

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:)

U.S. Smelter and Lead Refinery, Inc. Site)
in East Chicago, Lake County, Indiana)

Atlantic Richfield Company,)
The Chemours Company FC, LLC,)
E. I. du Pont de Nemours and Company,)
Mueller Industries, Inc.,)
United States Metals Refining Company,)
and U.S.S. Lead Refinery, Inc.,)

Respondents.)

Proceeding under Section 106(a))
of the Comprehensive Environmental)
Response, Compensation, and Liability)
Act, 42 U.S.C. § 9606(a).)

V-W-18-C-005

CERCLA Docket No. _____

**UNILATERAL ADMINISTRATIVE
ORDER FOR REMEDIAL ACTION
IN ZONE 2 OF OPERABLE UNIT 1
OF THE U.S. SMELTER AND LEAD
REFINERY, INC. SUPERFUND SITE**

TABLE OF CONTENTS

I.	JURISDICTION AND GENERAL PROVISIONS.....	1
II.	PARTIES BOUND	1
III.	DEFINITIONS.....	1
IV.	FINDINGS OF FACT.....	7
V.	CONCLUSIONS OF LAW AND DETERMINATIONS.....	15
VI.	Z2 REMEDIAL ACTION WORK ORDER.....	18
VII.	OPPORTUNITY TO CONFER.....	18
VIII.	EFFECTIVE DATE.....	18
IX.	NOTICE OF INTENT TO COMPLY	19
X.	PERFORMANCE OF THE WORK.....	19
XI.	PROPERTY REQUIREMENTS	21
XII.	INSURANCE.....	24
XIII.	DELAY IN PERFORMANCE	25
XIV.	ACCESS TO INFORMATION	25
XV.	RECORD RETENTION	27
XVI.	ENFORCEMENT/WORK TAKEOVER	28
XVII.	NOTICES AND SUBMISSIONS.....	28
XVIII.	RESERVATIONS OF RIGHTS	30
XIX.	OTHER CLAIMS	30
XX.	ADMINISTRATIVE RECORD	31
XXI.	APPENDICES	31
XXII.	SEVERABILITY	32

I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Order (“Z2 Soil UAO”) is issued under the authority vested in the President of the United States by Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9606(a). This authority was delegated to the Administrator of the United States Environmental Protection Agency (EPA) by Executive Order No. 12580, 52 Fed. Reg. 2923 (Jan. 23, 1987), and further delegated to the Regional Administrators by EPA Delegation Nos. 14-14-A and 14-14-B. On May 11, 1994, this authority was further redelegated by the Regional Administrator of EPA Region 5 to the Superfund Division Director of Region 5 by EPA Regional Delegation No. 14-14-B.

2. This Z2 Soil UAO pertains to property located at U.S. Smelter and Lead Refinery Inc., Site in East Chicago, Lake County, Indiana (the “USS Lead Site” or the “Site”). This Z2 Soil UAO directs Respondents to perform the remedial action (RA) described in the Record of Decision (ROD), dated November 30, 2012, for Zone 2 of Operable Unit 1 of the Site.

3. EPA has notified the State of Indiana (the “State”) of this action pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

II. PARTIES BOUND

4. This Z2 Soil UAO applies to and is binding upon Respondents and their successors and assigns. Any change in ownership or control of the Site or change in corporate or partnership status of a Respondent, including, but not limited to, any transfer of assets or real or personal property, shall not alter Respondents’ responsibilities under this Z2 Soil UAO.

5. Respondents are jointly and severally liable for implementing all activities required by this Z2 Soil UAO. Compliance or noncompliance by any Respondent with any provision of this Z2 Soil UAO shall not excuse or justify noncompliance by any other Respondent. No Respondent shall interfere in any way with performance of the Z2 RA Work in accordance with this Z2 Soil UAO by any other Respondent. In the event of the insolvency or other failure of any Respondent to implement the requirements of this Z2 Soil UAO, the remaining Respondents shall complete all such requirements.

6. Respondents shall provide a copy of this Z2 Soil UAO to each contractor hired to perform the Z2 RA Work required by this Z2 Soil UAO and to each person representing any Respondents with respect to the Site or the Z2 RA Work, and shall condition all contracts entered into hereunder upon performance of the Z2 RA Work in conformity with the terms of this Z2 Soil UAO. Respondents or their contractors shall provide written notice of the Z2 Soil UAO to all subcontractors hired to perform any portion of the Z2 RA Work required by this Z2 Soil UAO. Respondents shall nonetheless be responsible for ensuring that their contractors and subcontractors perform the Z2 RA Work in accordance with the terms of this Z2 Soil UAO.

III. DEFINITIONS

7. Unless otherwise expressly provided in this Z2 Soil UAO, terms used in this Z2 Soil UAO that are defined in CERCLA or in regulations promulgated under CERCLA shall have

the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Z2 Soil UAO or in its appendices, the following definitions shall apply solely for the purposes of this Z2 Soil UAO:

- a. “ARC” or “Atlantic Richfield” shall mean Atlantic Richfield Company.
- b. “CERCLA” shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9601-9675.
- c. “Chemours” shall mean The Chemours Company FC, LLC
- d. “Construction Contractor” shall mean the principal contractor retained by the Supervising Contractor to implement the Z2 RA Construction under this Z2 Soil UAO.
- e. “Day” or “day” shall mean a calendar day. In computing any period of time under this Z2 Soil UAO, where the last day would fall on a Saturday, Sunday, or federal or State holiday, the period shall run until the close of business of the next working day.
- f. “DuPont” shall mean E. I. du Pont de Nemours and Company
- g. “Effective Date” shall mean the effective date of this Z2 Soil UAO as provided in Section VIII.
- h. “EPA” shall mean the United States Environmental Protection Agency and its successor departments, agencies, or instrumentalities.
- i. “EPA Hazardous Substance Superfund” shall mean the Hazardous Substance Superfund established by the Internal Revenue Code, 26 U.S.C. § 9507.
- j. “Final ESD” or “Final Explanation of Significant Differences” shall mean the final Explanation of Significant Differences that EPA issues to explain the significant increase in cost between the estimated cost of the remedy selected in the 2012 Record of Decision for Zones 2 and 3 of Operable Unit 1 of the Site and the December 2017 estimated cost of the remedy for those two Zones. The Final ESD will be issued after notice and public comment on the Proposed ESD.
- k. “Former USS Lead Facility” shall mean the approximately 79-acre parcel of land that forms a part of Operable Unit 2 and that, from approximately 1906 to 1985, housed operations including but not limited to lead refining and secondary lead smelting. The street address of the Former USS Lead Facility is 5300 Kennedy Ave., East Chicago, Indiana.
- l. “IDEM” shall mean the Indiana Department of Environmental Management and any successor departments or agencies of the State.
- m. “Institutional Controls” or “ICs” shall mean Proprietary Controls and state or local laws, regulations, ordinances, zoning restrictions, or other governmental controls or notices that: (a) limit land, water, or other resource use to minimize the potential for human exposure to Waste Material at or in connection with the Site; (b) limit land, water, or other

resource use to implement, ensure non-interference with, or ensure the protectiveness of the RA; and/or (c) provide information intended to modify or guide human behavior at or in connection with the Site.

n. “Interest” shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund, compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year. Rates are available online at <https://www.epa.gov/superfund/superfund-interest-rates>.

o. “Mueller” shall mean Mueller Industries, Inc.

p. “National Contingency Plan” or “NCP” shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

q. “Non-Respondent Owner” shall mean any person, other than a Respondent, that owns or controls any Affected Property. The phrase “Non-Respondent Owner’s Affected Property” means Affected Property owned or controlled by Non-Respondent Owner.

r. “Original Z2 Soil UAO” shall mean the Unilateral Administrative Order for Remedial Action in Zone 2 of Operable Unit 1 of the U.S. Smelter and Lead Refinery, Inc. Superfund Site signed on December 14, 2017, by the Acting Director of the Superfund Division, EPA Region 5, or his/her delegate, and all attachments thereto. The Original Z2 Soil UAO, without its appendices, is attached as Appendix P. A copy of the Original Z2 Soil UAO, including appendices, is included as part of the administrative record for the Site.

s. “OU1” or “Operable Unit 1” shall mean the surface and subsurface soil of the area located inside the red highlighted boundaries on Appendix B. OU1 is generally bounded on the north by East Chicago Avenue; on the east by Parrish Avenue; on the south by East 151st Street/149th Place; and on the west by the Indiana Harbor Canal.

t. “OU2” or “Operable Unit 2” shall mean groundwater associated with the Site as well as the surface soil, subsurface soil, and sediments located inside the blue highlighted boundaries on Appendix B. The area within the blue highlighted boundaries on Appendix B consists of approximately 79 acres, is commonly known as 5300 Kennedy Avenue, and is generally bounded on the north by the Indiana Harbor Belt Railroad; on the east by Kennedy Avenue; on the south and west by the Grand Calumet River; and on the northwest by the Indiana Harbor Canal.

u. “Paragraph” or “¶” shall mean a portion of this Z2 Soil UAO identified by an Arabic numeral or an upper or lower case letter.

v. “Parties” shall mean EPA and Respondents.

w. “Performance Standards” shall mean the cleanup standards and other measures of achievement of the goals of the remedial action objectives, as set forth in the ROD.

x. “Personally Identifiable Information” or “PII” means “Personally Identifiable Information” as defined in 2 C.F.R. § 200.79 and EPA’s Privacy Policy, and generally includes information that can be used to distinguish, trace, or identify an individual’s identity, including personal information which is linked or linkable to an individual. Personally Identifiable Information includes but is not limited to names, addresses, GPS coordinates, telephone numbers, fax numbers, email addresses, social security numbers, or labels (including, e.g., character strings linked with real estate depicted in maps or assigned to sampling data) or other personal information that can be linked to an individual. EPA’s Privacy Policy is available at <https://www.epa.gov/privacy/epa-policy-21510-privacy-policy>.

y. “Proposed ESD” or “Proposed Explanation of Significant Differences” shall mean the EPA document, noticed on December 11, 2017, and made available for public comment, which explains the significant increase in cost between the estimated cost of the remedy selected in the 2012 Record of Decision for Zones 2 and 3 of Operable Unit 1 of the Site and the December 2017 estimated cost of the remedy for those two Zones. The Proposed ESD is attached as Appendix E.

z. “Proprietary Controls” shall mean easements or covenants running with the land that: (a) limit land, water, or other resource use and/or provide access rights; and (b) are created pursuant to common law or statutory law by an instrument that is recorded in the appropriate land records office.

aa. “RCRA” shall mean the Resource Conservation and Recovery Act, also known as the Solid Waste Disposal Act, 42 U.S.C. §§ 6901-6992.

bb. “Record of Decision” or “ROD” shall mean the EPA Record of Decision relating to Operable Unit 1 at the Site signed on November 30, 2012, by the Director of the Superfund Division, EPA Region 5, or his/her delegate, and all attachments thereto. The ROD is attached as Appendix D.

cc. “Remedial Action” or “RA” shall mean the remedial action selected in the ROD.

dd. “Remedial Action Levels” or “RALs” shall mean, for residential properties, 400 milligrams per kilogram (mg/kg) for lead and 26 mg/kg for arsenic, and for commercial/industrial properties, 800 mg/kg for lead and 26 mg/kg for arsenic.

ee. “Remedial Design” or “RD” shall mean those activities already undertaken or to be undertaken by EPA to develop final plans and specifications for the RA.

ff. “Respondents” shall mean Atlantic Richfield Company, The Chemours Company FC, LLC, E. I. du Pont de Nemours and Company, Mueller Industries, Inc., United States Metals Refining Company, and U.S.S. Lead Refinery, Inc.

gg. “Section” shall mean a portion of this Z2 Soil UAO identified by a Roman numeral.

hh. “Site” or “USS Lead Site” shall mean the U.S. Smelter and Lead Refinery, Inc. Superfund Site in East Chicago, Lake County, Indiana, and depicted generally on the map included with Appendix B. The Site includes both OU1 and OU2.

ii. “Staging Area” shall mean a parcel of land, if any, utilized by Respondents to temporarily store and stage excavated soil and other Waste Materials prior to transportation to a disposal facility.

jj. “State” shall mean the State of Indiana.

kk. “Supervising Contractor” shall mean the principal contractor retained by Respondents to supervise and direct the implementation of the Z2 RA Work under this Z2 Soil UAO.

ll. “Transfer” shall mean to sell, assign, convey, lease, mortgage, or grant a security interest in, or where used as a noun, a sale, assignment, conveyance, or other disposition of any interest by operation of law or otherwise.

mm. “United States” shall mean the United States of America and each department, agency, and instrumentality of the United States, including EPA.

nn. “USMR” shall mean United States Metals Refining Company.

oo. “USS Lead” shall mean U.S.S. Lead Refinery, Inc.

pp. “Waste Material” shall mean: (a) any “hazardous substance” under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (b) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); (c) any “solid waste” under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27), or under Indiana Code § 13-11-2-205; (d), any “hazardous material” under Indiana Code § 13-11-2-96(b); and (e) any “hazardous waste” under Indiana Code § 13-11-2-99(c).

qq. “Z1” or “Zone 1” shall mean the surface and subsurface soil found in an area located inside the yellow highlighted boundaries on Appendix C and labeled as “Zone 1.” Zone 1 is generally bordered: (1) on the north by the northern boundary of the Carrie Gosch Elementary School and a line extending eastward from that boundary to the eastern edge of a north/south utility right of way that runs parallel to McCook Avenue north of East 149th Place; (2) on the east by: (i) the eastern-most edge of a north/south utility right of way that runs parallel to McCook Avenue until East 149th Place, and (ii) McCook Avenue between East 149th Place and 151st Street; (3) on the south by East 151st Street; and (4) on the west by the Indiana Harbor Canal.

rr. “Z2” or “Zone 2” shall mean the surface and subsurface soil found in an area located inside the yellow highlighted boundaries on Appendix C and labeled as “Zone 2.” Zone 2 is generally bordered: (1) on the north by Chicago Avenue; (2) on the east, by the eastern edge of the railroad right of way that runs principally north and south and is labeled on Appendix C as “Elgin Joliet and Eastern Rlwy”; (3) on the south by East 151st Street; and (4) on the west by: (i) the Indiana Harbor Canal between Chicago Avenue and the northern boundary of

the Carrie Gosch Elementary School; (ii) the eastern-most edge of a north/south utility right of way that runs parallel to McCook Avenue until East 149th Place, and (iii) McCook Avenue between East 149th Place and 151st Street.

ss. “Z3” or “Zone 3” shall mean the surface and subsurface soil found in an area located inside the yellow highlighted boundaries on Appendix C and labeled as “Zone 3.” Zone 3 is generally bordered: (1) on the north by Chicago Avenue; (2) on the east by Parrish Avenue; (3) on the south by the northern edge of the railroad right of way located generally to the south of East 149th Place and labeled on Appendix C as “Elgin Joliet and Eastern Rlwy”; and (4) on the west by the eastern edge of the railroad right of way that runs principally north and south and is labeled on Appendix C as “Elgin Joliet and Eastern Rlwy.” The triangular plot of land bounded by several railroad spurs in the southeastern portion of the area labeled Zone 3 on Appendix C is a part of Zone 3.

tt. “Z2 Affected Property” shall mean all real property in Zone 2, Operable Unit 1, of the Site and any other real property where EPA determines, at any time, that access, land, water, or other resource use restrictions, and/or Institutional Controls are needed to implement the Zone 2 Remedial Action.

uu. “Z2 Excluded Properties” shall mean the properties on the final list that EPA develops and provides to Respondents pursuant to Paragraph 4.8(a)(2) of the Z2 Soil SOW.

vv. “Z2 ICIAP” or Z2 Institutional Controls Implementation and Assurance Plan” shall mean the plan that Respondents prepare for EPA’s approval pursuant to ¶ 6.7(j) of the Z2 Soil SOW.

ww. “Z2 O&M” or “Z2 Operation and Maintenance” shall mean all activities related to the implementation and maintenance of Institutional Controls in Zone 2 to ensure the effectiveness of the Z2 Remedial Action in accordance with the ROD as specified in the Z2 Soil SOW or the EPA-approved Z2 O&M Plan.

xx. “Z2 RA” or “Z2 Remedial Action” shall mean the remedial action selected in the ROD as applied to Zone 2. The Z2 RA includes Z2 Remedial Action Construction and the implementation of Institutional Controls.

yy. “Z2 RA Construction” “Z2 Remedial Action Construction” shall mean the excavation and disposal of Waste Material from Z2 Affected Properties and the restoration of those properties, but shall not include implementation of Institutional Controls.

zz. “Z2 RA Data Management” or “Z2 Remedial Action Data Management” shall mean those activities undertaken by Respondents to develop, manage, and implement proper data management for the data generated in implementing this Z2 Soil UAO.

aaa. “Z2 RA Response Costs” shall mean all costs, including, but not limited to, direct and indirect costs, that the United States incurs in monitoring and supervising Respondents’ performance of the Z2 RA Work to determine whether such performance is consistent with the requirements of this Z2 Soil UAO, including costs incurred in reviewing deliverables submitted pursuant to this Z2 Soil UAO, as well as costs incurred in overseeing

implementation of this Z2 Soil UAO, including, but not limited to, payroll costs, contractor costs, travel costs, laboratory costs and Department of Justice costs.

bbb. “Z2 RA Work” or “Zone 2 Remedial Action Work” shall mean all activities and obligations Respondents are required to perform under this Z2 Soil UAO, except those required by Section XV (Record Retention). The Z2 RA Work encompasses all activities within the definition of “Z2 Remedial Action,” but, in addition, it includes the Z2 O&M.

ccc. “Z2 RD” or “Z2 Remedial Design” shall mean those activities already undertaken or to be undertaken by EPA to develop final plans and specifications for Z2 Remedial Action.

ddd. “Z2 Soil UAO” shall mean this Unilateral Administrative Order and all appendices attached hereto. In the event of conflict between this Z2 Soil UAO and any appendix, this Z2 Soil UAO shall control.

eee. “Z2 Soil SOW” or “Zone 2 Soil Statement of Work” shall mean the document describing the activities Respondents must perform to implement the Z2 RA and the Z2 O&M. The Z2 Soil SOW is attached as Appendix A.

IV. FINDINGS OF FACT

8. EPA hereby makes the following findings of fact:

a. Pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, EPA placed the Site on the National Priorities List (NPL), set forth at 40 C.F.R. Part 300, Appendix B, by publication in the Federal Register on April 9, 2009, 74 Fed. Reg. 16,126–34.

b. The Site consists of two Operable Units: OU1 and OU2, both defined above. OU1 has been further divided into three zones: Zone 1 (Z1), Zone 2 (Z2), and Zone 3 (Z3), also defined above.

c. In response to a release or a substantial threat of a release of hazardous substances at or from OU1 of the Site, EPA commenced, in June 2009, a Remedial Investigation and Feasibility Study (RI/FS) of OU1 of the Site pursuant to 40 C.F.R. § 300.430.

d. EPA completed a Remedial Investigation (RI) Report and a Feasibility Study (FS) Report of OU1 in June 2012.

e. Pursuant to Section 117 of CERCLA, 42 U.S.C. § 9617, EPA published notice of the completion of the FS for OU1 and of the proposed plan for remedial action for OU1 on July 12, 2012, in a major local newspaper of general circulation. EPA provided an opportunity for written and oral comments from the public on the proposed plan for remedial action. A copy of the transcript of the public meeting is available to the public as part of the administrative record upon which the Director of the Superfund Division, EPA Region 5, based the selection of the response action for OU1.

f. The decision by EPA on the remedial action to be implemented at OU1 of the Site is embodied in a final Record of Decision (ROD), executed on November 30, 2012, on which the State has given its concurrence. The ROD includes a responsiveness summary to the public comments. Notice of the final plan was published in accordance with Section 117(b) of CERCLA, 42 U.S.C. § 9617(b). The remedy selected in that ROD included:

- (1) Excavation of soil that contains lead or arsenic in concentrations that exceed the Remedial Action Levels (RALs) to a maximum depth of 24 inches;
- (2) Disposal of excavated soil at a CERCLA-approved disposal facility;
- (3) If contaminated soil is identified at a depth greater than 24 inches below ground surface (bgs), placement of a visual barrier over that contaminated soil before the yard is backfilled, and implementation of institutional controls to protect users of the property from exposure to contaminated soils that remain at depth; and
- (4) Restoration of the excavated yards.

g. By Consent Decree entered on October 28, 2014, EPA and certain parties reached an agreement regarding remedial design and remedial action (RD/RA) in Zones 1 and 3 of OU1 of the Site. RD/RA work under the 2014 Consent Decree commenced in November 2014. In the summer of 2016, EPA suspended RD/RA work in Zone 1 because of actions of other governmental bodies leading to the permanent relocation of residents there. EPA is undertaking an Addendum to the FS as it applies to all of Zone 1, except for the property in Zone 1 that includes the former Carrie Gosch Elementary School. EPA continues RD/RA work in Zone 3 pursuant to the 2014 Consent Decree.

h. In July 2016, outside of the 2014 Consent Decree, EPA began conducting extensive soil sampling within Zone 2 as part of the Remedial Design process for OU1. As of December 4, 2017, EPA has sampled 528 out of approximately 590 properties in Zone 2. Approximately 446 of the sampled properties had contamination that equals or exceeds 400 mg/kg for lead and/or 26 mg/kg for arsenic in the top 24 inches of soil.

i. In the fall of 2016, outside of the 2014 Consent Decree, EPA remediated the soil of 17 properties in Zone 2.

j. On March 16, 2017, EPA and certain parties entered into an Administrative Settlement Agreement and Order on Consent (“Z2&3 ASAOC”) regarding, *inter alia*, exterior removal actions at properties in Zone 2 which had: (1) concentrations in surface soil (0 to 6 inches bgs) at or above 1200 mg/kg for lead or at or above 68 mg/kg for arsenic; and/or (2) concentrations in surface soil at or above 400 mg/kg for lead where EPA had reason to believe sensitive populations (pregnant women and/or children six and under) lived; and/or (3) concentrations in soil at or above 24 inches bgs at or above 400 mg/kg for lead where one or more children six and under had blood lead levels equal to or greater than 10 micrograms/deciliter. Exterior soil contamination at properties addressed under the Z2&3

ASAOC was remediated in a manner consistent with the ROD. As of December 1, 2017, exterior soil contamination at 109 Zone 2 properties has been addressed under the Z2&3 ASAOC.

k. A limited number of properties in Zones 2 and 3 that were remediated in 2016 and 2017 had lead and/or arsenic contamination below 24 inches bgs. However, no Institutional Controls will be required at any of these properties because all contamination that had existed below 24 inches bgs was removed.

l. On December 11, 2017, EPA noticed a Proposed Explanation of Significant Differences, with the State's concurrence. That ESD documents only the increased cost of implementing the ROD in Zones 2 and 3 of OU1 as compared to the original estimate provided in the Feasibility Study. The Proposed ESD has been published for public comment.

m. Lead is a hazardous substance, as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14). The Agency for Toxic Substances and Disease Registry (ATSDR) has determined that exposure to lead presents human health risks. Lead exposure via inhalation and/or ingestion can have detrimental effects on almost every organ and system in the human body. Exposure may occur from direct ingestion of soil in yards, soil tracked indoors (house dust), and inhalation of fugitive dust. Lead can cause a variety of health problems to people who are exposed to it. Potential human receptors include residents, with a particular concern for children six years of age and under, and pregnant or nursing women. Children are at greatest risk from the toxic effects of lead. Initially, lead travels in the blood to the soft tissues (heart, liver, kidney, brain, etc.). Then, it gradually redistributes to the bones and teeth where it tends to remain. Children exposed to high levels of lead have exhibited nerve damage, liver damage, colic, anemia, brain damage, and death. The most serious effects associated with markedly elevated blood lead levels include neurotoxic effects such as irreversible brain damage.

n. Arsenic is a hazardous substance, as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14). ATSDR has determined that exposure to arsenic presents human health risks. Ingesting very high levels of arsenic can result in death. Exposure to lower levels can cause nausea and vomiting, decreased production of red and white blood cells, abnormal heart rhythm, damage to blood vessels, and a sensation of "pins and needles" in hands and feet. Ingesting or breathing low levels of inorganic arsenic for a long time can cause a darkening of the skin and the appearance of small "corns" or "warts" on the palms, soles, and torso. Skin contact with inorganic arsenic may cause redness and swelling. Several studies have shown that ingestion of inorganic arsenic can increase the risk of skin cancer and cancer in the liver, bladder, and lungs. Inhalation of inorganic arsenic can cause increased risk of lung cancer. The Department of Health and Human Services (DHHS) and the EPA have determined that inorganic arsenic is a known human carcinogen (ATSDR, Chemical Abstract Services [CAS] #7440-38-2, August 2007).

o. EPA has already implemented and will continue to implement—outside the coverage of this Z2 Soil UAO—the activities (including sampling) necessary for designing the excavation activities in the yards in Zone 2.

p. A facility that formerly operated in Zone 1 of the Site (the "Former Anaconda Facility") operated three inter-related processes. Specifically, in 1912, a lead refinery

was built on the site and used a pyrometallurgical process to refine lead bullion that was shipped from Tooele, Utah, to East Chicago. Then, in 1919, a white lead plant was constructed to produce white lead for use as an ingredient in lead paint. Finally, in 1922, a zinc oxide plant was added to the facility.

q. The Former Anaconda Facility also operated numerous secondary metal treatment processes. Byproducts of the operations included slag, lead waste, and arsenic. Among other sources of contamination, arsenic was burned off and was supposed to be recovered in flues and a baghouse. In addition, lead and arsenic particulate was disposed of into the environment in the same manner as with the Former USS Lead Facility (*see infra* ¶ 8.aa). Operation of the white lead process generated additional releases.

r. Significant quantities of lead were refined from 1912 until 1946, when refining operations at the Former Anaconda Facility ceased. However, secondary smelting and white lead production continued into the 1950s. The Former Anaconda Facility was demolished over the course of the 1960s and early 1970s. In approximately 1972, the West Calumet Housing Complex was constructed on the footprint of the Former Anaconda Facility.

s. Lead and arsenic from the Former Anaconda Facility came to be deposited in Operable Unit 1 of the Site, including in Zones 2 and 3. Wind was one manner by which lead and arsenic was disbursed throughout the neighborhood.

t. The Former Anaconda Facility was owned and operated between 1912 and approximately 1946 by subsidiaries of the Anaconda Copper and Mining Company. Respondent Atlantic Richfield is a successor to the liabilities of one or more companies that owned and operated the Former Anaconda Facility.

u. On January 10, 2018, Atlantic Richfield, with three other Respondents to this UAO, provided consolidated written comments on the Original Z2 Soil UAO and the Original Z2&3 Interior UAO. A copy of those consolidated comments is included in the Administrative Record.

v. A facility that formerly operated at 5215 Kennedy Avenue, East Chicago, Indiana, (the “Former DuPont Facility”) began operations in 1892 to manufacture various organic and inorganic chemicals. Over the course of its operations, the Former DuPont Facility produced over one hundred different chemicals, including lead arsenic and calcium arsenate (1910–1949) and zinc chloride (1900–1969). Among other sources of contamination, lead and arsenic particulate generated from these operations was disposed of into the environment as stack emissions, precipitator dust, and dust from exposed waste piles stored on the grounds of the site. General operations at the Former DuPont Facility contracted significantly during the 1980s and 1990s. The Former DuPont Facility is undergoing corrective action under federal RCRA authorities.

w. Lead and arsenic from the Former DuPont Facility came to be deposited in Operable Unit 1 of the Site, including in Zones 2 and 3. Wind was one manner in which lead and arsenic was dispersed into the neighborhood.

x. The Former DuPont Facility was owned and operated by the Grasselli Chemical Company from 1891 until 1928, when it was acquired by DuPont. The Former DuPont Facility was then owned and operated by DuPont or its subsidiaries from 1928 to 2015. In 2015, Respondent Chemours assumed the liabilities of Respondent DuPont related to the USS Lead Site. Respondent DuPont, however, still remains liable.

y. On January 10, 2018, DuPont and Chemours, with two other Respondents to this UAO, provided consolidated written comments on the Original Z2 Soil UAO and the Original Z2&3 Interior UAO. A copy of those consolidated comments is included in the Administrative Record.

z. The facility that formerly operated at 5300 Kennedy Ave., East Chicago, Indiana (the “Former USS Lead Facility”), and that encompasses one aspect of Operable Unit 2 of the Site, was first constructed in 1906 and used an electrolytic process (the Betts process) to refine lead bullion that was shipped first from Midvale, Utah, and then Tooele, Utah, to East Chicago. Because lead refining produces a number of byproducts, the Former USS Lead Facility also included various secondary metal treatment operations—such as secondary lead smelting—and operated a weed killer (lead arsenate) plant. In addition, throughout its history, the Former USS Lead Facility accepted scrap lead from a variety of sources for treatment in its secondary lead smelting operations involving a blast furnace. In approximately 1972, the Former USS Lead Facility stopped refining lead bullion and instead increased its blast furnace capacity to treat more scrap lead material. Operations at the USS Lead facility ceased in 1985.

aa. Among other sources of contamination from the Former USS Lead Facility, slag from the blast furnace was routinely placed in piles on the ground and left exposed to the elements. Lead and arsenic particulate was disposed of into the environment as fumes from operations, as dust from the baghouses, and as dust from lead waste piles (*e.g.*, slag and baghouse dust) stored on the grounds.

bb. Lead and arsenic from the Former USS Lead Facility came to be located in Operable Unit 1 of the Site, including in Zones 2 and 3. Wind was one manner by which lead and arsenic was dispersed into the neighborhood.

cc. The Former USS Lead Facility was owned and operated by Respondent United States Metals Refining Company from 1906 to 1919.

dd. On January 10, 2018, United States Metals Refining Company, with three other Respondents to this UAO, provided consolidated written comments on the Original Z2 Soil UAO and the Original Z2&3 Interior UAO. A copy of those consolidated comments is included in the Administrative Record.

ee. The Former USS Lead Facility was owned and operated by United States Smelting Refining and Mining Company (“USSRAM”) from 1919 to 1920. USSRAM no longer exists.

ff. The Former USS Lead Facility was owned by USS Lead from 1920 to the present.

gg. From 1920 to 1979, USS Lead was a subsidiary of USSRAM, which, in 1972, changed its name to UV Industries, Inc. (“UV”) (collectively “UV/USSRAM”). UV/USSRAM no longer exists.

hh. From 1979 to the late 1980s, USS Lead was a subsidiary of Sharon Steel Corporation (“Sharon Steel”).

ii. In the mid-1980s through the end of the 1980s, Sharon Steel went through bankruptcy. As a result of the bankruptcy, Sharon Steel was reorganized and emerged from the bankruptcy as Respondent Mueller Industries, Inc. (“Mueller”).

jj. Since the reorganization of Sharon Steel, USS Lead has been a subsidiary of Mining Remedial Recovery Company (“MRRC”); MRRC has been a subsidiary of Arava Natural Resources, Inc. (“Arava”); and Arava has been a subsidiary of Mueller.

kk. On December 26, 2017, and December 29, 2017, USS Lead and Mueller, respectively, provided written comments on the Original Z2 Soil UAO and the Original Z2&3 Interior UAO. A copy of those comments is attached in the Administrative Record.

ll. Well in advance of the issuance of the Original Z2 Soil UAO:

(1) EPA provided Mueller with the specific factual bases supporting EPA’s claim that Mueller succeeded to the liabilities of UV/USSRAM;

(2) Mueller conceded that it succeeded to the liabilities of Sharon Steel; and

(3) EPA advised Mueller that it had found sufficient factual evidence—in documents specifically within Mueller’s control—to support findings that Mueller’s predecessors, UV/USSRAM and Sharon Steel, were liable at the USS Lead Site under either a *United States v. Bestfoods*, 524 U.S. 51 (1998), direct theory of liability or under an indirect corporate veil piercing theory of liability for the acts of their subsidiary, USS Lead. At all times, Mueller’s access to the documentary evidence, witnesses, and other facts establishing this liability has been and continues to be greater than EPA’s.

mm. Notice and Factual Bases of Mueller’s Succession to the Liabilities of UV/USSRAM.

(1) Mueller has been on notice since its 1989–1990 creation as the reorganized Sharon Steel of the factual bases of its succession to the liabilities of UV/USSRAM. At all times since its creation, Mueller has had control over documents, witnesses, and evidence establishing the factual basis for its succession to UV/USSRAM’s liabilities.

(2) Mueller has been on notice since at least April 19, 2010, of the factual and legal bases of EPA’s claim that Mueller succeeded to the liability of UV/USSRAM. On April 19, 2010, the United States, on behalf of EPA, sent

Mueller a detailed letter providing the facts and law supporting EPA's claim that Mueller succeeded to the CERCLA liabilities of UV/USSRAM. That letter is attached as Appendix G. EPA incorporates herein as if fully set forth the April 19, 2010 letter. While the April 19, 2010 letter involved a Superfund site different from the USS Lead, the relevant facts that underlay Mueller's succession to UV/USSRAM's liability were the same as those involved in this matter.

(3) On April 7, 2017, the United States, on behalf of EPA, sent Mueller another letter further articulating the factual and legal basis for Mueller's succession to the liability of UV/USSRAM. That letter, without its attachments, is attached as Appendix H. A complete copy of the letter, with its attachments, is available in the Administrative Record for this Site.¹ EPA incorporates herein as if fully set forth the complete April 7, 2017 letter, including attachments. The April 7, 2017 letter specifically involves the USS Lead Site.

(4) On October 4, 2017, the United States, on behalf of EPA, sent Mueller yet another detailed letter further elaborating on the factual and legal basis for Mueller's succession to the liability of UV/USSRAM. That letter, without its attachments, is attached as Appendix I. A complete copy of the letter, with its attachments, is available in the Administrative Record for this Site. EPA incorporates herein as if fully set forth the complete October 4, 2017 letter, including attachments.

(5) Mueller has disputed its liability as a successor to UV/USSRAM in a series of letters dated February 18, 2010, April 1, 2010, December 29, 2016, and November 6, 2017. The bodies of these letters, without their attachments, are set forth in Appendices J, K, L, and M, respectively. Complete copies of these letters, with attachments, are available in the Administrative Record for this Site.

(6) EPA disagrees with Mueller's claim that it is not liable as a successor to UV/USSRAM.

nn. Notice and Factual Bases of UV/USSRAM's and Sharon Steel's Direct and Indirect Liability for the 1920 to 1985 Time Period.

(1) Since its 1989–1990 creation as the reorganized Sharon Steel, Mueller has been in control of the documents, and has had access to witnesses and evidence, that provide the factual bases for UV/USSRAM's and Sharon Steel's direct and indirect liability for the operations of their subsidiary, USS Lead, for some or all the period between 1920 through 1985. At all times, Mueller's access to and/or control over this evidence has been and continues to be greater than EPA's.

¹ Attachments to the April 7, 2017 letter in Appendix H, as well as to the United States' October 4, 2017 letter cited in Paragraph 8.mm.(4), and to Mueller's letters to the United States cited in Paragraph 8.mm.(5) have not been included in the Appendices because of their size. However, the full bodies of these letters have been included.

(2) Documents related to the operations of the Former USS Lead Facility are located in a warehouse in Redding, California (“Redding Warehouse”) that is under the custody of two of Mueller’s subsidiaries, USS Lead and MRRC. At all times, Mueller has had full access to all documents in the Redding Warehouse.

(3) On May 25, 2017, EPA issued a request to USS Lead, pursuant to Section 104(e) of CERCLA, 42 U.S.C. § 9604(e), for access to documents in the Redding Warehouse. That request is attached as Appendix N. Mueller was made aware of EPA’s May 25, 2017 Section 104(e) request shortly after it was issued.

(4) In July 2017, EPA and the Department of Justice (DOJ) reviewed the boxes of documents that were provided in response to EPA’s May 25, 2017 104(e) request and marked a subset of the total documents for copying. EPA and DOJ, possibly earlier than the start of the review but in no event later July 25, 2017, specifically advised Mueller of the purpose of the document review: to look for evidence of direct and/or indirect liability of UV/USSRAM and/or Sharon Steel.

(5) By no later than October 6, 2017, EPA and DOJ advised Mueller that, as a result of the 2017 Redding Warehouse document review, it had found evidence supporting the direct and/or indirect liability of UV/USSRAM and/or Sharon Steel. In advance of the issuance of this Z2 Soil UAO, DOJ, on behalf of EPA, provided to Mueller a copy of the complete set of documents that EPA had copied from its 2017 review, notwithstanding the fact that, at all times, Mueller has had access to all of the documents.

(6) Earlier, on March 3, 2015, EPA had issued a request to USS Lead, pursuant to Section 104(e) of CERCLA, 42 U.S.C. § 9604(e), for access to documents in the Redding Warehouse for a purpose different from the 2017 Section 104(e) request. That request is attached as Appendix O. A team from EPA and its contractor subsequently reviewed the documents that were provided in response to EPA’s March 3, 2015 104(e) request and marked a subset of the total documents for copying. EPA provided a copy of the complete set to USS Lead by letter dated October 27, 2016. At no time did EPA suggest to USS Lead that it was prohibited from providing a copy of these documents to its parent.

(7) Additional documents potentially relevant to the issue of the direct and/or indirect liability of UV/USSRAM and Sharon Steel are also within the control of Mueller. Specifically, Mueller’s subsidiary, MRRC, maintains physical custody of all known, existing documents of UV/USSRAM at the Redding Warehouse.

oo. EPA has not made any formal findings under Section 122(g) of CERCLA, 42 U.S.C. § 9622(g), that any potentially responsible party at this Site is or is not a *de minimis* party. Likewise, EPA has not made any informal findings to that effect.

V. CONCLUSIONS OF LAW AND DETERMINATIONS

9. Based on the Findings of Fact set forth above, and the administrative record, EPA has determined that:

a. The U.S. Smelter and Lead Refinery, Inc. Superfund Site is a “facility” as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

b. The Former USS Lead Facility is a “facility” as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9). The Former USS Lead Facility is a part of the Site.

c. The Former DuPont Facility, historically located at 5215 Kennedy Avenue in East Chicago, Indiana, previously owned and/or operated by Respondent E. I. du Pont de Nemours and Company (“Former DuPont Facility”) and currently owned and/or operated by Respondent The Chemours Company FC, LLC, is a “facility” as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

d. The Former Anaconda Facility previously located in Zone 1 of OU1 of the Site and previously owned and/or operated by predecessors of Respondent Atlantic Richfield Company is a “facility” as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9). The Former Anaconda Facility is a part of the Site.

e. Each Respondent is a “person” as defined by Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

f. Each Respondent is a liable party under one or more provisions of Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

(1) From 1920 to the present, Respondent U.S.S. Lead Refinery, Inc. (“USS Lead”) has been an “owner” and/or “operator”—as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Sections 107(a)(1) and (a)(2) of CERCLA, 42 U.S.C. §§ 9607(a)(1), (a)(2)—of the Former USS Lead Facility at which hazardous substances were disposed of and from which there were releases of hazardous substances.

(2) Respondent Mueller Industries, Inc. is liable as a successor to two companies: (i) United States Smelting Refining and Mining Company, which later changed its name to UV Industries, Inc.; and (ii) Sharon Steel Corporation.

i. UV/USSRAM was one or more of the following:

a. From 1919 to 1920, a person who, at the time of disposal of hazardous substances, “owned” and/or “operated”—within the meaning of Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2)—the Former USS Lead Facility at which hazardous

substances were disposed of and from which there were releases of hazardous substances.

- b. For some or all of the time between 1920 and 1979, a person who “operated”—within the meaning of Section 101(20) of CERCLA, 42 U.S.C. §§ 9601(20), and Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2)—the Former USS Lead Facility at which hazardous substances were disposed of and from which there were releases of hazardous substances.
 - c. A parent company who, for some or all of the time between 1920 and 1979, is indirectly liable, under a corporate veil piercing theory, for the acts of its subsidiary, USS Lead (which is liable as described in Paragraph 9.f(1) above).
 - d. For some or all of the time between 1920 and 1979, a person who arranged with USS Lead for the disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances at the Former USS Lead Facility, within the meaning of Section 107(a)(3) of CERCLA, 42 U.S.C. § 9607(a)(3).
- ii. Sharon Steel, for some or all of the time between 1979 and 1985, was a person who “operated”—within the meaning of Section 101(20) of CERCLA, 42 U.S.C. §§ 9601(20), and Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2)—the Former USS Lead Facility at which hazardous substances were disposed of and from which there were releases of hazardous substances.

(3) Respondent Atlantic Richfield Company is liable as a successor to:
(i) one or more persons, including Anaconda Lead Products Company, International Lead Refining Company, and International Smelting and Refining Company, who, at the time of disposal of hazardous substances, “owned” and/or “operated”—within the meaning of Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2)—the Former Anaconda Facility at which hazardous substances were disposed of and from which there were releases of hazardous substances; and/or (ii) one or more persons, including Anaconda Lead Products Company, International Lead Refining Company, and International Smelting and Refining Company, who arranged with USS Lead for the disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances at the Former USS Lead Facility, within the meaning of Section 107(a)(3) of CERCLA, 42 U.S.C. § 9607(a)(3).

(4) Respondent E. I. du Pont de Nemours and Company is a person who: (i) at the time of disposal of hazardous substances, “owned” and/or “operated”—within the meaning of Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2)—the Former DuPont Facility at which hazardous substances were disposed of and from which there were releases of hazardous substances to the Site; and/or (ii) arranged with USS Lead for the disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances at the Former USS Lead Facility, within the meaning of Section 107(a)(3) of CERCLA, 42 U.S.C. § 9607(a)(3).

(5) Respondent The Chemours Chemical Company FC, LLC, is liable as a successor to E. I. du Pont de Nemours and Company (which is liable as described in Paragraph 9.f(4) above).

(6) Respondent United States Metals Refining Company is a person who at the time of disposal of hazardous substances, “owned” and/or “operated”—within the meaning of Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2)—the Former USS Lead Facility at which hazardous substances were disposed of and from which there were releases of hazardous substances.

g. The lead and arsenic contamination found in Zone 2, as identified in the Findings of Fact above, includes “hazardous substances” as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), and also includes “pollutants or contaminants” that may present an imminent and substantial danger to public health or welfare under Section 104(a)(1) of CERCLA, 42 U.S.C. § 9604(a)(1).

h. The conditions described in Paragraph 8.h of the Findings of Fact above constitute an actual or threatened “release” of a hazardous substance from the facility as defined by Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

i. The conditions described in Paragraph 8.h of the Findings of Fact above may constitute an imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance from the facility within the meaning of Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

j. Solely for purposes of Section 113(j) of CERCLA, 42 U.S.C. § 9613(j), the remedy set forth in the ROD and the Z2 RA Work to be performed by Respondents shall constitute a response action taken or ordered by the President for which judicial review shall be limited to the administrative record.

k. The actions required by this Z2 Soil UAO are necessary to protect the public health, welfare, or the environment.

VI. Z2 REMEDIAL ACTION WORK ORDER

10. Based on the Findings of Fact and Conclusions of Law and Determinations set forth above, and the administrative record, Respondents are hereby ordered to comply with this Z2 Soil UAO and any modifications to this Z2 Soil UAO, including, but not limited to, all appendices and all documents incorporated by reference into this Z2 Soil UAO. Consistent with the work schedule set forth ¶ 7.2 of the Z2 Soil SOW, in no event shall Respondents mobilize for Z2 RA Construction or commence Z2 RA Construction until after issuance of the Final ESD.

VII. OPPORTUNITY TO CONFER

11. Respondents were given the opportunity to confer and provide written comments on the Original Z2 Soil UAO. Respondents Atlantic Richfield, Chemours, DuPont, and US Metals Refining requested a conference with EPA, which was held on January 5, 2018. Those Respondents provided consolidated written comments on the Original Z2 Soil UAO on January 10, 2018. Neither USS Lead nor Mueller asked for an opportunity to confer. On December 26, 2017, and December 29, 2017, USS Lead and Mueller, respectively, provided written comments on the Original Z2 Soil UAO. All Respondents' comments on the Original Z2 Soil UAO are attached in Appendices Q through S.

12. No later than 5 days after this Z2 Soil UAO is signed by the Regional Administrator or his/her delegates, Respondents may submit written comments or a statement of position on so much of this Z2 Soil UAO as is different from the Original Z2 Soil UAO. Any written comments or statements should be submitted to:

Steven Kaiser
Office of Regional Counsel
Region 5, US EPA
77 West Jackson Blvd. (C-14J)
Chicago, IL 60604-3590
kaiser.steven@epa.gov
(312) 353-3804

Leonardo Chingcuanco
Office of Regional Counsel
Region 5, US EPA
77 West Jackson Blvd. (C-14J)
Chicago, IL 60604-3590
chingcuanco.leonardo@epa.gov
(312) 886-7236

VIII. EFFECTIVE DATE

13. This Z2 Soil UAO shall be effective on January 19, 2018, unless EPA determines that this Z2 Soil UAO should be modified based on written materials received in accordance with Paragraph 12. In such event, EPA shall notify Respondents on January 18, 2018, that EPA

intends to modify this Z2 Soil UAO. The modified Z2 Soil UAO shall be effective 5 days after it is signed by the Regional Administrator or his/her delegatee.

IX. NOTICE OF INTENT TO COMPLY

14. On or before the Effective Date, each Respondent shall notify EPA in writing of Respondent's irrevocable intent to comply with this Z2 Soil UAO. Such written notice shall be sent to EPA as provided in ¶ 12.

15. Each Respondent's written notice shall describe, using facts that exist on or prior to the Effective Date, any "sufficient cause" defenses asserted by such Respondent under Sections 106(b) and 107(c)(3) of CERCLA, 42 U.S.C. §§ 9606(a) and 9607(c)(3). The absence of a response by EPA to the notice required by this Section shall not be deemed to be acceptance of any Respondent's assertions. Failure of any Respondent to provide such notice of intent to comply within this time period shall, as of the Effective Date, be treated as a violation of this Z2 Soil UAO by such Respondent.

X. PERFORMANCE OF THE WORK

16. **Compliance with Applicable Law.** Nothing in this Z2 Soil UAO limits Respondents' obligations to comply with the requirements of all applicable federal and state laws and regulations. Respondents must also comply with all applicable or relevant and appropriate requirements of all federal and state environmental laws as set forth in the ROD and the Z2 Soil SOW.

17. Permits.

a. As provided in Section 121(e) of CERCLA, 42 U.S.C. § 9621(e), and Section 300.400(e) of the NCP, no permit shall be required for any portion of the Z2 RA Work conducted entirely on-site or at any other property which is within the areal extent of contamination or in very close proximity to the contamination and necessary for implementation of the Z2 RA Work. Where any portion of the Z2 RA Work that is not on-site requires a federal or state permit or approval, Respondents shall submit timely and complete applications and take all other actions necessary to obtain all such permits or approvals.

b. This Z2 Soil UAO is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation

18. Coordination and Supervision.

a. Project Coordinators and Remedial Project Managers.

