

PSR-LA Decommissioning Litigation at the Santa Susana Field Laboratory

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Preamble


- 2022 annual meeting in Spokane, Washington
 - Legislation, litigation, and regulatory abuse initiated by activists, politics and LNT-based radiation paranoia in the nuclear decommissioning program at the Santa Susana Field Laboratory
- 2023 annual meeting in National Harbor, Maryland
 - Shipment of demolition debris from DOE-owned buildings, including decommissioned facilities and non-radiological facilities to an LLRW disposal facility
- 2025 annual meeting in Madison, Wisconsin
 - 10-year litigation by the Physicians for Social Responsibility (PSR-LA) that has delayed demolition of five Boeing-owned decommissioned facilities

Online Source Material

Nuclear Decommissioning at the
Santa Susana Field Laboratory:
20+ Years of Politics vs. Science

[https://philrutherford.com/SSFL/
Nuclear Decommissioning at SS
FL.pdf](https://philrutherford.com/SSFL/Nuclear%20Decommissioning%20at%20SSFL.pdf)

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**Nuclear Decommissioning at the
Santa Susana Field Laboratory:
20+ Years of Politics vs. Science**

Phil Rutherford

**June 9, 2022
Revised July 21, 2024**

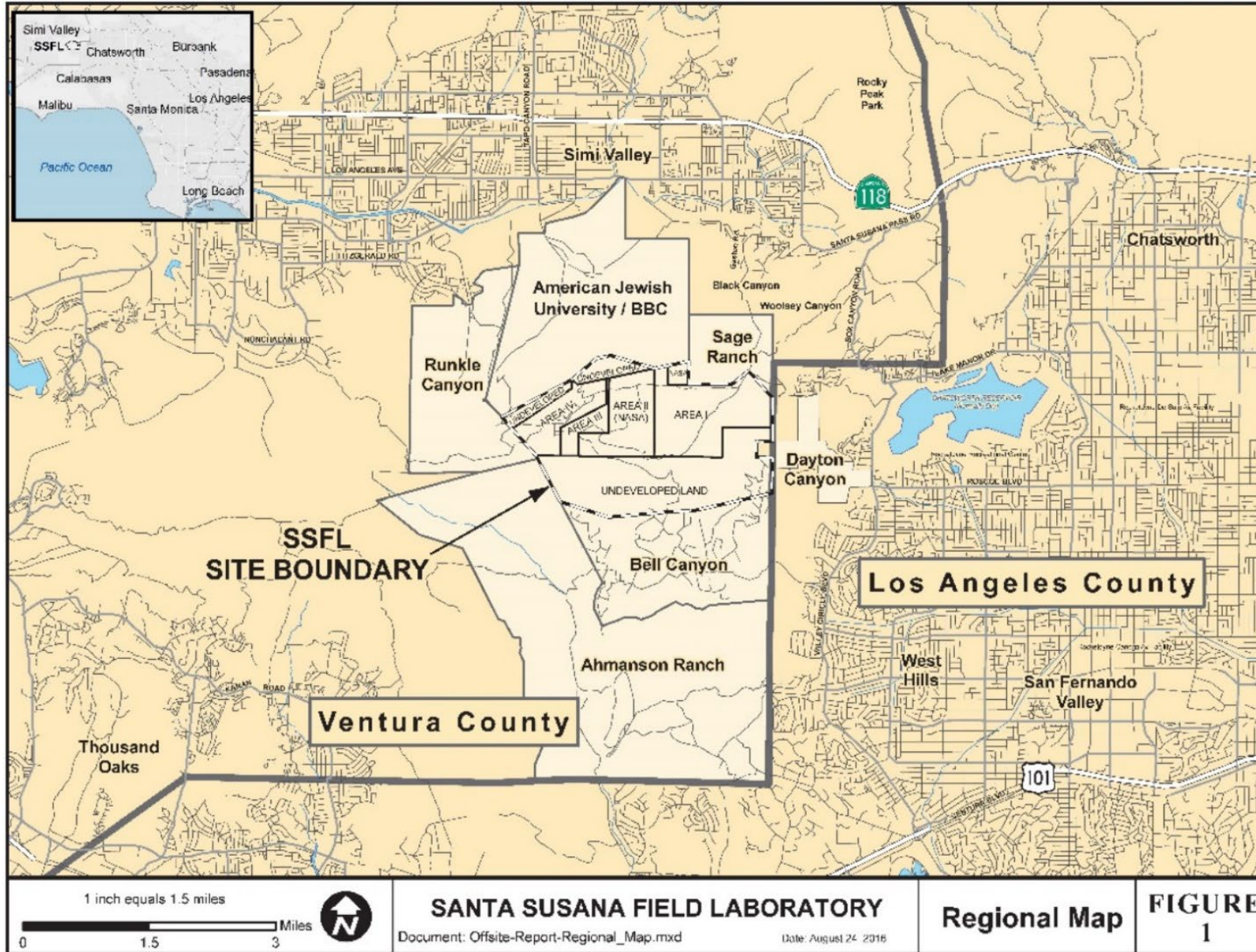
Nuclear Decommissioning at SSFL Page 1 of 130 July 21, 2024

