UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 155
Seattle, WA 98101-3188

SUPERFUND &
EMERGENCY
MANAGEMENT DIVISION

May 28, 2020

MEMORANDUM

SUBJECT: Request for Approval and Funding for a Time-Critical Removal Action at Former Kaiser Smelter, Mead, Spokane County, Washington, **ACTION MEMORANDUM**

FROM: Brooks Stanfield, On-Scene Coordinator
Spill Prevention and Removal Section
BROOKS STANFIELD Digitally signed by BROOKS STANFIELD Date: 2020.05.28 16:02:54 -07'00'

THRU: Calvin Terada, Director
Superfund and Emergency Management Division
CALVIN TERADA Digitally signed by CALVIN TERADA Date: 2020.05.28 17:15:03 -07'00'

TO: Chris Hladick, Regional Administrator
EPA Region 10

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval to expend to up to $5,990.350 in direct extramural costs to mitigate threats posed to human health and the environment from an ongoing release of hazardous substances and the potential for a catastrophic release of hazardous substances from an industrial property described herein as the Former Kaiser Smelter Site located at 2111 East Hawthorne Road, Mead, Spokane County, Washington (Site). The Site is made up of three parcels and owned by two owners, both of whom are identified as potentially responsible parties (PRPs).

This selected Time-Critical Removal Action meets the criteria for initiating a removal action under the National Contingency Plan (NCP), 40 C.F.R. § 300.415. The total cost of the selected Removal Action is expected to exceed the $2 million statutory limitation established in Section 104(c) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and therefore this Action Memorandum requests an emergency exemption from this limit with statutory criteria further discussed in Section V below.

II. SITE CONDITIONS AND BACKGROUND

The SEMS ID No: WAN001020091

The Site includes three separate tax parcels owned by two distinct owners. One parcel covers approximately 170 acres and includes the former aluminum smelter facility. The “facility parcel”

is owned by Spokane Recycling, LLC and is zoned for heavy industrial use. This parcel contains dozens of large industrial buildings, a baghouse, administrative buildings, a network of stormwater catch basins, sumps, storage tanks, a rail spur, and other features common to industrial facilities.

The former facility's system of catch basins and storm sewers collects and diverts stormwater through a half-mile long aqueduct flowing north from the facility to a pair of settling ponds, referred to as the upper pond and lower pond. The ponds are located on a second 405-acre undeveloped parcel owned by Kaiser Aluminum Investments Company (KAIC). At the northern end of the lower pond, a pipe transfers the water into a second aqueduct that runs approximately 1.25 miles to a third parcel, owned by Spokane Recycling, LLC, where an effluent outfall discharges stormwater into Deadman Creek (Figure 1).

The smelter facility was constructed by the Defense Plant Corporation, which began plant operations in 1942 during World War II. The property was purchased in 1946 by Kaiser Aluminum & Chemical Company (KACC). KACC operated the facility from 1946 until 2000, when the company ceased smelting operations. A portion of the former smelter property was placed on the National Priorities List (NPL) in 1983. The NPL Site, known as the Kaiser Aluminum – Mead Works Potliner Superfund Cleanup Site, is owned by a trust, which is responsible for carrying out a long-term remedy that is being overseen by the Washington Department of Ecology (Ecology). The 50-acre NPL Site consists of spent potliner solid waste, a 25-acre wet scrubber sludge bed, and a plume of groundwater contaminated with cyanide and fluoride, which flows in a northwest direction and away from the Site features discussed in this memorandum. Since its listing on the NPL, Ecology has overseen the consolidation of potliner waste into one pile, the covering of the pile with an engineered cap, and the maintenance of a system of sumps and piping around the pile. In fall of 2020, Ecology will be overseeing the installation of a groundwater pump and treatment system to address contaminated groundwater flowing from the pile. No records indicate that environmental data was available or considered for purposes of including other components of the facility within the scope of the original NPL listing.

The facility parcel and the outfall parcel (located to the north by Deadman Creek) have been sold together to three separate owners since 2004 following close of KACC's operations. The current owner, Spokane Recycling, LLC, acquired the facility and outfall parcels in 2014. The undeveloped 405-acre parcel with the settling ponds was originally acquired by KACC from the United States of America in 1976 while the company still owned and operated the smelter. The parcel was not sold with the facility parcel and outfall parcel but rather transferred to Kaiser Aluminum Fabricated Products in 2006 and then later transferred to KAIC in 2010. As part of the sale of the plant and outfall parcels in 2004, KACC granted an easement to the purchaser to provide ongoing access to the stormwater aqueducts and settling ponds located on the 405-acre undeveloped parcel.

The vicinity of the Site is comprised of a mix of residential, educational, commercial, and industrial development. The closest surface water body is Deadman Creek, which is located approximately 1.5 miles north of the site's industrial buildings. Deadman Creek is a tributary of the Little Spokane River, which subsequently flows into the Spokane River.

A. Site Description

1. Removal site evaluation

EPA received a formal written request for assistance from Ecology and the Spokane Regional Clean Air Agency (SRCAA) concerning the release of polychlorinated biphenyls (PCBs), asbestos and other contaminants[1]. A summarized list of concerns identified in the request for assistance from Ecology and SRCAA includes:

1. The amount and types of contaminants present that are highly toxic to humans and ecosystems;
2. Building conditions and illegal trespass, including an increase in homeless encampments, on the property, which are likely to result in exposure;
3. Threat of fire or explosion, particularly because the property currently does not have water service available with which to fight fires;
4. Migration of hazardous substances such as PCBs and metals into waterways that are already heavily challenged by these contaminants; and
5. A current owner that is failing to meet basic regulatory requirements.

An abbreviated Preliminary Assessment was completed for the site on February 12, 2019, pursuant to Section 104(b)(1) of CERCLA, which provided background information included in the previous section of this memorandum. Three other previous investigations are known to have taken place at the facility:

- An environmental consultant conducted a due diligence investigation on behalf of a potential buyer of the property in April 2010. A report documenting the investigation reported elevated concentrations of PCBs, including the PCB Aroclor 1268, present in siding material on buildings, soil and sediment samples, and sediment in settling ponds. This report also documented that other contaminants, including diesel-range organics and polycyclic aromatic hydrocarbons (PAHs), were present in catch basins at the facility;
- An asbestos abatement contractor, IRS Environmental, completed a cost estimate for abatement of the known asbestos throughout the facility in June 2015. The cost estimate refers to over 30 facility buildings and structures that contain asbestos-containing material (ACM[2]); and
- Sampling activities performed by Ecology's National Pollution Discharge Elimination System (NPDES) program staff starting in March 2018 confirmed the presence of PCBs in sediments in stormwater catch basins, the two settling ponds, and water discharging from the stormwater outfall into Deadman Creek. Ecology reported total PCB concentrations in surface water as high as 236,000 picograms per liter (pg/L) at the stormwater outfall entering the lower settling pond, while surface water concentrations in

[1] Kaiser Mead Request. March 6, 2019. Letter from Brook Beeler, Director of Washington Department of Ecology's Eastern Region to Wally Moon, Chief of the U.S. Environmental Protection Agency Region 10 Spill Prevention and Removal Section.
[2] ACM is defined under the Clean Air Act regulations as material containing more than 1 percent asbestos. See 40 CFR Part 61 §61.141.

the lower settling pond itself were 44,300 pg/L. PCB concentrations in surface water collected at the outfall to Deadman Creek were 7,460 pg/L. Ecology compared the surface water results to the Model Toxics Control Act (MTCA) human health screening level for fresh water in the Spokane River Basin (7 pg/L) and the Spokane Tribe of Indians human health screening level for fresh water in the Spokane River Basin (1.3 pg/L). The total PCB concentrations in surface water were several orders of magnitude greater than these screening levels.

EPA conducted a Removal Site Evaluation (RSE) pursuant to 40 C.F.R. § 300.410 to assess the presence, concentrations, and migration pathways of hazardous substances at the Site to determine risks of exposure. The RSE sampling effort, conducted in May 2019, focused on the potential migration pathway of hazardous substances from the facility buildings through the catch basins and settling ponds to the outfall at Deadman Creek. Several PCB congeners were detected in various sampling locations during this effort. The PCB Aroclor 1268 was detected in samples collected from each of these sampling areas, which helped trace the connection between the source, sample locations along the pathway, and the outfall at Deadman Creek.

