November 2020

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Lead

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United States Environmental Protection Agency

EPA Reduces Lead Exposures Through Cleanup Enforcement 2020

EPA's cleanup enforcement programs help get the lead out of American communities

EPA enforces the national hazardous substances and hazardous waste cleanup programs under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund) and the Resource Conservation and Recovery Act (RCRA). EPA's Superfund and RCRA corrective action enforcement groups identify parties responsible for releases or threatened releases of hazardous substances and wastes and compel them to take the actions necessary to address the contamination.

Superfund directs EPA to clean up contaminated sites where hazardous substances, such as lead, have been released into the environment. Lead is one of the most common contaminants found at Superfund sites; there are presently over 900 Superfund sites with lead as a contaminant of concern. Where there are financially viable parties that are responsible for the contamination, Superfund authority is used to compel those parties to either perform or pay for the cleanup.

RCRA cleanup authority may be used at RCRA permitted facilities that treat, store or dispose of hazardous waste, or anywhere that a release of solid or hazardous wastes may cause an imminent and substantial endangerment to human health and the environment.

Cleanup enforcement programs help to reduce lead exposure

The Superfund program cleans up hazardous substances such as lead to protect human health and the environment. A 2019 EPA study of two decades of children's blood lead levels (BLLs) in six states indicated that Superfund cleanups lowered the risk of elevated BLL for children living within 2 km (1.24 miles) of lead-contaminated sites by 8 to 18 percent.

The Superfund and RCRA corrective action enforcement programs make many cleanups possible by identifying the parties responsible for the contamination and using enforcement authorities to compel them to clean it up. Superfund enforcement actions save taxpayers from having to pay the costs of cleanup and get some cleanups started sooner than

Lead is a neurotoxin; exposure can permanently damage the brain. It can also injure other soft tissues and organs, cause permanent nerve damage, interfere with blood formation, and high levels of lead exposure can lead to seizures, coma, and death. More information on lead and human health is available here.

Lead is still used in numerous products including paints, batteries, computer components, aviation fuel and ammunition. Metal smelters and refineries discharge lead to the air and leave waste piles that contaminate soil and groundwater. Despite efforts to phase lead out of many products, its extensive historical use has left a legacy of persistent contamination in communities throughout the country.

Lead is found in yards, playgrounds, homes, soils, sediments, surface and ground-waters. Lead-based paint is often found in homes built before the 1978 ban on household use of lead paint. Some communities still have lead-based or lead-soldered water pipes which may pose a hazard to drinking water.

they would if they had to wait for federal funds to become available. Facility owners and operators operating under a RCRA permit or RCRA interim status are obligated to take "corrective action" (cleanup action) when necessary; failure to do so prompts enforcement action.

Enforcement actions include administrative settlement agreements and orders on consent (ASAOCs), unilateral administrative orders (UAOs), and consent decrees (CDs). Orders and CDs can require investigation and cleanup, compel access to contaminated property, repayment of money spent by EPA (under Superfund), implementation and monitoring of institutional controls, and other measures.

Some examples of lead-related cleanup enforcement actions in Fiscal Year 2020 (FY20) are highlighted here.

Blood Lead Level (BLL)
As understanding of the impact of lead on human health has increased, "acceptable" levels of lead in blood have steadily dropped.

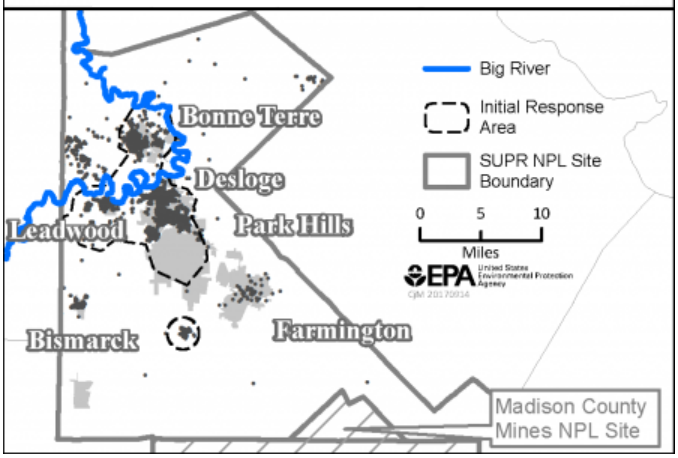
In 2012 the CDC, recognizing there is no safe BLL in children, recommended clinicians monitor children with a BLL greater than 5 µg/dL.

EPA efforts to reduce lead exposure have contributed to BLLs in U.S. children steadily dropping over the past four decades, but lead exposure persists in communities throughout the country.