SSFL Area IV History & Operations

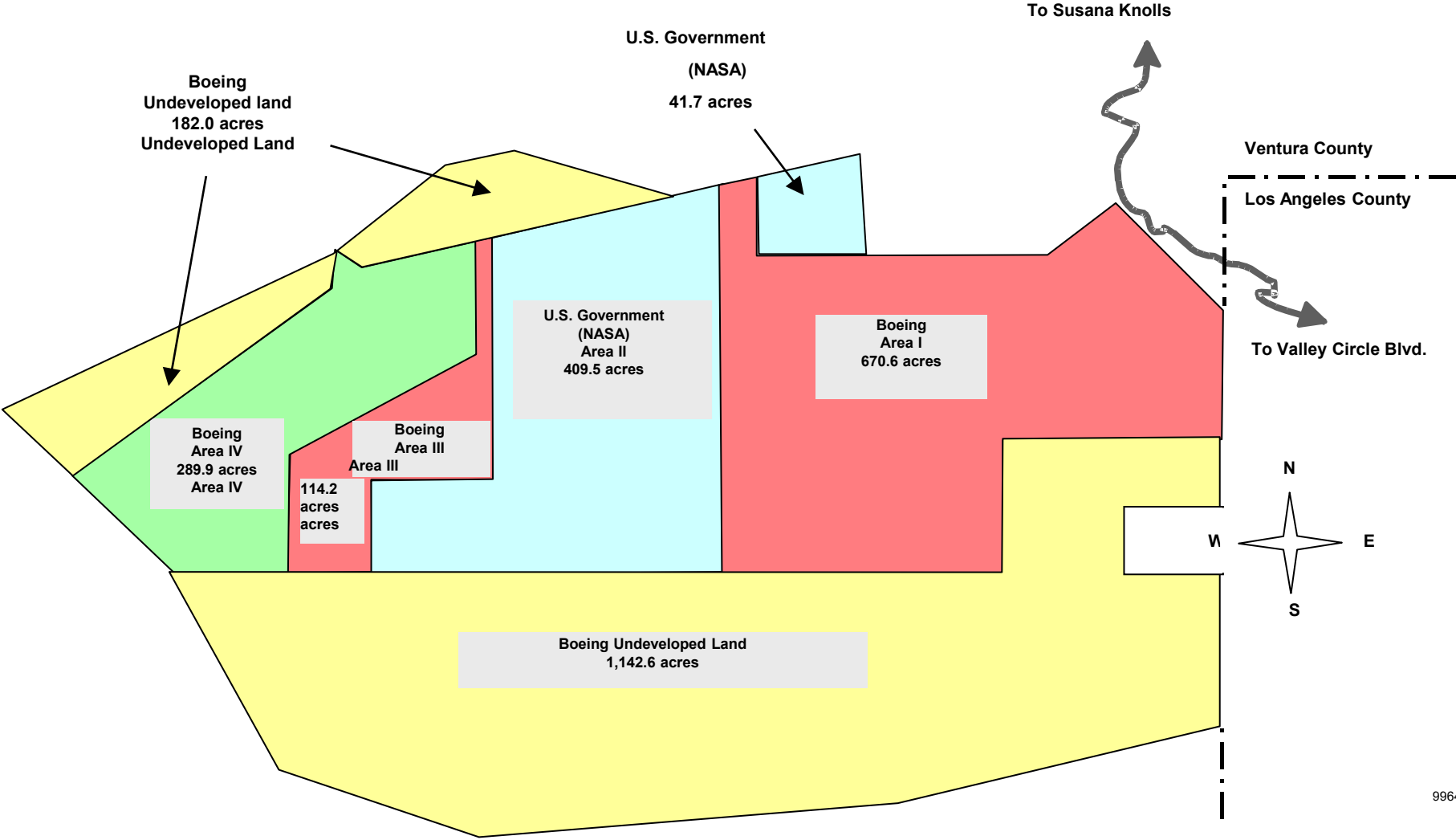
Santa Susana Field Laboratory

- Santa Susana Field Laboratory (SSFL), Area IV, aka Energy Technology Engineering Center (ETEC)
 - Ventura County, California
 - Operated for 60 years by North American Aviation (NAA), Rockwell International (RI) and The Boeing Company for the Atomic Energy Commission (AEC) and Department of Energy (DOE)
 - Currently operated by North Wind Portage since October 2014
- Agencies
 - Nuclear Regulatory Commission
 - California Department of Public Health - Radiologic Health Branch (CDPH/RHB)
 - California Department of Toxic Substances Control (DTSC)
 - US Environmental Protection Agency (EPA)
- Other Players
 - California & US legislators, activist organizations, traditional media, social media, community members

Location of SSFL and Surrounding Communities



Administrative Areas of SSFL



9964-1

Area IV Status in 2025

- 27 nuclear/radiological facilities including sodium-cooled research reactors, SNAP space reactors, fuel fabrication, fuel & waste storage, laboratories, support operations plus soil and groundwater contamination
- Land owned by Boeing
- DOE-owned facilities self-regulated
- Boeing-owned facilities licensed by NRC and/or CDPH/RHB
- Surveyed variously by Rockwell, Boeing, DOE (ORISE), NRC (ANL), CDPH/RHB and USEPA