(1) Respondents' Project Coordinator and Alternate Project Coordinator must have sufficient technical expertise to coordinate the Z2 RA Work. Respondents' Project Coordinator and Alternate Project Coordinator may not be an attorney representing any Respondent in this matter and may not act as the Supervising Contractor. Respondents' Project Coordinator and Alternate

Project Coordinator may assign other representatives, including other contractors, to assist in coordinating the Z2 RA Work.

(2) EPA has designated Timothy Drexler and Sarah Rolfes as EPA's Remedial Project Managers (RPMs). EPA may designate other representatives, which may include its employees, contractors and/or consultants, to oversee the Z2 RA Work. EPA's RPM will have the same authority as a remedial project manager and/or an on-scene coordinator, as described in the NCP. This includes the authority to halt the Z2 RA Work and/or to conduct or direct any necessary response action when he or she determines that conditions at the Site constitute an emergency or may present an immediate threat to public health or welfare or the environment due to a release or threatened release of Waste Material.

(3) Respondents' Project Coordinator(s) shall communicate with EPA's RPMs regularly.

b. **Supervising Contractor.** Respondents' proposed Supervising Contractor must have sufficient technical expertise to supervise the Z2 RA Work and a quality assurance system that complies with ASQ/ANSI E4:2014, "Quality management systems for environmental information and technology programs - Requirements with guidance for use" (American Society for Quality, February 2014).

c. Procedures for Disapproval/Notice to Proceed.

(1) Respondents shall designate, and notify EPA, within 10 days after the Effective Date, of the names, titles, contact information, and qualifications of the Respondents' proposed Project Coordinator, Alternate Project Coordinator, and Supervising Contractor, whose qualifications shall be subject to EPA's review for verification based on objective assessment criteria (e.g., experience, capacity, technical expertise) and that they do not have a conflict of interest with respect to the project.

(2) EPA shall issue notices of disapproval and/or authorizations to proceed regarding the proposed Project Coordinator, Alternate Project Coordinator, and Supervising Contractor, as applicable. If EPA issues a notice of disapproval, Respondents shall, within 15 days, submit to EPA a list of supplemental proposed Project and Alternate Project Coordinators and/or Supervising Contractors, as applicable, including a description of the qualifications of each. EPA shall issue a notice of disapproval or authorization to proceed regarding each supplemental proposed coordinator/alternate coordinator and/or contractor. Respondents may select any coordinator/contractor covered by an authorization to proceed and shall, within 7 days, notify EPA of Respondents' selection.

(3) Respondents may change their Project Coordinator and/or Supervising Contractor, as applicable, by following the procedures of ¶¶18.c(1) and 18.c(2).

19. **Performance of Z2 RA Work in Accordance with Z2 Soil SOW.** Respondents shall: (a) perform the Z2 Remedial Action; (b) perform the Z2 O&M; and (c) support, if and as necessary, EPA's periodic review efforts; all in accordance with the Z2 Soil SOW and all EPA-approved, conditionally-approved, or modified deliverables as required by the Z2 Soil SOW. All deliverables required to be submitted for approval under the Z2 Soil UAO or Z2 Soil SOW shall be subject to approval by EPA in accordance with ¶ 6.6 (Approval of Deliverables) of the Z2 Soil SOW.

20. **Emergencies and Releases.** Respondents shall comply with the emergency and release response and reporting requirements under ¶ 4.6 (Emergency Response and Reporting) of the Z2 Soil SOW.

21. **Community Involvement.** Respondents shall conduct community involvement activities under EPA's oversight as provided for in, and in accordance with, Section 2 (Community Involvement) of the Z2 Soil SOW. Such activities include, but are not limited to, designation of a Community Involvement Coordinator.

22. **Modification.**

a. EPA may, by written notice from the EPA RPM to Respondents, modify, or direct Respondents to modify, the Z2 Soil SOW and/or any deliverable developed under the Z2 Soil SOW, if such modification is necessary to achieve or maintain the Performance Standards or to carry out and maintain the effectiveness of the Z2 Remedial Action, and such modification is consistent with the Scope of the Remedy set forth in ¶ 1.3 of the Z2 Soil SOW. Any other requirements of this Z2 Soil UAO may be modified in writing by signature of the Superfund Division Director for Region 5 if such modification is consistent with the ROD.

b. Respondents may submit written requests to modify the Z2 Soil SOW and/or any deliverable developed under the Z2 Soil SOW. If EPA approves the request in writing, the modification shall be effective upon the date of such approval or as otherwise specified in the approval. Respondents shall modify the Z2 Soil SOW and/or related deliverables in accordance with EPA's approval.

c. No informal advice, guidance, suggestion, or comment by the EPA RPM or other EPA representatives regarding reports, plans, specifications, schedules, or any other writing submitted by Respondents shall relieve Respondents of their obligation to obtain any formal approval required by this Z2 Soil UAO, or to comply with all requirements of this Z2 Soil UAO, unless it is formally modified.

d. Nothing in this Z2 Soil UAO, the attached Z2 Soil SOW, any deliverable required under the Z2 Soil SOW, or any approval by EPA constitutes a warranty or representation of any kind by EPA that compliance with the work requirements set forth in the Z2 Soil SOW or related deliverable will achieve the Performance Standards.

XI. PROPERTY REQUIREMENTS

23. **Agreements Regarding Access.**

a. EPA to Provide Respondents with Previously-Executed Access Agreements. With respect to Zone 2 Affected Properties that require remediation but still have not been remediated, by no later than 10 days after the Effective Date, EPA shall either provide Respondents with a copy of each previously-executed access agreement or shall provide Respondents with access to a secure, non-public website where these access agreements can be found. An unexecuted, blank copy of the access agreement that EPA has used in Zone 2 is attached as Appendix F.

b. Respondents' Use of Previously-Executed Access Agreements. With respect to the previously-executed access agreements, Respondents are hereby deemed "authorized representatives" of EPA for purposes of this Z2 Soil UAO. If a previously-executed access agreement includes access for both sampling and "removal" activities, Respondents are authorized to access the subject Z2 Affected Property and undertake the activities required by this Z2 Soil UAO. If a previously-executed access agreement does not include access for "removal" activities or if a property owner does not continue to consent to or grant access notwithstanding his/her previous execution of an access agreement, Respondents shall use best efforts to secure from the property owner an access agreement substantially in the form attached as Exhibit F. Because completion of the Z2 RA Construction under this Z2 Soil UAO shall take more than one construction season, Respondents shall continue to use "best efforts," as defined in Paragraph 25.b, to secure access during each year up to and including three months prior to the expected final demobilization of Z2 RA Construction, unless EPA informs Respondents that, with respect to a particular property(ies), EPA will take independent action to obtain access. Respondents shall provide a copy of any newly-executed access agreements to EPA.

c. Respondents' use of an access agreement that is substantially in the form attached as Appendix F shall be deemed sufficient to enable the Respondents, their contractors, EPA, and its contractors to undertake, as applicable, the following activities:

- (1) Performing the Z2 RA Work;
- (2) Monitoring the Z2 RA Work;
- (3) Verifying any data or information submitted to EPA;
- (4) Conducting investigations regarding contamination at or near the Z2 Affected Property;
- (5) Obtaining samples;
- (6) Assessing the need for, planning, or implementing additional response actions at or near the Z2 Affected Property;
- (7) Assessing implementation of quality assurance and quality control practices as defined in the approved construction quality assurance quality control plan as provided in the Z2 Soil SOW;
- (8) Implementing the Z2 RA Work pursuant to the conditions set forth in ¶ 37 (Z2 RA Work Takeover);

(9) Assessing Respondents' compliance with the Z2 Soil UAO;

(10) Determining whether the Z2 Affected Property is being used in a manner that is prohibited or restricted, or that may need to be prohibited or restricted under the Z2 Soil UAO; and

(11) Implementing, monitoring, maintaining, reporting on, and enforcing any land, water, or other resource use restrictions and any Institutional Controls regarding the Z2 Affected Property.

If Respondents do not use an access agreement substantially in the form attached in Appendix F, Respondents shall ensure that its access agreement enables access for the activities identified in this Paragraph 23.c.

24. **Proprietary and Institutional Controls.** Pursuant to the schedule set forth in Paragraph 7.2 of the Z2 Soil SOW, if contamination that requires Institutional Controls pursuant to the ROD remains at one or more Z2 Affected Properties, Respondents shall submit an Institutional Controls Implementation and Assurance Plan (ICIAP) for EPA approval. If an ICIAP is necessary, it shall include, but not be limited to, consideration of the following types of restrictions, as appropriate:

(1) Prohibitions on activities that could interfere with the Z2 Remedial Action;

(2) Prohibitions on the use of contaminated groundwater;

(3) Prohibitions on activities that could result in exposure to contaminants in subsurface soils and groundwater;

(4) Requirements ensuring that any new structures on the Z2 Affected Property will not be constructed in a manner that could interfere with the Z2 Remedial Action; and

(5) Requirements ensuring that any new structures on the Z2 Affected Property will be constructed in a manner that will minimize potential risk of inhalation of lead and arsenic contaminants.

The ICIAP shall include a schedule for implementation. Respondents shall implement the approved ICIAP consistent with the approved schedule.

25. **Proprietary Controls and Best Efforts.**

a. With respect to any Z2 Affected Property, Respondents shall use best efforts to secure the owner's cooperation in executing and recording, in accordance with the procedures of the ICIAP, Proprietary Controls that: (i) grant a right of access to conduct any activity regarding the Z2 Soil UAO, including those activities listed in ¶ 24; and (ii) grant the right to enforce the land, water, or other resource use restrictions set forth in the ICIAP, if necessary.

b. As used in this Paragraph: (1) “Prior Encumbrances” means any encumbrance that affects the title to the Z2 Affected Property, including but not limited to prior liens, claims, rights (such as easements) and mortgages; and (2) “best efforts” means the efforts that a reasonable person in the position of Respondents would use so as to achieve the goal in a timely manner, including the cost of employing professional assistance and the payment of reasonable sums of money to secure access and/or use restriction agreements, Proprietary Controls, releases, subordinations, modifications, or relocations of Prior Encumbrances that affect the title to the Z2 Affected Property, as applicable.

c. Notification to EPA regarding Best Efforts.

(1) For Access Agreements. By no later than October 31 of the year preceding the year that Respondents expect to complete the Z2 RA Construction for all Z2 Affected Properties for which access has been granted, Respondents shall notify EPA of the Z2 Affected Properties, if any, for which they still have not secured access. In the notice, Respondents shall include a description of the steps they have taken to comply with the requirement to use “best efforts” to secure access. If EPA deems it appropriate, it may assist Respondents, or take independent action, in obtaining such access. EPA reserves the right to pursue cost recovery regarding all costs incurred by the United States in providing such assistance or taking such action, including the cost of attorney time and the amount of monetary consideration or just compensation paid.

(2) Land, Water, or Other Resource Use Restrictions. By no later than 180 days after completion of the Z2 RA Construction, Respondents shall notify EPA of the Z2 Affected Properties, if any, where they have not been able to secure land, water, or other resource use restrictions set forth in the ICIAP. In the notice, Respondents shall include a description of the steps they have taken to comply with the requirement to use “best efforts” to secure these restrictions. If EPA deems it appropriate, it may assist Respondents, or take independent action, in obtaining such use restrictions, Proprietary Controls, releases, subordinations, modifications, or relocations of Prior Encumbrances that affect the title to the Z2 Affected Property, as applicable. EPA reserves the right to pursue cost recovery regarding all costs incurred by the United States in providing such assistance or taking such action, including the cost of attorney time and the amount of monetary consideration or just compensation paid.

26. In the event of any Transfer of any Z2 Affected Property, unless EPA otherwise consents in writing, Respondents shall continue to comply with their obligations under the Z2 Soil UAO, including their obligation to secure access and ensure compliance with any land, water, or other resource use restrictions regarding the Z2 Affected Property, and to implement, maintain, monitor, and report on Institutional Controls.

XII. INSURANCE

27. Not later than 15 days before commencing any on-site Z2 RA Work, Respondents shall secure, and shall maintain until the first anniversary after the Certification of Z2 RA

Construction Completion pursuant to ¶ 4.8 of the Z2 Soil SOW, commercial general liability insurance with limits of liability of \$1 million per occurrence, and automobile insurance with limits of liability of \$1 million per accident, and umbrella liability insurance with limits of liability of \$5 million in excess of the required commercial general liability and automobile liability limits, naming the United States as an additional insured with respect to all liability arising out of the activities performed by or on behalf of Respondents pursuant to this Z2 Soil UAO. In addition, for the duration of the Z2 Soil UAO, Respondents shall satisfy, or shall ensure that their contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing Z2 RA Work on behalf of Respondents in furtherance of this Z2 Soil UAO. Within the same time period, Respondents shall provide EPA with certificates of such insurance and a copy of each insurance policy. Respondents shall submit such certificate and copies of policies each year on the anniversary of the Effective Date. If Respondents demonstrate by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in a lesser amount, then, with respect to that contractor or subcontractor, Respondents need provide only that portion of the insurance described above that is not maintained by the contractor or subcontractor. Respondents shall ensure that all submittals to EPA under this Paragraph identify the USS Lead Site in East Chicago, Indiana, and the EPA docket number for this action.

XIII. DELAY IN PERFORMANCE

28. Respondents shall notify EPA of any delay or anticipated delay in performing any requirement of this Z2 Soil UAO. Such notification shall be made by telephone and email to the EPA RPM within 48 hours after Respondents first knew or should have known that a delay might occur. Respondents shall adopt all reasonable measures to avoid or minimize any such delay. Within seven days after notifying EPA by telephone and email, Respondents shall provide to EPA written notification fully describing the nature of the delay, the anticipated duration of the delay, any justification for the delay, all actions taken or to be taken to prevent or minimize the delay or the effect of the delay, a schedule for implementation of any measures to be taken to mitigate the effect of the delay, and any reason why Respondents should not be held strictly accountable for failing to comply with any relevant requirements of this Z2 Soil UAO. Increased costs or expenses associated with implementation of the activities called for in this Z2 Soil UAO is not a justification for any delay in performance.

29. Any delay in performance of this Z2 Soil UAO that, in EPA's judgment, is not properly justified by Respondents under the terms of ¶ 28 shall be considered a violation of this Z2 Soil UAO. EPA will notify Respondents of any such violation, or of any change to the deadline for deliverables. Any delay in performance of this Z2 Soil UAO shall not affect Respondents' obligations to fully perform all obligations under the terms and conditions of this Z2 Soil UAO.

XIV. ACCESS TO INFORMATION

30. Respondents shall provide to EPA, upon request, copies of all records, reports, documents, and other information (including records, reports, documents, and other information in electronic form) (hereinafter referred to as "Records") within Respondents' possession or

control or that of their contractors or agents relating to activities at the Site or to the implementation of this Z2 Soil UAO, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information regarding the Z2 RA Work. Respondents shall also make available to EPA, for purposes of investigation, information gathering, or testimony, their employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Z2 RA Work.

31. Privileged and Protected Claims.

a. Respondents may assert that all or part of a Record requested by EPA is privileged or protected as provided under federal law, in lieu of providing the Record, provided Respondents comply with ¶ 31.b, and except as provided in ¶ 31.c.

b. If Respondents assert a claim of privilege or protection, they shall provide EPA with the following information regarding such Record: its title; its date; the name, title, affiliation (e.g., company or firm), and address of the author, of each addressee, and of each recipient; a description of the Record's contents; and the privilege or protection asserted. If a claim of privilege or protection applies only to a portion of a Record, Respondents shall provide the Record to EPA in redacted form to mask the privileged or protected portion only. Respondents shall retain all Records that they claim to be privileged or protected until EPA has had a reasonable opportunity to dispute the privilege or protection claim and any such dispute has been resolved in the Respondents' favor.

c. Respondents may make no claim of privilege or protection regarding: (1) any data regarding the Site, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, radiological, or engineering data, or the portion of any other Record that evidences conditions at or around the Site; or (2) the portion of any Record that Respondents are required to create or generate pursuant to this Z2 Soil UAO.

32. Business Confidential Claims. Respondents may assert that all or part of a Record provided to EPA under this Section or Section XV (Record Retention) is business confidential to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Respondents shall segregate and clearly identify all Records or parts thereof submitted under this Z2 Soil UAO for which Respondents assert business confidentiality claims. Records claimed as confidential business information will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies Records when they are submitted to EPA, or if EPA has notified Respondents that the Records are not confidential under the standards of CERCLA § 104(e)(7) or 40 C.F.R. Part 2, Subpart B, the public may be given access to such Records without further notice to Respondents.

33. Personally Identifiable Information.

a. In the course of implementing this Z2 Soil UAO, Respondents shall receive from EPA and shall generate themselves written and/or electronic materials that contain Personally Identifiable Information. Respondents shall keep PII confidential and not disclose it

to other persons or entities except as required by law, court order or other lawful process that protects disclosure to the public of PII. Respondents shall take all necessary and appropriate measures to maintain the confidentiality of PII and to retain written or electronic materials in a secure manner.

b. Respondents may share PII with agents and contractors of theirs who are responsible for assisting in the implementation of this Z2 Soil UAO provided that any such person with whom such information is shared either: (i) is specifically made aware of, and, prior to receiving the information, agrees in writing with Respondents to comply with the substantive requirements of Paragraph 33.a as if he/she were a Respondent; or (ii) already has executed a confidentiality agreement with the Respondent that is broad enough to cover PII.

c. PII otherwise admissible, discoverable or subject to subpoena in any proceeding shall not be rendered inadmissible, non-discoverable or not subject to subpoena because of its coverage under this Z2 Soil UAO.

d. In the event that Respondents conclude in good faith that applicable law, a subpoena or other lawful process, or a court order, requires disclosure of PII to a third party, Respondents shall provide, as far as is practicable, advance written notice to EPA of the intent to disclose, including a description of the applicable law or a copy of the subpoena, process or order requiring disclosure. Respondents shall not disclose any Personally Identifiable Information sooner than one day following provision of such written notice, unless required by law or order of a court.

e. Each Respondent shall promptly report to EPA breaches of PII, unauthorized disclosures or releases, and/or system vulnerability (to the extent known). Any disclosure of PII in contravention of this Z2 Soil UAO shall not result in a waiver of the claim of confidentiality, except as provided by law.

XV. RECORD RETENTION

34. During the pendency of this Z2 Soil UAO and for a minimum of 10 years after EPA provides Notice of Z2 RA Work Completion under ¶ 4.11 of the Z2 Soil SOW, each Respondent shall preserve and retain all non-identical copies of Records (including Records in electronic form) now in its possession or control or that come into its possession or control that relate in any manner to its liability under CERCLA with respect to the Site, provided, however, that Respondents who are potentially liable as owners or operators of the Site must retain, in addition, all Records that relate to the liability of any other person under CERCLA with respect to the Site. Each Respondent must also retain, and instruct its contractors and agents to preserve, for the same period of time specified above, all non-identical copies of the last draft or final version of any Records (including Records in electronic form) now in its possession or control or that come into its possession or control that relate in any manner to the performance of the Z2 RA Work, provided, however, that each Respondent (and its contractor and agents) must retain, in addition, copies of all data generated during performance of the Z2 RA Work and not contained in the aforementioned Records to be retained. Each of the above record retention requirements shall apply regardless of any corporate retention policy to the contrary.

35. At the conclusion of this document retention period, Respondents shall notify EPA at least 90 days prior to the destruction of any such Records, and, upon request by EPA, and except as provided in ¶ 31, Respondents shall deliver any such Records to EPA.

36. Within 30 days after the Effective Date, each Respondent shall submit a written certification to EPA's RPM that, to the best of its knowledge and belief, after thorough inquiry, it has not altered, mutilated, discarded, destroyed, or otherwise disposed of any Records (other than identical copies) relating to its potential liability regarding the Site since notification of potential liability by the United States or the State and that it has fully complied with any and all EPA requests for information regarding the Site pursuant to Sections 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. § 6927, and state law. Any Respondent unable to so certify shall submit a modified certification that explains in detail why it is unable to certify in full with regard to all Records.

XVI. ENFORCEMENT/WORK TAKEOVER

37. Any willful violation, or failure or refusal to comply with any provision of this Z2 Soil UAO may subject Respondents to civil penalties of up to \$53,907 per violation per day, as provided in Section 106(b)(1) of CERCLA, 42 U.S.C. § 9606(b)(1), and the Civil Monetary Penalty Inflation Adjustment Rule, 81 Fed. Reg. 43,091, 40 C.F.R Part 19.4. In the event of such willful violation, or failure or refusal to comply, EPA may carry out the required actions unilaterally, pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604, and/or may seek judicial enforcement of this Z2 Soil UAO pursuant to Section 106 of CERCLA, 42 U.S.C § 9606. Respondents may also be subject to punitive damages in an amount up to three times the amount of any cost incurred by the United States as a result of such failure to comply, as provided in Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3).

XVII. NOTICES AND SUBMISSIONS

38. All approvals, consents, deliverables, modifications, notices, notifications, objections, proposals, reports, and requests specified in this Z2 Soil UAO must be in writing unless otherwise specified. Whenever, under this Z2 Soil UAO, notice is required to be given, or a report or other document is required to be sent, by one Party to another, it must be directed to the person(s) specified below at the address(es) specified below. Any Party may change the person and/or address applicable to it by providing notice of such change to all Parties. All notices under this Section are effective upon receipt, unless otherwise specified. Except as otherwise provided, notice to a Party by email (if that option is provided below) or by regular mail in accordance with this Section satisfies any notice requirement of the Z2 Soil UAO regarding such Party.

As to EPA:

Director, Superfund Division
Region 5, US EPA
77 W. Jackson Blvd. (SR-6J)
Chicago, IL 60604-3590

Timothy Drexler

EPA RPM
Region 5, US EPA
77 W. Jackson Blvd. (SR-6J)
Chicago, IL 60604-3590
drexler.timothy@epa.gov
(312) 353-4367

Sarah Rolfes
EPA RPM
Region 5, US EPA
77 W. Jackson Blvd. (SR-6J)
Chicago, IL 60604-3590
rolfes.sarah@epa.gov
(312) 886-6551

Steven Kaiser
Office of Regional Counsel
Region 5, US EPA
77 West Jackson Blvd. (C-14J)
Chicago, IL 60604-3590
kaiser.steven@epa.gov
(312) 353-3804

Leonardo Chingcuanco
Office of Regional Counsel
Region 5, US EPA
77 West Jackson Blvd. (C-14J)
Chicago, IL 60604-3590
chingcuanco.leonardo@epa.gov
(312) 886-7236

As to the Regional Financial
Management Officer:

Chief, Program Accounting and Analysis Section
United States Environmental Protection Agency
Region 5, MF-10J
77 West Jackson Blvd.
Chicago, IL 60604-3590

As to EPA Cincinnati Finance
Center

EPA Cincinnati Finance Center
26 W. Martin Luther King Dr.
Cincinnati, OH 45268
cinwd_acctsreceivable@epa.gov

XVIII. RESERVATIONS OF RIGHTS

39. Nothing in this Z2 Soil UAO limits the rights and authorities of EPA and the United States:

a. To take, direct, or order all actions necessary, including to seek a court order, to protect public health, welfare, or the environment or to respond to an actual or threatened release of Waste Material on, at, or from the Site;

b. To select further response actions for the Site in accordance with CERCLA and the NCP, including but not limited to further response actions relating to soils in Zone 2 that currently are covered by impermeable barriers but become exposed due to the removal of existing impermeable barriers and further response actions at Z2 Excluded Properties;

c. To seek legal or equitable relief to enforce the terms of this Z2 Soil UAO;

d. To take other legal or equitable action as they deem appropriate and necessary, or to require Respondents in the future to perform additional activities pursuant to CERCLA or any other applicable law;

e. To bring an action against Respondents under Section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of any costs incurred by EPA or the United States regarding this Z2 Soil UAO or the Site and not paid by Respondents pursuant to this Z2 Soil UAO, including but not limited to Z2 RA Response Costs;

f. Regarding access to, and to require land, water, or other resource use restrictions and/or Institutional Controls regarding the Site under CERCLA, RCRA, or other applicable statutes and regulations; or

g. To obtain information and perform inspections in accordance with CERCLA, RCRA, and any other applicable statutes or regulations.

XIX. OTHER CLAIMS

40. By issuance of this Z2 Soil UAO, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondents. The United States or EPA shall not be deemed a party to any contract entered into by Respondents or their directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out actions pursuant to this Z2 Soil UAO.

41. Nothing in this Z2 Soil UAO constitutes a satisfaction of or release from any claim or cause of action against Respondents or any person not a party to this Z2 Soil UAO, for any liability such person may have under CERCLA, other statutes, or common law, including but not limited to any claims of the United States under Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607.

42. Nothing in this Z2 Soil UAO shall be deemed to constitute preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or C.F.R. § 300.700(d).

43. No action or decision by EPA pursuant to this Z2 Soil UAO shall give rise to any right to judicial review, except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

XX. ADMINISTRATIVE RECORD

44. EPA has established an administrative record that contains the documents that form the basis for the issuance of this Z2 Soil UAO, including, but not limited to, the documents upon which EPA based the selection of the Remedial Action selected in the ROD. EPA will make the administrative record available for review at the EPA Region 5 Superfund Record Center located 77 W. Jackson Blvd., Chicago, IL 60604. A copy of the administrative record is also available for viewing at <https://www.epa.gov/uss-lead-superfund-site>.

XXI. APPENDICES

45. The following appendices are attached to and incorporated into this Z2 Soil UAO:
- a. Appendix A: Z2 Soil SOW
 - b. Appendix B: Map of USS Lead Site OU1 and OU2
 - c. Appendix C: Map of USS Lead Site OU1 – Zones 1, 2, and 3
 - d. Appendix D: Record of Decision
 - e. Appendix E: Proposed Explanation of Significant Differences
 - f. Appendix F: Copy of EPA’s access agreement for soil sampling and clean-up
 - g. Appendix G: Letter from John N. Moscato, Senior Counsel, Dep’t of Justice, to E. Donald Elliott, Partner, Willkie Farr & Gallagher LLP (Apr. 19, 2010)
 - h. Appendix H: Letter from Annette Lang, Dep’t of Justice, to E. Donald Elliot, Senior Of Counsel, Covington & Burling LLP (Apr. 7, 2017)
 - i. Appendix I: Letter from Annette Lang, Dep’t of Justice, to E. Donald Elliot, Senior Of Counsel, Covington & Burling LLP (Oct. 4, 2017)
 - j. Appendix J: Letter from E. Donald Elliott, Partner, Willkie Farr & Gallagher LLP, to John N. Moscato, Senior Counsel, Dep’t of Justice (Feb. 18, 2010)
 - k. Appendix K: Letter from E. Donald Elliott, Partner, Willkie Farr & Gallagher LLP, to John N. Moscato, Senior Counsel, Dep’t of Justice (Apr. 1, 2010)
 - l. Appendix L: Letter from E. Donald Elliott, Senior Of Counsel, Covington & Burling LLP, to Annette Lang, Senior Counsel, Dep’t of Justice (Dec. 29, 2016)
 - m. Appendix M: Letter from E. Donald Elliott, Senior Of Counsel, Covington & Burling LLP, to John N. Moscato, Senior Counsel, Dep’t of Justice (Nov. 6, 2017)

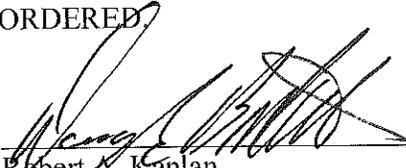
- n. Appendix N: 104(e) Information Request Issued by EPA to USS Lead (May 25, 2017)
- o. Appendix O: 104(e) Information Request Issued by EPA to USS Lead (Mar. 3, 2015)
- p. Appendix P: Original Z2 Soil UAO (Excluding Appendices)
- q. Appendix Q: Comments on Original Z2 Soil UAO and Z2&3 Interior UAO from ARC, Chemours, DuPont, and USMR to EPA (Jan. 10, 2018)
- r. Appendix R: Comments on Original Z2 Soil UAO and Z2&3 Interior UAO from USS Lead to EPA (Dec. 26, 2017)
- s. Appendix S: Comments on Original Z2 Soil UAO and Z2&3 Interior UAO from Mueller to EPA (Dec. 29, 2017)

XXII. SEVERABILITY

46. If a court issues an order that invalidates any provision of this Z2 Soil UAO or finds that Respondents have sufficient cause not to comply with one or more provisions of this Z2 Soil UAO, Respondents shall remain bound to comply with all provisions of this Z2 Soil UAO not invalidated or determined to be subject to a sufficient cause defense by the court's order.

It is so ORDERED.

BY:


 Robert A. Kaplan
 Acting Director, Superfund Division
 Region 5
 U.S. Environmental Protection Agency

DATE:



UNILATERAL ADMINISTRATIVE ORDER

**STATEMENT OF WORK FOR
REMEDIAL ACTION IN ZONE 2 OF
OPERABLE UNIT 1 OF THE USS LEAD
SUPERFUND SITE**

City of East Chicago, Lake County, State of Indiana

EPA Region 5

TABLE OF CONTENTS

1.	INTRODUCTION	1
2.	COMMUNITY INVOLVEMENT	3
3.	REMEDIAL DESIGN	3
4.	REMEDIAL ACTION.....	4
5.	REPORTING	15
6.	DELIVERABLES.....	16
7.	SCHEDULES	24
8.	STATE PARTICIPATION.....	27
9.	REFERENCES	27

1. INTRODUCTION

1.1 Background and Applicability of the Z2 Soil SOW

(a) Background.

(1) This Statement of Work forms a part of the Unilateral Administrative Order (Z2 Soil UAO) for the continued implementation of remedial action in Zone 2 of Operable Unit 1 of the U.S. Smelter and Lead Refinery, Inc. Superfund Site (Site) in East Chicago, Indiana, consistent with the Record of Decision (ROD), which was signed by the Director of the Superfund Division of the U.S. Environmental Protection Agency, Region 5, on November 30, 2012. This document shall be referred to as the “Zone 2 Soil Statement of Work” or the “Z2 Soil SOW.”

(2) Operable Unit 1. EPA has divided the Site into two operable units: Operable Unit 1 (OU1) and Operable Unit 2 (OU2). OU1 consists generally of a residential neighborhood in East Chicago, Indiana, commonly known as the Calumet neighborhood. OU1 has been further divided into three zones: Zone 1 (Z1), Zone 2 (Z2), and Zone 3 (Z3). The definition and boundaries of OU1 and Zones 1, 2, and 3 are set forth in the Definitions Section of the Z2 Soil UAO.

(3) Operable Unit 2. OU2 consists a 79-acre parcel of land that formerly housed the lead refining and smelting operations of U.S. Smelter and Lead Refinery Inc. (Former USS Lead Facility), as well as the groundwater associated with both OU1 and the Former USS Lead Facility. The definition of OU2 is set forth in the Definitions Section of the Z2 Soil UAO.

(b) Contamination. Soils in yards throughout OU1 are contaminated with lead and arsenic above the Remedial Action Levels or “RALs.” The RALs at OU1 are 400 milligrams per kilogram (mg/kg) for lead at residential properties, schools, parks and unrestricted public right of ways; 800 mg/kg for lead at industrial/commercial properties; and 26 mg/kg for arsenic at both residential and industrial/commercial properties.

(c) Record of Decision. The ROD requires the excavation and off-Site disposal of soils in yards that contain lead or arsenic above RALs down to a maximum depth of twenty-four inches below ground surface (bgs). The ROD does not require the excavation of soils in yards that contain lead or arsenic in concentrations that exceed the RALs located more than twenty-four inches bgs. However, if soils in yards that contain lead or arsenic in concentrations that exceed the RALs are located more than twenty-four inches bgs, a visual barrier must be installed after any contaminated soils in the first twenty-four inches bgs are excavated, and Institutional Controls must be implemented.

- (d) The ROD addresses only OU1. It does not address groundwater associated with either OU1 or the Former USS Lead Facility or any other aspect of OU2.
- (e) The Z2 Soil UAO addresses continued implementation of the ROD in properties located only within Zone 2.
- (f) This Z2 Soil SOW addresses Z2 Remedial Design and Z2 Remedial Action. EPA will implement all Z2 Remedial Design. Respondents will implement all Z2 Remedial Action except they will not be responsible for implementing Z2 Remedial Action at the “Z2 Excluded Properties,” as that term is defined in the Z2 Soil UAO and in Paragraph 4.8(a)(2) of this Z2 Soil SOW.
- (g) Respondents will implement their activities consistent with the ROD; the Z2 Soil UAO; all plans approved by EPA pursuant to the Z2 Soil UAO and this Z2 Soil SOW; any additional written direction provided by EPA; the *National Contingency Plan*; the *Superfund Lead-Contaminated Residential Sites Handbook*, August 2003 (“*Lead Handbook*”); and the documents and guidances identified in Section 9 of this Z2 Soil SOW. Nothing in this Paragraph shall preclude EPA from providing additional guidance under the Resource Conservation and Recovery Act (RCRA) with respect to any RCRA-subject facility used during the implementation of the Z2 Remedial Action.

1.2 Structure of the Z2 Soil SOW

- Section 2 (Community Involvement) sets forth EPA’s and Respondents’ responsibilities for community involvement.
- Section 3 (Remedial Design) sets forth activities related to EPA’s development of design documents for the Z2 RA.
- Section 4 (Remedial Action) sets forth requirements regarding the continued implementation of the Z2 RA, including primary deliverables related to completion of the Z2 RA for all Z2 properties except the Z2 Excluded Properties.
- Section 5 (Reporting) sets forth Respondents’ reporting obligations.
- Section 6 (Deliverables) describes the content of the supporting deliverables and the general requirements regarding Respondents’ submission of, and EPA’s review of, approval of, comment on, and/or modification of, the deliverables.
- Section 7 (Schedules) sets forth the schedule for submitting the primary deliverables, specifies the supporting deliverables that must accompany each primary deliverable, and sets forth the schedule of milestones regarding the continued implementation of the Z2 RA.
- Section 8 (State Participation) addresses providing documents to the State.
- Section 9 (References) provides a list of references, including URLs.

1.3 The Scope of the Remedy includes the actions described in the ROD at Section 1.4, Section 2.8, Alternative 4A of Section 2.9.2, and Section 2.12.

- 1.4 The terms used in this Z2 Soil SOW that are defined in CERCLA, in regulations promulgated under CERCLA, or in the Z2 Soil UAO, have the meanings assigned to them in CERCLA, in such regulations, or in the Z2 Soil UAO, except that the term “Paragraph” or “¶” means a paragraph of the Z2 Soil SOW, and the term “Section” means a section of the Z2 Soil SOW, unless otherwise stated.

2. COMMUNITY INVOLVEMENT

2.1 Community Involvement Responsibilities

- (a) EPA has the lead responsibility for developing and implementing community involvement activities at the Site. Previously, EPA developed a Community Involvement Plan (CIP) for the Site. Pursuant to 40 C.F.R. § 300.435(c), EPA shall review the existing CIP and determine whether it should be revised to describe further public involvement activities during the Z2 RA Work that are not already addressed or provided for in the existing CIP, including, if applicable, any Technical Assistance Grant (TAG), and/or any use of the Technical Assistance Services for Communities (TASC) contract.
- (b) If requested by EPA, Respondents shall participate in community involvement activities, including participation in (1) the preparation of information regarding the Z2 RA Work for dissemination to the public, and (2) public meetings that may be held or sponsored by EPA to explain activities at or relating to the Site. Respondents’ support of EPA’s community involvement activities may include providing initial submissions and updates of deliverables to (1) any Community Advisory Groups, (2) any Technical Assistance Grant recipients and their advisors, and (3) other entities to provide them with a reasonable opportunity for review and comment. EPA may describe in its CIP Respondents’ responsibilities for community involvement activities. All community involvement activities conducted by Respondents at EPA’s request are subject to EPA’s oversight.
- (c) **Respondents’ CI Coordinator.** Within 30 days of the Effective Date, Respondents shall designate and notify EPA of Respondents’ Community Involvement Coordinator (Respondents’ CI Coordinator). Respondents may hire a contractor for this purpose. Respondents’ notice must include the name, title, and qualifications of the Respondents’ CI Coordinator. Respondents’ CI Coordinator is responsible for providing support regarding EPA’s community involvement activities, including coordinating with EPA’s CI Coordinator regarding responses to the public’s inquiries about the Site.

3. REMEDIAL DESIGN

- 3.1 **Design Planning and Soil Sampling.** EPA already has developed a work plan that includes design planning for properties in Zone 2. In addition, EPA has conducted and will continue to conduct field activities and soil sampling, also known as “Pre-Design Investigation” (PDI). EPA will continue to undertake PDI to address data gaps.

3.2 Zone 2 Remedial Design. EPA will perform Z2 Remedial Design and has already started the process.

- (a) For the yards of each property in Zone 2 that have not yet been remediated and that contain lead or arsenic in concentrations above the RALs at locations from the surface down to 24 inches bgs, EPA will develop a design document for the property which will consist of a diagram for that individual property.
 - (1) The individual property diagram will identify the areas of excavation and the depth of the excavation areas. Areas on the diagram that are not identified for excavation (such as sidewalks, impermeable driveways, and buildings) are not required to be excavated.
 - (2) The diagram will identify whether the Waste Material to be excavated is non-hazardous (identified as “Type-1 Waste”) or hazardous (identified as “Type-2 Waste”).
 - (3) The diagram will identify whether Waste Material is located at depths below 24 inches bgs. These areas will be colored in orange. At their election, Respondents may either: (i) install a visible barrier immediately over contamination remaining below 24 inch bgs and use best efforts to secure institutional controls; or (ii) excavate all Waste Materials above native sand that are contaminated with lead or arsenic above the RALs.
- (b) For the yards of each property in Zone 2 that do not contain lead or arsenic in concentrations above the RALs at locations from the surface to twenty-four inches bgs, no design document will be created nor will the Respondents be required to excavate or remove Waste Material from such property.
- (c) To the extent of EPA’s knowledge, each property diagram will identify features that may require removal such as underground lighting systems, invisible fences, or watering systems.

3.3 EPA will invite Respondents to discuss any Remedial Design issues as necessary.

4. REMEDIAL ACTION

4.1 Z2 Remedial Action Work Plan. Respondents shall submit a Z2 RA Work Plan (Z2 RAWP) for EPA approval that includes:

- (a) A proposed Z2 RA Construction Schedule in Gantt chart format;
- (b) The deliverables identified in ¶ 6.7, except for (i) the Z2 O&M Plan which must be submitted for EPA approval pursuant to the Z2 RA Schedule at ¶ 7.2 and (ii) the Z2 ICIAP, which may be unnecessary if no contamination is left that requires Institutional Controls; if the Z2 ICIAP is necessary, it shall be submitted for EPA approval pursuant to the Z2 RA Schedule at ¶ 7.2; and

- (c) Plans for satisfying the substantive requirements of permits for on-site activity (Respondents are not required to actually obtain the applicable permits—such as storm water permits—for on-site activity but must satisfy the substantive requirements of any such permits); and
- (d) Plans for obtaining permits and satisfying those permits requirements for off-site activity, if any such off-site activity occurs; and
- (e) A list of key contractor personnel who will provide support during the Z2 RA; and
- (f) A schedule of deliverables to be provided during the Z2 RA.

4.2 Z2 Remedial Action. Respondents shall conduct the Z2 RA in accordance with the Z2 RAWP. When conducting the Z2 RA, Respondents shall, at a minimum:

- (a) Excavate soils consistent with the individual property diagrams that EPA prepares pursuant to Section 3.2(a) of this Z2 Soil SOW.
- (b) Consistent with each individual property diagram, install a visual barrier such as landscape fabric or orange construction fencing over soil containing lead or arsenic in concentrations above the RALs at depths greater than 24 inches bgs. Respondents are required to install a visual barrier only if soils above 24 inches bgs are excavated. In the alternative, at their option, Respondents may elect to excavate soil deeper than 24 inches bgs to avoid the need for a visual barrier and Institutional Controls at the property. If Respondents elect to excavate additional soils, Respondents shall revise any individual property diagram from which they deviate to show the actual excavation that was undertaken.
- (c) Deviate from the individual property diagrams that EPA prepares, as necessary.
 - (1) Deviations Requiring EPA Approval. Based on property conditions (e.g., underground utilities or features, the addition of a porch or garage), Respondents may need to deviate from an individual property diagram (e.g., by using offsets). If Respondents determine that it is necessary to deviate from an individual property diagram based on property conditions, Respondents shall confer with EPA and obtain EPA's assent. Based upon the extent of the deviation from the individual property diagram, EPA may require Respondents to: (i) submit sufficient information to document the need for the deviation; (ii) revise, prior to excavation, the individual property diagram to reflect the newly proposed excavation design; and/or (iii) undertake additional soil sampling. If EPA determines that additional soil sampling is necessary, Respondents' sampling must be consistent with sampling methods and analysis described in the *Remedial Investigation Report, Final*, June 2012, at Section 3.0 and the *Superfund Lead-*

Contaminated Residential Sites Handbook, OSWER 9285.7-50 (Aug. 2003), at Section 4.3.

- (2) Deviations Not Requiring EPA Approval. If an individual property diagram prepared by EPA does not include complete sampling data to a depth of twenty-four inches bgs either because of refusal during RD sampling or because a previously-existing impermeable barrier has been removed, Respondents shall undertake additional soil sampling to determine whether any unsampled soils in the yard, down to a depth of at least twenty-four inches bgs, contain lead or arsenic above the RALs. Respondents' sampling must be consistent with sampling methods and analysis described in the *Remedial Investigation Report, Final*, June 2012, at Section 3.0 and the *Superfund Lead-Contaminated Residential Sites Handbook*, OSWER 9285.7-50 (Aug. 2003) at Section 4.3.
 - (i) Contaminated Soils 0–24 Inches Below Ground Surface. If Respondents find additional soils containing lead or arsenic above the RALs within twenty-four inches bgs that were not identified in the individual property design provided by EPA, Respondents shall excavate those soils.
 - (ii) Unknown Contaminated Soils Below 24 Inches Below Ground Surface. If Respondents excavate additional soils down to twenty-four inches bgs that were not identified in the individual property design provided by EPA, Respondents shall also sample the next six inches of soil below twenty-four inches bgs to determine if they contain lead or arsenic above the RALs. If they do, Respondents shall either:
 - (A) Install a visual barrier (e.g., landscape fabric, orange construction fencing) over the contaminated soil at twenty-four inches bgs; or
 - (B) Excavate all soils above native sand that are contaminated with lead or arsenic above the RALs.
 - (iii) Known Contaminated Soils Below 24 Inches Below Ground Surface. If an individual property diagram prepared by EPA shows soil containing lead or arsenic above the RALs below twenty-four inches bgs, but no soil containing lead or arsenic above the RALs between 18 and 24 inches bgs, Respondents shall either:
 - (A) Excavate all soils above native sand that are contaminated with lead or arsenic above the RALs; or

- (B) Implement Institutional Controls to prevent exposure to soil below twenty-four inches bgs contaminated with lead and arsenic above the RALs.
- (3) Respondents shall revise any individual property diagram from which they deviate to show the actual excavation that was undertaken.
- (d) Backfill and restore each property in a manner consistent with the *Superfund Lead-Contaminated Residential Sites Handbook*, OSWER 9285.7-50 (Aug. 2003).
- (e) Transport and dispose of Waste Material consistent with ¶ 4.7 and the Z2 RA TST&D Plan. If Respondents temporarily store and stage Waste Material, Respondents must identify and segregate from one another hazardous waste and non-hazardous waste. If Respondents stage or stockpile contaminated soil at a Staging Area or at a transfer station, or if they arrange for the treatment of contaminated soil, Respondents shall take all necessary measures to prevent the soil from being redistributed to any area other than the container it is in or the location at the Staging Area or transfer or treatment station where the soil is being held.
- (f) Implement Institutional Controls to preserve the protectiveness of the Z2 RA and prevent exposure to soil below twenty-four inches bgs contaminated with lead and arsenic above the RALs, at properties with soils below twenty-four inches bgs which contain lead or arsenic above the RALs after implementation of the Z2 RA Construction.

4.3 Independent Quality Assurance Team. Respondents shall notify EPA of Respondents' designated Independent Quality Assurance Team (IQAT). The Supervising Contractor may perform this function or Respondents may hire a third party for this purpose. Respondents' notice must include the names, titles, contact information, and qualifications of the members of the IQAT. The IQAT will have the responsibility to determine whether Z2 RA Work is of expected quality and conforms to applicable plans and specifications. The IQAT will have the responsibilities as described in ¶ 2.1.3 of the *Guidance on EPA Oversight of Remedial Designs and Remedial Actions Performed by Potentially Responsible Parties*, EPA/540/G-90/001 (Apr. 1990).

4.4 Meetings and Inspections

- (a) **Preconstruction Conferences.** Respondents shall hold an initial preconstruction conference with EPA and others as directed or approved by EPA to discuss Respondents' initial meetings with homeowners regarding remedial designs. Respondents subsequently shall hold a second preconstruction conference with EPA and others as directed or approved by EPA and as described in the *Remedial Design/Remedial Action Handbook*, EPA 540/R-95/059 (June 1995). Respondents

shall prepare minutes of each conference and shall distribute the minutes to all Parties.

- (b) **Periodic Meetings.** During the construction portion of the Z2 RA (Z2 RA Construction), Respondents shall meet regularly with EPA, and others as directed or determined by EPA, to discuss construction issues. Respondents shall distribute an agenda and list of attendees to all Parties prior to each meeting. Respondents shall prepare minutes of the meetings and shall distribute the minutes to all Parties.
- (c) **Inspections**
 - (1) EPA or its representative shall conduct periodic inspections of the Z2 RA Work. At EPA's request, the Supervising Contractor or other designee shall accompany EPA or its representative during inspections.
 - (2) Upon notification by EPA of any deficiencies in the Z2 RA Construction, Respondents shall take all necessary steps to correct the deficiencies and/or bring the Z2 RA Construction into compliance with the Z2 RD, any approved design changes, and/or the approved Z2 RAWP. If applicable, Respondents shall comply with any schedule provided by EPA in its notice of deficiency.

4.5 EPA Support

- (a) Respondents may refer any questions or comments from the public regarding the Site to the EPA RPM(s), the EPA CI Coordinator, or any other person designated by EPA.
- (b) Upon request by Respondents' Project Coordinator or Supervising Contractor, an EPA RPM will:
 - (1) Conduct pre-construction walkthroughs of individual properties with Respondents' employees and/or contractors;
 - (2) Conduct post-construction walkthroughs of individual properties with Respondents' employees and/or contractors; and
 - (3) Conduct additional walkthroughs of individual properties with Respondents' employees and/or contractors, as practicable.

4.6 Emergency Response and Reporting

- (a) **Emergency Response and Reporting.** If any event occurs during performance of the Z2 RA Work that causes or threatens to cause a release of Waste Material on, at, or from the Site and that either constitutes an emergency situation or that may present an immediate threat to public health or welfare or the environment,

Respondents shall: (1) immediately take all appropriate action to prevent, abate, or minimize such release or threat of release; (2) immediately notify the authorized EPA officer (as specified in ¶ 4.6(c)) orally; and (3) take such actions in consultation with the authorized EPA officer and in accordance with all applicable provisions of the Health and Safety Plan, the Emergency Response Plan, and any other deliverable approved by EPA under this Z2 Soil SOW.

