March 30, 2025

COMMITTEE TO BRIDGE THE GAP COMMENTS ON DTSC'S LATEST PROPOSAL TO BREACH THE SANTA SUSANA FIELD LABORATORY (SSFL) CLEANUP AGREEMENTS

After widely criticized actions in 2022 and 2023 breaking the longstanding SSFL cleanup agreements, the California Department of Toxic Substances Control (DTSC) has now proposed a breathtaking further breach. It has put forward a plan to throw out the 2010 Administrative Orders on Consent (AOCs) and replace their requirement of cleanup of the site to background with a new approach, opaquely called "Multiple Lines of Evidence" (MLE). DTSC's MLE proposal would allow contamination levels thousands of times higher than the AOCs permit, and would allow most of the contaminated soil to not be cleaned up. This is thus a pivotal moment in the cleanup; if DTSC's plans are not abandoned, the health of large numbers of people living in the area will be at perpetual risk.

A Heavily Contaminated Site

The Santa Susana Field Laboratory (SSFL) is one of the most contaminated sites in California. It was used as a nuclear reactor and rocket engine test site for decades starting in the 1940s. During that time, the site was heavily polluted by a slew of toxins including rocket fuel and its by-products, multiple nuclear accidents, and improper waste disposal (burning it in open air pits). The site is located in the Simi Hills of Ventura County, surrounded by over half a million people who live within 10 miles. Contamination migrates off-site through a number of pathways, including storm runoff and winds, and federally-funded studies found contamination had migrated offsite at concentrations in excess of EPA levels of concern and that there were higher rates of certain cancers key associated with proximity to SSFL.[1]

A History of Breaches of Public Trust

DTSC's latest breach of public trust follows two breathtaking abrogations in recent years of its longstanding commitments to a full cleanup. In 2020, then-CalEPA Secretary Jared Blumenfeld repeatedly promised that the state would not negotiate with the Responsible Parties (RPs) but instead rigorously enforce the existing cleanup agreements.[2] Less than a year later, however, DTSC initiated secret negotiations with Boeing. When local and Congressional elected officials learned about the backroom deal-in-the making, they strongly objected. In a October 14, 2021, ten County Supervisors, City Councilmembers, and Mayors (including the then-Mayor of Moorpark, now Chair of the Ventura Board

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[1] Cancer Incidence in the Community Surrounding the Rocketdyne Facility in Southern California, Morgenstern et. al., March 2007, https://www.ssflworkgroup.org/files/UofM-Rocketdyne-Epidemiologic-Study-Feb-2007-release.pdf; Potential for Offsite Exposures Associated with SSFL, Cohen et. al., Feb. 2006, https://www.ssflworkgroup.org/potential-for-offsite-exposures-associated-with-ssfl.

[2] SSFL Workgroup meeting video, February 13, 2020, Simi Valley, California. https://www.ssflworkgroup.org/video/#feb13pt5 Footage timestamps: 3:55, 8:05, and 9:35.

of Supervisors, Janice Parvin), objected to secret negotiations to weaken or delay the cleanup, failure to enforce the 2007 and 2010 agreements, any effort to change the Standardized Risk Assessment Methodology (SRAM) that could allow Boeing to delay and weaken cleanup, and any failure to remedy the problems in the EIR that the County of Ventura and others had identified.[3]

In response, the then-Director of DTSC, Meredith Williams promised that any negotiation was to require full compliance by Boeing with the existing 2007 Consent Order and that any outcome would be issued as a proposal for public comment and with full environmental review.[4] However, every one of those promises was broken. When the deal was released, it was nearly 800 pages "superseding" the 2007 Order; it was issued as final, with no environmental review or opportunity for public comment; and it dramatically weakened the cleanup required for Boeing. Cleanup levels for contaminants were relaxed by factors of tens, hundreds, and thousands compared to the SRAM in effect before the secret deal.

Then, in July 2023, DTSC expanded its breach of the 2007 and 2010 cleanup agreements by certifying a Final Program EIR for the whole site. It exempted from the required cleanup-to-background nearly two-thirds of DOE and NASA contaminated acreage, violating the narrow exemptions allowed in their AOCs. It failed to remedy the criticisms of the Draft PEIR raised by Ventura and other local governments, which had insisted on full compliance with the required cleanup to background.

Now DTSC Is Proposing the Final Deathblow to the Promised Cleanup

DTSC is attempting the *coup de grâce*, the final deathblow to the AOCs. It is pushing MLE to override the AOCs and instead allow vastly higher concentrations of toxins to remain at SSFL, not cleaned up, available in perpetuity to migrate offsite and impact large numbers of innocent people.

DTSC In a PR Bind

DTSC is in a series of PR binds, however. The first is that it can't readily admit that what it is putting forward *would violate the AOCs*. DTSC has conceded that the AOCs are legally binding, that they are "legal contracts."[5] But at the same time DTSC is vigorously attacking the very AOCs it helped draft and which it executed and repeatedly promised to uphold. Instead, DTSC is now proposing "A Better Approach"[6] – i.e., superseding/breaching the AOCs. While out of one side of its mouth it asserts commitment to the AOCs, out of the other side it attacks and proposes to breach them. At least DOE, by

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[3] October 14, 2021 Letter from local governments to Secretary Jared Blumenfeld of CalEPA, https://www.committeetobridgethegap.org/wp-content/uploads/2025/03/Letter-to-CalEPA-Secretary-Blumenfeld-from-Electeds.pdf

[4] February 17, 2022 response letter from DTSC and CalEPA, https://www.committeetobridgethegap.org/wp-content/uploads/2025/03/2022.02.17-SSFL-Response-Letter-to-Local-Officials-final-signed.pdf

[5] Victoria Hanley presentation, Soil Smarts Workshop 1, Slides pdf p. 3, provided by DTSC's Anaeis Minas Masihi via email to Jonah Henry Feb. 12, 2025.

[6] See title of DTSC Soil Smarts Fact Sheet 5.

contrast, is publicly acknowledging that DTSC's MLE proposal is an *alternative to the AOCs*, by proposing, in the DOE scoping notice for its SEIS, DTSC's MLE approach as an alternative to its AOC.[7]

The second PR conundrum is that DTSC also cannot directly acknowledge it is proposing leaving contamination at levels above background – indeed far above background – because the AOCs require cleanup to background ("at the completion of the cleanup, no contaminants shall remain in the soil above local background levels, with the exception of the exercise of the exemptions that are specifically expressed in the AIP [Agreement in Principle]"[8]). So DTSC needs to claim that its proposed MLE approach would result in a cleanup "consistent with background," even though DTSC's MLE precisely breaches the requirement to cleanup to background, indeed by orders of magnitude. DTSC brazenly asserts, "Using the MLE approach will allow for a cleanup to local background levels consistent with the AOCs."[9] *This is patently false, and DTSC knows it is false.*

Line 1 in DTSC's MLE is supposedly to determine if the soil sample measurements are consistent with background.[10] However, if the sample is deemed *not* consistent with background, the next MLE steps *allow one to not clean it up, even though it is above background*. In reality, the MLE approach defaults, primarily via Lines 2, 3,and 4, to cleanup levels that are greatly above background.[11]

The AOCs preclude the use of supposed risk-based standards, but that is precisely what DTSC now proposes as MLE. The core of the MLE proposal is to use what DTSC claims are Residential Screening Levels (RSLs), based on risk, instead of cleanup tp background. And this default to supposed risk-based levels is the 3rd of DTSC's PR conundrums. DTSC acknowledges that a risk-based cleanup is barred by the AOCs;[12] yet it is using what it claims are risk-based cleanup levels, which far exceeds background. So DTSC falls all over itself to try to explain away its use of supposed risk-based cleanup levels when it admits it can't. DTSC identified what it called a FAQ, "Is MLE a Risk-Based Cleanup?" Its answer: " No this is still a cleanup to background."[13] Both assertions are false. MLE is not to background, and it is a risk-based cleanup.