- 25 released for unrestricted use, and removed from licenses if applicable
- 23 demolished
- 4 remain

Santa Susana Field Laboratory (2005)



SSFL Area IV Buildings (1985)

4093

4005

4011

4055

4100

4009

2010-2013 Demolition of Boeing-Owned Buildings

Demolition of Boeing-Owned Non-Radiological Buildings (2010-2013)

- 40 Boeing-owned, non-radiological buildings were demolished in Areas I, III and IV
 - DTSC required pre-demo radiation surveys
 - Survey reports reviewed/approved by DTSC, CDPH/RHB, and in some cases USEPA, prior to demo and disposal
 - 6 non-radiological buildings in Area IV also required post-demo surveys of undersides of concrete slabs, dug-up asphalt roadbed and previously inaccessible structural surfaces
 - Completed successfully

Planned Demolition of Boeing-Owned, Former, Decommissioned, Nuclear/Radiological Buildings (2013)

- Building 4005 Uranium Carbide Manufacturing Facility (concrete foundation slab)
- Building 4009, Organic Moderated Reactor / Sodium Graphite Reactor Facility
- Building 4011, Radiation Instrument Calibration Facility
- Building 4055, Nuclear Materials Development Facility (Plutonium Fuel Fabrication)
- Building 4093, L-85 Reactor Facility (concrete foundation slab plus one wall)
- Building 4100, Fast Critical Experiment Laboratory / Advanced Epithermal Thorium Test Facility

