



Area IV, SSFL, Building Demolition and Disposal of Decommissioned Material

The Parents Against Santa Susana Field Laboratory (PASSFL) latest disinformation campaign¹ against SSFL centers around Boeing's plans to demolish four remaining former nuclear/radiological facilities that have been decommissioned (Buildings 4009, 4011, 4055, and 4100).

The title, "Just Because It's Legal Doesn't Mean It's Safe" acknowledges that the planned demolition is legal. It is legal because (1) regulatory guidelines have been followed in the decommissioning and release of these facilities, (2) numerous regulatory agencies have had oversight and have validated the decommissioning, (3) California Courts have denied PSR-LA's Petition & Complaint, and (4) disposal of decommissioned material complies with California Executive Order D-62-02 (2002). Yes ... it's safe!!!

Regulatory Review and Oversight

PASSFL alleges that there has been no regulatory oversight of the radiological status of the facilities or of the original planned demolition in 2013 or today in 2026. That is incorrect. PASSFL conveniently overlooks the following.

- Following decommissioning, the subject buildings were surveyed and released for unrestricted use by the appropriate regulatory agency that licensed the facility.^{2,3}
 - 4009 (1999, CDPH)
 - 4011 (1998, CDPH)
 - 4055 (1987, NRC)
 - 4100 (1980, NRC and 2013, CDPH)
- Between 2000 and 2003, at the public's request, Region IX of the U.S. Environmental Protection Agency (USEPA) conducted additional surveys and reviewed previous decontamination & decommissioning (D&D) documentation of numerous former

¹ Parents Against Santa Susana Field Laboratory (PASSFL). "Just Because It's Legal Doesn't Mean It's Safe." Accessed November 1, 2026. <https://parentsagainstssfl.com/radioactive>

² Rutherford. "Boeing Building Demolition," Table 1, page 18 of "Nuclear Decommissioning at SSFL." August 11, 2025. https://philrutherford.com/SSFL/Nuclear_Decommissioning_at_SSFL.pdf#page=18

³ CDPH is the California Department of Public Health, Radiologic Health Branch. NRC is the U.S. Nuclear Regulatory Commission.



nuclear facilities in Area IV, including the subject buildings, 4009, 4011, 4055, and 4100.^{4,5} USEPA was not able to survey 4009 at that time as it was being used for classified, non-nuclear work at the time, but was able to review all previous D&D documentation. USEPA's conclusions were.

- The previous surveys sampled in appropriate and representative locations.
 - The measurements made in previous surveys were accurate.
 - EPA concurred with the conclusions made by the Department of Energy (DOE) and Boeing Rocketdyne about the locations and levels of residual radioactivity.
 - The residual radioactivity in the buildings does not exceed DOE and Nuclear Regulatory Commission (NRC) established limits for unrestricted release.
- During the original 2012-2013 demolition planning for the subject buildings, the Department of Toxic Substances Control (DTSC), CDPH and the USEPA, were provided with all previous decommissioning and survey documentation.⁶ Following reviews by CDPH and USEPA, the conclusions were that “no further radiological surveys are warranted.”⁷ DTSC, CDPH and USEPA were in universal agreement that the subject buildings had been appropriately decommissioned, surveyed, released for unrestricted use, removed from licensure, and that demolition debris from the subject buildings was decommissioned material that could be disposed of to a Class I hazardous waste landfill in California.⁸

⁴ USEPA. “EPA’s Independent Assessment of Building Decontamination & Decommissioning (D&D) Program at the Boeing Rocketdyne Propulsion and Power Division, Santa Susana Field Laboratory.” January 9, 2003. https://www.energy.gov/sites/default/files/2022-12/EPA_Building_Survey_Letter.pdf

⁵ Rutherford. “Boeing Building Demolition,” Chapter 18.0, page 57-60 of “Nuclear Decommissioning at SSFL.” August 11, 2025. https://philrutherford.com/SSFL/Nuclear_Decommissioning_at_SSFL.pdf#page=57-60

⁶ Rutherford. “Boeing Building Demolition,” Chapter 18.0 of “Nuclear Decommissioning at SSFL.” August 11, 2025. https://philrutherford.com/SSFL/Nuclear_Decommissioning_at_SSFL.pdf#page=57