DTSC asserts that risk-based cleanups only use area averaging and that DTSC is proposing a not-to-exceed approach for SSFL, so its MLE plan wouldn't actually be using risk, even though it would

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[7] 89 Fed. Reg. 105,555, 105,557.
https://www.energy.gov/sites/default/files/2024-12/doe-noi-eis-0402-s1-12-27-24.pdf
[8] Administrative Order on Consent with DOE, pdf p. 5
[9] DTSC Fact Sheet: When the Test is Wrong: Unearthing a Better Approach Soil Smarts Fact Sheet #5, Nov. 2024, p.3,
https://dtsc.ca.gov/wp-content/uploads/sites/31/2025/01/SSFL-Fact-Sheet-5-Unearthing-a-Better-Approach-FINAL.pdf
[10] DTSC's MLE Technical Memorandum, Feb., 2025, pdf p. 9,
https://dtsc.ca.gov/wp-content/uploads/sites/31/2025/02/MLE-Background-Cleanup-Approach-Tech-memo-FINAL.pdf
[11] Victoria Hanley presentation, Soil Smarts Workshop 1, Slides pdf p. 69, provided by DTSC's Anaeis Minas Masihi via email to Jonah Henry, Feb. 12, 2025.
[12] Victoria Hanley presentation, Soil Smarts Workshop 1, Slides pdf p. 14, provided by DTSC's Anaeis Minas Masihi via email to Jonah Henry, Feb. 12, 2025.
[13] Victoria Hanley presentation, Soil Smarts Workshop 1, Slides pdf p. 89, provided by DTSC's Anaeis Minas Masihi via email to Jonah Henry, Feb. 12, 2025: "FAQ: Is MLE a Risk-Based Cleanup? No this is still a cleanup to background."

be. The claim about averaging, however, is FALSE. USEPA guidance makes clear that risk-based cleanups for residential use generally should be based on a not-to-exceed standard, not area averaging:

> EPA's Superfund remedial program general practice has been to use the NTE [Not To Exceed] approach for soil where residential land use is assumed. If using the AA [Area Averaging] approach, users should ensure that exposure of receptors across the exposure unit is random. However, exposure is not expected to be random under residential land use because residents often engage in activities (such as gardening or child's play) in specific portions of a yard. Under most residential situations and other non-random exposure situations, remediating with the AA approach may not be protective of human receptors.[14]

DTSC knows full well that its claim is false, and that what it is proposing is replacing the required cleanup to background with a supposed risk-based standard. And its assertions about the particular risk-based standard it is putting forward are also FALSE.

DTSC Falsely Asserts That The New Standards It is Pushing to Replace Background Are for Exposures From Unrestricted Use

DTSC claims that the RSLs it is proposing as the new standard for SSFL are based on *unrestricted* residential use.[15] That is also FALSE, and DTSC knows it is false.

The primary sources given by DTSC for the RSLs it wishes to use are DTSC's own Human Health Risk Assessment (HHRA) Note 3 and the US EPA Regional Screening Levels.[16] But DTSC's own HHRA Note 3 explicitly states:

> The residential and industrial soil RSLs *do not account for exposure to indoor air vapors due to intrusion of subsurface soil gas emissions; ingestion via uptake of plants (home-grown fruits and vegetables), meat, or dairy products;* or inhalation of particles (fugitive dust) generated by activities which elevate particulate emissions such as truck traffic and use of heavy equipment. *If pathways excluded from the derivation of the soil and tap water screening levels are anticipated at the site (e.g., home-grown produce consumption* or excessive dust generation), an RSL- or DTSC-SL-based screening level risk evaluation *may significantly underestimate risk*.[17]

Furthermore, DTSC knows perfectly well that the EPA Regional Screening Levels for chemicals also leave out the garden pathway, whereas EPA's Preliminary Remediation Goals for radionuclides include it.

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[14] See USEPA, "Radiation Risk Assessment at CERCLA Sites: Q&A," OSWER 9285.6-20, June 14, 2013, p. 8, Q3
[15] DTSC's MLE Technical Memorandum, Feb., 2025, pdf p. 5, footnote 2, https://dtsc.ca.gov/wp-content/uploads/sites/31/2025/02/MLE-Background-Cleanup-Approach-Tech-memo-FINAL.pdf
[16] Id, pdf p. 12.
[17] Human Health Risk Assessment (HHRA) Note Number 3, DTSC-modified Screening Levels (DTSC-SLs), Revised May 2022, pp. 6-7 [emphasis added] https://dtsc.ca.gov/wp-content/uploads/sites/31/2022/02/HHRA-Note-3-June2020-Revised-May2022A.pdf

EPA is aware of the deficiency in the RSLs and as of a couple of years ago began an effort to start efforts that would eventually add those exposures to the RSLs, consistent with the PRG Calculator.

Moreover, DTSC knows full well that unrestricted use would allow all uses permitted by local zoning and General Plan designation. As DTSC itself has written in its Responses to Comments on the SSFL AIP, those land uses at and near SSFL include not just suburban residential but rural residential/agricultural uses and that it must clean the site up to levels safe for all those uses.[18] DTSC formally found that a risk-based standard that was based on unrestricted use would be equivalent to background.[19] Using RSLs that are actually for unrestricted use, as DTSC falsely claims it is doing in the MLE proposal but is in fact not doing, would result in cleanup levels vastly more restrictive than those DTSC is currently pushing to use as replacement for the long-promised background standard.

Thus, the supposed risk-based screening levels (RSLs) DTSC now puts forward as its MLE alternative both violate the AOC and are not even risk-based, but would allow orders of magnitude higher concentrations of contaminants than either background or a genuine risk-based cleanup standard.

MLE Proposal Would Result in Cleanup Levels Orders of Magnitude Weaker Than Required by the AOCs

DTSC has studiously failed to disclose how much higher concentrations of pollutants its MLE proposal would allow compared to the AOC or even to its own previous risk-based standard for suburban residential with garden. In the absence of DTSC meeting that obligation for disclosure, we have calculated those comparisons. The detailed spreadsheet comparisons are attached, but we summarize key conclusions here.

Summary tables are included at the end of DTSC's Multiple Lines of Evidence Technical Memorandum[20] which provide the values for the LUT standards and the proposed alternative RSLs. Upon comparison, of the 105 chemical constituents for which both an LUTV and RSL are provided:

- 99 would have cleanup levels weakened
- 1 would be strengthened
- and 5 would remain the same.

Those last 5 were exempted by DTSC from revision; had they also been switched to the RSLs, their standards would also have tightened.

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[18] Responses to Comments, Agreements in Principle, State of California and the DOE, State of California and the NASA, prepared by DTSC, October 26, 2010,Volume I https://www.dtsc-ssfl.com/files/lib_correspond/agreements/64765_AIP_Response_to_Comments_Volume_I.pdf, pdf pp. 11-12, 21

[19] Id, pdf pp. 14-16.

[20] DTSC Background Cleanup Approach Proposal; MLE Technical Memorandum, Feb., 2025, pdf pp. 11-15, https://dtsc.ca.gov/wp-content/uploads/sites/31/2025/02/MLE-Background-Cleanup-Approach-Tech-memo-FINAL.pdf

So, the vast majority of changes would be weakening standards. And the degree of weakening is generally very large. A few examples:

- The proposed MLE cleanup level for methyl mercury is 156,000 times the AOC LUTV.
- The proposed MLE cleanup level for perchlorate is 33,700 times the AOC LUTV
- The proposed MLE cleanup level for the PCB, Aroclor 5460, is 700 times weaker than the AOC LUTV
- Chromium is weakened by a factor of 904
- Toluene is weakened by a factor of 220,000
- Pyrene is weakened 321,000-fold

DTSC may try to argue that a background cleanup is to levels of very low risk. But, as indicated above, DTSC's proposed MLE RSLs are greatly weaker than risk-based standards for genuine unrestricted use. In a second spreadsheet attached hereto, we have compared the MLE RSLs to DTSC's own approved Resident-Garden RBSLs as they are found in the 2014 SRAM 2 Addendum and the RBSL Table in Appendix B of DTSC's PEIR for SSFL. The proposed MLE value for methyl mercury is 5950 times weaker than those Resident Garden RBSLs; for perchlorate, 3480 times weaker; Aroclor 5460 is 72,200 times weaker; chromium is 159 times weaker; toluene 68 times weaker; and pyrene 175 times weaker.

Note that these comparisons grossly understate the weakening even from a risk-based standpoint, because cleanup is required to be to agricultural levels, which would be far tighter than the suburban residential levels. As indicated earlier, DTSC formally concluded in its Response to Comments on the AIP that a cleanup to levels allowing unrestricted use (i.e., to all uses allowed by Ventura County) would be equivalent to background.

