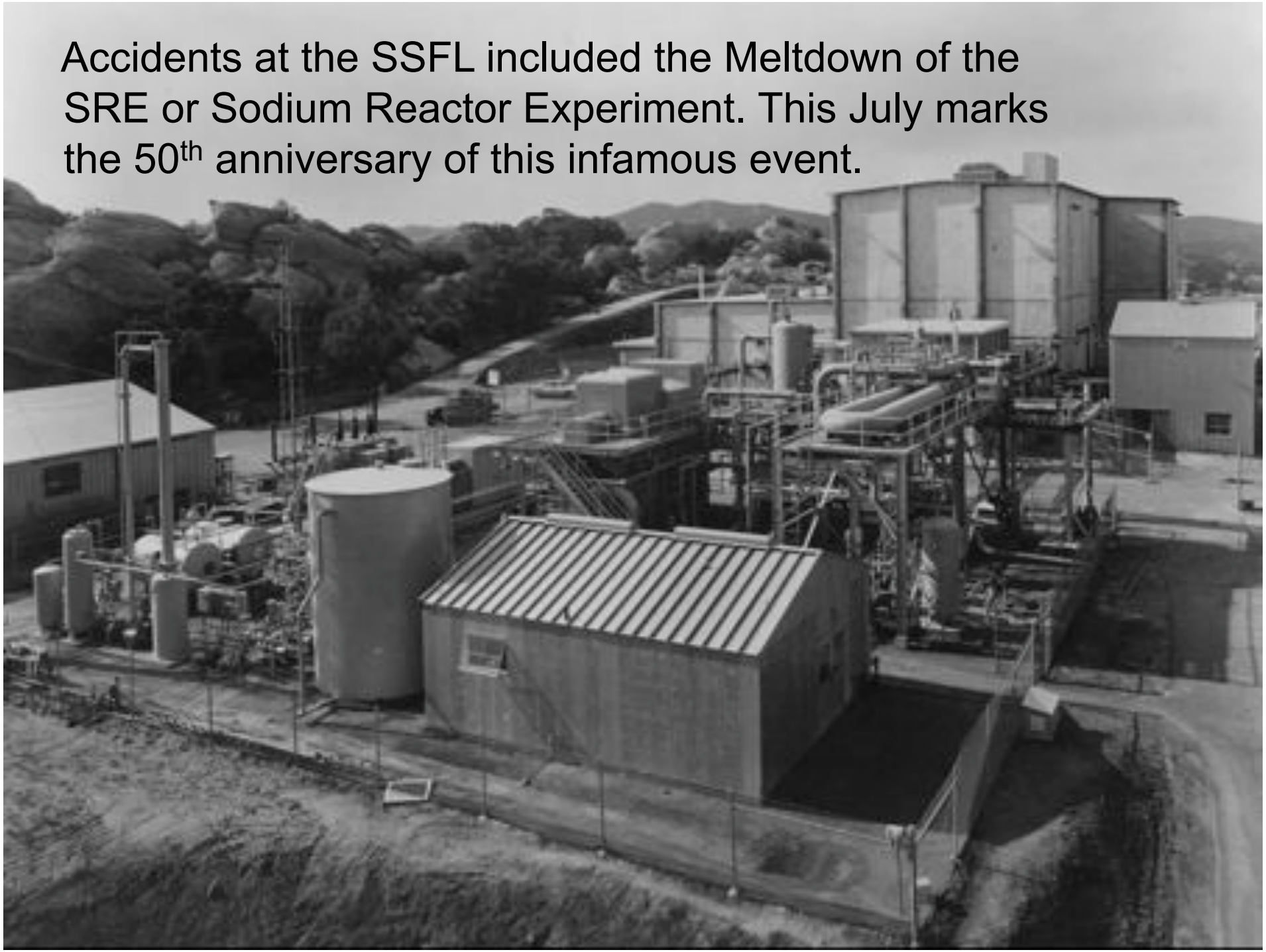
However, the senator maintained that she was concerned about lack of funding for a planned community health study of residents living near the field lab. The DOE has said it was the federal Department of Health and Human Services' jurisdiction to conduct the study, and Feinstein on Tuesday sent a letter urging that department's secretary to conduct the study to evaluate cancer risks.

A version of this story appears in Main News.

Daily News

The Simi Valley Edition of the Daily News is published seven days a week.

Accidents at the SSFL included the Meltdown of the SRE or Sodium Reactor Experiment. This July marks the 50th anniversary of this infamous event.



On July 13th, 1959, the partial meltdown of an experimental reactor, The Sodium Reactor Experiment, released a large amount of radioactive gas into the atmosphere. The true magnitude was kept from the public and the workers for decades. Today, environmental controversy over cleanup continues. It happened right here - in the San Fernando Valley.

AEROSPACE CANCER MUSEUM OF EDUCATION & CLEANUPROCKETDYNE.ORG COMMEMORATE THE

SSFL's Sodium Reactor Experiment's

50th Anniversary

MONDAY JULY 13, 2009

6:30 p.m.

Special Guests Include
Former Workers
Specialists on Nuclear Policy
Regulatory Agencies


1959-2009
Santa Susana Field Laboratory's
Sodium Reactor Experiment
50 Years After the "SRE"
JULY 10TH & 11TH 2009


EARTHWALK DANCE COMPANY PRESENTS
POISONED
Honoring the 50th Anniversary of Santa Susana Field Laboratory's
Chemical & Nuclear Saga
FRI. & SAT.
JULY 10TH & 11TH 2009
8:00 P.M. $20.00