Documents Submitted to DTSC, CDPH and USEPA for Approval to Demolish and Dispose

- All decommissioning reports
- All final status survey reports
- All verification/confirmatory survey reports
- Clearance/release criteria used in surveys
- All letters of release by appropriate agencies
- All relevant license amendments removing buildings from licenses
- Proximate soil sample data from the 2012 EPA Radiological Survey of Area IV demonstrating that surrounding soil either meets background or is an incremental risk of $< 10^{-6}$

Surveys and Release for Unrestricted Use (1980-2013)

Building	Surveys					EPA Doc Review	Agency Release
	Rockwell / Boeing	ORISE/ORAU	DPH-RHB	NRC	EPA		
4005	x	x	x				DPH-RHB (1995)
4009	x		x			x	DPH-RHB (1999)
4011	x		x		x	x	DPH-RHB (1998)
4055	x	x			x	x	NRC (1987)
4093	x	x			x	x	NRC (1987)
4100	x		x	x	x	x	NRC / DPH-RHB (1980/2013)

USEPA Confirmatory Surveys (2000-2003)

- Between 2000 and 2003, following demands from the public, Region IX of the USEPA conducted additional confirmation surveys and reviews of prior survey documentation for six DOE-owned facilities and five Boeing-owned facilities (those facilities that are the subject of the PSR-LA lawsuit).
- EPA's conclusions were ...
 - *“Previous surveys sampled in appropriate and representative locations.”*
 - *“Measurements made in previous surveys were accurate.”*
 - *“EPA concurs with the conclusions made by the DOE and Boeing about the locations and levels of residual radioactivity.”*
 - *“Residual radioactivity does not exceed DOE and NRC established limits for unrestricted use.”*

CDPH-RHB and USEPA's Reviews of Prior Final Status Surveys and Verification Surveys (2013)

- CDPH and USEPA reviews (at DTSC's request) of prior radiation surveys conducted on the six subject buildings concluded
 - No further radiological surveys are warranted
 - Removal from CDPH and USNRC licenses was appropriate
 - All debris from the L-85 reactor site is suitable for unrestricted release and disposal to a California Class 1 hazardous waste facility

PSR-LA Litigation (2013-2023)

PSR-LA Litigation - Case 34-2013-80001589

- On August 5, 2013, before operations could be initiated on the remaining five facilities, the Physicians for Social Responsibility - Los Angeles (PSR-LA), the Southern California Federation of Scientists (SCFS), the Committee to Bridge the Gap (CBG), and Consumer Watchdog sued DTSC and CDPH as Respondents, and Boeing as Real Party of Interest.
- Petitioners' allegations were ...
 1. The demolition program was a "project" as defined by CEQA, and as such, required DTSC to perform an EIR before "approving" the demolition.
 2. Criteria that DTSC and CDPH used to confirm that former radiological facilities had been appropriately decommissioned and released for unrestricted use, were "underground regulations" that had not gone through the public notice and hearing process required by the California Administrative Procedures Act (APA).
 3. The demolition debris from the subject buildings was LLRW and would be a hazard to the public and environment if not disposed of to a licensed LLRW disposal facility.

Declarations of DTSC Project Management for Boeing's Building Demo Program (2013)

- DTSC understands that Boeing-owned former radiological buildings in Area IV have been released for unrestricted use
- Boeing does not need DTSC's approval to demolish its non-regulated buildings in Area IV
- DTSC does not regulate radioactive wastes
- Decommissioned material from released radiological buildings is not regulated as LLRW
- DTSC coordinated with CDPH and USEPA to review all radiological survey data for both non-radiological and former radiological Boeing-owned buildings in Area IV

Declaration of Ed Bailey, Former Chief of Radiologic Health Branch (2013)