⁷ Rutherford. “PSR-LA Litigation” Chapter 19.2, Table 4, pages 67-68 of “Nuclear Decommissioning at SSFL.” August 11, 2025. https://philrutherford.com/SSFL/Nuclear_Decommissioning_at_SSFL.pdf#page=67-68

⁸ Rutherford. “PSR-LA Litigation,” Chapter 19.2, “DTSC Response.” pages 64-71 of “Nuclear Decommissioning at SSFL.” August 11, 2025. https://philrutherford.com/SSFL/Nuclear_Decommissioning_at_SSFL.pdf#page=64-71



- PASSFL's own research on DTSC, DOE and other open websites has unearthed a plethora of open-source documents related to Boeing's and multiple agencies' involvement in the decommissioning of the subject buildings. This illustrates that RPs are fully transparent and have nothing to hide. The agencies exercise constant vigilance and oversight.

Allegations of Use of Outdated Release & Clearance Standards

PASSFL repeats the same PSR-LA Petition and Complaint allegations of "underground, outdated cleanup standards" for acceptable surface contamination. These allegations are incorrect. The following are the facts.

Nuclear Regulatory Commission: It is true that the NRC withdrew Regulatory Guide 1.86⁹ in 2016. However, this was not done because the limits of R.G. 1.86 were obsolete or non-protective. It was done because other regulatory guidance required the same limits and therefore R.G. 1.86 was redundant. The NRC still utilizes identical total and removable surface contamination limits in other guidance documents.^{10,11}

For example, the 1987 (Revised 1993) "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material"¹² includes a Table 1, entitled "Acceptable Surface Contamination Levels", identical the limits of 1974 Regulatory Guide 1.86.

More recent post-2016, NUREG-1556, Volume 11, Rev 1¹³, "Consolidated Guidance About Broad Scope Material Licenses" includes Table L-2, "Acceptable Surface Contamination

⁹ AEC. "Regulatory Guide 1.86. Termination of Operating Licenses for Nuclear Reactors." Table 1. "Acceptable Surface Contamination Levels." June 1974. <https://www.nrc.gov/docs/ML0037/ML003740243.pdf>

¹⁰ Rutherford. "Response to PSR-LA Petition & Complaint," Appendix A, "Withdrawal of Regulatory Guide 1.86." Page 54. March 15, 2021. https://philrutherford.com/SSFL/boeing_building_demolition/Response_to_PSR-LA_Petition.pdf#page=54

¹¹ NRC. Federal Register. Vol. 81. No. 156. Pages 53507-53508. "Termination of Operating Licenses for Nuclear Reactors." August 12, 2016. <https://www.govinfo.gov/content/pkg/FR-2016-08-12/html/2016-19195.htm>

¹² NRC, "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material." April 1993 <https://www.nrc.gov/docs/ML1036/ML103620647.pdf>

¹³ NRC. "Consolidated Guidance About Materials Licenses – Program Specific Guidance About Licenses of Broad Scope." February 2017. <https://www.nrc.gov/docs/ML1705/ML17059D332.pdf>



Levels”¹⁴ that are identical to the Regulatory Guide 1.86 limits. According to NUREG-1556, Vol. 11, these Table L-2 limits can be used for releasing equipment and material from licensed facilities prior to license termination, and could logically also be used for releasing building demolition debris after license termination.

Effective August 20 1997, NRC issued its dose-based, 25 mrem/y plus ALARA, “License Termination Rule” in 10 CFR 20.1402, Subpart E. For release of facilities for unrestricted use or termination of license, dose-based surface contamination limits compliant with the 25 mrem/y dose limit can be used. Dose-based limits for beta-emitting fission products are provided in NUREG-1556, Vol. 11, Table L-3, “Screening Values for Building Surface Contamination.”¹⁵ Table L-3 limits have been calculated by NRC using conservative default exposure scenarios assuming continued occupancy of the intact building for conventional non-radiological office/laboratory/factory purposes. Licensees maintaining surface contamination below Table L-3 levels would ensure that the 10 CFR 20.1402, Subpart E, 25 mrem/y dose limit is met without performing a site-specific dose assessment. The same screening levels for beta-emitting fission products may be found in the more recent 2022 NUREG-1757 Vol. 2. Rev. 2.¹⁶

According to NUREG-1556, Vol. 11, these Table L-3 limits can be used for releasing a facility for unrestricted use and license termination. It is of interest that the dose-based screening levels of Table L-3 are, in general, all much higher, and in some cases, orders of magnitude higher than the Regulatory Guide 1.86 limits and the Table L-2 limits. Therefore, meeting RG 1.86 limits would ensure that doses were well below the dose limit of 10 CFR 20.1402.