Special thanks to
D’Lanie Blaze and Liesa Ciaviarelli at Jail House Graphics

for their amazing creative gifts to ACME

Sharon Sekhon for her amazing time-lines

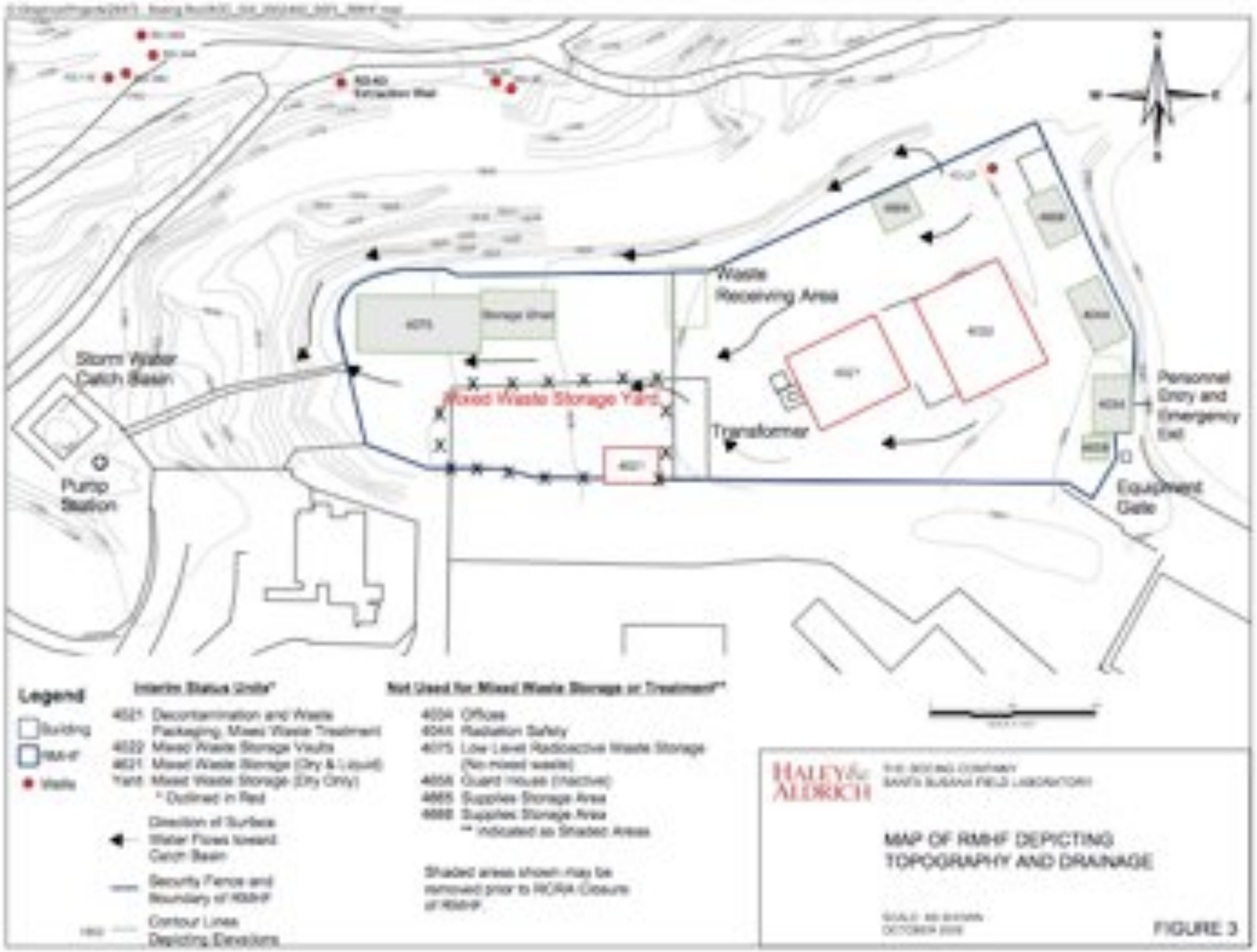

ACME
AEROSPACE CANCER MUSEUM OF EDUCATION
Radiation, Chemicals,
what does it mean
today?

Gerard Abrams, DTSC

Department of Toxic Substances Control

Nuclear work at the site:
SRE
The Sodium Reactor Experiment, partial meltdown in July, 1959

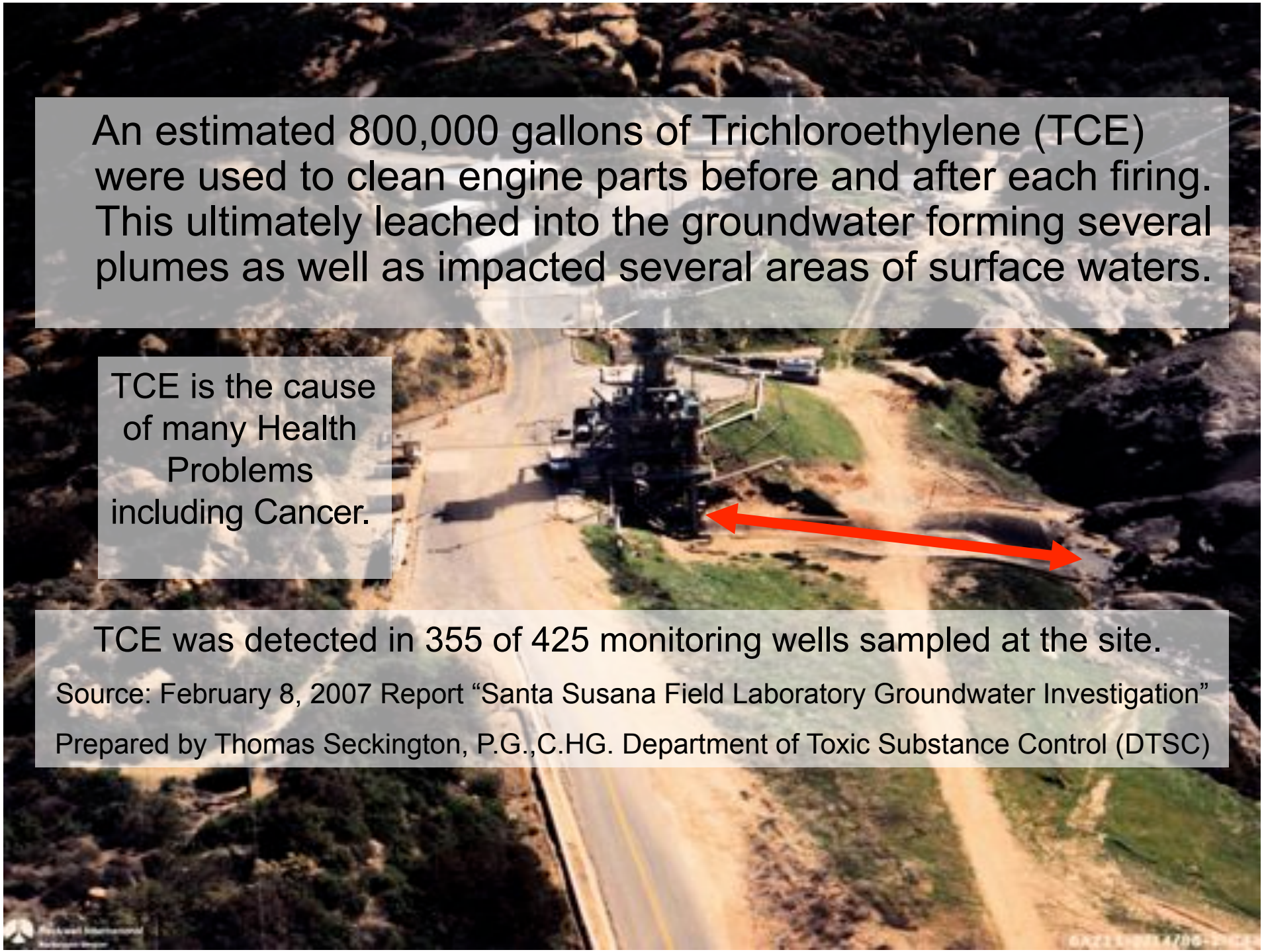
But there were many reactors and many reactor programs…


Waste Receiving Area
Storm Water Catch Basin
Mixed Waste Storage Yard
Transformer
Pump Station
Personnel Entry and Emergency Exit
Equipment Gate
Legend
Building
RMHF
Wells
Interim Status Units*
4021 Decontamination and Waste Packaging, Mixed Waste Treatment
4022 Mixed Waste Storage Vaults
4021 Mixed Waste Storage (Dry & Liquid)
Yard Mixed Waste Storage (Dry Only)
* Outlined in Red
Direction of Surface Water Flows toward Catch Basin
Security Fence and Boundary of RMHF
Contour Lines Depicting Elevations
Not Used for Mixed Waste Storage or Treatment**
4024 Offices
4041 Radiation Safety
4075 Low Level Radioactive Waste Storage (No mixed waste)
4658 Guard House (Inactive)
4665 Supplies Storage Area
4668 Supplies Storage Area
** Indicated as Shaded Areas
Shaded areas shown may be removed prior to RCRA Closure of RMHF
HALEY & ALDRICH
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
MAP OF RMHF DEPICTING TOPOGRAPHY AND DRAINAGE
OCTOBER 2008
FIGURE 3

Laura Rainey, DTSC

Department of Toxic Substances Control


AEROSPACE CANCER MUSEUM OF EDUCATION
Chemical Contamination:
Solvents like TCE and other chlorinated solvents, Perchlorate, Dioxins, TPH, metals, inorganics, mercury…
groundwater…
To the people below?