- (b) **Release Reporting.** Upon the occurrence of any event during performance of the Z2 RA Work that Respondents are required to report pursuant to Section 103 of CERCLA, 42 U.S.C. § 9603, or Section 304 of the Emergency Planning and Community Right-to-know Act (EPCRA), 42 U.S.C. § 11004, Respondents shall immediately notify the authorized EPA officer orally.
- (c) The “authorized EPA officer” for purposes of immediate oral notifications and consultations under ¶ 4.6(a) and ¶ 4.6(b) are the EPA RPMs or the Emergency Response Section, Region 5, U.S. Environmental Protection Agency (if neither EPA RPM is available).
- (d) For any event covered by ¶ 4.6(a) and ¶ 4.6(b), Respondents shall: (1) within 14 days after the onset of such event, submit a report to EPA describing the actions or events that occurred and the measures taken, and to be taken, in response thereto; and (2) within 30 days after the conclusion of such event, submit a report to EPA describing all actions taken in response to such event.
- (e) The reporting requirements under ¶ 4.6 are in addition to the reporting required by CERCLA § 103 or EPCRA § 304.

4.7 Off-Site Shipments

- (a) Respondents may ship hazardous substances, pollutants, and contaminants from the Site to an off-Site facility only if they comply with Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440. Respondents will be deemed to be in compliance with CERCLA § 121(d)(3) and 40 C.F.R. § 300.440 regarding a shipment if Respondents obtain a prior determination from EPA that the proposed receiving facility for such shipment is acceptable under the criteria of 40 C.F.R. § 300.440(b).
- (b) Respondents may ship Waste Material from the Site to an out-of-state waste management facility only if, prior to any shipment, they provide notice to the appropriate state environmental official in the receiving facility’s state and to the EPA Project Coordinator. This notice requirement will not apply to any off-Site shipments when the total quantity of all such shipments does not exceed 10 cubic yards. The notice must include the following information, if available: (1) the name and location of the receiving facility; (2) the type and quantity of Waste Material to be shipped; (3) the schedule for the shipment; and (4) the method of transportation. Respondents also shall notify the state environmental official

referenced above and the EPA Project Coordinator of any major changes in the shipment plan, such as a decision to ship the Waste Material to a different out-of-state facility. Respondents shall provide the notice after the award of the contract for Z2 RA Construction and before the Waste Material is shipped.

- (c) Respondents may ship Investigation Derived Waste (IDW) from the Site to an off-Site facility only if they comply with Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3), 40 C.F.R. § 300.440, EPA's *Guide to Management of Investigation Derived Waste*, OSWER 9345.3-03FS (Jan. 1992), and any IDW-specific requirements contained in the ROD. Wastes shipped off-Site to a laboratory for characterization, and RCRA hazardous wastes that meet the requirements for an exemption from RCRA under 40 CFR § 261.4(e) shipped off-site for treatability studies, are not subject to 40 C.F.R. § 300.440.

4.8 Certification of Z2 RA Construction Completion

- (a) Definitions

- (1) Performance Standards

- (i) Cleanup Standards. The cleanup standards for the Z2 Remedial Action are the RALs for lead and arsenic set forth in the ROD. For residential yards, the RAL for lead is 400 mg/kg. At schools, parks and unrestricted public right of ways, the RAL for lead is also 400 mg/kg. At industrial/commercial properties, the RAL for lead is 800 mg/kg. The RAL for arsenic is 26 mg/kg at both residential and commercial/industrial properties.
 - (ii) ARARs. EPA has identified the ARARs for the Z2 Remedial Action in Appendix B of the ROD, a copy of which is appended to the Z2 Soil UAO as Appendix D.

- (2) "Z2 Excluded Properties"

- (i) Prior to scheduling a Z2 RA Construction Completion Inspection pursuant to Paragraph 4.8(b) of this Z2 Soil SOW, Respondents must secure a final list of the Z2 Excluded Properties from EPA.
 - (ii) As set forth in Paragraphs 23.b and 25 of the Z2 Soil UAO, for those properties for which there is no access for sampling and/or excavation/restoration activities, Respondents shall use best efforts to secure such access during each year up to and including three months prior to the expected final demobilization of Z2 RA Construction (excluding the maintenance period), unless EPA informs Respondents that, with respect to a particular property(ies), EPA will take independent action to obtain access.

- (iii) By no later than October 31 of the year preceding the year that Respondents expect to complete the Z2 RA Construction for all Z2 properties for which access has been granted, Respondents shall provide EPA with a list of the Z2 properties, if any, for which they still have not secured access for sampling and/or remediation.
 - (iv) After Respondents have provided EPA with the list required in ¶ 4.8(a)(2)(iii), EPA may, if it deems it appropriate, assist Respondents, or take independent action, in obtaining access. To the extent that Respondents and/or EPA is/are successful in securing access, EPA will prepare RD drawings and provide them to Respondents no later than 30 days prior to Respondents' expected date of final demobilization, excluding the maintenance period.
 - (v) No later than six months prior to Respondents' expected date of final demobilization of Z2 RA Construction, Respondents shall notify EPA of their expected date of final demobilization and will regularly update that expected date in subsequent monthly Progress Reports submitted pursuant to ¶ 5.1.
 - (vi) By no later than 30 days after the notification in ¶ 4.8(a)(2)(v), EPA will develop a preliminary list of all Z2 unsampled and/or unremediated properties and will provide it to the Respondents. Thereafter, EPA and Respondents, will informally discuss the list. By no later than 30 days prior to Respondents' expected date of final demobilization, excluding the maintenance period, EPA will provide Respondents with a final list of the properties within Z2 that are unsampled and/or unremediated. The properties on this list shall constitute the "Z2 Excluded Properties."
 - (vii) At such time as EPA provides Respondents with the final list of Z2 Excluded Properties (which will be no later than 30 days prior to demobilization of Z2 RA Construction, excluding the maintenance period), Respondents' obligations to perform Z2 Remedial Action and Z2 O&M at the Z2 Excluded Properties shall cease under the Z2 Soil UAO and this Z2 Soil SOW. After Respondents complete any remaining Z2 RA Construction at any non-Z2 Excluded Properties (if any), Respondents may schedule a Z2 RA Construction Completion Inspection.
- (b) **Z2 RA Construction Completion Inspection.** The Z2 RA Construction is "Complete" for purposes of this ¶ 4.8 when it has been fully performed and the Performance Standards have been achieved, except at the Z2 Excluded Properties. Respondents shall schedule an inspection for the purpose of obtaining EPA's

Certification of Z2 RA Construction Completion. The inspection must be attended by Respondents and EPA and/or their representatives.

- (c) **Z2 RA Construction Report.** Following the inspection, Respondents shall submit a Z2 RA Construction Report to EPA requesting EPA's Certification of Z2 RA Construction Completion. The report must: (1) include certifications by a registered professional engineer and by Respondents' Project Coordinator that the Z2 RA Construction is complete; (2) include as-built drawings in a package which is signed and stamped by a registered professional engineer; (3) include copies of all restoration plans generated in connection with ¶ 4.2(d); (4) be prepared in accordance with Chapter 2 of EPA's *Close Out Procedures for NPL Sites* guidance (May 2011); (5) contain post-excavation diagrams to demonstrate that Performance Standards have been achieved; and (6) be certified in accordance with ¶ 6.5 (Certification).
- (d) **EPA Notice of Deficiencies.** If EPA concludes that the Z2 RA Construction is not Complete, EPA shall so notify Respondents. EPA's notice must include a description of any deficiencies. EPA's notice may include a schedule for addressing such deficiencies or may require Respondents to submit a schedule for EPA approval. Respondents shall perform all activities described in the notice in accordance with the schedule.
- (e) If EPA concludes, based on the initial or any subsequent Z2 RA Construction Report requesting Certification of Z2 RA Construction Completion, that the Z2 RA Construction is Complete, EPA shall so certify to the Respondents. This certification will constitute the Certification of Z2 RA Construction Completion for purposes of the Z2 Soil UAO. Issuance of the Certification of Z2 RA Construction Completion will not affect Respondents' remaining obligations under the Z2 Soil UAO.

4.9 Periodic Review Support Plan. To the extent that contamination is left that requires Institutional Controls and to the extent that EPA notifies Respondents that Respondents' submissions under the approved Z2 O&M Plan do not provide EPA with sufficient information to undertake its statutorily-mandated five-year reviews, Respondents shall submit a periodic review support plan (PRSP) for EPA approval. The PRSP addresses the studies and investigations that Respondents shall conduct to support EPA's reviews of whether the Z2 RA is protective of human health and the environment in accordance with Section 121(c) of CERCLA, 42 U.S.C. § 9621(c) (also known as "Five-year Reviews"). Respondents shall develop the plan in accordance with *Comprehensive Five-year Review Guidance*, OSWER 9355.7-03B-P (June 2001), and any other relevant five-year review guidances.

4.10 Notice of Z2 RA Completion

- (a) **“Z2 RA” Distinguished from “Z2 RA Construction.”** “Z2 RA” fully encompasses “Z2 RA Construction” but it also includes Institutional Control activities.
- (b) **If Institutional Controls are not Required at any Z2 Affected Property.**
- (1) If Respondents leave no contamination in place that requires Institutional Controls, then, at the same time that Respondents seek certification from EPA of Z2 RA Construction Completion, they may also seek notification from EPA of Z2 RA Completion.
 - (2) Respondents shall not be required to prepare a Z2 RA Completion Report if no Institutional Controls are necessary because the Z2 RA Construction Completion Report shall be sufficient.
 - (3) If EPA concludes that the Z2 RA is complete, EPA shall so notify Respondents.
 - (4) If EPA concludes that the Z2 RA is not complete, the procedures identified in ¶ 4.10(c)(3)–(c)(4) shall apply.
- (c) **If Institutional Controls are Required at One or More Z2 Affected Properties.**
- (1) **Z2 RA Completion Meeting.** If Institutional Controls are required at one or more Z2 Affected Property, then upon completion of the implementation of the ICIAP, Respondents shall schedule a meeting with EPA for the purpose of obtaining EPA’s Notice of Z2 RA Completion. The meeting must be attended by Respondents and EPA and/or their representatives.
 - (2) **Z2 RA Completion Report.** Following the meeting, Respondents shall submit a report to EPA requesting EPA’s Notice of Z2 RA Completion. The report must: (1) include certifications by Respondents’ Project Coordinator that all requirements of Section XI (Property Requirements) of the Z2 Soil UAO and all activities under the Z2 ICIAP are complete; and (2) be certified in accordance with ¶ 6.5 (Certification).
 - (3) If EPA concludes that the Z2 RA is not complete, EPA shall so notify Respondents. EPA’s notice must include a description of the activities that Respondents must perform to complete the Z2 RA. EPA’s notice must include specifications and a schedule for such activities or must require Respondents to submit specifications and a schedule for EPA approval. Respondents shall perform all activities described in the notice or in the EPA-approved specifications and schedule.

- (4) If EPA concludes, based on the initial or any subsequent Z2 RA Completion Report, that the Z2 RA is complete, EPA shall so notify Respondents.
- (d) Issuance of the Notice of Z2 RA Completion under either ¶ 4.10(b)(2) or (c)(4) does not affect the following continuing obligations: (i) activities under the Periodic Review Support Plan, if this Plan is required; (ii) activities under the Z2 O&M Plan; and (iii) obligations under Sections XVI (Record Retention) and XV (Access to Information) of the Z2 Soil UAO.

4.11 Notice of Z2 RA Work Completion

- (a) **“Z2 RA Work” Distinguished from “Z2 RA.”** “Z2 RA Work” fully encompasses “Z2 RA” but also includes Z2 O&M. Z2 O&M involves inspecting or reviewing records of properties, if any, where Institutional Controls are required. *See* Paragraph 6.7(j) below. By definition in the Z2 Soil UAO, “Z2 RA Work” also includes all other activities required by the Z2 Soil UAO except for record retention. Those other activities are addressed in Paragraph 4.11(d) below.
- (b) **If Institutional Controls are not Required at any Z2 Affected Property.**
 - (1) If Respondents leave no contamination in place that requires Institutional Controls, then Respondents shall not be required to undertake any Z2 O&M under the Z2 Soil UAO. Therefore, at the same time that Respondents seek certification from EPA of Z2 RA Construction Completion and notification from EPA of Z2 RA Completion, Respondents may also seek notification of Z2 RA Work Completion.
 - (2) Respondents shall not be required to prepare a Z2 RA Work Completion Report if no Institutional Controls are necessary because the Z2 RA Construction Completion Report shall be sufficient.
 - (3) If EPA concludes that the Z2 RA Work is complete, EPA shall so notify Respondents.
 - (4) If EPA concludes that the Z2 RA Work is not complete, the procedures identified in ¶ 4.11(c)(3)–(c)(4) shall apply.
- (c) **If Institutional Controls are Required at One or More Z2 Affected Properties.**
 - (1) **Z2 RA Work Completion Meeting.** If Institutional Controls are required at one or more Z2 Affected Property, then upon completion of the implementation of the Z2 O&M Plan, Respondents shall schedule a meeting with EPA for the purpose of obtaining EPA’s Notice of Z2 RA

Work Completion. The meeting must be attended by Respondents and EPA and/or their representatives.

- (2) **Z2 RA Work Completion Report.** Following the meeting, Respondents shall submit a report to EPA requesting EPA's Notice of Z2 RA Work Completion. The report must: (1) include certifications by Respondents' Project Coordinator that the Z2 RA Work, including all Z2 O&M activities, is complete; and (2) be certified in accordance with ¶ 6.5 (Certification).
 - (3) If EPA concludes that the Z2 RA Work is not complete, EPA shall so notify Respondents. EPA's notice must include a description of the activities that Respondents must perform to complete the Z2 RA Work. EPA's notice must include specifications and a schedule for such activities or must require Respondents to submit specifications and a schedule for EPA approval. Respondents shall perform all activities described in the notice or in the EPA-approved specifications and schedule.
 - (4) If EPA concludes, based on the initial or any subsequent Z2 RA Work Completion Report, that the Z2 RA Work is complete, EPA shall so notify Respondents.
- (d) Issuance of the Notice of Z2 RA Work Completion does not affect the following continuing obligations: (1) activities under the Periodic Review Support Plan, if this Plan is required; and (2) obligations under Section XVI (Record Retention), and XV (Access to Information) of the Z2 Soil UAO.

5. REPORTING

5.1 Progress Reports. Commencing in the month following the approval of the Z2 RAWP, Respondents shall submit progress reports to EPA on a monthly basis, or as otherwise requested by EPA. The reports must cover all activities that took place during the prior reporting period pursuant to the Z2 Soil UAO, including:

- (a) The actions that have been taken toward achieving compliance with the Z2 Soil UAO;
- (b) A summary of all results of sampling, tests, and all other data received or generated by Respondents;
- (c) A description of all deliverables that Respondents submitted to EPA;
- (d) A description of all activities relating to Z2 RA Construction that are scheduled for the next six weeks;
- (e) An updated Z2 RA Construction Schedule (if that schedule has been modified), together with information regarding percentage of completion, delays encountered

or anticipated that may affect the future schedule for implementation of the Z2 RA Work, and a description of efforts made to mitigate those delays or anticipated delays; and

- (f) A description of any modifications to the work plans or other schedules that Respondents have proposed or that have been approved by EPA.

5.2 Notice of Progress Report Schedule Changes. If the schedule for any activity described in the Progress Reports, including activities required to be described under ¶ 5.1(d), changes, Respondents shall notify EPA of such change at least 7 days before performance of the activity.

6. DELIVERABLES

6.1 Applicability. Respondents shall submit deliverables for EPA approval or for EPA comment as specified in this Z2 Soil SOW. If neither is specified, the deliverable does not require EPA's approval or comment. Paragraphs 6.2 (In Writing) through 6.4 (Technical Specifications) apply to all deliverables. Paragraph 6.5 (Certification) applies to any deliverable that is required to be certified. Paragraph 6.6 (Approval of Deliverables) applies to any deliverable that is required to be submitted for EPA approval.

6.2 In Writing. All deliverables under this Z2 Soil SOW must be in writing unless otherwise specified.

6.3 General Requirements for Deliverables. All deliverables must be submitted by the deadlines in the Z2 RA Schedule. Respondents shall submit all deliverables in electronic form. Technical specifications for sampling and monitoring data and spatial data are addressed in ¶ 6.4. All other deliverables shall be submitted to EPA in the electronic form specified by the EPA RPM. If any deliverable includes maps, drawings, or other exhibits that are larger than 8.5" by 11", Respondents shall also provide EPA with paper copies of such exhibits.

6.4 Technical Specifications

- (a) Sampling and monitoring data should be submitted in standard Regional Electronic Data Deliverable (EDD) format. Respondents shall consult with the EPA RPM prior to transmitting sampling and monitoring data in order to be advised of the EDD format that the data should be transmitted in. Other delivery methods may be allowed if electronic direct submission presents a significant burden or as technology changes.
- (b) Spatial data, including spatially-referenced data and geospatial data, should be submitted: (1) in the ESRI File Geodatabase format; and (2) as unprojected geographic coordinates in decimal degree format using North American Datum 1983 (NAD83) or World Geodetic System 1984 (WGS84) as the datum. If

applicable, submissions should include the collection method(s). Projected coordinates may optionally be included but must be documented. Spatial data should be accompanied by metadata, and such metadata should be compliant with the Federal Geographic Data Committee (FGDC) Content Standard for Digital Geospatial Metadata and its EPA profile, the EPA Geospatial Metadata Technical Specification. An add-on metadata editor for ESRI software, the EPA Metadata Editor (EME), complies with these FGDC and EPA metadata requirements and is available at <https://edg.epa.gov/EME/>.

- (c) Each file must include an attribute name for each site unit or sub-unit submitted. Consult <http://www.epa.gov/geospatial/geospatial-policies-and-standards> for any further available guidance on attribute identification and naming.
- (d) Spatial data submitted by Respondents does not, and is not intended to, define the boundaries of the Site.

6.5 Certification. All deliverables that require compliance with this ¶ 6.5 must be signed by the Respondents' Project Coordinator, or other responsible official of Respondents, and must contain the following statement:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

6.6 Approval of Deliverables

(a) Initial Submissions

- (1) After review of any deliverable that is required to be submitted for EPA approval under the Z2 Soil UAO or this Z2 Soil SOW, EPA shall:
 - (i) approve, in whole or in part, the submission; (ii) approve the submission upon specified conditions; (iii) disapprove, in whole or in part, the submission; or (iv) any combination of the foregoing.
- (2) EPA also may modify the initial submission to cure deficiencies in the submission if: (i) EPA determines that disapproving the submission and awaiting a resubmission would cause substantial disruption to the Z2 RA Work; or (ii) previous submission(s) have been disapproved due to material defects and the deficiencies in the initial submission under

consideration indicate a bad faith lack of effort to submit an acceptable deliverable.

- (b) **Resubmissions.** Upon receipt of a notice of disapproval under ¶ 6.6(a) (Initial Submissions), or if required by a notice of approval upon specified conditions under ¶ 6.6(a), Respondents shall, within 14 days or such longer time as specified by EPA in such notice, correct the deficiencies and resubmit the deliverable for approval. After review of the resubmitted deliverable, EPA may: (1) approve, in whole or in part, the resubmission; (2) approve the resubmission upon specified conditions; (3) modify the resubmission; (4) disapprove, in whole or in part, the resubmission, requiring Respondents to correct the deficiencies; or (5) any combination of the foregoing.
- (c) **Implementation.** Upon approval, approval upon conditions, or modification by EPA under ¶ 6.6(a) (Initial Submissions) or ¶ 6.6(b) (Resubmissions), of any deliverable, or any portion thereof: (1) such deliverable, or portion thereof, will be incorporated into and enforceable under the Z2 Soil UAO; and (2) Respondents shall take any action required by such deliverable, or portion thereof.

6.7 Supporting Deliverables. Respondents shall submit each of the following supporting deliverables for EPA approval as part of the Z2 RAWP, except that the Z2 ICIAP (if Institutional Controls are necessary), and the Z2 O&M Plan (if properties remain that are other than “unrestricted use and unrestricted exposure”) may be submitted at a later date as specified in ¶ 7.2 (Z2 RA Work Schedule). Respondents shall develop the deliverables in accordance with all applicable regulations, guidances, and policies (see Section 9 (References)). Respondents shall update each of these supporting deliverables as necessary or appropriate during the course of the Z2 RA Work and/or as requested by EPA. For those documents which EPA will make available to Respondents, EPA will separately provide instructions to Respondents on how to access a secure website which has those documents.

- (a) **Health and Safety Plan.** The Health and Safety Plan (HASP) describes all activities to be performed to protect on site personnel and area residents from physical, chemical, and all other hazards posed by the Z2 RA Work. Respondents shall develop the HASP in accordance with EPA’s Emergency Responder Health and Safety and Occupational Safety and Health Administration (OSHA) requirements under 29 C.F.R. §§ 1910 and 1926. The HASP should cover activities during the Z2 RA and be updated to cover activities after Z2 RA completion. EPA does not approve the HASP, but will review it to ensure that all necessary elements are included and that the plan provides for the protection of human health and the environment. EPA shall make an example HASP that EPA developed for the residential areas of the USS Lead Site available to Respondents.
- (b) **Emergency Response Plan.** The Emergency Response Plan (ERP) must describe procedures to be used in the event of an accident or emergency at the Site (for

example, power outages, water impoundment failure, treatment plant failure, slope failure). The ERP must include:

- (1) Name of the person or entity responsible for responding in the event of an emergency incident;
- (2) Plan and date(s) for meeting(s) with the local community, including local, State, and federal agencies involved in the cleanup, as well as local emergency squads and hospitals;
- (3) Spill Prevention, Control, and Countermeasures (SPCC) Plan (if applicable), consistent with the regulations under 40 C.F.R. Part 112, describing measures to prevent, and contingency plans for, spills and discharges;
- (4) Notification activities in accordance with ¶ 4.6(b) (Release Reporting) in the event of a release of hazardous substances requiring reporting under Section 103 of CERCLA, 42 U.S.C. § 9603, or Section 304 of the Emergency Planning and Community Right-to-know Act (EPCRA), 42 U.S.C. § 11004; and
- (5) A description of all necessary actions to ensure compliance with ¶ 4.6 in the event of an occurrence during the performance of the Z2 RA Work that causes or threatens a release of Waste Material from the Site that constitutes an emergency or may present an immediate threat to public health or welfare or the environment.

EPA shall make an example ERP that EPA developed for the residential areas of the USS Lead Site available at to Respondents.

- (c) **Field Sampling Plan.** The Field Sampling Plan (FSP) addresses all sample collection activities. The FSP must be written so that a field sampling team unfamiliar with the project would be able to gather the samples and field information required. Respondents shall develop the FSP in accordance with *Guidance for Conducting Remedial Investigations and Feasibility Studies*, EPA/540/G 89/004 (Oct. 1988). EPA shall make an example FSP that EPA developed for the residential areas of the USS Lead Site available to Respondents.
- (d) **Quality Assurance Project Plan.** The Quality Assurance Project Plan (QAPP) augments the FSP and addresses sample analysis and data handling regarding the Z2 RA Work. The QAPP must include a detailed explanation of Respondents' quality assurance, quality control, and chain of custody procedures for all treatability, design, compliance, and monitoring samples. Respondents shall develop the QAPP in accordance with *EPA Requirements for Quality Assurance Project Plans*, QA/R-5, EPA/240/B-01/003 (Mar. 2001, reissued May 2006); *Guidance for Quality Assurance Project Plans*, QA/G-5, EPA/240/R 02/009

(Dec. 2002); and *Uniform Federal Policy for Quality Assurance Project Plans*, Parts 1-3, EPA/505/B-04/900A through 900C (Mar. 2005). EPA shall make an example QAPP that EPA developed for the residential areas of the USS Lead Site available to Respondents. The QAPP also must include procedures:

- (1) To ensure that EPA and its authorized representative have reasonable access to laboratories used by Respondents in implementing the Z2 RA Work (Respondents' Labs);
 - (2) To ensure that Respondents' Labs analyze all samples submitted by EPA pursuant to the QAPP for quality assurance monitoring;
 - (3) To ensure that Respondents' Labs perform all analyses using EPA-accepted methods (i.e., the methods documented in *USEPA Contract Laboratory Program Statement of Work for Inorganic Analysis*, ILM05.4 (Dec. 2006); *USEPA Contract Laboratory Program Statement of Work for Organic Analysis*, SOM01.2 (amended Apr. 2007); and *USEPA Contract Laboratory Program Statement of Work for Inorganic Superfund Methods (Multi-Media, Multi-Concentration)*, ISM01.2 (Jan. 2010)) or other methods acceptable to EPA;
 - (4) To ensure that Respondents' Labs participate in an EPA-accepted QA/QC program or other program QA/QC acceptable to EPA;
 - (5) For Respondents to provide split samples and/or duplicate samples to EPA upon request;
 - (6) For EPA to take any additional samples that it deems necessary;
 - (7) For EPA to provide to Respondents, upon request, split samples and/or duplicate samples in connection with EPA's oversight sampling; and
 - (8) For Respondents to submit to EPA all sampling and tests results and other data in connection with the implementation of the Z2 RA Work.
- (e) **Construction Quality Assurance/Quality Control Plan (CQA/QCP).** The purpose of the Construction Quality Assurance Plan (CQAP) is to describe planned and systemic activities that provide confidence that the Z2 RA Construction will satisfy all plans, specifications, and related requirements, including quality objectives. The purpose of the Construction Quality Control Plan (CQCP) is to describe the activities to verify that Z2 RA construction has satisfied all plans, specifications, and related requirements, including quality objectives. EPA shall make an example CQA/QCP that EPA developed for the residential areas of the USS Lead Site available to Respondents. The CQA/QCP must:

- (1) Identify, and describe the responsibilities of, the organizations and personnel implementing the CQA/QCP;
 - (2) Describe the PS required to be met to achieve Completion of the Z2 RA;
 - (3) Describe the activities to be performed: (i) to provide confidence that PS will be met; and (ii) to determine whether PS have been met;
 - (4) Describe verification activities, such as inspections, sampling, testing, monitoring, and production controls, under the CQA/QCP;
 - (5) Describe industry standards and technical specifications used in implementing the CQA/QCP;
 - (6) Describe procedures for tracking construction deficiencies from identification through corrective action;
 - (7) Describe procedures for documenting all CQA/QCP activities; and
 - (8) Describe procedures for retention of documents and for final storage of documents.
- (f) **Construction Stormwater Pollution Prevention Plan.** EPA shall make an example Construction Stormwater Pollution Prevention Plan that EPA developed for the residential areas of the USS Lead Site available to Respondents.
- (g) **Traffic Management Plan.** EPA shall make an example Traffic Management Plan that EPA developed for the residential areas of the USS Lead Site available to Respondents.
- (h) **Z2 RA Temporary Storage, Transportation and Disposal Plan.** The Z2 RA Temporary Storage, Transportation and Disposal Plan (Z2 RA TST&D Plan) must include:
- (1) Proposed routes for off-site shipment of Waste Material;
 - (2) Identification of communities affected by shipment of Waste Material;
 - (3) Description of plans to minimize impacts on affected communities;
 - (4) Description of the site setup at a Staging Area, if any, including the locations of the waste staging area and laydown yard;
 - (5) Waste management control measures necessary for safety and protection of human health and the environment at a Staging Area, if any, including but not limited to erosion control, stormwater pollution prevention, dust

suppression (both on the roads used by the truck traffic and near the Waste Materials), and air monitoring;

- (6) Description of maintenance to be performed on the roads used by trucks hauling Waste Materials
- (7) Health and safety requirements;
- (8) Documentation requirements; and
- (9) A description of the disposal facilities.

A TST&D Plan prepared by Defendants to a 2014 Consent Decree (that covers Z1&3 of OU1) already exists (Z1&3 TST&D Plan) and has been approved by EPA. Respondents may utilize the Z1&3 TST&D Plan as the core document for their preparation and submission of the Z2 RA TST&D Plan due hereunder, but shall submit an Addendum to the Z1&3 TST&D Plan to include any additional requirements set forth in this Z2 Soil SOW and any that may be required by EPA.

- (i) **Addendum to the Data Management Plan.** EPA shall make EPA's current Data Management Plan for residential areas of the USS Lead Site available to Respondents. Respondents shall prepare an Addendum to the Data Management Plan (ADMP) that shall describe the information that Respondents shall collect during the Z2 RA Construction and how Respondents shall collect and manage that information so that it is compatible with EPA's data management practices.

- (1) For field activities, the ADMP must include requirements to:
 - (i) Use DustTrak DRX for air monitoring and download all generated data for backup;
 - (ii) Use VIPER and associated telemetry equipment for real-time air monitoring activities;
 - (iii) Use Gillians (or equivalent) to collect air samples;
 - (iv) Fill out an Air Monitoring iForm (or equivalent) to record air sample information;
 - (v) Use XRF for soil screening (as needed);
 - (vi) Use XRF iForm (or equivalent) to record XRF QC checks and field data; and
 - (vii) Use licensed surveyors or another method approved by EPA to record pre-excavation elevation and confirmation of excavation depth.

- (2) The flow chart on Page 4 of the current Data Management Plan identifies data that must be exported to Scribe (which is a software program for managing environmental data). For data that must be exported to Scribe, the ADMP must include requirements to:
- (i) Re-create digital forms for field data entry (i.e., using iForms or equivalent);
 - (ii) Ensure that export data from digital forms can be imported to Scribe without adjustments to Scribe (stated otherwise, ensure that comma-separated values (CSV) files are able to be imported to Scribe without adjustments to Scribe);
 - (iii) QA/QC CSV exports for iForms (or equivalent) to ensure information entered is correct/valid;
 - (iv) Update the field version of Scribe by subscribing to the updated version of Scribe.NET;
 - (v) Upload CSV files into field version of Scribe for creation of chain of custody (COC) for submission of samples;
 - (vi) Export the COC XML files from Scribe;
 - (vii) Email the CSV files from the digital forms and the COC XML files to the database administrator;
 - (viii) Backup all CSV and COC XML files submitted to the database administrator; and
 - (ix) QA/QC pre-elevation data, excavation depth confirmation data, and the export of this data to Scribe.

EPA will work with Respondents during their development of the ADMP and the necessary digital forms.

- (j) **Z2 O&M Plan.** The Z2 O&M Plan shall describe the requirements for inspecting, operating, and maintaining the Z2 RA where contamination below 24 inches bgs that requires Institutional Controls has been left in place. Respondents shall develop the Z2 O&M Plan in accordance with *Operation and Maintenance in the Superfund Program*, OSWER 9200.1 37FS, EPA/540/F-01/004 (May 2001). The Z2 O&M Plan must include a description of the procedures the Respondents shall use for inspections or record reviews of properties where Institutional Controls are required. The Z2 O&M Plan must require the submission of a Z2 O&M Report following Z2 O&M activities. Remediated properties that have unlimited use and unrestricted exposure (“UU/UE”) are not required to be included in the Z2 O&M Plan.

(k) **Institutional Controls Implementation and Assurance Plan.**

- (1) The Institutional Controls Implementation and Assurance Plan (ICIAP) is required only if Respondents leave contamination in place below 24 inches bgs that requires Institutional Controls.
- (2) The ICIAP describes plans to implement, maintain, and enforce the Institutional Controls (ICs) at the Site. Respondents shall develop the ICIAP in accordance with *Institutional Controls: A Guide to Planning, Implementing, Maintaining, and Enforcing Institutional Controls at Contaminated Sites*, OSWER 9355.0-89, EPA/540/R-09/001 (Dec. 2012), and *Institutional Controls: A Guide to Preparing Institutional Controls Implementation and Assurance Plans at Contaminated Sites*, OSWER 9200.0-77, EPA/540/R-09/02 (Dec. 2012). The ICIAP must include the following additional requirements:
 - (i) Locations of recorded real property interests (e.g., easements, liens) and resource interests in the property that may affect ICs (e.g., surface, mineral, and water rights) including accurate mapping and geographic information system (GIS) coordinates of such interests; and
 - (ii) Legal descriptions and survey maps that are prepared according to current American Land Title Association (ALTA) Survey guidelines and certified by a licensed surveyor.

7. SCHEDULES

7.1 Applicability and Revisions. All deliverables and tasks required under this Z2 Soil SOW must be submitted or completed by the deadlines or within the time durations listed in the Z2 RA Work Schedule set forth below. Respondents may submit proposed revised Z2 RA Work Schedules for EPA approval. Upon EPA's approval, the revised Z2 RA Work Schedules supersede the Z2 RA Work Schedule set forth below, and any previously-approved Z2 RA Work Schedules.

7.2 Z2 RA Work Schedule

	Description of Deliverable / Task	¶ Ref.	Deadline (dates are “no later than” dates) (“days” are calendar days)
1	Z2 RAWP	4.1	The HASP, ERP, FSP, QAPP, and C-SWPPP subplans shall be submitted 60 days after EPA’s Notice of Authorization to Proceed regarding Supervising Contractor under ¶ 18.c of the Z2 Soil UAO; all remaining subplans (except the Z2 O&M Plan and the ICIAP) shall be submitted 75 days after the Notice
2	Designate IQAT (either a third party or the Supervising Contractor)	4.3	30 days after EPA’s Notice of Authorization to Proceed regarding Supervising Contractor under ¶ 18.c of the Z2 Soil UAO
3	Initial Preconstruction Conference	4.4(a)	60 days after EPA’s Notice of Authorization to Proceed regarding Supervising Contractor under ¶ 18.c of the Z2 Soil UAO
	Second Preconstruction Conference	4.4(a)	5 days before the Start of Z2 RA Construction (Line 4)
4	Start of Z2 RA Construction, (which includes mobilization for Z2 RA Construction)		The later of: (i) 30 days after Approval of Z2 RAWP; (ii) 14 days after the date of the Final ESD; or (iii) such other time as EPA may require (provided that EPA has both approved the Z2 RAWP and issued the Final ESD)
5	Z2 O&M Plan, if properties remain that are other than Unrestricted Use/Unrestricted Access	6.7(j)	60 days before Completion of Z2 RA Construction (Item 7)
6	ICIAP, if Institutional Controls are necessary	6.7(k)	60 days before Completion of Z2 RA Construction (Item 7)
7	Completion of Z2 RA Construction		Per approved Z2 RA Construction Schedule
8	Z2 RA Construction Completion Inspection	4.8(b)	As scheduled by Respondents when they believe the Z2 RA Construction is completed (Item 7)
9	Z2 RA Construction Report	4.8(c)	60 days after Z2 RA Construction Completion Inspection (Item 8)
10	Z2 RA Completion Meeting (may be consolidated with Z2 RA Construction Completion Inspection if Institutional Controls are not necessary)	4.10(c)(1)	As scheduled by Respondents when they believe the Z2 RA is completed

11	Z2 RA Completion Report (required only if Institutional Controls are necessary)	4.10(c)(2)	60 days after Z2 RA Completion Meeting (Item 10)
12	Z2 RA Work Completion Meeting (may be consolidated with Z2 RA Construction Completion Inspection and Z2 RA Completion Meeting if Institutional Controls are not necessary)	4.11(c)(1)	As scheduled by Respondent when they believe the Z2 RA Work is completed
13	Z2 RA Work Completion Report (required only if Institutional Controls are necessary)	4.11(c)(2)	60 days after the Z2 RA Work Completion Inspection (Item 11)
14	Periodic Review Support Plan, if required	4.9	Four years after start of Z2 RA Construction

8. STATE PARTICIPATION

8.1 Copies. Respondents shall, at any time they send a deliverable to EPA, send a copy of such deliverable to the State in care of:

Doug Petroff
Project Manager, Federal Programs
Indiana Dep't of Environmental Management
100 North Senate Ave.
IGCN – 11th Floor
Indianapolis, IN 46204

EPA shall, at any time it sends a notice, authorization, approval, disapproval, or certification to Respondents, send a copy of such document to the State.

9. REFERENCES

9.1 The following regulations and guidance documents, among others, apply to the Z2 RA Work. Any item for which a specific URL is not provided below is available on one of the two EPA Web pages listed in ¶ 9.2:

- (a) A Compendium of Superfund Field Operations Methods, OSWER 9355.0-14, EPA/540/P-87/001a (Aug. 1987).
- (b) CERCLA Compliance with Other Laws Manual, Part I: Interim Final, OSWER 9234.1-01, EPA/540/G-89/006 (Aug. 1988).
- (c) Guidance for Conducting Remedial Investigations and Feasibility Studies, OSWER 9355.3-01, EPA/540/G-89/004 (Oct. 1988).

- (d) CERCLA Compliance with Other Laws Manual, Part II, OSWER 9234.1-02, EPA/540/G-89/009 (Aug. 1989).
- (e) Guidance on EPA Oversight of Remedial Designs and Remedial Actions Performed by Potentially Responsible Parties, OSWER 9355.5-01, EPA/540/G-90/001 (Apr.1990).
- (f) Guidance on Expediting Remedial Design and Remedial Actions, OSWER 9355.5-02, EPA/540/G-90/006 (Aug. 1990).
- (g) Guide to Management of Investigation-Derived Wastes, OSWER 9345.3-03FS (Jan. 1992).
- (h) Permits and Permit Equivalency Processes for CERCLA On-Site Response Actions, OSWER 9355.7-03 (Feb. 1992).
- (i) Guidance for Conducting Treatability Studies under CERCLA, OSWER 9380.3-10, EPA/540/R-92/071A (Nov. 1992).
- (j) National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule, 40 C.F.R. Part 300 (Oct. 1994).
- (k) Guidance for Scoping the Remedial Design, OSWER 9355.0-43, EPA/540/R-95/025 (Mar. 1995).
- (l) Remedial Design/Remedial Action Handbook, OSWER 9355.0-04B, EPA/540/R-95/059 (June 1995).
- (m) EPA Guidance for Data Quality Assessment, Practical Methods for Data Analysis, QA/G-9, EPA/600/R-96/084 (July 2000).
- (n) Operation and Maintenance in the Superfund Program, OSWER 9200.1-37FS, EPA/540/F-01/004 (May 2001).
- (o) Comprehensive Five-year Review Guidance, OSWER 9355.7-03B-P, 540-R-01-007 (June 2001).
- (p) Guidance for Quality Assurance Project Plans, QA/G-5, EPA/240/R-02/009 (Dec. 2002).
- (q) Superfund Lead-Contaminated Residential Sites Handbook, OSWER 9285.7-50 (Aug. 2003).
- (r) Institutional Controls: Third Party Beneficiary Rights in Proprietary Controls (Apr. 2004).

- (s) Quality management systems for environmental information and technology programs - Requirements with guidance for use, ASQ/ANSI E4:2014 (American Society for Quality, February 2014).
- (t) Uniform Federal Policy for Quality Assurance Project Plans, Parts 1-3, EPA/505/B-04/900A through 900C (Mar. 2005).
- (u) Superfund Community Involvement Handbook, SEMS 100000070 (January 2016) available at <http://www.epa.gov/superfund/community-involvement-tools-and-resources>.
- (v) EPA Guidance on Systematic Planning Using the Data Quality Objectives Process, QA/G-4, EPA/240/B-06/001 (Feb. 2006).
- (w) EPA Requirements for Quality Assurance Project Plans, QA/R-5, EPA/240/B-01/003 (Mar. 2001, reissued May 2006).
- (x) EPA Requirements for Quality Management Plans, QA/R-2, EPA/240/B-01/002 (Mar. 2001, reissued May 2006).
- (y) USEPA Contract Laboratory Program Statement of Work for Inorganic Analysis, ILM05.4 (Dec. 2006).
- (z) USEPA Contract Laboratory Program Statement of Work for Organic Analysis, SOM01.2 (amended Apr. 2007).
- (aa) EPA National Geospatial Data Policy, CIO Policy Transmittal 05-002 (Aug. 2008), available at <http://www.epa.gov/geospatial/geospatial-policies-and-standards> and <http://www.epa.gov/geospatial/epa-national-geospatial-data-policy>.
- (bb) Summary of Key Existing EPA CERCLA Policies for Groundwater Restoration, OSWER 9283.1-33 (June 2009).
- (cc) Principles for Greener Cleanups (Aug. 2009), available at <http://www.epa.gov/greenercleanups/epa-principles-greener-cleanups>.
- (dd) USEPA Contract Laboratory Program Statement of Work for Inorganic Superfund Methods (Multi-Media, Multi-Concentration), ISM01.2 (Jan. 2010).
- (ee) Close Out Procedures for National Priorities List Sites, OSWER 9320.2-22 (May 2011).
- (ff) Groundwater Road Map: Recommended Process for Restoring Contaminated Groundwater at Superfund Sites, OSWER 9283.1-34 (July 2011).
- (gg) Recommended Evaluation of Institutional Controls: Supplement to the "Comprehensive Five-Year Review Guidance," OSWER 9355.7-18 (Sep. 2011).

- (hh) Construction Specifications Institute's MasterFormat 2012, available from the Construction Specifications Institute, <http://www.csinet.org/masterformat>.
- (ii) Updated Superfund Response and Settlement Approach for Sites Using the Superfund Alternative Approach , OSWER 9200.2-125 (Sep. 2012)
- (jj) Institutional Controls: A Guide to Planning, Implementing, Maintaining, and Enforcing Institutional Controls at Contaminated Sites, OSWER 9355.0-89, EPA/540/R-09/001 (Dec. 2012).
- (kk) Institutional Controls: A Guide to Preparing Institutional Controls Implementation and Assurance Plans at Contaminated Sites, OSWER 9200.0-77, EPA/540/R-09/02 (Dec. 2012).
- (ll) EPA's Emergency Responder Health and Safety Manual, OSWER 9285.3-12 (July 2005 and updates), <http://www.epaosc.org/HealthSafetyManual/manual-index.htm>
- (mm) Broader Application of Remedial Design and Remedial Action Pilot Project Lessons Learned, OSWER 9200.2-129 (Feb. 2013).
- (nn) Guidance for Evaluating Completion of Groundwater Restoration Remedial Actions, OSWER 9355.0-129 (Nov. 2013).
- (oo) Groundwater Remedy Completion Strategy: Moving Forward with the End in Mind, OSWER 9200.2-144 (May 2014).
- (pp) Guidance for Management of Superfund Remedies in Post Construction, OLEM 9200.3-105 (Feb. 2017), available at <https://www.epa.gov/superfund/superfund-post-construction-completion>.

9.2 A more complete list may be found on the following EPA Web pages:

Laws, Policy, and Guidance: <http://www.epa.gov/superfund/superfund-policy-guidance-and-laws>

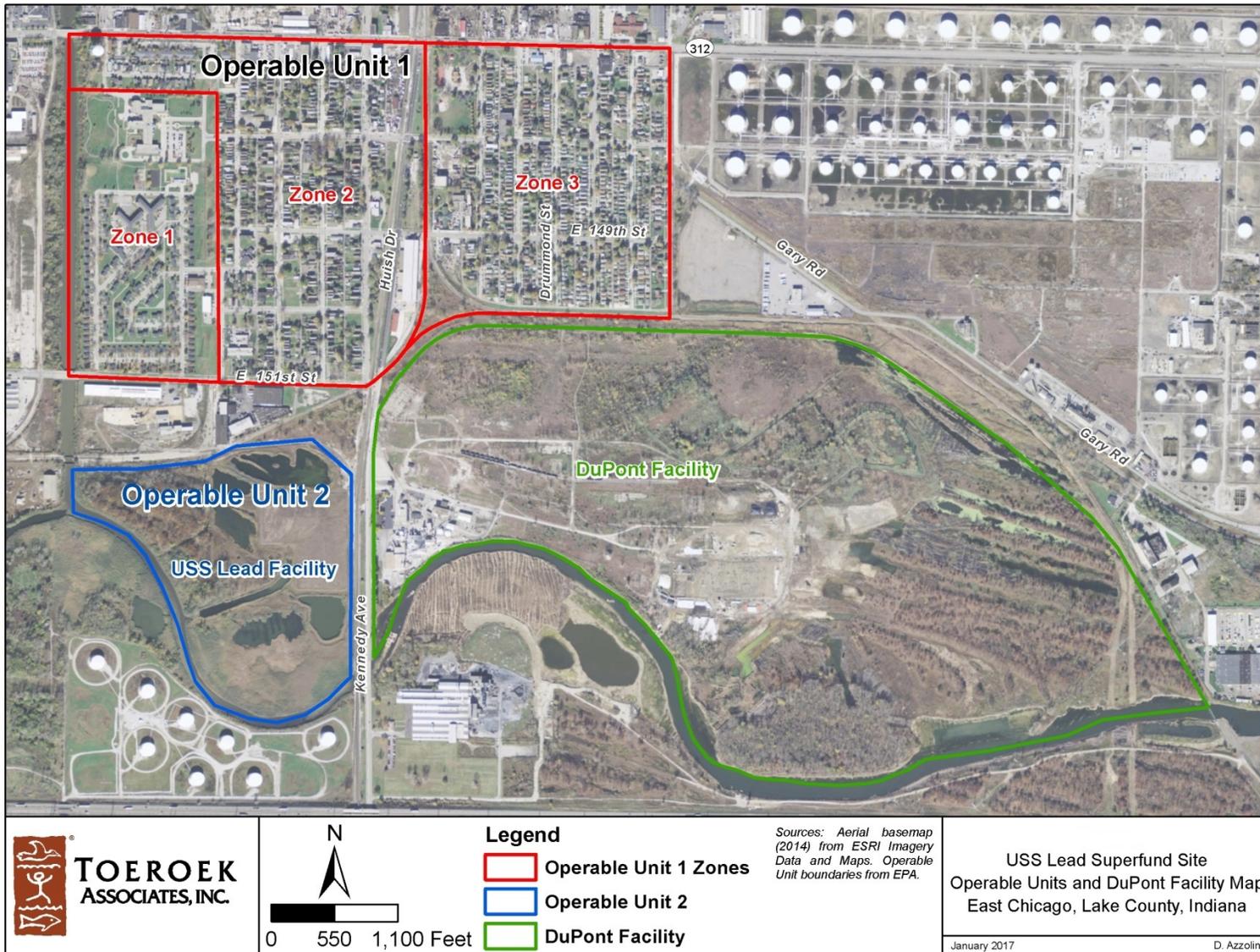
Test Methods Collections: <http://www.epa.gov/measurements/collection-methods>

9.3 For any regulation or guidance referenced in the Z2 Soil UAO or Z2 Soil SOW, the reference will be read to include any subsequent modification, amendment, or replacement of such regulation or guidance. Such modifications, amendments, or replacements apply to the Z2 RA Work only after Respondents receive notification from EPA of the modification, amendment, or replacement.

