

**Comments by the Committee to Bridge the Gap
On Boeing's Removal Action Workplan for the Area I Burn Pit**

November 15, 2023

Abstract

DTSC's supposed request for public input on the present plans for remediation of the Area I Burn Pit (hereafter "Burn Pit") is a sham, since DTSC and Boeing already entered into a backroom deal on May 9, 2022, to require only a trivial cleanup of the Burn Pit, one of the most contaminated sites on the SSFL property. Public comment now is thus meaningless, because the sweetheart deal between the polluter and its captured regulator was executed a year and a half ago – without opportunity for public comment or environmental review.

That 2022 DTSC-Boeing deal on the Burn Pit ["Imminent and Substantial Endangerment (ISE) Order"], and the Removal Action Workplan (RAW) that is derived therefrom, prohibits cleanup pursuant to them for protection of public health. Instead, it only requires cleanup to standards for biological receptors, and for those, uses woefully weak Ecological Risk Based Screening Levels (EcoRBSLs) that DTSC and Boeing admit would leave behind pollutant levels that would cause "observable adverse effects." Indeed, the companion 2022 "settlement agreement" and subsequent revised Standardized Risk Assessment Methodology weakened the EcoRBSLs, and the 2022 ISE and 2023 RAW further endanger ecological receptors by requiring the use of High EcoRBSLs, rather than the more protective Low EcoRBSLs. Furthermore, for five toxic chemicals, the RAW uses a cleanup standard of *ten times* the already woefully nonprotective High EcoRBSLs. This plan thus is essentially a plan to allow continued great harm to the very biological receptors claimed to require emergency relief, and no protection at all for human beings at risk from the contamination that keeps migrating offsite.

Of 86 toxic chemicals and radionuclides admitted by Boeing in its RFI Data Summary and Findings Report for the Area I Burn Pit¹ (hereafter "DSFR") to have been detected above human health and/or ecological screening levels, only 15 are included in the RAW as designated for possible cleanup. Thus over 80% of the hazardous constituents admitted to be in the Burn Pit are exempted from any cleanup at all in the proposed action. Furthermore, of the small fraction of constituents that are considered for cleanup, the RAW would leave such high concentrations as to allow the great majority of soil contaminated with them to avoid cleanup.

The present "public input" opportunity is more of a PR effort by DTSC to put a spin on its shameful backroom deal with Boeing than a genuine effort at considering public concerns.

¹ RCRA Facility Investigation, Data Summary and Findings Report, Area I Burn Pit RFI Site, Boeing RFI Subarea 1B Southwest, Santa Susana Field Laboratory, Ventura County, California (DSFR) (CH2M 2021)

DTSC and Boeing Do Not Disclose the Extreme Environmental Violations That Created the Burn Pit Problems in the First Place

We would not even be here discussing the Area I Burn Pit if the predecessors to Boeing and DTSC had done their job in the first place. Instead, Rocketdyne chose to save money by doing open-air burning of toxic materials for decades, and the regulators didn't stop it.

An internal Rocketdyne memo from 1959 says "Several months ago...a large earthen pit [was] constructed... This was, and has since been, used to dispose of dangerous chemicals, fuels, oxidizers, explosives, etc. These are burned with quantities of ordinary contaminated fuels. This procedure eliminated the costly method in use at that time, of trucking them from the facility ... or by other complicated ways of disposal requiring permits from various official agencies, etc."



The Area I Burn Pit was established in 1959 and toxic contaminants were burned in the area for years. Although it was supposedly a chemical burn pit, radionuclides were illegally burned there as well. Concerningly, as discussed below, the Workplan does not require the cleanup of many of the key radionuclides such as Radium-226, Strontium-90, and Cesium-137 at all. Ironically, it

was the revelation of radium contamination in the Area I Burn Pit 15 years ago that increased much of the concern about the site.

A sample document from July 1960 shows that over 1,200 gallons of a wide range of toxic substances were burned in that month at the Burn Pit. This went on, month after month, year after year.

ROCKETDYNE
INTER-OFFICE LETTERS ONLY

TO: Captain E. J. Madden DEPARTMENT 552 - SanSu

FROM: Lieutenant R. G. Addeo DEPARTMENT 552 - SanSu

PHONE: 520 DATE: 1 July 1960

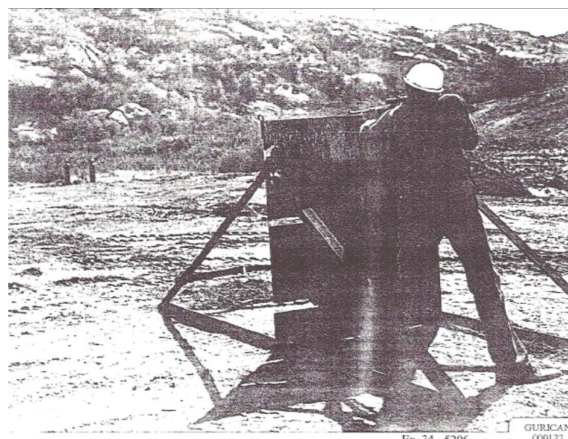
SUBJECT: MONTHLY REPORT - JUNE, 1960; CHEMICAL DISPOSAL - ACTIVITIES AT PITS, INSPECTIONS BURNING, CONWILING, ETC.

