QUEMETCO'S LEAD LEGACY

A CYCLE OF INJUSTICE AND CONTAMINATION IN SOUTHERN CALIFORNIA

EARTHJUSTICE

ACKNOWLEDGMENTS

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EXECUTIVE SUMMARY

Quemetco is a secondary lead smelter in Los Angeles County operating within 600 feet of homes. The people surrounding Quemetco have suffered, and continue to suffer, from its more than sixty years of operation–including its long history of violations and its failure to comply with permitting conditions–which has resulted in lead contamination and toxic pollution in the air, soil, and water. Nevertheless, Quemetco evades responsibility for the devastating harm of its operations by working a system of oversight that has proven to be inadequate for the task of protecting human health and the environment. Regulators ask for plans, impose permit conditions, and seek testing of the air, soil, and water to understand the scope of the impact of Quemetco's operations. Quemetco submits inadequate plans, delays implementation of permit and regulatory requirements, and refuses to engage in appropriate sampling of air, soil, and water. When information is gathered, Quemetco claims that its operations are not the source of the high levels of lead and other toxins found in the air, soil, and water samples–no matter how much evidence exists to the contrary. Regulators and Quemetco have settled into a cycle of failure in which they spin around-and-around, while leaving the people who live near Quemetco in harm's way.

Quemetco is currently seeking approval from the South Coast Air Quality Management District ("SCAQMD") to expand its operations. This expansion, if approved, would result in an increase in its operations from processing 600 tons per day of lead-containing-materials to 750 tons per day. Further, the expansion would authorize Quemetco to operate its lead smelting furnaces 24 hours a day, 7 days a week, 365 days a year. Quemetco is also in the midst of the permit renewal process for its long-expired hazardous waste permit with the Department of Toxic Substances Control ("DTSC"), a process that has been delayed because of its ongoing failure to provide all of the information necessary for DTSC to process the permit renewal application.

REGULATORS AND QUEMETCO HAVE SETTLED INTO A CYCLE OF FAILURE IN WHICH THEY SPIN AROUND-AND-AROUND, WHILE LEAVING THE PEOPLE WHO LIVE NEAR QUEMETCO IN HARM'S WAY.

Quemetco belongs to a long line of secondary lead smelters that have polluted and harmed communities. There used to be hundreds of secondary lead smelters in the United States that left behind contaminated soil, surface water, and groundwater. Over time the number of secondary lead smelters has dwindled and now there are only twelve remaining in the United States. Quemetco is the last one in California.

The lead smelting industry is a remnant of a time when people ignored the impacts of lead on human health and the environment. Today there are countless studies documenting the harms of lead exposure, as well as the harms from the numerous other contaminants that are emitted by secondary smelters, such as arsenic and hexavalent chromium. The process of secondary lead smelting results in the release of these harmful compounds throughout each step of the process: from

crushing the batteries, which results in the dispersal of lead fragments and lead dust; to smelting and refining, which result in the dispersal of lead fumes and other toxins. These lead fragments, lead dust, lead fumes, and toxic chemicals are inhaled by workers, settle onto workers' clothes, and condense into particles that end up settling on soil and any other nearby surfaces in the surrounding communities. The lead in the soil can then migrate to the surface water and groundwater. Residents are ultimately exposed to lead and other toxic compounds through these various pathways– air, soil, and water.

CALIFORNIA'S LEGISLATORS AND REGULATORS HAVE THE OPPORTUNITY AND OBLIGATION TO STAND WITH COMMUNITY MEMBERS AND FIGHT TO END THE CYCLE OF FAILURE.

The harms inflicted by secondary lead smelters and the toxins that they emit persist far beyond their closure dates and can cost millions of dollars to clean up. Further, the financial assurance mechanisms that are meant to ensure that companies like Quemetco pay to clean up its contamination once it closes are not working as intended and thus, the burden is often left to taxpayers to pay for remediation.

Community members near Quemetco directly experience the harms of secondary lead smelting and have raised their concerns about the facility's detrimental impact on their health and their lives for several decades. They have spoken about losing loved ones to cancer and suffering from chronic health conditions like headaches, sore throats, asthma, respiratory problems, and nausea. They have repeatedly raised the alarm that their children are suffering from the impacts of lead exposure. They have wondered how to protect their families from a facility that continues to operate, unabated, despite a long history of violations and lack of compliance. Community members are opposed to Quemetco's proposal to increase its operations and instead, demand a focus on advancing the transition that is already taking place away from the use of lead-acid batteries and secondary lead smelters and towards a cleaner future with alternative technologies. California's legislators and regulators have the opportunity and obligation to stand with community members and fight to end the cycle of failure.

To that end, we recommend that the legislature update the financial assurance provisions to ensure that companies provide enough money to cover the costs of fully cleaning up their contamination. The legislature should also require DTSC to update its regulations regarding the agency's annual assessment of a facility's violations. Such assessments must result in meaningful consequences for facilities like Quemetco that have a history of violations and non-compliance. We further recommend that the SCAQMD deny Quemetco's currently pending expansion request and that DTSC deny Quemetco's application to renew its hazardous waste permit. Finally, we recommend that DTSC establish a process and timeline to shut Quemetco down and develop a comprehensive clean-up plan.

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INTRODUCTION

Lead is a potent neurotoxin that accumulates in the body and has a harmful impact on numerous organs and bodily systems. There is no safe level of lead in humans. Lead in children is especially dangerous as it can impact their developmental and neurological systems resulting in life-long harms. Once those harms occur, there is no way to reverse them.

This report builds on and adds to the history of the well-known harms of lead and specifically the harms of secondary lead smelters that extend far beyond their closure date. This report focuses on the last remaining secondary lead smelter in California and situates this facility in the long line of secondary lead smelters that have devastated communities and the environment as a result of their toxic operations. Specifically, this report provides an account of the impact of Quemetco's operations on the air, soil, water, and nearby residents and details how Quemetco has exploited a failed regulatory structure that does little to protect the interest of people and the environment while actively protecting polluting facilities such as Quemetco. We call on California's legislative and regulatory bodies to fulfill their oversight duties and hold Quemetco accountable for its historic and ongoing harm to people and the environment.

BACKGROUND

SECONDARY LEAD SMELTING INDUSTRY

There are currently a small number of operational secondary lead smelters remaining in the United States. The consolidation of the secondary lead smelting industry began in the 1970s as larger facilities replaced smaller facilities.[i] Between 1975 and 1994, over one hundred facilities, mostly small, closed.[ii] This trend of consolidation has continued in recent decades with the number of secondary lead smelters decreasing from 53 to 12 over the past thirty years.[iii]

In addition to the general trend of consolidation, there are also fewer facilities as a result of other factors. For starters, there has been a begrudging acknowledgment of the severe health impacts of exposure to lead and the emissions of secondary lead smelters. Thus, these facilities faced more regulation by state and federal agencies. It is not the regulations in and of themselves that have led to a decline in secondary lead smelters but rather the fact that secondary lead smelters were required to internalize some of the negative externalities of their operations. Even with regulations, the true cost of their operations is still not entirely accounted for, as can be seen in the substantial amount of money that it costs to clean up former secondary lead smelters and the off-site contamination they cause. In many cases, these costs are paid by taxpayers rather than the polluting company.

Another reason for the decline in the number of secondary lead smelters is stalling demand for lead due to the increasing availability of other battery technologies. For instance, RSR Corporation, the owner of Quemetco, acknowledges that the increased "performance and reduced cost of lithium-ion batteries and other energy storage technologies" represent a threat to their industry.[iv] The US Geological Survey also notes that there has been a decrease in refined lead production and consumption due to an increase in usage of lithium-ion batteries, as well as a decline in automobile production.[v]

THE TRUE COST OF THEIR OPERATIONS IS STILL NOT ENTIRELY ACCOUNTED FOR. . . . IN MANY CASES, THESE COSTS ARE PAID BY TAXPAYERS RATHER THAN THE POLLUTING COMPANY.

QUEMETCO

Quemetco is one in a long line of secondary lead smelters that have contaminated communities and the environment. The Quemetco facility is located in City of Industry, California, and the property has been used for smelting operations since 1959. Quemetco processes about ten million batteries each year with a throughput of 600 tons per day and produces 120,000 tons of lead for use per year.[vi]

Quemetco is currently seeking approval from the South Coast Air Quality Management District ("SCAQMD") to expand its activity by twenty-five percent. This expansion, if approved, would authorize Quemetco to increase its throughput to 750 tons per day and to operate its lead smelting furnaces 24 hours a day, 7 days a week, 365 days a year. Quemetco is also in the midst of the permit renewal process for its

hazardous waste permit with the Department of Toxic Substances Control ("DTSC"). Community members who live near Quemetco and have suffered from its toxic contamination for decades oppose Quemetco's expansion and permit renewal.

POLITICAL OPPOSITION

In addition to community members, local political representatives have also expressed their opposition to Quemetco's operations. In 2019, Los Angeles County Supervisors Hilda L. Solis and Janice Hahn authored a motion in opposition to the expansion that was subsequently approved by the full Board of Supervisors. In their motion, they noted that Quemetco's proposed expansion "would increase hazardous waste, air pollution, including lead and arsenic emissions, water quality issues, traffic, and public health impacts in a community that is already disproportionately impacted by environmental and health risks." In 2020, Supervisors Solis and Hahn submitted another motion that was approved by the Board in which they expressed their opposition to Quemetco's waste permit being considered for renewal until the facility achieved full compliance with all environmental laws.

COMMUNITIES NEAR QUEMETCO

The Quemetco facility is directly adjacent to the communities of Hacienda Heights, Avocado Heights, Whittier, and La Puente. Homes and schools–the closest just 600 feet away–surround Quemetco. Specifically, twenty-one schools are located within a 2-mile radius of Quemetco.