DTSC may try to argue that it cut a deal with Boeing in widely criticized secret negotiations to dramatically weaken suburban resident-with-garden RBSLs. Surely, such backroom deals with a polluter do not have scientific credibility. But even those give-away-the-store RBSLs are more protective than what is now proposed by DTSC. In our third attached spreadsheet, we have performed those comparisons.[21]

DTSC Argument for Hugely Weakening SSFL Cleanup Requirements Rests On Its Attack on Its Own Competence

In 2010, DTSC helped draft the AOCs, approving every word therein, and signed the AOCs. In the years since, it has pledged repeatedly to enforce the agreements. In 2012, DTSC performed the chemical background study and established Background Threshold Values (BTVs) for the cleanup. In 2013 it conducted studies that established LookUp Table Values (LUTVs) based on BTVs and laboratory Method Reporting Limits (MRLs).

[21]The MRLs compared to the Boeing deal numbers are weaker by a factor of 7720 for methyl mercury, 4370 times weaker for perchlorate, 3670 times weaker for Aroclor 5460, 14 times weaker for chromium, 43 times weaker for toluene, and 22 times weaker for pyrene.

Now DTSC is trying to come up with excuses to relieve DOE and NASA of their obligations under the AOCs. So DTSC has been hosting "Soil Smarts Workshops" for the public, wherein it asserted that the AOCs DTSC helped write and which it signed are purportedly unimplementable and that the cleanup requirements should be greatly weakened. In doing so it not only attacks its own AOCs, but its own background study, MRL study, and LUTVs. In essence, DTSC is now impugning the competence of DTSC itself, all in the service of trying to greatly relax cleanup obligations for those who are responsible for having polluted the site.

False Claims About False Positives

DTSC rests almost its entire case for throwing out the AOC and its requirement of cleanup-to-background on an assertion that the AOC LUT produces an immense number of false positives. Specifically, DTSC claims that its own background study results in a "false positive" rate of 54% – i.e., that more than half of the samples in the "clean" background area would have to get cleaned up under the AOC. This "false positive" claim is itself FALSE. And DTSC knows it is false.

In DTSC's "Soil Smarts" Fact Sheet 4, DTSC says there were 295 discreet samples taken in the background study (a background study performed, it must be noted, by DTSC itself). Of those 295, it now asserts 95 had at least one "non-detect" where the detection level employed was higher than the LUT value and would have to be cleaned up. This, of course, is nonsense – there is nothing in the AOC requiring cleanup of soil where contamination wasn't detected.[22]

At the 3rd Soil Smarts Workshop on March 12, 2025, when confronted with the fact that most of what they were claiming as false positives were in fact non-detects, the DTSC spokesperson sheepishly admitted we were right that much of her claimed false positives were samples that had not detected contamination and that "there is actually not any clause within the AOC that says that there would need to be cleanup" of non-detects.[23] She tried to assert it was a "gray area," but of course it is not; and she had not explicitly disclosed that the majority of the supposed false positives were samples that had not in fact detected any contamination above the LUT values.

It is interesting to note that even DOE does not claim there was a 54% false positive rate in the background study. It asserts a 23% false positive rate, a figure which it admits is itself inflated.[24] That figure matches fairly closely to DTSC's claim when the inappropriately included non-detects are removed. (DTSC asserts 63 out of 295 samples had detects above LUT values, or 21%).

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[22] AOC with DOE, pdf p. 50-51. To the extent DTSC failed in its own background study to assure the labs it employed met the MRLs promised, that is a failure of DTSC and the labs to exercise appropriate Quality Assurance/Quality Control. The response to such failure is, of course, to redo measurements with sufficient oversight to meet promised sensitivity, not to presume one cleans up soil in which nothing was detected.

[23] "Soil Smarts" Workshop 3, March 12, 2025, https://youtu.be/DsFPLzNPhZ4?si=QXxFTuJmHG9Man-G&t=5111, 1:25:11

[24] Appendix J Cost-Benefit Analysis Report of DOE's Draft EIS, Jan. 2017, pdf p. 71 https://www.dtsc-ssfl.com/files/lib_doe_area_iv/DraftEISRemAIV_NBuffZone/Volume2%E2%80%93ApA-K/Appendix_J_Cost_Benefit_Analysis_Report.pdf DOE indicated that some of what it identified as false positives were in fact statistical outlier and that it is appropriate to remove outliers to derive BTVs.

However, of the 63 samples with detects that DTSC now claims are false positives, most – 39 – were pesticides and herbicides. This also was not voluntarily disclosed by DTSC, but when revealed by a public commenter, DTSC also had to concede it is true.[25] Of course, the SSFL cleanup is not about herbicides and pesticides – it is about reactor and rocket fuel contamination. Using herbicides and pesticides as an excuse to not clean up plutonium and perchlorate and TCE is grossly inappropriate. The true false positive rate, when the non-detects and herbicides/pesticides are not inappropriately included, is thus only about 8% in the background location, and likely considerably lower in SSFL onsite areas.[26]

What should be driving decisions is *the risk of false negatives* – not cleaning up soil that in fact is contaminated. DTSC is completely silent about false negatives, and gives no estimate how large the risk of false negatives would be under their proposals, which would in fact dramatically increase that risk. Assuring that one does not fail to clean up soil that is polluted should be the fundamental consideration, not saving money for the polluters. DTSC's primary motivation appears to be to protect those who polluted the site rather than the public and environment impacted by that pollution.

AOC Requires Not-To-Exceed Background; Doesn't Allow DTSC to Use MLE

The AOCs are quite simple: with very narrow exceptions, at the completion of the cleanup, no contaminants shall remain in the soil above local background levels. EPA was to determine local background for radionuclides and DTSC for chemicals. At the conclusion of the background studies, DTSC was to establish LookUp Tables including the determined Background Threshold Values (BTVs) and laboratory Minimum Reporting Levels (MRLs) for radionuclides and chemicals for which no BTV was set (e.g., chemicals not found in nature). Cleanup was then to be to the LUT values – if a soil sample exceeded the LUT, it would be cleaned up. The RP would sample its soil; the measured levels of each contaminant would be "looked up" in the LookUp Table, and if over the LUT value, cleaned up. Any sample exceeding the LUT, with very restricted exceptions specified in the AOC, would be remediated.

Instead, in direct violation of the AOCs, DTSC now proposes allowing contamination in excess of background, and often far in excess, to not be cleaned up. It does so through a series of steps, each of which violates the AOCs.

DTSC Brazenly Misrepresents the AOC

DTSC claims that it is authorized by the AOC to exchange the not-to-exceed cleanup approach for its proposed Multiple Lines of Evidence approach. Specifically, DTSC states the following in its Multiple Lines of Evidence Technical Memorandum: "The AOCs authorize DTSC to determine the best option available if confirmation sample laboratory results exceed the 2013 Chemical Look-Up Table (LUT) values."[27] THIS IS FALSE AND MISLEADING. It implies that DTSC may determine *any* option for confirmation samples exceeding background..

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[25] "Soil Smarts" Workshop 3, March 12, 2025, https://youtu.be/DsFPLzNPhZ4?si=QXxFTuJmHG9Man-G&t=5111, 1:26:03
[26] Of the claimed 158 false positives, 95 were non-detects and 39 of the 63 detects were herbicides and pesticides; thus the remaining samples totaled 24 out of 295 total samples, or 8%.
[27] DTSC's MLE Proposal Technical Memo, p. 4

When one reads the full quote from the AOC, it becomes clear how severely DTSC is misrepresenting what the AOC says. When confirmation samples exceed Lookup Table Values, DTSC is authorized by the AOC to "determine the best option" *of two limited options*: either reanalyze the sample with enhanced sensitivity and precision, or excavate more soil and take more confirmation samples.[28]

This is a far cry from DTSC's claim that this language in the AOC allows DTSC to do away with the not-to-exceed approach and substitute a different approach that would leave contamination above background not cleaned up. The AOC is quite clear that all soils exceeding background levels are to be cleaned up, stating specifically in multiple sections that a not-to-exceed background approach is to be taken.[29]

Thus, there is no language in the AOC giving DTSC the ability to change the cleanup approach from a not-to-exceed approach to a multiple lines of evidence approach or any other approach. DTSC's assertion that the AOC gives DTSC this authority is incorrect. To implement the AOC, DTSC must implement a not-to-exceed approach. The not-to-exceed approach is not only legally required by the AOC, it is eminently achievable, contrary to DTSC's specious protestations.