EPA observed at least 13 facility buildings that appeared to have walls constructed with Robertson Siding (often referred to incorrectly by another trade name: Galbestos), which is a formerly used building material containing PCBs and asbestos (Figure 2).[3] The Robertson Siding panels were noted to be weathered and damaged, with multiple pieces observed to be on the ground around the buildings (Figure 3). Chrysotile asbestos was detected in most of the Robertson Siding samples at concentrations of approximately 20%. Additionally, the analytical results confirmed the presence of high concentrations of Aroclor 1268 in siding material ranging from 70,000 to 39,000,000 micrograms per kilogram (µg/kg). The regulatory limit for PCB concentrations in any substance under the Toxic Substances Control Act (TSCA) is 50,000 µg/kg as a baseline concentration to protect human health.

Aroclor 1268 was detected in soils and solids on the ground near exterior walls with Robertson Siding at concentrations as high as 170,000 µg/kg and sediments accumulated on top of facility catch basins at concentrations as high as 220,000 µg/kg. All three soil and sediment samples collected in the area of Building 34 (referred to as the Baghouse Building) significantly exceeded the TSCA cleanup standard of 25,000 µg/kg for unrestricted use at low occupancy areas and the Removal Management Level[4] (RML) of 94,000 µg/kg for total PCBs in industrial soil. In stormwater settling ponds where facility stormwater sediments were transported (Figure 4), Aroclor 1268 concentrations in sediment ranged upwards of 12,000 µg/kg. Total PCB concentrations exceeded Washington State sediment screening level of 2,500 µg/kg in all three

[3] An asbestos survey conducted by the abatement contractor in 1992 estimated that portions of at least 30 buildings were constructed with Robertson Siding, adding up to an estimated 978,553 square feet of material. It is believed that approximately 488,000 square feet of Robertson siding are still remaining after a demolition effort undertaken in 2013 by a previous owner.

[4] Regional Removal Management Levels (RMLs) are chemical-specific concentrations for individual contaminants in tap water, air, and soil that may be used to support the decision for EPA to undertake a removal action. Generic RMLs are based on default exposure parameters and factors that represent Reasonable Maximum Exposure (RME) conditions for long-term/chronic exposures. https://www.epa.gov/risk/regional-removal-management-levels-chemicals-rmls

samples. Aroclor 1268 was also detected in the surface water of the settling ponds at concentrations ranging from 10,803 to 23,821 pg/L, while total PCB concentrations ranged from 23,489 to 44,447 pg/L. These concentrations exceeded the Washington State (7 pg/L) human health screening levels for the Spokane River by 3,000 times or more in each case. Finally, where stormwater discharged to Deadman Creek, Aroclor 1268 was again detected in stormwater effluent (793 pg/L) and total PCB concentrations for this sample were 1,875 pg/L, which exceeded the Washington State (7 pg/L) human health screening levels for the Spokane River.[5] PCBs were detected in sediment at the outfall at trace concentrations and were below Washington State sediment cleanup goals.

These results document a pathway for migration of PCBs from the facility buildings with Robertson Siding through the catch basins and stormwater system to the settling ponds and then to Deadman Creek. Additionally, total PCB concentrations in several of these samples, including Robertson Siding, soil/solids on the ground, and catch basin sediment, exceeded the RML for industrial soil.[6] In addition to the PCBs, samples from the sediment in catch basins and settling ponds also contained elevated concentrations of other compounds, including PAHs, metals, and petroleum hydrocarbons (diesel- and heavy oil-range organics), indicating that these contaminants are also migrating off site in a manner similar to PCBs. The presence of petroleum hydrocarbons collocated with PCBs increases the solubility and thus mobility of PCBs, which are otherwise hydrophobic. The presence of these hydrocarbons with PCBs could be contributing to the mobility observed in PCBs moving from the Site to Deadman Creek.

In the rafters of the Baghouse Building and exterior piping throughout the facility, Thermal System Insulation (TSI) material was observed to be visibly deteriorating from the pipelines and had fallen onto the ground. The results of the asbestos sampling indicated some of the TSI on the pipelines contained both amosite and chrysotile asbestos at total concentrations of approximately 20% and thus were ACM. Within the Baghouse Building there were approximately 5,500 linear feet of TSI in the rafters. On observed exterior pipelines throughout the facility, EPA estimated approximately 750 linear feet of suspect ACM TSI, however it is believed that upwards of 15,000 linear feet may be present throughout the facility in addition to what was documented in the Baghouse Building (Figure 5).

EPA observed numerous piles of waste materials and former products. Many of these materials were uncontrolled and without secondary containment. They were either outside and exposed directly to the elements, or inside unsecured and open buildings. Within Building 52, commonly called the Green Mill Building, there were approximately 4,500 cubic yards of a material labeled "Green Coke" in numerous piles and containers (Figure 6). Samples collected from the Green Coke contained elevated concentrations of PAHs in comparison to the RML for industrial soil. For instance, the carcinogen benzo(a)pyrene was detected at 560,000 µg/kg, which is over two-times higher than the RML of 210,000 µg/kg for this contaminant. Metals were also detected but were below action levels. In and near the Baghouse Building were several large piles of baghouse dust. One large pile (approximately 1,000 cubic yards) was located inside a large open and unsecured building (Building 35), and another large pile (approximately 220 cubic yards)

[5] Sampling occurred during base flow conditions.
[6] https://semspub.epa.gov/work/HQ/199688.pdf

was located outside and to the north of the Baghouse Building. There was visual evidence that material from this pile was being moved by wind and/or rain. Samples from the baghouse dust contained concentrations of PCBs that ranged from 1,080 µg/kg to 2,690 µg/kg (including Aroclor 1268), PAHs, and metals. There were three above ground storage tanks (ASTs) containing coal tar pitch in a small tank farm area. Several yards of coal tar were spilling out of one open AST. The coal tar sample contained multiple carcinogenic PAH compounds whose concentrations exceeded RMLs, most notably benzo(a)pyrene, which was detected at 3,400,000 µg/kg compared to the RML of 210,000 µg/kg. The quantity of coal tar remaining inside the tanks is unknown, however the maximum capacity of each tank is 1,485 cubic yards or 100,000 gallons.

2. Physical Location

The Site is located at 2111 East Hawthorne Road, Mead, Spokane County, Washington, approximately 8 miles north of downtown Spokane, Washington. The precise location is 47.753089 north latitude, 117.378199 west longitude. The Site is located within an area comprising a mix of residential, educational, commercial, and industrial development. An elementary school is located 0.3 miles southwest and an RV campground is located less than 0.2 miles due west of the Site with at least seven additional active commercial properties located within 0.25 of the Site. An estimated 1,220 residents live within a one-mile radius of the site.[7] The closest residence sits 0.25 miles northwest of the Site. The area is experiencing increased development following the completion of a new bypass for State Highway 395, which runs along the eastern boundary of the undeveloped parcel for approximately one mile. Local agencies are seeing the new bypass bringing with it increases in traffic and pressure to develop land for more commercial and residential use. A Costco Wholesale store was recently constructed on a 25-acre portion of the undeveloped parcel, less than 500 feet northwest of the sediment ponds. In response to this growth, local agencies such as the Mead School District are also making plans to expand in order to serve the growing local population.[8]

During the field sampling event in 2019, EPA observed evidence of uncontrolled access to the facility. Although there is a front gate that was sometimes staffed by security personnel, EPA observed multiple visitors entering and driving throughout the property unaccompanied. EPA also observed graffiti, clothing, and several mattresses at the property. Additionally, several online videos show members of the public driving and/or walking throughout the former facility and documenting their visit with video cameras without any apparent knowledge of potential risk of exposure. Due to the availability of services for homeless people nearby, the Site has become an attractive location for homeless encampments. The security guard told EPA that he finds and documents new graffiti on a weekly basis. In addition to unauthorized visitors, one business is currently leasing a building on-Site and running a metal fabrications shop located near the eastern boundary. This business is located approximately 300 feet from the Baghouse Building

[7] This estimate is based on a count of 508 living units using aerial images to count single-occupancy homes plus the number of units in the Deer Run at North Pointe apartment complex (https://www.securityproperties.com/our-locations) and multiplying this number by the average number of persons per household (2.41) in the Spokane/Mead area as reported by the United States Census. (https://www.census.gov/quickfacts/fact/table/spokanecitywashington,meadcdpwashington,US/PST045219).