- Ed Bailey was the Chief of the CDPH Radiologic Health Branch from 1989 to 2006
- Mr. Bailey's conclusions
 - Regulatory Guide 1.86 and corresponding California guidance were appropriately used in the release of buildings at SSFL
 - Boeing, NRC and RHB correctly concluded that materials from SSFL, Area IV buildings can be disposed of with no further radiological controls
 - Standards, policies and procedures used at SSFL are protective of public health and safety and the environment

Declaration of Malcolm Knapp, Nuclear Regulatory Commission (2013)

- Malcolm Knapp was in NRC leadership from 1979 to 1999, including Director of Low-Level Waste Management and Decommissioning
- Mr. Knapp concluded,
 - NRC considers is that Regulatory Guide 1.86 to be an acceptable way for licensees to demonstrate decommissioning requirements of 10 CFR 50 and 20
 - Boeing's survey procedures are consistent with NRC's requirements concerning surface contamination
 - All final and verification surveys demonstrate that facilities were released in accordance with standards acceptable to the NRC
 - NRC considers that facilities "released for unrestricted use" do not contain LLRW

Declaration by Gonzalo Perez, Chief of CDPH-RHB (2013)

- *“Determinations that premises are suitable for “release for unrestricted use” are made on a case-by-case basis and are not governed by any set policy or required standard.”*
- *“Since 2002, DPH's Health Physicists and their supervisors have had complete discretion to exercise their professional judgment as to which standards and/or criteria to apply in making the determinations required by Section 30256.”*
- *"DPH's Health Physicists are never, under any circumstances, required to apply or follow, for example, IPM-88-2, DECON-1, Regulatory Guide 1.86, or U.S. Department of Energy Order 5400.5, nor are they required to apply or follow any other particular standard, criteria, or formula.”*
- *“DPH's Health Physicists are, likewise, not forbidden from applying whatever standards or criteria that they, in their professional judgment, conclude will assist them in making the determinations required by Section 30256.”*
- *“Similarly, DPH's Health Physicists have complete discretion to exercise their professional judgment as to which standards and/or criteria to apply in any other circumstance where they are called upon to evaluate the existence of radioactive contamination, or whether radioactive contamination constitutes a hazard to the public health.”*

Reason for CDPH-RHB Declaration

- In March 2002, CBG, SCFS, and PSR-LA filed a lawsuit objecting to CDHS/RHB's adoption of USNRC's 10 CFR 20.1402, Subpart E, 25 mrem/y License Termination Rule.
- On June 19, 2002, Judge Gail Ohanesian ruled for the plaintiffs and ordered CDHS to conduct a California Environmental Quality Act (CEQA) Environmental Impact Report (EIR) to assess alternate options and select safe dose-based standards for decommissioning.
- In response, RHB ...
 - Failed to comply with the Judge's Order 23 years later.
 - Rescinded all its internal numerical decommissioning guidance documents, including DECON-1, IPM-88-2, and RML-00-02, based on R.G. 1.86.
 - Failed to notify its licensees of its action.
- Nevertheless, RHB health physicists continued to do what they had always done and used the DECON-1 / IPM-88-2 / R.G. 1.86 surface contamination standards for radiological surveys.
 - In 2013, RHB performed a verification survey for building 4100, based on meeting R.G. 1.86 standards and released it for unrestricted use.