Critique Of Each Proposed MLE Line of Evidence

All of the lines of evidence in the MLE approach violate the AOC and would weaken the cleanup. The AOC's Confirmation Sampling Protocol clearly states, "The 'Look-up' levels cannot be exceeded by any sample."[30] Further, the AOC specifies that "The cleanup of soils at the Site shall result in the end state of the Site after cleanup being consistent with 'background.'"[31] DTSC's MLE approach would result in much soil that exceeds LUTVs not getting cleaned up, and would not result in SSFL being cleaned up to background; thus, the entire MLE approach violates the AOC and should be thrown out. Following are our critiques of each particular line of evidence in the MLE.

Line 1a: Inflates Background By Overriding DTSC's Own Background Threshold Values

DTSC misleadingly asserts that this first line of evidence simply checks whether a sample is "consistent with local background," which DTSC euphemistically describes as a comparison "to the full range of concentrations collected from the Background Study."[32] However, the Background Study established Background Threshold Values (BTVs), and what DTSC is now proposing is to throw out its own BTVs and use higher numbers based on outliers that DTSC rightly removed as part of its own statistical test for setting the BTVs.

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[28] AOC, Confirmation Sampling Protocol, p. 2. Furthermore, DTSC is to make this narrow determination "[i]n consultation with the USEPA Technical Advisor."
[29] See for instance: AOC pdf pp. 15, 46; AOC Confirmation Protocol, pdf p. 50;
[30] AOC, Confirmation Sampling Protocol, p. 2
[31] AOC p. 5
[32] MLE Approach Proposal p. 6

In DTSC's March 12 Soil Smarts presentation, DTSC revealed what it intends to do: when samples exceed DTSC's own BTVs, DTSC will ignore the BTVs and instead use the "maximum background detection" if higher than the BTV.[33] This exemplifies the cherrypicking at the heart of its proposed revisions, all going in the direction of weakening cleanup, if the highest measurement is below the BTV, DTSC will use the lower value, the BTV.

DTSC's proposal for Line 1a would skew the game in the polluters' favor by adding back in the outliers that DTSC appropriately removed in the calculation of the BTVs to meet its statistical tests.[34] It is important to note that the existing BTVs have already been watered down, in so far as they were derived using the least conservative (least protective) of the four statistical methods considered, the Upper Simultaneous Limit (USL95). USL95 reduces the risk of false positives but increases the risks of false negatives, not a good choice if protection of public health is to be the main priority.[35]

The choice of USL as the statistical test inflated the BTV above that which would have resulted from any of the other three statistical tests considered, generally by a substantial amount, as shown in the DTSC comparison table below. So, background was already inflated by a substantial amount in deriving the BTVs. DTSC now proposes inflating it even further.

Background Threshold Values Using Combined Chemical Background Data

Analyte Class	Analyte	Unit	No. of Outliers Excluded	No. of Samples (after excluding outliers)	No. of Detects	Detection Rate	Statistical Method	Background Threshold Values (BTVs)* 95th Percentile	UPL95	UTL95-95	USL
CYANIDE	Cyanide	mg/kg	1	267	17	6%	Kaplan-Meier	0.262	0.262	0.267	0.325
GEN	Fluoride	mg/kg	1	267	158	59%	Kaplan-Meier	5.061	5.079	5.387	8.79
GEN	Nitrate	mg/kg	2	266	249	94%	Kaplan-Meier	11.03	11.07	11.73	19.09
METAL	Aluminum	mg/kg	1	267	267	100%	Nonparametric	36510	36660	37900	50300
METAL	Arsenic	mg/kg	1	267	267	100%	Nonparametric	18.6	18.72	24.2	39.70
METAL	Barium	mg/kg	0	268	268	100%	Gamma	195.9	195.9	203.8	318.75
METAL	Beryllium	mg/kg	1	267	267	100%	Gamma	1.367	1.368	1.424	1.87
METAL	Boron	mg/kg	0	268	216	81%	Kaplan-Meier	17.85	17.91	18.85	29.35
METAL	Cadmium	mg/kg	0	268	267	100%	Kaplan-Meier	0.419	0.42	0.435	0.579
METAL	Calcium	mg/kg	0	268	268	100%	Nonparametric	7503	7842	9765	32000
METAL	Chromium	mg/kg	0	268	268	100%	Normal	58.13	58.23	60.11	80.85
METAL	Cobalt	mg/kg	0	268	268	100%	Nonparametric	23.07	23.21	26.18	38
METAL	Copper	mg/kg	0	268	268	100%	Nonparametric	37.05	38.94	42	102
METAL	Hexavalent Chromium	mg/kg	0	268	201	75%	Kaplan-Meier	1.074	1.077	1.129	1.706
METAL	Iron	mg/kg	1	267	267	100%	Gamma	45149	45179	46671	65402
METAL	Lead	mg/kg	0	268	268	100%	Nonparametric	30.43	30.58	33.9	42.15
METAL	Lithium	mg/kg	0	268	268	100%	Nonparametric	59.95	61.12	64.4	78.4
METAL	Magnesium	mg/kg	1	267	267	100%	Normal	11569	11592	11992	16387
METAL	Manganese	mg/kg	1	267	267	100%	Nonparametric	669.7	673.4	723	959

See footnote[36]

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[33] DTSC presentation Soil Smarts #3, slide 24.

[34] MLE Tech Memo p. 6

[35] "When compared to the USL95, using the UTL95-95 BTVs results in higher false-positive rates (i.e., where soil is indicated to be contaminated when, in fact, it is not) and lower false-negative rates (i.e., where soil is indicated as not contaminated when, in fact, it is) and end up underestimating risk for the site." Pdf p. 3, Final Results Report, Chemical Soil Background Study

[36] *Excerpt from* Combined-Data Background Threshold Values and Methodology Narrative, Chemical Soil Background Study*, DTSC, pdf p. 8,* *https://www.dtsc-ssfl.com/files/lib_cbs/results_report/csbs_report/65787_Combined_Data_BTVs_&_Methodology.pdf*

Line 1b: DTSC Proposes to Throw Out Its Own Method Reporting Limits and Replace Them With Inflated New Ones

Line 1b asks whether the method reporting limit (MRL) for that chemical is "reliably achievable" by labs. However, the MRLs were already designed to account for laboratory capabilities. The existing MRLs were established in a rigorous, collaborative effort with the labs over a decade ago. DTSC, in its Final Chemical Soil Background Study Report, described this process:

> Prior to implementing the analytical program, a **rigorous** laboratory evaluation was conducted to identify laboratories that could consistently produce high-quality, defensible analytical data with the lowest **achievable** reporting limits (RLs) within a commercial laboratory environment.[37]

DOE at the time described its efforts to help determine the MRLs:

> After consultation with the chemists from the Environmental Chemistry Laboratory (ECL) of the DTSC, the DOE chemistry team issued a request for information to a group of environmental chemistry laboratories in December 2011. This request for laboratory information was intended to elicit the **lowest**, **reasonably achievable** method reporting limits (MRLs) from production environmental laboratories.[38]

DTSC puts forward no new information to call into question the MRLs it itself established over a decade ago. Lab capabilities have only improved since. But once again it is trying to generate *post hoc* support for its claims by indicating a study on the issue has recently begun by the RPs (but results will not be available until fall). Moreover, that new study is designed in a way that can't produce results that genuinely challenge the MRLs that DTSC had determined could be met by labs a decade ago. The new study seems designed to produce a pre-ordained outcome. The questions being posed to labs are not how low an MRL can they meet, nor even if they can meet the existing MRLs, but merely what is their standard MRL.[39] This is like walking into a dealership and asking for a car that has standard gas mileage,

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[37] Pdf p. 14, Final Results Report, Chemical Soil Background Study, Dec. 2012 (emphasis added) https://www.dtsc-ssfl.com/files/lib_cbs/results_report/csbs_report/65788_Final_Chemical_Soil_Background_Study_Report.pdf

[38] Pdf p. 65, Revised Draft Technical Memorandum Process to Establish Site-Specific Method Reporting Limits for The AOC Chemical Characterization and Cleanup Program, Attachment A, Summary of Laboratory Responses to DOE's Method Reporting Limit (MRL) Request for Information (emphasis added), Sept. 2012 https://www.dtsc-ssfl.com/files/lib_look-uptables/chemical/70672_Revised_Draft_DOE_MRL_Tech_Memo_to_DTSC_09282012.pdf

[39] The Request for Information (RFI) document that Boeing, DOE and NASA will be sending to labs as part of the ongoing 2025 MRL evaluation study requests that labs "provide the laboratory's *standard* reporting limit (RL) that the laboratory can routinely meet using the standard conditions listed in the analytical method" (emphasis added), and states that "analytical methods should be performed as stated, with no modifications employed to enhance sensitivity" (pg. 2). Such language reveals that the responsible parties' true intent is for labs to report the highest MRLs possible, to give them cause to suggest weakening the MRL-based LUTVs. https://www.dtsc-ssfl.com/files/lib_bkflstdy_mrleval/DOE/Reports/70213_2023.10.26_SSFL_Lab_MRL_RFI_and_Laboratory_List.pdf

as opposed to asking for one that gets the best mileage. If DTSC is seeking information on the most up-to-date lab capabilities, it should be asking the labs for their best capabilities.