The following is a resume of time consumed during various activities at the Chemical Disposal Pits.

CHEMICALS AND/OR FUELS DISPOSED OF	AMOUNTS	FROM WHICH TEST AREA	DISPOSAL AUTHORIZED BY
Hydrazine mixtures	660 gallons	SPA Area	F. A. Nelson 596-305
Ethylene Diamine (contaminated)	55 gallons	SPA Area	F. A. Nelson 596-305
Kalite (sludge)	55 gallons	E.L. Area	H. Sutherland 596-362
RP-1 and Pentaborane	165 gallons	PRA Area	M. G. Blum 591-350
Flushing Oil (sludge)	220 gallons	E.L. Area	H. Sutherland 596-362
Nitrogen Tetroxide (contaminated)	55 gallons	CTL III	F. A. Nelson 596-305
TRAM/TES mixtures with RP-1	55 gallons	Chem. Lab. "A"	F. A. Nelson 596-305
Sodium (used)	50 pounds	Hot Fuel	H. Burge 591-352
Lithium metal powder	25 pounds	Canoga Park	E. G. Addeo 552
Delezene	10 pounds	Chem. Lab. "A"	R. C. Ahlert 591-358
Misc. Lab. Chemicals and samples	25 pounds	Chem. Lab. "A"	R. C. Ahlert 591-358
Chlorine Trifluoride *	600 pounds	PRA Area	F. A. Nelson 596-305

Grand Total Gallons Burned - 1,265 gallons
Grand Total Pounds Burned - 710 pounds

Workers at the Area I Burn Pit would shoot at the barrels of toxic waste to ignite them.



And the toxic fumes from the smoke traveled far beyond the burn pit itself, falling out widely on the land.



Now, the parties responsible for years of gross violations of fundamental environmental and public health protections – DTSC and Boeing, which acquired Rocketdyne – are cutting huge corners regarding the cleanup of the contamination so produced.

The Primary Inadequacies in the Removal Action Workplan

There are major issues with the narrow list of contaminants considered in the Workplan. First, this list excludes more than 80% of the contaminants actually detected at the Burn Pit, thus exempting them from any cleanup at all under the RAW. Section 5.3 of the RAW identifies the contaminants that will be subject to the removal action and the Soil Remedial Goals (SRGs) for them:

The SRGs for the removal are presented in Table 3. SRGs were determined for the COECs identified from the 2022 AIBP ERA and for radionuclides with detections above their respective LUTVs for the AIBP RFI site in the areas shown on Figure 2.

Table 3. Soil Remedial Goals

Analytical Group	Analyte	CAS	Remedial Goal	Units	Source
Dioxin	2,3,7,8-TCDD_TEQ_Bird	1746016-TEQ_Bird	0.000057	mg/kg	High EcoRBSL (hermit thrush)
Dioxin	2,3,7,8-TCDD_TEQ_Mammal	1746016-TEQ_Mammal	0.000005	mg/kg	High EcoRBSL (deer mouse)
Metal	Cadmium	7440439	0.56	mg/kg	High EcoRBSL (deer mouse)
Metal	Mercury	7439976	0.29	mg/kg	High EcoRBSL (hermit thrush)
Metal	Molybdenum	7439987	39	mg/kg	10X High EcoRBSL (deer mouse)
Metal	Nickel	7440020	840	mg/kg	10X High EcoRBSL (deer mouse)
Metal	Zinc	7440666	930	mg/kg	10X High EcoRBSL (hermit thrush)
PCB	Aroclor-1248	12672296	0.64	mg/kg	10X High EcoRBSL (deer mouse)
PCB	Aroclor-1254	11097691	3.9	mg/kg	10X High EcoRBSL (deer mouse)
VOC	Pentachlorophenol	87865	10	mg/kg	High EcoRBSL (deer mouse)
VOC	Trichloroethene	79016	18	mg/kg	High EcoRBSL (deer mouse)
VOC	1,1-Dichloroethene	75354	18	mg/kg	High EcoRBSL (deer mouse)
Radiological	Europium-152	14683239	0.0739	pCi/g	LUTV
Radiological	Plutonium-238	13981163	0.0254	pCi/g	LUTV
Radiological	Plutonium-239/240	E-13207	0.023	pCi/g	LUTV
Radiological	Thorium-230	14269637	2.38	pCi/g	LUTV
Radiological	Thorium-232	7440291-R	3.44	pCi/g	LUTV
Radiological	Uranium-233/234	E-13230	2.18	pCi/g	LUTV
Radiological	Uranium-235/236	E-16045	0.152	pCi/g	LUTV for Uranium-235
Radiological	Uranium-238	7440611-R	1.96	pCi/g	LUTV

LUTVs are January 20, 2013 Provisional Look-Up Table Values from EPA Lab B.