Selected HP Allegations and Rebuttals of PSR-LA Lawsuit

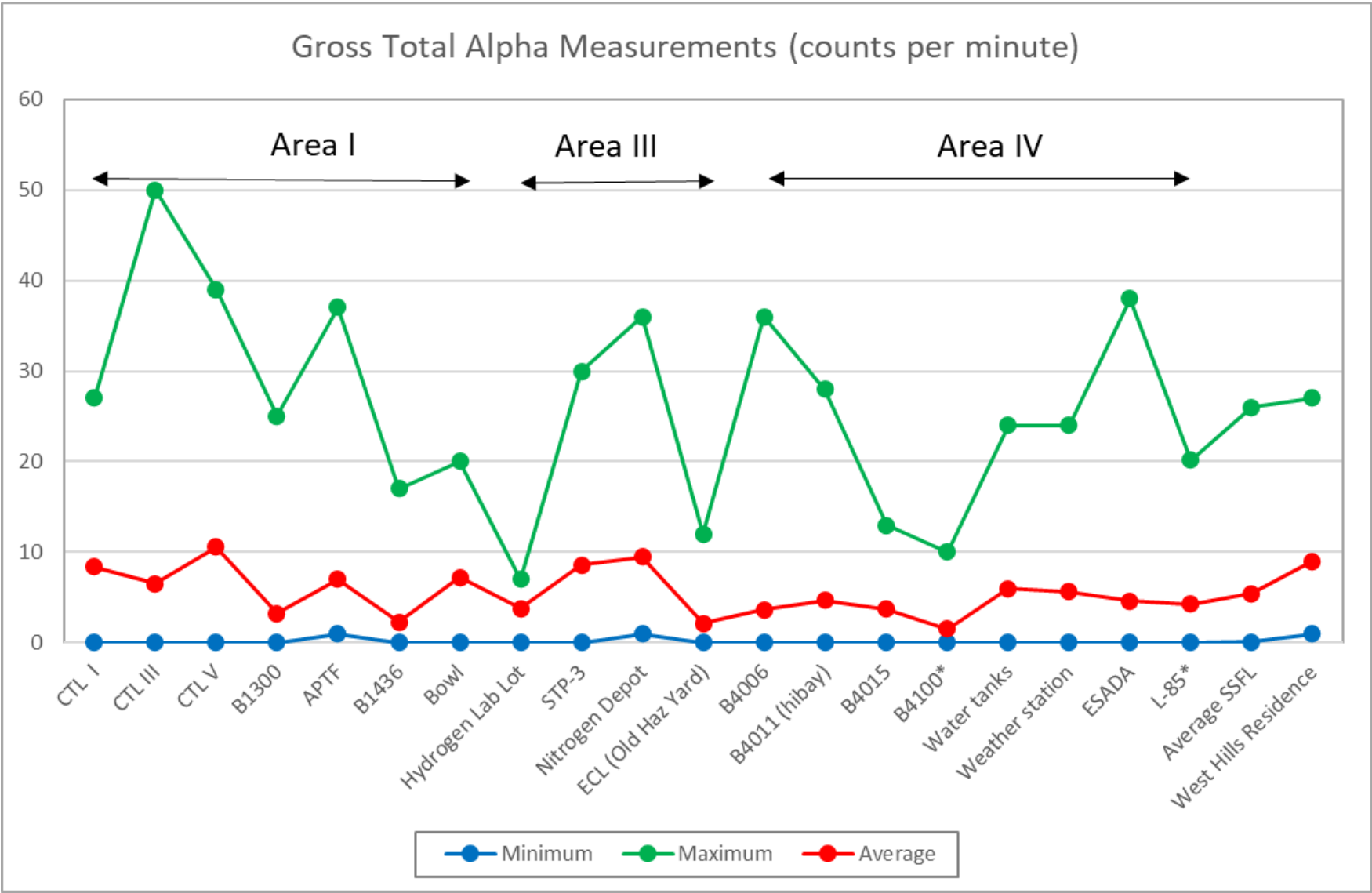
“Underground Regulations” for Surface Contamination Limits

- Allegation:
 - NRC Regulation Guide 1.86, DOE Order 5400.5, DOE Order 458.1, CDPH/RHB DECON-1, Boeing Procedure N001SRR140131
 - Are “underground regulations”
 - Require formal California approval via the APA
 - Allows leaving non-zero residual contamination
- Response:
 - Established national standards
 - Approved by DOE and CDPH-RHB
 - Condition 13(o) of Boeing’s Radioactive Material License 0015-19, Amendment 111
 - Supported by current standards, e.g. DOE-STD-1241-2023, ANSI/HPS N13.12-2013, NUREG-1757, FC 83-23, NUREG-1556 (v11), etc.
 - Used by CDPH-RHB in its last survey and release of Building 4100 in 2013