BIG RIVER MINE TAILINGS: Engaging with PRPs for additional cost-effective cleanup

The Big River Mine Tailings/St. Joe Minerals Corp. Superfund Site is located in the heart of southeastern Missouri's Old Lead Belt. Starting in the 1800s, lead mining in the region produced about 250 million tons of mine waste, which was then used as fill for public roads, residential properties, etc. These uses and transport by wind and water erosion resulted in mine wastes contaminating soils, sediments, and water with lead.

Big River Mine Tailing/St. Joe Mineral Corp. Site



The Big River Mine Tailings Site was discussed in the 2019 lead cleanup enforcement bulletin. The FY19 Big River entry highlighted CDs entered with (1) NL Industries to pay $13 million to the EPA for past and future response costs; and (2) the Missouri Department of Natural Resources to pay the EPA $40,000 in past costs and $25,000 in future oversight costs and perform remedial work on 98 residential properties at the site.

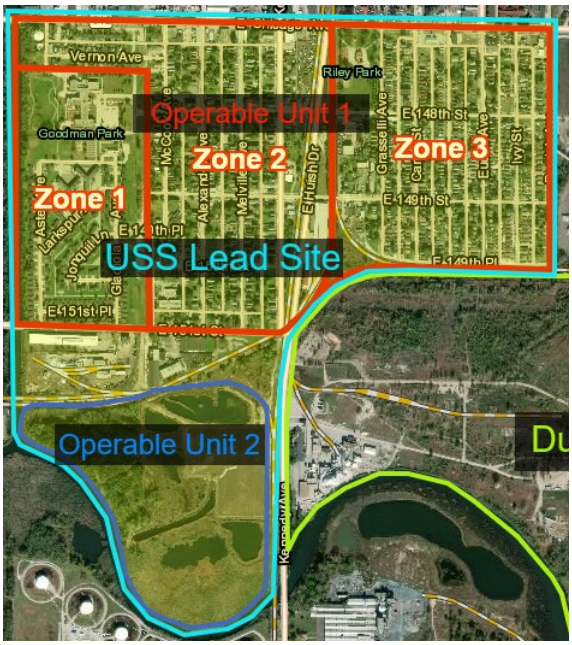
In 2011, EPA finalized a Record of Decision (ROD; cleanup plan) for Big River Operable Unit 1 (OU01), selecting a remedy to address over 4,000 residential properties contaminated with lead at a cost of approximately $130 million. Doe Run Resources Corporation (Doe Run), a potentially responsible party (PRP) at the Big River Mine Tailings Site, is cleaning up most of the over 4,000 OU01 contaminated residential properties under a May 2018 CD.

EPA planned to clean up an additional 100 residential properties in OU01 using monies recovered from other site PRPs. Doe Run suggested to EPA that Doe Run could perform the cleanup work that was to be completed by EPA at the additional residential properties. After examining Doe Run's proposal, EPA agreed that having Doe Run perform the work at the additional properties made sound environmental, health and economic sense, and on June 22, 2020, EPA Region 7 signed an ASAOC with Doe Run. Under the ASAOC, Doe Run will

replace an estimated 23,000 cubic yards of lead contaminated soil from the 100 properties in the next two years at a cost per yard that could save the government over $500,000. As of this writing, work has already been performed on 40 yards and Doe Run anticipates completing cleanup for 75 of the 100 properties this year. This ASAOC demonstrates that a PRP already obligated to perform work can serve as a resource for the Agency to achieve more cleanup work at the same site, improving efficiency and saving the government and taxpayers money.

USS LEAD: Following through to protect children from lead-laden yards

The U.S. Smelter and Lead Superfund Site (USS Lead) is located in East Chicago in northwestern Indiana, where the extensive lead contamination has required continued focused enforcement work. USS Lead was included in the FY19 lead cleanup enforcement publication, highlighting the latest in a series of enforcement actions going back to 2008 that directed Atlantic Richfield Co. (ARC), the Chemours Company FC, LLC (Chemours), E.I. du Pont de Nemours and Co. (DuPont), and other PRPs (collectively "the PRPs") to perform cleanup work at the site.



The USS Lead Site encompasses both the USS Lead facility and hundreds of adjacent residential properties. The USS Lead facility was an active lead smelter from 1906 until 1985. Wastes from the smelting operations and on-site surface soils were heavily contaminated with lead and other metals. The complicated site history and the successful remediation of nearly 800 properties to date demonstrates the ongoing nature of Superfund enforcement work at complex lead sites.