DTSC has no new information that existing MRLs it set up a decade ago can't be met; instead it is relying on a study not yet performed that is structured so as to give an answer it wants as an excuse to get out of cleanup obligations.

The RPs, under DTSC guidance, are currently conducting a new MRL study that is not designed to be able to determine whether labs can achieve the established SSFL MRLs; rather, DOE's letter to the labs asks for their "default" MRLs, specifically warning them not to use any method modifications to achieve more sensitive MRLs. The letter from the RPs to the labs requests that the labs "provide the laboratory's standard reporting limit (RL) that the laboratory can routinely meet using the standard conditions listed in the analytical method," and also warns labs against modifying their lab procedures in order to achieve lower reporting limits, telling labs that "Analytical methods should be performed as stated, with no modifications employed to enhance sensitivity."[40] This language is intended to send a signal to labs against reporting low MRLs, thus giving the RPs what they want: a verdict from DTSC that DTSC's own 2013 MRL-based LUTVs from the 2011 MRL evaluation study and subsequent multi-lab MRL study should be thrown out and weaker numbers used.

Line 2: Replacing Background Cleanup With A Far Weaker Purported Risk Standard

Line 2 is the key to the whole effort to overturn the AOC cleanup to background requirements and leave huge amounts of contaminated soil not cleaned up. It allows each sample exceeding the LUTV to evade cleanup, and instead compares the soil sample result to a supposed Risk Based Screening Level. Comparing soil sample detections to a RBSL, even if it were the most stringent RBSL available, is a clear violation of the AOC, as the AOC states that soil samples must be identified for cleanup based on a "not-to-exceed LUTV" approach. But the replacement standards proposed are immensely less protective than the LUTVs.

The Resident Screening Levels that DTSC now proposes to use in its MLE approach are, as discussed earlier, not RSLs for unrestricted use, despite DTSC claims to the contrary, but rather are residential *without garden* RBSLs. In many instances they are orders of magnitude higher than the Resident With Garden RBSLs presented in the SRAM Revision II and even the non-credible 2022 DTSC-Boeing Settlement Agreement.[41] And as shown in the tables attached hereto, the proposed MLE Line 2 replacement standards are as much as hundreds of thousands of times weaker than the required cleanup to background.

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[40] *Request for Information, Laboratory Support for Remediation Activities at Santa Susana Field Laboratory*, DOE, NASA, Boeing, p. 2, https://www.dtsc-ssfl.com/files/lib_bkflstdy_mrleval/DOE/Reports/70213_2023.10.26_SSFL_Lab_MRL_RFI_and_Laboratory_List.pdf

[41] Jonah's RBSL comparison spreadsheet

This is where the fundamental breach of the longstanding cleanup commitments is buried. Rather than a cleanup to background, it would allow ignoring the measurements above background and leaving contamination orders of magnitude higher unremediated.

Line 3: Further Substituting Cleanup-to-Background With a Far Weaker Standard

Line 3 of DTSC's MLE approach asks: "Is the cumulative risk and cumulative non-cancer hazard at or below the point of departure for residential land use?" If so, "this is a supporting line of evidence that no further soil removal will be needed."[42] This both violates the AOC prohibition on risk-based standards and is completely erroneous even about the risk. As previously discussed, the risk numbers being put forward by DTSC are gross underestimates compared to risk based screening levels for unrestricted use.

Line 4: Compounding the Breach of the AOC Requirements to Cleanup to Background

Line 4 of DTSC's MLE approach asks: "What is the cumulative risk and hazard ratio between chemical detections in a sample and cumulative risk and hazard for that same set of chemicals using the LUT value?" If the ratio between these cumulative risk and hazards is less than 1 the MLE approach concludes that the sample does not need to be removed, if the ratio is more than 10 the MLE approach concludes that the sample does indeed have to be removed, and if the ratio is in between 1 and 10 the MLE approach is inconclusive and DTSC states that "other lines of evidence would be evaluated to determine if further soil removal is needed."[43]

Once again, DTSC is breaching the simple requirement in the AOCs, to compare measured values to LUTVs and if above the LUTV, clean it up. This again is an effort at using risk instead of background. And it doesn't even accurately use risk. As we have noted, the RBSLs used for the supposed comparison are orders of magnitude weaker than RBSLs for unrestricted use. Furthermore, line 4 attempts to compare risks from site contamination to a hypothetical sample in which each chemical is at the LUTV. That purposely skews things, because actual background samples would be far below the LUTV for most chemicals, and many chemicals in background are at levels of risk that are already fairly high.

DTSC's Claim That Its MLE Approach is Viewed by USEPA As "Best Practice" is FALSE

At its March 12, 2025, Soil Smart #3 Workshop, DTSC defined MLE vaguely, saying "Multiple Lines of Evidence (MLE) means using different types of proof to support an idea."[44] DTSC went on to say, "The US EPA identifies the use of Multiple Lines of Evidence as a 'Best Practice' in environmental clean ups."[45] This is incredibly misleading. Nowhere in the document cited by DTSC does EPA endorse anything like what DTSC is proposing for SSFL cleanup standards.

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[42] 2025 MLE technical memo (pg. 7) (link here)
[43] 2025 MLE technical memo (pg. 8) (link here)
[44] DTSC Soil Smarts: DTSC's Interactive Learning Series on the Soil Cleanup at SSFL Workshop #3: Multiple Lines of Evidence Approach for Chemical Cleanup to Background, March 12 2025, slide 19, https://dtsc.ca.gov/wp-content/uploads/sites/31/2025/03/Soil-Smarts-WS3-Technical-Presentation-20250320_ADA-compliant.pdf
[45] Id. The DTSC slide gave as its reference to its EPA claim: Smart Scoping For Environmental Investigations Technical Guide, EPA ID # 542-G-18-004, Nov. 2018, https://semspub.epa.gov/work/HQ/100001799.pdf

The actual EPA document cited is referring to "multiple lines of evidence" in a completely different way than DTSC is proposing at SSFL. EPA was referring to using data *from different measurement techniques*, for example in determining hydraulic conductivity. In its discussion on the subject in the document in question, EPA states:

> Using multiple lines of evidence means that *data from different measurement techniques* provide results that converge and support similar conclusions. If the lines of evidence do not converge, then the site team will evaluate the reason and the original CSM assumptions an adjust to the actual conditions found in the field to resolve the inconsistency. Both convergence and divergence of multiple lines of evidence inform the project team and future investigative efforts. *Examples of investigative multiple lines of evidence for determining relative hydraulic conductivity in the subsurface include lithologic logs, cone penetrometer testing, electrical conductivity readings and hydraulic profiling measurements*. All four lines of evidence use different methods to give an indication of the relative hydraulic conductivity parameter. The EPA strongly encourages the use of multiple lines of evidence in many of its Superfund technical guides, including those related to vapor intrusion and monitored natural attenuation. Site teams can look for opportunities to develop strategic sampling designs that collect both collaborative data and multiple lines of evidence.[46]

DTSC does not cite to a single EPA cleanup which does what DTSC is now proposing – having a numerical cleanup standard, that you can breach over and over again.

Conclusion

DTSC executed the AOCs and has for years promised to rigorously enforce them. Instead, there is a long pattern of trying to let the Responsible Parties get out of the required cleanup. DTSC's newest effort to breach the commitments to a cleanup to background – opaquely called Multiple Lines of Evidence – poses a clear and present danger to the public and the environment. The proposal should be abandoned, and the Department of Toxic Substances Control should finally start controlling toxic substances.