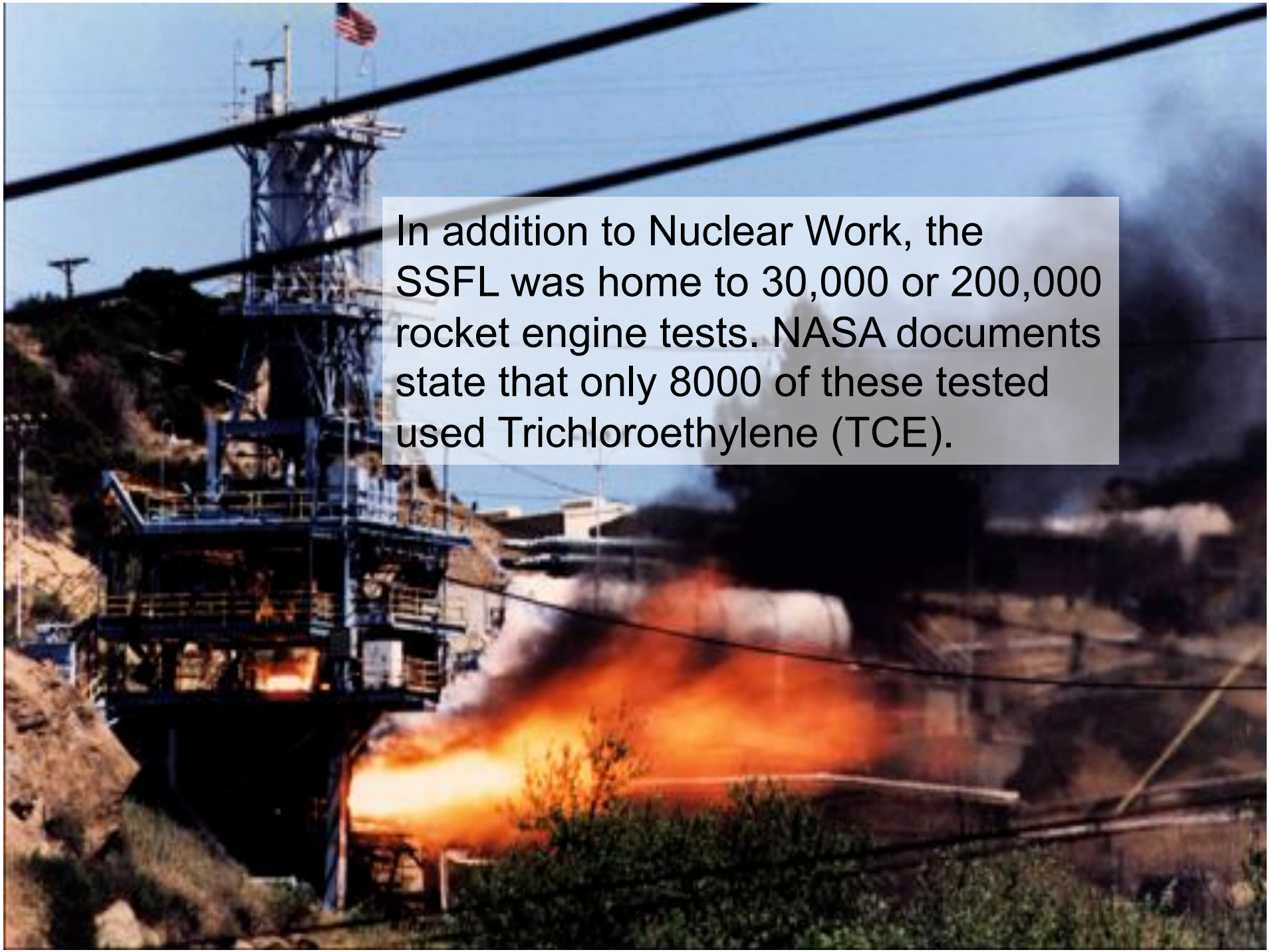
An estimated 800,000 gallons of Trichloroethylene (TCE) were used to clean engine parts before and after each firing. This ultimately leached into the groundwater forming several plumes as well as impacted several areas of surface waters.

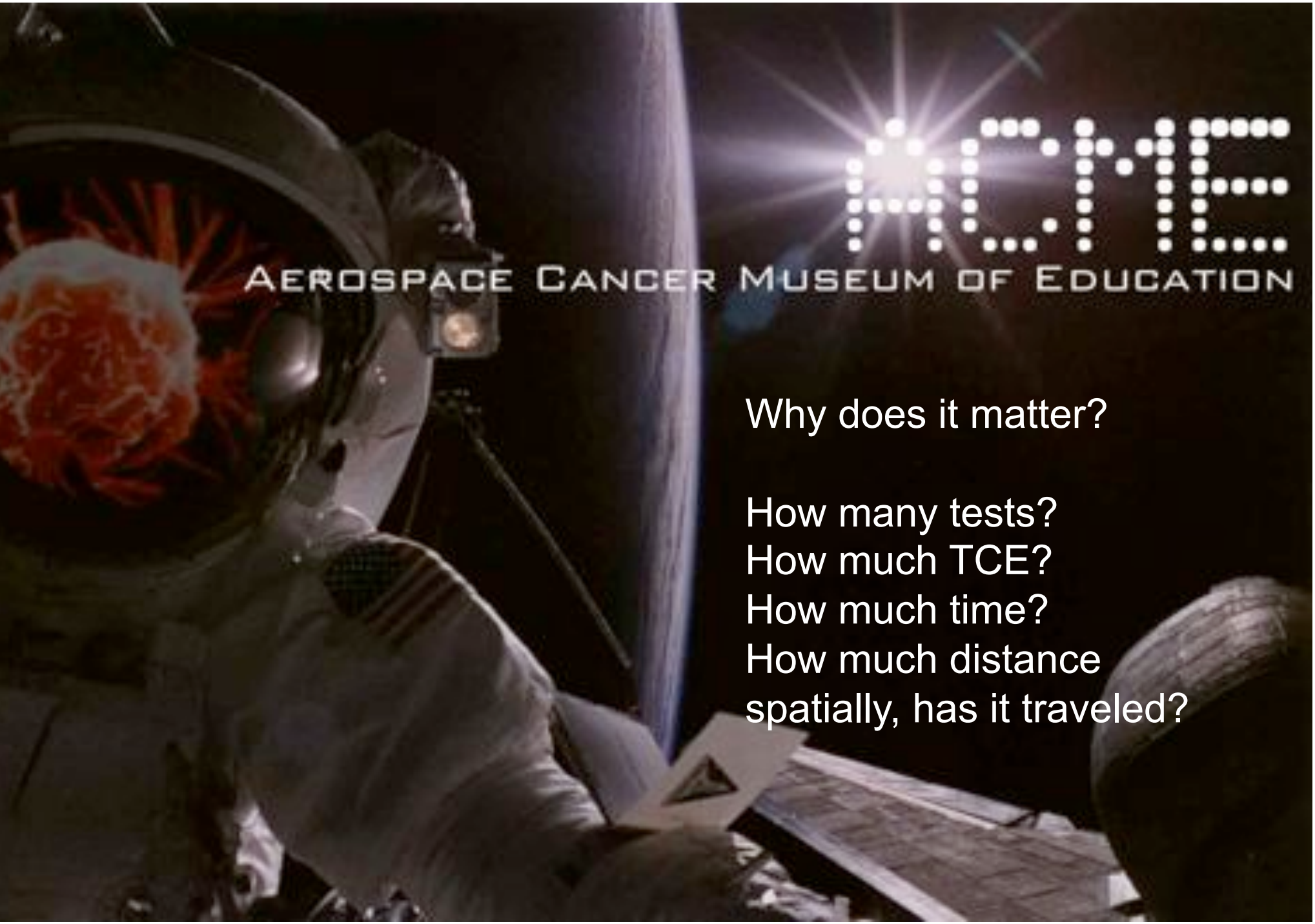
TCE is the cause of many Health Problems including Cancer.

TCE was detected in 355 of 425 monitoring wells sampled at the site.