The population surrounding Quemetco is predominantly low-income and communities of color. Within a 3-mile radius of the facility, the population is 93 percent minority and per capita income is $22,266.[vii] According to CalEnviroScreen–a science-based mapping tool used by the California Environmental Protection Agency to identify census tracts that are disproportionately burdened by, and vulnerable to multiple sources of pollution–the communities surrounding Quemetco are in the 86th to 90th percentile.[viii] A higher percentile indicates greater environmental burden and vulnerability. Communities that are in census tracts that score above the 75th percentile are identified as environmental justice communities.[ix]

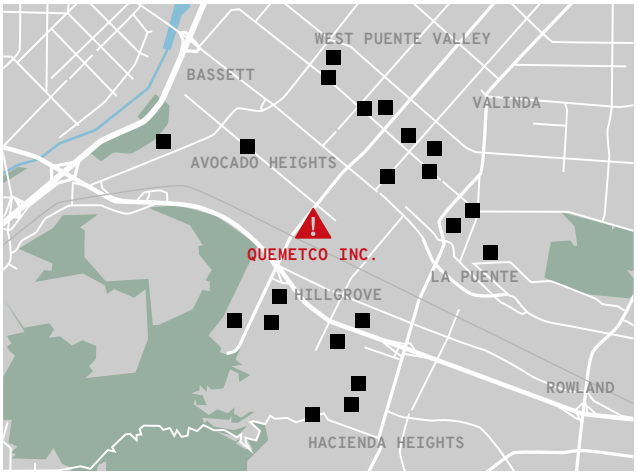

Figure 1: Schools within 2 miles of Quemetco

DECADES OF HARM: COMMUNITY VOICES

The community members who live near Quemetco have repeatedly voiced their concerns about the facility to California's regulatory agencies, including DTSC and SCAQMD. For instance, in a 1996 letter to DTSC, a mother expressed her worries about Quemetco because her child (one year and eleven months old) had an elevated blood lead level of 12 µg/dL.[x] In a community questionnaire submitted that year, a teacher noted that her special education students had lead poisoning symptoms.[xi] In public meetings in 1996 and 2004 regarding Quemetco's application for a hazardous waste permit, community members expressed the same concerns that they continue to express at public meetings today. Residents at the public meeting in 1996 voiced concerns about their health and the health of family members and neighbors who were suffering from headaches, asthma, mental health issues, and cancer; and workers at a plant nearby expressed concern about Quemetco's

Figure 2: Proximity of Quemetco to nearby residents

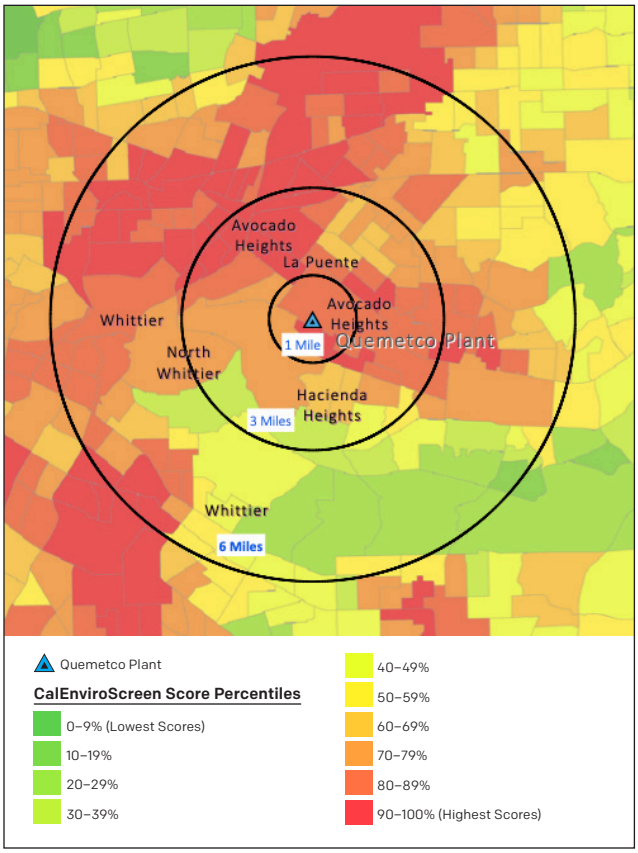

Figure 3: CalEnviroScreen Score Percentiles by Tract, as of October 25, 2018. (Source: Office of Health Hazard Assessment; LA Times)

operations and how the emissions impacted their health and left them with a metallic taste in their mouth.[xii] Specifically,

- Kenneth Gunn, a Teamster's Union Steward at the Volkswagen plant a couple doors down from Quemetco, stated: "Myself and our workers from the plant are very concerned about the lead, as well as the other emissions; arsenic, plutonium, sulfuric acid, as well as whatever else might be emitted … We seem to be held captive in terms of the exposure to whatever direction the wind blows. I know the effects on the shop floor as we constantly hear complaints of bad air quality coming from our doors on the dock there … [O]ur workers are left with a metallic taste in their mouth … Personally, I hear that breathing is being affected and they try futilely to avoid the toxins by not breathing. And that's not very practical. People have complaints of being extraordinarily tired or lacking of energy after their shifts, sore throats, headaches, nausea."[xiii]

Numerous residents also complained about the strong odors coming from Quemetco at that time. Quemetco has taken steps to reduce these odors so they are no longer the primary complaint of community members. But for many years the odors had a profoundly negative impact on peoples' quality of life:

- Marie Fergusson stated: "I'm angry because I'm an outside person. And when I go outside, especially sometimes at night, the odor is so strong–and I'm an asthmatic, my granddaughter is an asthmatic, my neighbor is an asthmatic. And we're all having troubles with our asthma … And I'm ill. And I get angry because I can't go outside."[xiv]

- Ed Dominguez stated: "I'm a resident here for the last nine years. And when I drive [by Quemetco] I get these odors; I have to roll up my windows now because of the headaches I received from this. And my concern is what is Quemetco going to do now? … That's my concern because I have a little brother. He goes to school right here. And I'm concerned about his health … I just feel, personally, it's going to affect my brother in the long run if they don't do something now."[xv]

In letters and at a public hearing in 2004, residents described living near Quemetco–about the impacts to their health, including sore throats, headaches, nausea, coughing, and respiratory problems; about the loss of loved ones from cancer; and about the increased number of children with learning disabilities.[xvi] Specifically,

- Lillian Avery stated: "These emissions of toxic particles and contaminants into the ambient air over Hacienda Heights have continued without

Community members at a local hearing to discuss Quemetco.

ceasing, day in and day out, for over 31 years … The constant barrage of emissions causes acrid and offalic tastes, sore throats, headaches, nausea, coughing, and inhalation and respiratory problems … I have reason to be concerned. My husband died in 1992 after suffering for three years from mouth and throat cancer."[xvii]

- Troy Veilleux stated: "[I]t seems like living in Hacienda Heights has become a full-time job. Every night we get a meeting for–we've got the landfill, the double-decker freeway. And you know, really unfortunately for all of us, we have Quemetco. And it's really disappointing to work all day and try to pay your house payment and come home and hear something as terrible like a toxic waste facility … whatever you want to call it. And you really feel helpless after a while."[xviii]

- Susan Moran stated: "I'm a kindergarten teacher. I have taught for 20 years. The last seven have been at Los Robles. There is an increasing number of students who have learning disabilities, speech disorders, hyperactivity, attention deficits, reading disorders. And there are so many that our district cannot service all of those children. Now, you know, as a teacher and as a resident of this community, it's my responsibility to help those children not only in teaching them, but in every way that I can. And if their health is not what it should be, then their learning is not what it should be. And I just think this is really unfair."[xix]

In 2018, during scoping meetings for Quemetco's proposed expansion, community residents again expressed profound anger, frustration, and concern. Along with condemning Quemetco for its long history of numerous fines and violations for excessive emissions of toxic pollution, community members described their experiences of living near Quemetco. Residents shared accounts of themselves and family members becoming ill and dying of cancer, despite a lack of family history of the disease. Residents also discussed the burden of constantly fearing that their children will suffer from growing up in an environment where Quemetco's toxic operations have contaminated the air, soil, and water. Ultimately, residents expressed severe doubt that the same agencies, including SCAQMD, which neglected the communities next to the Exide secondary lead smelter in California, would protect them against Quemetco. Specifically,

- Maria Avila stated: “I’m poisoning my kids every day by just staying in the home that we’re in … I don’t go to work every day, 40 hours a week plus, to come home and feel like I’m a prisoner in my own home. I don’t want to go outside, I don’t want to be in the yard. Why? Because I see chemicals everywhere.”[xx]

- Richard Kamimura stated: “When they choose a pound of lead over a pound of human life, something is wrong. And until they do something about it, nothing will be done. I think the people here are finally fed up and they are going to say no more poisoning. That air, that emission is poisoning our children 20 hours a day, six days a week, and you want to allow it 7/24, all the time. What do you tell your children, ‘You don’t breathe. That’s the only way we can protect you?’”[xxi]

“WHEN THEY CHOOSE A POUND OF LEAD OVER A POUND OF HUMAN LIFE, SOMETHING IS WRONG. . . THE PEOPLE ARE FINALLY FED UP AND THEY ARE GOING TO SAY NO MORE POISONING.”