The dominant soil contaminants found above background by USEPA in its Area IV Radiological Survey were beta-emitting cesium-137 and strontium-90. The table below shows R.G 1.86, and NUREG-1556, Vol. 11, Tables L-2 and L-3 total average surface contamination levels for cesium-137 and strontium-90.

¹⁴ NRC. NUREG-1556, Vol. 11. “Consolidated Guidance About Materials Licenses – Program Specific Guidance About Licenses of Broad Scope.” Table L-2. “Acceptable Surface Contamination Levels,” Page L-3. “February 2017. <https://www.nrc.gov/docs/ML1705/ML17059D332.pdf#page=193>

¹⁵ NRC. NUREG-1556, Vol. 11. “Consolidated Guidance About Materials Licenses – Program Specific Guidance About Licenses of Broad Scope.” Table L-3. “Screening Values for Surface Contamination,” Page L-5. “February 2017. <https://www.nrc.gov/docs/ML1705/ML17059D332.pdf#page=195>

¹⁶ NRC. NUREG-1757. Vol. 2. Rev. 2. “Consolidated Decommissioning Guidance - Characterization, Survey, and Determination of Radiological Criteria.” Table H-1. “Acceptable License Termination Screening Values of Common Radionuclides for Building Surface Contamination.” July 2022. <https://www.nrc.gov/docs/ML2219/ML22194A859.pdf#page=274>



Radionuclide	Symbol	Reg. Guide 1.86 Table 1	NUREG-1556 Table L-2	NUREG-1556 Table L-3
		dpm/100 cm ²	dpm/100 cm ²	dpm/100 cm ²
Strontium-90	Sr-90	1,000	1,000	8,700
Cesium-137	Cs-137	5,000	5,000	28,000

It should be stressed that gross beta measurements of surface activity are not necessarily detecting cesium-137 and strontium-90 contaminants but are most likely detecting any or all of the 21 beta-emitting progeny (decay products) of naturally occurring uranium and thorium, and of potassium-40. Dose-based, isotope-specific limits for cesium-137 are more than 5 times higher than Regulatory Guide 1.86 limits. Dose-based, isotope-specific limits for strontium-90 are almost 9 times higher than Regulatory Guide 1.86 limits.

Table L-3 of NUREG-1556 Vol. 11 and Table H-1 of NUREG-1757 Vol. 2 are limited to beta-emitting fission products only. No screening levels for alpha-emitting radionuclides including plutonium-239 are provided. Comparison of alpha-emitting, transuranic, plutonium-239, may be made using data from ANSI/HPS N13.12-2013, "Surface and Volume Radioactivity Standards for Clearance."¹⁷ See table below.

Radionuclide	Symbol	Reg. Guide 1.86 Table 1	ANSI/HPS N13.12-2013 Table 1
		dpm/100 cm ²	dpm/100 cm ²
Plutonium-239	Pu-239	100	600

It should be stressed that gross alpha measurements of surface activity are not necessarily detecting plutonium-239 but are most likely detecting any or all of the 28 alpha-emitting progeny (decay products) of naturally occurring uranium and thorium. Dose-based, isotope-specific limits for plutonium-239 are 6 times higher than Regulatory Guide 1.86 limits.

Department of Energy (DOE): The DOE still uses identical total and removable surface contamination limits as R.G. 1.86 and the former DOE Order 5400.5. DOE Order 458.1¹⁸

¹⁷ American National Standards Institute (ANSI). "Surface and Volume Radioactivity Standards for Clearance." ANSI/HPS N13.12-2013. May 6, 2013. As standard ANSI policy, this standard was withdrawn in October 2023, since it had not been updated/revised within 10 years of publication. Withdrawal of the standard does not invalidate the data in the standard. This standard is still cited in DOE-STD-1241-2023, for volumetric screening levels for clearance, issued in March 2023.