Source: February 8, 2007 Report “Santa Susana Field Laboratory Groundwater Investigation”

Prepared by Thomas Seckington, P.G.,C.HG. Department of Toxic Substance Control (DTSC)


In addition to Nuclear Work, the SSFL was home to 30,000 or 200,000 rocket engine tests. NASA documents state that only 8000 of these tested used Trichloroethylene (TCE).



Why does it matter?

How many tests?
How much TCE?
How much time?
How much distance spatially, has it traveled?

Tom Seckington, DTSC

Department of Toxic Substances Control

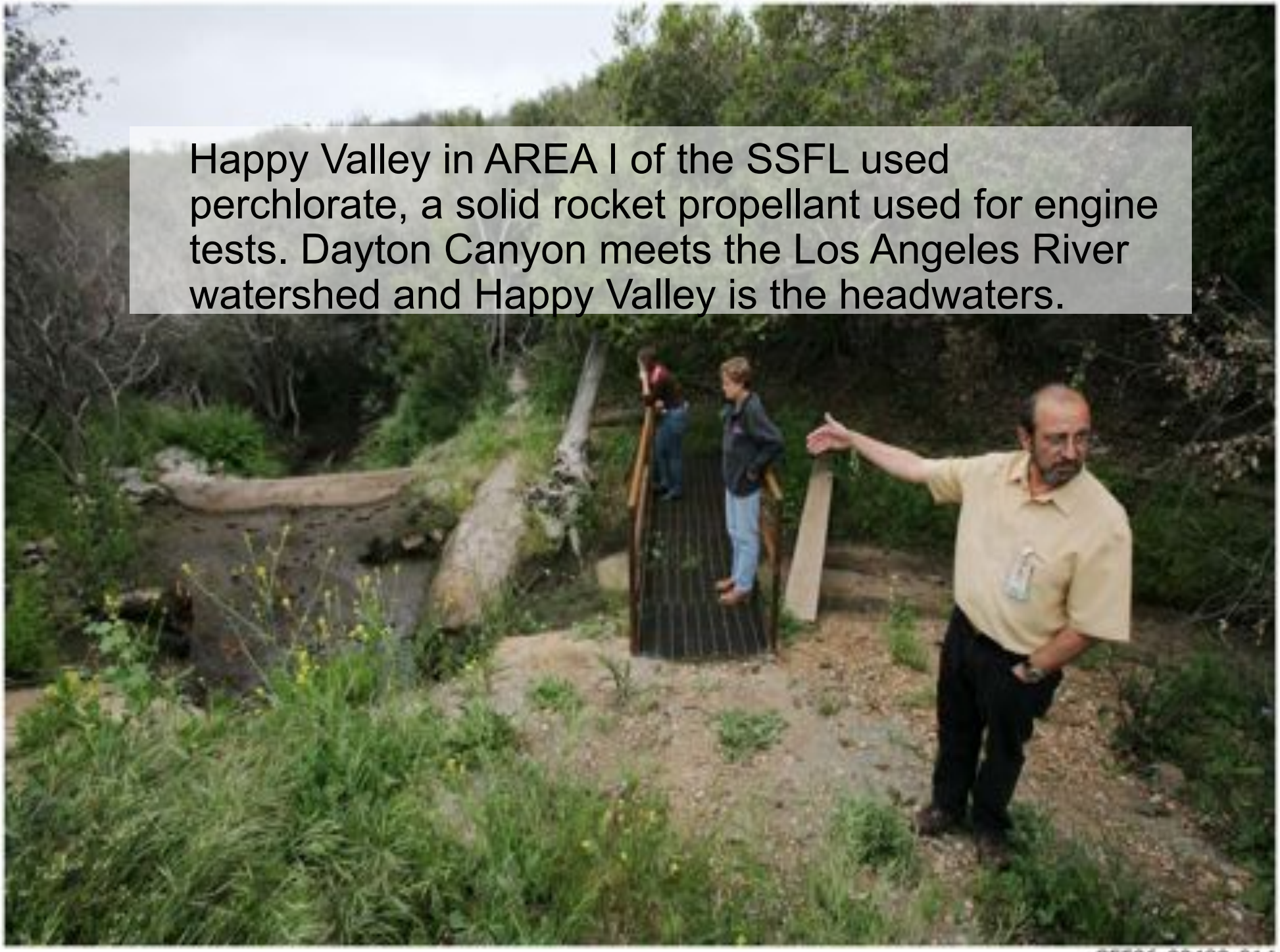
Groundwater, seeps and springs…

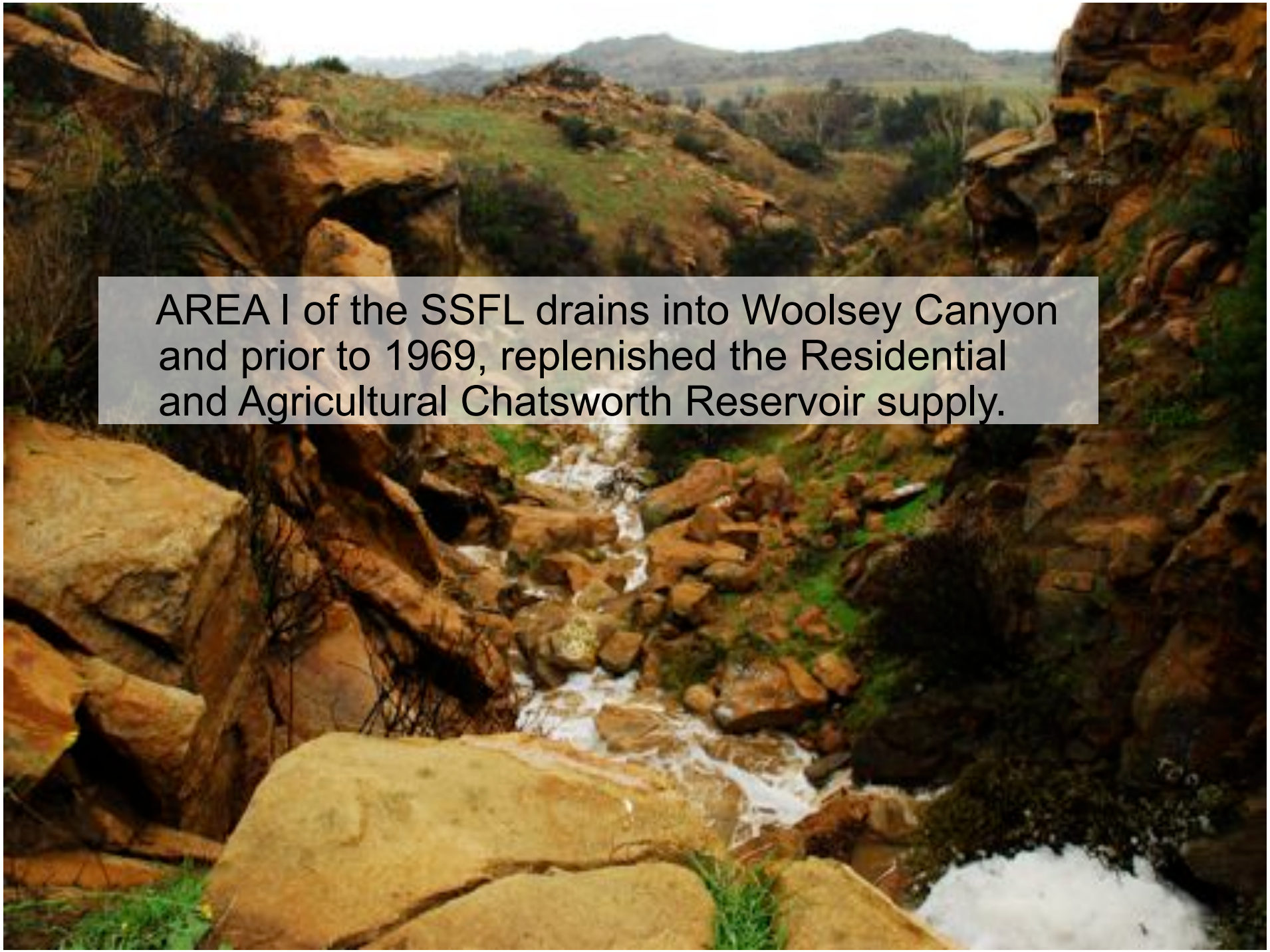
plume(s)?

