

State Assembly Committee on Environmental Safety and Toxic Materials
*Informational Hearing: Keeping Communities Safe: Oversight of Toxic Waste
Facility Closure Plans*

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Sacramento, California, State Capitol, Room 4202

Testimony of James Wells, PG, PhD¹
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Introduction

Good afternoon, my name is James Wells and I serve as the Technical Advisor to the Exide Community Advisory Group. Thank you for the invitation to speak with you today. This position is funded jointly by South Coast Air Quality Management District and the Department of Toxic Substances Control. Closure of the Exide facility and cleanup of both on-site and off-site contamination is obviously a highly complex endeavor and my role is to provide technical advice to the Exide Advisory Group to help them evaluate the efficacy and effectiveness of the planned projects. For the last three years, I've served in a similar role at the Montrose and Del Amo Superfund sites in Torrance: advising community groups on the technical aspects of US EPA's proposed cleanup plans. I have also advised attorneys on technical aspects of environmental lawsuits. I am an environmental geologist with a Bachelor's Degree in Geology from Dartmouth College and MS and PhD degrees from University of Washington. I've been working on cleaning up contaminated sites for about 25 years: characterizing the nature and extent of contamination, advising responsible parties of their obligations for complying with various state and federal rules, negotiating with regulatory authorities and cleaning up soil and groundwater at sites in California and across the country.

The Closure Plan

The community wants to raise its children in a healthy environment, free from lead contamination. As such, they need and deserve a holistic and durable cleanup of lead and other Exide contaminants at the facility and in neighborhoods surrounding the Exide Facility.

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The root cause of much of the confusion about how this project is being handled is that different parts of the overall cleanup are being regulated under different regulatory programs: RCRA Closure and RCRA Corrective Action. The Closure Plan and the Draft EIR are focused almost entirely on RCRA Closure, which is all about safely removing the structures (and, in particular, the hazardous waste management units) from the site. In other words, RCRA Closure is mostly about knocking down the infrastructure of the smelter and safely removing structural components that have been exposed to (or are themselves) hazardous waste. The soil and groundwater cleanup is managed separately under the Corrective Action program.

The Closure Plan discusses how to decommission and remove the 103 Hazardous Waste Management Units at Exide. In the Draft EIR, the identified alternatives only vary from Exide's proposed project in small ways. When I first read the voluminous Draft EIR and discovered that alternatives were proposed for only two components of the Closure Plan, my first thought was to question the adequacy of the Draft EIR. For example, the issue of lead in the kettles is important but it represents less than 1% of the projected cost of Closure. Why are we focusing so much attention on this one small piece of the overall project? What does it mean that the Draft EIR finds no need to propose alternatives to the vast majority of the project, thus the EIR more or less just nibbles around the edges of this project? Upon reflection, I don't think this is a deficiency in the EIR. I think the answer is that (compared to the on-site and off-site soil cleanup) the Closure part of this project probably should be the least controversial of the three main components of this project. We know how to test materials, we know how to protect workers, we know how to dismantle hazardous facilities.

However, I believe one of our fundamental responsibilities is to do no more harm: closure activities must not impose further contaminant burden on the community. This points to one of the real challenges for the Closure Project, which is to insure compliance with the written plan. This requires constant vigilance during Closure for dust suppression, truck loading, truck washing and transportation routes: all the things that could allow more lead to escape into the neighborhood if not managed properly.

Regarding the kettles, there are three identified options for removing the tons of lead that remain in the kettles and according to the Draft EIR, all three carry approximately the same environmental impacts and all three are theoretically acceptable. Considering its acceptability from the perspective of environmental impacts, mechanical removal of the lead is the method I would recommend. Remelting the lead would be faster and probably cheaper but this requires restarting part of the facility & relying on air pollution control strategies that the community (understandably) does not trust. Water jetting

creates a lot of contaminated water that would be difficult to contain and treat, so mechanical removal is (in my opinion) the best of the three options.

I've talked about the need for a holistic cleanup approach. I will note that the Draft EIR only covers closure, not corrective action. There is a tacit acknowledgement that there will be significant soil and groundwater contamination remaining after the Closure project is completed. For example, releases to groundwater from contamination in the old slag landfill will continue, essentially unabated even after successful closure. So, it is baffling to the lay reader to find that one of the goals of the closure plan is to: "control, minimize or eliminate...post-closure escape of hazardous waste..." when this seems not be really be a goal of the Closure process but, rather, is deferred until completion of the corrective action.