[8] Mike LaScoula – Spokane Regional Health District, personal communication, March 10, 2020.

and the nearest known source of contaminants described in this memorandum. The property owner is actively marketing leasing opportunities for other portions of the property and EPA has been contacted by one company actively pursuing a lease to start an operation that would transload butane from rail cars to trucks. The exact extent of this proposed operation is not final, but the company anticipates utilizing the rail line that runs parallel to and within 40 feet of the Baghouse Building while operations would potentially be focused in an area 500 feet west of the Green Mill Building. Given the presence of friable asbestos and several known carcinogenic contaminants in an uncontrolled state which significantly exceed RMLs, the presence of authorized workers and unauthorized visitors accessing the Site establishes a second potential pathway for exposure.

Local weather conditions are characterized by two main seasons: hot dry summers and cooler wetter winters. The period between late October and early June is characterized by cooler, wetter weather where average daily temperatures typically range in the 30s and 40s and average monthly rainfall ranges between 1.5 and 2.5 inches. Precipitation in the form of snowfall is most common between early November and early March. A hotter drier season spans between mid-June and mid-September where average daily temperatures range in the upper 70s and upper 80s and average monthly rainfall is about 0.5 inches.[9] The area is known to have strong seasonal winds, especially during the months of March through June.[10] Contaminants of concern (COCs) at the Site are susceptible to mobilization by moderate to heavy rainfall and winds.

The closest surface water body is Deadman Creek, which is located approximately 1.5 miles north of the Site's industrial buildings. Deadman Creek is a tributary of the Little Spokane River, which subsequently flows into the Spokane River. There are no known federally-listed threatened or endangered species on the Site. Numerous species of birds listed as Birds of Conservation Concern under the Migratory Bird Treaty Act of 1918 and Bald and Golden Eagle Protection Act of 1940 are listed as potentially present in Spokane County, however no observations of species of concern birds have been reported on the Site and only one observation of one subject species has been documented within 1.5 miles of the Site.[11]

Although no excavation of previously undisturbed subsurface soil is planned under this Time-Critical Removal Action, due to the age and contributions the facility has had in supporting the country's war efforts and the regional economy, there are potential structures of historical significance on the facility parcel. EPA has contacted the State Historic Preservation Office to determine if any of the buildings on-Site sided with Robertson Siding would be considered historically significant and what, if any, steps should be taken to comply with substantive requirements of the National Historic Preservation Act during the course of cleanup.

Several tribes have interests in the area of the facility. EPA has notified interested tribes of the planned Removal Action and is prepared to work with tribes to address any concerns related to potential impacts to natural and archeological resources.

[9] https://weatherspark.com/y/2019/Average-Weather-in-Mead-Washington-United-States-Year-Round#Sections-Wind
[10] http://alltowndata.com/living-in/Spokane-Washington
[11] https://ebird.org/map/

3. Site characteristics

Currently, authorized commercial activities at the facility parcel are limited to one small business which is leasing a 10,000-square foot building on the eastern boundary of the property to run a metal fabrications shop. With no sources of water or power available, this company is using generators and imported water to support its operations. Several dozen buildings remain on the property. These buildings are open and are not actively maintained. Making use of the abandoned and dilapidated appearance of the facility, a local film production company filmed a zombie movie on the Site in the recent past. Although the facility parcel is fenced and has a gate at its main entrance, site security for the 170-acre property has been intermittent and limited. There is ample evidence of frequent trespassing by homeless populations and others in the form of graffiti, mattresses, and online videos documenting the explorations of curious visitors. Debris from weathered building materials and waste piles can be seen accumulating in areas with soil, clogged storm sewer drains, and other places where stormwater accumulates. The on-Site buildings are in various states of disrepair. A previous property owner specialized in salvage and demolition and began to demolish several buildings, including a project to remove fifteen 700-foot by 50-foot potliner buildings.[12] EPA noted evidence of the demolition during its field event. Some buildings were partially torn down, others were left with only the foundation, some had caved-in ceilings with ponded water inside, while others appeared to be structurally sound. No demolition activities of the remaining several dozen buildings has been documented since Spokane Recycling, LLC took ownership of the facility parcel in 2014. Although the facility owner has a stormwater NPDES general permit, Ecology reports that the current owner has not complied with or met any regulatory obligations under this permit for stormwater management and violated the terms of a recent settlement agreement addressing compliance issues in March 2020.

The undeveloped 405-acre parcel where the settling ponds reside is largely dedicated to agricultural use. One 25-acre portion of this parcel was recently developed into a Costco Wholesale store. The two lined settling ponds on this parcel are enclosed by a locked chain link fence. The lower pond has a non-functioning pumphouse and a series of catchment locks where stormwater exits the ponds into the second aqueduct en route to Deadman Creek. The upper pond, which was used to hold water and sediment during maintenance of the lower pond is largely full of sediment, water, and marsh vegetation. In general, the ponds and associated infrastructure show no sign of recent maintenance, are in disrepair, and are overgrown by vegetation. It is unknown whether the pond liners are still serving to prevent stormwater from infiltrating into ground water.

The outfall parcel borders Deadman Creek. The parcel is characterized by a mixture of deciduous trees and shrubs and tall grasses typical of marshes and riparian areas in this region. The only noteworthy features are the stormwater outfall, Deadman Creek, and a footpath that provides access to the outfall from a nearby road.

No previous CERCLA removal actions have occurred at this Site.

[12] "*The next phase: Kaiser's Mead smelting plant undergoes Demolition*" The Spokesman-Review, October 6, 2013.

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant

Based on the information available at this time, the principal hazardous substances or pollutants or contaminants that are being released or for which there is threat of release are listed below.

Media	Estimated Quantity	Hazardous Substances, Pollutants or Contaminants	Concentrations detected	Action Level
Building siding material	488,500 square feet	PCBs	39,000,000 µg/kg	50,000 µg/kg[13]
		ACM	20% chrysotile	1%
TSI pipe insulation	20,666 linear feet	ACM	20% amosite and chrysotile	1%
Waste piles: Green coke	4,500 cubic yards	Benzo(a)pyrene	560,000 µg/kg	210,000 µg/kg[14]
Coal Tar Pitch ASTs	≤ 300,000 gallons	Benzo(a)pyrene (and multiple other PAHs)	3,400,000 µg/kg	210,000 µg/kg[14]
Soil[15]	Unknown	PCBs	170,000 µg/kg	94,000 µg/kg[14]
		Benzo(a)pyrene	480,000 µg/kg	210,000 µg/kg[14]
Sediment in lower settling pond	1,000-1,700 cubic yards	PCBs	12,000 µg/kg	2,500 µg/kg[16]
		PAHs	177,000 µg/kg	30,000 µg/kg[16]
Surface water	432,000 gallons	PCBs	44,000 pg/L	7 pg/L[17]

These substances are hazardous substances, pollutants, or contaminants as defined by sections 101(14) and 101(33) of CERCLA, 42 U.S.C. §9601(14) and (33). Other hazardous substances may also be present on the Site.

Primary COCs at the Site include several human carcinogens, namely PCBs, PAHs, and friable asbestos. These substances – in addition to other secondary COCs – are emanating from deteriorating building materials and waste piles that are exposed to the elements and being

[13] The regulatory limit for PCB concentrations in any substance pursuant to TSCA regulations.
[14] Applicable Removal Management Level (RML).
[15] The term "soil" describes detritus found in several areas of accumulation such as at the foot of buildings with Robertson Siding and caught in sediment traps around storm drains.
[16] Washington State sediment screening level.
[17] MTCA Human Health Fresh Water for the Spokane River.

spread throughout the Site by way of wind and rain creating immediate exposure risks to any visitors that may come in contact with these substances. Primary and other secondary COCs were also found in extremely elevated concentrations migrating through stormwater into a tributary of the Little Spokane River, a waterbody that has been included on the State's listing of impaired waters under Section 303(d) of the Clean Water Act due to the presence of PCBs in fish tissue.[18] The presence of petroleum hydrocarbons in soils and sediments along the stormwater migration path creates an added risk, due to the ability of these constituents to increase the solubility, and thus the mobility of PCBs originating from the Site.