¹⁸ DOE Order 458.1. "Radiation Protection of the Public and Environment." Change 5. January 30, 2025.
<https://www.energy.gov/documents/radiation-protection-public-and-environment>



succeeded DOE Order 5400.5. DOE Order 458.1 Section 4.k and CRD Section 2.k., “Release and Clearance of Property” permits real or personal property to be released if pre-approved DOE Authorized Limits¹⁹ are met.

In 2023, DOE issued a new standard, “Implementing Release and Clearance of Property Requirements (DOE-STD-1241-2023).”^{20,21} This standard is designed to provide guidance in meeting release and clearance of property requirements provided in DOE Order 458.1 The standard uses identical total and removable surface contamination limits used in the surveying of the subject buildings.

CDPH Radiological Health Branch (RHB): In 2002, the Department of Public Health rescinded all its numerical decommissioning standards, following its loss to CBG in Case 01CS01445. However, as of 2012, ten years later, RHB health physicists continued to use R.G. 1.86 surface contamination levels, when conducting their verification surveys of licensees’ facilities.²²

California Court Decisions

PASSFL is well aware of the 10-year PSR-LA Petition & Complaint²³ which in 2013 litigated exactly the same issues that it is parroting. In 2018, the California Superior Court found in favor of the Defendants in 2018. In 2023, the California Appeals Court upheld the decision

¹⁹ DOE Memo from Sally Robison to Roger Liddle. “Sitewide Limits for Release of Facilities Without Radiological Restriction.” September 17, 1996. Appendix B. “Agency Approvals” of N001SRR140131. “Approved Sitewide Release Criteria for Remediation of Radiological Facilities at the SSFL.” December 18, 1999. https://www.energy.gov/sites/default/files/2023-08/Doc_No_26_Approved_Release_Criteria_for_Remediation_of_SSFL_RAD_Facilities%20.pdf#page=28

²⁰ Rutherford. “Response to PSR-LA Petition & Complaint,” Appendix E, “Implementing Release and Clearance of Property Requirements (DOE-STD-1241-2023).” Page 73. May 20, 2023. https://philrutherford.com/SSFL/boeing_building_demolition/Response_to_PSR-LA_Petition.pdf#page=73

²¹ DOE, “Implementing Release and Clearance of Property Requirements (DOE-STD-1241-2023).” Table 1, page 23. March 2023. <https://www.energy.gov/sites/default/files/2026-04/DOE-STD-1241-2023.pdf#page=36>

²² CDPH/RHB. “Confirmatory Survey. Area IV. Building 4100.” Appendix A, Table 9, PDF page 320. June 27, 2013. https://www.dtsc-ssfl.com/files/lib_rcra_soils/BuildingDemo/buildingdemolition/DTSC_demo_workplan_B4100.pdf#page=320

²³ Rutherford. “PSR-LA Petition & Complaint.” https://philrutherford.com/SSFL/PSR-LA_Petition.html



of the lower court in favor of the Defendants.²⁴ In 2023, the California Supreme Court refused to hear the case, not wishing to waste its time.

The Appeals Court decision (Section IIC, pages 8-9)²⁵ stated,

“When DPH terminates a license, it does so through a decommissioning process that requires licensees “to remove safely from service and reduce residual radioactivity to a level that permits release of the property for unrestricted use and termination of the license.” (Cal. Code Regs., tit. 17, § 30100, subd. (c).) A prerequisite for terminating a license is a determination by DPH that the radioactive material has been properly disposed, reasonable effort has been made to eliminate residual radioactive contamination, and a radiation survey has been performed and demonstrates that the premises are suitable for unrestricted use. (Cal. Code Regs., tit. 17, § 30256, subd. (k).) Removing a building from a license ends DPH’s regulation of that building.”