APPENDIX B

**TO
Z2 SOIL UAO**

MAP OF USS LEAD OU1 AND OU2

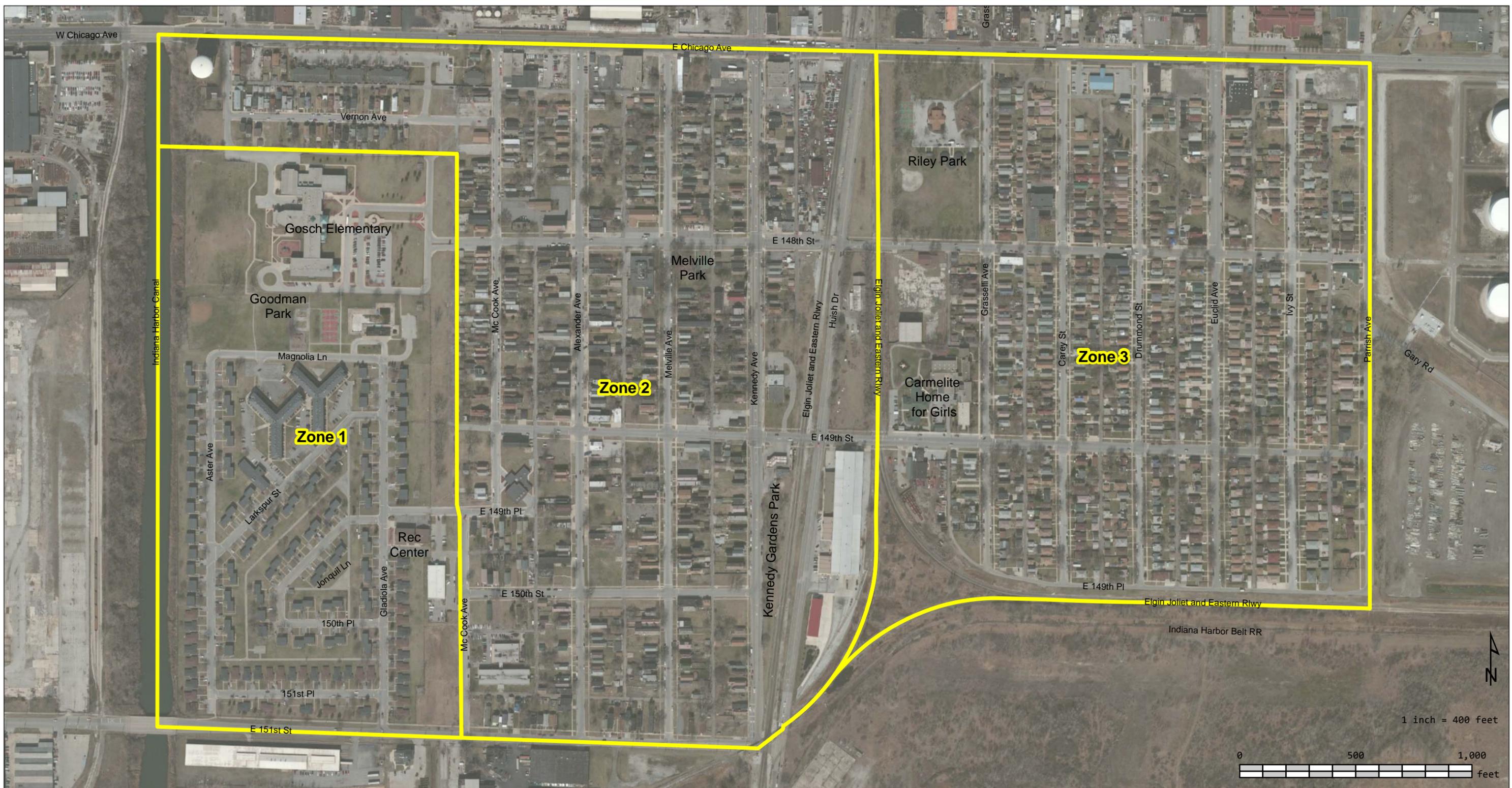


APPENDIX B: USS Lead Superfund Site Operable Units 1 and 2

APPENDIX C

**TO
Z2 SOIL UAO**

**MAP OF USS LEAD SITE
OU1 – ZONES 1, 2, AND 3**



 Zone

Basemap source: Esri



US SMELTER & LEAD REFINERY
LAKE COUNTY, EAST CHICAGO, INDIANA

APPENDIX C
OU1 ZONES

EPA REGION 5 RAC 2 | REVISION 0 | JULY 2014



APPENDIX D

**TO
Z2 SOIL UAO**

RECORD OF DECISION

US EPA RECORDS CENTER REGION 5



446987

U.S. Smelter and Lead Refinery, Inc. Superfund Site

Operable Unit 1

East Chicago, Lake County, Indiana

Record of Decision



U.S. Environmental Protection Agency Region 5

77 W Jackson Blvd.
Chicago, IL 60604

November 2012

Table of Contents

Section	Page
Part 1 – Declaration	
1.1 Site Name and Location	4
1.2 Statement of Basis and Purpose	4
1.3 Assessment of Site	4
1.4 Description of Selected Remedy	4
1.5 Statutory Determinations	5
1.6 Data Certification Checklist	6
1.7 Authorizing Signatures	6
Part 2 – Decision Summary	
2.1 Site Name, Location, and Brief Description	7
2.2 Site History and Enforcement Activities	7
2.3 Community Participation	9
2.4 Scope and Role of Operable Unit or Response Action	9
2.5 Site Characteristics	10
2.6 Current and Potential Future Site and Resource Uses	14
2.7 Summary of Site Risks	15
2.8 Remedial Action Objectives	35
2.9 Description of Alternatives	37
2.10 Comparative Analysis of Alternatives	41
2.11 Principal Threat Waste	47
2.12 Selected Remedy	48
2.13 Statutory Determinations	50
2.14 Documentation of Significant Changes	51
Part 3 – Responsiveness Summary	
3.1 Stakeholder Comments and Lead Agency Responses	52
3.2 Technical and Legal Issues	54

Figures (following text)

Figure 1 – USS Lead Residential Area Site Location Map

Figure 2 – Historical Overview of Study Area

Figure 3 – Historical Imagery

Figure 4 – Conceptual Site Model

Tables

Table 1 – Summary of Chemicals of Concern for OU1..... 17
Table 2 – Cancer Toxicity Data Summary..... 21
Table 3 – Non-Cancer Toxicity Data Summary..... 22
Table 4 – Risk Characterization Summary for Residents – Carcinogens..... 25
Table 5 – Risk Characterization Summary for Utility Workers – Carcinogens..... 26
Table 6 – Risk Characterization Summary for Construction Workers – Carcinogens..... 27
Table 7 – Risk Characterization Summary for Residents – Non-Carcinogens..... 28
Table 8 – Risk Characterization Summary for Utility Workers – Non-Carcinogens..... 29
Table 9 – Risk Characterization Summary for Construction Workers – Non-Carcinogens..30
Table 10 – Soil Remedial Action Levels for OUI of the USS Lead Site..... 37

Appendices

- Appendix A – State Concurrence Letter
- Appendix B – List of Applicable or Relevant and Appropriate Requirements
- Appendix C – Remedial Alternatives Evaluation Summary
- Appendix D – Feasibility Study Cost Estimate for Alternative 4A

Part 1 – Declaration

1.1 – Site Name and Location

U.S. Smelter and Lead Refinery, Inc. Site
Operable Unit 1 (residential area)
CERCLIS ID# IND047030226
East Chicago, Lake County, Indiana

1.2 – Statement of Basis and Purpose

This decision document presents the Selected Remedy for Operable Unit 1 (OU1) at the U.S. Smelter and Lead Refinery, Inc. (USS Lead) Site in East Chicago, Lake County, Indiana. The U.S. Environmental Protection Agency (EPA) chose the Selected Remedy for OU1 in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986, and, to the extent practicable, the National Contingency Plan (NCP). The decision is based on the Administrative Record for the USS Lead Site.

The State of Indiana concurs with the Selected Remedy.

1.3 - Assessment of Site

The response action selected in this Record of Decision (ROD) is necessary to protect the public health or welfare or the environment from actual or threatened releases of hazardous substances into the environment.

1.4 - Description of Selected Remedy

The USS Lead Site is being addressed as two operable units under the framework set forth in CERCLA. The selected remedy specified in this ROD addresses OU1. OU1 contains residential yards¹ contaminated with lead and arsenic at levels that pose a threat to human health via ingestion, inhalation and direct contact. EPA's selected remedy for OU1 addresses these risks from exposure to contaminated soils through the excavation and off-site disposal of contaminated soils. The remedial action levels (RALs) at OU1 are 400 milligrams per kilogram (mg/kg) for lead at residential properties, 800 mg/kg for lead at industrial/commercial properties, and 26 mg/kg for arsenic at both residential and industrial/commercial properties. EPA's Selected Remedy for OU1 at the USS Lead Site consists of:

¹ Yards are the risk management unit in OU1. Each individual property consists of one or more yards. Sampling during the remedial investigation demonstrated that contaminant levels in one yard were not reliably correlated with contaminant levels in other yards on the same property. The Human Health Risk Assessment evaluated the risk to human health and the environment by property, not by yard.

- Excavation of soil that contains lead or arsenic in concentrations that exceed the RALs to a maximum excavation depth of 24 inches.
- Disposal of excavated soil at an off-site Subtitle D landfill; some excavated soils may require chemical stabilization prior to off-site disposal to address exceedances of the toxicity characteristic (TC) regulatory threshold. Contaminated soil that exceeds the TC threshold is considered principal threat waste.
- If contaminated soil is identified at a depth greater than 24 inches below ground surface (bgs), a visual barrier, such as orange construction fencing or landscape fabric, will be placed above the contaminated soil before the yard is backfilled with clean soil. Institutional controls will be implemented to protect the visual barrier that separates clean backfill from impacted soils and to ensure that users of the property are not exposed to contaminated soil that remains at depth.
- Excavated soil will be replaced with clean soil to maintain the original grade. The top 6 inches of fill will consist of topsoil. Each yard will be restored as close as practicable to its pre-remedial condition.

This Selected Remedy is the first of two remedial decisions for the USS Lead Site. EPA has not yet begun the remedial investigation (RI) of Operable Unit 2 (OU2). OU2 consists of the former USS Lead property. In the future, EPA will develop a remedial investigation, feasibility study (FS), Proposed Plan, and ROD for OU2.

1.5 - Statutory Determinations

The Selected Remedy is protective of human health and the environment, complies with federal and state requirements that are applicable or relevant and appropriate to the remedial action, is cost-effective, and utilizes permanent solutions and alternative treatment (or resource recovery) technologies to the maximum extent practicable.

This remedy satisfies the statutory preference for treatment as a principal element of the remedy (i.e., reduces the toxicity, mobility, or volume of hazardous substances, pollutants, or contaminants as a principal element through treatment). Soils at OU1 that have lead concentrations exceeding the TC threshold and that are therefore defined under the Resource Conservation and Recovery Act (RCRA) as hazardous waste will be treated prior to disposal. This treatment will reduce the mobility of the lead. The remaining volume of relatively low-level soil contamination that is being addressed in this remedy does not lend itself to any cost-effective treatment.

Because this remedy will likely result in hazardous substances, pollutants, or contaminants remaining on-site above levels that allow for unlimited use and unrestricted exposure, a statutory review will be conducted within five years after initiation of the remedial action to ensure that the remedy is, or will be, protective of human health and the environment.

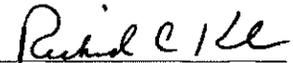
1.6 – Data Certification Checklist

The following information is included in the *Decision Summary* section of this ROD. Additional information can be found in the Administrative Record for this site.

Information Item	Location in ROD
Contaminants of concern and their respective concentrations	Section 2.7.2
Baseline risk represented by the contaminants of concern	Section 2.7
Cleanup levels established for contaminants of concern and the basis for these levels	Section 2.8
How source materials that constitute principal threats will be addressed	Sections 2.11 and 2.13
Current and reasonably anticipated future land use assumptions in the baseline risk assessment and the ROD	Section 2.7.1
Estimated capital, annual operation and maintenance, and total present worth costs, discount rate, and the number of years over which the remedy cost estimates are projected	Section 2.9 and Appendix D
Key factor(s) that led to the selection of the remedy	Sections 2.10 and 2.12

1.7 - Authorizing Signatures

EPA, as the lead agency for the U.S. Smelter and Lead Refinery, Inc. Superfund Site (IND047030226), formally authorizes this Record of Decision.


Richard C. Karl, Director
Superfund Division
EPA Region 5

11-30-12
Date

The State of Indiana Department of Environmental Management (IDEM), as the support agency for the USS Lead Superfund Site, formally concurs with this ROD. IDEM has prepared a separate concurrence letter which is included as Appendix A.

Part 2 – Decision Summary

2.1 - Site Name, Location, and Brief Description

The USS Lead Site is located in the City of East Chicago, Indiana (see Figure 1). East Chicago is located on the shore of Lake Michigan and lies approximately 18 miles southeast of Chicago, Illinois. It has a total area of approximately 16 square miles (mi²) of which approximately 14 mi² are land and 2 mi² are water. The USS Lead Site comprises two separate areas each of which is called an operable unit (OU). OU1 is a predominantly residential area located in the southern portion of the City of East Chicago, north of the former USS Lead industrial facility (see Figure 1). The USS Lead facility is referred to as OU2. This ROD sets forth the remedy for OU1. OU1 is a residential soil cleanup site. Lead is the primary contaminant of concern (COC). Accordingly, EPA has followed its 2003 *Superfund Lead-Contaminated Residential Sites Handbook* in the development of the RI, FS, and ROD for OU1.

The residential area that comprises OU1 has been contaminated by aerial deposition of windblown contaminants from the USS Lead facility and other local industrial facilities and by direct deposition of contaminated fill materials. The other industrial sources of contamination in OU1 include operations conducted by the Anaconda Copper Refining Company on property within OU1 and from property located just south of OUI owned and operated by E.I. duPont deNemours and Company (DuPont) (see Figure 2).

EPA is the lead agency for the USS Lead Site. IDEM serves as the support agency. EPA conducted the RI/FS for OUI using federal funding. EPA intends to pursue responsible parties to fund or undertake the remedial design and remedial action for OUI.

2.2 - Site History and Enforcement Activities

The USS Lead facility is located at 5300 Kennedy Avenue, East Chicago, Indiana. The facility (OU2) was constructed in the early 1900s by the Delamar Copper Refinery Company to produce copper. In 1920, the property was purchased by U.S. Smelting Refinery and Mining and later by USS Lead. USS Lead operated a primary lead smelter at the facility. An electrolytic process called the "Betts process" was used for refining lead ores into high-purity lead. During production, the Betts process can release fugitive metals like lead.

United States Geological Survey aerial photographs from 1939, 1951, 1959, and 2005 show OU2 and OU1 over time (Figure 3). These photographs indicate the progression of residential development within OU1. For the area located west of Huish Avenue, the photographs show that the majority of the residences were built before 1939. For the area located east of Huish Avenue, approximately half of the homes were built before 1939, approximately 75 to 80 percent of the homes were built between 1939 and 1951, and by 1959 most of the homes were built. These photographs also show that the Anaconda Copper Company was located on the area now occupied by the Gosch Elementary School and a public housing residential complex (the southwest portion of OU1). The Gosch Elementary School and the East Chicago public housing complex were built on the former Anaconda Copper Company site after 1959.

Between 1972 and 1973, the USS Lead facility was converted into a secondary lead smelter which, instead of refining lead ore, recovered lead from scrap metal and automotive batteries. All operations at OU2 were discontinued in 1985. Two primary waste materials were generated as a result of the smelting operations: (1) blast-furnace slag and (2) lead-containing dust from the blast-furnace stack. Blast-furnace slag was stockpiled south of the plant building and once per year spread over an adjoining 21-acre wetland. The blast-furnace baghouse collected approximately 300 tons of baghouse flue dust per month during maximum operating conditions. Some of the flue dust escaped the baghouse capture system and was deposited by the wind within the boundaries of OU1. By the late 1970s, USS Lead stored onsite approximately 8,000 tons of baghouse dust.

The East Chicago area in the vicinity of OU1 has historically supported a variety of industries. In addition to the USS Lead smelting operation, other industrial operations have managed lead and other metals and are sources of contamination in OU1. Immediately east of OU2, across Kennedy Avenue, is the former DuPont site (currently leased and operated by W.R. Grace & Co., Grace Davison). At this location, DuPont manufactured the pesticide lead arsenate. Anaconda Lead Products and International Lead Refining Company, two smelter operations that managed lead and other metals, operated within OU1 at the location currently occupied by an East Chicago public housing facility. Anaconda Lead Products was a manufacturer of white lead and zinc oxide, and the International Lead Refining Company was a metal-refining facility. These facilities included the following: a pulverizing mill, white-lead storage areas, a chemical laboratory, a machine shop, a zinc-oxide experimental unit building and plant, a silver refinery, a lead refinery, a baghouse, and other miscellaneous buildings and processing areas.

Starting in 1993, USS Lead began a cleanup at its facility (OU2) pursuant to an agreement with EPA under the Resource Conservation and Recovery Act. USS Lead addressed the majority of the contamination in OU2 by excavating contaminated soils and consolidating those soils within a corrective action management unit located within OU2. As part of the OU2 RCRA activities, investigations were conducted in the residential area now known as OU1 to investigate the source and identify the extent of lead-contaminated soils. Modeling of air deposition of lead in the residential area was also performed.

Responsibility for the further investigation of conditions at OU1 and OU2 was subsequently transferred from EPA's RCRA program to its Superfund program. During this transition, EPA's Superfund program conducted some limited sampling of the residential area in 2007. The Superfund program subsequently listed the USS Lead Site on the National Priorities List (NPL) in April 2009. As part of the NPL listing process, EPA and IDEM evaluated contaminant concentrations focusing on the southwestern portion of the residential area. This evaluation was later expanded during the RI to cover the entirety of OU1. EPA sampled 7% of the properties during its full-scale remedial investigation. During these investigations, EPA identified properties with lead concentrations in surface soils greater than 1,200 mg/kg. Lead in surface soils in concentrations greater than 1,200 mg/kg poses an imminent and substantial threat to human health. EPA's emergency response program addressed these most highly-contaminated parcels. EPA removed the contaminated soils to a maximum depth of two feet and backfilled the

excavated areas with clean soils. A total of 29 properties were remediated by the Superfund emergency response program in 2008 and 2011.

Although some residential properties have been cleaned up, contamination remains at many properties within OU1. This ROD sets forth EPA's approach for addressing the contaminated soils throughout OU1 that still require cleanup.

2.3 – Community Participation

The RI/FS Reports and the Proposed Plan for the USS Lead Site were made available to the public in early July 2012. These documents can be found in the Administrative Record for the site. The Administrative Record is maintained at the EPA Docket Room in Chicago, Illinois, and the East Chicago Public Libraries on Chicago Avenue and Columbus Avenue. After issuing the Proposed Plan, EPA held a public comment period between July 12 and September 12, 2012. In addition, EPA held a public meeting on July 25, 2012, to present the Proposed Plan to a community audience. When the Proposed Plan was issued, EPA mailed a fact sheet to area residents informing them about the Proposed Plan. The fact sheet advised residents that the RI, FS, and Proposed Plan were available for viewing at the public repositories. The fact sheet included the date, time and location of the public meeting. At the public meeting, EPA and IDEM representatives answered questions about the site and the remedial alternatives. EPA's responses to the comments received during the public comment period are included in the *Responsiveness Summary*, which is Part 3 of this ROD.

2.4 - Scope and Role of Operable Unit or Response Action

The USS Lead Superfund Site includes the former USS Lead facility with its surrounding property (OU2) and the residential area north of it (OU1). EPA estimates that approximately 57 percent of the yards (i.e., approximately 723 of the 1,271 properties) in OU1 contain concentrations of lead and/or arsenic that pose a risk to human health. EPA has concluded that USS Lead, DuPont, Anaconda Lead and International Refining were sources of contamination to OU1 through historic aerial deposition and/or direct releases to the ground. These facilities are not ongoing sources of contamination to the residential area.

EPA has organized the USS Lead Superfund Site into two OUs:

- Operable Unit 1 – The residential area north of the former USS Lead facility. OU1 is bounded by Chicago Avenue to the north, Parrish to the east, the Calumet Canal to the west, and 150th/151st Streets to the south. This ROD addresses yards in OU1 that contain lead and/or arsenic concentrations in soil that pose a threat to human health.
- Operable Unit 2 – The former USS Lead facility, its surrounding property, and site-wide groundwater. OU2 will be addressed in a future RI/FS and decision document.

The Selected Remedy for OU1 will address the principal threats by treating contaminated soil that exceeds the toxicity characteristic regulatory threshold for lead before disposing of the soil at an off-site landfill. During the RI, EPA did not test for arsenic exceedances of the TC

threshold because very few soil samples had high enough concentrations of arsenic to warrant toxicity characteristic leaching procedure (TCLP) analysis. Although the highest arsenic soil concentration detected at OU1 during the RI was 567 mg/kg, the arsenic concentration in soil was often below 100 mg/kg, the lowest concentration of arsenic in soil that would possibly fail the TCLP test and therefore be considered a hazardous waste. Based on TCLP analysis for lead conducted during the RI, EPA estimates that OU1 soils will exceed the TC threshold for lead when concentrations exceed 2,400 mg/kg. EPA does not expect the highest arsenic concentrations found at OU1 to exceed the TC threshold. Additionally, the highest concentrations of arsenic were found to be co-located with high lead concentrations. Because of this, soils with the highest arsenic concentrations are likely to be subject to treatment because they are frequently co-located with the lead concentrations that require treatment.

2.5 – Site Characteristics

2.5.1 - Conceptual Site Model

The conceptual site model (CSM) for the USS Lead Superfund Site (Figure 4) considers four potentially affected media at the site: air, soil, surface water, and groundwater. The CSM shows that the USS Lead Site comprises within an urban setting historically industrial areas, the residential area (OU1), and a canal. The former smelter plants are the primary source of contamination. During plant operations, the smelters generated airborne emissions from plant stacks. Leaks and spills were also likely. Fill material used to raise the ground level in OU1 is a second potential source of contaminants. Approximately two feet of fill overlie native sands throughout OU1. Metals and polycyclic aromatic hydrocarbons (PAHs) are the main constituents of interest (COIs) associated with these sources. The water table in the vicinity of the site lies approximately 8.5 feet bgs. The groundwater flows south/southwest towards the Grand Calumet River.

Contaminants were deposited at OU1 through airborne emissions from the industrial plants and direct deposition of contaminated fill material. Other possible sources of contaminants at OU1 are fertilizers and pesticides. These chemicals may have been applied to individual properties. Fertilizer can contain measurable levels of heavy metals such as lead, arsenic, and cadmium. The DuPont facility manufactured the pesticide lead arsenate using two ingredients: lead and arsenic. Both are contaminants of concern at the USS Lead Site.

Potential migration routes for COIs were assessed according to the properties of the contaminants and fate-and-transport processes. Potential migration pathways for COIs to be released, deposited, or redistributed in surface soils include:

- particulate erosion and redeposition by wind
- runoff, particulate erosion, and redeposition by surface water
- surface water percolation
- surface soil filling and excavation activities

Contaminants may migrate into the air by two distinct emission mechanisms: entrainment of contaminated particles by the wind and volatilization of chemical compounds. The most likely

transport mechanism for the COIs at OU1 is by windborne transport of contaminated dust and soil erosion. The COIs have a strong tendency to adsorb to soil particles. Wind and the concomitant release of wind-borne dust is the primary pathway for site COIs to be released to the atmosphere.

Surface-water runoff is another migration pathway that was considered. Surface-water runoff can erode surface soils and transport particles by overland flow and result in contaminated soil being picked up and redeposited at lower elevations. Because OU1 is flat and is served by a municipal sewer system, redeposition in low-lying areas is not expected to be of major significance at the site.

Excavation and filling activities are also likely migration pathways. EPA has observed these activities at the site. Excavation potentially exposes the subsurface to fugitive dust erosion and deposition. Filling activities result in topsoil that is not as compact as native soils and which may result in faster percolation and/or erosion rates. There is also a possibility that amended fill materials may be contaminated, particularly if obtained from a nearby, contaminated source.

Human and ecological receptors can be exposed to the COIs through direct dermal exposure to soil, inhalation of windborne soils, ingestion of soils, or ingestion of produce grown in affected soils. Based upon the distribution of PAHs, EPA has concluded that their presence in OU1 is not attributable to neighboring industrial activities. Rather, it is consistent with an urban residential setting. Therefore, the Selected Remedy does not address PAHs but does address lead and arsenic in surface and subsurface soils.

2.5.2 - Overview of site

OU1 encompasses approximately 322 acres and is bounded by East Chicago Avenue on the north, East 151st Street on the south, the Indiana Harbor Canal on the west, and Parrish Avenue on the east (see Figure 2). OU1 is a mixed residential and commercial/industrial area north of the former USS Lead industrial facility. The mixed-use area includes the following uses: (1) residences including single and multi-family units some of which, in the southwest corner of the area, are public housing, (2) generally small commercial/industrial operations, (3) municipal and community offices and operations, (4) two schools (the Carrie Gosch Elementary School and the Carmelite School for Girls), (5) four parks, and (6) numerous places of worship. Residences, schools, and public parks constitute the large majority of properties and acreage within OU1.

The average annual precipitation in East Chicago between 1961 and 1990 was 36.82 inches. A five-year wind-rose plot for the years 1987 to 1991 at a site in nearby Hammond, Indiana, indicates that prevailing winds are from the southwest and north at less than 20 miles per hour.

2.5.3 - Geologic and Hydrogeologic Setting

During site investigations, five main soil varieties were identified within OU1, including the following: organic topsoil, fill, fill with construction debris, fill with slag, and native sand. All but the native sand were found from the surface down to depths of as much as 24 inches bgs. Native sand was typically located 18 to 24 inches bgs. Nearby soil borings indicate that the

Equality Formation underlies the top few feet of soils at OU1. The Equality Formation, also known as the Calumet Aquifer, is primarily a sand unit with some silts, clays, and gravel lenses. The Equality Formation is estimated to extend to approximately 25 feet bgs.

EPA did not evaluate groundwater as part of the remedial investigation for OU1. Site-wide groundwater will be investigated as part of the OU2 RI. Residents and businesses in East Chicago are served by a municipal water system.

2.5.4 - Sampling Strategy

EPA's sampling approach at OU1 followed the methodology described in its 2003 *Superfund Lead-Contaminated Residential Sites Handbook*. As part of the RI, EPA collected surface and subsurface soil samples between December 2009 and September 2010. EPA sampled a total of 88 properties, including 74 residential properties and 14 non-residential properties (i.e., schools, parks, and commercial properties). In total, EPA sampled 232 distinct yards (including drip zone samples and quadrants from larger properties such as parks and schools) in order to characterize the nature and extent of COIs in and around OU1. Drip zone samples are soil samples collected from beneath the gutters and downspouts of buildings. The purpose of drip zone sampling is to investigate whether airborne contamination is concentrating or has concentrated along the drip lines of roofs. These 232 separate "yards" included 75 front yards, 76 back yards, 21 quadrants, and 60 drip zones. EPA elected to consider drip zones as separate "yards" because they covered a geographic area that was not confined to a front yard, back yard, or quadrant. EPA used the term "yard" throughout the RI and the FS to represent one unit of remedial area. A single remedial area generally consists of a front yard, back yard, or drip zone of a residential property, or any quadrant of a park, commercial property, easement, or school. A residential property can have up to three yards (front, back, drip zone) and a park, commercial property, easement, or school can be divided into a maximum of four yards (otherwise referred to as quadrants in the RI).

Soils from four different horizons (0-6", 6-12", 12-18", and 18-24" bgs) were analyzed from front yards, back yards, and quadrants of larger properties. The purpose of sampling soils from different soil horizons was to evaluate vertical contamination profiles. Aerial deposition of contaminants would be expected to yield contamination profiles with higher concentrations near the surface and lower concentrations at depth.

2.5.5 - Sources of Contamination

As previously discussed, the primary sources of site-related contamination are the industrial facilities that formerly operated in and around OU1, including DuPont, Anaconda Lead, Industrial Refining and the USS Lead facility. None of these facilities are still in operation, and none of them are ongoing sources of contamination to OU1. The placement of fill material and the individual application of materials such as pesticides are other potential sources of contamination in OU1 that may be ongoing.

2.5.6 - Types of Contaminants and Affected Media

Metals are the primary contaminants and soil is the affected media in OU1. All soil samples were analyzed for lead. In addition, a subset of samples was analyzed for various combinations of total metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), PAHs, polychlorinated biphenyls (PCBs), and pesticides to provide a basis for more fully assessing contamination in shallow soils in OU1. Although SVOCs (including PAHs), pesticides, and PCBs were sampled for and discussed in the RI and evaluated in the risk assessment, there is no reasonable basis from which to conclude that there were consistent releases of these compounds into OU1 from the local industrial facilities. Rather, EPA has concluded that the detection of these compounds is associated with other anthropogenic sources typical of a metropolitan industrial area. EPA's RI Report for OU1 includes all available sampling results and a full discussion of those results.

The sampling results were evaluated in the human health risk assessment. The risk assessment determined the contaminants of potential concern (COPCs) and identified which chemicals and affected media drive potential risk at the site. These findings are summarized in Section 2.7.2 of this ROD and discussed in greater detail in the RI Report. The human health risk assessment was completed using site-specific data. EPA has determined that the contaminants of concern (COCs) are lead and arsenic in residential soils.

2.5.7 - Extent of Contamination

Lead is the primary COC at OU1. EPA used the *Superfund Lead-Contaminated Residential Sites Handbook*, EPA remedial screening levels (RSLs), and the State of Indiana's Risk Integrated System of Closure Technical Resource Guidance Document to set the site screening levels (SSLs) for lead at 400 mg/kg for residential areas and 800 mg/kg for industrial areas. Although lead was found to be the most widespread contaminant at OU1, arsenic was also present at locations within the residential area. As detailed in the RI Report, the SSLs for arsenic in surface and subsurface soils are 14.1 mg/kg and 13.2 mg/kg, respectively, at both residential and commercial/industrial properties.

Data analysis indicated that lead and arsenic were generally correlated; arsenic was present in areas with high lead concentrations. Based on the data, OU1 soils typically do not exceed the arsenic SSL unless lead also exceeds the lead SSL. Additionally, lead and PAHs were not correlated; EPA did not discern a correlation between high lead concentrations and high concentrations of PAHs. The lack of correlation between PAHs and lead supports the hypothesis that PAHs are not site-related compounds and are likely associated with other anthropogenic sources.

During the RI sampling events in OU1, EPA analyzed samples from all 232 yards for lead. The surface and/or subsurface soil in 123 yards (53 percent of those tested) exceeded the lead SSL. The potential lateral extent of lead-impacted soil includes all areas within the OU1 boundaries. The area west of Huish Avenue contained a higher frequency of exceedances for lead in both surface and subsurface soil samples than the eastern half of OU1. Lead concentrations in all of

the nine properties (20 yards) sampled in the East Chicago Housing Authority complex in the southwest portion of the study area exceeded the SSL for lead.

During the RI sampling events, a total of 136 yards in OU1 were analyzed for arsenic. The surface and/or subsurface soil in 75 yards (55 percent of those tested) exceeded the arsenic SSL. EPA performed an analysis of arsenic concentrations in soils to further understand site conditions and to assess the evidence for aerial deposition of arsenic at OU1. Because arsenic concentrations in the public housing area soils likely resulted from direct deposition of contaminants from the former industrial facility and because operations at the industrial facility and construction of the housing area likely redistributed soils, the vertical profile of arsenic in the public housing area was excluded from the analysis. When the public housing area was excluded from the arsenic data set, it became evident that the arsenic in the remainder of OU1 was primarily dispersed due to aerial deposition because the shallow soil horizons contain higher arsenic concentrations than the deeper soil horizons.

An analysis of front and back yards suggests that there is an approximately 75% chance that if the COIs in one yard are in excess of the SSLs, then the COIs in the other yard at the same property will exceed the SSLs. In addition, based on the observed vertical distributions of lead, arsenic, and PAHs, there is only a 13% chance that sampling only the upper two depth intervals (0-6" and 6-12" bgs) would miss contamination in the lower two depth intervals (12-18" and 18-24" bgs). A comparison of soil type to COI concentration concluded that soil type is not a reliable indicator of the presence or absence of COIs. There is one exception to this rule: the native sands are generally free of contamination.

EPA concluded that the concentration levels of VOCs, SVOCs (including PAHs), PCBs, and pesticides do not require further evaluation. EPA found the highest lead and arsenic concentrations in OU1 in the East Chicago Housing Authority complex. The high concentrations in this area appear to be related to the historical operations at the Anaconda Copper Company facility.

2.6 – Current and Potential Future Site and Resource Uses

The current land use at OU1 is largely residential and recreational (parks and school yards), with a small number of commercial and light industrial properties. The adjacent OU2 includes the RCRA landfill and wetland areas. EPA expects that the land use at OU1 will remain unchanged. The City of East Chicago has shared with EPA its development plans for OU1 and the surrounding area, which confirm that the land use within OU1 is not likely to dramatically change.

Lake Michigan is the municipal water source for East Chicago, and properties within OU1 do not access site-wide groundwater for any use. The surface water in the vicinity of OU1 is the Indiana Harbor Canal (OU1's western boundary) and the Grand Calumet River (south of OU2). The portion of the Indiana Harbor Canal near OU1 is not subject to much industrial use in contrast with much higher industrial activity in the northern part of the canal. The Grand Calumet River in this area is not navigable. Neither water body appears to be used recreationally.

In July 2009, East Chicago had a population of 29,900, of which 51.6% was Hispanic, 40.3% was African-American, and 7.2% was White, non-Hispanic. The density of East Chicago was approximately 2,496 people per square mile, and the average household size was 2.8 people (City-Data 2011). Based on the average household size and the number of homes in OU1, the approximate density within OU1 is 7,000 people per square mile. Based on an inspection of historical aerial photographs, the primary land use in East Chicago is industrial. Residential land use accounts for approximately 20% of the land within the city. OU1 is one of the most densely populated areas in East Chicago.

The East Chicago median household income is \$28,289, versus the Indiana median household income of \$45,424. The March 2011 unemployment rate for East Chicago was 12.7%, compared to Indiana's March 2011 unemployment rate of 8.8%. EPA considers East Chicago an environmental justice community. An environmental justice community is one characterized by low income and burdened with significant environmental challenges.

2.7 - Summary of Site Risks

A human health risk assessment (HHRA) estimates what risks a site poses to human health if no action is taken. It provides the basis for taking action and identifies the contaminants and exposure pathways that need to be addressed by the remedial action. This section of the ROD summarizes the results of the HHRA for the USS Lead site. More detailed information can be found in the RI Report. The HHRA relied on Tier I screening-level evaluations to identify media and exposure pathways that may pose unacceptable risks. More detailed (Tier II) risk assessments were considered if the Tier I screening level evaluations identified potentially significant risks. The HHRA evaluated the potential risks that could result to people from exposure to the contaminants at the site. EPA conducted the HHRA consistent with EPA's Risk Assessment Guidance for Superfund (RAGS) and other supplemental guidance to evaluate human health risks. The HHRA identified possible receptors and potentially complete pathways of exposure. The information used in the HHRA helped define site-specific, risk-based screening levels. The HHRA determined that the COCs for the site are lead and arsenic for residential soils and that cleanup levels of 400 mg/kg for lead and 26 mg/kg for arsenic are protective of human health and the environment for current and future residential use.

The information presented here focuses on the information that is driving the need for a response action at the site and does not necessarily summarize the entire HHRA. Further information is contained in the risk assessment within the RI Report and is included in the Administrative Record.

EPA did not identify any ecological habitats in OU1 so did not conduct an ecological risk assessment.

2.7.1 - Summary of Human Health Risk Assessment

The HHRA for the USS Lead site evaluated risks by individual property rather than by individual yard. Each property consists of one or more yards. The HHRA did not include lead

in its carcinogenic risk and non-carcinogenic hazard calculations because EPA's *Superfund Lead-Contaminated Residential Sites Handbook* specifies that lead cleanup levels should be calculated by using the Integrated Exposure Uptake Biokinetic (IEUBK) model. As discussed in the RI Report and explained in more detail in Section 2.7.7 of this ROD, EPA evaluated the available site-specific information (such as lead in drinking water and blood lead levels in children) in relation to the default exposure assumptions in the IEUBK model and concluded that there was no need to modify the default exposure assumptions.

The objectives of the risk evaluation using the HHRA (which includes the results of the IEUBK model) were the following: (1) to investigate whether site-related constituents detected in environmental media pose unacceptable risks to current and future human receptors, and (2) to provide information to support decisions concerning the need for further evaluation or action, based upon current and reasonably anticipated future land use. For the purposes of the risk assessment, future land uses were assumed to be the same as current land uses. Current land uses are primarily residential, commercial/industrial, and recreational. Human receptors at OUI include the following: child and adult residents; adult utility and construction workers; students; teachers (indoor and outdoor); adult and child recreationalists; and park workers (indoor and outdoor). All the receptors were assumed to be exposed to surface (current and future land use conditions) and subsurface soil (future land use conditions) through incidental ingestion, dermal contact, and inhalation of particulates in ambient air. Subsurface soils were included under the future land use conditions because residents and utility/construction workers may rework soils and expose deeper horizons.

In the HHRA risk characterization, the toxicity factors were integrated with concentrations of COIs and intake assumptions to estimate potential cancer risks and non-carcinogenic hazards. Risks and hazards were calculated using standard risk assessment methodologies. Risks were compared to EPA's acceptable risk range: from 1×10^{-6} (one cancer per one million exposed receptors) to 1×10^{-4} (one cancer per ten thousand exposed receptors). Risks less than 1×10^{-6} are considered insignificant. Risks within the above range are remediated at the discretion of EPA risk managers. Risks greater than 1×10^{-4} typically require remediation. Non-carcinogenic hazards are compared to a target hazard index (HI) of 1. Risks posed by lead in soil were evaluated by comparing lead exposure point concentrations (EPCs) in soil at each property to receptor-specific lead preliminary remediation goals (PRGs). Chemicals that have a risk identified through the risk assessment process become COCs.

Risks associated with lead are present throughout the study area. The HHRA found that risks and hazards associated with other compounds exist under both current and future land use conditions for between 30 and 40 percent of residential properties. At these properties, risks above EPA's acceptable risk range (1×10^{-4} to 1×10^{-6}) and hazard index (greater than 1) from compounds other than lead are driven primarily by exposure to arsenic and PAHs through ingestion of homegrown produce and incidental ingestion of soil. As discussed in the RI Report, the PAHs detected in soil at OUI are typical of urban soils in the Chicago metropolitan statistical area and are not related to any specific onsite or nearby offsite sources. Therefore, PAHs are not considered site-related COCs and were not addressed in the FS.

In addition, a risk management decision was made to address risk from arsenic concentrations in soil that exceed the upper tolerance limit (UTL) for background arsenic concentrations. Because of the similarity between the bulk soil concentrations for arsenic at OU1 and the background concentrations for arsenic, EPA calculated a UTL for arsenic concentrations in soil to distinguish between soil concentrations that are distributed among the naturally-occurring values at the site and those that may be impacted by activities in and around the USS Lead site. The approach of using the UTL as a value for the RAL has been used at other CERCLA sites, including the Jacobsville Neighborhood Soil Contamination site in Evansville, Indiana. This approach is discussed in greater detail in that site's RI Report. The UTL also corresponds with the soil concentration that is equivalent to a 1×10^{-4} cancer risk level assuming that 25% of the total produce consumed by residents in OU1 is comprised of homegrown produce.

2.7.2 - Identification of Contaminants of Concern

The COCs at OU1 are lead and arsenic, with lead being the primary COC. Based on lead concentrations observed during the RI, lead-contaminated soils at the USS Lead site require remedial action to address unacceptable risks. Data analysis indicates that lead and arsenic are generally co-located. The range of detected concentrations and frequency of detections for lead and arsenic in soil at OU1 are presented in Table 1.

Exposure Point	COC	Concentration Detected (mg/kg)		Frequency of Detection	Exposure Point Concentration (mg/kg)		Statistical Measure
		Min	Max		Min	Max	
Residences	Arsenic	1.6	567	252/252	8.4	169	95 UCL
	Lead	4.7	27,100	848/850	233	5,910	MAX
Parks	Arsenic	0.99	414	40/40	31.8	43.4	95 UCL
	Lead	7	6,770	82/84	276	1,460	MAX
Schools	Arsenic ¹	2.9	11	21/21	N/A	N/A	95 UCL
	Lead	15.6	572	39/40	257	260	MAX

2.7.3 - Data Quality and Usability

Data were evaluated based on completeness, holding times, initial and continuing calibrations, surrogate recoveries, internal standards, compound identification, laboratory and field quality assurance/quality control (QA/QC) procedures and results, reporting limits, documentation practices, and application of validation qualifiers. Analytical data collected as part of Phase I and Phase II RI sampling were considered to be acceptable for use in the HHRA. Data were reduced based on consideration of essential nutrient and duplicate status as described below.

- Calcium, magnesium, potassium, and sodium are classified as essential nutrients and, therefore, were eliminated from further quantitative evaluation.

- Duplicate pairs were reduced to a single value based on an evaluation of the relative percent difference between the paired results.

2.7.4 - Exposure Point Concentrations

EPCs were developed for both modeling and non-modeling scenarios. The same chemical-specific EPCs were used for both reasonable maximum exposure (RME) and central tendency exposure (CTE) scenarios. The approaches used to calculate EPCs under the two scenarios are presented in the HHRA.

EPCs were calculated only for chemicals with at least eight detected results. Calculations were performed for metals and PAHs in surface soil (0 to 6" bgs) and for all soil depths combined. EPCs were calculated using the 95 percent upper confidence limit of the mean following the decision rules in ProUCL 4.00.05, a statistical analysis software tool. Because EPA uses the IEUBK/Adult Lead Model in its evaluation of lead, the risk assessment used the average concentration under both RME and CTE conditions as the EPC for lead.

EPA used the approach described above to generate EPCs for all receptors except utility and construction workers. Because utility and construction workers may conduct their work within a limited area, the maximum detected concentration was used as the EPC for those receptors under both RME and CTE conditions.

EPCs were calculated following the methods and recommendations provided in EPA's risk assessment guidance. Modeling was used to generate medium-specific EPCs for media not sampled directly. Specifically, modeling was used to estimate EPCs for blood lead, outdoor air (from soil), and homegrown produce, as summarized below.

- EPA used the IEUBK model and the Adult Lead Model (ALM) to estimate soil concentrations that correspond to acceptable blood-lead concentrations for residents and non-residents, respectively. Appendix C of the HHRA presents the methodology based on the IEUBK and ALM models used to calculate acceptable receptor-specific soil lead concentrations (referred to as PRGs). The lead PRGs were compared to the lead EPCs (average lead concentrations) to evaluate whether adverse effects could result from exposure to lead in soil.
- EPA estimated concentrations of non-volatile constituents from soil in ambient air using constituent-specific and site-specific particulate emission factors as presented in the Regional Screening Level User's Guide.
- EPA evaluated the uptake of COPCs from soil into homegrown produce for current and future residents at the site using COPC-specific uptake factors. Uptakes into aboveground and belowground produce were evaluated separately. COPC-specific uptake factors were obtained from or calculated consistent with EPA's "Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities."

Singular EPCs were not calculated for OU1 based on exposure scenarios. Instead, EPCs were calculated on a property-specific basis for the HHRA. EPCs for all COPCs from each of the 88

individual properties evaluated are presented in Appendix A (RAGs Table 7) of the HHRA. A summary of the EPCs for the COCs lead and arsenic is provided in Table 1 above.

2.7.5 - Exposure Assessment

Exposure assessment is the process of measuring or estimating the intensity, frequency, and duration of human exposure to a chemical in the environment. OUI includes the following land uses: (1) numerous residences, including single and multi-family units, some of which are public housing, (2) various, generally small commercial/industrial operations, (3) various municipal and community offices and operations, (4) two schools (the Carrie Gosch Elementary School and the Carmelite School for Girls), (5) four parks, and (6) numerous places of worship. Residences, schools, and public parks constitute the large majority of properties and acreage within the USS Lead site. These properties are unlikely to soon be redeveloped and replaced by alternate property types. As a conservative approach, places of worship and commercial/municipal properties were treated as residential properties as the likely users of these properties are residents of OUI. Industrial cleanup criteria were applied to industrial properties.

The conceptual site model links contaminant concentrations in various media to potential human exposure. The CSM identified the following exposure scenarios for each of the property types:

- Residential Properties
 - Current and future residents were assumed to be exposed to surface and subsurface soil through incidental ingestion, dermal contact, inhalation of particulates in ambient air, and ingestion of homegrown produce.
 - Current and future utility and construction workers were assumed to be exposed to subsurface soil through incidental ingestion, dermal contact, and inhalation of particulates.
- Schools
 - Current and future students, teachers, and staff were assumed to be exposed to surface and subsurface soil through incidental ingestion, dermal contact, and inhalation of particulates in ambient air.
 - Current and future utility and construction workers were assumed to be exposed to subsurface soil.
- Parks
 - Current and future recreationalists and park staff were assumed to be exposed to surface and subsurface soil through incidental ingestion, dermal contact, and inhalation of particulates in ambient air.
 - Current and future utility and construction workers were assumed to be exposed to subsurface soil.

Assumptions about exposure frequency, duration, and other exposure factors are discussed in the HHRA. Sensitive sub-populations considered in the HHRA included children and adolescents. EPA used the IEUBK model to develop soil-lead PRGs for child and adolescent receptors, including child residents, adolescent school children, and child recreationalists.

2.7.6 - Toxicity Assessment

The toxicity assessment provides a description of the relationship between a dose of a chemical and the potential likelihood of an adverse health effect. The purpose of the toxicity assessment is to provide a quantitative estimate of the inherent toxicity of COCs for use in risk characterization. Potential health risks for COCs are evaluated for both carcinogenic and non-carcinogenic risks.

The risk assessment for the USS Lead site used the default toxicity values presented in the EPA RSL tables. The default values were obtained from the following sources:

- Integrated Risk Information System (IRIS) on-line database;
- Provisional Peer Reviewed Toxicity Values (PPRTV) derived by EPA's Superfund Health Risk Technical Support Center;
- Technical Support Center for the EPA Superfund program;
- The Agency for Toxic Substances and Disease Registry (ATSDR) minimal risk levels;
- The California Environmental Protection Agency/Office of Environmental Health Hazard Assessment's toxicity values;
- Screening toxicity values in appendices to certain PPRTV assessments; and
- The EPA Superfund program's Health Effects Assessment Summary Tables (HEAST).

Toxicity values used in the HHRA for all COPCs are presented in Tables A5.1 and A5.2 (non-cancer toxicity values) and Tables A6.1 and A6.2 (cancer toxicity values) of Appendix A of the HHRA. For the COCs lead and arsenic, the cancer toxicity data are summarized in Table 2 below and the non-cancer toxicity data are summarized in Table 3.