As previously stated, the lack of consistent site security enables frequent trespassing by homeless populations, who have used the property to locate encampments, and by curious locals who frequently document and publicize their illegal visits on social media, thus potentially attracting more unauthorized visitors. The local fire marshal expressed concern that this trespassing activity, in combination with a lack of available water service on the 170-acre property, creates an added risk of fire.[19]

5. NPL Status

The Site is not listed on the National Priorities List (NPL) nor has it been proposed for listing. A 50-acre portion of the former smelter property, known as the Kaiser Aluminum–Mead Works Potliner Superfund Cleanup Site, is located immediately north of the facility parcel. The Site was placed on the NPL in 1983 to address a groundwater plume contaminated with cyanide and fluoride originating from a repository of potliner waste generated on the former facility. No records indicate that environmental data was available or considered for purposes of including other components of the facility within the scope of the NPL listing. The RSE was conducted in close coordination with EPA's Site Assessment program and all removal actions taken will be conducted in a manner that supports any future remedial activities, should they occur.

6. Maps, pictures, and other graphic representations

[18] Washington State Water Quality Assessment. Listing ID 9051.
[19] Christian Linecchi, Spokane County Fire District 9, personal communication, May 2019.

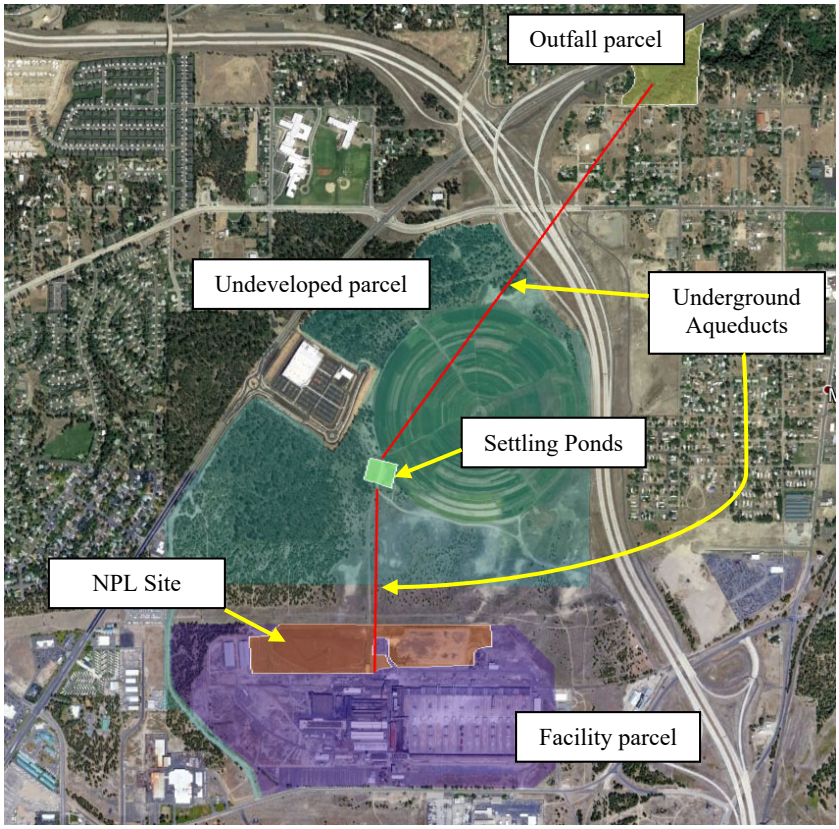

Figure 1: Overview of site features

Figure 2: Highlighting of buildings identified as having PCB and asbestos-containing Robertson Siding.

Figure 3: Dilapidated Robertson Siding contaminated with PCBs and asbestos moving to storm drain

Figure 4: Lower settling pond.

Figure 5: Asbestos containing pipe wrap found in a deteriorated condition and falling to the ground in several locations.

Figure 6: "Green coke" waste piles containing high levels of carcinogenic PAHs. One example of uncontrolled waste material.

B. Other Actions to Date

1. Previous Actions

As previously discussed, a privately conducted building demolition project was undertaken on the facility parcel approximately eight years ago, which led to the demolition and removal of 15 potliner buildings. This project occurred prior to the sale of the property to its current owner. Since this time, no known demolition or cleanup actions have been taken on the facility parcel by its owner or other authorities. No cleanup or maintenance activity is known to have occurred on the undeveloped settling pond parcel nor the outfall parcel during this same period.

2. Current actions

Because of the nature of the source contamination which includes ACM and other contaminants releasing from building siding, State and local authorities have been limited in their ability to address contaminated source material directly or to compel such actions on the part of property owners through enforcement tools.

EPA is coordinating with Ecology and SRCAA to ensure the planned Removal Action is supportive of the longer-term site management approach taken by these agencies.

C. State and Local Authorities' Roles

1. State and local actions to date

As previously stated in section II.A.1 of this memorandum, Ecology and SRCAA sent EPA a letter on March 6, 2019, formally requesting EPA assistance to conduct an emergency removal action. Under its NPDES authority, Ecology is conducting periodic sampling of stormwater at the point of discharge into Deadman Creek to monitor the extent of ongoing release of PCBs into the watershed. Ecology has been attempting to use its NPDES enforcement authority to compel compliance with requirements of the general permit under which the facility is covered. However, to date, NPDES regulatory requirements have not been met since the most recent sale of the facility parcel in 2014. Furthermore, the property owner recently violated a settlement agreement with Ecology that addressed some of the non-compliance issues. SRCAA has attempted to establish a cooperative working relationship with the owner of the facility parcel in order to guide the owner through the proper regulatory steps for demolition activities that involve abatement of ACM. To date, the owner has not initiated any regulatory actions with SRCAA for the abatement of ACM although several demolition projects are believed to have taken place on the property under previous owners.

2. Potential for continued State/local response

EPA has initiated discussions for a Memorandum of Understanding (MOU) with Ecology to delineate actions EPA will take under CERCLA removal authority and what roles Ecology will have under MTCA authority in conducting or overseeing longer-term cleanup of soil and management of any ongoing stormwater treatment that may be needed.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

The current conditions at this Site meet the following factors which indicate that the Site is a threat to the public health or welfare or the environment, and a removal action is appropriate under Section 300.415(b)(2) of the NCP.

1. Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants (40 C.F.R. § 300.415(b)(2)(i)).

The conditions at the Site have created at least two primary exposure pathways to human populations, animals and the food chain: (1) on-Site exposure and (2) off-Site migration through stormwater.

As described in section II.A.1, there at least 13 buildings on site that have siding (Robertson Siding) constructed of materials that contain asbestos and PCBs, both of which are human carcinogens. The siding was shown to contain concentrations of the PCB Aroclor 1268 ranging from 70,000 to 39,000,000 µg/kg with the upper range exceeding the TSCA regulatory limit by over 700 times. PCBs were detected in soil and sediments on the ground surface near these buildings in concentrations that were approximately two times the applicable RML. The siding was also shown to contain chrysotile asbestos at concentrations upwards of 20% and EPA also noted the presence of over 20,000 linear feet of asbestos-containing pipe insulation. Pipe insulation was also found to contain approximately 20% asbestos and much of what was observed was exposed to the elements and left in a deteriorated and friable condition. Finally, carcinogenic PAHs, most notably benzo(a)pyrene, were found in several uncontrolled waste piles at concentrations exceeding the EPA RML by over 16 times.