- Dianne Ortega stated: “Even after violation after violation, you continue to say, ‘Okay. One more time. A little longer.’”[xxii]

- Beatriz Ricarti stated: “Well, the reason that I’m here is because I am very concerned about this Quemetco being here without us having nothing to do with it. My son died of cancer. I have cancer. A dog in my block died of cancer, so, of course, there’s something in the environment that is causing us to have cancer … I wonder if at least one of you live in the neighborhood, then you would know how it feels that nobody is paying attention at what we’re feeling, what we are going through.”[xxiii]

Richard Kamimura

Beatriz Ricarti

Community members have continually taken time over the years to show up at meetings and provide testimony about the impacts of Quemetco on their lives. They have pushed for the agencies to hold Quemetco accountable and for Quemetco to improve its operations. Their efforts did result in Quemetco updating its air pollution control system in 2008, but only after a good deal of fighting and foot dragging on the company’s part. And while the air pollution control system has lowered emissions, that system does nothing to clean up the contamination from decades of under controlled operations.

HUMAN HEALTH AND ENVIRONMENTAL HARMS OF SECONDARY LEAD SMELTERS

The human health and environmental harms of secondary lead smelters are extensive and well-documented. There is no doubt that secondary lead smelters emit lead and other harmful, toxic chemicals into the air, soil, and water. Available information specific to Quemetco's operations and its impacts to the soil and water, both on and off-site, establish that Quemetco's impacts are extensive as well.

LEAD IS NOT THE ONLY TOXIC COMPOUND

There is no safe level of exposure to lead.[xxiv] Even very low blood lead levels have been linked to neurological damage in children.[xxv] Once absorbed, lead accumulates in the body and is toxic to many bodily systems and organs, including the cardiovascular system, the blood (thus, causing conditions like anemia), the kidneys, the nervous system (thus, producing symptoms such as headache, lethargy, muscle weakness, tremors, and paralysis), and the reproductive system, among others.[xxvi]

Because lead mimics calcium, it tends to accumulate in the teeth and bones.[xxvii] Lead is released into the bloodstream from the bones during demanding situations, such as when levels of calcium in the blood are low or when a bone is broken.[xxviii] The lead that has accumulated in the bones is also released into the blood during pregnancy, putting both the mother and fetus at risk.[xxix] Pregnant women who are exposed to lead are at increased risk of miscarriage, stillbirth, premature birth, and low birth weight.[xxx] Children are especially vulnerable to the toxicity of lead and can suffer "profound and permanent adverse health effects, particularly affecting the development of the brain and nervous system."[xxxi] Lead exposure can also result in delayed growth and stunting due to its inhibition of the body's use of vitamin D and iron.[xxxii]

In addition to emitting lead, secondary lead smelters also emit a variety of other hazardous contaminants, including antimony; arsenic; barium; benzene; 1,3-butadiene; cadmium; dioxins/furans; chromium; mercury; manganese; naphthalene; nickel; and selenium.[xxxiii] As Quemetco noted in its most recent Health Risk Assessment Report, the top three cancer risk drivers at its facility are arsenic, hexavalent chromium, and trichloroethylene ("TCE").[xxxiv] Arsenic emitted from Quemetco is the main contributor to chronic health risk for residents and workers and primarily impacts the central nervous system.[xxxv] Arsenic and mercury emissions from Quemetco are the main contributors to acute health risks and primarily impact the developmental and reproductive systems.[xxxvi]

Arsenic is classified as a known human carcinogen by the International Agency for Research on Cancer and the National Toxicology Program.[xxxvii] Arsenic compounds can cause lung, bladder, skin, kidney, liver, and prostate cancers. Arsenic is also known to be toxic to the cardiovascular system, the blood, and the nervous system.[xxxviii] Exposure to hexavalent chromium increases the risk of lung and nasal cancers.[xxxix] Hexavalent chromium can also cause irritation to the nose, throat, and lungs, resulting in coughing and shortness of breath.[xl] TCE has been shown to impact the central nervous system, as well as the liver, kidneys, gastrointestinal system, skin, immune system, and endocrine system.[xli] TCE exposure is associated with a greater risk of kidney, liver, cervical, and lymphatic system cancers.[xlii]

HARM TO WORKERS AND THEIR FAMILIES FROM SECONDARY LEAD SMELTER OPERATIONS

The process of secondary lead smelting results in emissions that are harmful to the environment, workers, and nearby residents. These emissions occur at various stages of the smelting process. The smelting process involves three main steps: crushing, smelting, and refining. First, the used batteries are crushed into smaller pieces, then the small pieces of lead are dried in a rotary dryer and fed into a reverberatory furnace. In the furnace, the lead pieces turn into molten lead and any impurities float to the top and are removed as slag. Lastly, various amounts of other constituents, such as copper, nickel, antimony, arsenic, and/or tin, are added to the molten lead in refining kettles, which ultimately leads to the production of metal bars or ingots that are sold to customers. Figure 4 illustrates the numerous points at which lead and other contaminants are released during the process. For instance, during the crushing stage, lead fragments and lead dust are dispersed into the air and settle on workers, soil, and other nearby surfaces. During the smelting and refining

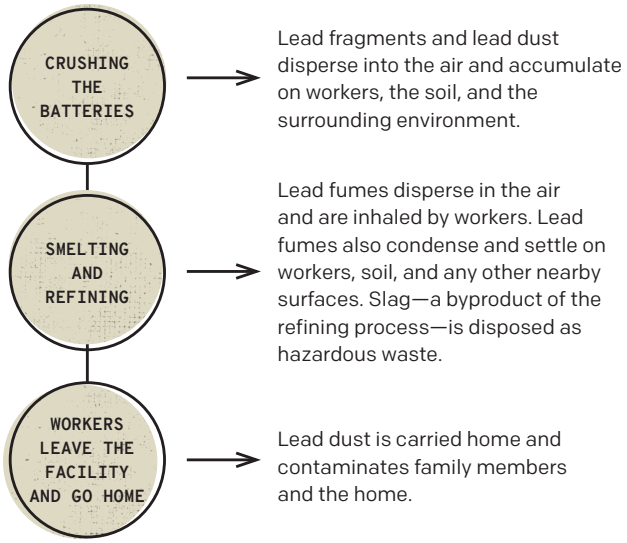

Figure 4: Secondary Smelting Process

stages, lead fumes disperse in the air and end up being inhaled by workers and condensing into particles that also settle on soil and other surfaces.

Studies have shown that workers at lead-acid battery smelting facilities and their families often have elevated blood lead levels. Employees of lead-acid battery smelting facilities are primarily exposed to lead through inhalation of the lead fumes and dust while at work.[xliii] The lead dust also accumulates on workers' clothing and then ends up in their cars and homes, thus impacting their families. Specifically at Quemetco, from 1996 to 2017, there have been over a hundred workers each year with blood lead levels at or above 10 µg/dL.[xliv] In 2017, for example, 111 workers at Quemetco had elevated blood lead levels at or above 10 µg/dL and between one to ten workers had blood lead levels above 25 µg/dL.[xlv] In California, prior to January 2020, there was no blood lead level at which public health officials were required to refer the company to California's Division of Occupational Health and Safety (known as Cal/OSHA).[xlvi] Thus, up until now Quemetco has been able to avoid any inspection or enforcement actions by Cal/OSHA even though its employees are routinely experiencing elevated blood lead levels. Quemetco's boast that "our

workers have some of the lowest blood lead levels in the industry" is not a reflection of the actual safety of its workers; rather, it is a statement that highlights how hazardous secondary lead smelting is to its workers.[xlvii]

These workers also end up bringing lead home with them resulting in impacts to their family members. California's Occupational Lead Poisoning Prevention Program has reported multiple instances, most recently in September 2017, where a child of a Quemetco worker had elevated blood lead levels because of lead contamination that was brought home.[xlviii] Such harm is particularly grave given the serious and largely irreversible damage that children can suffer when they are exposed to even low levels of lead.

	BLOOD LEAD LEVEL (BLL), µG/DL			
YEAR	<10	10-24	25-39	40+
1987	0	0	94	28
1988	0	0	107	16
1989	0	0	84	<11
1990	0	0	0	<11
1991	0	0	54	<11
1992	0	0	80	<11
1993	0	<11	68	<11
1994	0	<11	49	<11
1995	0	<11	29	<11
1996	27	174	26	0
1997	26	182	27	<11
1998	89	169	29	<11
1999	17	152	23	<11
2000	38	149	27	<11
2001	38	176	29	<11
2002	67	177	18	0
2003	53	150	<11	0
2004	46	149	<11	0
2005	46	152	<11	0
2006	66	148	11	0
2007	56	166	12	0
2008	70	162	<11	0
2009	68	151	13	0
2010	83	149	<11	0
2011	89	149	<11	0
2012	89	148	<11	0
2013	100	141	<11	0
2014	131	124	<11	0
2015	175	135	<11	0
2016	145	127	<11	0
2017	145	111	<11	0

Note: Each worker was counted once per year at their highest BLL; cell sizes with ten or fewer people were replaced with "<11" per CA Dept. of Health Care Services guidelines.

Figure 5: Annual blood lead level distributions of Quemetco workers reported to California Department of Public Health

QUEMETCO'S CYCLE OF NON-COMPLIANCE

Quemetco's operations have added, and continue to add, lead and other toxins to people's bodies, as well as the air, water, and soil. Quemetco has never taken full responsibility for the impact of its operations and instead acts to obscure the true extent of the harm it causes. For example, Quemetco has consistently fought to narrow the scope of environmental sampling by exerting pressure on regulators. Quemetco is engaged in a cycle with DTSC in which the company and the agency go back and forth about reports and permit requirements while identified problems go unaddressed. If, after this back and forth cycle, Quemetco undertakes some steps to address a problem, those heavily negotiated steps are the smallest it can get away with to reduce future harm and those steps rarely address the past harm already caused.

Below are examples that illustrate this pattern of behavior and the ways in which Quemetco has consistently managed to avoid being held accountable for its harmful operations, thereby putting residents, workers, and the environment at risk.