Interim Measures:

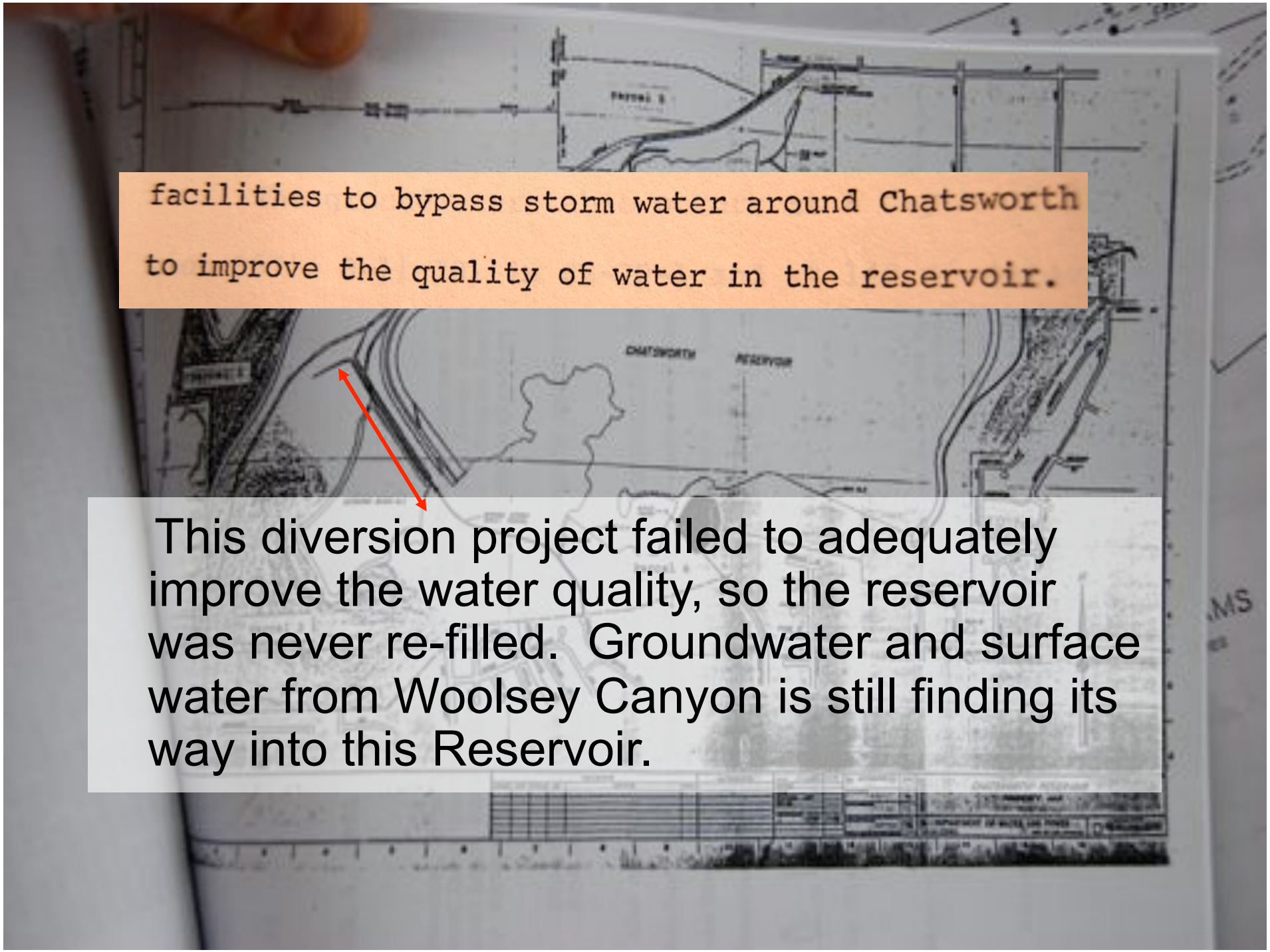
ISRA
ISEO
CAO
CDO
WDR

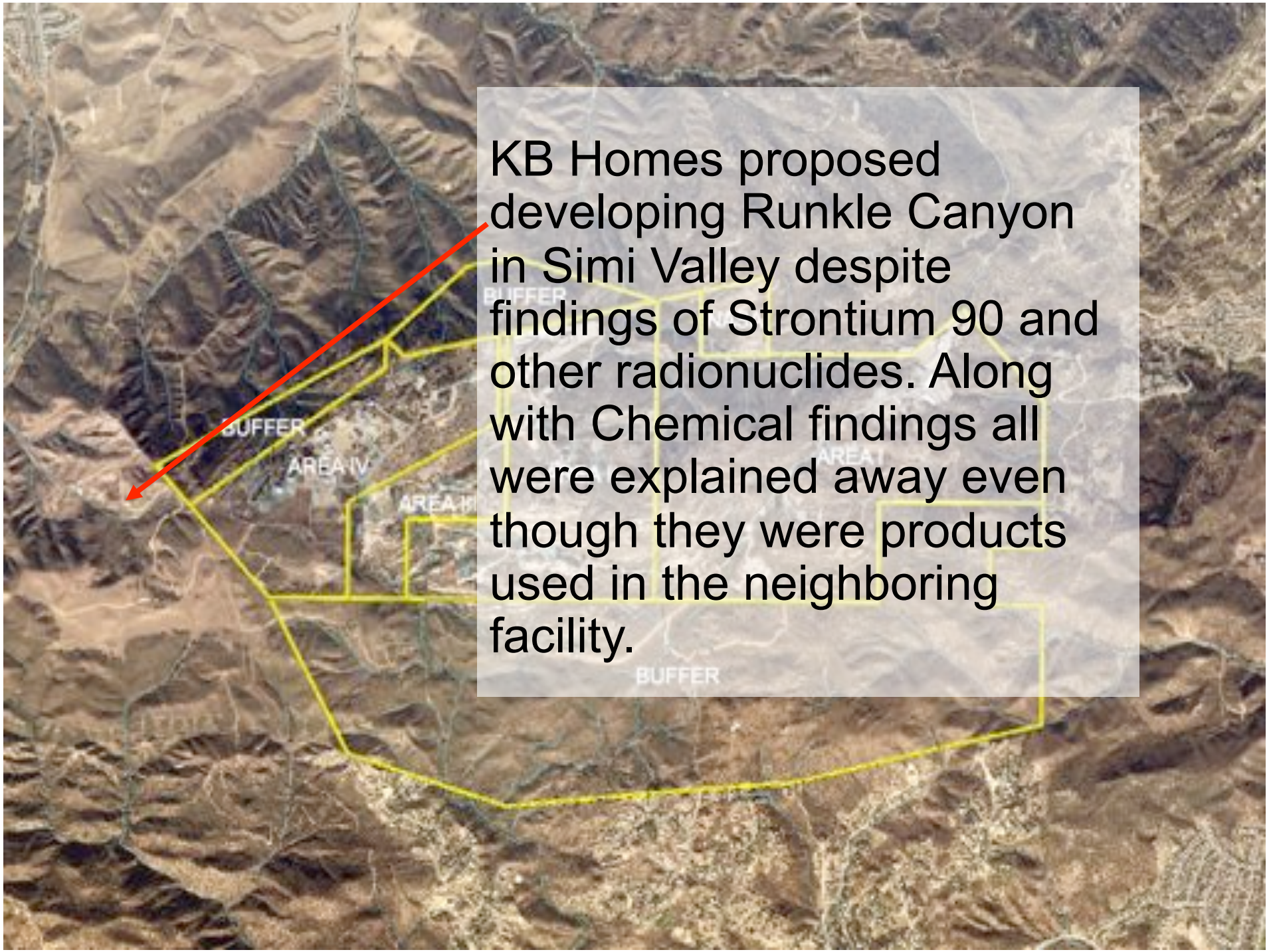
….what?