EcoRBSLs are Ecological Risk Based Screening Levels of March 18, 2022, Attachment 3 of Exhibit 5 to the Settlement Agreement (DTSC-Boeing 2022)

CAS = Chemical Abstracts Service
 EcoRBSL = ecological risk-based screening level
 LUTV = Lookup Table Value
 mg/kg = milligram(s) per kilogram
 PCB = polychlorinated biphenyl
 pCi/g = picoCurie(s) per gram
 TCDD = tetrachlorodibenzo-p-dioxin
 TEQ = toxicity equivalent
 VOC = volatile organic compound

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Inserted here, however, is the actual Table 3 from the RAW. One will note that it only includes 12 chemicals and 8 radionuclides, despite far more having been found in the Burn Pit. Of the radionuclides, key isotopes such as radium-226, strontium-90, and cesium-137 are entirely excluded. At the public meeting on November 9, DTSC claimed radium-226 was in fact included and would be cleaned up to background, and not to Look-Up Table values. But nowhere in the RAW that was made public for review is there any such assertion, and indeed, the RAW itself, in Table 3, excludes radium-226 as a radionuclide of concern or as a radionuclide with a cleanup level.

Table 3, which lists Soil Remedial Goals, includes only 8 Radionuclides of Concern and radium is *not* included. Indeed, radium is only mentioned in passing in the RAW as publicly released, regarding Quality Assurance and regarding igniters, but no requirement for cleanup of radium-contaminated soil nor cleanup levels is provided.

We note also that there is no remedial goal listed for numerous other critical radionuclides, such as strontium-90 and cesium-137. For example, there are repeated hits for strontium-90 above EPA's Background Threshold Value (BTV) of 0.075 pCi/g, and multiple hits above the much

weaker Look-Up Table Value² (hereafter “LUT value”) of 0.117 pCi/g ; however, no cleanup whatsoever is proposed for strontium-90.

We also note that use of these LUT values for other radionuclides violates the claims made by DTSC and Boeing that radionuclides on the Boeing property would be cleaned to background. LUT values given in Table 3 all exceed the Background Threshold Values established by EPA. For example, the LUT value given for plutonium-238 is 0.0254 pCi/g whereas the EPA BTV is 0.00425 pCi/g. The plutonium-238 LUT value is thus nearly six times less protective than the EPA BTV. The claim that radioactivity will be cleaned up to background is clearly a falsehood.

Additionally, the cleanup levels for the twenty contaminants that are listed for the removal action are far weaker than what is protective for human health and for biological receptors. The Workplan expressly *precludes* cleanup to a human health based standard, despite the risk to surrounding populations from contaminants’ migration. It instead uses dramatically weakened Ecological Risk Based Screening levels that DTSC and Boeing admit would leave behind toxic concentrations that would produce observable adverse effects in the biological receptors, rejecting the use of Low EcoRBSLs that are based on no observable adverse effects.

Furthermore, for numerous chemicals, the RAW sets cleanup levels not even at the High EcoRBSL, but at levels *ten times higher*. Additionally, for the other chemicals and radionuclides, the RAW appears to contemplate allowing averaging of locations with elevated contamination across areas of lower contamination, generally forbidden by EPA guidance. This would allow leaving contamination not cleaned up, even if it exceeds the very weak cleanup limit being used.

Furthermore, DTSC and Boeing appear to contemplate sending radioactive waste to facilities not licensed for low-level radioactive waste (LLRW). The two sites to which radioactively contaminated wastes would be shipped, as stated in the DTSC meeting on the 9th, are US Ecology’s facilities in Nevada and Utah (we believe DTSC got the latter wrong, as there is no US Ecology facility in Utah, and must have meant Idaho.) But US Ecology’s LLRW facility in Nevada was closed decades ago, and its Idaho facility is prohibited from taking LLRW, and can only take narrow categories of naturally occurring radioactive materials. The only licensed LLRW sites are in Washington State, Texas, Utah (run by Energy Solutions, not US Ecology), and S. Carolina. The squirrely statements made by DTSC and Boeing suggest a plan to send radioactively contaminated soil to disposal sites not licensed for low-level radioactive waste.

The Major Issues with DTSC’s Public Conduct

None of our comments or those of any members of the public make any difference, because this horrid backroom deal between the polluter and its captured regulator was already signed a year and a half ago. Both should be ashamed of themselves.