RCRA Corrective Action

RCRA Corrective Action process is designed to address cleanup of releases to the environment from RCRA permitted facilities. The corrective action process for this site was launched in 2002.² The general sequence of activities for RCRA corrective action is as follows:

- Step 1. Current Conditions Report
- Step 2. RCRA Facility Investigation (RFI) Work Plan
- Step 3. RCRA Facility Investigation and RFI Report
- Step 4. Interim Corrective Measures (if needed)
- Step 5. Corrective Measures Study
- Step 6. Remedy Selection
- Step 7. Remedy Implementation (e.g. site cleanup)

Fourteen years after issuing the corrective action order, Exide and DTSC are working through steps 2 and 3 of the seven-step sequence.³ This process is taking too long, but sadly, this is not particularly unusual. The rules governing corrective action were not intended to be efficient. It is a methodical and lengthy process. However, in my experience, the timeline can be made much more sluggish if the responsible party is recalcitrant. These are very expensive undertakings and some (but certainly not all) responsible parties figure out how to manage the process by being just cooperative enough to avoid enforcement actions, but not too cooperative, which can slow the give-and-take regulatory process down to a crawl.

² DTSC, 2002, Corrective Action Order.

³ Advanced Geoservices, March 26, 2013, revised Comprehensive RCRA Facility Investigation Work Plan; Advanced Geoservices, June 7, 2013, Addendum No. 1 Revised Comprehensive RFI Work Plan; Advanced Geoservices September 20, 2013, Addendum No. 2, Revised Comprehensive RFI Work Plan.

I also suspect that the promise of future RCRA Closure contributed to the drawn-out timeline for Corrective Action. For example, folks have known since the 1980s that soil under the surface impoundment in the South Yard is highly contaminated with lead. There seems to have been no effort to do anything about this, probably because it would have been highly disruptive to Exide and anyway, surely it would be dealt with during Closure sometime in the future.

Interplay between Closure and Corrective Action

There is considerable discomfort in the community regarding DTSC's distinction between closure and corrective action at this site. This bifurcation of the cleanup process does not make sense to laypeople. Among other things, some members of the Advisory Group are concerned that the lack of a single comprehensive plan for restoring the site could leave the project with inadequate funding from Exide to accomplish this monumental task. Implementing two programs concurrently is particularly problematic with respect to soil contamination because that is where the programs overlap. For example, I draw your attention to the map attached to my testimony. The West Yard of the former Exide facility would barely be touched during RCRA Closure. However, this is the location of the Old Slag Landfill that includes between 60,000 to 80,000 cubic yards of industrial waste, as well as the Earthen Acid Dump Pit⁴ which appears to have created such acidic conditions in the subsurface that lead and other metals have been mobilized down to the water table and have impacted groundwater quality.

The Closure Plan calls for removing the top five-feet of soil from directly under the structures being removed, but only if the contamination is so bad as to qualify the soil as a hazardous waste and only if the contamination is directly related to the overlying hazardous waste unit, not older, site-wide impacts.

The hazardous waste threshold for lead in soil is 1,000 ppm (parts per million). This is a far more lenient cleanup standard than would likely be imposed under Corrective Action. The hazardous waste threshold for trichloroethene (also called, TCE) is 2,040 ppm. Soil below this threshold can still constitute a significant threat to human health and the environment. Indeed, typical soil cleanup goals for TCE in California are on the order of 1 ppm: 2,000 times lower than the target proposed by Exide in the Draft Closure Plan.⁵ It is clear from this example that the Closure Plan would only require a partial cleanup of on-site soil, leaving the bulk of soil and groundwater cleanup for the Corrective Action program. Further, the Closure Plan calls for installing an engineered cap (at a cost of 2 million dollars) over much of the north and south yards, seemingly precluding any further soil cleanup under Corrective Action. This is an

⁴ Advanced Geoservices, October 5, 2012, Revised Current Conditions Report, Exide Technologies, p. 3-14.

⁵ Advanced Geoservices, Closure Plan (Revised), Exide Technologies, November 2015, Table 3.3.

example of how decisions made during RCRA Closure can inadvertently constrain DTSC's options for further cleanup.