2.7.7 - Risk Characterization

For carcinogens, such as arsenic, risks are generally expressed as the incremental probability of an individual developing cancer over a lifetime as a result of exposure to the carcinogen. Excess lifetime cancer risk is calculated from the following equation:

$$\text{Risk} = \text{CDI} \times \text{SF}$$

Where:

risk = a unitless probability (e.g., 2×10^{-5}) of an individual's developing cancer

CDI = chronic daily intake averaged over 70 years (mg/kg-day)

SF = slope factor, expressed as (mg/kg-day)⁻¹

These risks are probabilities that are expressed typically in scientific notation (e.g., 1×10^{-6}). An excess lifetime risk of 1×10^{-6} indicates that an individual experiencing the RME estimate has a 1 in 1,000,000 chance of developing cancer as a result of site-related exposure. This is referred to as excess lifetime cancer risk because it would be in addition to the risks of cancer individuals face from other causes such as smoking or exposure to too much sun. The chance of an

**Table 2
Cancer Toxicity Data Summary**

Pathway: Ingestion, Dermal							
COC	Oral Cancer Slope Factor		Dermal Cancer Slope factor	Slope Factor Units	Weight of Evidence/ Cancer Guideline Description	Source	Date
Arsenic	1.5		1.5	(mg/kg-day) ⁻¹	A	IRIS	Nov-2010
Lead	NA		NA	NA	NA	IRIS	Nov-2010
Pathway: Inhalation							
COC	Unit Risk	Units	Inhalation Cancer Slope factor	Slope Factor Units	Weight of Evidence/ Cancer Guideline Description	Source	Date
Arsenic	0.0043	(µg/m ³) ⁻¹	15	(mg/kg-day) ⁻¹	A	IRIS	Nov-2010
Lead	NA	NA	NA	NA	NA	IRIS	Nov-2010
Notes: COC: Contaminant of concern NA: Not available IRIS: Integrated Risk Information System, EPA				A - Known Human Carcinogen B1- Probable human carcinogen - indicates that limited human data are available B2- Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans C- Possible human carcinogen D- Not classifiable as a human carcinogen E- Evidence of non-carcinogenicity			
This table provides carcinogenic risk information which is relevant to the contaminants of concern in soil. At this time, slope factors are not available for lead for oral, dermal, or inhalation routes of exposures. An adjustment factor is sometimes applied, and is dependent upon how well the chemical is absorbed via the oral route. An adjustment factor of 95% was used for arsenic. Therefore, a slightly lower value than is presented above was used as the dermal carcinogenic slope factor for arsenic.							

**Table 3
Non-Cancer Toxicity Data Summary**

Pathway: Ingestion, Dermal									
COC	Chronic/ Subchronic	Oral RfD value ¹	Oral RfD Units	Dermal RfD Value ²	Dermal RfD Units	Primary Target Organ ³	Combined UF/MF ⁴	Sources of RfD Target Organ ⁵	Date
Arsenic	Chronic	0.0003	mg/kg- day	0.0003	mg/kg- day	Cardiovascular Dermal	3	IRIS	Nov- 2010
Lead	NA	NA	NA	NA	NA	NA	NA	IRIS	Nov- 2010
Pathway: Inhalation									
COC	Chronic/ Subchronic	Inhalation RfC value	Inhalation RfC Units	Inhalation RfD Value	Inhalation RfD Units	Primary Target Organ ⁶	Combined UF/MF	Sources of RfC Target Organ	Date
Arsenic	Chronic	1.5x10 ⁻⁵	mg/m ³	NA	NA	Development Cardiovascular CNS	NA	CalEPA	Nov- 2010
Lead	NA	NA	NA	NA	NA	NA	NA	IRIS	Nov- 2010
<p>Notes:</p> <p>COC: Contaminant of concern NA: Value not available/not calculated 1) Oral RfD = Oral reference dose (EPA, 2010) 2) Dermal RfD = Dermal reference dose calculated as: RfDd = RfDo x GIABS (Gastrointestinal absorption efficiency EPA, 2010). 3) Primary target organ/system based on information from the Agency for Toxic Substances and Disease Registry "ToxFAQs" (ATSDR, 2010). 4) UF/MF = Uncertainty factor/modifying factor (EPA-IRIS, 2010) 5) Primary source of RfDo as cited in the RSL Tables (EPA, 2010) and date of RSL Table update. Primary sources include: 1) IRIS - Integrated Risk Information System; 2) PPRTV - Provisional Peer Reviewed Toxicity Values; 3) ATSDR = Agency for Toxic Substances and Disease Registry; 4) CalEPA - California Environmental Protection Agency; 5) HEAST - Health Effects Assessment Summary Table; 6) NJ - New Jersey Department of Environmental Quality. 6) Primary source of RfC as cited in the RSL Tables (EPA, 2010) and date of RSL Table update. Primary sources include: 1) IRIS - Integrated Risk Information System; 2) PPRTV - Provisional Peer Reviewed Toxicity Values; 3) ATSDR = Agency for Toxic Substances and Disease Registry; 4) CalEPA - California Environmental Protection Agency; 5) HEAST - Health Effects Assessment Summary Table; 6) NJ - New Jersey Department of Environmental Quality; 7) X-PPRTV = PPRTV Appendix; 8) ECAO = Environmental Criteria and Assessment Office.</p> <p>This table provides non-carcinogenic risk information which is relevant to the contaminants of concern in soil. At this time, RfDs are not available for lead for oral, dermal, or inhalation routes of exposure. An adjustment factor is sometimes applied, and is dependent upon how well the chemical is absorbed vial the oral route. An adjustment factor of 95% was used for arsenic. Therefore, a slightly lower value than was presented above is used as the dermal non-carcinogenic slope factor for arsenic.</p>									

individual developing cancer from all other causes has been estimated to be as high as one in three. EPA's generally-acceptable risk range for site-related exposures is 1×10^{-4} to 1×10^{-6} .

The potential for non-carcinogenic effects is evaluated by comparing an exposure level over a specified time period (e.g., lifetime) with a reference dose (RfD) derived for a similar exposure period. An RfD represents a level that an individual may be exposed to that is not expected to cause any adverse effect. The ratio of exposure to toxicity is called a hazard quotient (HQ). An HQ less than 1 indicates that a receptor's dose of a single contaminant is less than the RfD, and that toxic non-carcinogenic effects from that chemical are unlikely. The hazard index is generated by adding the HQs for all COCs to which a given individual may reasonably be exposed that affect the same target organ (e.g., liver) or that act through the same mechanism of action within a medium or across all media. An HI less than 1 indicates that, based on the sum of all HQs from different contaminants and exposure routes, toxic non-carcinogenic effects from all contaminants are unlikely. An HI greater than 1 indicates that site-related exposures may present a risk to human health.

The HQ is calculated as follows:

$$\text{Non-cancer HQ} = \text{CDI/RfD}$$

Where:

CDI = chronic daily intake

RfD = reference dose

CDI and RfD are expressed in the same units and represent the same exposure period (i.e., chronic, subchronic, or short-term).

Because lead does not pose a cancer risk and does not have a nationally-approved reference dose, slope factor, or other accepted toxicological factor which can be used to assess risk, standard risk assessment methods cannot be used to evaluate the health risks associated with lead contamination. EPA has developed the Integrated Exposure Uptake Biokinetic Model for Lead in Children to predict blood lead levels (BLLs) in children exposed to lead. The IEUBK model calculates the probability that a child will have a BLL greater than 10 micrograms of lead per deciliter of blood ($\mu\text{g}/\text{dL}$). BLLs above $10 \mu\text{g}/\text{dL}$ have been directly related to adverse health effects in adults and children. EPA developed the IEUBK model to assist in establishing lead cleanup levels at Superfund sites.

The IEUBK model for lead in children was used to evaluate the non-carcinogenic risks posed to young children as a result of the lead contamination at OU1. EPA ran the IEUBK model using the available site-specific data to predict a lead soil level that will be protective of children and other residents. Site-specific soil concentrations for lead were used in place of model default values. Drip zone samples were included in the IEUBK model calculations.

A blood-lead-level study was not conducted at OU1. EPA used the IEUBK model to develop soil-lead PRGs for child and adolescent receptors, including child residents, adolescent school children, and child recreationalists. For the remaining receptors considered in the OU1 HHRA, EPA used the ALM to develop soil-lead PRGs. For residential child receptors, the average lead concentration in soil at each property was compared to the EPA residential soil RSL of 400

mg/kg. The 400 mg/kg RSL was calculated using EPA's IEUBK model and default exposure assumptions.

Available site-specific information was below regulatory levels and did not appear to be significantly different from the default parameters of the IEUBK model. This information included the municipal lead result for drinking water (3.6 micrograms per liter ($\mu\text{g/l}$)), low reported blood lead concentrations in school children, and low bioavailability of lead in soil at the site based on leachability studies. For other site-specific factors, insufficient information was available (for example, localized concentrations of lead in air, water, and foodstuffs) to warrant calculation of a site-specific residential soil PRG. For these reasons, EPA determined it was the best practice to use the default parameters in the model rather than to use site-specific data for only certain inputs. The output from the IEUBK model identified residential properties with average lead concentrations in soil greater than 400 mg/kg as presenting potential lead risks to residential receptors.

PRGs for lead in soil for both adolescent school children and child recreationalists were calculated in accordance with EPA's "Assessing Intermittent or Variable Exposures at Lead Sites" (EPA-540-R-03-008). In performing the calculations, EPA assumed that the overall average concentration of lead in soil to which these receptors could be safely exposed was the residential soil PRG of 400 mg/kg. For each receptor, three inputs were identified: (1) the average concentration to which the receptor would be exposed at home, (2) the fraction of time the receptor would spend at home, and (3) the fraction of time the receptor would spend at the alternate exposure point (for an adolescent school child, this would be the school; for a child recreationalist, this would be a park). Using these inputs and the target acceptable overall average lead concentration of 400 mg/kg, EPA calculated receptor-specific soil-lead PRGs (the acceptable concentration of lead in soil at the alternate location) for schools and parks. The calculated soil-lead PRG for an adolescent school child is 583 mg/kg, and for a child recreationalist the soil-lead PRG is 693 mg/kg.

After evaluating all COPCs for the appropriate exposure scenarios, EPA retained only lead and arsenic as COCs. Non-carcinogenic effects attributable to COPCs other than lead at OU1 were found to be negligible for all exposure scenarios.

Tables 4, 5, and 6 summarize the total carcinogenic risks from all COPCs to residents, utility workers, and construction workers, respectively. Tables 7, 8, and 9 summarize the total non-carcinogenic risks from all COPCs to residents, utility workers, and construction workers, respectively. Because the HHRA evaluated risks on an individual, property-by-property basis, Tables 4 through 9 show the range of the property-specific risk results for each exposure route.

**Table 4
Risk Characterization Summary for Residents - Carcinogens**

Scenario Timeframe: Current/Future Receptor Population: Resident Receptor Age: Adult/Child													
Medium	Exposure Location	Exposure Point	Carcinogenic Risk									Exposure Routes Total	
			Ingestion			Inhalation		Dermal		Home Grown Produce Ingestion		Min	Max
			Min	Max	Min	Max	Min	Max	Min	Max			
Surface/Subsurface Soil	Schools	Soil On-Site Adult/Child RME	3.9×10^{-8}	6.2×10^{-6}	7.5×10^{-9}	4.7×10^{-6}	4.9×10^{-17}	8.1×10^{-9}	1.2×10^{-5}	6.4×10^{-5}	1.2×10^{-5}	7.5×10^{-5}	
	Parks	Soil On-Site Adult/Child RME	4.7×10^{-8}	7.9×10^{-5}	4.9×10^{-9}	1.8×10^{-5}	3.7×10^{-16}	6.4×10^{-9}	N/A	N/A	5.2×10^{-8}	9.7×10^{-5}	
	Residential	Soil On-Site Adult/Child RME	0.0	1.3×10^{-3}	0.0	2.4×10^{-1}	0.0	1.9×10^{-3}	0.0	4.5×10^{-3}	0.0	7.9×10^{-3}	

**Table 5
Risk Characterization Summary for Utility Workers - Carcinogens**

Scenario Timeframe: Current/Future Receptor Population: Utility Worker Receptor Age: Adult												
Medium	Exposure Medium	Exposure Point	Carcinogenic Risk									
			Ingestion		Inhalation		Dermal		Home Grown Produce Ingestion		Exposure Routes Total	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Surface/Subsurface Soil	Schools	Soil On-Site Adult RME	0.0	6.0×10^{-6}	0.0	3.1×10^{-11}	0.0	2.3×10^{-6}	N/A	N/A	0.0	8.3×10^{-6}
	Parks	Soil On-Site Adult RME	5.2×10^{-6}	5.8×10^{-5}	5.7×10^{-10}	6.4×10^{-9}	4.9×10^{-7}	5.6×10^{-6}	N/A	N/A	5.7×10^{-6}	6.4×10^{-5}
	Residential	Soil On-Site Adult RME	6.5×10^{-8}	7.8×10^{-5}	2.7×10^{-13}	6.0×10^{-9}	2.5×10^{-8}	7.1×10^{-6}	N/A	N/A	1.8×10^{-7}	8.5×10^{-5}

**Table 6
Risk Characterization Summary for Construction Workers - Carcinogens**

Scenario Timeframe: Current/Future Receptor Population: Construction Worker Receptor Age: Adult												
Medium	Exposure Medium	Exposure Point	Carcinogenic Risk									Exposure Routes Total
			Ingestion		Inhalation		Dermal		Home Grown Produce Ingestion		Min	Max
			Min	Max	Min	Max	Min	Max	Min	Max		
Surface/Subsurface Soil	Schools	Soil On-Site Adult RME	0.0	3.6×10^{-7}	0.0	3.7×10^{-12}	0.0	1.4×10^{-7}	N/A	N/A	0.0	5.0×10^{-7}
	Parks	Soil On-Site Adult RME	3.1×10^{-7}	3.5×10^{-6}	6.9×10^{-11}	7.7×10^{-10}	7.0×10^{-11}	3.4×10^{-7}	N/A	N/A	3.1×10^{-7}	3.8×10^{-6}
	Residential	Soil On-Site Adult RME	3.9×10^{-9}	4.7×10^{-6}	3.3×10^{-14}	1.8×10^{-7}	5.7×10^{-11}	1.6×10^{-1}	N/A	N/A	7.9×10^{-9}	1.6×10^{-1}

**Table 7
Risk Characterization Summary for Residents - Non-Carcinogens**

		Non-Carcinogenic Risk (Hazard Index)														
Medium	Exposure Medium	Exposure Point	Ingestion			Inhalation			Dermal			Home Grown Produce Ingestion			Exposure Routes Total	
			Min	Max		Min	Max		Min	Max		Min	Max	Min	Max	
Surface/Subsurface Soil	Schools	Soil On-Site Adult/Child RME	0.0	2.7×10^{-1}		0.0	2.7×10^{-3}		0.0	2.2×10^{-2}		0.0	2.5×10^{-1}		0.0	5.4×10^{-1}
	Parks	Soil On-Site Adult/Child RME	4.6×10^{-3}	6.4		1.2×10^{-1}	5.9×10^{-1}		4.8×10^{-1}	4.2×10^{-1}		N/A	N/A		5.2×10^{-3}	7.4
	Residential	Soil On-Site Adult/Child RME	0.0	1.6×10^{-2}		0.0	3.0×10^{-1}		0.0	2.1		0.0	5.3×10^{-2}		0.0	7.2×10^{-2}

Scenario Timeframe: Current/Future
 Receptor Population: Resident Adult/Child
 Receptor Age: Adult/Child

Table 8
Risk Characterization Summary for Utility Workers - Non-Carcinogens

Scenario Timeframe: Current/Future Receptor Population: Utility Worker Receptor Age: Adult		Non-Carcinogenic Risk (Hazard Index)											
Medium	Exposure Medium	Exposure Point	Ingestion			Inhalation		Dermal		Home Grown Produce Ingestion		Exposure Routes Total	
			Min	Max		Min	Max	Min	Max	Min	Max	Min	Max
Surface/Subsurface Soil	Schools	Soil On-Site Adult RME	0.0	6.0×10^{-6}	0.0	3.1×10^{-11}	0.0	2.3×10^{-6}	N/A	N/A	0.0	8.3×10^{-6}	
	Parks	Soil On-Site Adult RME	4.5×10^{-2}	4.9×10^{-1}	2.3×10^{-4}	4.2×10^{-4}	2.9×10^{-3}	3.2×10^{-2}	N/A	N/A	4.8×10^{-2}	5.2×10^{-1}	
	Residential	Soil On-Site Adult RME	2.1×10^{-6}	1.2	3.3×10^{-10}	1.1×10^{-3}	3.0×10^{-1}	4.5×10^{-2}	N/A	N/A	3.0×10^{-4}	1.2	

**Table 9
Risk Characterization Summary for Construction Workers - Non-Carcinogens**

		Scenario Timeframe: Current/Future		Receptor Population: Construction Worker		Receptor Age: Adult		Non-Carcinogenic Risk (Hazard Index)									
Medium	Exposure Medium	Exposure Point	Ingestion		Inhalation		Dermal		Home Grown Produce Ingestion		Exposure Routes Total						
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max					
Surface/Subsurface Soil	Schools	Soil On-Site Adult RME	0.0	1.9×10^{-1}	0.0	2.7×10^{-3}	0.0	0.0	N/A	N/A	0.0	1.9×10^{-1}					
	Parks	Soil On-Site Adult RME	5.8×10^{-1}	6.4	6.0×10^{-3}	1.1×10^{-2}	7.8×10^{-3}	4.2×10^{-1}	N/A	N/A	6.0×10^{-3}	6.8					
	Residential	Soil On-Site Adult RME	2.6×10^{-7}	15	1.6×10^{-4}	2.4×10^{-1}	2.8×10^{-3}	5.8×10^{-1}	N/A	N/A	3.0×10^{-3}	16					

Risk characterization results are discussed by property and receptor type in the following order: residential, school, and recreational properties. For each, there is a discussion of the likely exposure of the primary receptor, followed by the likely exposure to utility and construction workers (which are assumed to be potentially exposed at all properties). (See Section 2.7.5 for a discussion of the various exposure scenarios that were evaluated.)

Residential Properties

The majority of OUI is made up of residential properties. Risk was evaluated discretely at each of the 74 residential properties that were tested during the RI. Exposure routes at residential properties to lead- and arsenic-contaminated surface and subsurface soils include incidental ingestion, dermal contact, inhalation of particulates in ambient air, and ingestion of homegrown produce. For lead, these were integrated together in the IEUBK model. For other COPCs, risks were quantified individually for each exposure route at each property. The HHRA evaluated risks associated with both current and future land uses. For current land use, the HHRA considered the upper 12 inches of soil in yards and 24 inches where gardens are currently located. Future land use assumes that gardens can be relocated anywhere in the yard and the HHRA considered the top 24 inches of soil throughout the yard. Individual risks for each property can be found in the HHRA, which is included in the RI Report. The sensitive subpopulation for lead is children.

The primary non-lead drivers of risk are arsenic and carcinogenic PAHs. EPA has determined that the PAHs at OUI are not site-related. The primary hazard drivers are arsenic, antimony, manganese, and mercury, as well as a series of other metals at a small number of properties. Risks and hazards are driven by ingestion of homegrown produce and incidental ingestion of soil. No carcinogenic COPCs were identified at 35 of the 74 residential properties tested.

Residents

As shown in Table 4, the total carcinogenic risk for residents under both current and future land uses from all COPCs at the residential properties tested ranges from zero to 7.9×10^{-3} . Table 7 shows that the non-carcinogenic hazard index from all COPCs at the residential properties tested ranges from zero to 720. However, some of the COPCs were determined not to be site-related. The risks to residents when considering only the site-related COCs are summarized as follows:

- For residents under current land uses (exposed to the upper 12 inches of soil), 27 of the 74 residential properties tested have total current risks greater than 1×10^{-4} , the upper end of EPA's acceptable risk range. The total risks at these properties range from 2×10^{-4} to 5×10^{-3} .
- For residents under future land uses (potentially exposed to the upper 24 inches of soil), 36 of the 74 properties tested have total future risks greater than 1×10^{-4} , the upper end of EPA's acceptable risk range. The total risks at these properties range from 2×10^{-4} to 5×10^{-3} .
- Lead poses a risk to residents at 47 of the 74 residential properties that were tested.

Utility Worker

The HHRA evaluated potential exposure of utility workers at the residential properties. As shown in Table 5, the total carcinogenic risk for utility workers from all COPCs ranges from 1.8×10^{-7} (below EPA's acceptable risk range) to 8.5×10^{-5} (within EPA's acceptable risk range). Table 8 shows that the non-carcinogenic hazard index from all COPCs ranges from 0.0003 (insignificant) to 1.2. However, when considering risks to utility workers only due to site-related COCs, non-carcinogenic hazards are less than 1 and insignificant at all properties. Lead poses a risk to utility workers at three of the 74 residential properties that were tested.

Construction Worker

The HHRA evaluated potential exposure of construction workers at the residential properties. As shown in Table 6, the total carcinogenic risk for construction workers from all COPCs ranges from 7.9×10^{-9} (below EPA's acceptable risk range) to 1.6×10^{-1} (above EPA's acceptable risk range). Table 9 shows that the non-carcinogenic hazard index from all COPCs ranges from 0.003 to 16. However, when considering risks to construction workers only due to site-related COCs, carcinogenic risks were either less than 1×10^{-6} and considered insignificant or were within EPA's acceptable risk range. Non-carcinogenic hazards for construction workers due to the COCs exceed an HI of 1 at 11 of the residential properties that were tested. Lead poses a risk to construction workers at 16 of the 74 residential properties that were tested. The majority of the 16 properties are clustered in the public housing area at the southwest corner of OU1.

Schools

There are two schools within the study area, the Carmelite School for Girls and Carrie Gosch Elementary School. The Carmelite School contains some residents. Therefore, the exposure assumptions were different for the two schools. Human health risks for students and teachers are summarized as follows:

Carmelite School for Girls

Under both current (C) and future (F) land use conditions, total risks from all COPCs for adolescent students (5×10^{-5} [C] and 7×10^{-5} [F]) and adult teachers and staff (4×10^{-5} [C] and 1×10^{-4} [F]) are within EPA's acceptable risk range. Non-carcinogenic hazards for both receptor groups are less than an HI of 1 and considered insignificant. At Carmelite School for Girls, lead does not pose a risk to either adolescent students or adult teachers and staff.

Carrie Gosch Elementary School

At Carrie Gosch Elementary School, under both current and future land use conditions, total risks from all COPCs for adolescent students, indoor teachers and staff, and outdoor teachers and staff are less than or equal to 1×10^{-5} and within EPA's acceptable risk range. Non-carcinogenic hazards are less than an HI of 1 and considered insignificant for all receptors. At Carrie Gosch Elementary School, lead does not pose a risk to any receptors.

Construction and Utility Workers

There were no unacceptable risks for construction or utility workers at either school under current or future land use conditions.

Parks

Under current land use conditions, total carcinogenic risks to the following groups are within EPA's acceptable risk range: (1) child, adolescent, and adult recreationalists; (2) indoor park workers; and (3) outdoor park workers at Riley Park, Goodman Park, and Kennedy Gardens Park. The maximum risk is 3×10^{-5} (within EPA's acceptable risk range) for an outdoor park worker at Goodman Park. Total non-carcinogenic hazards at all three parks are less than an HI of 1 and considered insignificant for all receptors.

Lead poses the following types of risk at each park:

- Riley Park – lead does not pose a risk to any receptors.
- Goodman Park – lead poses a risk to child recreationalists, indoor park workers, and outdoor park workers.
- Kennedy Gardens Park – lead poses a risk to all recreational receptors.

Under future land use conditions, the carcinogenic risks increase slightly for all receptors but remain within EPA's acceptable risk range, and non-carcinogenic hazards at the three parks also remain insignificant. The risks from lead remain similar to those described under current land use conditions.

Construction and Utility Workers

There are no unacceptable risks for utility workers at the three parks under current or future land use conditions. For construction workers, the non-carcinogenic hazard index from all COPCs ranges from 0.006 to 6.8 (see Table 9), with the values exceeding 1 driven by concentrations of arsenic at or below background levels. When taking such non-site-related concentrations out of the evaluation, there are no unacceptable risks to construction workers at the three parks.

2.7.8 - Uncertainties

Uncertainties are inherent in the process of quantitative risk assessment because of the use of environmental sampling results, assumptions regarding exposure, and the quantitative representation of chemical toxicity. Potentially significant sources of uncertainty for this assessment are discussed in the HHRA and include analytical data, exposure estimates, toxicity estimates, and background conditions. The uncertainties associated with analytical data are summarized below.

At OUI of the USS Lead Site, there are four primary sources of uncertainty with regard to the analytical data used in the HHRA: (1) the depth of surface soil samples, (2) the use of x-ray fluorescence (XRF) data, (3) the limited number of soil samples analyzed for constituents other than lead, and (4) a limited number of samples at each property. Each of these sources of uncertainty is summarized below.

- Surface soil samples were collected from 0 to 6 inches bgs. However, EPA guidance suggests that concentrations of some constituents, particularly lead, may be highest in the uppermost few centimeters (1 inch). Therefore, collection of surface soil samples from 0 to 6 inches bgs may result in a dilution of lead concentrations in surface soil samples. At OUI, EPA evaluated the concentration of lead in soil samples collected during the limited investigation in 2007. EPA concluded that concentrations of lead measured in soil samples collected from 0 to 1 inch bgs did not differ from measured lead concentrations in samples collected from 1 to 6 inches bgs at the same location.
- Field-based analytical methods have been found acceptable for use in investigating hazardous waste sites if a particular method (in this case XRF) is generally accepted and performed in accordance with QA/QC protocols and procedures. The XRF technique, well established and routinely used in site investigations, was performed using an established analytical method (Method 6200). Therefore, EPA concluded that XRF data (obtained by EPA) are acceptable for use in the RI and HHRA for the USS Lead Site. Furthermore, all XRF data used in the HHRA were first adjusted based on a correlation developed between samples analyzed using both XRF and laboratory analysis.
- All soil samples collected during the RI were analyzed for lead, either by XRF (and later adjusted as described above) or by an off-site laboratory. However, only 20 percent of the Phase I soil samples were sent to an off-site laboratory for total metals analysis. (Note: All Phase II soil samples were sent offsite for total metals analysis). Also, only eight Phase I soil samples were sent offsite for VOC, SVOC (including PAHs), PCB, and pesticide analyses. VOCs, non-PAH SVOCs, PCBs, and pesticides were not detected in any of those eight samples; therefore, VOCs, non-PAH SVOCs, PCBs, and pesticides were not analytes in Phase II sampling. Consequently, the EPCs (and in turn risks and hazards) for non-lead COPCs, particularly arsenic and PAHs, are subject to a moderate to large amount of uncertainty.
- As noted above, samples analyzed for COCs other than lead were collected less frequently than samples analyzed for lead. As a result, EPCs for COCs other than lead at individual properties are based on fewer samples than EPCs for lead. This means that EPCs for some analytes could not be calculated at some properties. At other properties, the EPCs are subject to at least a moderate amount of uncertainty because they are based on a limited number of samples. In such instances, the maximum detected concentration was used as the EPC. This may result in an overestimation of the EPC.

2.7.9 - Risk Assessment Conclusions

The risk to human health from lead and arsenic in residential soils drives the need for remedial action at OU1 of the USS Lead Site. The response action selected in this ROD is therefore necessary to protect public health or welfare or the environment from actual or threatened releases of pollutants or contaminants that may present an imminent and substantial endangerment.

2.8 – Remedial Action Objectives

Remedial action objectives (RAOs) are goals specific to media or operable units for protecting human health and the environment. Risk can be associated with current or potential future exposures. RAOs should be as specific as possible, but not so specific that the range of alternatives to be developed is unduly limited. Objectives aimed at protecting human health and the environment should specify: (1) COCs; (2) exposure routes and receptors; and (3) an acceptable contaminant level or range of levels for each exposure route.

As discussed in Section 2.7, the OU1 HHRA recognized the following receptors for current and future land-use scenarios: child, adolescent, and adult residents; child, adolescent, and adult recreationalists; and adult indoor and outdoor workers. Section 2.7 also details the exposure routes for each receptor. Current land uses within OU1 include residential, recreational, school, and industrial/commercial properties. For the purposes of the HHRA and the development of RAOs, EPA assumed that future land uses of all properties would be the same as current land uses. As land use and the potential for exposure to contaminated material is not likely to change, the RAO must reduce the risks posed by soils in yards at OU1.

EPA has identified the following RAO for OU1 of the USS Lead Site:

- Reduce to acceptable levels human health risk from exposure to COCs (lead and arsenic) in impacted surface and subsurface soils, through ingestion, direct contact, or inhalation exposure pathways, assuming reasonably anticipated future land-use scenarios.

Portions of OU1 are currently paved or covered with buildings, which limits potential exposure. However, significant portions of OU1, including yards, parks, and lawns, are unpaved. The intent of the RAO above is to address open areas to protect residents, recreationalists, and workers. A cleanup that achieves this RAO will be protective of human health and the environment as it will ensure that the soil to which residents are exposed, now and in the future, does not pose a health risk.

Remedial Action Levels

Lead

As discussed in Section 2.7.7, the HHRA evaluated lead by using the IEUBK model and default exposure assumptions to calculate a screening level very similar to the 400 mg/kg RSL. Available site-specific information was not significantly different than the standard parameters

of the IEUBK model, and insufficient information was available for other site-specific factors. EPA therefore used the default parameters for the IEUBK model and the ALM in its calculation of site-specific residential soil PRGs for lead, and identified average lead concentrations in soil greater than 400 mg/kg as presenting potential lead risks to residential receptors. EPA is therefore selecting 400 mg/kg as the RAL for lead in residential yards.

At schools and parks, where the calculated soil PRG is above 400 mg/kg, EPA has conservatively chosen to use the residential RSL of 400 mg/kg as the RAL since it is likely that the children potentially exposed at schools and/or parks are also exposed at residences within OU1. Given the small size of the yards at many residences within OU1, it is possible that some children spend more time outside at schools and parks than they do at home. Selecting 400 mg/kg as the lead RAL for all property types therefore takes into account cumulative risk from exposure of children at schools and parks as well as at residential properties.

At industrial/commercial properties, EPA used the ALM to identify a RAL of 800 mg/kg for lead in soil.

Arsenic

As discussed in Section 2.7.1, the RAL for arsenic is based upon the upper tolerance limit of naturally-occurring concentrations of arsenic at OU1. Arsenic concentrations in soil samples collected within OU1 are distributed around both the site-specific background concentration of 14.1 mg/kg and the Illinois metropolitan background concentration of 13.0 mg/kg. Because of the similarity between the bulk soil concentrations for arsenic at OU1 and the naturally-occurring background concentrations, EPA made a risk-management decision to use the UTL to distinguish between arsenic soil concentrations that are distributed among the naturally-occurring values at OU1 and those that may have been impacted by activities in and around the site. The 95% UTL for arsenic in soil at OU1 is 26 mg/kg, which corresponds to the upper bound of the naturally-occurring (i.e. background) concentrations. The 26 mg/kg RAL for arsenic will be applied to residential, recreational, and commercial/industrial properties. The approach of using the UTL as a RAL has been used at other CERCLA sites, including the Jacobsville Neighborhood Soil Contamination Site in Evansville, Indiana, and is discussed more fully in the RI Report for OU1 of the USS Lead Site.

EPA notes that an arsenic soil concentration of 26 mg/kg also corresponds with a risk level of 1×10^{-4} for residential land use if one assumes that 25 percent of the produce consumed by residents of OU1 is comprised of homegrown produce (grown within OU1).

RAL Summary

Table 10 summarizes the remedial action levels for soils at OU1.

Table 10 Soil Remedial Action Levels for OU1 of the USS Lead Site		
Analyte Group	Analyte Name	OU1 Soil RAL
Metals	Arsenic	26 mg/kg
	Lead	400 mg/kg (Residential) 800 mg/kg (Industrial/Commercial)

2.9 – Description of Alternatives

This section presents the remedial alternatives for OU1, which are numbered to correspond with the numbering system used in the FS Report. The alternatives are described more fully in Section 2.9.2. The alternatives listed in bold font are those that EPA carried forward for detailed analysis in the FS.

- **Alternative 1 – No Action**
- Alternative 2 – Institutional Controls
- **Alternative 3 – On-site Soil Cover + Institutional Controls**
- **Alternative 4A – Excavation of Soil Exceeding RALs + Off-site Disposal + Ex-situ Treatment Option**
- **Alternative 4B – Excavation to Native Sand + Off-site Disposal + Ex-situ Treatment Option**
- Alternative 5 – *In-situ* Treatment by Chemical Stabilization

In accordance with EPA guidance, the potential remedial alternatives identified in the FS and listed above were screened against three broad criteria: (1) effectiveness (both short-term and long-term), (2) implementability (including technical and administrative feasibility), and (3) relative cost (capital and operation and maintenance [O&M]). The purpose of the screening evaluation was to reduce the number of alternatives chosen for a more thorough analysis. EPA eliminated Alternative 2 (exclusive reliance on institutional controls to prevent exposure) and Alternative 5 (in-place treatment by chemical stabilization) from further consideration because EPA did not consider them to be effective for OU1. Alternative 2 does not reduce human health risk from exposure to COCs because the impacted soils would remain in place without protective barriers. Alternative 5, chemical stabilization through the introduction of ground fish bones to achieve phosphate immobilization, was eliminated because it is not proven for long-term effectiveness; there are few case studies available for review.

2.9.1 - Common Element of Alternatives

Pre-Remedial Sampling

Prior to remedy implementation, pre-remedial sampling must be conducted at the remainder of the properties in OUI (i.e., those that have not yet been tested) to determine which yards require remediation. The pre-remedial sampling will take place during the remedial design phase. All field activities will be conducted in accordance with an EPA-approved, site-specific quality assurance project plan. The sampling methodologies employed will be the same as those used during the RI field work. Because EPA has secured access to fewer than 25% of the properties in OUI, additional access agreements for the remaining properties will be obtained before initiating the pre-remedial field investigation. The pre-remedial sampling results will be used in the remedial design to identify the yards that require remediation. For Alternative 4A, the pre-remedial sampling will also identify the depth of RAL exceedances in each yard. The cost of the pre-remedial sampling is included in each retained alternative, with the exception of Alternative 1, No Action.

Assumed Number of Properties Requiring Remediation

Based on the representative sampling conducted during the RI, of the 1,271 properties in OUI, 53 percent or 672 properties are likely to require remedial action to address risks associated with lead. An additional four percent or 51 properties are likely to require remediation to address risks associated only with arsenic. In total, 723 properties are likely to require remediation.

2.9.2 – Summary of Remedial Alternatives

Alternative 1 – No Action

Estimated Capital Cost: \$0

Estimated Total O&M Cost: \$0

Cost Estimate Contingency: \$0

Estimated Present Worth Cost: \$0

Estimated Construction Timeframe: None

Regulations governing the Superfund program generally require that the “no action” alternative be evaluated to establish a baseline against which EPA and the public can compare the costs and benefits of other alternatives. Under this alternative, EPA would take no action at OUI to prevent exposure to the soil contamination, and statutory five-year reviews would not be required.

Alternative 3 – On-site Soil Cover + Institutional Controls

Estimated Capital Cost: \$16,705,000

Estimated Total O&M Cost: \$735,000

Cost Estimate Contingency: \$3,500,000

Estimated Present Worth Cost: \$20,900,000

Estimated Construction Timeframe: 18 months

Alternative 3 would achieve the RAO of preventing exposure to contaminated soil by installing a soil cover that limits direct contact with impacted soil. A visible barrier, such as orange construction fencing or landscaping fabric, would be placed over the contaminated soil and then the contaminated soil and visible barrier would be covered with clean soil. Contamination would be left in place and capped with a 12-inch-thick soil cover as specified in EPA's *Superfund Lead-Contaminated Residential Sites Handbook*. The soil cover would be composed of 6 inches of imported select borrow material topped with 6 inches of top soil, and is meant to prevent direct contact with contaminated soil. The soil cover would be placed directly on top of the existing grade. After installation of the soil cover, each yard would be restored to its pre-remedial condition. As part of the O&M cost calculations, EPA assumed that the soil cover would be inspected and repaired as needed on a semi-annual basis for the first 5 years, followed by an annual inspection for years 6 through 30. Annual repairs would include re-grading portions of the soil cover, placing additional soil to maintain the 12-inch cover, and seeding or sodding the yards as needed. Institutional controls would be implemented to maintain the integrity of the soil cover so that users of the impacted yards would not be exposed to COCs in soil. Institutional controls may include property restrictions, such as the following:

- limiting gardening to raised beds;
- requiring that all subsurface work (utility maintenance, foundation work, etc.) be done in accordance with the remedial design in order to protect workers and residents;
- requiring that sufficient coverage of impacted soils be maintained.

In accordance with CERCLA requirements, EPA would perform five-year reviews of this remedy since impacted soil would be left in place above levels that allow for unlimited use and unrestricted exposure. After remediation work is complete, this alternative would allow for the continued residential use of impacted yards.

Alternative 4A - Excavation of Soil Exceeding RALs + Off-site Disposal + Ex-situ Treatment Option

Estimated Capital Cost: \$24,795,000

Estimated Total O&M Cost: \$67,000

Cost Estimate Contingency: \$4,980,000

Estimated Present Worth Cost: \$29,900,000

Estimated Construction Timeframe: 26 months

Alternative 4A would achieve the RAO of preventing exposure to contaminated soil by removing impacted soil that exceeds RALs, to a maximum excavation depth of 24 inches, while leaving in place soils that do not exceed the RALs. This alternative requires excavation of soil exceeding RALs, disposal of excavated soil at an off-site Subtitle D landfill, and, as necessary, chemical stabilization of some excavated soil to address lead concentrations that exceed the toxicity characteristic regulatory threshold. Based upon testing conducted during the RI, EPA estimates that soil with lead concentrations above 2,400 mg/kg (an estimated 7% of the excavated yards at OU1) will exceed the TC regulatory threshold. EPA considers the soils that exceed the TC regulatory threshold to be principal threat waste, and under Alternative 4A, the principal threat wastes would be treated.

Pre-remedial sampling would be conducted at impacted properties to determine the approximate excavation depth required in each yard. The maximum excavation depth would be 24 inches, but may be less than 24 inches at many properties. Confirmation samples would be collected as needed during the excavation work to determine the final excavation depth (up to 24 inches) and to confirm that all soils exceeding RALs within the top 24 inches were excavated. If contaminated soil is identified at a depth greater than 24 inches bgs, a visual barrier such as orange construction fencing or landscape fabric would be placed above the contaminated soil and beneath the clean backfill soil. In such instances, institutional controls would be implemented, in the same way as described in Alternative 3, to ensure that users of the property are not exposed to COCs in soil. Unlike the ICs for Alternative 3, however, the ICs for Alternative 4A would not limit gardening to raised beds.

Based on the results of the RI, the native sand/soil horizon is estimated to be no more than 24 inches bgs and is clean. During the RI, native sand was encountered at most sample locations between 0 and 24 inches bgs. For this reason, EPA expects that excavating to a maximum depth of 24 inches under Alternative 4A would remove all of the soil exceeding RALs at the majority of the impacted yards within OU1.

Since no local stockpile area has been identified, EPA assumes that soil would be loaded directly into roll-off containers and transported to the landfill. If a stockpiling location is identified that is acceptable to the community, then excavated soils could be stockpiled prior to being transported off-site for disposal.

Excavated soil would be replaced with clean soil, including 6 inches of top soil, to maintain the original grade. Each yard would be restored as close as practicable to its pre-remedial condition. Once the properties are sodded or seeded, O&M of the sod or seed, including watering, fertilizing, and cutting, would be conducted for 30 days. After the initial 30-day period, property owners would be responsible for the maintenance of their own yards. Because some soil exceeding RALs would likely be left in place at OU1 (e.g., within some yards deeper than 24 inches bgs), a five-year review would be required in accordance with CERCLA. After remediation is complete, this alternative would allow for the continued residential use of impacted yards.

Alternative 4B - Excavation to Native Sand + Off-site Disposal + Ex-situ Treatment Option

Estimated Capital Cost: \$37,760,000

Estimated Total O&M Cost: \$0

Cost Estimate Contingency: \$7,560,000

Estimated Present Worth Cost: \$45,400,000

Estimated Construction Timeframe: 40 months

Alternative 4B would achieve the RAO of preventing exposure to contaminated soil by removing all of the soil at impacted yards to the native sand, even if some of the excavated soils do not exceed RALs. EPA has observed that lead is not found in the native sand layer. Under this alternative, EPA would not collect confirmation samples during the excavation work. Instead, EPA would assume that, for yards that have soils exceeding the RALs, complete removal of all

soils above the native sand layer would achieve the RAO. The goal of this alternative is the total removal of soil at identified yards down to the native sand, disposal of excavated soil at an off-site Subtitle D landfill, and, as necessary, chemical stabilization of some excavated soil to address lead concentrations that exceed the TC regulatory threshold. EPA considers the soils that exceed the TC regulatory threshold to be principal threat waste, and under Alternative 4B, the principal threat wastes would be treated.

Soil in those yards that have RAL exceedances would be excavated from the surface grade down to the native sand/soil horizon without pre-remedial testing to determine the depth of contamination. Based on the results of the RI, the native sand/soil horizon is estimated to be no more than 24 inches bgs. During the RI, native sand was encountered at most sample locations between 0 and 24 inches bgs. RI results indicated that the native sand beneath the fill soils is both clean and by sight very easily distinguished from soil and fill material. The cost estimate for this alternative assumes that all soil above the native sand would be excavated and disposed offsite with no post-excitation confirmation samples.

Since no local stockpile area has been identified, EPA assumes that soil would be loaded directly into roll-off containers and transported to the landfill. If a stockpiling location is identified that is acceptable to the community, then excavated soils could be stockpiled prior to being transported off-site for disposal.

Excavated soil would be replaced with clean soil, including 6 inches of top soil, to maintain the original grade. Each yard would be restored as close as practicable to its pre-remedial condition. Once the properties are sodded or seeded, O&M of the sod or seed, including watering, fertilizing, and cutting, would be conducted for 30 days. After the initial 30-day period, property owners would be responsible for the maintenance of their own yards. This alternative would result in the removal of all impacted soils (since excavations would go down to the native sand, and the native sand layer is clean). No institutional controls would be needed, and CERCLA would not require five-year reviews because waste would not be left in place above levels that allow for unlimited use and unrestricted exposure. After remediation is complete, this alternative would allow for the continued residential use of impacted yards.

2.10 – Comparative Analysis of Alternatives

As required by CERCLA, nine criteria were used to evaluate the different remediation alternatives individually and against each other in order to select a remedy. This section of the *Record of Decision* summarizes the performance of each alternative against the nine criteria and notes how they compare to the other options under consideration.

The nine evaluation criteria fall into three groups: threshold criteria, primary balancing criteria, and modifying criteria. Threshold criteria, which include overall protection of human health and the environment and compliance with ARARs, are requirements that each alternative must meet in order to be eligible for selection. Primary balancing criteria, which include long-term effectiveness and permanence, reduction of toxicity, mobility, or volume of contaminants through treatment, short-term effectiveness, implementability, and cost, are used to weigh major trade-offs among alternatives. Modifying criteria, which include state/support agency

acceptance and community acceptance, can be fully considered only after public comment is received on the Proposed Plan, so were not evaluated in the FS. In the final balancing of trade-offs between alternatives, upon which the final remedy selection is based, modifying criteria are of equal importance to the balancing criteria. The nine evaluation criteria are discussed below.

2.10.1 - Overall Protection of Human Health and the Environment

This criterion assesses how well the alternatives achieve and maintain protection of human health and the environment.

Alternative 1 (No Action) would provide no improvement over current conditions, would provide no risk reduction, and would not be protective of human health or the environment.

Alternatives 3, 4A, and 4B are each expected to be effective remedies for OU1 that would be protective of human health and the environment. Protection of human health and the environment would be achieved by addressing potential pathways of exposure to contaminated soils. Alternative 3 relies on a soil cover and compliance with institutional controls, such as restricting gardens to raised beds, to achieve protectiveness. Alternatives 4A and 4B would achieve protectiveness through removal of contaminated soils. As discussed in Section 2.5.1, the exposure pathways through which people can be exposed to the lead- and arsenic-contaminated surface and subsurface soils at OU1 are ingestion, direct contact, and inhalation.

Ingestion of contaminated soils in yards is the primary exposure route at OU1. Residents may be exposed to contaminants adhering to soils through ingestion of homegrown produce or through direct ingestion of contaminated soil. Alternatives 3, 4A, and 4B are all considered effective at preventing ingestion of contaminants.

Exposure to contaminated soils through direct contact may result from recreational activities, gardening, landscaping, or excavation activities. Each of the active alternatives would prevent most direct contact by covering or removing the contaminated soils. However, direct contact may be more likely to result from unauthorized excavation activities under Alternative 3 because the contaminated soils would remain in place under a soil cover that is only 12 inches thick.

Exposure through inhalation would most likely occur through windborne transport of contaminated dust and soil due to the COCs' low volatility and strong tendency to adsorb to soil particles. Each of the active alternatives would prevent exposure to contaminated dust over the long term by removing or covering the contaminated soils. However, the remedial activities may generate dust and cause short-term exposure, particularly under Alternatives 4A and 4B, which would excavate contaminated soils.²

Alternatives 3, 4A, and 4B address potential exposure to contaminants by covering or removing the contaminated soil. Alternative 4B would eliminate all potential exposure pathways because

² Any dust generated under Alternative 3 would be created by the placement of clean soils as cover material, since excavation of contaminated soils is not part of that alternative.

all of the soil at yards that exceed the RALs would be removed down to native sand. Alternatives 3 and 4A would reduce or eliminate potential exposure pathways. Alternative 3 would leave contaminated soil behind at all properties under a 12-inch soil cover, and EPA would rely on institutional controls (such as prohibiting excavation work deeper than 12 inches and limiting gardening to raised beds) to prevent exposure. Alternative 4A would leave contaminated soil in place at some properties at depths greater than 24 inches. At those properties where contaminated soil remains at depth, EPA would rely on institutional controls (such as prohibiting excavation of contaminated soils) to prevent exposure.

Each active remedial alternative is expected to be protective of human health and the environment, provided that the cover is properly maintained under Alternative 3 and institutional controls are effective under Alternatives 3 and 4A. Active Alternatives 3 and 4A could allow exposure to contaminated soils through unauthorized excavation, if institutional controls are not effective. The potential for such exposure is highest for Alternative 3 where the greatest volume of contaminated soils would remain in place.

2.10.2 - Compliance with Applicable or Relevant and Appropriate Requirements

This criterion assesses how the alternatives comply with regulatory requirements. Federal and state regulatory requirements that are either applicable or relevant and appropriate are known as ARARs. Only state requirements that are more stringent than federal requirements are ARARs. There are three different categories of ARARs: chemical-specific, action-specific, and location-specific ARARs. Potential ARARs were identified during the FS and were included in Table 1 of EPA's July 2012 Proposed Plan.

Alternatives 3, 4A and 4B would all comply with ARARs. Alternative 1 would not comply with ARARs.

The ARARs that have been identified for the Selected Remedy are included in this ROD as Appendix B.

2.10.3 - Long-term Effectiveness and Permanence

This criterion evaluates the effectiveness of the alternatives in protecting human health and the environment in the long term, after the cleanup is complete.