Happy Valley in AREA I of the SSFL used perchlorate, a solid rocket propellant used for engine tests. Dayton Canyon meets the Los Angeles River watershed and Happy Valley is the headwaters.
SEF06-00480-014

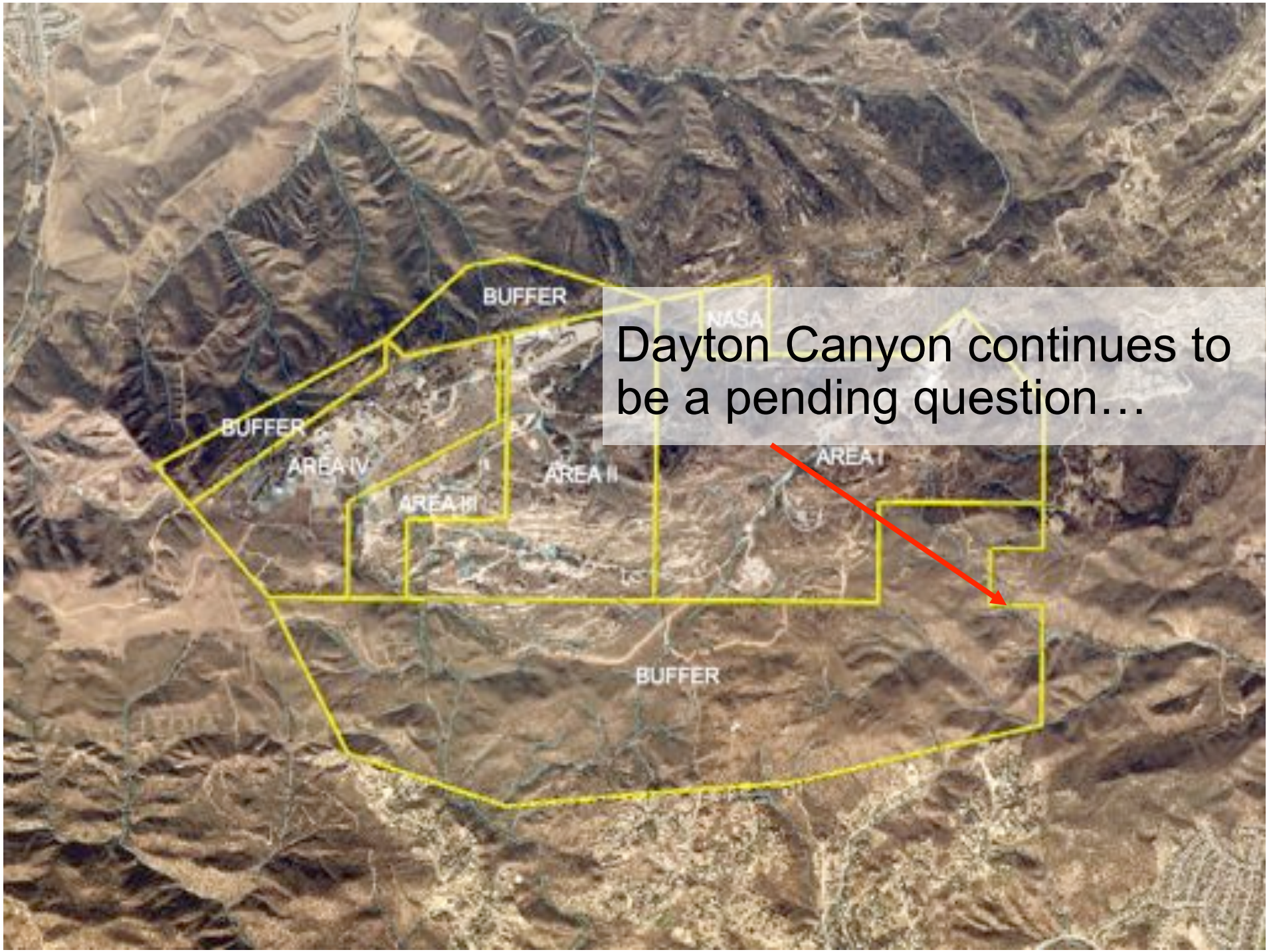

AREA I of the SSFL drains into Woolsey Canyon and prior to 1969, replenished the Residential and Agricultural Chatsworth Reservoir supply.

In 1969 the Chatsworth Reservoir was drained and in 1972 marked the completion of a diversion tunnel. This tunnel was intended to divert the Woolsey Canyon waters away from the Chatsworth Reservoir to “Improve the water quality.” What they did was direct potentially polluted water into the L.A. River via Chatsworth Creek.


facilities to bypass storm water around Chatsworth
to improve the quality of water in the reservoir.
This diversion project failed to adequately improve the water quality, so the reservoir was never re-filled. Groundwater and surface water from Woolsey Canyon is still finding its way into this Reservoir.



KB Homes proposed developing Runkle Canyon in Simi Valley despite findings of Strontium 90 and other radionuclides. Along with Chemical findings all were explained away even though they were products used in the neighboring facility.


BUFFER
NASA
BUFFER
AREA IV
AREA III
AREA II
AREA I
BUFFER
Dayton Canyon continues to be a pending question…

We have also seen groundwater contaminated with Trichloroethylene (TCE) and Radioactivity at the Rocketdyne Canoga Facility. Monitoring wells have documented releases into the L.A. River.

Currently owned by Pratt & Whitney, a United Technologies Company, formerly Boeing, Rocketdyne, Rockwell International and in the 1950's & 60's it was the Atomics International Nuclear Research Facility.

Many accidents associated with Nuclear work impacted

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV

January 29, 1996

MEMORANDUM TO: Michael F. Weber, Chief
Low-Level Waste and Decommissioning Projects Branch
Division of Waste Management/NMSS

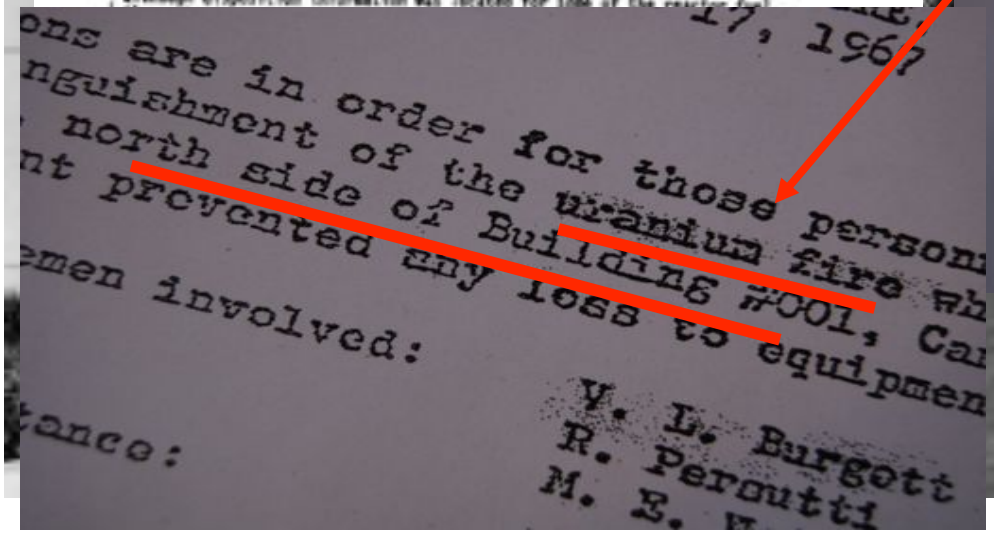
FROM: Ross A. Scarano, Director
Division of Nuclear Materials Safety