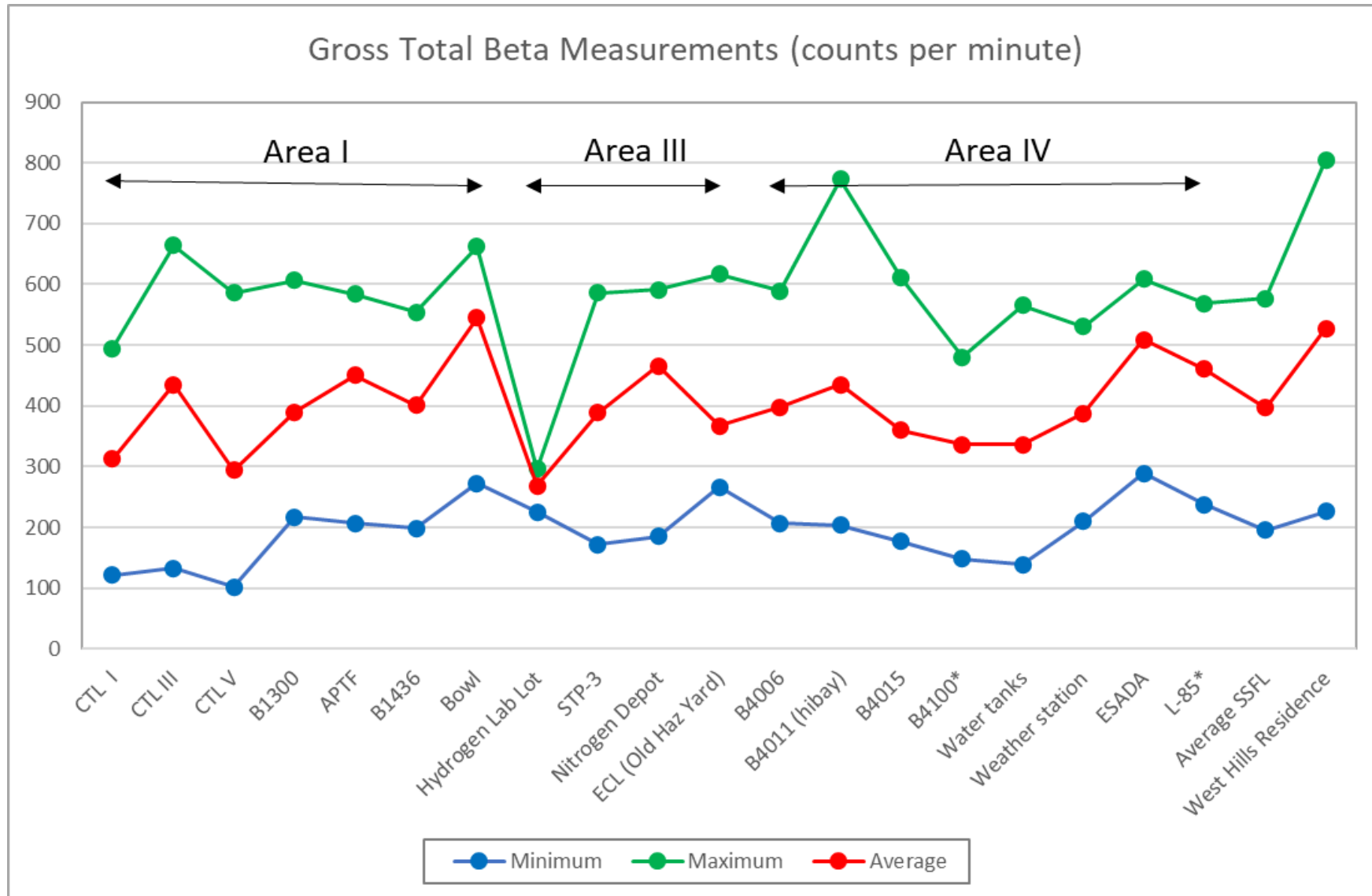
Surface Contamination Background Measurements