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[46] Smart Scoping For Environmental Investigations Technical Guide, EPA ID # 542-G-18-004, Nov. 2018, https://semspub.epa.gov/work/HQ/100001799.pdf

March 30, 2025

<u>Attachment A: MLE to LUTV comparison</u>

Chemical Constituent	LUTVs (mg/kg) (source DTSC 2013)	MLE Memo RSLs (mg/kg) (source DTSC 2025)	MLE RSLs: LUTVs
Acenaphthylene	2.50E-03	--	--
Aroclor 1262	3.30E-02	--	--
Aroclor 1268	3.30E-02	--	--
Aroclor 5432	5.00E-02	--	--
Aroclor 5442	5.00E-02	--	--
Benzo(g,h,i)perylene	2.50E-03	--	--
Dimethyl phthalate	2.70E-02	--	--
Ethanol	7.00E-01	--	--
o-Terphenyl	7.00E+00	--	--
Phenanthrene	9.00E+00	--	--
Sodium	1.78E+03	--	--
Anthracene	2.50E-03	1.70E+04	6.80E+06
Acetone	2.00E-02	7.00E+04	3.50E+06
Diethyl phthalate	2.70E-02	5.10E+04	1.89E+06
Endosulfan I	2.40E-04	4.50E+02	1.88E+06
Dicamba	1.30E-03	1.90E+03	1.46E+06
Acenaphthene	2.50E-03	3.30E+03	1.32E+06
Endosulfan II	4.80E-04	4.50E+02	9.38E+05
2,4,5-TP	6.30E-04	5.59E+02	8.87E+05
2,4-DB	2.40E-03	1.90E+03	7.92E+05
Endosulfan Sulfate	4.80E-04	3.80E+02	7.92E+05
Fluorene	3.80E-03	2.30E+03	6.05E+05
2,4,5-T	1.20E-03	6.30E+02	5.25E+05
Fluoranthene	5.20E-03	2.40E+03	4.62E+05
Benzoic Acid - EPA 8270	6.60E-01	2.50E+05	3.79E+05
Pyrene	5.60E-03	1.80E+03	3.21E+05
2,4-DP (Dichloroprop)	2.40E-03	6.99E+02	2.91E+05
Di-n-butylphthalate	2.70E-02	6.30E+03	2.33E+05
Toluene	5.00E-03	1.10E+03	2.20E+05
Methanol	7.00E-01	1.20E+05	1.71E+05
Methyl Mercury	5.00E-05	7.80E+00	1.56E+05

Dalapon	1.25E-02	1.90E+03	1.52E+05
Methoxychlor	2.40E-03	3.20E+02	1.33E+05
2,4-D	5.80E-03	6.99E+02	1.21E+05
Phenol - EPA 8270	1.70E-01	1.90E+04	1.12E+05
2-Methylnaphthalene	2.50E-03	1.90E+02	7.60E+04
Endrin	4.80E-04	1.90E+01	3.96E+04
Perchlorate	1.63E-03	5.50E+01	3.37E+04
Endrin Aldehyde	7.00E-04	1.90E+01	2.71E+04
Endrin Ketone	7.00E-04	1.90E+01	2.71E+04
Di-n-octylphthalate	2.70E-02	6.30E+02	2.33E+04
2-Hexanone	1.00E-02	2.00E+02	2.00E+04
Dinoseb	3.30E-03	6.30E+01	1.91E+04
Nitrate	2.23E+01	1.30E+05	5.83E+03
Chlordane	7.00E-03	3.50E+01	5.00E+03
p,p-DDD	4.80E-04	2.30E+00	4.79E+03
cis-1,2-Dichloroethene	5.00E-03	1.80E+01	3.60E+03
Butylbenzylphthalate	1.00E-01	2.90E+02	2.90E+03
Gamma-BHC - Lindane	2.40E-04	5.70E-01	2.38E+03
Silver	2.00E-01	3.90E+02	1.95E+03
Beta-BHC	2.30E-04	3.00E-01	1.30E+03
Ethylbenzene	5.00E-03	5.80E+00	1.16E+03
1,1-Dichloroethene	5.00E-03	4.80E+00	9.60E+02
Chromium	9.40E+01	8.50E+04	9.04E+02
Aroclor 5460	5.00E-02	3.50E+01	7.00E+02
Bis(2-Ethylhexyl)phthalate	6.10E-02	3.90E+01	6.39E+02
Naphthalene	3.60E-03	2.00E+00	5.56E+02
Heptachlor	2.40E-04	1.30E-01	5.42E+02
1,4-Dioxane - EPA 8260 (SIM)	1.00E-02	5.30E+00	5.30E+02
Boron	3.40E+01	1.60E+04	4.71E+02
Selenium	1.00E+00	3.90E+02	3.90E+02
Alpha-BHC	2.40E-04	8.60E-02	3.58E+02
Fluoride	1.02E+01	3.10E+03	3.04E+02
Heptachlor Epoxide	2.40E-04	7.00E-02	2.92E+02

Strontium	1.63E+02	4.70E+04	2.88E+02
Aroclor 1016	1.70E-02	4.10E+00	2.41E+02
Hexachlorobutadiene	5.00E-03	1.20E+00	2.40E+02
p,p-DDE	8.60E-03	2.00E+00	2.33E+02
Methylene chloride	1.00E-02	2.20E+00	2.20E+02
Trichloroethene	5.00E-03	9.40E-01	1.88E+02
MCPP	3.77E-01	6.30E+01	1.67E+02
Aldrin	2.40E-04	3.90E-02	1.63E+02
p,p-DDT	1.30E-02	1.90E+00	1.46E+02
Molybdenum	3.20E+00	3.90E+02	1.22E+02
Tetrachloroethene	5.00E-03	5.90E-01	1.18E+02
Zinc	2.15E+02	2.30E+04	1.07E+02
1-Methyl naphthalene	2.50E-03	1.83E-01	7.32E+01
Mirex	5.00E-04	3.60E-02	7.20E+01
Dieldrin	4.80E-04	3.40E-02	7.08E+01
Benzene	5.00E-03	3.30E-01	6.60E+01
TPH EFH (C15-C20)4	5.00E+00	2.60E+02	5.20E+01
Toxaphene	8.80E-03	4.50E-01	5.11E+01
MCPA	7.61E-01	3.20E+01	4.20E+01
Barium	3.71E+02	1.50E+04	4.04E+01
Cyanide	6.00E-01	2.40E+01	4.00E+01
Antimony	8.60E-01	3.10E+01	3.60E+01
Research Department Explosive (I	3.00E-01	8.30E+00	2.77E+01
Copper	1.19E+02	3.10E+03	2.61E+01
Benzo(a)pyrene TEQ7	4.47E-03	1.10E-01	2.46E+01
Delta-BHC	2.20E-04	3.80E-03	1.73E+01
Aroclor 1254	1.70E-02	2.40E-01	1.41E+01
Aroclor 1260	1.70E-02	2.40E-01	1.41E+01
Aroclor 1242	1.70E-02	2.30E-01	1.35E+01
Aroclor 1248	1.70E-02	2.30E-01	1.35E+01
Cadmium	7.00E-01	7.10E+00	1.01E+01
Aroclor 1232	1.70E-02	1.70E-01	1.00E+01
Mercury	1.30E-01	1.00E+00	7.69E+00

Beryllium	2.20E+00	1.60E+01	7.27E+00
Nickel	1.32E+02	8.20E+02	6.21E+00
Aroclor 1221	3.30E-02	2.00E-01	6.06E+00
Pentachlorophenol	1.70E-01	1.00E+00	5.88E+00
Potassium	1.44E+04	7.80E+04	5.42E+00
2,3,7,8-TCDD TEQ	9.12E-07	4.80E-06	5.26E+00
Formaldehyde	1.87E+00	4.33E+00	2.32E+00
Vanadium	1.75E+02	3.90E+02	2.23E+00
Lithium	9.10E+01	1.60E+02	1.76E+00
Vinyl chloride	5.00E-03	8.20E-03	1.64E+00
Lead	4.90E+01	8.00E+01	1.63E+00
Manganese	1.12E+03	1.80E+03	1.61E+00
Aluminum	5.86E+04	7.70E+04	1.31E+00
Thallium	1.20E+00	7.80E-01	6.50E-01
Cobalt	4.40E+01	2.30E+01	5.23E-01
Zirconium	1.90E+01	6.30E+00	3.32E-01
N-Nitrosodimethylamine - 8270C	1.00E-02	2.00E-03	2.00E-01
Hexavalent Chromium	2.00E+00	3.00E-01	1.50E-01
Arsenic	4.60E+01	1.10E-01	2.39E-03