SUBJECT: ROCKWELL INTERNATIONAL SITE VISIT

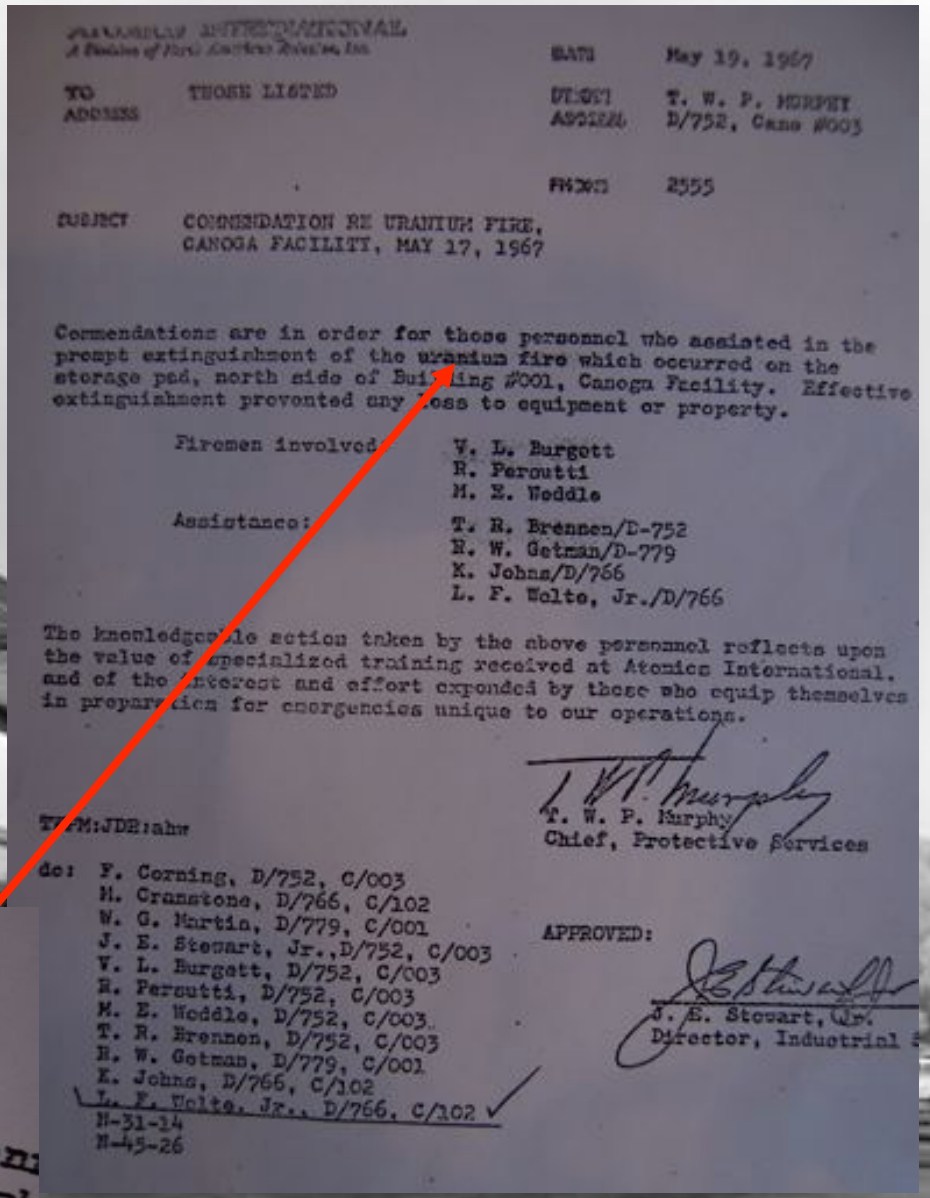
As you are aware, Oak Ridge Associated Universities (ORAU) recently reviewed 59 terminated research and test reactor license docket files. ORAU concluded that 30 files did not contain sufficient decommissioning and disposition information. One of the 30 files was Docket 50-50, License R-19.

License R-19 was issued to Atomics International, a Division of North American Aviation, for the L-47 reactor. This reactor operated between 1957-1958 at a Atomics International facility located in Canoga Park, California. The facility is now controlled by Rockwell International.

In an attempt to gather more information about the reactor, a member of our staff, Mr. Robert Evans, visited Rockwell International on November 15-16, 1995. In summary, the where-abouts of the reactor were not identified although disposition information was located for some of the reactor fuel



ons are in order for those person
nguishment of the uranium fire wh
north side of Building #001, Ca
nt prevented any loss to equipmen
emen involved:
tance:
V. L. Burgott
R. Perrutti
M. E.



DATE May 19, 1967

TO THOSE LISTED

SUBJECT COMMENDATION RE URANIUM FIRE, CANOGA FACILITY, MAY 17, 1967

Commendations are in order for those personnel who assisted in the prompt extinguishment of the uranium fire which occurred on the storage pad, north side of Building #001, Canoga Facility. Effective extinguishment prevented any loss to equipment or property.

Firemen involved:
V. L. Burgott
R. Perrutti
M. E. Weddle

Assistance:
T. R. Brennen/D-752
N. W. Getman/D-779
K. Johns/D/766
L. F. Wolte, Jr./D/766

The knowledgeable action taken by the above personnel reflects upon the value of specialized training received at Atomics International, and of the interest and effort expended by those who equip themselves in preparation for emergencies unique to our operations.