Asbestos affects the lungs and the membrane that surrounds the lungs. Breathing high levels of asbestos for a long time may result in scar-like tissue in the lungs and in pleural membrane (lining) that surrounds the lung causing mesothelioma. PCBs are chlorinated compounds that are extremely persistent in the environment and are resistant to chemical and biological degradation. PCBs bioaccumulate in fatty tissues and are known to increase in concentration as they migrate up the food chain. Acute or chronic exposure to large amounts of PCBs can cause harmful effects to the eyes, liver, and reproductive system in humans. PCBs are carcinogens and have been shown to cause tumors of the pituitary gland and liver as well as leukemia. PAHs, including those present on Site, are linked to increased incidences of skin, lung, bladder, liver, and stomach cancers in laboratory animals and oven coke workers, the latter which have been shown to experience disproportionately high mortality rates due to these diseases. The presence of uncontrolled carcinogenic PCBs and PAHs along with asbestos fibers is a concern given the presence of current commercial activity on Site and ongoing trespassing by curious locals, vandals, and homeless populations, presumably none of whom are aware of the health risks.

The migration of persistent, carcinogenic contaminants such as PCBs and PAHs along with other contaminants from materials on Site through a stormwater system that discharges into a tributary

of the Little Spokane and Spokane River watersheds presents an exposure pathway to aquatic organisms, including fish, and human consumers of those fish. The pathway of PCBs from source material to soil, sediment and finally surface water leads to concentrations that are at times several thousand times the applicable water quality standard in a watershed that, because of the presence of PCBs in fish, is already designated as impaired under section 303(d) of the Clean Water Act.

2. **Actual or potential contamination of drinking water supplies or sensitive ecosystems (40 C.F.R. § 300.415(b)(2)(ii))**.

Carcinogenic contaminants such as PCBs and PAHs were detected in effluent discharging into Deadman Creek from the stormwater aqueduct originating at the Site. Deadman Creek is a tributary of the Little Spokane and the Spokane Rivers, both of which are waterbodies that are listed as "impaired" under Section 303(d) of the Clean Water Act due to the high concentrations of PCBs found in fish tissue. The local aquatic ecosystem supports fish populations of rainbow trout, northern pikeminnow, and bridgelip suckers and the watershed is part of the greater Lake Coeur d'Alene ecosystem which also supports chinook salmon and bass fish. The Spokane River Regional Toxics Task Force is actively working on activities "[to] further analyze the existing and future data to better characterize the amounts, sources, and locations of PCBs and other toxics as defined above entering the Spokane River."[20]

The Site is also located above the Spokane Valley-Rathdrum Prairie Aquifer, which has been a federally designated sole-source aquifer since 1978. The aquifer is the only affordable source of drinking water in a bi-state region serving drinking water to more than 500,000 people. Although many of the primary COCs are not highly soluble in water, the added presence of petroleum hydrocarbons in soils, sediments, and surface water on Site creates a potential risk to the aquifer, due to the ability of these hydrocarbons to increase the solubility, and thus the mobility of PCBs to migrate through surface or groundwater.

3. **Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release (40 C.F.R. § 300.415(b)(2)(iii))**.

EPA observed numerous piles of waste materials and former products on Site. Many of these materials were uncontrolled and without secondary containment. They were either outside and exposed to the elements, or inside unsecured and open buildings. Mobilization of waste material by wind and rain was visible and PAHs emanating from waste piles were detected in surface water sampled in settling ponds. Within the Green Mill Building, there were approximately 4,500 cubic yards of a material labeled "Green Coke" in numerous piles and containers. Samples collected from the green coke contained elevated concentrations of PAHs and metals. In and near the Baghouse Building were several large piles of baghouse dust. One large pile (approximately 1,000 cubic yards) was located inside a large open and unsecured building (Building 35), and another large pile (approximately 220 cubic yards) was located outside to the north of the Baghouse Building. Samples from the baghouse dust contained elevated concentrations of PCBs

[20] https://srrttf.org/

(including Aroclor 1268), PAHs, and metals. There were three coal tar ASTs at the coal tar tank farm, and several cubic yards of coal tar were spilling out of one open AST. The coal tar sample contained elevated concentrations of PAHs, including multiple PAH compounds with concentrations greater than 1,000,000 µg/kg. The maximum capacity of each tank is 1,485 cubic yards or 100,000 gallons. Based on the analytical data from samples collected from the containers and the environment, the bulk storage containers on Site are currently releasing hazardous substances and present an ongoing threat to continue to do so in the future.

4. **High levels of hazardous substances or pollutants in soils largely at or near the surface that may migrate (40 C.F.R. § 300.415(b)(2)(iv)).**

One PCB congener, Aroclor 1268, was detected at concentrations as high as 220,000 µg/kg in surface soils and in sediment accumulated near stormwater drains adjacent to buildings with Robertson Siding. Half of the samples exceeded the RML for total PCBs in industrial soil (94,000 µg/kg). In addition to PCBs, sediment samples from the catch basins and settling ponds also contained elevated concentrations of other compounds, including PAHs, metals, and petroleum hydrocarbons (diesel- and heavy oil-range organics). The carcinogenic PAH, benzo(a)pyrene, was detected in samples collected near the Green Mill Building at concentrations up to 480,000 µg/kg and two of three samples exceeded the RML for industrial soil (210,000 µg/kg) by more than two times. Pipe insulation containing approximately 20% asbestos was found in large quantities, outside and exposed to the elements, and in a friable state. All of these COCs are susceptible to aerial migration due to the seasonally windy conditions this area experiences and PCBs and PAHs were found to be migrating off Site through stormwater into Deadman Creek. Removal of primary source material on the facility parcel will be a primary focus of this Action Memorandum, as described below in section VI. Removal of the secondary source, which is sediment in the stormwater system on the undeveloped parcel, including in the settling ponds, will be completed through a separate but coordinated Action Memorandum and Settlement Agreement being negotiated with KAIC.

5. **Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released (40 C.F.R. § 300.415(b)(2)(v)).**

The RSE documented presence of friable ACM in a deteriorated condition and waste piles left outside in the elements or in structures that are open and affected by the elements. The area where the Site is located is known for seasonally high winds. EPA documented visual evidence of mobilization of material from waste material inside and outside buildings from wind and outside buildings from rain. When dust settles onto PCB-contaminated material, including intact siding material, dust particles sorb PCBs causing PCBs from soil and the Robertson Siding to mobilize away from the building when the wind or rain move the newly contaminated dust off the siding.

PCBs were detected in the lower pond at concentrations as high as 12,000 µg/kg which exceeds the Washington State sediment screening level of 2,500 µg/kg by one order of magnitude. Due to the lack of maintenance of the stormwater settling ponds, the volume of sediment in the lower pond has accumulated and is at or near the level of the point of exit where a second aqueduct conveys stormwater from the pond to its point of final discharge in Deadman Creek. PCB

detections in stormwater effluent discharging into Deadman Creek confirm that, even in base (low volume) flow conditions, PCBs are migrating through stormwater from the settling ponds to the watershed. The potential capacity of this system to mobilize large volumes of PCB-contaminated sediment during storm (peak flow) conditions presents a significant and immediate threat to the local aquatic ecosystem and human consumers of organisms living in that system. As outlined above in section III.5 of this memorandum, removal of primary source material on the facility parcel will be a primary focus of this Action Memorandum. Removal of the secondary source, which is sediment in the stormwater system on the undeveloped parcel, including in the settling ponds, will be completed through a separate but coordinated Action Memorandum and Settlement Agreement being negotiated with KAIC.

6. Threat of fire or explosion (40 C.F.R. § 300.415(b)(2)(vi))

During the RSE and during the weeks following, EPA was contacted by an inspector from Spokane County Fire District 9. Among the concerns provided by the local fire authorities included the lack of water service on the facility parcel that would be needed in the event of a fire. The local fire department has responded to several fires caused by homeless encampments in the surrounding area and the previously cited increase in homeless encampments on the facility parcel and lack of consistent security increases the risk of fire on the Site. If PCBs are burned, dioxin is formed, thus potentially creating a new, more toxic, contaminant of concern. Uncontrolled fires coming in contact with building materials containing ACM could create a large-scale release of asbestos fibers that would impair the air quality throughout the surrounding area.

7. The availability of other appropriate federal or state response mechanisms to respond to the release (40 C.F.R. § 300.415(b)(2)(vii)).

Ecology is currently regulating contaminant issues on the Site through its NPDES program. The property owner has not complied with regulatory requirements under this permit since acquiring the property in 2014, and in 2020 it violated a settlement agreement with Ecology that addresses some elements of non-compliance. Ecology's MTCA statute may be able to regulate some contaminants that are confirmed to be migrating off Site. However, Ecology has stated it does not have authority or resources to address immediate threats of release in a time-critical fashion, and that MTCA does not provide authority to address releases of ACM or PCB sources that are present in building materials.