- Allegation:
 - Boeing used high backgrounds to “hide” contamination
- Response:
 - Aimed primarily at surveys of non-radiological facilities
 - Boeing used daily backgrounds for concrete, asphalt and construction material in Area I, 2 miles from Area IV
 - MARSSIM recommends high backgrounds to accommodate expected high variability of sampled material (Section 6.7)
 - Comparison of gross, non-background-subtracted, data shows that my home has higher average surface activity than the average SSFL facility

Gross Alpha Data for Area I, III, IV and My Home



Gross Beta Data for Area I, III, IV and My Home



California Superior Court Finds For Defendants

November 19, 2018

- Plaintiffs' claims against DTSC and CDPH for violating CEQA and APA and using "underground regulations" were denied
- Plaintiffs subsequently appealed

California Court of Appeal Finds For Defendants

May 2, 2023

- Plaintiffs' claims against DTSC and CDPH for violating CEQA and APA and using "underground regulations" were denied
- The lower court's judgement is affirmed
- Subsequently, the California Supreme Court declines to hear the case

Summary

- Petitioners had alleged that Boeing's plans to demolish and dispose of decommissioned building debris to a Class I hazardous waste disposal site in compliance with E.O. D-62-02 (2002) would violate CEQA and APA and would be sending LLRW to a facility not licensed to accept LLRW.
- The California Superior Court and California Court of Appeals denied the petition and found in favor of the Defendants
- The Courts agreed with defendants that Boeing buildings that had been decommissioned, released for unrestrictive use, and removed from an NRC and/or State license, were no longer "*regulated radioactive material*" and cannot be arbitrarily alleged to be "*low-level radioactive waste*" and by implication need not be sent to an out-of-state LLRW disposal site.
- This would appear to be an obvious fact to anyone working in decommissioning but took the California Courts 10 years to figure out.
- It is ironic that DTSC, one of the defendants in this lawsuit, violated the court's decision in the 2020 AOC by forcing DOE to send decommissioned material to *EnergySolutions* as LLRW.
- Lesson Learned – Demolish and dispose of building debris immediately following building release.

Additional Information

- Author's technical documentation of the health physics issues of the PSR-LA litigation
- Nuclear Decommissioning at the SSFL, Sections 18.0 and 19.0
https://philrutherford.com/SSFL/Nuclear_Decommissioning_at_SSFL.pdf#page=57
https://philrutherford.com/SSFL/Nuclear_Decommissioning_at_SSFL.pdf#page=61
- Response to PSR-LA Petition & Complaint
https://philrutherford.com/SSFL/boeing_building_demolition/Response_to_PSR-LA_Petition.pdf
- Response to PSR-LA Appeal
https://philrutherford.com/SSFL/boeing_building_demolition/Response_to_PSR-LA_Appeal.pdf
- Annotated Comments on Appellants' Opening Brief
https://philrutherford.com/SSFL/boeing_building_demolition/69832_Appellants_Opening_Brief_Final_PDR_Comments.pdf
- Response to the PSR-LA Petition to the California Supreme Court
https://philrutherford.com/SSFL/boeing_building_demolition/Response_to_PSR-LA_Petition_to_CA_Supreme_Court.pdf
- Annotated Comments on PSR-LA Petition for Review
https://philrutherford.com/SSFL/boeing_building_demolition/70032_2023-06-12_Petition_for_Review-Final_PDR_Comments.pdf
- Response to Petitioners' Claim of Victory in PSR-LA Litigation
https://philrutherford.com/SSFL/boeing_building_demolition/Response_to_Petitioners'_Claim_of_Victory.pdf
- Questions, comments, provision of PowerPoint slides
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