T. W. P. Murphy
Chief, Protective Services

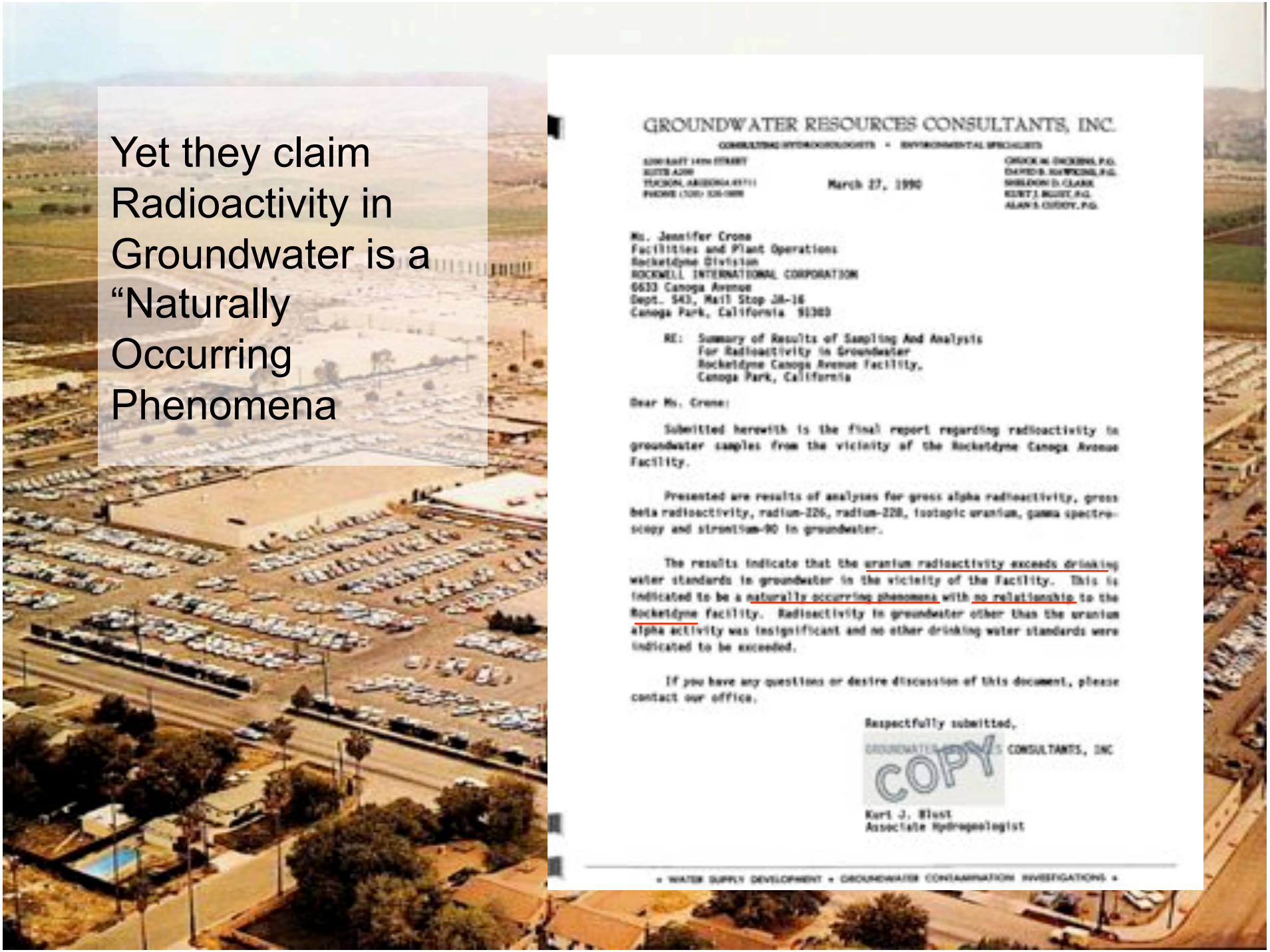
TWPM:JDR:ahw

cc: F. Corning, D/752, C/003
M. Cranstone, D/766, C/102
W. G. Martin, D/779, C/001
J. E. Stewart, Jr., D/752, C/003
V. L. Burgett, D/752, C/003
R. Perrutti, D/752, C/003
M. E. Weddle, D/752, C/003
T. R. Brennen, D/752, C/003
N. W. Getman, D/779, C/001
K. Johns, D/766, C/102
L. F. Wolte, Jr., D/766, C/102 ✓
N-31-14
N-45-26

APPROVED:

J. E. Stewart, Jr.
Director, Industrial

Yet they claim Radioactivity in Groundwater is a “Naturally Occurring Phenomena



GROUNDWATER RESOURCES CONSULTANTS, INC.

CONSULTING HYDROGEOLOGISTS • ENVIRONMENTAL SPECIALISTS

[redacted]

March 27, 1990

[redacted]

Ms. Jennifer Crone
Facilities and Plant Operations
Rocketdyne Division
ROCKWELL INTERNATIONAL CORPORATION
6633 Canoga Avenue
Dept. 543, Mail Stop JB-16
Canoga Park, California 91303

RE: Summary of Results of Sampling And Analysis
For Radioactivity in Groundwater
Rocketdyne Canoga Avenue Facility,
Canoga Park, California

Dear Ms. Crone:

Submitted herewith is the final report regarding radioactivity in groundwater samples from the vicinity of the Rocketdyne Canoga Avenue Facility.

Presented are results of analyses for gross alpha radioactivity, gross beta radioactivity, radium-226, radium-228, isotopic uranium, gamma spectroscopy and strontium-90 in groundwater.

The results indicate that the uranium radioactivity exceeds drinking water standards in groundwater in the vicinity of the Facility. This is indicated to be a naturally occurring phenomena with no relationship to the Rocketdyne facility. Radioactivity in groundwater other than the uranium alpha activity was insignificant and no other drinking water standards were indicated to be exceeded.

If you have any questions or desire discussion of this document, please contact our office.

Respectfully submitted,

GROUNDWATER RESOURCES CONSULTANTS, INC

COPY

Kurt J. Blust
Associate Hydrogeologist

• WATER SUPPLY DEVELOPMENT • GROUNDWATER CONTAMINATION INVESTIGATIONS •

Today the Facility is Operational with unknown Hazards to the L.A. River watershed.

Why is this important?

These facilities all worked together in the past, processing fuel, loading fuel, researching radioactive fuel alternatives and testing those alternatives.

Northern Drainage

Bigger than Bill continues

11,000 cubic yards?
And how many igniters?


AEROSPACE CANCER MUSEUM OF EDUCATION
Things didn’t always go
as expected.


AEROSPACE CANCER MUSEUM OF EDUCATION
These were extremely hazardous materials and ultra-hazardous activities.

This is a new science:

Indoor Vapor Intrusion is essentially brand new: 2002.

The science of remediation and environmental recovery is now.

That is what we need to be thinking about.

How do we fix it?
How do we do things better? Safer?

Nicole Moutoux US EPA

Background Study

The purpose of “Background” is to determine what level of clean-up is necessary, considering global impacts that have also occurred.

The recently passed Senate Bill 990 states, The Boeing Company will donate it's Santa Susana Field Lab land after clean up.


AEROSPACE CANCER MUSEUM OF EDUCATION
As a community, it is important that we understand the steps needed to achieve our goals of clean-up at the Santa Susana Field Lab.

Craig Cooper, US EPA

Soil Characterization of Area IV Historical Site Assessment

Coming Events:

Bring a friend
Tell a friend
Discuss the importance of these decisions to our futures, with the people in and around your life.

This is for all of us.


AEROSPACE CANCER MUSEUM OF EDUCATION
What's on the table right now?

Source Removal:

What does it mean?
How can it be done right?
What should we be worrying about?


AEROSPACE CANCER MUSEUM OF EDUCATION
Consent Order
Negotiations continue…
NASA transfer to GSA
Issues to congress


AEROSPACE CANCER MUSEUM OF EDUCATION
“On May 14, GSA met with you to discuss NASA's notice of intent to deliver to GSA NASA's determination that the Federal property at the Santa Susana Field Laboratory facility was excess to its needs. GSA provided you a briefing memorandum to facilitate that discussion. When I met with local interest groups in the weeks that followed, Ms. Christina Walsh, with the Aerospace Cancer Museum of Education, pointed out that she thought GSA's statement in the briefing paper -- that California's law, SB 990, may require cleanup beyond background for some constituents -- was in error. I told her that I would discuss this with the California Department of Toxic Substances Control (DTSC) and correct or clarify the statement if it were in error. After discussing the issue with Norm Riley, the DTSC Project Manager, I have determined that a clarification is in order:…”


ACME
AEROSPACE CANCER MUSEUM OF EDUCATION
Northern Drainage
Clean-up continues…
What about the rainy
season?

Remedial Actions:

What is needed?
How much soil?
Where does it go?
How do we accomplish this safely?

RCRA or now CERCLA
Group after Group

Right now:
1a (Area 1)
3 (Area II, Alfa/Bravo)
10 (Southern Bufferzone)
4 SAP (Area II Coca/Delta)

2017?

Can we get there?

What about the groundwater?

How can this be accomplished?

- What can YOU do?
  - –You can use your voice and weigh in.
  - –You can help us use ours
  - –Call, Write or E-mail your elected officials.
  - –Visit ACME

- What can YOU do?
  - –If you would like to write a letter to voice your concern, let us help you.
  - –Let us help you with the reports.

- Get Involved in the discussion:

Christina Walsh and William Preston Bowling

Aerospace Cancer Museum of Education

TheRocketdyneInformationSociety@yahoogroups.com