Alternative 1 would not provide any degree of long-term effectiveness or permanence because no action would be taken. Each of the remaining, active alternatives would meet the RAO and provide long-term effectiveness and permanence once the RAO is met. The active alternatives are combinations of proven and reliable remedial processes, and the potential for failure of any individual component is low. The evaluation of the active alternatives against this criterion resulted in the following findings:

- Alternative 3 would achieve long-term effectiveness through covering the metals-contaminated soil onsite as the primary component of the remedy, with O&M and

institutional controls to ensure and verify the ongoing effectiveness and permanence of the remedy. Implementation of Alternative 3 would introduce topographic changes to the properties that would need to be maintained to ensure protectiveness. Therefore, the long-term effectiveness of this alternative is completely dependent on (1) O&M to prevent erosion and potential exposure to contaminated soils that remain in place, and (2) institutional controls to prevent unauthorized activities that could result in exposure to contaminated soils that remain in place.

- Alternative 4A would achieve long-term effectiveness by removing soil that exceeds RALs and disposing of it at an off-site disposal facility. Alternative 4A would likely leave some contaminated material in place deeper than 24 inches bgs if the contamination exceeding RALs extends deeper than 24 inches. (Native sand was encountered above 24 inches bgs at all but a few locations in OUI where borings were advanced.) Any material exceeding RALs that is left in place would require O&M and institutional controls to maintain the effectiveness and permanence of the remedy.
- Alternative 4B would achieve long-term effectiveness by removing all non-native soils down to native sand (estimated to be no more than 24 inches bgs at most properties) from yards that exceed RALs and disposing of those soils at an off-site disposal facility.

Alternatives 3, 4A, and 4B are all proven methodologies that meet the requirements for long-term effectiveness and permanence. Compared to Alternative 3, Alternatives 4A and 4B would provide an additional level of protectiveness because wastes above RALs would be removed and sent off-site for disposal. Alternative 4B would provide the greatest degree of long-term effectiveness and permanence because all soil exceeding RALs would be removed from impacted yards.

2.10.4 - Reduction of Toxicity, Mobility, or Volume through Treatment

This criterion addresses the preference for selecting remedial actions that use treatment technologies that permanently and significantly reduce the toxicity, mobility, or volume of the hazardous substances. This preference is satisfied when treatment is used to reduce the principal threats at a site through destruction of toxic contaminants, reduction of the total mass of toxic contaminants, irreversible encapsulation, or reduction of total volume of contaminated media.

EPA has estimated that approximately 7% of the soils at OUI have lead concentrations that exceed the TC threshold and that would therefore be considered hazardous waste. These soils are considered principal threat wastes due to their toxicity and potential to leach to groundwater.

Alternatives 1 and 3 would not reduce the toxicity, mobility, or volume of contaminated materials since no treatment would be applied. Alternatives 4A and 4B would reduce the toxicity and mobility of those soils with lead levels that exceed the TC threshold through the use of ex-situ treatment prior to disposal. The amount of material requiring treatment is expected to be the same for Alternatives 4A and 4B. The treatment used under Alternatives 4A and 4B would not reduce the volume of contaminated materials.

2.10.5 - Short-term Effectiveness

This criterion examines the effectiveness of the alternatives in protecting human health and the environment during implementation of the cleanup until the cleanup is complete. It considers protection of the community, workers, and the environment during the cleanup. For OU1, the short-term effectiveness criterion is primarily related to the volume of contaminated soils addressed in each alternative, the time necessary to implement the remedy, potential risks to workers, and potential impacts to the community during implementation of the remedy.

Each of the active alternatives would have short-term impacts that include increased potential for exposure to lead-contaminated soils and construction-related risks. Potential for exposure to lead-contaminated soils would increase in the short term through creation of dust during excavation activities and increased potential for workers to come in contact with lead-contaminated soils above RALs. Construction-related risks include the potential for vehicle accidents, traffic and noise from construction vehicles, increased wear on local roads, and other risks associated with construction work. These impacts can be mitigated by implementing a project-specific health and safety plan, keeping excavation areas properly wetted to reduce dust generation, planning truck routes to minimize disturbances to the surrounding community, and using other best management practices.

There are no short-term impacts associated with Alternative 1 since no action would be taken. Of the action alternatives, Alternative 3 requires the least disturbance of lead-contaminated soils and the shortest duration of construction. Compared to Alternative 3, Alternatives 4A and 4B present greater short-term impacts because they require a greater amount of material to be moved to and from the site. Construction of these alternatives would also take longer than Alternative 3. The duration of construction work for the action alternatives progresses from an estimated 18 months for Alternative 3, to 26 months for Alternative 4A, to 40 months for Alternative 4B. Increasing the duration of construction means increased truck traffic, potential for vehicle accidents, construction-related and exposure risks to workers, as well as extending the time during which the local community would be subjected to increased dust and noise.

2.10.6 - Implementability

This criterion assesses the technical and administrative feasibility of an alternative and the availability of required goods and services. Technical feasibility considers the ability to construct and operate a technology and its reliability, the ease of undertaking additional remedial actions, and the ability to monitor the effectiveness of a remedy. Administrative feasibility considers the ability to obtain approvals from other parties or agencies and the extent of required coordination with other parties or agencies.

Alternative 1 could easily be implemented as no action would be taken. Alternatives 3, 4A, and 4B are proven, could be readily implemented, and have been used successfully for other environmental cleanup projects. In addition, Alternatives 3, 4A, and 4B could all be completed using readily available conventional earth-moving equipment. EPA expects that most of the necessary services and construction materials are readily available. Qualified commercial contractors with experience are available locally to perform the work.

Alternative 3 would be more difficult to implement than Alternatives 4A and 4B since it requires a more detailed remedial design plan to maintain safe grading for each of the contaminated yards. Raising the grade of each impacted yard by 12 inches under Alternative 3 would pose technical and administrative challenges. The areas where the soil cover must be tied into the existing grade (such as at streets) would require excavation and would likely erode more rapidly than the surrounding areas. This could pose physical safety concerns for the elderly and young. Each yard would need to undergo a custom remedial design to achieve proper storm water drainage.

All of the alternatives are administratively feasible. Although no permits would be required, a similar level of coordination would be needed with state and local parties during design and construction activities for the action alternatives. However, Alternative 3 would likely be more difficult to implement because property owners may not want the grade of their properties raised by 12 inches; access may therefore be difficult to obtain.

2.10.7 - Cost

This criterion evaluates the capital and operation and maintenance costs of each alternative. Present-worth costs are presented to help compare costs among alternatives with different implementation times.

The present worth costs for the alternatives are presented within the descriptions of alternatives in Section 2.9.2 of this ROD. The detailed cost estimates and associated assumptions for all alternatives are in the FS and other documents within the administrative record. The cost estimates are consistent with the level of estimation required in the FS phase. The estimate is within a range of accuracy of +50 to -30 percent. A final cost estimate will be developed and refined during the remedial design process.

Alternative 1 has no associated capital or O&M costs since no action would be taken. The remaining three alternatives are progressively more expensive. Alternative 3 is the least costly action alternative (\$20.9 million) and Alternative 4A is the next most costly option (\$29.9 million). Alternative 4B is the most costly alternative (\$45.4 million), costing more than twice as much as Alternative 3. The cost savings anticipated to be realized in Alternative 4B by not collecting and analyzing post-excavation confirmation samples are more than offset by the increased cost of handling and transporting for off-site disposal a greater volume of soil, since the process of removing all soils down to the native sand would include soils that do not exceed the RALs.

2.10.8 - State/Support Agency Acceptance and Community Acceptance

State/support agency acceptance considers the state's preferences among or concerns about the alternatives, including comments on regulatory criteria or proposed use of waivers. Community acceptance considers the community's preferences or concerns about the alternatives.

The State of Indiana supports the selection of Alternative 4A as the Selected Remedy. The State's concurrence letter is included as Appendix A.

During the public comment period, the community expressed general support for Alternative 4A, although some citizens and the City of East Chicago supported Alternative 4B. All attendees who expressed their opinion at the proposed plan public meeting strongly disliked Alternative 3. A complete list of the public comments and EPA's response to the comments is contained in the *Responsiveness Summary*, which is Part 3 of this ROD. In addition, the transcript from the proposed plan public meeting is included in the administrative record.

2.10.9 – Comparative Analysis Summary

Appendix C provides a summary, in table form, of the comparative analysis of the alternatives described in Sections 2.10.1 through 2.10.8 above.

2.11 – Principal Threat Waste

The NCP establishes an expectation that EPA will use treatment to address the principal threats posed by a site wherever practicable (NCP §300.430(a)(1)(iii)(A)). Identifying principal threat wastes combines concepts of both hazard and risk. In general, principal threat wastes are those source materials considered to be highly toxic or highly mobile which generally cannot be contained in a reliable manner or will present a significant risk to human health or the environment should exposure occur. Conversely, low-level threat wastes are those source materials that generally can be reliably contained and that will present only a low risk in the event of exposure. The manner in which principal threats are addressed generally will determine whether the statutory preference for treatment as a principal element is satisfied.

Wastes that generally will be considered to constitute principal threats include but are not limited to the following:

- **Liquid source material** - wastes contained in drums, lagoons or tanks, or free product in the subsurface (i.e., non-aqueous phase liquids) containing contaminants of concern (generally excluding groundwater).
- **Mobile source material** - surface soil or subsurface soil containing high concentrations of chemicals of concern that are (or potentially are) mobile due to wind entrainment, volatilization (e.g., volatile organic compounds), surface runoff, or subsurface transport.
- **Highly toxic source material** – buried, drummed non-liquid wastes; buried tanks containing non-liquid wastes; or soils containing significant concentrations of highly toxic materials.

Wastes that generally will not constitute principal threats include but are not limited to the following:

- **Non-mobile contaminated source material of low to moderate toxicity** - surface soil containing chemicals of concern that generally are relatively immobile in air or

groundwater (i.e., non-liquid, low volatility, low leachability contaminants such as high molecular weight compounds) in the specific environmental setting.

- **Low toxicity source material** - soil and subsurface soil concentrations not greatly above reference dose levels or that present an excess cancer risk near the acceptable risk range if exposure were to occur.

At OU1 of the USS Lead site, EPA considers soils with lead concentrations exceeding the TC threshold to be principal threat waste that requires chemical stabilization prior to disposal. Without treatment, lead from such soils could potentially leach to groundwater.

Cleanup Alternatives 4A and 4B will best address the principal threat wastes at OU1 by chemically stabilizing those soils with lead concentrations above the TC threshold prior to disposal.

2.12 – Selected Remedy

The Selected Remedy for OU1 of the USS Lead Site is Remedial Alternative 4A: Excavation of Soil Exceeding RALs + Off-site Disposal + *Ex-situ* Treatment Option.

Summary of the Rationale for the Selected Remedy

EPA chose Alternative 4A as the Selected Remedy because it represents the best balance of the evaluation criteria among all the alternatives. Alternative 4A meets the RAO of reducing exposure of residents to contaminated soils that pose a health risk through the removal and off-site disposal of those soils, and allows for the continued residential use of impacted residential properties within OU1. Alternative 4A is more easily implemented and requires fewer restrictions on property use than Alternative 3, which involves placing a soil cover on the contaminated soil. Alternative 4A also reduces risk within a more reasonable time frame and at a lower cost than the other excavation alternative (Alternative 4B), and provides for long-term reliability of the remedy.

Based on the information available at this time, EPA and the State of Indiana believe that the Selected Remedy will (1) be protective of human health and the environment, (2) comply with ARARs, (3) be cost-effective, and (4) utilize permanent solutions and alternative treatment technologies to the maximum extent practicable. Because it will treat those soils constituting principal threats, the remedy also will meet the statutory preference for the selection of a remedy that involves treatment as a principal element.

Description of the Selected Remedy

The Selected Remedy achieves protectiveness by removing impacted soil that exceeds RALs, to a maximum excavation depth of 24 inches, while leaving in place soils with concentrations below the RALs. The RALs for lead are 400 mg/kg at residential properties and 800 mg/kg for commercial/industrial properties. The RAL for arsenic is 26 mg/kg. Under the Selected Remedy, soil exceeding RALs will be excavated from impacted yards within OU1 to a maximum depth of 24 inches bgs and transported off-site for disposal at a Subtitle D landfill.

Excavated soil that exceeds the TC regulatory threshold will be chemically stabilized prior to disposal. EPA estimates that soil with lead concentrations above 2,400 mg/kg (an estimated 7% of the excavated yards at OU1) exceeds the TC regulatory threshold and considers these soils to be principal threat waste.

Pre-remedial sampling will be conducted at impacted properties to determine the approximate excavation depth required in each yard, and confirmation samples will be collected as needed during the excavation work to confirm that all soils exceeding RALs within the top 24 inches were excavated. If contaminated soil is identified at a depth greater than 24 inches bgs, a visual barrier such as orange construction fencing or landscape fabric will be placed above the contaminated soil and beneath the clean backfill soil. In such instances, institutional controls will be implemented to ensure that users of the property are not exposed to COCs in soil. The institutional controls will be deed restrictions that will require the use of the proper procedures for handling contaminated material in the event that any future excavation work must intrude into the underlying contamination.

EPA assumes that soil will be loaded directly into roll-off containers and transported to the landfill for disposal. If a stockpiling location that is acceptable to the community is identified, then excavated soils could be stockpiled prior to being transported to the landfill.

Excavated soil will be replaced with clean soil, including 6 inches of top soil, to maintain the original grade. Each yard will be restored as close as practicable to its pre-remedial condition. Once the properties are sodded or seeded, O&M of the sod or seed, including watering, fertilizing, and cutting, will be conducted for 30 days. After the initial 30-day period, property owners will be responsible for the maintenance of their own yards. Since some soil exceeding RALs will likely be left in place at OU1 (e.g. within some yards deeper than 24 inches bgs), statutory five-year reviews of the remedy will be required in accordance with CERCLA.

Summary of the Estimated Remedy Costs

The estimated cost of implementing the Selected Remedy at OU1 is \$29.9 million. A detailed cost estimate for the Selected Remedy, Alternative 4A, is included as Appendix D. The cost estimate is based on the best available information regarding the anticipated scope of the remedial alternative. Changes in the cost elements are likely to occur as a result of new information and data that will be collected during the remedial design phase. This is an order-of-magnitude engineering cost estimate that is expected to be within +50 to -30 percent of the actual project cost.

Expected Outcome of the Selected Remedy

The expected outcome of the Selected Remedy is that residents in OU1 will no longer be exposed to soil that poses a threat to human health. The land use of the properties will remain unchanged, and the Selected Remedy will allow for the continued residential use of impacted yards. As noted above, some properties may require institutional controls, for those situations where contamination remains in place at depths greater than 24 inches bgs.

2.13 – Statutory Determinations

Under CERCLA §121 and the NCP, the lead agency must select remedies that are protective of human health and the environment, comply with applicable or relevant and appropriate requirements (unless a statutory waiver is justified), are cost-effective, and utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. In addition, CERCLA includes a preference for remedies that employ treatment that permanently and significantly reduces the volume, toxicity, or mobility of hazardous wastes as a principal element and a bias against off-site disposal of untreated wastes. The following sections discuss how the Selected Remedy meets these statutory requirements.

Protection of Human Health and the Environment

The current and potential future risks at OU1 are due to the presence of lead and arsenic in residential soils. Implementation of the Selected Remedy, Alternative 4A, will be protective of human health and the environment through the removal of soils with lead concentrations above 400 mg/kg at residential properties, schools and parks, 800 mg/kg at commercial or industrial properties, and/or arsenic concentrations above 26 mg/kg. The site-specific RAO was developed to protect current and future receptors that are potentially at risk from exposure to the contaminants at OU1. The Selected Remedy will achieve the RAO. Institutional controls will be employed at those properties where contamination is left in place at depths greater than 24 inches bgs in order to ensure that the remedy remains protective.

Compliance with Applicable or Relevant and Appropriate Requirements

Section 121(d) of CERCLA requires that Superfund remedial actions meet ARARs. Appendix B provides all ARARs that have been identified for the remedial action. The Selected Remedy will comply with the identified ARARs.

Cost-Effectiveness

EPA has concluded that the Selected Remedy is cost-effective and represents a reasonable value for the money to be spent. In making this determination, the following definition was used: “A remedy shall be cost-effective if its costs are proportional to its overall effectiveness” (NCP §300.430(f)(1)(ii)(D)). For OU1, this determination was made by evaluating the “overall effectiveness” of those alternatives that satisfied the threshold criteria (i.e., were both protective of human health and the environment and ARAR-compliant). Overall effectiveness was evaluated by assessing three of the five balancing criteria in combination (long-term effectiveness and permanence; reduction in toxicity, mobility, and volume through treatment; and short-term effectiveness). Overall effectiveness was then compared to costs to determine cost-effectiveness. The relationship of the overall effectiveness of the Selected Remedy was determined to be proportional to its costs. The Selected Remedy therefore represents a reasonable value for the money to be spent.

Utilization of Permanent Solutions and Alternative Treatment Technologies (or Resource Recovery Technologies) to the Maximum Extent Practicable

EPA has determined that the Selected Remedy for OU1 represents the maximum extent to which permanent solutions and treatment technologies can be utilized in a practicable manner. Of those alternatives that are protective of human health and the environment and comply with ARARs, EPA has determined that the Selected Remedy provides the best balance of trade-offs in terms of the five balancing criteria, while also considering the statutory preference for treatment as a principal element and bias against off-site disposal, and considering state and community acceptance. The Selected Remedy removes the contaminated soils at OU1 from the top 24 inches of impacted yards, and treats those materials constituting principal threats. The Selected Remedy therefore provides a permanent solution for both the low-level and principal threat wastes at OU1 that is effective in the long term, and achieves significant reductions in leachability to groundwater. The short-term risks associated with the Selected Remedy are greater than those presented by Alternative 3 and less than those presented by Alternative 4B, but those risks are offset by implementability and cost considerations.

Preference for Treatment as a Principal Element

By treating those soils that exceed the TC threshold prior to disposal, the Selected Remedy addresses the principal threats posed at OU1 through the use of chemical stabilization treatment technologies. By utilizing treatment as a portion of the remedy, the Selected Remedy satisfies to the maximum extent practicable the statutory preference for remedies that employ treatment as a principal element.

Five-Year Review Requirements

Because this remedy will likely result in hazardous substances, pollutants, or contaminants remaining on-site, at depth but above levels that allow for unlimited use and unrestricted exposure, a statutory review will be conducted within five years after initiation of the remedial action to ensure that the remedy is, or will be, protective of human health and the environment.

2.14 – Documentation of Significant Changes

The Proposed Plan for OU1 was released for public comment on July 12, 2012. The Proposed Plan identified as the preferred alternative Remedial Alternative 4A, Excavation of Soil Exceeding RALs + Off-site Disposal + *Ex-situ* Treatment Option. After carefully reviewing all written and verbal comments submitted during the public comment period, EPA has determined that no significant changes to the remedy as originally identified in the Proposed Plan are necessary or appropriate. While not considered a significant change, EPA notes that the cost estimates and estimated construction timeframes for Alternatives 3, 4A and 4B are slightly different in the ROD than in the Proposed Plan. After release of the Proposed Plan, the cost and time estimates were revised as a result of refined estimates of the volume of contamination that would need to be addressed under each of the alternatives. The revised cost and time estimates neither impact the outcome of the comparison of alternatives nor alter EPA's selection of Alternative 4A as the Selected Remedy.

Part 3 – Responsiveness Summary

The Proposed Plan for the USS Lead Site was released for public comment on July 12, 2012. At the request of the City of East Chicago, Indiana, EPA extended the public comment period for thirty days until September 12, 2012. EPA held a public meeting in East Chicago, Indiana, on July 25, 2012, to describe the Proposed Plan and answer questions about the different cleanup alternatives. The public meeting also provided the community with an opportunity to comment on the proposed cleanup alternative and the other alternatives evaluated. EPA received several general comments and a few technical comments at the public meeting. Additional comments were provided to EPA in writing during the comment period. These comments and responses are divided into two parts in this *Responsiveness Summary*. Part 1 includes general stakeholder issues and lead agency responses. Part 2 includes specific technical comments related to the alternatives evaluated in the Proposed Plan.

3.1 – Stakeholder Comments and Lead Agency Responses

Comment: A resident expressed support for EPA's preferred remedy (Alternative 4A).

Response: EPA has noted the support.

Comment: Two persons stated that EPA should select Alternative 4B.

Response: EPA carefully considered Alternative 4B during its comparative analysis of the various cleanup alternatives. Under Alternative 4B, impacted yards would be excavated down to native sand without confirmation sampling, which means that clean soils that do not exceed RALs would also be excavated and transported off-site for disposal along with contaminated soils. EPA selected Alternative 4A, which excavates contaminated soils to a maximum depth of 24 inches and includes confirmation sampling, because it represents the best balance of the evaluation criteria. EPA determined that Alternative 4B is not significantly more protective in the long term than Alternative 4A. It is, however, much more expensive, would take longer to implement, and would pose higher short-term risks to the community than Alternative 4A. Because Alternative 4B is estimated to cost about \$15 million more than Alternative 4A while providing only an insignificant increase in long-term effectiveness, it is much less cost effective than Alternative 4A. Both alternatives remove all of the soils above RALs that pose a risk to residents – namely the contamination within the top two feet of impacted yards.

Comment: Several persons commented that EPA should conduct medical testing of residents in the area, particularly lifelong residents. One commenter stated that she is a life-long resident of the area and suffer from illnesses.

Response: EPA does not intend to conduct medical testing as a part of the remedy. EPA is confident that the remedy, once implemented, will reduce to an acceptable level the risk to human health and the environment posed by lead- and arsenic-contaminated soils. Section 104 of CERCLA (the Superfund law) authorized the creation of the Agency for Toxic Substances and Disease Registry (ATSDR). ATSDR has the primary

responsibility at the federal level for performing health assessments. The Indiana Department of Health and the Lake County, Indiana, Department of Health may also be better positioned to address these concerns.

Comment: A commenter requested that EPA conduct health studies on residents in conjunction with implementation of the remedy. The commenter stated that they are a life-long resident of the area and suffer from illnesses.

Response: EPA conducts cleanups based upon the current or future risk of human or environmental exposure to contaminated material. This approach is conservative in that there does not need to be actual current exposure – or evidence of adverse impacts to human health or the environment – for EPA to require a cleanup. Health studies are based upon current conditions and at USS Lead would reflect how current residents are using their yards. As future residents may use yards differently than current residents, health studies done on current residents may not reflect future health risks posed to future residents. For these reasons, EPA does not conduct health studies as a part of the remedy selection process.

Comment: EPA should not dispose of contaminated soil removed from the USS Lead Site at the new East Chicago Landfill.

Response: EPA does not yet know where the contaminated soil excavated from OUI will be sent for disposal. EPA does not always select the disposal location during the remedy selection process, but does require that the disposal location be permitted to accept the waste materials from the site and be in compliance with federal and state regulations. EPA will decide where to dispose of the contaminated soil from OUI during the remedial design phase.

Comment: One commenter stated that he did not believe the soil at his property is contaminated and for that reason does not want his property excavated.

Response: EPA will respect the wishes of individual homeowners if they refuse access to their property, though it strongly encourages homeowners to allow their yards to be tested and remediated if appropriate. All testing and cleanup work will be conducted at no cost to the property owner.

Comment: The City of East Chicago commented that EPA should consider area restoration and reuse and partner with the city throughout the cleanup process.

Response: The area that makes up OUI of the USS Lead Site is predominantly residential. EPA's Selected Remedy will maintain current land uses within OUI. Further, the Selected Remedy does not prevent construction or redevelopment at any property within OUI, although if any properties have contamination left behind deeper than 24 inches bgs, institutional controls would require that all subsurface work at those properties be done in accordance with approved procedures. Additionally, EPA will communicate and coordinate closely with the city during the OUI cleanup process.

3.2 – Technical and Legal Issues

Comment: EPA should evaluate use of the USS Lead property as a disposal facility.

Response: EPA does not intend to dispose of contaminated material at the USS Lead facility (OU2) for the following reasons: (1) The residential portion of the USS Lead Site is located within an environmental justice community that is already home to several disposal facilities. Further disposal at the USS Lead property, immediately adjacent to the southern edge of OU1, would increase the environmental burden already borne by the residents of OU1; (2) contamination still remains at the USS Lead property that requires further evaluation; and, (3) some of the material that will be excavated and require disposal will be a hazardous waste; the corrective action management unit located within the USS Lead facility is not a hazardous waste landfill and cannot accept such wastes.

Comment: The ATSDR's January 27, 2011, report does not support EPA's determination that the USS Lead Site requires a cleanup.

Response: ATSDR's statement that, "Breathing the air, drinking tap water or playing in soil in neighborhoods near the USS Lead Site is not expected to harm people's health," is based upon low blood lead levels in children within East Chicago. In determining whether to perform response actions, EPA evaluates the current and potential threats to human health and the environment posed by exposure to hazardous substances. EPA estimates these threats by using risk calculations that are based upon the physical characteristics of the site and the general characteristics of the hazardous substances. Present day blood lead levels reflect neither current nor future risk of exposure. EPA has analyzed the current and potential threats posed by contaminated soil within the residential portion of the USS Lead Site and concluded that soils with lead levels exceeding 400 mg/kg and arsenic levels exceeding 26 mg/kg pose a risk to the health of residents living within OU1. EPA has concluded that these conditions require it to undertake response actions.

Comment: Several persons commented that a RAL for lead of 400 mg/kg is too conservative. They recommended that EPA calculate a site-specific Preliminary Remediation Goal for lead and noted that the RAL of 400 mg/kg (the standard output from the IEUBK model) is not site-specific. They also stated that EPA should perform a bioavailability study for the site, and argued that a bioavailability study would likely conclude that lead in the residential portion of the USS Lead Site poses a low risk because it is not readily bioavailable.

Response: EPA did evaluate the use of site-specific inputs for the IEUBK model but decided to use the IEUBK model set to the general default parameters. EPA compared the available site-specific data with the default parameters and concluded that the site-specific information was not significantly different from the default inputs. For example, EPA looked at lead uptake through drinking water at the USS Lead site. The source drinking water lead data is from samples collected annually by the City of East Chicago at 30 residential taps within East Chicago. In 2011, the lead in drinking water in East Chicago was reported as 3.6 ppb (or 4 ppb if you round up to the nearest integer). The

default drinking water input for the IEUBK model is 4 ppb. As these concentrations are not significantly different, EPA deemed it appropriate to use the base input parameter.

Comment: EPA should not select cleanup Alternative 4A (excavation with confirmation sampling to a maximum depth of 24 inches) as it is not cost effective. The commenter added that Alternative 3 (installation of a 12-inch soil cap) is cost effective and should be the selected remedy.

Response: EPA determines cost effectiveness by comparing the cost of an alternative with its long-term effectiveness and permanence, reduction of toxicity, mobility, or volume through treatment, and short-term effectiveness. Alternative 3 would leave all contaminated materials in place and would introduce topographic changes to the properties. These changes would need to be maintained to ensure the remedy's permanence and long-term effectiveness. Alternative 4A removes the soil contamination within the top two feet bgs and restores yards to their existing topography, so erosion of soil barriers is not a concern with Alternative 4A. Alternative 4A therefore offers greater long-term effectiveness and permanence than Alternative 3. Alternative 4A represents the best combination of all the balancing criteria. Alternative 4A will also treat those soils considered to be principal threat waste, while the principal threat waste would go untreated in Alternative 3. For these reasons, Alternative 4A is more cost-effective than Alternative 3, despite its higher absolute cost.

Comment: One commenter stated that it is inappropriate for EPA to require the excavation of all soils at yards down to 24 inches if EPA collects a single sample with a concentration of lead above 400 mg/kg.

Response: The commenter's statement is not accurate. Under Alternative 4A, the decision to clean up any given yard will typically be made based on the results of composite soil samples collected from discrete 6-inch horizons. A composite soil sample combines the soil collected from several different areas within the yard, and therefore represents the average concentration in that yard. The only exception to this is that single, discrete soil samples will be considered when evaluating the contamination levels in gardens and play areas. Additionally, contaminated yards will not automatically be excavated to the depth of 24 inches. The maximum excavation depth is 24 inches, but could be less based on the amount of contamination present in a particular yard.

Comment: Alternative 3 would be preferable to the community as it is less intrusive in the community.

Response: During the public meeting on July 25, 2012, the community expressed general disapproval of Alternative 3.

Comment: USS Lead Refinery, Inc. is bankrupt and unable to fund a cleanup.

Response: EPA's remedy selection process is independent of available funding. EPA intends to pursue other potentially responsible parties to design and conduct the Selected Remedy.

Comment: It is unclear if EPA followed the *Superfund Lead-Contaminated Residential Sites Handbook* in consideration of future land use or sampling techniques.

Response: EPA followed the Residential Lead Sites Handbook throughout the RI and FS processes, including sampling techniques and consideration of future land use.

Comment: The *Superfund Lead-Contaminated Residential Sites Handbook* is not straightforward.

Response: EPA disagrees with this comment and is confident in its ability to follow and interpret the cited document.

Comment: Several persons commented that EPA should consider alternative remediation techniques.

Response: EPA did consider alternative remediation techniques during the Feasibility Study. In-situ treatment technologies for soils contaminated with metals largely consist of encapsulation or the introduction of soil amendments to make the metals less bioavailable. These technologies show promise but the duration of their effectiveness is not yet known. It is possible that following treatment, metals over time may again become bioavailable. For these reasons, EPA decided that an alternative treatment technology remedy for OU1 of the USS Lead Site would not be protective of human health and the environment. EPA elected not to carry an alternative remediation technique remedy forward into the final array of cleanup alternatives.

Comment: The City of East Chicago stated its support for Alternative 4B (excavation down to native sand without confirmation sampling) over Alternative 4A (excavation to a maximum depth of 24 inches with confirmation sampling) because the former is more protective than Alternative 4A.

Response: EPA has determined that at OU1 of the USS Lead Site, soils that exceed RALs in the top 24 inches of residential yards pose a threat to current and future residents. Alternative 4A may leave some contaminated soil deeper than 24 inches bgs at a limited number of yards, but EPA has concluded that soil deeper than 24 inches does not pose a risk to residents, and institutional controls will be implemented in situations where contamination remains at depth. Alternative 4B is not significantly more protective in the long term than Alternative 4A. It is, however, much more expensive, would take longer to implement, and would pose higher short-term risks to the community than Alternative 4A. Because Alternative 4B is estimated to cost about \$15 million more than Alternative 4A while providing only an insignificant increase in long-term effectiveness, it is much less cost effective than Alternative 4A. Both alternatives remove all of the soils above RALs that pose a risk to residents – namely the contamination within the top two feet of impacted yards.

Comment: The City of East Chicago supports Alternative 4B over Alternative 4A because excavation to native sand would not leave in place any contaminated soil. If contaminated soil is left in place, the remedy requires the installation of subsurface barriers, maintenance of a soil cover, and the recording of deed restrictions or other requirements for construction activities at some properties located within the site. Alternative 4B is consistent with EPA's *Superfund Lead-Contaminated Residential Sites Handbook* that sets forth EPA's preference for permanent remedies that allow for remediated yards to be returned to unrestricted use. Furthermore, leaving contaminated material below 24 inches will make it more difficult or costly for the city or others to redevelop properties.

Response: EPA recognizes that leaving some contaminated soils in place imposes burdens on the city and affected property owners. EPA has concluded, however, that these burdens do not warrant the expenditure of an additional \$15 million when the expenditure will not yield any greater protection of human health or the environment.

Comment: A reader cannot determine which properties are to be remediated.

Response: EPA intentionally removed references to individual addresses out of concern for the privacy of the property owners.

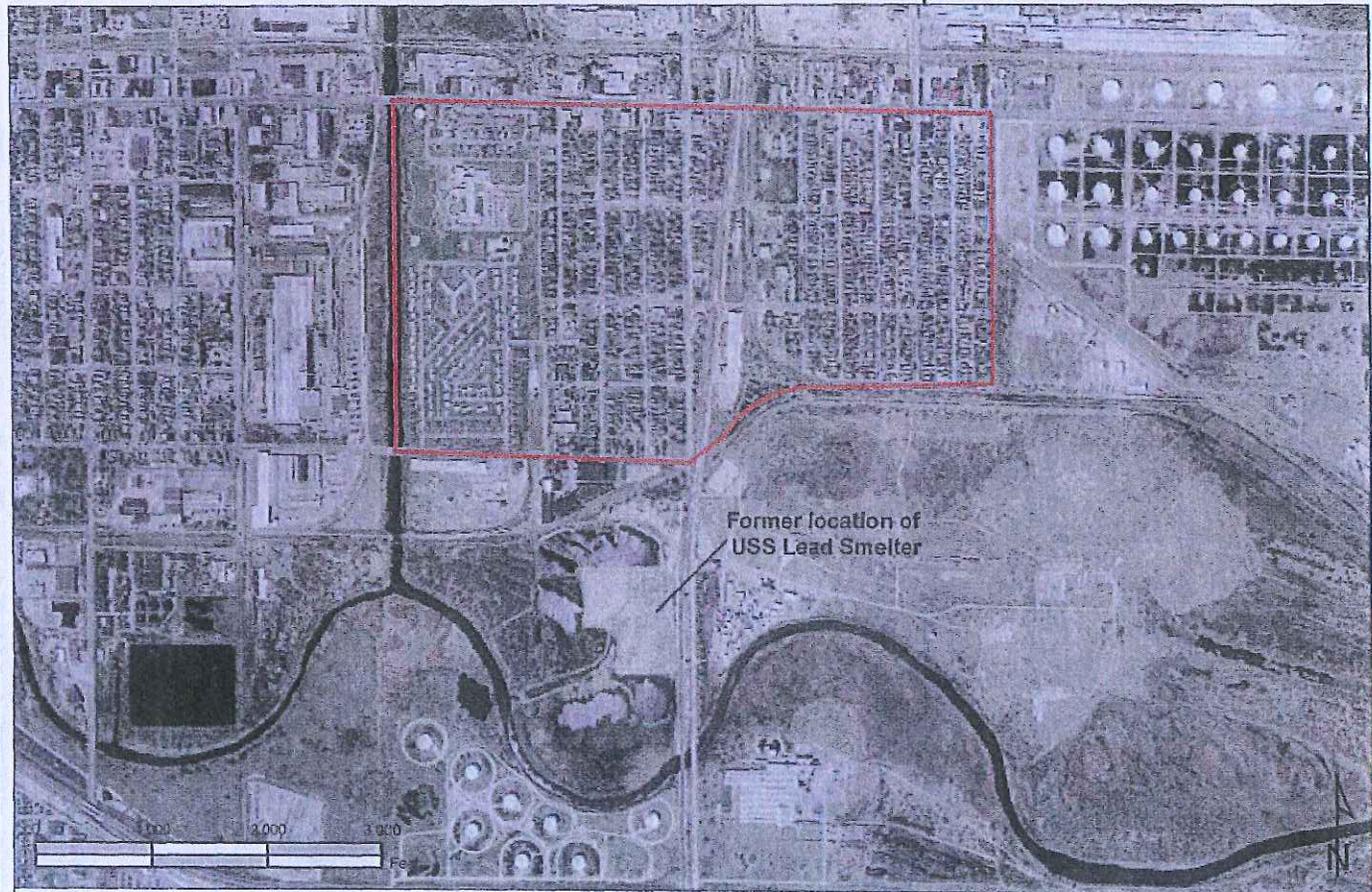
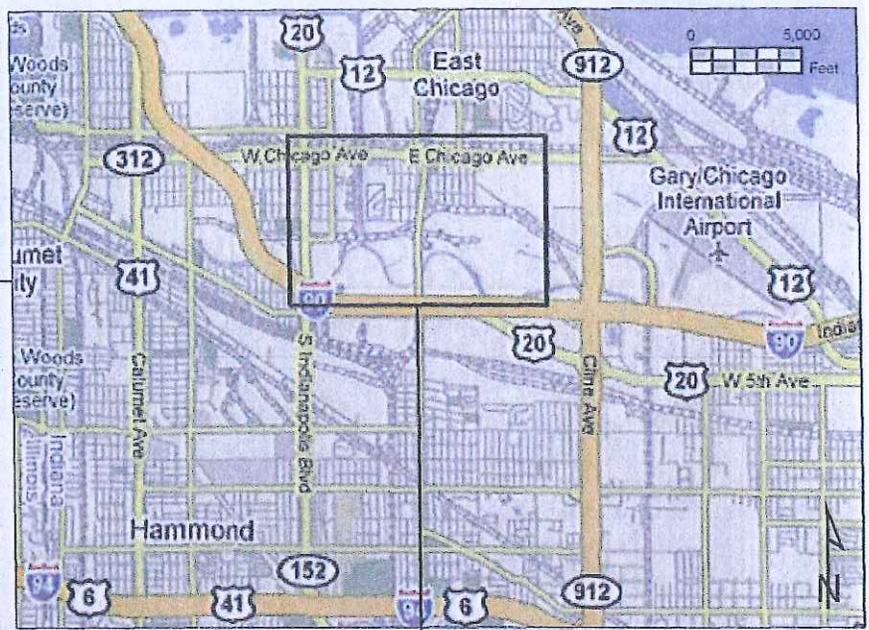
Comment: There are areas of the RI/FS in which EPA's data analysis is not transparent. Also, the text and tables present conflicting information. Finally, steps could be taken to increase the clarity of EPA's data analysis.

Response: EPA is not aware of places within the RI/FS where statements in the text conflict with information presented in the tables. EPA has provided tables to indicate which data were included in statistics and how they were evaluated. The Human Health Risk Assessment Appendix to the RI contains close to 1700 pages of detailed tables that provide the data EPA considered for its evaluation of risks to human health. Section 5.2 of the RI contains a detailed description of the data upon which the RI is based. Section 5.3 of the RI contains a detailed description of the statistical treatment of data and data used for each contaminant of concern.

Comment: It is difficult to follow EPA's calculations for the purpose of estimating remedial volume.

Response: Volume estimates are based on a number of factors, including the number of yards within each sub-area of the site, the average yard size for different types of properties, the proportion of those yards estimated to require cleanup, and the anticipated depths of excavation for the various different remedial alternatives. EPA calculated these volumes based on the information it collected during the RI so that it could conduct a comparison of relative costs of cleanup alternatives. During the remedial design phase, EPA will calculate more precise remedial volumes based upon data from many, if not all, of the properties in OUI.

FIGURES



 OU1 boundary

Imagery sources (clockwise from upper left):
 ESRI Resource Center
 Google Maps
 ISDP (Indiana Spatial Data Portal)

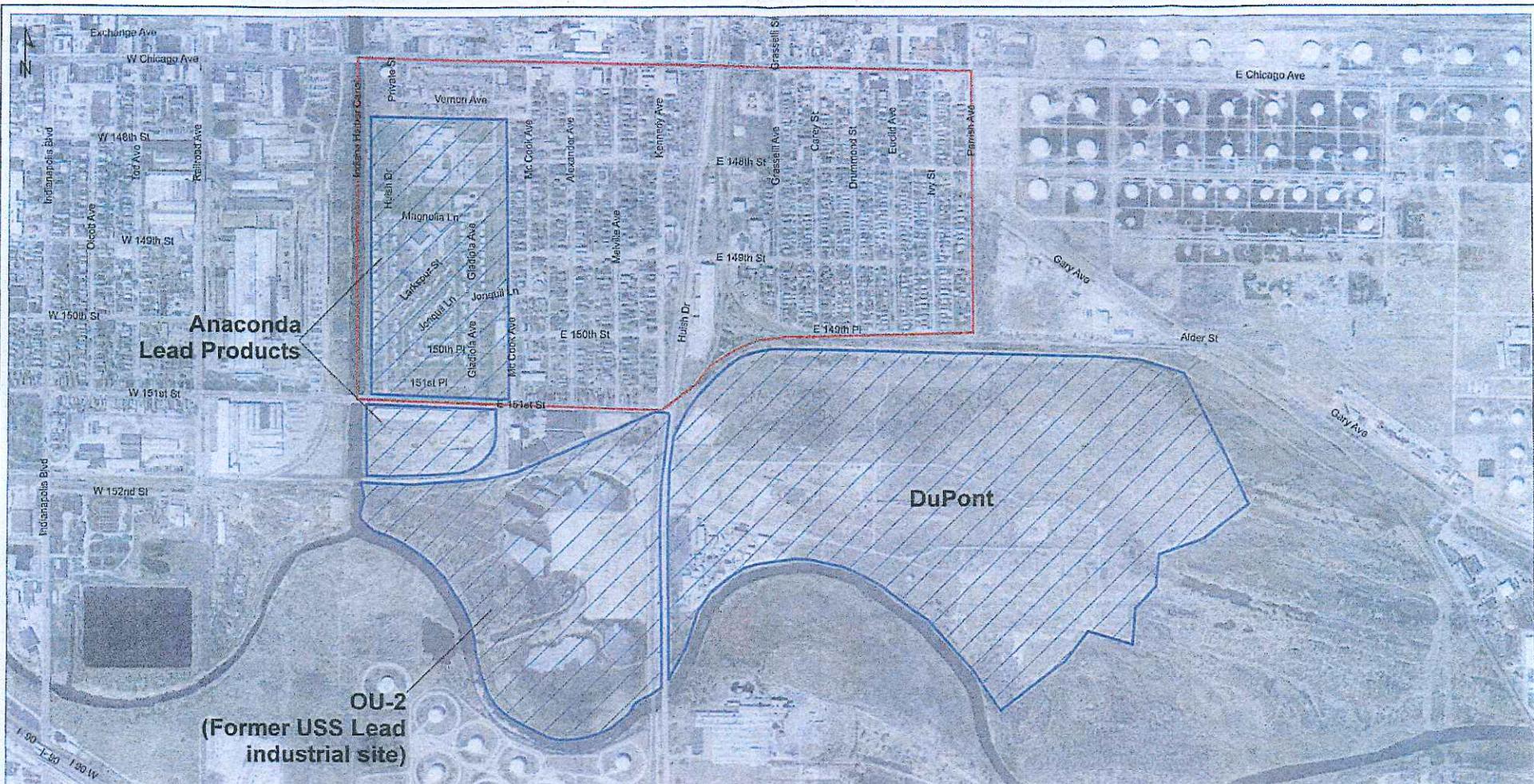


US SMELTER & LEAD REFINERY
 LAKE COUNTY, EAST CHICAGO, INDIANA

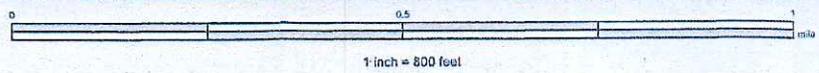
RECORD OF DECISION
FIGURE 1
 USS LEAD RESIDENTIAL AREA
 SITE LOCATION MAP

EPA REGION 5 RAC 2 | REVISION 0 | AUGUST 2012





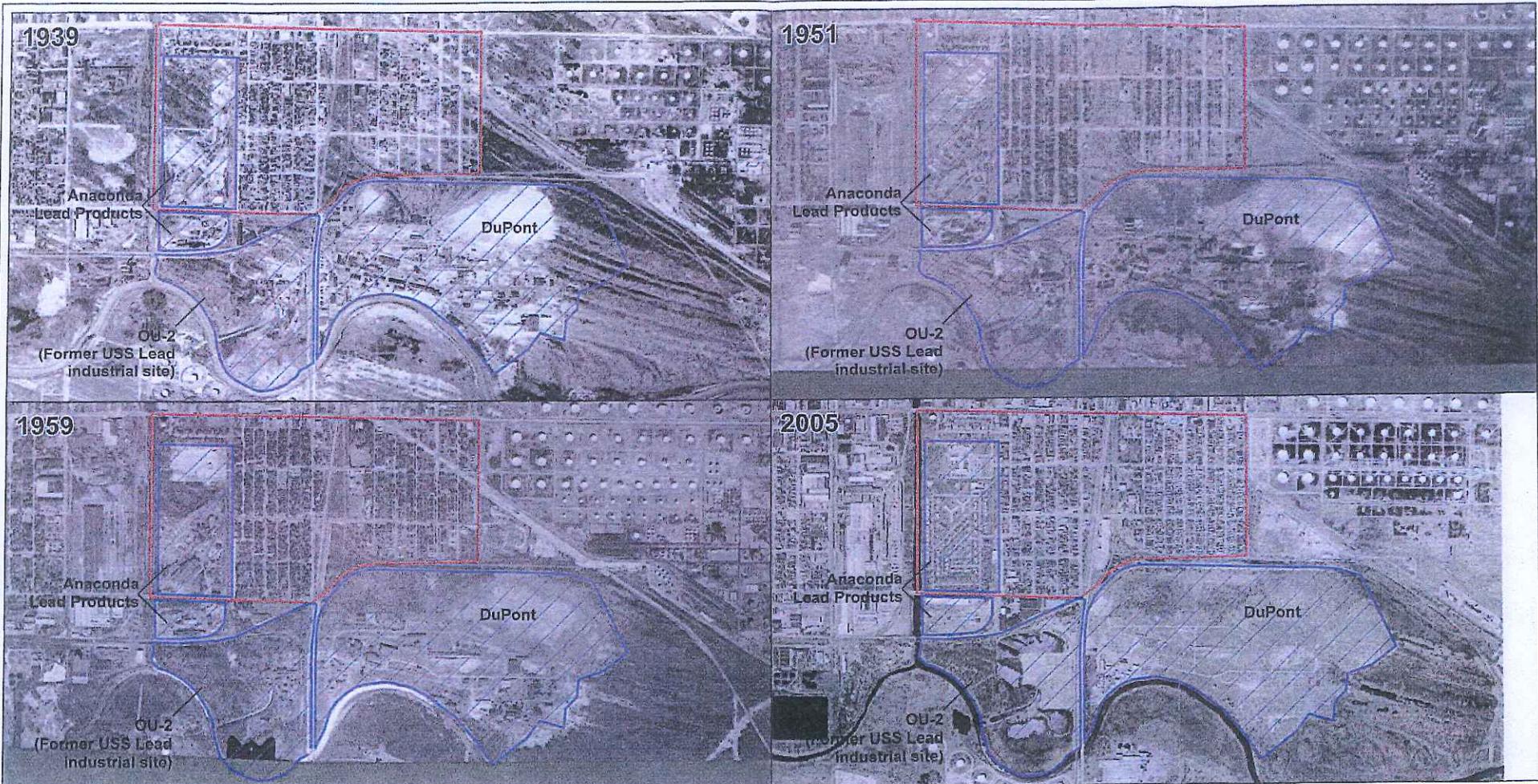
- OU-1 boundary
- Industrial sites



Imagery source:
ISDP (Indiana Spatial Data Portal)

US SMELTER & LEAD REFINERY
 LAKE COUNTY, EAST CHICAGO, INDIANA
 RECORD OF DECISION
FIGURE 2
 HISTORICAL OVERVIEW OF STUDY AREA
 EPA REGION 5 RAC 2 | REVISION 9 | AUGUST 2012

ST SuITRAC



OU-1 boundary
 Industrial sites

Imagery sources (clockwise from upper left):
 Indiana State Archives,
 USGS EarthExplorer,
 ISDP (Indiana Spatial Data Portal),
 USGS EarthExplorer

Note: Graphic scale is approximate for the 1939, 1951 & 1959 Imagery



US SMELTER & LEAD REFINERY
 LAKE COUNTY, EAST CHICAGO, INDIANA

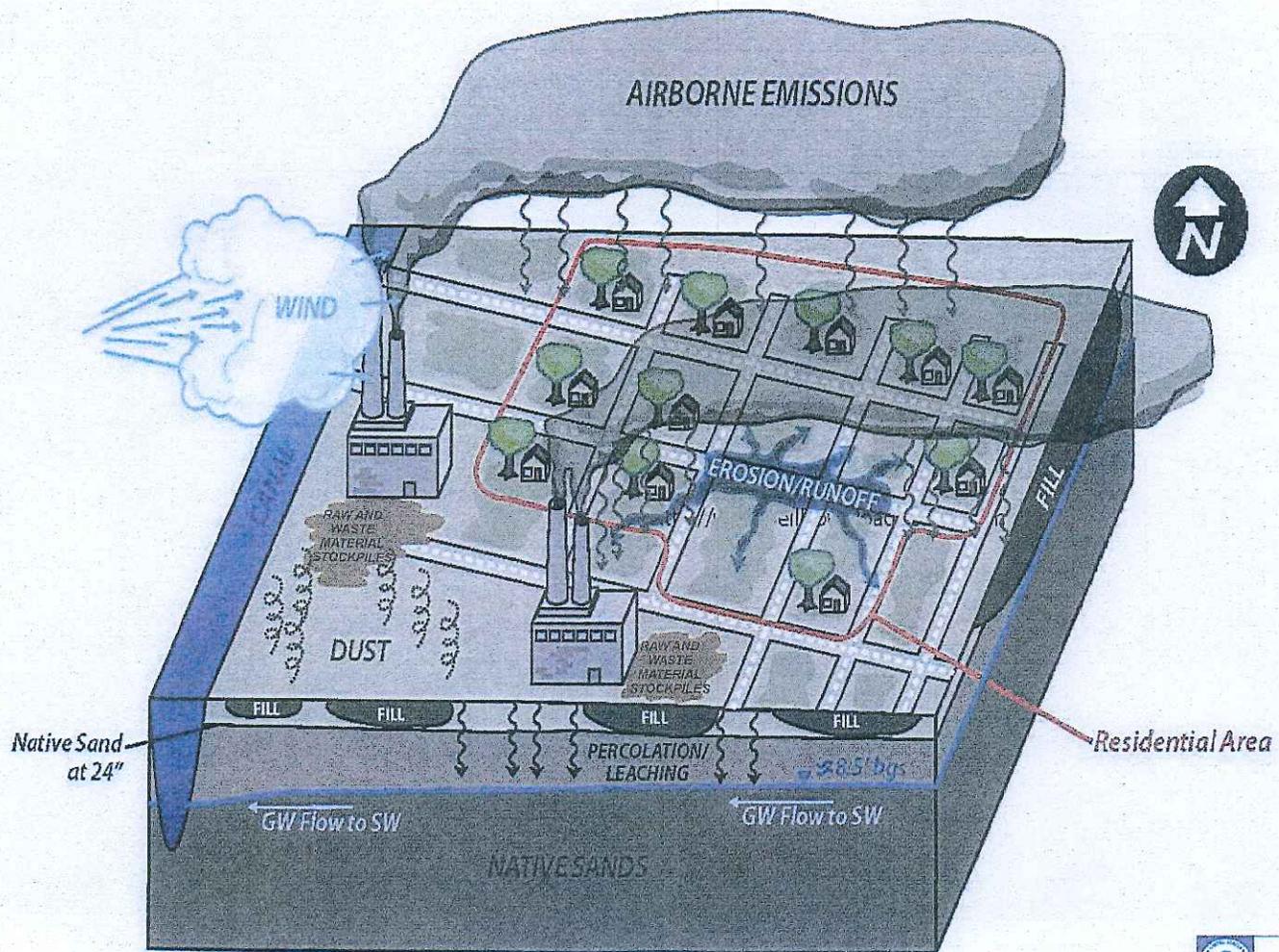
RECORD OF DECISION

FIGURE 3

HISTORICAL IMAGERY

EPAREGION 5 RAC 2 | REVISION 0 | AUGUST 2012

ST SulTRAC



	US SMELTER & LEAD REFINERY LAKE COUNTY, EAST CHICAGO, INDIANA
	RECORD OF DECISION
	FIGURE 4
	CONCEPTUAL SITE MODEL
DPA REGION 5 RAC 2 REVISION 0 AUGUST 2012	
	

APPENDIX A

State Concurrence Letter



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

September 25, 2012

Ms. Susan Hedman
Regional Administrator
U.S. EPA, Region V
77 West Jackson St.
Chicago, Illinois 60604-3507
Mail Code: SRF-6J

Dear Ms. Hedman:

Re: Draft Record of Decision (ROD)
USS Lead Superfund Site
East Chicago, Indiana

The Indiana Department of Environmental Management (IDEM) has reviewed the U.S. Environmental Protection Agency's draft Record of Decision (ROD) document for the USS Lead Superfund site in East Chicago, Indiana. IDEM is in full concurrence with the major components of the selected remedy outlined in the document which include the following:

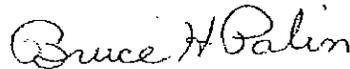
- Excavation of impacted soils that exceed Remedial Action Levels (RALs) to a maximum depth of two feet below the ground surface (bgs) and replacement with clean soil.
- Chemical stabilization of excavated soils, as necessary prior to disposal, to address soils exceeding the toxicity characteristic (TC) regulatory threshold.
- Disposal of excavated soils at an off-site Subtitle D landfill.
- Placement of a buried visual barrier, such as orange construction fencing, above soils exceeding the RALs if such soils are identified at a depth greater than two feet bgs, and the placement of Environmental Restrictive Covenants (ERCs) to protect the barrier.

