



Response to Comments by Melissa Bumstead to the NRC's Proposed Rule NRC-2025-1140

On July 15, 2026, the NRC published a Proposed Rule NRC-2025-1140, entitled "Reforming and Modernizing the NRC's Radiation Protection Framework." Melissa Bumstead of Parents Against Santa Susana Field Laboratory (PASSFL) submitted comments to the NRC.¹ The statements below are a response to Melissa's comments.

Daughter's Cancer

In the third sentence of her comments, Melissa again leverages her daughter, Grace, as a cancer survivor and accuses the Santa Susana Field Laboratory (SSFL) of being the cause of her cancer.

Melissa claims not to have heard of SSFL until after her daughter, Grace was diagnosed with leukemia in 2014. However the timeline below suggests otherwise. Extensive print and TV media coverage, numerous community cancer studies, class-action litigation, real estate disclosure statements, all pre-dated Melissa's decision to rent a home (2005) and purchase a home (2012) in the same neighborhood of West Hills, approximately three miles from SSFL. It is unbelievable that someone with Melissa's social media background and awareness of current events, sailed through her high school years, her college years, her 20s and early 30s without any knowledge of SSFL and the misinformation surrounding its operations and remediation. Nevertheless, Melissa chose to remain in the West Valley, close to her parents, who have lived in neighboring Thousand Oaks for 47 years. Melissa and her husband have chosen to buy a home, raise their son and daughter, and stay in West Hills, three miles from SSFL which she believes caused her daughter's cancer.

Date	Event
1978	Melissa's parents, Steve and Deva Andrews moved to Thousand Oaks
1981	Melissa Andrews is born
1989	Beginning of extensive negative media coverage of SSFL
1990	First DHS community cancer study
1992	Second DHS community cancer study
1997	Class action litigation
1998	Initial disclosures to home buyers
1999	Expanded disclosures to home buyers
1999	Melissa graduates from Thousand Oaks High School
2001-2004	Attended Otis College of Art & Design
???	Melissa Andrews marries Chad Bumstead
2005	Topanga Fire burned through SSFL, threatening Thousand Oaks (parent's home), Westlake Village, Agoura and Oak Park
2005	Melissa and Chad rent a home in West Hills (Hamlin St.)

¹ NRC-2025-1140-1793. "Comments by Melissa Bumstead." August 31, 2026.
<https://www.regulations.gov/comment/NRC-2025-1140-1793>



Date	Event
2007	Morgenstern's community cancer study (Melissa's favorite quoted study) ²
January 2010	Melissa's daughter, Grace, is born
February 2010	Teens Against Toxins, a high school group from Westlake/Agoura Hills has a Meltdown Bakesale
September 2012	Melissa buys a home in same West Hills neighborhood (Fallbrook Ave.)
January 2014	Grace diagnosed with acute lymphoblastic leukemia (ALL) at age of four
2015	Melissa enters the SSFL activist community
2016	Grace is cancer free
August 2017	Grace relapses
2017	Chemo and radiation treatment, and bone-marrow transplant
2018	Grace is cancer free with no relapse

Radiation

In her NRC comments, Melissa refers to *"breakthrough studies that have found that even a minuscule amount of radiation, if ingested or breathed, may cause cancer"* but fails to provide any citations, or quantify *"minuscule"* or *"may."*

Melissa uses the terms *"minuscule"* twice, *"minimal"* once, and *"microscopic"* once in describing the amount of radiation that SSFL allegedly is exposing her family and the community. Clearly, Melissa does not believe she or her community has been exposed to large or significant amounts of radiation, otherwise she would have loudly proclaimed the lie. Minuscule, microscopic and minimal could imply very small, unmeasurable, undetectable or even non-existent.

Melissa lives in West Hills in the San Fernando Valley, approximately 3 miles from SSFL and 3 miles from my home, and at an elevation of approximately 900 feet ASL.³ Cosmic ray contributions to background radiation are a function of elevation and give the following easily measurable dose rates and theoretical risks (assuming LNT⁴ is valid at background levels), far exceeding the EPA one-in-a-million risk goal and the zero dose, zero risk goal of the 2010 AOCs.

² Rutherford. "Offsite Impact of SSFL." Chapter 10.6. "Morgenstern Community Cancer Study." September 15, 2025. https://philrutherford.com/SSFL/Offsite_Impact_of_SSFL.pdf#page=138-143

³ ASL = above sea level

⁴ LNT = linear no threshold theory of radiation cancer risk



Location	Elevation (feet ASL)	Cosmic Ray Dose Rate (mrem/y) ⁵	Cosmic Ray Dose Rate (μrem/hr)	80-Year Lifetime Cancer Incidence Risk ⁶
Santa Monica or Malibu	0	30	3.42	$2,400 \times 10^{-6}$ (0.24%)
Melissa's Home West Hills, San Fernando Valley	~900	38.5 ⁷	4.39	$3,080 \times 10^{-6}$ (0.308%)
Denver, Mile-High City	5,280	80	9.13	$6,400 \times 10^{-6}$ (0.64%)

Melissa could reduce her and her family's 80-year cosmic radiation induced theoretical lifetime cancer incidence risk by 680×10^{-6} by moving to Santa Monica or Malibu. Alternatively, she could increase her family's 80-year cosmic radiation induced theoretical lifetime cancer incidence risk by $3,320 \times 10^{-6}$ by moving to Denver. The U.S. total annual dose from all background radiation is 300 mrem/y and the 80-year theoretical lifetime cancer incidence risk is $300 \times 80 \times 10^{-6} = 24,000 \times 10^{-6} = 2.4\%$.

These are clearly moderately large doses and large theoretical cancer risks. How does the alleged "minuscule" radiation dose from SSFL compare to these doses and risks?

Grace's 4-year lifetime theoretical cancer risk from cosmic rays alone would have been $1/20^{\text{th}}$ of the values in the final column above, i.e. 154×10^{-6} . And her 4-year lifetime theoretical cancer risk from all background sources would have been approximately $300 \times 4 \times 10^{-6} = 1,200 \times 10^{-6} = 0.12\%$. At her current age of sixteen, she has quadrupled these theoretical cancer risks from background radiation.

Melissa has fallen into the same trap into which all anti-nuclear activists fall. She uses LNT to claim, "no safe level of radiation exposure." She claims that even Grace's alleged "minuscule" exposure from SSFL "may" still have caused Grace's cancer. If that is the case, then wouldn't Melissa also blame the much larger sources of background radiation and the much larger theoretical cancer risks associated with applying LNT at background levels? I guess not!

None of the numerous community cancer studies support Melissa's belief that Grace's cancer has been caused by radiation or chemicals from SSFL.⁸

⁵ EPA. "Radiation Sources and Doses." <https://www.epa.gov/radiation/radiation-sources-and-doses>

⁶ BEIR-VII radiation cancer risk of 10^{-6} per millirem, and assuming the linear no threshold (LNT) hypothesis of radiation risk is valid at background doses

⁷ Ratioed from sea level and Denver cosmic ray dose rates. $38.5 = 30 + (80-30) \times (900/5280)$

⁸ Rutherford. "Offsite Impact of SSFL." Chapter 18.8.1. "Melissa Bumstead." September 15, 2025. https://philrutherford.com/SSFL/Offsite_Impact_of_SSFL.pdf#page=199-203