SURFACE WATER

Quemetco's lack of compliance with water quality protection standards has been a recurring issue throughout the facility's history. In the past, Quemetco would discharge "tens of thousands of gallons daily of untreated waste water into San Jose Creek, where it likely flowed downstream and deposited metal-contaminated sediment in the unlined portion of the creek."[xlix] More recently, from 2009 through 2014, Quemetco exceeded benchmark levels of pollutants (i.e., enforceable effluent limits) a total of 145 times, including 73 exceedances of the lead benchmark alone.[l]

California's hazardous waste laws and Quemetco's hazardous waste permit require Quemetco to complete a Surface Water Monitoring and Response Plan ("SWMRP"). This plan is crucial to monitoring surrounding surface water bodies that could be affected by a release of contaminants. Despite the importance of this plan, Quemetco submitted inadequate or incomplete SWMRPs to DTSC on November 28, 2006, and November 19, 2010. After DTSC rejected these SWMRPs, Quemetco submitted a revised SWMRP in 2014. In a familiar cycle, DTSC determined that Quemetco's 2014 SWMRP remained unacceptable. In particular, DTSC's Geological Services Unit ("GSU") noted in a memorandum that Quemetco "appears to have taken an overly simplistic approach to [the SWMRP] requirement and has failed to provide adequate responses to most of our comments."[li] GSU went on to state that they "have some concerns with surface water management at the facility" and noted that Quemetco has been consistently discharging elevated levels of lead, antimony, and zinc into the storm drains.[lii] These storm drains "are tied into the main storm drain line underlying 7th Avenue. The main storm drain then

empties into San Jose Creek"–a major tributary to the San Gabriel River.[liii] GSU also goes on to discuss a letter from the California Regional Water Quality Control Board ("CRWQCB") to Quemetco dated April 19, 2010, in which:

> [CRWQCB] notified Quemetco that sample data from 2008-2009 showed the facility had also exceeded their benchmarks for lead and zinc. In their letter, the CRWQCB had required Quemetco to submit a Storm Water Pollution Prevention Plan (SWPPP) with upgraded best management practices (BMPs) to eliminate or reduce storm water pollution from the facility. Quemetco responded … to the CRWQCB that they had improved their BMPs which should "yield significant improvement in the reduction of fugitive lead particulates which impact our storm water results." As noted in the 2010-2011 data, the lead and zinc concentrations have instead increased, not decreased, since Quemetco's letter, which would seem to contradict their assurances to the CRWQCB. What seems clear is that, more often than not, Quemetco is not in compliance with the provisions listed in their General Permit.[liv]

In 2017, Quemetco finally–after years of violations and exceedances–installed a new stormwater treatment system that has resulted in the discharge of lower levels of pollutants. The installation of this stormwater treatment system does nothing to address past contamination caused by Quemetco. In a 2018 memorandum, GSU noted that lead, antimony, arsenic, and other toxic metals were detected in several creek bottom samples around the perimeter of the facility.[lv] The samples of lead and arsenic in the creeks showed a strong correlation, "suggesting impacts from [Quemetco]."[lvi] In addition, air dispersion modeling conducted by DTSC showed that the area potentially impacted by Quemetco's emissions includes significant portions of San Jose Creek and Puente Creek.[lvii] The memorandum went on to describe how historic and current air emissions and surface water discharges could have impacted the downstream surface water or "contaminated sediment may have become deposited at the bottom of soft-bottomed areas of San Jose Creek and associated surface water bodies like the [San Gabriel River], thereby potentially acting as a continuous source for surface water degradation in the creeks and the [San Gabriel River]."[lviii]

GROUNDWATER

Quemetco also has a record of non-compliance with its groundwater permit requirements. The groundwater under Quemetco has "a history of elevated concentrations of lead, arsenic, volatile organic compounds (VOCs), nitrate, and sulfate."[lix] As noted above, this is in part due to Quemetco's past practice of discharging tens of thousands of gallons of waste water into the San Jose Creek, which still presents "an ongoing threat to groundwater."[lx]

Current information clearly establishes that Quemetco has contaminated the groundwater. To the extent that some gaps remain as to the magnitude of the contamination that is a result of Quemetco's non-compliance with regulatory requirements and DTSC's failure to hold the company accountable to meeting those requirements.

Quemetco received a hazardous waste permit in 2005, which included numerous groundwater monitoring requirements. As a result, Quemetco established a network of groundwater monitoring wells and tested samples from the wells. But DTSC found that the results of the laboratory tests failed to provide "a reliable picture of the groundwater quality" because Quemetco's monitoring network was–and still is–deficient, an issue that DTSC has "attempted to get the company to fix" for almost two decades now.[lxi]

In 2015, DTSC conducted a Groundwater Monitoring Evaluation in which they cited Quemetco for numerous violations related to Quemetco's continued failure to implement groundwater detection and evaluation monitoring programs, thus increasing the likelihood of a hazardous release occurring and going undetected. The failure to have a reliable groundwater monitoring network in place means that Quemetco's operations could leach contaminants into the San Gabriel Basin–the main source of drinking water for about 1.5 million San Gabriel Valley residents.[lxii]

QUEMETCO'S OPERATIONS COULD LEACH CONTAMINANTS INTO THE SAN GABRIEL BASIN—THE MAIN SOURCE OF DRINKING WATER FOR ABOUT 1.5 MILLION SAN GABRIEL VALLEY RESIDENTS.

Quemetco's ongoing non-compliance with groundwater monitoring requirements undermines DTSC's reassurances during the initial hazardous waste permit process in 2001 that continued operations at Quemetco "would not result in a change in existing groundwater quality" and that groundwater quality "would continue to be monitored and reported to the DTSC."[lxiii] Neither of these statements was true then, and neither is true today.

SOIL

The history of soil tests at Quemetco shows that Quemetco, as well as regulators, knew for decades that the soil around the facility and in the surrounding communities was contaminated with lead. For instance, soil samples taken in 1991 at distances out to 3,200 feet showed elevated concentrations of lead.[lxiv] At 3,200 feet, two-thirds of the samples were at or above 90 ppm. The highest sample, 10,300 ppm, was 200 feet from the fenceline. Every sample taken at 800 feet was between 101 and 1,100 ppm. For reference, California's screening threshold for lead for residential properties is 80 ppm, for industrial properties it is 320 ppm,[lxv] and the nearest house is 600 feet away. Sampling throughout the years has continued to show elevated levels of lead in the soil.

In a June 2004 letter from DTSC to Quemetco regarding recent soil sampling, DTSC stated that the results showed elevated levels of lead which meant that "[n]ot only is the general public at risk from exposure but so are the landscape and maintenance crews that Quemetco may employ to care for" parts of the facility.[lxvi] Quemetco's response after hearing about these sampling results was to deny, point fingers elsewhere, and put pressure on DTSC. For example, in July 2004, Quemetco sent a letter to DTSC after finding out that the agency would be meeting with community members to discuss the soil sampling results. In the letter, Quemetco stated that it was concerned about the meeting because the meeting could "signal to the community that its health is at risk due to soil contamination when it is clearly not" and thus, the meeting "runs the risk of prejudicing the community against Quemetco."[lxvii] Quemetco went on to state in the letter that they did not think DTSC had the authority to require them to conduct soil sampling; that there were not any children who lived next to the plant; and that it was "premature to assume a health risk" from the lead contamination present around the perimeter of the facility.[lxviii]

In 2006, researchers with the University of California Riverside examined samples of soil around Quemetco and found that the mean concentration level of each metal that they sampled for–arsenic, cadmium, chromium, copper, nickel, lead, and zinc–was four to ten times higher at Quemetco than in the surrounding area.[lxix] Specifically, they noted that levels of chromium, nickel, and lead "exhibit significantly elevated contamination levels near" Quemetco.[lxx]

In 2013, a geologist at DTSC wrote a memorandum regarding the results of soil sampling at Quemetco conducted the year before. Of note, they found that (1) dioxins/furans were detected in the single sample taken and at a level exceeding the industrial human health screening level, indicating that if other samples had been analyzed for dioxins, they "would have produced either comparable or greater results"; and (2) increasing lead concentrations generally corresponded to increasing antimony concentrations. The geologist concluded that these findings "strongly suggest[] that off-site lead contamination is likely due to fugitive dust emissions produced from Quemetco's lead-smelting operations."[lxxi]

THE MEAN CONCENTRATION LEVEL OF ARSENIC, CADMIUM, CHROMIUM, COPPER, NICKEL, LEAD, AND ZINC WAS FOUR TO TEN TIMES HIGHER AT QUEMETCO THAN IN THE SURROUNDING AREA.