² California Environmental Protection Agency, Department of Toxic Substances Control (DTSC). 2013. Radiological Lookup Table Values (LUTVs). Draft Provisional. January 30.

The RAW cannot be changed in any significant way based on public comments because DTSC has bound itself to the ISE order that was signed by themselves and Boeing after secret negotiations, with no opportunity for public comment or environmental review. The excuse that an emergency exists requiring breaching CEQA review cannot withstand scrutiny, because the ISE deal was entered into a year and a half ago, and a Final Program EIR certified a year later, with the RAW now still in process. There was plenty of time to permit public comment and include environmental review before signing the sweetheart deal.

DTSC claims this cleanup at the Burn Pit is only initial, and there will be opportunities to return to the Burn Pit area and clean up fully at a later date. However, DTSC has been thoroughly evasive in replying to public questions about whether the specific early action areas addressed in this initial cleanup will be returned to again, or if there are merely other locations elsewhere within the Area I Burn Pit that may receive cleanup measures at a later date. The situation is reminiscent of the Sodium Burn Pit supposed interim measures cleanup which occurred twenty years ago, and where similar promises to return were made, and yet all this time later no additional cleanup has occurred.

To the extent that DTSC were really saying it will come back to the same places partially cleaned up under the ISE and do some further cleanup at the same locations – which does not appear to be the case – it would make no sense. Why would one only do a very partial remediation of particular spots now and then years later come back to those same spots and do more? It appears DTSC is attempting to evade criticism by implying to the public that a fuller cleanup will occur, not now, never now, but perhaps in a distant unplanned future. Even were DTSC's vague implication that it would come back to the same spots later and do more cleanup true, it would be nonsensical. The longer the contamination remains in the environment the more time the contaminants have to migrate downhill into the surrounding communities or spread via biological processes and do further harm to human health and biological receptors.

Additionally, DTSC's misrepresentations on this matter are extreme. A key example at the Thursday November 9 "public input" meeting was the following assertion by DTSC's Brian Faulkner:

"I mean, this is an interim action, right, so, we're, you know, we're, it's limited in its scope. We're gonna go back at the end and... do a more broad cleanup that's gonna cover...everything that isn't covered in this initial action... But, it is an interim action, and, you know, again, **nothing is gonna be left behind when we get to the end of this.**" (emphasis added)

This statement is categorically false. The Final PEIR and the 2022 "Settlement Agreement" *exclude* cleanup to background (overriding previous written statements by DTSC that it would require cleanup of the Boeing areas to background). See, e.g., Final PEIR Section 6.2.7, which expressly excludes cleanup to background as an alternative. Cleanup to background is the technical way of saying "nothing is gonna be left behind when we get to the end of this" – but DTSC and Boeing have actually *eliminated* cleanup-to-background as even an option. Indeed,

it appears that the great majority of the contaminated soil will not get cleaned up. DTSC should correct Mr. Faulkner's false statement and tell the truth – rather than “nothing is gonna be left behind,” much of the contaminated soil will be left unremediated at the end of final cleanup set forth in the PEIR and the 2022 Boeing-DTSC deal.

DTSC claimed that the November 9 meeting was designed to provide the public an opportunity to give input on the RAW. It scheduled the meeting a mere three business days before the comment deadline, making clear DTSC did not intend it to be a meaningful opportunity to get information useful for the comments. DTSC used up the majority of the two hours allocated, for its own presentation and its insistence on rebutting public comments. This left only a short time for the public, who were restricted to two minutes apiece. Furthermore, we are aware of a number of participants present at the “public input” meeting who were not given the opportunity to speak even though their hands were raised for the entire public comment period, and even though some other participants were called on more than once. It was more of a PR session for DTSC than a genuine public comment opportunity.

During this same meeting, DTSC staff also assured the public that they could reach out so that they could have “a more in-depth conversation with our project manager.” We are aware of at least one attempt to follow up with DTSC and schedule a conversation with technical staff wherein additional questions would be addressed. DTSC refused this request outright.

DTSC said instead one should email any questions. We are aware of at least one such email with technical questions, requesting a response by Monday evening, given the Wednesday comment deadline. Answers were only provided late Wednesday morning, and only to some of the questions, making meaningful comments by the deadline impossible.

Furthermore, DTSC stated at the meeting on the 9th that it would not provide any written response to the public comments submitted. All of this conduct, pretending to take comment on the agreement that was actually executed a year and a half ago, is indicative of a public relations exercise, not a genuine consideration of public opposition. The backroom deal allows Boeing to avoid cleaning up most of the contaminated soil in the Burn Pit in this remedial action, and nothing the public says about the sweetheart deal between polluter and regulator will make any difference.