The SRCAA regulates management of ACM during demolition and abatement activities. The SRCAA has limited staff to provide oversight of permitted projects. It has stated it has no resources available to conduct cleanup of ACM and that its enforcement authority is limited to situations where an entity does not comply with SRCAA administrative actions such as notices of violation and penalties.

EPA is working cooperatively with the Ecology and SRCAA to use all the available and appropriate regulatory tools in order ensure threats from the release of hazardous substances are properly mitigated within appropriate timeframes.

8. **Other situations or factors that may pose threats to public health or welfare of the United States or the environment. (40 C.F.R. § 300.415(b)(2)(viii)).**

An overarching factor that magnifies the threats posed by this Site is the demonstrated past non-compliance with environmental regulatory requirements by the owner of the facility parcel and outfall parcel, as recently as March 2020.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from this Site may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. EXEMPTION FROM STATUTORY LIMITS

This Action Memorandum requests an emergency exemption from the $2 million limit for fund-financed removal actions as outlined in Section 104(c) of CERCLA. This exemption is warranted and the statutory criteria in Section 104(c)(1)(A) of CERCLA are met as outlined below:

1. **Continued response actions are immediately required to prevent, limit, or mitigate an emergency.**
   As outlined in previous sections of this Action Memorandum, EPA has documented as part of its RSE that there is an ongoing release of hazardous substances including, but not limited to PCBs, PAHs, and asbestos from this Site that create a current risk of exposure to these contaminants. The RSE also documents the potential of a catastrophic release of highly contaminated sediment from the 1,700 cubic yards of sediment that have accumulated in a sediment pond to Deadman Creek.

2. **There is an immediate risk to public health or welfare or the environment.**
   As outlined in previous sections of this Action Memorandum, the contaminants currently being released from the Site include but are not limited to PCBs, PAHs, and asbestos all of which are known human carcinogens. Due to the ongoing presence of commercial activity and illegal trespassers on the Site, there is an immediate risk to human health from on-Site exposure. The documented migration of PCBs through stormwater into watersheds that are already designated as impaired waterbodies because of the presence of PCBs present an immediate risk to the health of the local environment and human health among populations that consume fish from this river system.

3. **Such assistance will not otherwise be provided on a timely basis.**
   As outlined in section III(7) of this Action Memorandum the State of Washington's cleanup statutes do not provide authority to address contaminants in building materials, which represent the primary and largest source of contamination at the Site. Additionally, there are no state or local authorities that can order removal of ACM. While it has been determined that the risks described in this memorandum require immediate action, no state or other federal cleanup authorities can provide a response

within a near-term timeframe and likely will require at least a year of planning and procedural steps to initiate cleanup activities.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Action

1. Proposed Action Description

a. Robertson Siding

There is an estimated 488,500 square feet of Robertson siding on at least 13 buildings on-Site. The siding on these buildings contains PCBs at concentrations as high as 39,000,000 µg/kg and chrysotile asbestos at concentrations as high as 20%. Based on the best information available at this time, EPA will:

1. Survey and establish safe site control, including exclusion, contaminant reduction, and support zones. Because workers will be using boom lifts (or an equivalent), all surficial debris that may interfere with use of this equipment must be removed before operations may commence. A spotter shall be used at all times when personnel are using boom lifts.
2. Personnel will secure each segment of siding prior to detaching the segment from the building structure. The segment will be secured using load-appropriate rope or chains with hooks, clamps, or other means of securing the segment to a forklift.
3. Once the segment is secured to the forklift, personnel will detach the segment from the building structure using saws, torches, and/or hand tools.
4. After clearing all personnel from under the detached segment, the segment will be slowly lowered to the ground as gently as possible to prevent release of asbestos or PCBs.
5. A ground crew will detach the segment from the rope/chain and carry the segment to a prepared (lined and cushioned) roll off box.
6. The segment will be carefully stacked to maximize the amount of segments in the roll off box as efficiently as possible. Cardboard or other padding will be used as necessary to prevent the siding segments from puncturing the liner.
7. This process will continue repetitively until the roll off box is full or the maximum weight for legal transportation is achieved, whichever occurs first.
8. When the roll off box is full, the liner will be sealed in a manner that prevents release of dust during transportation.
9. The roll off box will then be sealed, secured, and placarded for transportation to an appropriately licensed disposal facility.

b. Siding Detritus on the Ground Surface

There is an unknown amount of detritus that has sloughed off of the buildings clad with Robertson siding due to weathering. This material is located on the

ground surface adjacent to the buildings and has migrated into the storm water drains, the settling ponds, and Deadman Creek. Samples of this material contained PCBs at concentrations as high as 170,000 µg/kg and the carcinogenic PAH, benzo(a)pyrene, at concentrations as high as 480,000 µg/kg. Based on the best information available at this time, EPA will conduct the following actions on paved and unpaved ground surfaces:

Removal of Siding Detritus from Paved Surfaces

1. Personnel will plug nearby storm water drains.
2. Personnel will use heavy equipment (excavators, backhoes, vacuum trucks, etc.) or manual equipment (brooms, shovels, shop vacuums, etc.) to collect, contain, and dispose of sloughed siding detritus from paved surfaces that threaten storm water drains.
3. After accumulations of detritus have been removed, paved surfaces will be pressure washed to direct the residual detritus into the plugged storm water drains.
4. The liquid and sediment collected into the plugged storm water catch basins will be pumped into settling tanks.
5. After the sediment has settled, water will be removed, treated and discharged into the storm water system.
6. The sediment that has settled out will be removed, dried, and placed into a lined roll off box.
7. This process will continue repetitively until the roll off box is full or the maximum weight for legal transportation is achieved, whichever occurs first.
8. When the roll off box is full, the liner will be sealed in a manner that prevents release of dust during transportation.
9. The roll off box will then be sealed, secured, and placarded for transportation to an appropriately licensed disposal facility.
10. Plugs will be removed from surface water drains.

Removal of Siding Detritus from Unpaved Surfaces

1. Personnel will plug nearby storm water drains.
2. Personnel will use heavy equipment (excavators, backhoes, vacuum trucks, etc.) and/or manual equipment (shovels, etc.) to excavate soil contaminated with siding detritus that is located adjacent to building clad with Robertson siding.
3. An initial lift of 0.5 feet will be removed and placed into a lined roll off box.
4. Confirmation samples will be collected to ascertain that PCB-contaminated soil has been removed. If PCBs concentrations are below the cleanup level, the excavated area will be backfilled with clean material and compacted.

5. If analytical results of soil samples indicated PCB concentrations greater than the cleanup level, an additional 0.5-foot lift will be excavated and placed into a lined roll off box.
6. In areas excavated to a depth of 1 foot, confirmation samples will be collected for documentation purposes only. Because the primary concern for PCBs in surface soil is direct human exposure and contamination or the storm water system, excavation will not proceed beyond 1.0 feet below ground surface and the fill material will be considered a sufficient cap to reduce those exposure pathways. The excavated area will be backfilled with clean material and compacted.
7. When the roll off box is full, the liner will be sealed in a manner that prevents release of dust during transportation.
8. The roll off box will then be sealed, secured, and placarded for transportation to an appropriately licensed disposal facility.
9. Plugs will be removed from surface water drains.

c. TSI Pipe Insulation

There is an estimated 20,666 linear feet of friable TSI pipe insulation observed in poor, deteriorated condition throughout the Site. This TSI pipe insulation is located within building rafters, in large pieces having detached and fallen to the ground, and outside of buildings exposed to the weather. The TSI pipe insulation contains concentrations of amosite and chrysotile asbestos at concentrations as high as 20%. Based on the best information available at this time, EPA will:

1. Survey and establish safe site control, including exclusion, contaminant reduction, and support zones. When workers are using boom lifts (or an equivalent), all surficial debris that may interfere with use of this equipment must be removed before operations may commence. A spotter shall be used at all times when personnel are using boom lifts.
2. Personnel will wrap various lengths of pipe using a glove bag that prevents the release of asbestos to the environment.
3. Personnel will then attach a second glove bag to sections of the pipe to be detached.
4. Working within the glove bag to eliminate the release of asbestos, personnel will remove the TSI and expose a section of pipe to be cut.
5. Personnel will use a saw, hand tools, or a hydraulic shear to cut the pipe and detach that section from the remaining pipe.
6. After clearing all personnel from under the detached pipe, the pipe will be slowly lowered to the ground as gently as possible to prevent release of asbestos.
7. A second crew will receive the detached pipe and transport the pipe to a prepared (lined and cushioned) roll off box.