In summary, the Closure process is a very important part of the holistic cleanup of the Exide facility and surrounding neighborhoods, but the way it deals with contaminated soil is intrinsically inefficient and possibly counter-productive. If we have to straddle these two regulatory programs, we should make sure to use them logically and efficiently. The Closure process should be used to safely dismantle and remove the built infrastructure and the Corrective Action process should be used to manage all aspects of soil and groundwater cleanup. A possible solution is to not excavate any soil during Closure and require a temporary asphalt cap over the entire site as an interim remedy against resuspension of lead-contaminated soil. The cap would be maintained while the Corrective Action process proceeds through the various steps toward a complete cleanup, leaving open the full range of remedial options.

How Can the State Avoid More Exides?

With regard to contaminated sites, DTSC and RWQCB are reactive agencies: they are organized to respond to problems that are brought to them but seem not to be very good at proactively uncovering hidden environmental problems. Part of the problem is that these problems don't announce themselves, so they remain hidden in plain sight. For example, the contaminated soil that has impacted so many homes and businesses surrounding Exide is not generally discernable to the naked eye. The groundwater contamination affecting the neighborhoods near Del Amo and Montrose is not visible. The vapors that emanate up from that groundwater has no odor.

The problem at Exide was knowable many, many years ago, but we failed to recognize it. Exide conducted on-site soil sampling in the 1980s and discovered lead in soil at levels dozens of times higher than hazardous waste criteria. DTSC conducted off-site soil sampling around the Exide site in 1994 and found elevated levels of lead. We knew long ago that emissions from this site were potentially problematic. After all, the dust collected by Exide from its pollution control equipment was so rich in lead that they simply re-smelted it! AQMD published plume dispersion maps showing impacts in the neighborhood. The levels didn't look too bad considering the operation of modern air pollution control systems at the facility, but did anyone look at those air dispersion maps and ask, "what would the numbers have looked like for all those decades the plant operated without air pollution control?" Starting in 2001, there was published literature raising concern about the impacts of secondary lead smelters on surrounding neighborhoods. Shortly thereafter, US EPA began a comprehensive evaluation of former secondary lead smelters around the country. Problems from secondary lead smelters were on

the radar of the environmental community. We need programs at DTSC where scientists and engineers are empowered to connect the dots at sites like this to proactively identify problems like Exide more rapidly.

Once identified, the process of cleaning up a highly contaminated site is very complex and it can take many years to navigate the rules of RCRA, CERCLA or other federal and state regulatory regimes. However, there seems not to be a fast-track or accelerated pathway for cases in which people are directly exposed and cannot be protected until a cleanup is complete. We have hot shot fire crews for forest fires. We have emergency rooms in health care. We have quick-response repair crews if our power goes out. We don't have a quick response team for environmental problems like Exide. If our power goes out, we don't expect the power company to say, "Well, we are scheduled to inspect lines in your area next month so we'll look into it then." This would not be acceptable: we expect quick action. However, with regard to soil and groundwater cleanup, we are told there is no such thing as quick action. I reject that theory. This can never be a truly fast process but I believe DTSC has the authority to move a high-priority project along much more rapidly than a typical project.