In 2018, EPA issued two UAOs to the PRPs requiring work at the site. One UAO was for interior cleanings in Zones 2 and 3 of OU1 (Interior UAO) and the second UAO was for soil remediation in Zone 2 (Exterior UAO). In 2020, the PRPs remediated the last known residential properties in Zone 2 requiring cleanup pursuant to the Exterior UAO. In May 2020, EPA issued a UAO that ordered additional soil cleanup work for several non-residential properties in Zones 2 and 3.

In June 2020, the U.S. District Court for the Northern District of Indiana issued Orders in Aid of Access ("Access Orders") for five properties located within Zone 2 of the Site. While EPA has successfully obtained voluntary access to remediate 503 of the 508 properties in Zone 2 that require remediation, EPA was unable to obtain voluntary access from the current owners of the remaining five properties. The Access Orders were necessary to implement the 2012 ROD and the Exterior UAO requiring remediation of soil at each property that is contaminated with hazardous substances. To date, 793 residential properties with contaminated soil have been remediated (28 of them in FY20) and 229 home interiors have been cleaned. This leaves just 12 of 805 yards with lead contaminated soil remaining at the Site and three additional properties awaiting sample results, and 2 of 231 home interiors left to clean. The USS Lead Site demonstrates EPA's commitment to reducing lead exposure using a variety of appropriate enforcement actions over time to ensure that needed remediation continues.

DELFAB: PRP unable to pay full cleanup costs performs post-removal decontamination

The Delfab Site is a three-acre industrial lot in Gladstone, Michigan, in a mixed area of industrial, commercial, and residential properties. Residences are located within 100 feet of the Site, and there are two schools a quarter of a mile away. Various tenants used the property for storage and recycling of e-waste. Intact cathode ray tubes

(CRTs) and crushed CRT glass with high levels of leachable lead were stored onsite, exposed to the elements in collapsing containers with crushed glass spilling onto site soils. In addition to the threat of lead exposure from weathering and runoff, CRT glass has caused fires at e-waste recycling sites by concentrating sunlight and combusting nearby materials. A fire at a site like Delfab would produce smoke with high concentrations of lead that could migrate into the residential and commercial areas near the site.

On September 19, 2019, EPA Region 5 signed an ASAOC with Delfab, Inc. of Gladstone, Michigan. Delfab, Inc. owns a warehouse where a television and CRT recycler abandoned 1.8 million pounds of lead-contaminated CRT glass. While Delfab, Inc. demonstrated an inability to pay for EPA's proposed cleanup, it will conduct post-removal decontamination work and provide EPA and the State of Michigan access to the Site. The decontamination is expected to cost Delfab, Inc. approximately $50,000 and likely would have cost the EPA more.

RINGWOOD MINES/LANDFILL: PRPs agree to reimburse EPA and State and perform remedial work

In August 2020, the District Court of New Jersey entered a CD for Operable Unit 2 (OU2) of the Ringwood Mines/Landfill Superfund Site in Ringwood, NJ. The Site was the location of historic iron ore mining operations and now includes abandoned mine pits and shafts, a closed municipal landfill, and 48 residential properties. The primary contaminants for OU2 are lead and arsenic. The CD is pursuant to CERCLA and is between the United States and the State of New Jersey (as co-Plaintiffs) and Ford Motor Company and the Borough of Ringwood (as Settling Defendants).

The CD requires the Settling Defendants to implement the remedial action at an estimated cost of $17.6 million, reimburse EPA and the State for their projected future oversight costs, and pay approximately $5.7 million to EPA and the State towards reimbursement of their respective past costs.

A unique aspect of the CD is that it provides for the division of the financial assurance (FA) between EPA and the State, providing the State with FA for future operation and maintenance (O&M) of the OU2 remedy. This division addresses the State's concerns about having sufficient funds to perform the O&M in the event the Settling Defendants fail to perform or are unable to perform the O&M at some time in the future.

SUPERIOR BARREL AND DRUM: Recovering millions of dollars from dozens of PRPs

The Superior Barrel and Drum Superfund Site is a 5.5-acre property in New Jersey where metal and plastic drums are cleaned and reconditioned for resale, reuse or disposal. In 2013, EPA discovered thousands of containers, mostly 275-gallon totes and 55-gallon drums, at the Site, which is partially located in a federally protected wetland. Containers were found to be leaking, rusted, perforated with bullet holes, stored improperly, and laying on their sides. Nearly 2,200 containers were removed, many holding hazardous substances, including lead, benzene, toluene, trichloroethylene,

ethylbenzene, xylenes, PCBs, and other contaminants. EPA removed over 215,000 gallons of hazardous chemical waste for treatment or disposal, incurring over $6.7 million in costs.