8. The pipe will be carefully stacked to maximize the amount of material in the roll off box as efficiently as possible. Cardboard or other padding will be used as necessary to prevent the pipes from puncturing the liner.
9. This process will continue repetitively until the roll off box is full or the maximum weight for legal transportation is achieved, whichever occurs first.
10. When the roll off box is full, the liner will be sealed in a manner that prevents release of dust during transportation.
11. The roll off box will then be sealed, secured, and placarded for transportation to an appropriately licensed disposal facility.

d. Waste Piles/Green Coke

There is an estimated 4,500 cubic yards of waste material/green coke in several stockpiles and drums within the Green Mill Building and other stockpiles on Site. This material ranges in particulate size from fine sand or silt to medium gravel. The waste material contains the carcinogenic PAH benzo(a)pyrene at concentrations as high as 560,000 µg/kg. The waste piles exhibit clear evidence of exposure to wind and PAHs have been detected above allowable limits in water samples collected from the storm water retention ponds. Based on the best information available at this time, EPA will:

1. Use a water mist or a tackifier to control dust emissions during removal of the waste piles.
2. Use a front-end loader to direct load waste material into the selected transportation vessels.
3. Line and seal transportation vessels with polyethylene, wet the waste material, or apply a tackifier, and then cover prior to transportation off Site to prevent the release of dust during transportation.
4. The transportation vessel will be sealed, secured, and placarded for transportation to an appropriately licensed disposal facility.

e. Coal Tar Pitch

There is an unknown amount of solidified coal tar pitch in the three 100,000-gallon ASTs on Site. If full, each tank would contain approximately 1,000 tons of material. The access flange was removed from the base of one of the ASTs and approximately 3-5 cubic yards of material has spilled out. A sample of that material was collected, submitted for analysis, and the material contained the carcinogenic PAH benzo(a)pyrene at concentrations as high as 3,400,000 µg/kg. Based on the best information available at this time, EPA will:

1. Reattach the flange cover to the AST to prevent further release of coal tar pitch to the environment.

2. Use an excavator or hand shovel to remove the previously spilled material and place it into drums, waste wranglers, or a lined dump truck.
3. Dump truck or drums/waste wranglers will be sealed, secured, and placarded for transportation to an appropriately licensed disposal facility.

Post Removal Site Controls

Responsibility for Post Removal Site Controls will be addressed in a pending Settlement Agreement with the owner of the facility parcel and MOU with Ecology. For the work described in this Action Memorandum, EPA anticipates Post Removal Site Controls to be limited to periodic monitoring of removal actions completed by EPA.

The Site is not listed or proposed to be listed on the National Priorities List. The work described in this Action Memorandum should not impede any future removal or remedial activities at the Site.

2. Description of alternative technologies

There are no viable alternative technologies that have been identified for the Site. Removal of waste, soil, and sediment is standard technology for a site in which the primary COCs include PCBs, PAHs, and ACM.

3. Engineering Evaluation/Cost Analysis (EE/CA)

This proposed action is for time-critical removal action and, therefore, an EE/CA is not required.

4. Applicable or relevant and appropriate requirements (ARARs)

Removal actions conducted under CERCLA are required to attain Applicable or Relevant and Appropriate Requirements (ARARs) to the extent practicable. In determining whether compliance with ARARs is practicable, the On-Scene Coordinator may consider appropriate factors, including the urgency of the situation and the scope of the removal action to be conducted. EPA also requested a list of ARARs from the State of Washington. EPA has developed the following list of ARARs and the removal action will comply with these ARARs to the extent practicable.

FEDERAL ARARs

Toxic Substances Control Act (TSCA), 15 U.S.C. §§ 2601 *et seq*., 40 C.F.R. Part 761. TSCA and its implementing regulations specifically at Part 761 address the manufacture,

processing, distribution in commerce, and use prohibitions applicable to polychlorinated biphenyls (PCBs), which are applicable to EPA's handling of waste material at the Site contaminated with PCBs.

a. Subpart D, at Section 761.50-761.79, addresses specific PCB waste handling and disposal procedures.
b. Subpart N, Section 761.260-761.274, addresses cleanup site remediation sampling for PCB remediation waste in accordance with Section 761.61(a)(2).

Clean Air Act (CAA), 42 U.S.C. § 7412, 40 C.F.R. Part 61, Subpart M. The CAA and its implementing regulation for National Emissions Standard for Hazardous Air Pollutants (NESHAP), specifically at Subpart M, addresses asbestos milling, manufacturing, and fabricating operations, demolition and renovation activities, waste disposal issues, active and inactive waste disposal sites, and asbestos conversion processes. Subpart M is applicable to the handling, packaging, labeling, transportation, and disposal of waste material at a site contaminated with asbestos-containing material.

a. Section 61.145 "Standard for demolition and renovation" is likely applicable because some of the work EPA will do may require some demolition. The structures on the Site are damaged and dilapidated, and though not anticipated, EPA may need to demolish portions of structures.
b. Section 61.150 "Standard for waste disposal for manufacturing, fabricating, demolition, renovation, and spraying operations" is likely applicable because EPA will be collecting and disposing of asbestos waste from the Site.

Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §§ 6921-6939g, 40 C.F.R. Parts 260-279. Hazardous waste regulations in Subtitle C of RCRA specify hazardous waste identification, management, and disposal requirements. Because the State of Washington is authorized to operate its state hazardous waste program, the Hazardous Waste Management Act (RCW 70.105) and its Dangerous Waste Regulations (Chapter 173-303 WAC), in lieu of the federal RCRA program, this removal action will comply with the State HWMA standards to the extent practicable. Substantive requirements of RCRA Subtitle C (or the state's HWMA equivalent) may be satisfied by off-Site disposal, consistent with the CERCLA Off-Site Rule at 40 C.F.R. § 300.440. RCRA Subtitle C and the HWMA also provides treatment standards for debris contaminated with hazardous waste ("hazardous debris"), 40 C.F.R. § 268.45, although the lead agency may determine that such debris is no longer hazardous, consistent with 40 C.F.R. § 261.3(f)(2), or equivalent state regulations. While two primary contaminants of concern, PCBs and asbestos, are addressed by other ARARs, there will likely be additional hazardous waste at the Site that will be addressed under RCRA. Given the status of the state authorization in Washington, it is unlikely that federal RCRA regulations will apply; however, should new information be made available, EPA will reassess whether federal RCRA regulations

should be designated as ARARs.

Clean Water Act (CWA), 33 U.S.C. § 1342. The National Pollution Discharge Elimination System (NPDES) requires permits for discharge of stormwater. The State Department of Ecology has been delegated the authority under the CWA to carry out the NPDES program in the State of Washington. If response activities at the Site involve clearing, grading, excavating, or other response activities that will disturb more than one acre of land resulting in storm water discharges, such activities should comply with the substantive requirements for a Construction Stormwater General Permit to prevent or minimize the discharge of pollutants in storm water runoff from the disturbed areas to waters of the United States.

Endangered Species Act (ESA), 16 U.S.C. §§ 1531 – 1544, 50 C.F.R. Parts 17 and 402. The ESA protects species of fish, wildlife, and plants that are listed as threatened or endangered with extinction, along with designated critical habitat for those listed species. The ESA outlines procedures for federal agencies to follow when taking actions that may jeopardize listed species, including consultation with resource agencies. EPA conducted an evaluation of the Site and the area surrounding the Site and found that while there are some protected species in the County, the habitat range and listed species themselves are not located within or near the Site. However, if any listed species are identified in the vicinity of removal work, and the removal work may affect such species and/or their habitat, EPA will consult with the U.S. Fish and Wildlife Service, to the extent practicable, to ensure that response actions are conducted in a manner to avoid adverse habitat modification and jeopardy to the continued existence of such species.