Ms. Susan Hedman
Page 2

IDEM staff agree that the selected remedy is protective of human health and the environment, complies with Federal and State requirements that are legally applicable or relevant and appropriate to the remedial action, and is cost effective. IDEM staff have been working closely with Region V staff in the selection of an appropriate remedy and are satisfied with the selected alternative.

Please be assured that IDEM is committed to accomplish cleanup at all Indiana sites on the National Priorities List and intends to fulfill all obligations required by law to achieve that goal. We look forward to beginning remediation work on this project.

Sincerely,



Bruce H Palin
Assistant Commissioner
Office of Land Quality

BP:DP:bl

cc: Peggy Dorsey, IDEM
Bruce Oertel, IDEM
Rex Osborn, IDEM
Michael Berkoff, EPA

APPENDIX B

List of Applicable or Relevant and Appropriate Requirements

APPENDIX B
List of Applicable or Relevant and Appropriate Requirements
USS Lead Site, OUI
East Chicago, Indiana

Applicable/Relevant and Appropriate Requirements	Description	Type of ARAR	Applicable/Relevant and Appropriate	Comment
CLEAN AIR ACT (CAA) of 1974				
42 USC Section 7401-7671	The Act is intended to protect the quality of air and promote public health. Title I of the Act directed the U.S. Environmental Protection Agency (EPA) to publish national ambient air quality standards for "criteria pollutants." In addition, EPA has provided national emission standards for hazardous air pollutants under Title III of the Act. Hazardous air pollutants are also designated hazardous substances under CERCLA. The Clean Air Act amendments of 1990 greatly expanded the role of National Emission Standards for Hazardous Air Pollutants by designating 179 new hazardous air pollutants and directed EPA to attain maximum achievable control technology standards for emission sources. Such emission standards are potential ARARs if selected remedial technologies produce air emissions of regulated hazardous air pollutants.	Action-specific	Applicable	The Act is considered an ARAR for remedies that involve creation of air emissions, such as excavation activities that might create dust. Also includes emissions rules that apply to equipment working on the project (based on date of manufacture and/or rebuild and/or overhaul).
FLOODPLAIN MANAGEMENT EXECUTIVE ORDER No. 11988				
40 CFR Part 6, Appendix A	Requires federal agencies to evaluate the potential adverse effects associated with direct and indirect development of a floodplain. Alternatives that involve modification/construction within a floodplain may not be	Location-specific	Applicable	The Act is considered an ARAR as some properties within OUI are adjacent to the Calumet Canal which feeds into the Grand Calumet River.

APPENDIX B
List of Applicable or Relevant and Appropriate Requirements
USS Lead Site, OUI
East Chicago, Indiana

Applicable/ Relevant and Appropriate Requirements	Description	Type of ARAR	Applicable/ Relevant and Appropriate	Comment
	<p>selected unless a determination is made that no practicable alternative exists. If no practicable alternative exists, potential harm must be minimized and action taken to restore and preserve the natural and beneficial values of the floodplain.</p>			
CLEAN WATER ACT (CWA) OF 1977				
<p>Protection of Wetlands Executive Order 11990 [40 CFR Part 6, Appendix A]</p>	<p>Under this Order, federal agencies are required to minimize the destruction, loss, or degradation of wetlands, and preserve and enhance natural and beneficial values of wetlands. If remediation is required within wetland areas and no practical alternative exists, potential harm must be minimized and action taken to restore natural and beneficial values.</p>	<p>Location-specific</p>	<p>Applicable</p>	<p>Applicability will be determined by location of wetlands, if any, along Grand Calumet River</p>
<p>Federal Water Pollution Control Act Section 401: Water Quality Certification</p>	<p>Establishes a permit program to regulate a discharge into the navigable waters of the U.S., including wetlands.</p>	<p>Action-specific</p>	<p>Relevant and Appropriate</p>	

APPENDIX B
List of Applicable or Relevant and Appropriate Requirements
USS Lead Site, OUI
East Chicago, Indiana

Applicable/ Relevant and Appropriate Requirements	Description	Type of ARAR	Applicable/ Relevant and Appropriate	Comment
National Pollutant Discharge Elimination System 33 U.S.C. §§1251-1387 Clean Water Act NPDES Permit Program (40 CFR 122)	Regulates discharges of pollutants to navigable waters.	Action-specific and may be Chemical-specific	Relevant and Appropriate	Applies to disturbances of one acre or more of total land area and disturbances of less than one acre of land that are part of a larger common plan of development or sale if the larger common plan will ultimately disturb one or more acres of land.
FISH AND WILDLIFE COORDINATION ACT				
Fish and Wildlife Coordination Act; 16 U.S.C. §§661 et seq. 16 USC 742a 16 USC 2901 40 CFR 6.302 50 CFR 402	Actions that affect species/habitat require consultation with U.S. Department of Interior, U.S. Fish and Wildlife Service, and National Marine Fisheries Service, and/or state agencies, as appropriate, to ensure that proposed actions do not jeopardize the continued existence of the species or adversely modify or destroy critical habitat. The effects of water-related projects on fish and wildlife resources must be considered. Action must be taken to prevent, mitigate, or compensate for project-related damages or losses to fish and wildlife resources. Consultation with the responsible agency is also strongly recommended for on-site actions. Under 40 CFR Part 300.38, these requirements apply to all response activities under the National Contingency Plan.	Location-specific	Applicable	

APPENDIX B
List of Applicable or Relevant and Appropriate Requirements
USS Lead Site, OU1
East Chicago, Indiana

Applicable/ Relevant and Appropriate Requirements	Description	Type of ARAR	Applicable/ Relevant and Appropriate	Comment
RESOURCE CONSERVATION AND RECOVERY ACT OF 1976				
Off-Site Land Disposal Subtitle C [40 CFR 260-268]	Soil and/or sediment that is excavated for off-site disposal and constitutes a hazardous waste must be managed in accordance with the requirements of RCRA.	Action-specific	Applicable	Applicable for management of soils that are characteristic hazardous wastes.
Land Disposal Restrictions [40 CFR 268.2]	The land disposal restrictions (LDR) provide a second measure of protection from threats posed by hazardous waste disposal by ensuring that hazardous waste cannot be placed on the land until the waste meets specific treatment standards to reduce the mobility or toxicity of its hazardous constituents. Hazardous waste destined for land disposal must meet the applicable Land Disposal Regulations of 40 CFR 268.	Action-specific	Relevant and Appropriate	Relevant for treatment of soils that are characteristic hazardous wastes.
Land Treatment [40 CFR 264.270 to 264.283 Subpart M]	Establishes standards applicable for owners and operators of facilities that treat or dispose of hazardous waste in land treatment units to ensure that hazardous constituents placed in or on the treatment zone are degraded, transformed, or immobilized within the treatment zone.	Action-specific	Relevant and Appropriate	Applicable if treatment of residue piles to render them non-hazardous occurs in a land treatment unit.
Special Provisions for Cleanup [40 CFR 264.550 to 264.555 Subpart S]	Establishes standards for corrective action management units, temporary units, and staging piles.	Action-specific	Applicable	Staging piles or temporary units may be needed for residue that may be a characteristic hazardous waste.

APPENDIX B
List of Applicable or Relevant and Appropriate Requirements
USS Lead Site, OUI
East Chicago, Indiana

Applicable/Relevant and Appropriate Requirements	Description	Type of ARAR	Applicable/Relevant and Appropriate	Comment
Miscellaneous Units [40 CFR 264.600 to 264.603 Subpart X]	Establishes design and operating requirements, detection and monitoring requirements, and requirements for responses to releases of hazardous waste or hazardous constituents from the unit.	Action-specific	Applicable/Relevant and Appropriate	ARAR if treatment or storage of the TCLP hazardous materials is in miscellaneous units.
Definition of a hazardous waste [40 CFR 261.3(d) and 329 IAC 3.1-1]	Applies to contaminated containment components, contaminated soils, and structures and equipment contaminated with waste.	Action-specific	Relevant and Appropriate	Substantive requirements are ARARs for identifying and managing characteristic hazardous waste.
Hazardous waste determination [40 CFR 262.11 and 329 IAC 3.1-6]	Requires that a proper hazardous waste determination must be made on all wastes generated from remedial actions.	Action-specific	Relevant and Appropriate	Substantive requirements are ARARs for identifying and managing characteristic hazardous waste.
Pre-Transportation Requirements [40 CFR 262.30, 262.31, 262.32, and 262.33 and 329 IAC 3.1-7 and 329 IAC 3.1-8]	All hazardous waste must be properly packaged, with labels, markings, and placards, prior to transport.	Action-specific	Relevant and Appropriate	
Standards applicable to the generators of hazardous waste - The manifest [40 CFR 262, Subpart B and 329 IAC 3.1-7 and 329 IAC 3.1-8]	Hazardous waste stored on-site in containers for greater than 90 days shall be managed in accordance with 40 CFR 262, Subpart B (329 IAC 3.1-7 and 329 IAC 3.1-8).	Action-specific	Applicable	

APPENDIX B
List of Applicable or Relevant and Appropriate Requirements
USS Lead Site, OUI
East Chicago, Indiana

Applicable/ Relevant and Appropriate Requirements	Description	Type of ARAR	Applicable/ Relevant and Appropriate	Comment
Standards applicable to the generators of hazardous waste - The manifest [40 CFR 262, Subpart B and 329 IAC 3.1-7 and 329 IAC 3.1-8]	Hazardous waste must be manifested as such for transport to a permitted treatment, storage, or disposal facility (TSDF)	Action-specific	Relevant and Appropriate	
Standards for owners and operators of hazardous waste treatment, storage, and disposal facilities - Waste piles [40 CFR 264, Subpart L]	Any excavated contaminated soils must not be placed back on the ground so as to create a waste pile. Covered rolloff containers may be used.	Action-specific	Relevant and Appropriate	
Use and management of containers [40 CFR 265, Subpart J and 329 IAC 3.1-10]	Hazardous waste stored on-site in containers for 90 days or less shall be managed in accordance with the standards of 40 CFR 265, Subpart I (329 IAC 3.1-10).	Action-specific	Relevant and Appropriate	
SOLID WASTE DISPOSAL ACT				
Identification and Listing of Hazardous Waste (40 CFR 261) Subpart B	Sets criteria for identifying a hazardous waste.	Action-specific	Relevant and Appropriate	

APPENDIX B
List of Applicable or Relevant and Appropriate Requirements
USS Lead Site, OU1
East Chicago, Indiana

Applicable/ Relevant and Appropriate Requirements	Description	Type of ARAR	Applicable/ Relevant and Appropriate	Comment
Identification and Listing of Hazardous Waste (40 CFR 261) Subpart C	Identifies the characteristics of a hazardous waste.	Action-specific	Relevant and Appropriate	
Identification and Listing of Hazardous Waste (40 CFR 261) Subpart D, List of Hazardous Waste	Lists hazardous waste from sources	Action-specific	Relevant and Appropriate	
Standards for Hazardous Waste Generators (40 CFR 263)	General requirements for packaging, labeling, marking, and manifesting hazardous wastes for temporary storage and transportation off-site	Action-specific	Applicable	
Solid Wastes (40 CFR 264), Subpart D	Hazardous waste and debris may be placed in units known as containment buildings for the purpose of interim storage or treatment.	Action-specific	Applicable	
ENDANGERED SPECIES ACT				
Endangered Species Act [16 USC 1531]; 50 CFR.200	Requires that federal agencies ensure that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any threatened or endangered species or adversely modify critical habitat.	Location-specific	Applicable	No endangered species are known to be present on the site that would be affected by remedial actions.

APPENDIX B
List of Applicable or Relevant and Appropriate Requirements
USS Lead Site, OUI
East Chicago, Indiana

Applicable/ Relevant and Appropriate Requirements	Description	Type of ARAR	Applicable/ Relevant and Appropriate	Comment
NATURAL HISTORIC PRESERVATION ACT				
National Historic Preservation Act [16 USC 661 et seq.] 36 CFR Part 65	Establishes procedures to provide for preservation of scientific, historical, and archaeological data that might be destroyed through alteration of terrain as a result of a federal construction project or a federally licensed activity or program. If scientific, historical, or archaeological artifacts are discovered at the site, work in the area of the site affected by such discovery will be halted pending a completion of any data recovery and preservation activities required pursuant to the act and any implementing regulations.	Location-specific	Applicable	No part of the USS Lead Residential Area is listed on the national register of historic places. Would be applicable during remedial activities if scientific, historic, or archaeological artifacts are identified during implementation of the remedy.
DEPARTMENT OF TRANSPORTATION				
Requirements for the Transport of Hazardous Materials [40 CFR 172]	Transportation of hazardous materials on public roadways must comply with the requirements.	Action-specific	Applicable	
OTHER FEDERAL GUIDELINES TO BE CONSIDERED				
Integrated Risk Information System (IRIS)	Risk reference doses (RfD) are estimates of daily exposure levels that are unlikely to cause adverse non-carcinogenic health effects over a lifetime. Cancer Slope Factors (CSF) are used to compute the incremental cancer risk from exposure to site	Chemical-specific	To Be Considered	Levels may be considered for use as cleanup goals.

APPENDIX B
List of Applicable or Relevant and Appropriate Requirements
USS Lead Site, OUI
East Chicago, Indiana

Applicable/ Relevant and Appropriate Requirements	Description	Type of ARAR	Applicable/ Relevant and Appropriate	Comment
	contaminants and represent the most up-to-date information on cancer risk from EPA's Carcinogen Assessment Group.			
EPA Regional Screening Levels	EPA Regional Screening Levels (RSLs and associated guidance necessary to calculate them) are risk-based screening levels developed using risk assessment guidance from the USEPA Superfund program. These are risk-based concentrations derived from standardized equations combining exposure information assumptions with USEPA toxicity data. Screening levels are considered to be protective for humans over a lifetime; however, screening levels do not address non-human health endpoints, such as ecological impacts.	Chemical-specific	To Be Considered	Levels may be considered for use as cleanup goals.
EPA Area of Contamination Policy under RCRA	Allows wastes within an Area of Contamination to be consolidated and treated in-situ without triggering RCRA LDRs or minimum technology requirements. This policy does not have the effect of law.	Action-specific	To Be Considered	Applicable to on-site consolidation, treatment and covering/capping of soils and sediments.
EPA's Contained-in Policy under RCRA	Deals with management of remediation waste. This policy does not have the effect of law.	Action-specific	To Be Considered	
Occupational Safety and Health Act [29 CFR 61]	The Act was passed in 1970 to ensure worker safety on the job. Worker safety at hazardous waste sites is addressed under 29 CFR 1910.120:	Action-specific	Applicable	The Act is considered an ARAR for construction activities performed during the implementation of remedies.

APPENDIX B
List of Applicable or Relevant and Appropriate Requirements
USS Lead Site, OU1
East Chicago, Indiana

Applicable/ Relevant and Appropriate Requirements	Description	Type of ARAR	Applicable/ Relevant and Appropriate	Comment
	Hazardous Waste Operations and Emergency Response. General worker safety is covered elsewhere within the law.			
INDIANA ADMINISTRATIVE CODE				
Indiana Solid Waste Rules (IAC Title 329)	This law applies to remedies that involve off-site disposal of materials typically involved with excavations. Contaminated soils or wastes that are excavated for off-site disposal would be tested for hazardous waste characteristics and requirements of the Rules would be followed if hazardous waste is found.	Action-specific	Relevant and Appropriate	
Generator Responsibilities for Waste Information (329 IAC 10-7.2-1)	Requires all wastes undergo a waste determination, and if found to be nonhazardous, be disposed of in a permitted solid waste disposal facility.	Action-specific	Relevant and Appropriate	
Indiana Air Pollution Control Regulations (IAC Title 326)	This law applies to the regulation of air emissions, for activities such as excavation, that have the potential to create dust and sets emissions limits for particulates.	Action-specific and may be Chemical-specific	Relevant and Appropriate	
Rule 4. Fugitive Dust Emission (326 IAC 6-4-1[4])	Rule 4 establishes that visible fugitive dust must not escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located.	Location/Action-specific	Relevant and Appropriate	

APPENDIX B
List of Applicable or Relevant and Appropriate Requirements
USS Lead Site, OUI
East Chicago, Indiana

Applicable/ Relevant and Appropriate Requirements	Description	Type of ARAR	Applicable/ Relevant and Appropriate	Comment
Motor vehicle fugitive dust sources (326 IAC 6-4-4)	No vehicle driven on any public right of way may allow its contents to escape and form fugitive dust.	Action-specific	Relevant and Appropriate	
Storm Water Run-off Associated with Construction Activity (327 IAC 15-5)	Sets requirements for managing storm water during construction activities, including sediment and erosion control.	Action-specific	Relevant and Appropriate	Will be required if remedial activities generate storm water runoff.
Voluntary Remediation of Hazardous Substances and Petroleum (Indiana Code [IC] 13-25-5)	IC 13-25-5 established the Voluntary Remediation Program in 1993 and gave the IDEM the authority to establish guidelines for voluntary site closure. Under this authority IDEM developed a non-rule policy document, the Risk Integrated System of Closure (RISC), to guide site closures within the authority of IDEM's remediation programs. This guidance document does not have the effect of law.	Chemical-specific	To Be Considered	The RISC document provides a methodology for establishing remedial goals and determining that remediation has been achieved. The RISC policy does not apply to Superfund sites, but does apply to remedial sites under several state programs, including the state version of RCRA, the state Leaking Underground Storage Tank program, the State Cleanup Program (state equivalent of the Federal Superfund Program) and the Voluntary Remediation Program.

APPENDIX C

Remedial Alternatives Evaluation Summary

APPENDIX C
Remedial Alternatives Evaluation Summary
USS Lead Site, OU-1
East Chicago, Indiana

Evaluation Criteria	Alternative 1 No Action	Alternative 3 On-Site Soil Cover + Institutional Controls	Alternative 4A Excavation of Soil Exceeding RALs + Off-Site Disposal + Ex Situ Treatment Option	Alternative 4B Excavation to Native Sand + Off-Site Disposal + Ex Situ Treatment Option
Overall Protection to Human Health and the Environment Protection of human health and the environment	Not protective	Protective	Protective	Protective
Compliance with ARARs Location-specific ARARs Action-specific ARARs Chemical-specific ARARs	Not in compliance Not in compliance Not in compliance	In compliance In compliance In compliance	In compliance In compliance In compliance	In compliance In compliance In compliance
Long-Term Effectiveness and Permanence Magnitude of residual risk Adequacy and reliability of controls Need for 5-year review	Residual risk remains No controls Required	Some residual risk Somewhat reliable Required	Minimal residual risk Reliable to very reliable May be required	No residual risk Very reliable Not required
Reduction of Toxicity, Mobility, or Volume through Treatment Treatment processes used and materials treated Amount of hazardous material destroyed or treated Expected reduction in toxicity, mobility, or volume of the waste Irreversibility of treatment	None None None Not applicable Not applicable	None None None Not applicable Not applicable	Some treatment utilized ~7% treatment Toxicity and mobility reduced Not likely reversible Metals less than TC threshold Partially satisfies	Some treatment utilized ~7% treatment Toxicity and mobility reduced Not likely reversible Metals less than TC threshold Partially satisfies
Type and quantity of residuals that will remain following treatment	Does not satisfy	Does not satisfy	Partially satisfies	Partially satisfies
Statutory preference for treatment	High	High	Moderate-High	Moderate-High
Short-Term Effectiveness Protection of workers during remedial action Protection of the community during remedial action Potential environmental impacts of remedial action	Not applicable Not applicable Protection not achieved	High High Low Immediate	Moderate-High Moderate-High Low Immediate	Moderate-High Moderate-High Low Immediate
Time until protection is achieved	Not applicable	Immediate	Immediate	Immediate
Implementability Technical feasibility Reliability of technology Administrative feasibility Availability of services, equipment, and materials	Not applicable Not applicable Not applicable Not applicable	Moderate Somewhat reliable Difficult Readily available	Easy Very reliable Feasible Readily available	Easy Very reliable Feasible Readily available
Cost Total construction cost Total engineering and construction management cost Total present worth O&M Period of analysis (yrs) Total cost (including 20% contingency)	\$0 \$0 \$0 NA \$0	\$13,905,000 \$2,800,000 \$735,000 30 \$20,900,000	\$21,600,000 \$1,195,000 \$67,000 30 \$29,900,000	\$32,800,000 \$4,960,000 \$0 NA \$45,400,000

APPENDIX D

Feasibility Study Cost Estimate for Alternative 4A

APPENDIX D
FEASIBILITY STUDY COST ESTIMATE
ALTERNATIVE 4A: EXCAVATION OF SOIL EXCEEDING RALS + OFF-SITE
DISPOSAL + EX SITU TREATMENT OPTION
USS Lead Site, OU-1
East Chicago, Indiana

Estimate Category	Cost			TOTAL
	Eastern Area	Southwestern Area	Northwestern Area	
PRE-REMEDIAL DESIGN SAMPLING				
Sample Labor	\$583,000	\$408,000	\$451,000	\$1,442,000
ODCs	\$84,000	\$60,000	\$66,000	\$210,000
REMEDY CONSTRUCTION				
Preconstruction Activities	\$180,000	\$186,000	\$173,000	\$539,000
Site Preparation and Access	\$460,000	\$685,000	\$268,000	\$1,413,000
Institutional Controls	\$5,000	\$5,000	\$5,000	\$15,000
Contaminated Soil Excavation and Backfilling	\$2,203,000	\$3,793,000	\$1,548,000	\$7,544,000
Contaminated Soil Transportation and Disposal	\$1,509,000	\$2,411,000	\$943,000	\$4,863,000
Soil Cover	\$1,000	\$2,000	\$1,000	\$4,000
Property Restoration	\$1,407,000	\$2,278,000	\$927,000	\$4,612,000
Contractor's Oversight, Health & Safety, Quality Control	\$280,000	\$455,000	\$175,000	\$910,000
Construction Subtotal	\$6,700,000	\$10,300,000	\$4,600,000	\$21,600,000
ENGINEERING & CONSTRUCTION MANAGEMENT				
	\$991,000	\$1,548,000	\$656,000	\$3,195,000
OPERATIONS AND MAINTENANCE				
	\$27,068	\$18,961	\$20,971	\$67,000
Project Subtotal	\$7,700,000	\$11,900,000	\$5,300,000	\$24,900,000
20% Contingency	\$1,540,000	\$2,380,000	\$1,060,000	\$4,980,000
Project Total	\$9,200,000	\$14,300,000	\$6,400,000	\$29,900,000

APPENDIX E

**TO
Z2 SOIL UAO**

**PROPOSED EXPLANATION OF
SIGNIFICANT DIFFERENCES**



PROPOSED EXPLANATION OF SIGNIFICANT DIFFERENCES

U.S. SMELTER AND LEAD REFINERY, INC. SUPERFUND SITE EAST CHICAGO, LAKE COUNTY, INDIANA

EPA Region 5

December 2017

I. INTRODUCTION

The United States Environmental Protection Agency (EPA) is proposing this Explanation of Significant Differences (ESD) to document the significant increase in cost between the estimated cost of the remedy selected in the 2012 Record of Decision (ROD) for Zones 2 and 3 of Operable Unit 1 (OU1) of the U.S. Smelter and Lead Refinery, Inc. Superfund Site (Site) and the current estimated cost of the remedy for those two Zones. Previously, the estimated cost for Zones 2 and 3 was \$22.8 million; currently, the estimate is \$84.9 million. Notwithstanding this projected increase in costs, EPA has determined that the remedy selected in the 2012 ROD—excavation of contaminated soil and off-site disposal (with an off-site soil treatment option)—is still the correct remedy for Zones 2 and 3 and continues to meet the requirements of the National Oil and Hazardous Substances Contingency Plan (NCP). EPA would have selected this remedy even if the projected costs in 2012 had been more consistent with the current estimate. Thus, this ESD does not propose any changes to the remedy selected for Zones 2 and 3 of OU1. It merely explains the differences in the costs between then and now.¹

Under Section 117(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA or Superfund), as amended, EPA is required to publish an Explanation of Significant Differences when, after issuance of a Record of Decision,² subsequent enforcement or remedial actions differ in any significant respects from the final plan set forth in the ROD. Sections 300.435(c)(2)(i) and 300.825(a)(2) of the NCP set forth the criteria for issuing an ESD and requiring that an ESD be published if, after issuance of the ROD, there is a significant, but not fundamental, difference in the scope, performance, or cost of the remedy. A difference is significant, but not fundamental, if it affects basic features of the remedy such as timing and cost, but does not affect the overall approach to managing hazardous waste at a site.³

¹ This ESD does not address Zone 1 of OU1 of the Site. In 2016 and 2017, all residents of Zone 1 were relocated out of their housing complex and the housing complex was slated for demolition. Consequently, for the former residential and park areas of Zone 1, EPA is in the process of preparing a Feasibility Study Addendum to the 2012 ROD. EPA may fundamentally change the remedy for those areas, which would necessitate a ROD Amendment. In addition, there may be changes in the land use for some areas of Zone 1 that currently house a former elementary school. Therefore, no areas of Zone 1 are addressed in this ESD.

This ESD also does not include costs associated with indoor response actions. Those actions were performed pursuant to EPA's removal, not remedial, authorities.

² A ROD documents the EPA's remedy decision.

³ See 55 Fed. Reg. 8,666, 8,771-72 (Mar. 8, 1990).

The remedial investigation (RI)⁴ performed by the EPA at OU1 of the Site identified lead and arsenic in soil as the contaminants of concern. EPA's 2012 ROD estimated it would cost \$29.9 million to implement the selected remedy across all areas of OU1, which were then designated as an "eastern" area, a "southwestern" area, and a "northwestern" area. In 2014, OU1 was subdivided into three geographic "zones": Zones 1, 2, and 3. These Zones differed to some extent from the "areas" previously identified, but the original "area" costs were relatively easily reallocated to the "Zones." EPA estimated it would cost \$13.4 million to remediate Zone 2 and \$9.4 million to remediate Zone 3, for a total of \$22.8 million for both Zones.⁵

From approximately May 2015 to early 2016, extensive soil sampling in Zones 2 and 3 was conducted during remedial design to better delineate the extent of contamination at each property.⁶ Based on that sampling, EPA determined that the actual volume of contaminated soil that needs to be excavated is greater than what was originally estimated. In addition, based largely on more up-to-date engineering estimates, EPA determined that the "per unit" cost of various tasks required by remediation work is greater than what was originally estimated. As a result of the increased volume of contaminated soil and the increased per unit costs of remediating that soil, the current estimated cost of remediating Zones 2 and 3 has increased to \$84.9 million.⁷

II. SITE BACKGROUND

The U.S. Smelter and Lead Refinery, Inc. Superfund Site is located in the City of East Chicago, Indiana. The Site has been divided into two operable units (OUs). *See* Appendix A. Operable Unit 1 (OU1) is a predominantly residential neighborhood which is generally bounded on the north by East Chicago Avenue, on the east by Parrish Avenue, on the south by East 151st Street/149th Place, and on the west by the Indiana Harbor Canal. OU1 has been further subdivided in Zones 1, 2, and 3. *See* Appendix A. Operable Unit 2 (OU2) includes the 79-acre former USS Lead facility as well as groundwater beneath the entire Site. The Site was placed on the National Priorities List (NPL) in April 2009.

Contamination in OU1 is largely derived from historic operations at three nearby facilities: (1) the USS Lead facility; (2) a facility formerly located in Zone 1 and owned and operated by subsidiaries of the Anaconda Copper and Mining Company (the "Anaconda facility"); and (3) the E. I. Du Pont de Nemours facility located just southeast of OU1 (the "DuPont facility").

⁴ An RI determines the nature and extent of contamination at a site for the purposes of developing a ROD. EPA sampled 7.4% of properties in OU1 during the RI.

⁵ *See* Appendix B: *Technical Memorandum: Final Comparison of Original Cost Estimates and Current Cost Estimates for Zones 2 and 3 of Operable Unit 1, USS Lead Superfund Site*, at Table 1 (December 2017) ("Z2&3 ESD Technical Memorandum").

⁶ Remedial design determines the extent of contamination at properties that are not sampled during the RI.

⁷ EPA has taken a conservative approach to the current cost estimate. Once remedial design is completed, EPA typically targets a cost estimate that is within +15% to -10% of the final cost. *See A guide to Developing and Documenting Cost Estimates During the Feasibility Study*, EPA 540-R-00-002, OSWER 93355.0-75 at 2-4 (July 2000). That said, the current estimate of \$84.9 million includes a 20% contingency both because remedial design is not yet completed and because the original estimate used a 20% contingency. It is likely that the 20% contingency is high for both Zones, but especially for Zone 3 where more than 50% of the properties have already been remediated.

The USS Lead facility was constructed in 1906 and used an electrolytic process (the Betts process) to refine lead bullion that was shipped from Midvale, Utah, to East Chicago.⁸ Because lead refining produces a number of byproducts, the USS Lead facility also included various secondary metal treatment operations—such as secondary lead smelting—and operated a weed killer (lead arsenate) plant. In addition, throughout its history, the USS Lead facility accepted scrap lead from a variety of sources for treatment in its secondary lead smelting operations involving a blast furnace. In approximately 1972, the USS Lead facility stopped refining lead bullion and instead increased its blast furnace capacity to treat more scrap lead material. Operations at the USS Lead facility ceased in 1985.

Among other sources of contamination from the USS Lead facility, slag from the blast furnace was routinely placed in piles on the ground and left exposed to the elements. Lead and arsenic particulate was disposed of into the environment as fumes from operations, as dust from the baghouses, and as dust from lead waste piles (*e.g.*, slag and baghouse dust) stored on the grounds.

The Anaconda facility operated three inter-related processes. In 1912, a lead refinery was built on the site and used a pyrometallurgical process to refine lead bullion that was shipped from Toole, Utah, to East Chicago. In 1919, a white lead plant was constructed to produce white lead for use as an ingredient in lead paint. Finally, in 1922, a zinc oxide plant was added to the facility.

As with the USS Lead facility, the Anaconda facility also operated numerous secondary metal treatment processes. Byproducts of the operations included slag, lead waste, and arsenic. Among other sources of contamination, arsenic was burned off and was supposed to be recovered in flues and a baghouse. In addition, lead and arsenic particulate was disposed of into the environment in the same manner as with the USS Lead facility. Operation of the white lead process generated additional releases.

Significant quantities of lead were refined from 1912 until 1946, when refining operations at the Anaconda facility ceased. However, secondary smelting and white lead production continued into the 1950s. The Anaconda facility was demolished over the course of the 1960s and early 1970s. In approximately 1972, the West Calumet Housing Complex was constructed on the facility's footprint.

The DuPont facility was constructed in 1892 to manufacture various organic and inorganic chemicals. Over the course of its operations, the DuPont facility produced over one hundred different chemicals, including lead and calcium arsenate (1910–1949) and zinc chloride (1900–1969). Among other sources of contamination, lead and arsenic particulate generated from these operations was disposed of into the environment as stack emissions, precipitator dust, and dust from exposed waste piles stored on the grounds of the site. General operations at the facility contracted significantly during the 1980s and 1990s. The DuPont facility is undergoing corrective action under federal RCRA authorities.

Similarly, in the 1990s, USS Lead began a cleanup of its facility under state and federal RCRA programs. In the early 2000s, as part of RCRA corrective action at the facility, the scope of

⁸ The ROD incorrectly stated that the USS Lead facility was constructed to produce copper. EPA, USS Lead Record of Decision at 7 (Nov. 2012).

investigation was expanded somewhat beyond the facility's boundaries into OU1. In 2007, responsibility for further investigation was transferred from EPA's RCRA program to its Superfund program. Limited sampling was performed in 2007, resulting in the 2008 removal of contaminated soils from several residential properties. In April 2009, EPA placed the Site on the NPL. EPA performed its remedial investigation of OU1 from June 2009 to June 2012.^{9, 10}

EPA's completed remedial investigation identified lead and arsenic in soil as the contaminants of concern for OU1. Based on that investigation and on the corresponding feasibility study, EPA issued its Record of Decision for OU1 in November 2012. The remedy selected in the ROD was as follows:

- Excavation of soil that contains lead or arsenic in concentrations that exceed the Remedial Action Levels (for residential areas, the RALs are 400 ppm lead and 26 ppm arsenic); to a maximum excavation depth of 24 inches.
- Disposal of excavated soil at an off-site Subtitle D landfill; some excavated soils may require chemical stabilization prior to off-site disposal to address exceedances of the toxicity characteristic (TC) regulatory threshold. Contaminated soil that exceeds the TC threshold is considered principal threat waste.
- If contaminated soil is identified at a depth greater than 24 inches below ground surface (bgs), a visual barrier, such as orange construction fencing or landscape fabric, will be placed above the contaminated soil before the yard is backfilled with clean soil. Institutional controls will be implemented to protect the visual barrier that separates clean backfill from impacted soils and to ensure that users of the property are not exposed to contaminated soil that remains at depth.
- Excavated soil will be replaced with clean soil to maintain the original grade. The top 6 inches of fill will consist of topsoil. Each yard will be restored as close as practicable to its pre-remedial condition.

Consistent with the ROD and pursuant to a consent decree with two potentially responsible parties, from November 2014 to August 2016, EPA performed remedial design activities in Zones 1 and 3. Remedial design activities in Zone 2 began in August 2016 and is ongoing. Based on these remedial designs, EPA started remediation work in both Zones 2 and 3 in the fall of 2016 and

⁹ To date, it appears that soil contamination in the former USS Lead facility has largely been remediated through RCRA corrective action. Pursuant to a 2017 Administrative Settlement Agreement and Order on Consent between EPA and USS Lead, however, remaining contamination in OU2—that is, in the soil and in the groundwater under the entire Site—will be the subject of a remedial investigation beginning in early 2018. A proposed plan, public comment period, and record of decision for OU2 will follow that investigation.

¹⁰ In 2011, EPA performed additional soil removal actions at several residential properties in OU1 based on sampling data collected during the remedial investigation.

continued that work throughout 2017.¹¹ As of December 2017, EPA has remediated 289 properties consistent with the ROD. Additional work will continue in 2018 and thereafter.¹²

III. EXPLANATION OF SIGNIFICANT DIFFERENCES AND NO CHANGE IN THE REMEDY SELECTED

A. Explanation of the Significant Differences

EPA estimated that it would cost \$22.8 million to remediate Zones 2 and 3 based on data generated during the remedial investigation and feasibility study. *See* App. B at Table 1. The principal assumptions underlying the original estimate were: (1) the number of contaminated properties; (2) the size of those properties; (3) the extent of contamination at those properties; and (4) the per unit cost of various tasks involved in remediation. The original cost estimate was based on a sample size of 7.4% of properties in OU1.

At this time, approximately 90% of the properties in Zones 2 and 3 have been sampled. Based on the results of this sampling, EPA has determined that the number of properties requiring remediation, the size of those properties, and the extent of contamination at those properties are all greater than what was originally estimated. These changes have increased the total estimated volume of contaminated soil to be excavated from approximately 47,000 cubic yards to approximately 88,000 cubic yards. This increased quantity of soil correspondingly increased the construction management costs and the contingency costs and required a longer duration for remediation and oversight than originally estimated. In addition, based largely on more up-to-date engineering estimates, EPA has determined that the per unit cost of various tasks involved in remediation is greater than what was originally estimated. For example, the estimated rate for excavating and replacing one cubic yard of contaminated soil increased from \$115 to \$471.

As a result of these major factors, the estimated cost to implement the selected remedy in Zones 2 and 3 is now \$84.9 million. The Z2&3 ESD Technical Memorandum included as Appendix B provides a full explanation of the significant differences between the original and current cost estimate.

B. No Change in the Remedy Selected

In the 2012 ROD, EPA evaluated two remedial alternatives in addition to the one selected: (1) on-site soil cover plus institutional controls (Alternative 3); and (2) excavation to native sand plus off-site disposal (Alternative 4B).¹³

Alternative 3: Consistent with its determination in the ROD and upon further review, EPA has concluded that capping hundreds of residential yards and then implementing institutional controls

¹¹ Soil remediation work in Zone 2 in 2016 and 2017 was performed pursuant to EPA's removal authorities. However, that work was performed consistent with and after issuance of the ROD.

¹² Work in Zone 1 has been put on hold. *See* Note 1.

¹³ As required by law, EPA also evaluated a "no action" alternative. That alternative remains inappropriate in light of the contamination that exists in Zones 2 and 3.

poses a number of technical, legal, and administrative difficulties. Among the technical challenges is the difficulty of developing effective, property-specific cap designs and grading. Capping would also result in significant topographic changes to the property, compared to the current remedy which restores properties to their existing use. These caps would require extensive operation and maintenance by individual property owners. Further, institutional controls required by a capping remedy would involve significantly greater restrictions and monitoring requirements that would burden the owners' and tenants' use of their property. Finally, capping is inconsistent with EPA's preference for remedies that include treatment, which permanently and significantly reduces the toxicity, mobility, or volume of hazardous substances.

Based on general community reactions at the July 25, 2012 public meeting held for the proposed plan and on extensive community engagement since then, EPA expects poor community acceptance of this alternative. Poor community acceptance could make it more difficult for EPA to secure access to implement the remedy and could significantly increase costs. Finally, 289 properties in Zones 2 and 3 have already been remediated pursuant to the preferred remedy selected in the ROD; it would be inappropriate and unfair for EPA to subject the owners and residents of properties that have not yet been remediated to a different, more burdensome remedy.

Alternative 4B: The increased costs described above would proportionally increase the cost of Alternative 4B. Therefore, the reasons set forth in the ROD for not selecting Alternative 4B still apply at this time.

IV. SUPPORT AGENCY COMMENTS

The Indiana Department of Environmental Management supports this proposed ESD.

V. FIVE YEAR REVIEWS

If this remedy results in hazardous substances, pollutants, or contaminants remaining on-site above levels that allow for unlimited use and unrestricted exposure, EPA will review the remedy no less often than every five years from the start of construction to ensure that the remedy is, or will be, protective of human health and the environment.

VI. AFFIRMATION OF STATUTORY DETERMINATIONS

The remedy selected in the 2012 ROD remains fundamentally unaltered, and the statutory determinations made in the ROD still apply. The significant change to the remedial action is an increase in the cost due primarily to an increase in the estimated volume of contaminated soil and an increase in the per unit costs of the remediation work.

The remedy will continue to be protective of human health and the environment and will comply with federal and state requirements that are legally applicable or relevant and appropriate to the remedial action. The remedy remains technically feasible, cost-effective and satisfies the requirements of CERCLA and the NCP.

VII. PUBLIC PARTICIPATION AND THE ADMINISTRATIVE RECORD

Pursuant to NCP § 300.435(c)(i), EPA will publish a brief description of this ESD in the local newspaper. An electronic copy of this ESD will also be available online at: <https://www.epa.gov/uss-lead-superfund-site>. Further, EPA will hold a 60-day public comment period that will run from December 18, 2017 to February 16, 2018. A public meeting will be scheduled for January, where EPA will answer questions regarding this ESD and provide the public with further opportunities to provide comments. Because EPA will already hold a 60-day public comment period (instead of a typical 30-day public comment period), no extensions of time will be granted. EPA will review and consider all submitted comments before finalizing this ESD.

Pursuant to NCP § 300.825(a)(2), once this ESD is finalized, it will become part of the Administrative Record file for the site. The Administrative Record for the response actions related to the site is available for public review at the following locations:

East Chicago Public Library
2401 East Columbus Drive
East Chicago, IN 46312

East Chicago Public Library
1008 West Chicago Avenue
East Chicago, IN 46312

The Administrative Record file and other relevant reports and documents are also available for public review at the EPA Region 5 office at the following location:

EPA Region 5 Records Center
77 West Jackson Boulevard – 7th Floor
Chicago, IL 60604

Hours: Monday to Friday: 8:00 am – 4:00 pm

Finally, the Administrative Record is available online at: <https://www.epa.gov/uss-lead-superfund-site>.