examples
metals reverting to LUTV
single strengthening

Final count:	116
weakened	99
strengthened	1
"unchanged"	5
not enough info	11

March 30, 2025

Attachment B: MLE to Suburban Resident-With-Garden RBSL Comparison

Chemical Constituent	SRAM II Resident w/ garden RBSLs (mg/kg) (DTSC 2014)	MLE Memo RSLs (mg/kg) (source DTSC 2025)	MLE RSLs: SRAM II RBSLs
Acenaphthylene	1.87E+01	--	--
Aluminum	--	7.70E+04	--
Aroclor 1221	--	2.00E-01	--
Aroclor 1232	--	1.70E-01	--
Aroclor 1262	--	--	--
Aroclor 1268	--	--	--
Aroclor 5432	--	--	--
Aroclor 5442	--	--	--
Benzo(g,h,i)perylene	1.07E+01	--	--
Dimethyl phthalate	6.43E+01	--	--
Ethanol	--	--	--
Fluoride	--	3.10E+03	--
Methanol	--	1.20E+05	--
Methoxychlor	--	3.20E+02	--
Nitrate	--	1.30E+05	--
o-Terphenyl	1.07E-01	--	--
Phenanthrene	1.00E+02	--	--
Potassium	--	7.80E+04	--
Sodium	--	--	--
TPH EFH (C15-C20)4	--	2.60E+02	--
Aroclor 5460	4.85E-04	3.50E+01	7.22E+04
Chlordane	2.78E-03	3.50E+01	1.26E+04
Research Department Explosive (RDX)	8.67E-04	8.30E+00	9.57E+03
Acetone	7.79E+00	7.00E+04	8.99E+03
1,4-Dioxane - EPA 8260 (SIM)	8.37E-04	5.30E+00	6.33E+03
Methyl Mercury	1.31E-03	7.80E+00	5.95E+03
Cadmium	1.65E-03	7.10E+00	4.30E+03
Perchlorate	1.58E-02	5.50E+01	3.48E+03
N-Nitrosodimethylamine - 8270C (SIM)	9.49E-07	2.00E-03	2.11E+03

Benzo(a)pyrene TEQ7	8.09E-05	1.10E-01	1.36E+03
Arsenic	9.91E-05	1.10E-01	1.11E+03
Boron	1.49E+01	1.60E+04	1.07E+03
Phenol - EPA 8270	2.07E+01	1.90E+04	9.18E+02
Cyanide	2.78E-02	2.40E+01	8.63E+02
2,4-DB	2.28E+00	1.90E+03	8.33E+02
Gamma-BHC - Lindane	7.37E-04	5.70E-01	7.73E+02
Dalapon	2.62E+00	1.90E+03	7.25E+02
p,p-DDE	2.87E-03	2.00E+00	6.97E+02
Aldrin	5.72E-05	3.90E-02	6.82E+02
Mirex	5.41E-05	3.60E-02	6.65E+02
p,p-DDT	2.87E-03	1.90E+00	6.62E+02
2,3,7,8-TCDD TEQ	7.50E-09	4.80E-06	6.40E+02
2-Hexanone	3.17E-01	2.00E+02	6.31E+02
Benzoic Acid - EPA 8270	4.20E+02	2.50E+05	5.95E+02
Butylbenzylphthalate	4.88E-01	2.90E+02	5.94E+02
p,p-DDD	4.03E-03	2.30E+00	5.71E+02
Dieldrin	5.98E-05	3.40E-02	5.69E+02
Toxaphene	8.04E-04	4.50E-01	5.60E+02
Heptachlor	2.37E-04	1.30E-01	5.49E+02
Beta-BHC	5.47E-04	3.00E-01	5.48E+02
Aroclor 1254	4.87E-04	2.40E-01	4.93E+02
Aroclor 1260	4.88E-04	2.40E-01	4.92E+02
Aroclor 1242	4.85E-04	2.30E-01	4.74E+02
Aroclor 1248	4.85E-04	2.30E-01	4.74E+02
Dicamba	4.25E+00	1.90E+03	4.47E+02
Zinc	5.37E+01	2.30E+04	4.28E+02
Tetrachloroethene	1.38E-03	5.90E-01	4.28E+02
Heptachlor Epoxide	1.71E-04	7.00E-02	4.09E+02
Strontium	1.21E+02	4.70E+04	3.88E+02
Diethyl phthalate	1.33E+02	5.10E+04	3.83E+02
2,4-D	2.12E+00	6.99E+02	3.30E+02
Selenium	1.31E+00	3.90E+02	2.98E+02

Aroclor 1016	1.38E-02	4.10E+00	2.97E+02
Molybdenum	1.38E+00	3.90E+02	2.83E+02
Alpha-BHC	3.06E-04	8.60E-02	2.81E+02
Copper	1.11E+01	3.10E+03	2.79E+02
MCPP	2.48E-01	6.30E+01	2.54E+02
2,4-DP (Dichloroprop)	2.76E+00	6.99E+02	2.53E+02
Endosulfan I	1.83E+00	4.50E+02	2.46E+02
Endosulfan II	1.83E+00	4.50E+02	2.46E+02
MCPA	1.31E-01	3.20E+01	2.44E+02
2,4,5-T	2.66E+00	6.30E+02	2.37E+02
Cobalt	9.93E-02	2.30E+01	2.32E+02
2,4,5-TP	2.43E+00	5.59E+02	2.30E+02
Lithium	7.03E-01	1.60E+02	2.28E+02
Antimony	1.38E-01	3.10E+01	2.25E+02
Dinoseb	2.87E-01	6.30E+01	2.20E+02
Vanadium	1.78E+00	3.90E+02	2.19E+02
Zirconium	2.88E-02	6.30E+00	2.19E+02
Thallium	3.58E-03	7.80E-01	2.18E+02
Silver	1.80E+00	3.90E+02	2.17E+02
Endosulfan Sulfate	1.76E+00	3.80E+02	2.16E+02
Barium	7.10E+01	1.50E+04	2.11E+02
Methylene chloride	1.06E-02	2.20E+00	2.08E+02
Di-n-butylphthalate	3.35E+01	6.30E+03	1.88E+02
Endrin Aldehyde	1.02E-01	1.90E+01	1.86E+02
Endrin	1.04E-01	1.90E+01	1.83E+02
Endrin Ketone	1.04E-01	1.90E+01	1.83E+02
Fluorene	1.29E+01	2.30E+03	1.78E+02
Acenaphthene	1.86E+01	3.30E+03	1.77E+02
Di-n-octylphthalate	3.59E+00	6.30E+02	1.75E+02
Pyrene	1.03E+01	1.80E+03	1.75E+02
Fluoranthene	1.39E+01	2.40E+03	1.73E+02
Anthracene	1.00E+02	1.70E+04	1.70E+02
Chromium	5.34E+02	8.50E+04	1.59E+02

Hexavalent Chromium	1.94E-03	3.00E-01	1.55E+02
2-Methylnaphthalene	1.23E+00	1.90E+02	1.54E+02
Nickel	6.03E+00	8.20E+02	1.36E+02
Bis(2-Ethylhexyl)phthalate	3.25E-01	3.90E+01	1.20E+02
Hexachlorobutadiene	1.20E-02	1.20E+00	1.00E+02
Trichloroethene	9.69E-03	9.40E-01	9.70E+01
Ethylbenzene	6.01E-02	5.80E+00	9.65E+01
Benzene	3.49E-03	3.30E-01	9.46E+01
cis-1,2-Dichloroethene	2.04E-01	1.80E+01	8.82E+01
Toluene	1.62E+01	1.10E+03	6.79E+01
Manganese	3.97E+01	1.80E+03	4.53E+01
Beryllium	7.00E-01	1.60E+01	2.29E+01
Mercury	5.02E-02	1.00E+00	1.99E+01
Pentachlorophenol	5.26E-02	1.00E+00	1.90E+01
Lead	6.35E+00	8.00E+01	1.26E+01
Vinyl chloride	7.91E-04	8.20E-03	1.04E+01
Delta-BHC	4.86E-04	3.80E-03	7.82E+00
1-Methyl naphthalene	2.88E-02	1.83E-01	6.35E+00
Formaldehyde	3.70E+00	4.33E+00	1.17E+00
1,1-Dichloroethene	5.93E+00	4.80E+00	8.09E-01
Naphthalene	3.89E+00	2.00E+00	5.14E-01