In November 2019, two CDs were finalized for the Site. The first CD is with a group of 30 arrangers (the Group) and the second CD is with Mahogany Company of Mays Landing (Mahogany), an arranger that has a limited ability to pay. Both CDs resolve the United States' claims against these 31 parties, who arranged for the treatment or disposal of hazardous substances at the Site, for a total of $3.7 million. The Group paid $3.4 million to EPA and Mahogany has paid $75,000 of $375,000 it agreed to pay over five years. EPA's identification and pursuit of these 31 PRPs resulted in recovering over half of the government's response costs.

EPA also sought to recover costs from the former owners and operators of the facility. In April 2018, the Court granted EPA's Motion for Entry of Default Judgment for all Site costs against the owner/operators Thomas Toy, Melva Toy and Superior Barrel and Drum Co., Inc. EPA is working with the U.S. Attorney's Office in New Jersey to collect on the default judgment.

ADDITIONAL TOOLS: Comfort/Status Letters and Data on Lead Cases

- *Comfort/Status Letters*

As illustrated in this publication, EPA pursues parties responsible for lead contamination to conduct cleanup work and/or reimburse EPA for its response costs. EPA's cleanup enforcement program also engages with lead cleanups in other ways – for example the issuance of comfort/status letters. Comfort/status letters are intended to address potential CERCLA liability concerns at a property by summarizing the relevant information available to EPA at that time. Such letters do not exclude the recipient from future liability, rather they summarize the EPA's current knowledge of the site so that the requestor may find "comfort" in understanding the liability factors at the Site. EPA provides these comfort/status letters to help facilitate returning lands to productive reuse. Not all requests for comfort/status letters result in a letter being issued.

The ASARCO lead refinery operated in Omaha for over 125 years. Photo credit: The World-Herald

The Omaha Lead Superfund Site, highlighted in the FY19 lead cleanup enforcement publication, is one of the largest lead Superfund sites in the country. It encompasses 27 square miles of lead contaminated soil around downtown Omaha and 42,000 residential properties at the Site have been tested for lead. Over 13,000 of the approximately 14,000 residential properties that showed high levels of lead concentration have been cleaned up. On January 2, 2020, Flatiron Hotel LLC requested a comfort/status letter for a property located within the boundaries of the Omaha Lead Superfund Site (but not a part of the Site). The Site only includes residential properties for sampling and cleanup purposes and the property identified in the comfort letter was a commercial property that did not have any exposed soil. Flatiron was attempting to refinance the property as a mixed-use apartment complex and wanted the comfort letter to help with the refinancing process. EPA Region 7 was able to provide that letter on January 23, 2020.

A comfort/status letter was also issued regarding the Big River Mine Tailing Site (discussed above). In 2018, St. Francois County, Missouri, requested a comfort/status letter for a property consisting of 102 acres (the Property) within the Site. Work has been ongoing at the Site for over 30 years and some large piles of mine waste have been capped and other areas of the Site are being used as repositories for mine waste materials. One

of these former large mine waste piles is located very close to the Property. Further, EPA is aware that portions of the Property contain former railbeds that were likely constructed of mining waste materials and other mining wastes may be located on the Property.

St. Francois County expressed an interest in acquiring the Property and was concerned that by doing so it may incur liability due to the presence of contamination. St. Francois County has asserted it has performed "all appropriate inquiries" as required by CERCLA §§ 101(40) and 107(r) and 40 C.F.R. Part 312 to qualify as a Bona Fide Prospective Purchaser (BFPP). On September 28, 2020, shortly after receiving requested additional information about the property, EPA Region 7 was able to provide a comfort/status letter to St. Francois County.

- *Data on Lead Cases*

Under CERCLA orders and settlements for sites involving lead since October 5, 2018, the EPA recovered over $335.3 million in response costs and PRPs agreed (or were ordered) to perform work worth over $177.9 million. This totals over half a billion dollars in work ordered and costs recovered at lead contaminated sites since the beginning of FY19 through EPA enforcement. The circumstances vary across the sites and settlements, but the core goal is the same – to minimize people's exposure to lead and maximize the extent to which responsible parties perform or pay for the work associated with cleaning up lead contamination.

For more information about lead poisoning prevention go to epa.gov/lead

This summary of work by the EPA's cleanup enforcement programs that address reducing lead exposures is provided as a courtesy. It is a targeted, limited summary and is neither complete nor fully current. This information is provided strictly for informational purposes. This information is not intended for use in establishing liability or calculating cost recovery Statutes of Limitations and cannot be relied upon to create any rights, substantive or procedural, enforceable by any party in litigation with the United States or third parties. The EPA may modify or change this summary at any time without public notice.