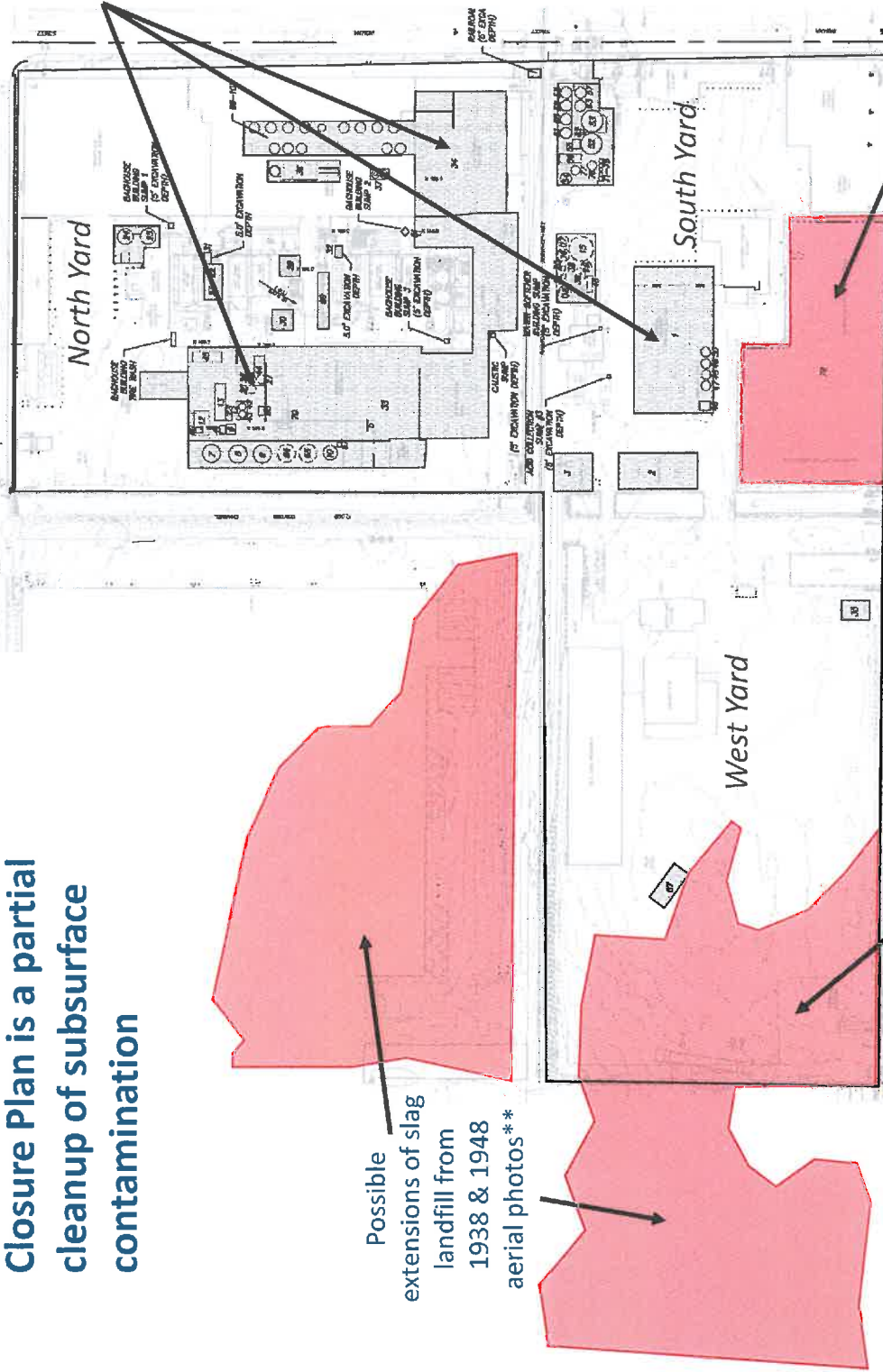
I've seen this painfully slow process at other sites. Another sad example is the Carousel Tract in Carson where it took decades to rediscover petroleum contamination under hundreds of homes and it took the Regional Board 10 years of study before deciding what to do about it, and the interim response was to advise the residents not to let their children play in their yards. Through their actions, DTSC is sending the community the message that a thorough cleanup can only be accomplished through a glacially slow process. By the way, this is not just an issue for the on-site work. You can do the math for the offsite residential cleanup and it's pretty obvious that this is destined to be a very, very long process. I believe the community is justified in expecting a cleanup that is both thorough and timely. We should not be forced to choose between these two priorities.

If the State could streamline and accelerate the cleanup process, that would be a big step toward rebuilding trust with the community. In closing, we need a fast-track for sites like Exide where the consequences of a years-long or decades-long cleanup is paid with the health and well-being of our children.

Thank you.

Soil Component of Closure Plan is a partial cleanup of subsurface contamination

Conceptual Excavation Plan for Exide Facility Closure (maximum of 5-ft in gray shaded areas)*



Possible extensions of slag landfill from 1938 & 1948 aerial photos**

No excavation for Old Slag Landfill & Earthen Acid Pit (onsite depth = 45-ft; onsite volume = 60,000 to 80,000 cubic yards; offsite volume unknown)

No excavation for soil under surface impoundment (previous sampling found lead at concentrations up to 32,000 ppm)

Sources

*November 2015 Closure Plan, Figure 16.2

**Advanced Geoservices, October 2006, Phase II Facility Investigation, Figure 12