Nevertheless, Quemetco continues to maintain that it is not the source of soil contamination outside of its facility. In 2015, DTSC requested that Quemetco test for contamination around its facility. In response, Quemetco challenged DTSC's authority to request testing; asserted that there was "little to no evidence available to justify beginning a sampling program"; and argued that it should only have to test within a quarter-mile radius of its facility because testing further than this might entail "unnecessary delineation of a problem that does not exist."[lxxii]

Quemetco not only attempts to avoid testing outright but also puts information in its testing workplans that is clearly incorrect; thus, requiring the agency to engage in another back and forth cycle of feedback. For instance, in 2015, DTSC sent Quemetco a letter providing feedback about Quemetco's Resource Conservation and Recovery Act ("RCRA") Facility Investigation Workplan in which the agency had to tell Quemetco that as part of its Workplan, it could not apply industrial soil screening levels to residences.[lxxiii] Further, DTSC had to make Quemetco aware that the company needed to acknowledge "that more than just deposition/accumulation of lead from its emissions is a concern. ALL of the constituents of concern (COCs) associated with Facility emissions need to be measured and evaluated."[lxxiv]

In 2018, DTSC again provided feedback to Quemetco regarding its RCRA Facility Investigation Report. DTSC directed Quemetco to sample soil within a 1.6-mile radius around the facility as air dispersion modeling had indicated that historical emissions may have been deposited at that distance. Predictably, Quemetco was not willing to expand its sampling beyond a quarter-mile radius.[lxxv] The results of Quemetco's limited sampling nevertheless showed that lead concentrations exceeded the residential screening level of 80 ppm "at most, if not all, of the 132 residential properties sampled."[lxxvi] Furthermore, a technical review of the RCRA Facility Investigation Report noted that recontamination was continuing to occur outside of the facility, resulting in an increase in lead concentrations above 320 ppm in a span of only about four years.[lxxvii] The reviewers emphasized the significance of this because these increases in lead levels were still occurring even after Quemetco had installed an air pollution control device in 2008.[lxxviii]

Quemetco has repeatedly refused to take accountability for the true impact of its operations. From not responding sufficiently to regulators' questions to submitting inadequate reports and challenging testing plans, Quemetco has employed various tactics over the years that obscure the harms the surrounding community is exposed to and how contaminated their environment is.

Action must be taken to change the dynamic between Quemetco and DTSC. Quemetco has figured out how

to work the regulatory system to its own advantage and to the detriment of community members. DTSC must fulfill its oversight duties and ensure that Quemetco is held accountable for its harmful operations and callous disregard for its permit requirements.

VIOLATIONS AND ENFORCEMENT ACTIONS

Throughout Quemetco's history, DTSC, SCAQMD, and the United States Environmental Protection Agency ("EPA") have cited the company numerous times for violations and issued enforcement orders, corrective action orders, and more to try to obtain compliance from Quemetco. In almost every year for the past two decades, Quemetco has violated a regulation or permit condition. EPA considers Quemetco to be a "significant noncomplier" in regards to its federal and state hazardous waste requirements.[lxxix] This status is the "most serious level of violation" in EPA's databases and indicates that the facility represents a "severe level of concern for the environment."[lxxx] The appendix includes a more extensive timeline of Quemetco's history of violations, non-compliance, soil testing, and other incidents; the table on the next page is a sample from the larger timeline of incidents from 2015 to the present.

In 2019, at the direction of the Legislature, DTSC implemented a new tool–the Violations Scoring Procedure ("VSP")–that established a process for evaluating a hazardous waste facility's compliance history as part of DTSC's permit decision-making process. The VSP is meant to serve as a tool to incentivize facilities to improve compliance with regulations and to reduce the number of violations incurred. If a facility's score is too high (above forty) then DTSC is required to initiate permit denial, suspension, or revocation proceedings. *See* Appendix B for additional details. However, the VSP tool is deeply flawed. Despite Quemetco's extensive history of violations and non-compliance, two decisions made during the regulatory process have resulted in Quemetco being able, again, to avoid being held accountable. Namely, the decisions to review facility history over a ten-year period and to reduce the score for a facility that has received more inspections. DTSC must update its regulations for the VSP to ensure that there are actual consequences for facilities that do not comply with regulations and pose a harm to community members and the environment.

QUEMETCO HAS FIGURED OUT HOW TO WORK THE REGULATORY SYSTEM TO ITS OWN ADVANTAGE AND TO THE DETRIMENT OF COMMUNITY MEMBERS.

SAMPLE OF QUEMETCO'S NON-COMPLIANCE

APRIL 28, 2015 Numerous violations found during DTSC Inspection, including a failure to take action when detecting a possible release from the primary barrier of the Containment Building.

JUNE 12, 2015 Three Notices of Violation ("NOVs") issued by SCAQMD for violations of the benzene limit on March 25, May 6, and May 12.

JUNE 23, 2015 Numerous violations found during DTSC Groundwater Monitoring Evaluation.

SEPT. 18, 2015 NOV issued by SCAQMD for failing to obtain a permit revision before modifying equipment.

DEC. 10, 2015 NOV issued by SCAQMD because the fuel meter was not tamper proof.

MAY 26, 2016 Numerous violations found during DTSC inspection, including a failure to repair a condition that could lead to a release of hazardous waste and a failure to completely enclose the Containment Building to prevent the release of hazardous waste dust.

JULY 25, 2016 Enforcement Order issued to Quemetco by DTSC requiring the facility to correct violations related to its failure to have a functioning leak-detection system and its failure to minimize the possibility of a release from its Containment Building, which stores hazardous waste. In issuing the Order, DTSC was "elevating its enforcement actions against Quemetco after issuing a series of violations over the last year, including seven non-minor violations this month."

JUNE 26, 2017 Violation found during DTSC inspection, namely Quemetco failed to promptly repair a condition that could lead to a release of hazardous waste.

FEB. 8, 2018 NOV issued by SCAQMD for exceedance of arsenic limit at fenceline monitor.

JUNE 13, 2018 NOV issued by SCAQMD for inaccurate reporting of emissions.

JUNE 28, 2018 Numerous violations found during DTSC inspection, including a failure to maintain the primary barrier free of significant cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be released from the primary barrier (specifically, Quemetco deliberately cut a gap through the primary and secondary concrete layers).

JULY 27, 2018 NOV issued by SCAQMD for arsenic, lead, and 1,3-butadiene exceedances.

OCT. 17, 2018 NOV issued by SCAQMD for numerous violations, including a 1,3-butadiene exceedance.

OCT. 31, 2018 DTSC, on behalf of the State of California, sued Quemetco for 29 violations of state hazardous waste laws and regulations.

NOV. 16, 2018 Corrective Action Order issued to Quemetco by DTSC related to the release of hazardous waste from its facility.

DEC. 17, 2018 Enforcement Order issued to Quemetco by DTSC requiring the facility to conduct additional lead sampling in nearby residential areas.

APRIL 25, 2019 NOV issued by SCAQMD for multiple violations, including fenceline exceedances of arsenic and lead.

FEB. 11, 2020 Quemetco and DTSC entered into a Corrective Action Consent Agreement requiring Quemetco to conduct additional investigations to determine the full nature and extent of hazardous waste releases at the facility.

APRIL 30, 2020 Settlement Agreement entered into between Quemetco and SCAQMD in which Quemetco agreed to pay SCAQMD $600,000 related to reporting and emissions violations.

JUNE 12, 2020 Violation found during DTSC Financial Records Review.

HARMFUL LEGACY OF SECONDARY LEAD SMELTERS

FINANCIAL ASSURANCE

Facilities like Quemetco are required to provide adequate financial resources to pay for the closure and cleanup of their facilities, otherwise known as financial assurance mechanisms.[lxxxi] This is meant to ensure that the facility pays for the cleanup and not taxpayers. Unfortunately, financial assurance mechanisms are not working as intended and are failing to ensure that a facility has enough money to pay to clean up the pollution caused by the facility either on- or off-site.

For example, at the Exide secondary lead smelting facility in California, Exide had $11.1 million in a surety bond for the cleanup of its operations and then declared bankruptcy and subsequently closed.[lxxxii] In 2016, then-Governor Brown directed $176.6 million in the state budget for remediation of the Exide site.[lxxxiii] In 2019, Governor Newsom allocated an additional $74.5 million for the Exide cleanup.[lxxxiv] The State of California (meaning taxpayers) has so far contributed about twenty times more in funds to clean up the Exide facility than Exide has contributed itself. Further, in 2020, a bankruptcy court fully released Exide from financial liability for its contamination and the facility has now been transferred to a state environmental trust.[lxxxv] The California State Auditor estimates that the total cost of the cleanup will approach $650 million.[lxxxvi] Despite this disastrous situation, DTSC has "not required Quemetco to front the money needed to remediate any off-site contamination."[lxxxvii] Quemetco has only provided financial assurance in the amount of $7.8 million for closure and $1 million for post-closure.[lxxxviii] The ongoing cleanup of Exide demonstrates that Quemetco's financial assurance is drastically inadequate.

THE STATE OF CALIFORNIA (MEANING TAXPAYERS) HAS SO FAR CONTRIBUTED ABOUT TWENTY TIMES MORE IN FUNDS TO CLEAN UP THE EXIDE FACILITY THAN EXIDE HAS CONTRIBUTED ITSELF.

Exide and Quemetco's insufficient financial assurances continue a history of secondary lead smelters reneging on their responsibility to remediate their facilities after closure. The ongoing cleanup and monitoring of two former secondary lead smelting sites is illustrative here. The Interstate Lead Company in Leeds, Alabama, contaminated the groundwater, soil, and a nearby creek with lead.[lxxxix] The company filed for bankruptcy and thus, did not have to pay for the extensive cleanup that EPA estimated would cost $17.48 million in 1991–the equivalent of about $33 million today.[xc] Tonolli Corporation in Nesquehoning, Pennsylvania, contaminated a nearby creek, soil, and on-site wells with arsenic, cadmium, and lead but filed for bankruptcy before having to pay for cleanup of the contamination.[xci] The remedy EPA selected to remediate Tonolli Corporation was estimated to cost $16.6 million in 1992–an amount equivalent to about $31 million today.[xcii]

Based on the amount of money that has been allocated for Exide's cleanup and the amount of money that has historically been required for cleanup of secondary lead smelting sites, it is clear that Quemetco's current financial assurance amount–$8.8 million–is not sufficient. DTSC must ensure that Quemetco is fully responsible for the closure of its facility and the remediation of its toxic operations that have contaminated the environment and surrounding communities for decades.

LEGACY OF CONTAMINATION

Former secondary lead smelters have left behind a legacy of contamination and harm that continues to impact the environment and communities today. In particular, RSR Corporation–the owner of Quemetco–is responsible for leaving behind many toxic sites that have never been fully remediated.