“DPH also has authority to prohibit the disposal of low-level radioactive wastes in such a manner as would “result in . . . significant radioactive contamination of the environment.” (Health & Saf. Code, § 114715; see id., § 114720.) Generally, this statutory authority does not apply to material from a decommissioned building because by the time a building is decommissioned, all radioactive waste must have been “properly disposed.” (Cal. Code Regs., tit. 17, § 30256, subd. (k)(1).”

“Disposal of “low-level radioactive waste,” defined as “regulated radioactive material” that meets certain technical requirements, is regulated under a separate multi-state compact. (Health & Saf. Code, §§ 115255, art. 2, 115261, subd. (e)(4).) Because there is no longer any “regulated radioactive material” in a decommissioned building, the compact would generally not apply. (Health & Saf. Code, § 115255, art. 2(l).) Under an executive order signed in 2002 by then-Governor Davis, decommissioned materials may not be disposed into municipal solid waste landfills and unclassified waste management units.”

In plain English, this means that,

- when a facility has undergone decommissioning, and

²⁴ Rutherford. “PSR-LA Litigation” Chapter 19.4, “Appeal.” Table 4, pages 72-74 of “Nuclear Decommissioning at SSFL.” August 11, 2025.

https://philrutherford.com/SSFL/Nuclear_Decommissioning_at_SSFL.pdf#page=72-74

²⁵ California Appeals Court. “PSR-LA vs. DTSC et al. Case C088821.” Section IIC, pages 8-9. May 2, 2023.

https://www.dtsc-ssfl.com/files/lib_physocrespvsdtsc/courtdocuments/69837_PSR_v_DTSC_Appeal_Decision.pdf#page=8-9



- when final status surveys show that federal/state cleanup standards have been met, and
- when multiple independent surveys confirm these standards have been met, and
- when the regulatory authority has released the facility for unrestricted use, and
- when the regulatory authority has removed the facility from applicable licenses

... then ...

- the facility is no longer licensed or regulated,
- the regulatory agency has no further control about how the facility is used and/or demolished,
- the only restriction on disposal of demolition debris (decommissioned material) is Executive Order D-62-02 (2002)²⁶ which *“imposes a moratorium on the disposal of decommissioned materials into Class III landfills and unclassified waste management units”* in California,
- material from the facility is no longer “regulated radioactive material,”
- therefore the material cannot be arbitrarily mis-classified as, “low-level radioactive waste”
- there is no requirement to ship decommissioned material out-of-state to a licensed LLRW disposal site.

Alleged Exceedances

Reference to “exceedances” as evidence of contamination by nuclear by-product material including cesium-137 and strontium-90 and transuranic material including plutonium-239, is incorrect. See “Response to PSR-LA Petition & Complaint” for a detailed discussion of backgrounds, detection limits and exceedances.²⁷

Conclusions

California Courts have spent 10 years legally adjudicating the PSR-LA Petition & Complaint and in 2023 issued a final decision, that the demolition of Area IV buildings and disposal of

²⁶ Governor Gray Davis. “Executive Order D-62-02.” Governor’s Moratorium. September 30, 2002.
<https://www.philrutherford.com/SSFL/D-62-02/GovDavisEOD-62-02.pdf>

²⁷ Rutherford. “Response to PSR-LA Petition & Complaint. Superior Court of California. Case 34-2013-80001589.” Sections 2.22 to 2.26. PDF pages 43-53. Original November 20, 2013. Revised July 30, 2024
https://philrutherford.com/SSFL/boeing_building_demolition/Response_to_PSR-LA_Petition.pdf#page=43-53



resultant decommissioned material to a California Class I or II hazardous waste landfill, in compliance with Executive Order D-62-02, could proceed.

Extensive review, analysis and rebuttal of the technical and regulatory aspects of the PSR-LA Petition & Complaint and its CBG supporting document has demonstrated that the PSR-LA and CBG allegations were without merit.^{28,29}

²⁸ Rutherford. "PSR-LA Petition & Complaint." https://philrutherford.com/SSFL/PSR-LA_Petition.html

²⁹ Rutherford. "PSR-LA Litigation." Chapter 19.0, pages 61-76 of "Nuclear Decommissioning at SSFL." August 11, 2025. https://philrutherford.com/SSFL/Nuclear_Decommissioning_at_SSFL.pdf#page=61-76