Final count:	116
weakened	94
strengthened	2
"unchanged"	0
not enough info	20

March 30, 2025

<u>Attachment C: MLE to Boeing Deal Comparison</u>

Chemical Constituent	Boeing Deal Combined Resident w/ Garden RBSL (mg/kg) (source CalEPA-Boeing 2022)	MLE Memo RSLs (mg/kg) (source DTSC 2025)	MLE RSLs: Boeing Deal RBSLs
Acenaphthylene	7.71E+01	--	--
Aroclor 1221	--	2.00E-01	--
Aroclor 1232	--	1.70E-01	--
Aroclor 1262	9.68E-03	--	--
Aroclor 1268	9.68E-03	--	--
Aroclor 5432	--	--	--
Aroclor 5442	--	--	--
Benzo(g,h,i)perylene	1.34E+02	--	--
Dimethyl phthalate	6.09E+01	--	--
Ethanol	--	--	--
Methanol	--	1.20E+05	--
Nitrate	--	1.30E+05	--
o-Terphenyl	7.46E-01	--	--
Phenanthrene	6.08E+02	--	--
Potassium	--	7.80E+04	--
Sodium	--	--	--
TPH EFH (C15-C20)4	--	2.60E+02	--
1,4-Dioxane - EPA 8260 (SIM)	2.72E-04	5.30E+00	1.95E+04
Acetone	5.96E+00	7.00E+04	1.17E+04
Cyanide	2.18E-03	2.40E+01	1.10E+04
Methyl Mercury	1.01E-03	7.80E+00	7.72E+03
N-Nitrosodimethylamine - 8270C (	3.57E-07	2.00E-03	5.60E+03
Research Department Explosive (RI	1.55E-03	8.30E+00	5.35E+03
Perchlorate	1.26E-02	5.50E+01	4.37E+03
Aroclor 5460	9.53E-03	3.50E+01	3.67E+03
Dalapon	7.73E-01	1.90E+03	2.46E+03
Formaldehyde	2.95E-03	4.33E+00	1.47E+03
Boron	1.39E+01	1.60E+04	1.15E+03
Phenol - EPA 8270	1.90E+01	1.90E+04	1.00E+03
Strontium	6.60E+01	4.70E+04	7.12E+02

2-Hexanone	2.85E-01	2.00E+02	7.02E+02
Chlordane	5.33E-02	3.50E+01	6.57E+02
Benzoic Acid - EPA 8270	4.34E+02	2.50E+05	5.76E+02
Dicamba	5.06E+00	1.90E+03	3.75E+02
Zinc	7.57E+01	2.30E+04	3.04E+02
Diethyl phthalate	1.76E+02	5.10E+04	2.90E+02
2,4-D	3.60E+00	6.99E+02	1.94E+02
Gamma-BHC - Lindane	4.04E-03	5.70E-01	1.41E+02
Cadmium	5.04E-02	7.10E+00	1.41E+02
Silver	3.06E+00	3.90E+02	1.27E+02
Copper	2.46E+01	3.10E+03	1.26E+02
MCPP	5.32E-01	6.30E+01	1.18E+02
Beta-BHC	2.63E-03	3.00E-01	1.14E+02
Alpha-BHC	7.67E-04	8.60E-02	1.12E+02
MCPA	3.06E-01	3.20E+01	1.05E+02
Tetrachloroethene	5.75E-03	5.90E-01	1.03E+02
2,4,5-T	6.57E+00	6.30E+02	9.59E+01
2,4-DP (Dichloroprop)	7.53E+00	6.99E+02	9.28E+01
Naphthalene	2.30E-02	2.00E+00	8.70E+01
Molybdenum	4.57E+00	3.90E+02	8.53E+01
cis-1,2-Dichloroethene	2.13E-01	1.80E+01	8.45E+01
Arsenic	1.32E-03	1.10E-01	8.33E+01
Manganese	2.18E+01	1.80E+03	8.26E+01
2,4-DB	2.53E+01	1.90E+03	7.51E+01
Dinoseb	8.70E-01	6.30E+01	7.24E+01
Antimony	4.36E-01	3.10E+01	7.11E+01
Endosulfan Sulfate	5.82E+00	3.80E+02	6.53E+01
Endosulfan I	6.94E+00	4.50E+02	6.48E+01
Endosulfan II	6.94E+00	4.50E+02	6.48E+01
2,4,5-TP	8.98E+00	5.59E+02	6.22E+01
Barium	2.70E+02	1.50E+04	5.56E+01
Benzene	6.38E-03	3.30E-01	5.17E+01
Butylbenzylphthalate	5.66E+00	2.90E+02	5.12E+01

Heptachlor Epoxide	1.38E-03	7.00E-02	5.07E+01
Trichloroethene	2.02E-02	9.40E-01	4.65E+01
Acenaphthene	7.55E+01	3.30E+03	4.37E+01
Toluene	2.56E+01	1.10E+03	4.30E+01
2-Methylnaphthalene	4.74E+00	1.90E+02	4.01E+01
Fluorene	6.43E+01	2.30E+03	3.58E+01
Dieldrin	9.54E-04	3.40E-02	3.56E+01
p,p-DDE	5.77E-02	2.00E+00	3.47E+01
Aldrin	1.15E-03	3.90E-02	3.39E+01
Fluoride	9.56E+01	3.10E+03	3.24E+01
Mirex	1.13E-03	3.60E-02	3.19E+01
Nickel	2.58E+01	8.20E+02	3.18E+01
p,p-DDT	5.98E-02	1.90E+00	3.18E+01
Heptachlor	4.10E-03	1.30E-01	3.17E+01
2,3,7,8-TCDD TEQ	1.56E-07	4.80E-06	3.08E+01
Toxaphene	1.48E-02	4.50E-01	3.04E+01
p,p-DDD	7.60E-02	2.30E+00	3.03E+01
Di-n-butylphthalate	2.10E+02	6.30E+03	3.00E+01
Pentachlorophenol	3.34E-02	1.00E+00	2.99E+01
Ethylbenzene	2.05E-01	5.80E+00	2.83E+01
Anthracene	6.04E+02	1.70E+04	2.81E+01
Bis(2-Ethylhexyl)phthalate	1.49E+00	3.90E+01	2.62E+01
Vinyl chloride	3.25E-04	8.20E-03	2.52E+01
Aroclor 1254	9.68E-03	2.40E-01	2.48E+01
Aroclor 1248	9.30E-03	2.30E-01	2.47E+01
Endrin Aldehyde	7.77E-01	1.90E+01	2.45E+01
Aroclor 1242	9.51E-03	2.30E-01	2.42E+01
Lithium	6.80E+00	1.60E+02	2.35E+01
Aroclor 1260	1.04E-02	2.40E-01	2.31E+01
Selenium	1.70E+01	3.90E+02	2.29E+01
Methylene chloride	9.83E-02	2.20E+00	2.24E+01
Pyrene	8.08E+01	1.80E+03	2.23E+01
Mercury	4.50E-02	1.00E+00	2.22E+01

Endrin Ketone	8.68E-01	1.90E+01	2.19E+01
Methoxychlor	1.51E+01	3.20E+02	2.12E+01
Cobalt	1.09E+00	2.30E+01	2.11E+01
Endrin	9.64E-01	1.90E+01	1.97E+01
Beryllium	8.31E-01	1.60E+01	1.93E+01
Fluoranthene	1.25E+02	2.40E+03	1.92E+01
Vanadium	2.13E+01	3.90E+02	1.83E+01
Aroclor 1016	2.38E-01	4.10E+00	1.72E+01
Thallium	4.56E-02	7.80E-01	1.71E+01
Aluminum	4.56E+03	7.70E+04	1.69E+01
Zirconium	3.77E-01	6.30E+00	1.67E+01
Chromium	5.89E+03	8.50E+04	1.44E+01
Di-n-octylphthalate	4.76E+01	6.30E+02	1.32E+01
Lead	6.30E+00	8.00E+01	1.27E+01
Hexachlorobutadiene	1.29E-01	1.20E+00	9.30E+00
Hexavalent Chromium	3.45E-02	3.00E-01	8.70E+00
Benzo(a)pyrene TEQ7	1.64E-02	1.10E-01	6.71E+00
Delta-BHC	2.20E-03	3.80E-03	1.73E+00
1-Methyl naphthalene	1.78E-01	1.83E-01	1.03E+00
1,1-Dichloroethene	6.98E+00	4.80E+00	6.88E-01

Final count:	116
weakened	98
strengthened	1
"unchanged"	0
not enough info	17