CASE STUDY: RSR CORPORATION, WEST DALLAS, TEXAS

RSR Corporation operated a secondary lead smelter in West Dallas, Texas, that was active from the 1930s to 1984. The Dallas Housing Authority built a 3,500-unit public housing development just fifty feet downwind from the smelter. The community was comprised mainly of Black and Latino people. The smelter emitted more than 269 tons of lead particles into the air each year, which ended up accumulating on the grounds of the housing development, as well as nearby schools, parks, and neighborhoods.[xciii] At a nearby day-care center, lead levels "were more than 92 times what [was] considered a safe level" and readings at the West Dallas Boys Club as well as nearby schools were similarly elevated.[xciv] Lead slag and battery chips from the smelter were also disposed at various locations in the area and used as fill material in driveways and yards.[xcv] In 1982, a public health assessment found that the average blood lead level of 227 children living near the smelter was 20.1 µg/dL.[xcvi]

The smelter was designated as a Superfund site in 1995, only after years of protests and a Congressional investigation. During the course of the Congressional investigation, it was revealed that an EPA official had blocked a 1981 proposal to clean up contaminated soil around the smelter because the official wanted to wait for "further data."[xcvii] This admission outraged one of the Congressional chairs who stated: "'Of all the revelations that have come out in recent months at the EPA, this is the worst example … The decision was made to expose human beings to health risks. When the [EPA] Administration talked about "health effects evidence," what it really wanted was a body count.'"[xcviii] Similar to the situation at Quemetco, the regulatory agency–in this case, EPA–failed to adequately exercise its oversight duties or ensure that community members were protected from the smelter's toxic emissions.

Even after numerous cleanups, local residents live with the legacy of contamination produced by this smelter. In 2012, *The Dallas Morning News* commissioned a toxicologist to conduct soil testing in the community and the results showed that: (1) two residential properties had lead levels above EPA's residential cleanup standard of 400 ppm; (2) twelve properties had lead levels above 100 ppm; (3) thirty-one out of the thirty-six properties tested had lead levels above 20 ppm; and (4) the highest lead level found was 591 ppm. This contamination continues to harm children in the West Dallas neighborhood: in 2011, thirty-one children age five or younger had blood lead levels of 5 µg/dL or above and 234 children had blood lead levels between 2–4 µg/dL–a level at which health effects are known to occur given that there is no safe level of lead exposure.[xcix]

This situation in West Dallas epitomizes the failures of government and private actors that gave rise to the concept of environmental justice. Indeed, Robert Bullard–the father of environmental justice–highlighted this situation as the "classic example of government inaction and callous disregard for the

law."[c] There had been multiple studies conducted in the 1970s and 1980s that clearly showed that the smelter was causing lead poisoning in nearby residents. The evidence "was overwhelming and irrefutable. However, no action was taken to eliminate this preventable disease."[ci] Community groups in West Dallas had to force changes in government policy over the decades through their activism, including voicing their concerns at public meetings, producing reports, and exerting public pressure. The residents of West Dallas ultimately succeeded in getting the smelter shut down but, as Dr. Bullard notes, they "still deserve an answer as to why their government allowed an entire generation to be sacrificed."[cii]

CASE STUDY: RSR CORPORATION, MIDDLETOWN, NEW YORK

RSR Corporation began operating a secondary lead smelter in Middletown, New York, in 1972. In 1987, state environmental regulators detected alarming levels of lead in the air and soil, as well as in the groundwater, just a mile away from the town's water supply.[ciii] A 1994 *New York Times* article about the contamination at the facility noted the glacial pace of the cleanup and attributed this in part to the fact that companies like RSR are "aware that the agency is reluctant to take legal action or even conduct disciplinary hearings because of its overstretched legal staff. As a result, any canny polluter can draw out the corrective process and stretch out the costs of cleanup."[civ] A local resident described the situation as a "cat-and-mouse game" between the company and the state environmental agency–similar to the current dynamic between Quemetco and DTSC.

Various cleanup actions have been ongoing at this site since the 1990s to today. Consent Orders from 1997 and 1999 required RSR to clean up soils that were heavily contaminated with lead (concentrations as high as 200,000 ppm), cadmium, antimony, and arsenic.[cv] A 2011 Consent Order required the installation of a new floor liner system in the Containment Building and the development of a spill response protocol; and a September 2011 Record of Decision required RSR to conduct additional soil and sediment excavation.[cvi] In February 2020, the New York Department of Environmental Conservation proposed yet another remedy to clean up more soil and sediment that were contaminated with arsenic and lead.[cvii] Currently, the facility is listed as a Class 2 site on New York State's list of State Superfund sites, meaning that it represents a significant threat to human health or the environment.[cviii]

These case studies illustrate a dangerous pattern that is present at the Quemetco facility and other RSR Corp. secondary lead smelters across the country. Namely, the smelter operates near communities–often communities of color and low-income communities–that are burdened by pollution from the facility; the communities repeatedly voice their concerns to public agencies about the health harms they are experiencing; meanwhile the smelter is allowed to continue to operate while state and federal agencies engage in a back-and-forth process that stretches for decades and ultimately fails to protect the impacted communities or hold the smelter accountable.

ALTERNATIVES

The harmful legacy of secondary lead smelters should not be extended. The use of lead for energy storage is an antiquated approach that no longer makes sense given the fact that there is no safe level of lead exposure. There are now various types of batteries made with materials other than lead that are replacing lead-acid batteries across a range of uses and industries. Lithium-ion batteries and other battery technologies combined now hold a 53% share of the battery market, while lead batteries have a 47% share of the market.[cix] In this decade alone, it is expected that lithium demand will quadruple.[cx] There are various additional indicators that alternative battery technologies are going to be used more extensively in the future. For instance,

- In August 2020, one of the largest lithium battery cell makers in the world, CATL, teamed up with Schneider Electric and the companies' strategic partnership agreement "specified that one of its main targets was to replace lead-acid batteries with lithium-ion in new application areas."[cxi]

- In June 2020, ZAF Energy—a producer of nickel-zinc and zinc air batteries—signed a $2.5 million contract with the Department of Defense to supply batteries.[cxii]

- Also in June 2020, the Executive Vice President of the European Commission—the executive branch of the European Union that is responsible for proposing legislation—gave a speech regarding battery technology in which he stated: "'We have to assess which technologies have reached a maturity that will not allow more innovation, we shouldn't be throwing money at those …. We look at things that have a future rather than things that have had a great past …. We are more reluctant [to invest] when a technology doesn't seem to have much potential for development and has a huge negative impact on the environment … we're technology agnostic but we're not stupid.'"[cxiii]

Another indicator of the move away from lead was the recent closure of a primary smelter in Canada—this closure means that only two primary lead smelters are left on the entire continent of North America. Prior to this closure, the company had started to increase its production of cobalt and copper, "signaling a new focus on supplying the [electrical vehicle] market."[cxiv] In other words, even companies in the lead business are beginning to transition away from the use of lead in favor of alternative technologies.

EVEN COMPANIES IN THE LEAD BUSINESS ARE BEGINNING TO TRANSITION AWAY FROM THE USE OF LEAD IN FAVOR OF ALTERNATIVE TECHNOLOGIES.

The alternative battery market is also focused on ensuring that their batteries are responsibly used and recycled at the end of their life cycle. For example, in February 2019, the Department of Energy launched a lithium-ion battery recycling center to "grow a globally competitive recycling industry."[cxv] Researchers across the world are studying novel ways of recycling lithium-

ion batteries that are environmentally friendly. In Singapore, for instance, scientists developed a method of using orange peels and citric acid to extract precious metals from lithium-ion batteries that they then use to make new functional batteries.[cxvi]

The transition away from lead-acid batteries has already started down a path similar to the one that occurred when lead was phased out of gasoline. As a result of regulations to remove lead from gasoline, industry was forced to innovate and ended up creating a better product–"safer fuel additives that performed better than lead, reducing wear and tear on engines and improving fuel efficiency."[cxvii] The phase out of lead in gasoline also resulted in a 98 percent decrease in levels of lead in the air between 1980 and 2014.[cxviii]

We know how harmful lead and secondary lead smelters are and we know that alternatives exist. It is time to transition away from Quemetco's dangerous operations, and move towards a future in which community members are not continually harmed simply because of where they live. To that end, we recommend the formation of a Transition Working Group to determine the details of a future without Quemetco.

RECOMMENDATIONS

LEGISLATIVE RECOMMENDATIONS

1. **Ensure that a facility's history of violating health and safety regulations has consequences:** The legislature took an important first step in facility accountability when it enacted legislation[cxix] that required DTSC to set regulatory requirements for hazardous waste facility permit decisions by considering hazardous waste facility's compliance history. The regulations adopted by DTSC were flawed and inadequate. The legislature should require DTSC to update its regulations regarding the Violations Scoring Procedure to ensure that a terrible compliance history results in real consequences for bad actor facilities such as Quemetco.

2. **Ensure that Quemetco has adequate, verified resources to clean up its on- and off-site contamination:** The current system for financial assurance is not working. California does not require companies like Quemetco to provide an adequate amount of financial assurance that can actually cover the costs to clean up its operations. The legislature should update the financial assurance provisions to ensure they reflect the reality of cleaning up facilities such as Quemetco.

SCAQMD RECOMMENDATION

1. **Ensure that Quemetco does not expand its operations:** A meaningful step toward addressing Quemetco's emissions and violations is to ensure that it does not expand its operations. The SCAQMD should deny Quemetco's currently pending expansion request.