Migratory Bird Treaty Act (MBTA), 16 USC §§ 703 *et seq*. The MBTA makes it unlawful to "hunt, take, capture, kill" or undertake various other actions adversely affecting a broad range of migratory birds without prior approval by the U.S. Fish and Wildlife Service. The mortality of migratory birds due to ingestion of contaminated sediment is not a permitted "take" under the MBTA. EPA conducted an evaluation of the area and potential migratory birds that may have access to contaminated sediment at the Site and determined that there are no known migratory birds in the vicinity of the Site. However, should a protected migratory bird be observed during removal activities, EPA will consult with the U.S. Fish and Wildlife Service, to the extent practicable, to ensure that the Removal Action will be carried out in a manner that avoids the taking or killing of protected migratory bird species, including individual birds or their nests or eggs.

National Historic Preservation Act (NHPA), 16 U.S.C. § 470f, 36 C.F.R. §§ 60, 63, and 800. Section 106 of the NHPA requires that federal agencies take into account the effects of their undertakings on historic properties and seek ways to avoid, minimize, or mitigate any adverse effects on those properties. The Section 106 process seeks to accommodate historic preservation concerns with the needs of federal undertakings through consultation

among the agency official and affected parties, commencing at the early stages of project planning. While consultation with the State Historic Preservation Officer (SHPO) is considered by EPA to be an administrative, rather than substantive, element of the NHPA, and therefore not required for ARAR compliance, EPA has already engaged the SHPO on the planned removal activities. To the extent practicable, EPA will continue to communicate with the SHPO and provide the SHPO with a reasonable opportunity to comment on activities that may impact historic properties when practicable.

STATE ARARs

Washington State Model Toxics Control Act (MTCA), RCW 70.105D, Chapter 173-340 WAC. MTCA addresses cleanup of hazardous waste sites and establishes cleanup standards. Contaminated soil across the Site should be addressed in accordance with industrial cleanup standards at WAC 173-340-745.

Hazardous Waste Management Act and Dangerous Waste Regulations, RCW 70.105, Chapter 173-303 WAC. The Act and regulations address the handling and disposition of dangerous waste, including identification, accumulation, storage, transport, treatment, and disposal. While two primary contaminants of concern, PCBs and asbestos, are addressed primarily by other ARARs, there will likely be additional waste at the Site that will be addressed under the state authorized Subtitle C RCRA program.

a. WAC 173-303-070 addresses the process for determining whether a waste is dangerous or extremely hazardous.
b. WAC 173-303-141 addresses treatment, storage, and disposal of dangerous waste.
c. WAC 173-303-145 addresses spills and discharges into the environment.
d. WAC 173-303-190 addresses preparing dangerous waste for transport.

Solid Waste Handling Standards, Chapter 173-350 WAC. The Solid Waste Handling Standards apply to management of solid waste. The regulations set minimum functional performance standards for proper handling and disposal of solid waste, describe responsibilities of various entities, and set requirements for solid waste handling facilities. Management of excavated soil or debris, not categorized as hazardous, that is generated during Site cleanup can be addressed using the standards at WAC 173-350-021, 173-350-025, 173-350-300, and 173-350-320.

General Regulations for Air Pollution Sources, Chapter 173-400 WAC. These regulations establish technically feasible and reasonably attainable standards to control or prevent the emission of air contaminants. There is the potential to generate fugitive dust during the Removal Action which can be addressed by the precautions to prevent fugitive dust from becoming airborne and the requirements to maintain and operate the source to minimize emissions standards in WAC 173-400-040(9).

Best Management Practices

Best management practices (BMPs) will be utilized to the extent practicable. The sequence of cleanup actions will commence in a manner that prevents re-contamination of areas where removal activities have already taken place. Surface water/storm water control measures (storm drain plugs, straw wattles, filter fabric, etc.) will be used to prevent the release of sediment and contaminants through the aqueduct system and Deadman Creek. Caution tape, signs, and security personnel will be used to prevent non-essential personnel or the public from becoming exposed during cleanup actions. Temporary construction-related BMPs will be employed for control of fugitive dust and stormwater. Air monitoring will be conducted to verify the effectiveness of air-related BMPs. During asbestos material removal, fugitive dust will be suppressed by wetting the Site. Upwind and downwind air monitoring for particulate, including asbestos fibers, will continue to be conducted in order to monitor dust suppression effectiveness. Air samples will also be collected and analyzed for asbestos fibers. All sample results will be compared to the general public health base action level of 0.01 fiber per cubic centimeter of air (f/cc) or structure per cubic centimeter of air (s/cc), to determine the effectiveness of EPA's dust control activities. Traffic control procedures will be implemented at the Site to minimize the impact of increased trucking to the neighboring businesses and residential areas.

5. Project Schedule

It is expected that project implementation will begin in July 2020 and will take approximately 18 weeks to complete.

B. Estimated Costs

The EPA extramural costs are shown below.

Emergency and Rapid Response Services (ERRS)	$4,721,622
Superfund Technical Assessment and Response Team (START)	$724,149
Contingency (10%)	$544,579
Total Removal Action Project Ceiling	$5,990,350

Direct Costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective 2 October 2000. These estimates do not include pre-Judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal

action. The estimates are for illustration purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If the proposed Removal Action should be delayed or not taken, COCs will continue to be released on Site creating ongoing potential exposures to cancer-causing contaminants for authorized and unauthorized visitors of the Site. COCs will continue to migrate through stormwater into Deadman Creek with an increasing risk of catastrophic release of these contaminants as a result of a storm event. Even without a catastrophic release in the short-term, the risk of stream sediment becoming contaminated and requiring cleanup increases with time. Finally, it is currently unknown whether COCs are migrating from source material through stormwater into groundwater. Given that the Site sits atop a federally designated sole source aquifer, an uncontrolled pathway to groundwater could result in a greatly expanded scope for needed cleanup operations.

VIII. OUTSTANDING POLICY ISSUES

In consultation with the Office of Emergency Management (OEM), it was determined that the removal does not involved any nationally significant and precedent-setting issues. While removal of ACM where it is the primary contaminant of concern does fall within that category, OEM believes that category does not apply to this removal action because ACM is not the primary contaminant of concern. The Office of Site Remediation Enforcement (OSRE) reviewed the Action Memorandum and Confidential Enforcement Addendum because the cost of the removal action will exceed the $2 million threshold. OSRE completed this review and provided concurrence via email on May 21, 2020.

IX. ENFORCEMENT

See the attached “Confidential Enforcement Addendum” for enforcement details.

X. RECOMMENDATION

This decision document represents the selected Removal Action for the Former Kaiser Smelter Site, located at 2111 East Hawthorne Road, Mead, Spokane County, Washington, developed in accordance with CERCLA, and not inconsistent with the NCP. This decision is based on the administrative record for the Site. Pursuant to EPA Delegation 14-2, the Region 10 Regional Administrator has authority to sign Action Memoranda where the costs do not exceed $6 million. Pursuant to EPA Region 10 Redelegation R10 14-2, this authority has been further redelegated to the Division Director, Branch Chief, Section Chief, and OSC, in certain

circumstances. However, the 2009 Superfund Removal Guidance for Preparing Action Memoranda states that when an exemption to the statutory $2 million cost threshold is applied in a removal action, only Regional Administrators are authorized to sign the Action Memorandum. Therefore, the Region 10 Regional Administrator has authority to sign this Action Memorandum applying the emergency exemption to exceed $2 million in costs.

Conditions at the Former Kaiser Smelter meet the criteria in Section 300.415(b)(2) of the NCP for a removal action and I recommend your approval of the proposed Removal Action. The total project ceiling if approved will be $5,990,350. Of this, as much as $5,990,350 comes from the Regional Removal Allowance.

XI. APPROVAL / DISAPPROVAL

APPROVAL:

CHRISTOPHER HLADICK Digitally signed by CHRISTOPHER HLADICK Date: 2020.06.01 16:55:25 -07'00'

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Chris Hladick, Regional Administrator
EPA Region 10

DISAPPROVAL:

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Chris Hladick, Regional Administrator
EPA Region 10