DTSC RECOMMENDATIONS

1. **Ensure meaningful oversight of Quemetco's operations:** Quemetco's hazardous waste permit expired in 2015. DTSC should not approve Quemetco's application to renew its hazardous waste permit. As documented throughout this report, the Quemetco facility has routinely been unable or unwilling to comply with its hazardous waste obligations; therefore, it should not be granted a permit to continue operations.

2. **Ensure there is a process in place to transition Quemetco to closure and clean up:** DTSC should establish a Transition Working Group comprised of community members, DTSC staff, Quemetco representatives, and other relevant stakeholders. The working group would develop a comprehensive clean-up plan to address the extensive contamination around Quemetco and discuss how to move towards the greater use of alternative technologies.

CONCLUSION

For decades, Quemetco has polluted its workers, the community, and the environment. Quemetco is an antiquated and hazardous facility, as demonstrated by the dwindling number of secondary lead smelters across the country and the legacy of contamination left behind by these facilities. Closing Quemetco is the only way to protect workers, community members, and their children from Quemetco's toxic operations. It is time—and has long been time—to transition away from secondary lead smelting at this site and support the movement towards alternative technologies that reduces the burden from energy storage on nearby residents and the environment. It is also time to truly listen to community members who have been raising their voices about the harms of this facility for far too long.

GLOSSARY OF TERMS

µG/DL	Micrograms per deciliter
CRWQCB	California Regional Water Quality Control Board
DTSC	Department of Toxic Substances Control
EPA	Environmental Protection Agency
GSU	Geological Services Unit
NOV	Notice of Violation
PPM	Parts per million
RCRA	Resource Conservation and Recovery Act
SCAQMD	South Coast Air Quality Management District
SWMRP	Surface Water Monitoring and Response Plan
TCE	Trichloroethylene
VSP	Violations Scoring Procedure

APPENDIX A:
TIMELINE OF QUEMETCO'S HISTORY

1959	Western Lead Products established a facility for lead smelting.
1970	Facility changed its name to Quemetco and RSR Corp. assumed ownership of the facility shortly thereafter.
NOV. 1980	Quemetco submitted its RCRA Part A application.
MAY 1983	Quemetco received its Interim Status Permit.
NOV. 18, 1984	Notice of Violation ("NOV") issued by DTSC for groundwater-related violations.
OCT. 1985	A rapid gas expansion incident results in the death of an employee.
MAR. 18, 1987	A Consent Decree and Remedial Action Order were issued to Quemetco directing it to contain runoff, minimize leakage, seal cracks in the pavement, and more. DTSC also issued Quemetco a NOV.
SEP. 1987	A RCRA Facility Assessment identified 40 areas on the property that were contaminated.
JAN. 6, 1988	EPA issued a Consent Decree to Quemetco requiring the closure of a hazardous waste surface impoundment.
JAN. 17 & 18, 1988	Numerous violations observed during DTSC inspection.
FEB. 17 & 18, 1988	Numerous violations observed during DTSC inspection.
MAR. 4, 1988	DTSC issued a Report of Violation to Quemetco for numerous violations.
FEB. 15 & 20, 1990	Numerous violations observed during DTSC inspection.
MAR. 28, 1990	DTSC issued a Report of Violation to Quemetco for numerous violations.
JUN. 13 & 14, 1991	Numerous violations observed during DTSC inspection, including a failure to manage the waste piles so as to avoid dispersal by the wind and a failure to manage damaged batteries so as to minimize the release of lead and acid.
NOV. 25, 1991	DTSC referred enforcement actions against Quemetco to the Attorney General's Office.
DEC. 1991	Lead sampling of soil near the facility found concentrations ranging from less than 50 ppm to 10,300 ppm.
FEB. 12, 1992	EPA notified Quemetco that it was in violation of part of its Consent Decree related to groundwater monitoring.
JUN. 30, 1992	Violation observed during DTSC inspection.
JUN. 23, 1993	Numerous violations observed during DTSC inspection.
APR. 1994	Quemetco submitted its RCRA Part B application.
JUL. 13, 1994	Numerous violations observed during DTSC inspection, including a failure to minimize the possibility of a release of hazardous waste and a failure to store damaged batteries in a container capable of preventing the release of lead and acid.
OCT. 1994	DTSC and Quemetco entered into a Consent Order and Quemetco paid a penalty of $99,000.
DEC. 30, 1999	Multiple violations observed during DTSC inspection, including a failure to minimize the possibility of a release of hazardous waste.
SEP. 28, 2000	Multiple violations observed during DTSC inspection.
APR. 2001	RCRA Application accepted as complete.
JUN. 29, 2001	NOV issued by SCAQMD for exceedance of lead limit beyond the property line.
AUG. 7, 2001	NOV issued by SCAQMD for exceedance of lead limit beyond the property line during both April & May of 2000.
SEP. 28, 2001	Multiple violations observed during DTSC Inspection.

DEC. 18, 2001 Violation found during DTSC financial records review related to Quemetco's financial assurance insurance policy.

JAN. 4, 2002 DTSC and Quemetco entered into a Consent Order regarding containment issues at the wastewater treatment plant.

MAY 17, 2002 DTSC issued Quemetco an Imminent and Substantial Endangerment Determination and Order and Remedial Action Order as a result of soil sampling that showed concentrations of lead ranging as high as 18,000 ppm at the facility. Lead was also detected in the nearby residential area at levels ranging from 190 ppm to 780 ppm.

JAN. 30, 2003 Multiple violations observed during DTSC inspection.

MAR. 25, 2004 Lead sampling of soil near the facility found concentrations ranging from 100 ppm to 5,300 ppm.

2005 DTSC required Quemetco to institute Emergency Interim Measures to remove or cover lead-contaminated soil, dust, and sediment.

APR. 12 & 14, 2005 Lead sampling of soil near the facility found concentrations ranging from below 42 ppm to 8,774 ppm.

APR. 26, 2005 Violation observed during DTSC inspection.

JUL. 22, 2005 NOV issued by SCAQMD for exceedance of permit limits.

SEP. 15, 2005 DTSC issued Quemetco its Hazardous Waste Permit.

DEC. 20, 2005 Multiple violations observed during DTSC inspection, including a failure to minimize the possibility of a release and illegal storage of hazardous waste in an unauthorized area.

JAN. 5, 2006 A roof failure occurred at the facility, resulting in a shutdown of operations.

APR. 25, 2006 NOV issued by SCAQMD for exceedance of permit limits.

SEP. 29, 2006 Violation observed during DTSC inspection, specifically Quemetco was illegally storing hazardous waste slag in an unauthorized area.

MAY 30, 2008 Multiple violations observed during DTSC inspection.

JUL. 3, 2008 A fire occurred at the facility resulting in over 100 employees being evacuated and 120 firefighters responding. Officials were also preparing to evacuate the area out of fears of a chemical fire but no chemicals were involved in this incident.

JUL. 28, 2008 Minor violations observed during DTSC inspection.

JUN. 16, 2009 NOV issued by SCAQMD for a failure to conduct a source test on time.

AUG. 28, 2009 NOV issued by SCAQMD for a failure to maintain a monitoring device to continuously monitor sulfur oxide emissions.

MAY 20, 2011 Numerous violations found during DTSC Financial Records Review.

FEB. 23, 2012 NOV issued by SCAQMD for exceeding the nitrogen oxides annual limit.

JUL. 25, 2012 Sampling of soil, dust, and sediment reveal re-contamination. DTSC required Quemetco to institute Emergency Interim Measures to remove lead-contaminated soil, dust, and sediment. Lead values ranged from 138 to 1,450 ppm and antimony, chromium, mercury, nickel, dioxins/furans and zinc were also detected.

JUN. 27, 2013 Multiple violations found during DTSC inspection.

MAR. 26, 2014 Multiple violations found during a multi-agency inspection led by EPA.

MAY 16, 2014 NOV issued by SCAQMD for failure to operate equipment in compliance with the facility's permit.

JUN. 27, 2014 Numerous violations found during DTSC inspection.

JUL. 31, 2014 NOV issued by SCAQMD for exceeding arsenic limit at fenceline monitor.

NOV. 5, 2014 NOV issued by SCAQMD for failure to operate equipment in compliance with the facility's permit.

APR. 28, 2015 Numerous violations found during DTSC Inspection, including a failure to take action when detecting a possible release from the primary barrier of the Containment Building.

JUN. 12, 2015 Three NOVs issued by SCAQMD for violations of the benzene limit on March 25, May 6, and May 12.

JUN. 23, 2015 Numerous violations found during DTSC Groundwater Monitoring Evaluation.

SEP. 18, 2015 NOV issued by SCAQMD for failing to obtain a permit revision before modifying equipment.

DEC. 10, 2015 NOV issued by SCAQMD because the fuel meter was not tamper proof.

MAY 17, 2016 Quemetco notified by SCAQMD that it must reduce its emissions of arsenic in order to reduce the cancer risk to residents.

MAY 26, 2016 Numerous violations found during DTSC inspection, including a failure to repair a condition that could lead to a release of hazardous waste and a failure to completely enclose the Containment Building to prevent the release of hazardous waste dust.

JUL. 25, 2016 Enforcement Order issued to Quemetco by DTSC requiring the facility to correct violations related to its failure to have a functioning leak-detection system and its failure to minimize the possibility of a release from its Containment Building, which stores hazardous waste. In issuing the Order, DTSC was "elevating its enforcement actions against Quemetco after issuing a series of violations over the last year, including seven non-minor violations this month."

JUN. 26, 2017 Violation found during DTSC inspection, namely Quemetco failed to promptly repair a condition that could lead to a release of hazardous waste.

FEB. 8, 2018 NOV issued by SCAQMD for exceedance of arsenic limit at fenceline monitor.

JUN. 13, 2018 NOV issued by SCAQMD for inaccurate reporting of emissions.

JUN. 28, 2018 Numerous violations found during DTSC inspection, including a failure to maintain the primary barrier free of significant cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be released from the primary barrier (specifically, Quemetco deliberately cut a gap through the primary and secondary concrete layers).

JUL. 27, 2018 NOV issued by SCAQMD for arsenic, lead, and 1,3-butadiene exceedances.

OCT. 17, 2018 NOV issued by SCAQMD for numerous violations, including a 1,3-butadiene exceedance.

OCT. 31, 2018 DTSC, on behalf of the State of California, sued Quemetco for 29 violations of state hazardous waste laws and regulations.

NOV. 16, 2018 Corrective Action Order issued to Quemetco by DTSC related to the release of hazardous waste from its facility.

DEC. 17, 2018 Enforcement Order issued to Quemetco by DTSC requiring the facility to conduct additional lead sampling in nearby residential areas.

APR. 25, 2019 NOV issued by SCAQMD for multiple violations, including fenceline exceedances of arsenic and lead.

FEB. 11, 2020 Quemetco and DTSC entered into a Corrective Action Consent Agreement requiring Quemetco to conduct additional investigations to determine the full nature and extent of hazardous waste releases at the facility.

APR. 30, 2020 Settlement Agreement entered into between Quemetco and SCAQMD in which Quemetco agreed to pay SCAQMD $600,000 related to reporting and emissions violations.

JUN. 12, 2020 Violation found during DTSC Financial Records Review.

APPENDIX B: QUEMETCO AND THE VIOLATIONS SCORING PROCEDURE

QUEMETCO AND THE VIOLATIONS SCORING PROCEDURE

The California Department of Toxic Substances Control ("DTSC") recently implemented a new process–the Violations Scoring Procedure ("VSP")–to ensure that hazardous waste facilities' compliance histories are taken into consideration during the permitting process. The VSP is meant to serve as a tool to incentivize facilities to improve their compliance with regulations and to reduce the number of violations they incur. This, in turn, should lead to greater protections for community members and the environment. Earthjustice used the VSP to determine Quemetco's score. Based on the results, DTSC should begin to initiate permit denial, suspension, or revocation proceedings and should not allow Quemetco to expand its operations as it is currently seeking to do.

HOW THE VIOLATIONS SCORING PROCEDURE WORKS

A. SCORING

When DTSC inspects hazardous waste facilities, there are a few types of violations that may be present–Class I, Class II, and/or minor violations. Class I violations represent a significant threat to human health or safety or the environment. Class I violations are the only violations DTSC considers when calculating a facility's VSP score. Each Class I violation for the preceding ten calendar years is assigned a score between 2 and 25 based on a matrix that categorizes the potential for harm and the extent of deviation from compliance as either major, moderate, or minimal. *See Figure 1.* Thus, a Class I violation that is considered a major potential for harm and a major deviation from compliance would receive the highest score of 25, while a violation that is considered a minimal potential for harm and a minimal deviation from compliance would receive the lowest score of 2. The VSP also provides for upward adjustments to the scores if the violation is a repeat violation–meaning that it has occurred more than once within the longer of either the three prior years or three prior inspections. *See Figure 2.* The sum of all of the scores for the Class I violations from the preceding ten calendar years is then divided by the total number of compliance inspections over this time period to produce the final Facility VSP Score. DTSC

Extent of Deviation	Potential Harm		
	Major	Moderate	Minimal
Major	25	20	15
Moderate	20	15	6
Minimal	15	6	2

Figure 1. Matrix for Scoring Class 1 Violations

Adjustment Factors for Repeat Violations	Circumstance
Upward Adjustment of 25%	Second instance
Upward Adjustment of 50%	Third instance
Upward Adjustment of 100%	Fourth or more instances

Figure 2. Adjustment for Repeat Class 1 Violations

will undertake this scoring process each year to provide up to date Facility VSP Scores. The Department will post the scores on its website by December 31 each year.

B. COMPLIANCE TIERS

DTSC uses the Facility VSP Scores to assign facilities to compliance tiers:

- Acceptable (less than 20): no additional requirements.
- Conditionally Acceptable (20 – 40): required to comply with additional requirements, including preparing two third-party compliance audits. After reviewing these audits, DTSC may impose permit restrictions or enhancements, mitigation measures, or prohibitions on some hazardous waste management activities.
- Unacceptable (greater than 40): DTSC is required to initiate permit denial, suspension, or revocation proceedings.

According to Earthjustice's analysis and calculations, *see* Appendix below, Quemetco's 2019 VSP score is well above 40, which would put the facility in the "Unacceptable" compliance tier and require DTSC to initiate permit denial, suspension, or revocation proceedings.

APPENDIX C:
QUEMETCO'S VSP SCORE

Date of Inspection[1]	Description of Violation	Potential Harm	Extent of Deviation	Score	Adjustment for Repeat Violations	Final Score
3/26/2014	Failure to minimize the possibility of releases of hazardous waste or constituents.	Major	Major	25		25
3/26/2014	Failure to remove hazardous waste from leaking containers.	Major	Major	25		25
4/28/2015	Failure to maintain and operate the Secondary Containment system free of cracks or gaps.	Major	Major	25		25
4/28/2015	Failure to minimize the accumulation of liquid on the primary barrier of the Containment Building.	Major	Major	25		25
4/28/2015	Failure to take remedial action when detecting possible release from the primary barrier of the Containment Building.	Major	Major	25	25% (second instance)	31.25
6/23/2015	Failure to maintain the integrity of the monitoring well bore hole and prevent it from acting as a conduit for contaminant transport.	Major	Major	25		25
6/23/2015	Failure to include and implement consistent sampling and analytical procedures designed to ensure monitoring results.	Major	Moderate	20		20
6/23/2015	Failure to include an accurate determination of the groundwater surface elevation at each well.	Minimal	Moderate	6		6
6/23/2015	Failure to prevent the downward entry of water into the closed landfill, failure to maintain the integrity and effectiveness of the final cover, and to prevent run-on and run-off from eroding or otherwise damaging the final cover.	Major	Moderate	20		20
6/23/2015	Failure to implement a groundwater detection monitoring program for the former raw materials storage area.	Major	Major	25		25
6/23/2015	Failure to implement a groundwater detection monitoring program for the closed surface impoundment.	Major	Major	25		25
6/23/2015	Failure to implement a groundwater detection monitoring program (non-unit specific).	Major	Major	25		25

1 The dates reflect the inspection dates as listed on Envirostor. The violations from March 26, 2014, are based on evidence obtained during a multi-agency inspection led by the U.S. Environmental Protection Agency; they are not listed on Envirostor.

6/23/2015	Failure to implement a groundwater evaluation monitoring program for the former raw materials storage area.	Major	Major	25		25
6/23/2015	Failure to implement a groundwater evaluation monitoring program for the closed surface impoundment.	Major	Major	25		25
6/23/2015	Failure to establish a surface water monitoring program.	Major	Major	25		25
6/23/2015	Failure to establish an unsaturated zone monitoring program.	Major	Major	25		25
6/23/2015	Failure to maintain monitoring well borehole.	Major	Major	25		25
6/23/2015	Failure to adequately maintain groundwater monitoring wells to enable collection of representative samples.	Major	Moderate	20		20
6/23/2015	Failure to collect the data necessary to conduct appropriate statistical analyses for surface water and unsaturated zone monitoring.	Major	Major	25		25
6/23/2015	Failure to notify DTSC of the inadequacy of the groundwater detection monitoring program and apply for permit modification.	Major	Major	25		25
6/23/2015	Failure to notify DTSC of the inadequacy of the groundwater evaluation monitoring program.	Major	Major	25		25
5/26/2016	Failure to remedy deterioration of equipment or structures to ensure that the problem does not lead to an environmental or human health hazard.	Major	Major	25		25
5/26/2016	Failure to estimate the remaining service life of the tank system	Minimal	Minimal	2		2
5/26/2016	Failure to repair a condition that could lead to a release of hazardous waste.	Major	Major	25	25% (second instance)	31.25
5/26/2016	Failure to maintain the level of stored hazardous waste below the containment wall.	Major	Moderate	20	25% (second instance)	25
5/26/2016	Failure to completely enclose the Containment Building.	Major	Moderate	20		20
5/26/2016	Failure to comply with requirement that containment building used to manage hazardous wastes include a secondary containment system with a functioning leak detection system.	Major	Major	25	50% (third instance)	37.5
6/26/2017	Failure to promptly repair a condition that could lead to a release of hazardous waste.	Major	Major	25	50% (third instance)	37.5
6/28/2018	Failure to comply with requirement that containment building used to manage hazardous wastes include a secondary containment system with a functioning leak detection system.	Major	Major	25	50% (third instance)	37.5

6/28/2018	Failure to maintain primary barrier and keep it free of significant cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be released from the primary barrier.	Major	Major	25	25% (second instance)	31.25
6/28/2018	Failure to notify DTSC of plans to physically alter the facility.	Major	Major	25		25

TOTAL: **769.25**

TOTAL NO. OF COMPLIANCE INSPECTIONS (2009-2018): **13**

FINAL VSP SCORE: **59.17**

METHODOLOGY

1. Compiled information on violations from the Envirostor website. Included all Class I violations from Summaries of Violations ("SOVs") for the period from Jan. 1, 2009 to Dec. 31, 2018. Also included two violations from the March 26, 2014 multi-agency inspection led by the U.S. Environmental Protection Agency that were not listed in any of the SOVs.

2. Classified each violation according to potential harm and extent of deviation to produce a score as provided by the VSP matrix. Adjusted the scores for repeat violations. Summed these scores and then divided by the total number of compliance inspections from the relevant time period.

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