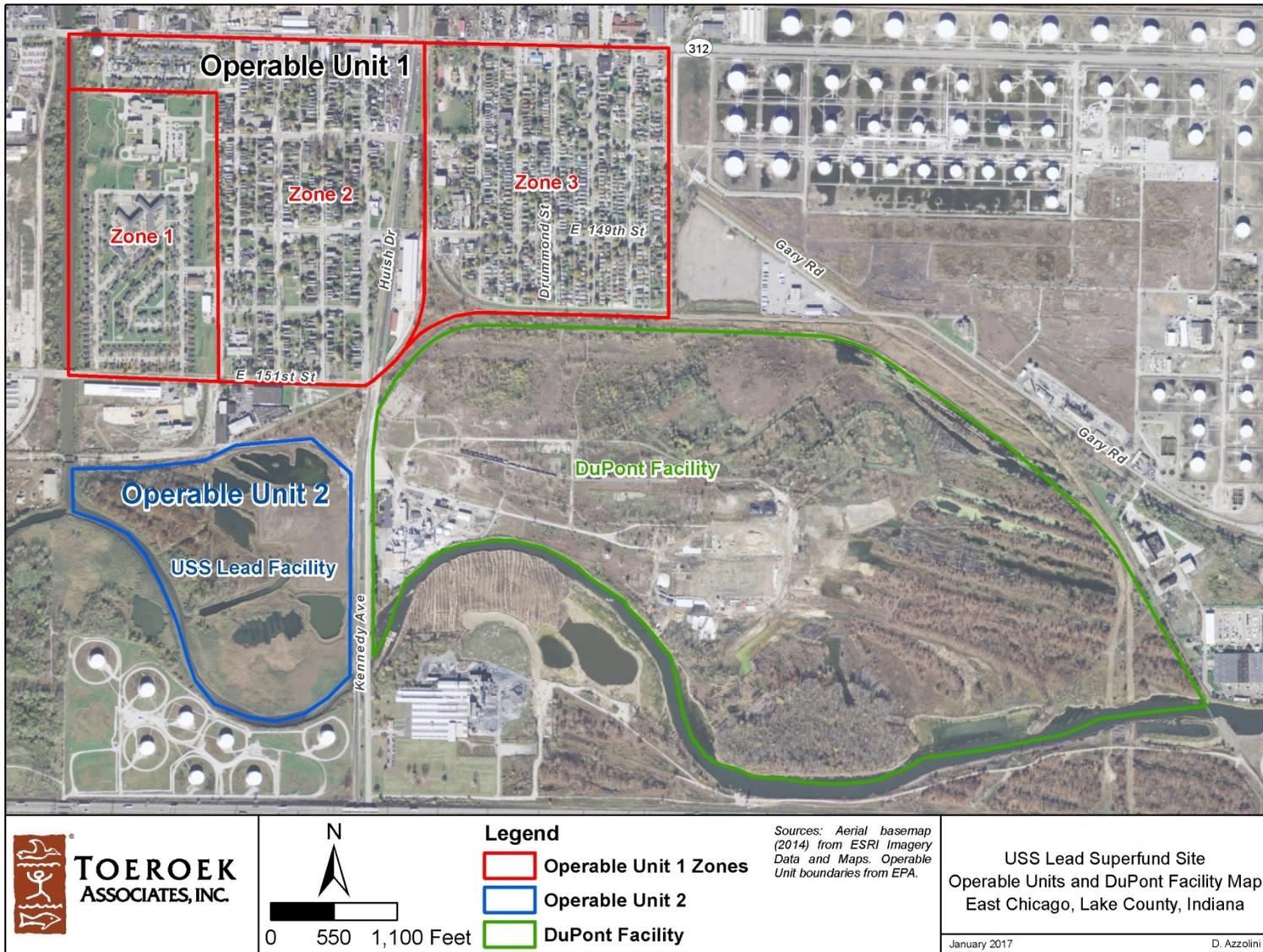
For any questions regarding this ESD, please contact:

Tim Drexler
Remedial Project Manager
Region 5, US EPA
77 West Jackson Boulevard (SR-6J)
Chicago, IL 60604-3590
drexler.timothy@epa.gov

Sarah Rolfes
Remedial Project Manager
Region 5, US EPA
77 West Jackson Boulevard (SR-6J)
Chicago, IL 60604-3590
rolfes.sarah@epa.gov

APPENDIX A

MAP OF USS LEAD SUPERFUND SITE



APPENDIX A: USS Lead Superfund Site Operable Units, Zones, and DuPont Facility

APPENDIX B

**TECHNICAL MEMORANDUM: FINAL COMPARISON
OF ORIGINAL COST ESTIMATE AND CURRENT COST
ESTIMATES FOR ZONES 2 AND 3 OF OU1**

**REMEDIAL ACTION CONTRACT 2
REGION 5**

TECHNICAL MEMORANDUM:

**COMPARISON OF ORIGINAL AND CURRENT COST ESTIMATES
FOR REMEDIAL ACTION IN ZONES 2 AND 3 OF OPERABLE UNIT 1**

**U.S. SMELTER AND LEAD RESIDENTIAL AREA SUPERFUND SITE
EAST CHICAGO, LAKE COUNTY, INDIANA**

**Prepared for:
U.S. ENVIRONMENTAL PROTECTION AGENCY
Region 5
77 West Jackson Boulevard
Chicago, IL 60604**

**Prepared by:
SulTRAC**

Date Submitted:	December 4, 2017
EPA Region:	5
Work Assignment No:	327-TATA-0528
Contract No:	EP-S5-06-02
Prepared by:	SulTRAC
Project Manager:	Rik Lantz
Telephone No:	(312) 265-6125
EPA Work Assignment Manager:	Sarah Rolfes / Tim Drexler
Telephone No:	(312) 886-6551 / (312) 363-4367

EXECUTIVE SUMMARY

This technical memorandum was prepared to compare estimated costs to remediate all properties in Zones 2 and 3 at the USS Lead site as estimated in the 2012 Feasibility Study, with a current cost estimate based on current remedial designs. The 2012 FS costs were estimated based on limited sampling conducted during the remedial investigation and on then-assumed unit rates for conducting various remediation tasks. The current estimated costs are based on a much more precise estimate of the total number of properties that will require remediation and volumes of contaminated soils present at each property, based on remedial design sampling conducted from 2014 to 2017, and on updated cost assumptions for the unit rates for the various tasks. The 2012 FS estimated that remediating all contaminated properties in Zones 2 and 3 would cost approximately \$22.8 million. The current estimate to remediate all properties in Zones 2 and 3 is \$84.9 million.

The principal underlying causes for the disparity between costs estimated in 2012 and current estimates are differences in quantities of contaminated soils that need to be removed and replaced and differences in unit rates. Specifically:

- Estimated quantities of soils that require remediation have nearly doubled from 47,250 cubic yards estimated in the 2012 FS to a current estimate of 88,300 cubic yards.
- Estimated unit rates such as costs to excavate and backfill each cubic yard of soil have increased significantly from the FS to the current estimate based on more labor-intensive excavation, higher wages paid to laborers, and a higher level of oversight than assumed for the FS.
- The increased quantity of soils to be remediated increased construction management costs and required a longer duration of remediation and oversight.
- Contingency costs across all tasks increased with the increased volume of soil and higher unit rates.

1.0 INTRODUCTION

SulTRAC received Work Assignment 327-TATA-0528 under Contract Number EP-S5-06-02 to compare estimated costs to remediate properties in Zones 2 and 3 of the U.S. Smelter and Lead Refinery, Inc. Superfund Site (USS Lead Site or Site), East Chicago, Lake County, Indiana that were presented in the Feasibility Study (SulTRAC 2012a) with current estimates using updated quantities and unit rates based on RD sampling conducted to date and revised engineering estimates. The Feasibility Study compared estimated costs for three areas within Operable Unit 1 (OU1) for four different remedial alternatives considered (SulTRAC 2012a). This Technical Memorandum only considers costs associated with the selected alternative (Alternative 4A – Excavation of Soil Exceeding RALs + Off-Site Disposal + *Ex Situ* Treatment Option).

A total of eighty-eight properties were sampled during the RI in a rough grid pattern at a frequency of two to three properties per block to provide spatial coverage of the entire site. The FS and Record of Decision (ROD) (EPA 2012) for the site divided operable unit 1 (OU1) into the northwestern, southwestern, and eastern geographic areas, based on similar incidence and levels of contamination in these areas. In 2014, after the FS was completed, OU1 was divided into three different geographic areas designated as Zones 1, 2, and 3. In 2014, SulTRAC reallocated the costs for the three *areas* identified in the FS into costs

associated with the three *zones*. Estimated costs to remediate all properties within OU1 were simply divided into different geographical groups between the FS and 2014. Total estimated costs for the three *areas* identified in the FS are equal to total estimated costs for the three *zones* identified in 2014, except for rounding errors.

The ROD estimated total remediation costs of \$29.9 million for the northwestern, southwestern, and eastern areas. These same costs of \$29.8 million were reallocated to Zones 1, 2, and 3 in 2014. (The \$100,000 difference between the total estimated costs included in the ROD and the reallocated 2014 costs is due to rounding.) Because the remedial alternative for Zone 1 (the West Calumet Housing Complex) is currently being reviewed and possibly modified, this discussion is limited to Zones 2 and 3.

Based on the costs from the three areas presented in the ROD as reallocated to the three zones in 2014, a total cost of \$22.8 million was estimated to remediate Zones 2 (\$13.4 million) and Zone 3 (\$9.4 million) (Table 1). These costs will subsequently be called the “original” costs. Tables 2, 3, and 4 show the basis for the original cost estimates. Based on an original estimate of 512 properties that require remediation in Zones 2 and 3, a per property remediation cost of approximately \$44,500 per property was estimated.

This memorandum has been prepared to identify differences between the original estimated costs and current estimated costs to remediate properties in Zones 2 and 3, and to explain the basis for the differences. Major cost categories to remediate Zones 2 and 3 as originally estimated and as currently estimated are presented below.

**Cost Estimates to Remediate Zones 2 and 3
 USS Lead Superfund Site
 East Chicago, Indiana**

	2012 Feasibility Study	Current Cost Estimate	Cost difference
Pre-remedial design sampling	\$1,500,000	\$3,900,000	\$2,400,000
Remedy construction	\$15,000,000	\$59,400,000	\$44,400,000
Engineering and Construction Management	\$2,400,000	\$7,400,000	\$5,000,000
O&M	\$ 62,000	\$ 62,000	\$0
Contingency	\$3,800,000	\$14,100,000	\$10,300,000
Total Estimated Cost	\$22,800,000	\$84,900,000	\$62,100,000

Note: Individual costs do not sum to total costs due to rounding.

2.0 BASIS FOR ORIGINAL COST ESTIMATE

As part of the Feasibility Study, estimated costs to remediate properties under remedial alternative 4A were derived from the estimated number of yards to be remediated and various components of the remedy including (1) costs to sample and prepare remedial designs for each property, (2) costs to excavate contaminated soils, (3) costs to transport and dispose (T&D) of contaminated soils, (4) costs to backfill excavated areas, (5) costs to restore properties, (6) contractor oversight costs, (7) engineering and construction management, and so on.

RI sampling and RD sampling was based on “yards,” defined as individual remediation units that consisted of front or back yards at typical residential properties, quadrants at larger properties, and other individual

units such as side yards, gardens, and areas where soil was relocated. Sampling results from the RI showed little correlation in contamination in front yards, back yards, and quadrants at a single property. Consequently, remediation costs were estimated based on individual yards, rather than individual properties.

Pre-remedial design sampling: Anticipated costs to sample each property were estimated based on the number of properties to sample, and past experience sampling properties during the RI. Estimated analytical costs assumed that samples would be analyzed by CLP laboratories or X-ray fluorescence, and that a small number of samples would be submitted to a private laboratory for TCLP analyses. The original estimate assumed that approximately 14 hours per property would be required to secure access and collect five-point composite samples from all of the yards at a particular property. A pre-remedial design sampling cost of \$1.5 million was originally estimated.

Remedy construction: Remedy construction costs to remediate all properties in Zones 2 and 3 that were anticipated to require remediation were estimated by identifying each step in the remedial process, estimating unit rates and the number of units to execute that step, and summing the costs associated with each step to derive a total cost. Soil excavation costs, T&D costs, and backfill costs were based on the estimated volume of soil to be removed and replaced with clean fill, which was calculated using the estimated number of yards that would require remediation, the average size of the yards, and the percentage of yards that would require remediation to 6-, 12-, 18-, and 24-inches, based on sampling 88 of 1195 properties in Zones 1, 2, and 3 (7.4%) (see Tables 2 and 3).

The estimated volumes of soil and areas of each yard were multiplied by unit rates for various components of the remedy such as excavation of contaminated soils, backfill placement, topsoil placement, and restoration by seeding or installing sod over backfilled areas. Unit rates for each of the major components of the remedial process that were used for the original cost estimate are shown in Table 1. Descriptions of tasks included in each unit rate are detailed in Table 4. Unit rates presented originally were typically assigned based on engineering judgement or by project experience at other residential soil remediation sites such as the Jacobsville site in Evansville, Indiana.

Remedial contractor oversight costs were accounted for both as a subtask within “Remedy Construction” labeled “Contractors Oversight, Health and Safety, and Quality Control”, and as part of “Engineering and Construction Management”. Costs of \$35,000 per month for 22 months were estimated for Contractor's Oversight, Health & Safety, and Quality Control. Based on unit rates used, this corresponds with 2 personnel providing remedial contractor oversight.

A total remedy construction cost of approximately \$15 million was estimated to remediate all properties in Zones 2 and 3 based on estimated quantities derived from the RI sampling and estimated unit rates.

Engineering and construction management: Costs for preparing remedial designs, procuring a remedial contractor, onsite construction management, and reporting were estimated at a rate of \$35,000 per month plus 10% of construction cost for a total \$2.4 million. A total duration of 22 months was estimated to remediate an estimated 512 properties in Zone 2 and 3 with 2 more personnel providing remedial contractor oversight (these were in addition to the two oversight personnel providing oversight under the remedy construction task).

Operations and maintenance: A cost of \$62,000 was originally estimated to conduct unspecified operations and maintenance (O&M) and five-year remedy reviews in Zones 2 and 3.

Contingency: A contingency of 20% of anticipated sampling costs, remedy construction costs, engineering and construction management costs, oversight and reporting, and O&M costs was added to the project subtotal cost to cover contingencies. The estimated contingency cost amounted to \$3.8 million.

Based on the costs discussed above, a total project cost of \$22.8 million was originally estimated to remediate all Zone 2 and 3 properties.

3.0 CURRENT COST ESTIMATES

Current cost estimates are based on units, unit rates, and cost assumptions that were updated based on current pricing and much more extensive RD sampling. The current cost estimate presented in Table 1 incorporates both the currently estimated units (such as volume of soil to be remediated) and current unit rates (such as cost to excavate and backfill each cubic yard of soil) and are based on current remedial designs and current unit rates. Current unit rates were derived in small part from actual incurred costs but predominantly from the Engineer's Estimate of the most recent remedial design report (SulTRAC 2017).

Specifically, SulTRAC provides a detailed Engineer's Estimate with each group of remedial designs submitted to the EPA for the USS Lead Site. The most recent RD document (SulTRAC 2017) submitted to EPA in September of this year included remedial designs for 94 Zone 3 properties and, in Appendix E, it included total estimated costs to remediate those 94 properties. That "Engineer's Estimate" is attached to this technical memorandum as Appendix A.

From the Engineer's Estimate, the total costs and units (i.e. yards, cubic yards, square yards) to remediate 94 Zone 3 properties were used as a basis to develop the new unit rates used in this document. To simplify the comparison between the more detailed cost categories used in the Engineer's Estimate to the less detailed categories used in the original cost estimate, each cost category from the Engineer's Estimate was mapped to a cost category used in the original estimate as detailed in Table 4. For example, to derive the new unit rate for Contaminated Soil Excavation and Backfilling, total estimated costs for 6 categories from the Engineer's Estimate (Excavation [mechanical], Excavation [manual], Backfill Placement, Topsoil Placement, Gravel Placement, and Geotechnical Testing) were summed (\$4,883,711) and divided by the total cubic yardage being excavated from the 94 properties (10,362 yd³), to derive a new unit rate of \$471/yd³ for Contaminated Soil Excavation and Backfilling. Current unit rates for all categories from the original cost estimate and their derivations are detailed in Table 4.

Pre-remedial design sampling: SulTRAC has sampled 966 properties in Zones 2 and 3 and has incurred actual costs of \$2.8 million to sample these properties. The actual sampling cost was derived by adding costs expended under the field investigation / data acquisition task (Task 3), sample analysis acquisition (Task 4), analytical support / data validation (Task 5), data management (Task 6), and project management (Task 1) of work assignments (WA) 198, 308, and 320 from May 2015 to the present. Through October 2017, SulTRAC has expended \$2.8 million including \$430,000 in travel costs, subcontractors, and other direct costs, and approximately \$2.4 million and 29,000 hours of labor to obtain access, sample, and manage resulting data for 966 properties in Zones 2 and 3 (approximately \$2,900 per property).

111 properties remain to be sampled, due to lack of access from the owner of record. Thirteen of these properties were not sampled because the property owner refused access. Assuming that SulTRAC samples the remaining 98 properties and incurs the same estimated cost per property to sample them, additional sampling costs of approximately \$282,000 are anticipated. Therefore, a total cost of approximately \$3.1 million is estimated to sample all properties in Zones 2 and 3.

Contract laboratory program (CLP) laboratory costs of approximately \$876,500 have been incurred to date, as reported by EPA on November 28. These actual laboratory costs have been included along with sampling costs to derive a total estimated pre-remedial design sampling cost of \$3.9 million in the current cost estimate.

Remedy construction: Remedy construction costs to remediate all properties in Zones 2 and 3 that are expected to require remediation are presented as “Current cost estimate” in Table 1. To date, SulTRAC has sampled approximately 966 of the 1,077 properties in Zones 2 and 3 (90%). The total number of properties in Zones 2 and 3 decreased from the original count of 1,153 to the current count of 1,064 for several reasons including combining adjacent parcels with common ownership into single properties, zoning changes, and not counting properties where the owners refused to allow sampling or remediation. Based on sampling conducted to date, 713 of the 966 properties sampled in Zones 2 and 3 (74%) are known to require remediation. If 74% of the 98 properties that have not yet been sampled also require remediation, 72 additional properties and a total of 785 properties in Zones 2 and 3 will require remediation.

Current estimated costs presented in Table 1 are based on (1) volumes of soil to be removed, which are known much more precisely based on RD sampling of 90% of properties in Zones 2 and 3 than the original costs, which were based on sampling only 7.4% of properties, and (2) current estimated unit rates, which are based on a much more detailed cost estimate prepared for a recent remedial design document (SulTRAC 2017).

Using the limited sampling conducted during the RI, SulTRAC estimated that approximately 47,250 cubic yards (CY) of soil in Zones 2 and 3 would require excavation, disposal, and replacement with clean fill. Based on the much more extensive sampling conducted during the remedial design (RD), SulTRAC now estimates that a total of 88,300 CY of soil in Zones 2 and 3 will require excavation, disposal, and replacement with clean fill, about double the original estimate. The 88,300 CY consists of approximately 69,700 CY of soil estimated for the 713 properties currently known to need remediation plus an estimated 18,600 CY of soil for the remaining 98 properties that have not yet been sampled. (Note: many of the properties that have not yet been sampled are commercial properties and railroad rights-of-way and therefore the average property size for these properties is considerably larger than the average size of the sampled properties.)

Treatment and disposal costs for the updated estimate are based on actual costs incurred of \$40 per ton, as reported by EPA on November 27. Remedial designs provide volume of soil to be excavated and disposed of, but disposal of this material is priced in tons. For the purposes of estimating costs here, volume is converted to weight using density of the material, which depends on variables such as water content, soil composition, and inclusion of foreign materials such as bricks, debris, and slag. A disposal cost of \$40 per ton and density conversion of 1.15 tons per cubic yard resulted in the disposal cost of \$46 per cubic yard used for this cost estimate.

Based on updated units and unit rates, the remedy construction task for all properties in Zones 2 and 3 is now estimated at \$59.4 million.

Engineering and construction management: The original engineering and construction management cost category included remedial design costs and as well as procurement, contractor oversight and reporting costs. Thus, we include estimates for these costs in the current estimate.

- **Remedial design costs:** To date, SulTRAC has prepared remedial designs for approximately 500 properties in Zones 2 and 3, at a cost of approximately \$380,000 (\$760 per remedial design). This estimated cost to prepare remedial designs was calculated by adding the costs incurred under the Pre-final/Final design task (Task 11) of WAs 198, 308, and 320 from May 2015 to the present. Assuming that a total of 785 remedial designs will need to be prepared at a cost of \$760 per remedial design, a total of approximately \$600,000 is estimated to prepare remedial designs for all properties in Zones 2 and 3 that may ultimately require remediation. These costs were included in engineering and construction management unit costs.
- **Procurement, contractor oversight and reporting costs:** The Engineer's Estimate for 94 Zone 3 properties (SulTRAC 2017) included estimated costs to procure a remedial contractor, provide remedial oversight, and prepare a remedial action report. As noted above, remedial oversight costs appear in two locations in the original cost estimate: as a "Contractor's Oversight, Health and Safety, and Quality Control" subtask included in the "Remedy Construction" task and separately in the "Engineering and Construction Management" task. SulTRAC assigned the Engineer's Estimate subtasks to the Contractor's Oversight task or the Remedy Construction task as shown in Table 4. Because the original construction management costs were estimated on a monthly rate, SulTRAC divided the Engineer's Estimate totals by the seven months expected to complete the 94-property remedial project to derive an equivalent monthly rate for the current cost estimate that could be compared to the original cost estimate. The total duration to complete remediation of all properties in Zones 2 and 3 is now expected to be 48 months. This duration was estimated by prorating the 14 months of work required in 2017 to remediate 229 Zone 2 and 3 properties (16.4 properties per month) to derive the 48-month period required to remediate all 785 properties that are expected to require remediation.

Contingency: A contingency cost of \$14.1 million is estimated for the project, based on 20% of the remedial design sampling costs, remedy construction costs, and oversight and reporting costs for Zones 2 and 3.

Institutional controls and operations and maintenance costs: Institutional controls and O&M costs are a relatively minor component of the total cost for the remedy and were not updated.

4.0 COMPARISON OF ORIGINAL COST ESTIMATE WITH CURRENT COST ESTIMATE

Based on the original cost estimate, which was prepared using the very limited RI sampling and estimated unit rates, and the current cost estimate, which is based on the much more detailed RD sampling and a much more detailed evaluation of unit rates using updated material, equipment, and labor costs, a cost difference of \$62.1 million was identified. The basis for this cost difference is detailed below:

Pre-remedial design sampling: Estimated costs to conduct pre-design sampling have increased by approximately \$2.4 million between the original and current estimates, as shown in Table 1. The original estimate assumed a cost of \$1,315 to sample each property, for a total cost of \$1.5 million to sample all properties in Zones 2 and 3. A cost of \$3.9 million is now estimated to sample all properties in Zones 2 and 3 as described under pre-remedial design in Section 3.

Increases in sampling and analysis costs from the original estimate were caused by several factors, including:

- **Sampling deeper than originally assumed:** The original estimate assumed that sampling would cease when zones of refusal were encountered; In fact, sampling at the majority of properties was advanced to 2.5 feet below ground surface using the much more labor-intensive pry bars, pick axes, and in some cases, a subcontracted mechanical excavation contractor.
- **Use of contract laboratory program (CLP) laboratories instead of X-ray fluorescence (XRF) field instruments to measure lead and arsenic content of soil samples from Zone 2:** To achieve more rapid turn-around time for individual samples so that work in Zone 2 could begin together with work in Zone 3, and to avoid delays associated with generating a complete data set to create an XRF correction factor, SulTRAC sent all samples from Zone 2 and selected samples from Zone 3 to CLP laboratories for analysis, at costs of \$790,000 and \$86,500, respectively. CLP laboratory costs were not included in the FS cost estimate.
- **Use of private laboratories and third-party data validators:** To achieve more rapid analytical turn-around time, SulTRAC sent selected samples to a private laboratory. SulTRAC incurred costs of approximately \$92,000 to analyze samples and validate data that was not included in the original cost estimate.
- **Data management:** To make data available to the various stakeholders in the project, SulTRAC conducted intensive data management activities, including entering all field data in field tablet computers, the SCRIBE database, and a Geoportal and producing numerous graphics.

Remedy Construction: Estimated costs for remedy construction have increased by approximately \$44.4 million between the original and current estimates, as shown in Table 1. These differences are driven primarily by a difference in the estimated volume of soil to be remediated and the increased unit rates for soil excavation and backfill.

The differences between original and current estimates of soil volumes that require remediation are shown in Table 3. Using the limited sampling conducted during the RI, SulTRAC originally estimated that approximately 47,250 cubic yards (CY) of soil in Zones 2 and 3 would require excavation, disposal, and replacement with clean fill. Based on the much more extensive sampling conducted during the remedial design (RD), SulTRAC now estimates that a total of 88,300 CY of soil in Zones 2 and 3 will require excavation, disposal, and replacement with clean fill, about double the original estimate.

The primary reasons for the increase in estimated soil volume are that the average estimated size of the yards to be remediated has increased, the estimated number properties requiring remediation has increased, and the estimated depth of required remediation at these properties has increased from the original estimates.

- **Average size of yards:** As shown in Table 2, the average yard sizes originally used to estimate costs were smaller than the current estimated excavation areas used for the current estimated costs. The properties sampled during the Remedial Investigation were selected to achieve an even spatial distribution of properties throughout OU1 rather than on anticipated contaminant concentrations or the size of the property. For the original estimate, only those properties that were sampled were considered when estimating the average yard size.

Average yard size for residential properties increased from 1,254 ft² to 1,406 ft² in Zone 2 and from 900 ft² to 1,512 ft² in Zone 3. The increase in yard size between the original and current estimates was caused by using a much larger sample size (90% of properties sampled for current estimate vs. 7.4% of properties sampled used for original estimate) and to some degree by combining adjacent parcels with common ownership into single properties for the RD.

Yard size estimates for commercial properties used in the original estimate were biased low because some larger properties (including utility corridors and commercial properties) were not considered during the Feasibility Study, although this effect was mitigated to some extent by including the parks that were sampled.

- **Number properties requiring remediation:** The estimated number of Zone 2 and Zone 3 properties requiring remediation increased from 512 to 785 (494 in Zone 2 and 291 in Zone 3). This increase was caused by a higher incidence of contamination detected during the more comprehensive sampling of the RD (90% of properties) than the RI (7.4% of properties).
- **Depth of required remediation:** The original estimate assumed that a small percentage of the properties would require remediation to deeper soil intervals. For example, it was originally assumed that 4% of the residential properties in Zone 2 and 3% of the residential properties in Zone 3 would require remediation to 24-inches. Based on the much more extensive RD sampling, SulTRAC now estimates that 17% of the residential properties in Zone 2 and 14% of the residential properties in Zone 3 will require remediation to 24-inches (see Table 3).
- **Unit rates:** The estimated unit rates for activities such as preconstruction activities, excavation and backfill, and oversight have increased significantly between the FS and current estimates. Causes for this increase include:
 - Labor costs from 2012 were updated based on 2017 prevailing wage requirements (original labor costs were not based on prevailing wages);
 - Changes in material and equipment costs from 2012 to 2017;
 - Inclusion of manual excavation that was not considered in the formulation of the original cost estimate;
 - The original oversight costs assumed four persons would provide oversight (split between construction management and remedy construction), current estimates assume that a team of seven persons will provide remedial construction oversight.

Engineering and construction management: Estimated engineering and construction management costs have increased by approximately \$5.0 million between the original and current estimates, as shown in Table 1. Estimated engineering and construction management costs are based on 10% of estimated remedy

construction costs, plus an estimated duration of the project multiplied by a monthly construction oversight cost. Most of the cost difference between the original and the current estimate is the result of the increased remedy construction cost. The expected increase in project duration from 22 months to 48 months accounts for about \$140,000 of the cost difference.

5.0 SUMMARY

The disparity between the original cost estimate and the current estimate is accounted for primarily by a difference in quantities of contaminated soils that need to be removed and replaced and differences in unit rates. The principal underlying causes that have increased costs are:

- Estimated volumes of soils that require remediation have increased substantially. The original excavation volume was based on a small sample size of 7.4% of properties and the current estimate is based on much more robust RD soil sampling of 90% of properties in Zones 2 and 3. The RD sampling has shown that more yards require remediation than were originally estimated, and the contaminated intervals are larger and deeper than anticipated.
- Estimated unit rates such as costs to excavate and backfill each cubic yard of soil have increased significantly based on higher wages paid to laborers, a higher level of oversight, and manual excavation that was not considered originally.
- The increased quantity of soils to be remediated increased construction management costs and also required a longer duration of remediation and oversight.
- Contingency costs across all tasks increased with the increased volume of soil and higher unit rates.

6.0 REFERENCES

SulTRAC 2012a. “Feasibility Study, US Smelter and Lead Refinery Superfund Site, Lake County, Indiana.” June 20.

SulTRAC 2012b. “Remedial Investigation Report, U.S. Smelter and Lead Refinery Superfund Site, Lake County, Indiana.” June 20.

SulTRAC 2017. “Draft Remedial Design for 94 Zone 3 Properties, U.S. Smelter and Lead Residential Area Superfund Site East Chicago, Lake County, Indiana.” September.

U.S. EPA 2012. “U.S. Smelter and Lead Refinery, Inc. Superfund Site, Operable Unit 1, East Chicago, Lake County, Indiana, Record of Decision.” November.

Table 1
Original Cost Estimate vs Current Cost Estimate
USS Lead
East Chicago, Indiana

Estimate Category	Units	Unit Rates	Unit Rates	Number of Units			Number of Units			Difference ²	Original Cost Estimate			Current Cost Estimate			Difference ³	
		2012 FS	Current ¹	Original cost estimate	Current cost estimate	Difference	Zone 2	Zone 3	Total		Zone 2	Zone 3	Total	Zone 2	Zone 3	Total		
PRE-REMEDIAL DESIGN SAMPLING																		
Sample Collection Labor & Other Direct Costs	Total Properties * Rate	Total Properties	\$1,315	\$2,873	639	514	1,153	594	470	1,064	(89)	\$840,700	\$676,000	\$1,516,700	\$1,706,562	\$1,350,310	\$3,056,872	\$1,540,172
Contract laboratory program (CLP) laboratory costs ⁴		Lump sum													\$790,000	\$86,500	\$876,500	\$876,500
Pre-remedial Design subtotal												\$841,000	\$676,000	\$1,500,000	\$2,500,000	\$1,400,000	\$3,900,000	\$2,400,000
REMEDY CONSTRUCTION																		
Preconstruction Activities ⁵	Yards Requiring Remediation * Rate + Flat Cost of \$144,000 per Zone	Unremediated Yards	\$83	\$1,530	626	479	1,105	991	479	1,470	365	\$196,000	\$180,000	\$376,000	\$1,516,834	\$732,385	\$2,249,219	\$1,873,219
Site Preparation and Design Agreements	Estimated Total Area * Rate	Total Area (sq yd)	\$7.50	\$5.59	96,698	66,796	163,494	163,050	99,813	262,862	99,369	\$730,000	\$500,000	\$1,230,000	\$911,447	\$557,953	\$1,469,400	\$239,400
Institutional Controls	\$5,000 Lump Sum Per Zone	Zones	\$5,000	\$5,000	1	1	2	1	1	2	-	\$5,000	\$5,000	\$10,000	\$5,000	\$5,000	\$10,000	\$0
Contaminated Soil Excavation and Backfilling	Estimated Total Volume * Rate	Total Volume (cu yd)	\$115	\$471	28,093	19,157	47,250	55,647	32,642	88,288	41,038	\$3,231,000	\$2,203,000	\$5,434,000	\$26,209,547	\$15,374,272	\$41,583,819	\$36,149,819
Contaminated Soil Transportation and Disposal	Estimated Total Volume * Rate	Volume (cu yd)	\$79	\$46	28,093	19,157	47,250	55,647	32,642	88,288	41,038	\$2,219,000	\$1,513,000	\$3,732,000	\$2,559,743	\$1,501,521	\$4,061,265	\$329,265
Soil Barrier for Soil Below 24 inches		Total Area (sq yd)		\$1.35				34,240	20,961	55,201		\$2,000	\$1,000	\$3,000	\$46,225	\$28,297	\$74,521	\$71,521
Property Restoration	Estimated Total Area * Rate	Total Area (sq yd)	\$21	\$15	96,698	66,796	163,494	163,050	99,813	262,862	99,369	\$2,036,000	\$1,407,000	\$3,443,000	\$2,445,745	\$1,497,190	\$3,942,934	\$499,934
Contractor's Oversight, Health & Safety, Quality Control	Duration in Each Zone * Rate	Months	\$35,000	\$125,407	13	9	22	31	17	48	26	\$455,000	\$315,000	\$770,000	\$3,887,617	\$2,131,919	\$6,019,536	\$5,249,536
Construction Subtotal												\$8,900,000	\$6,100,000	\$15,000,000	\$37,600,000	\$21,800,000	\$59,400,000	\$44,400,000
ENGINEERING & CONSTRUCTION MANAGEMENT	Duration in Each Zone * Rate + 10% of Construction Subtotal + \$760 per design	Months	\$35,000	\$18,993	13	9	22	31	17	48	26	\$1,435,000	\$995,000	\$2,430,000	\$4,681,420	\$2,701,785	\$7,383,205	\$4,953,205
OPERATIONS AND MAINTENANCE																		
Project Subtotal												\$11,200,000	\$7,800,000	\$19,000,000	\$44,800,000	\$26,000,000	\$70,800,000	\$51,800,000
20% Contingency	20% of Project Subtotal											\$2,240,000	\$1,560,000	\$3,800,000	\$8,960,000	\$5,200,000	\$14,160,000	\$10,360,000
Project Total												\$13,400,000	\$9,400,000	\$22,800,000	\$53,800,000	\$31,200,000	\$84,900,000	\$62,100,000

¹ - All values are taken from the last column in Table 4

² - Difference in number of units between original and current estimates

³ - Cost difference between original and current estimate

⁴ - Contract laboratory costs were not included in original estimate, current cost estimate includes actual costs for CLP analytical services and data validation

⁵ - Preconstruction activities: A flat cost of \$144,000 for mobilization and project plans used in original estimate was not prorated to per property unit rate

Note: Values in this table have been rounded

Table 2
Remedial Soil Areas and Volumes Based on Depth
USS Lead
East Chicago, Indiana

Original Estimate

	Number of Yards	Property type	% Yards Requiring Remediation	Yards Requiring Remediation	Properties Requiring Remediation	Average Excavation Area per Yard (sq ft)	Total area requiring remediation (sq ft)	Total area by property type (sq ft)	Total volume by property type (cu yd)
Zone 2									
Residential	1,154	Residential	53%	612	306	1,254	767,448	767,448	24,332
Park/school/church	28	Commercial	50%	14	4	7,345	102,830	102,830	3,761
Industrial/commercial/easement	220		0%	-	-	984	-		
<i>Zone total</i>	1,402			626	310		870,278		28,093
Zone 3									
Residential	974	Residential	41%	399	182	900	359,100	359,100	11,104
Park/school/church	12	Commercial	67%	8	2	10,026	80,208	242,064	8,053
Industrial/commercial/easement	96		75%	72	18	2,248	161,856		
<i>Zone total</i>	1,082			479	202		601,164		19,157
TOTAL	2,484			1,105	512		1,471,442		47,250

Current Estimate

	Number of Yards	Property type	% Yards Requiring Remediation	Yards Requiring Remediation	Properties Requiring Remediation	Average Excavation Area per Yard (sq ft)	Total area requiring remediation (sq ft)	Total area by property type (sq ft)	Total volume by property type (cu yd)
Zone 2									
Residential	1,366	Residential	68%	934	465	1,406	1,246,167	1,304,630	47,280
Park/school/church	72		40%	29	13	2,644	58,463		
Industrial/commercial/easement	120	Commercial	24%	29	16	4,367	162,816	162,816	8,367
<i>Zone total</i>	1,558			991	494		1,467,447		55,647
Zone 3									
Residential	948	Residential	46%	434	272	1,512	644,691	679,463	23,440
Park/school/church	13		38%	5	2	18,588	34,772		
Industrial/commercial/easement	109	Commercial	36%	39	17	5,276	218,850	218,850	9,202
<i>Zone total</i>	1,070			479	291		898,314		32,642
TOTAL	2,628			1,470	785		2,365,760		88,288

*Totals may not reflect counts due to rounding

Table 3
Removal Volume Estimates Based on Depth of Impacted Soil
USS Lead
East Chicago, Indiana

Original Estimate

	Total Area Requiring Remediation (sq ft)	Percent RAL Exceedances 0-6"	Volume 0-6 inches (cu yd)	Percent RAL Exceedances 0-12"	Volume 0-12 inches (cu yd)	Percent RAL Exceedances 0-18"	Volume 0-18 inches (cu yd)	Percent RAL Exceedances 0-24"	Volume 0-24 inches (cu yd)	Total Volume (cu yd)
Zone 2										
Residential	767,448	42%	5,898	49%	13,786	6%	2,430	4%	2,218	24,332
Park/school/church	102,830	31%	590	50%	1,910	10%	577	9%	684	3,761
Industrial/commercial/easement	-	0%	-	0%	-	0%	-	0%	-	-
<i>Zone Total</i>	870,278									28,093
Zone 3										
Residential	359,100	44%	2,925	48%	6,384	5%	998	3%	798	11,104
Park/school/church	80,208	36%	538	53%	1,579	6%	258	5%	285	2,660
Industrial/commercial/easement	161,856	35%	1,052	54%	3,240	7%	621	4%	480	5,393
<i>Zone Total</i>	601,164									19,157
TOTAL	1,471,442									47,251

Current Estimate

	Total Area Requiring Remediation (sq ft)	Percent RAL Exceedances 0-6"	Volume 0-6 inches (cu yd)	Percent RAL Exceedances 0-12"	Volume 0-12 inches (cu yd)	Percent RAL Exceedances 0-18"	Volume 0-18 inches (cu yd)	Percent RAL Exceedances 0-24"	Volume 0-24 inches (cu yd)	Total Volume (cu yd)
Zone 2										
Residential	1,246,167	36%	6,781	30%	12,606	17%	10,408	17%	15,082	44,878
Park/school/church	58,463	18%	122	24%	495	41%	1,134	18%	651	2,402
Industrial/commercial/easement	162,816	13%	280	13%	1,490	35%	2,271	39%	4,326	8,367
<i>Zone Total</i>	1,467,447									55,647
Zone 3										
Residential	644,691	34%	3,770	34%	7,056	18%	5,309	14%	6,723	22,858
Park/school/church	34,772	80%	529	20%	53	0%	-	0%	-	582
Industrial/commercial/easement	218,850	38%	1,292	38%	2,610	8%	1,126	15%	4,173	9,202
<i>Zone Total</i>	898,314									32,642
TOTAL	2,365,760									88,288

*Totals may not reflect counts due to rounding

Table 4
2012 FS and 2017 RD Cost Estimate Unit Rate Comparison
USS Lead Site
East Chicago, Indiana

2012 Feasibility Study Cost Estimate Unit Rates			94 Zone 3 Properties Remedial Design Cost Estimate				Current Rates ¹
Category	Description	Unit Rates	Category	Total Cost	Lumped Total Cost	Units	
PRE-REMEDIAL DESIGN SAMPLING							
Sample Labor	Labor for sampling and access agreements. Assumes access agreements needed for all properties.	\$1,134 per property	Sample labor and ODCs ²	NA	NA	NA	\$2,873/property ²
ODCs	CLP/TCLP samples and equipment transportation	\$181 per property					
REMEDY CONSTRUCTION							
Preconstruction Activities	Mobilization & Demobilization, preconstruction Plans, Coordination with residents	\$144,000 + \$83/yard	Mobilization	\$292,530	\$313,710	205 yards in 94 properties	\$1,530/yard
			Demobilization	\$21,180			
Site Preparation and Access	Erosion control, utility locates, site prep, and documentation of yard conditions (including agreements with residents)	\$7.5/sq. yd.	Pre-construction Assessment	\$147,470	\$147,470	26,391 sq yd	\$5.59/sq. yd.
Institutional Controls	Institutional Control Monitoring Plan (not dependent on number of ICs)	\$5,000/zone	NA	NA	NA	NA	-
Contaminated Soil Excavation and Backfilling	Excavation of impacted soil, backfill with clean soil, and topsoil	\$115/cu. yd.	Excavation (Mechanical)	\$2,329,558	\$4,883,711	9,621 cu yd mechanical + 741 cy yd manual = 10,362 cu yd	\$471/cu. yd.
			Excavation (Manual)	\$411,098			
			Backfill Placement	\$876,681			
			Topsoil Placement	\$924,889			
			Gravel Placement	\$204,884			
			Geotechnical Testing	\$136,600			
Contaminated Soil Transportation and Disposal	Transportation & Disposal for haz and non-haz	\$79/cu. yd.	Contaminated Soil Transportation and Disposal ²	NA	NA	NA	\$46/cu. yd. ³
Soil Cover	Visible barrier for small percentage of properties with impacted soil below 24" (snow fence)	\$4,000/site	High Visibility Barrier	\$7,597	\$7,597	5,627 sq yd	\$1.35/sq. yd.
Property Restoration	Restoration of grass and any removed plantings	\$21/sq. yd.	Mulch Placement	\$15,704	\$402,823	26,391 sq yd	\$15/sq. yd.
			Sod Placement	\$146,639			
			Seed Placement	\$0			
			Watering	\$87,850			
			Trees	\$2,372			
			Shrubs	\$22,650			
			Stumps	\$7,924			
			Miscellaneous Landscaping	\$15,604			
			Property Close-Out	\$104,080			
Contractor's Oversight, Health & Safety, Quality Control	22 mo @ 35000/mo.	\$35,000/mo.	Office rental expense	\$21,600	\$877,850	7 months	\$125,407/mo.
			Field Startup activities	\$16,400			
			Remediation Oversight	\$768,600			
			Air Sampling	\$52,250			
			Soil Sampling	\$19,000			
ENGINEERING & CONSTRUCTION MANAGEMENT	Onsite construction Quality Assurance plus design, procurement, construction management, and reporting	\$35,000/mo. + 10% const subtotal	Procurement	\$33,250	\$132,950	7 months	\$18,993/mo. + 10% const subtotal +
			Plan generation	\$22,500			
			Plan review	\$10,800			
			Community relations	\$7,950			
			Close out activities	\$58,450			
			Remedial Design ²	NA			
OPERATIONS AND MAINTENANCE	Cost of 3 5-year reviews prorated across the three zones	Flat rates					Flat rates

¹ - Except for the three unit costs highlighted in pale green, the rates in this column are derived from the "Engineer's Estimate of Remediation Costs" attached to SulTRAC's September 2017 Remedial Design Document. The Engineer's Estimate of Remediation Costs is attached to this Technical Memorandum as Appendix A.

² - Pre-remedial design sampling costs were prorated based on actual incurred costs of approximately \$2.8 million to sample 966 properties, as described in Section 3.0

APPENDIX A

ENGINEER'S COST ESTIMATE

Originally included as Appendix E in

SulTRAC 2017. "Draft Remedial Design for 94 Zone 3 Properties, U.S. Smelter and Lead Residential Area Superfund Site East Chicago, Lake County, Indiana" September 29.

DESCRIPTION OF ENGINEER'S ESTIMATE OF REMEDIATION COSTS

SUBJECT: Engineer's Estimate of Remediation Costs for 94 Properties in Zone 3 of Operable Unit 1 of the U.S. Smelter and Lead Refinery, Inc. Superfund Site

FROM: Rik Lantz, SulTRAC Project Manager

TO: Sarah Rolfes / Tim Drexler
Remedial Project Managers
EPA Region 5

DATE: 12/4/2017

The attached Engineer's Estimate of Remediation Costs describes SulTRAC's estimate for remediating 94 properties in Zone 3 of Operable Unit 1 of the U.S. Smelter and Lead Refinery, Inc. Superfund Site.

This Engineer's Estimate was prepared by Chris Ore, P.E. in September 2017, and was originally provided to EPA on September 29, 2017 as Appendix E to a set of 94 draft remedial designs for Zone 3 properties. It is the most up-to-date cost estimate we have prepared. It is included separately here because unit rate cost estimates from this Engineer's Estimate have been used in the *Technical Memorandum: Comparison of Original Cost Estimates and Current Cost Estimates for Zones 2 and 3 of OUI*.

The attached Engineer's Estimate was prepared consistent with the Statement of Work for Remedial Design (OU1) dated January 28, 2016.



Rik Lantz, P.G., LEED-AP
Project Manager
SulTRAC

Engineer's Estimate of Remediation Costs

The costs for remediation of 94 properties (including excavation and transportation, restoration, and oversight) within USS Lead Zone 3 was estimated as \$6,770,000. Based upon discussion with EPA this estimate assumes, oversight of the remediation will be performed by a primary contractor, and the remediation activity will be performed by a subcontractor. Costs were estimated using applicable Davis Bacon wages and SulTRAC's experience with similar remediation projects.

This cost estimate has been prepared in accordance with the Statement of Work for Remedial Design (OU1) dated January 28, 2016. Assumptions have been made regarding the number of remediation crews and site workers, rate of production, and labor costs. Actual costs may vary from this cost estimate due to these or other factors. A detailed breakdown of the estimated costs, including descriptions of assumptions, is attached.

Subcontractor Costs

Bid Item	Unit	Unit Price	Est. Qty	Extended Price
1 Mobilization	each	\$292,530	1	\$292,530
2 Pre-construction Assessment	each	\$1,569	94	\$147,470
3 Excavation (Mechanical)	yds ³	\$242	9,621	\$2,329,558
4 Excavation (Manual)	yds ³	\$555	741	\$411,098
5 Backfill Placement	yds ³	\$304	2,888	\$876,681
6 Topsoil Placement	yds ³	\$228	4,064	\$924,889
7 Gravel Placement	yds ³	\$60	3407.4	204884
8 Mulch Placement	yds ³	\$196	80	\$15,704
9 Geotechnical Testing	each	\$332	266	\$136,600
10 High Visibility Barrier	ft ²	\$0.15	50645.2	7596.78
11 Sod Placement	ft ²	\$0.61	242,277	\$146,639
12 Seed Placement	ft ²	0	0	0
13 Watering	each	\$935	94	\$87,850
14 Trees	each	\$791	12	\$2,372
15 Shrubs	each	\$139	125	\$22,650
16 Stumps	each	\$1,132	17	\$7,924
17 Miscellaneous Landscaping	each	\$166	94	\$15,604
18 Property Close-Out	each	\$1,107	94	\$104,080
19 Demobilization	each	\$21,180	1	\$21,180
Total Subcontractor Cost				\$5,755,311

Oversight Contractor Costs

Procurement	\$33,250
Plan Generation	\$22,500
Plan Review	\$10,800
Community Relations	\$7,950
Office Rental Expense	\$21,600
Field Startup Activities	\$16,400
Remediation Oversight	\$768,600
Air Sampling	\$52,250
Soil Sampling	\$19,000
Close-Out Activities	\$58,450
Total Oversight Costs	\$1,010,800

Subcontractor Costs	\$5,755,311
Contractor Costs	\$1,010,800
Total Costs	\$6,766,111

1 - Mobilization (Continued)

Rental Items	Unit Price	Units	Total
Office Trailer ¹	\$1,800	7 months	\$12,600
Trailer Delivery	\$4,500	1 lump sum	\$4,500
Utility Connection	\$3,500	1 lump sum	\$3,500
Electric Service	\$400	7 months	\$2,800
Internet Service	\$100	7 months	\$700
Chain Link Fence ²	\$2,700	7 months	\$18,900
Fence Setup	\$500	1 lump sum	\$500
Conex Box ³	\$600	7 months	\$4,200
Conex Delivery	\$300	1 lump sum	\$300
Portable Toilets ⁴	\$1,600	7 months	\$11,200
Project Signage	\$1,000	1 lump sum	\$1,000
Drinking Water	\$200	7 months	\$1,400
Office Supplies	\$250	7 months	\$1,750
Office Furniture	\$250	7 months	\$1,750
Total Cost			\$65,100

Notes:

No cost is anticipated for usage of lot for trailer placement (McCook and 149th) or material staging area (Chemours). Equipment will be stored at one of these locations with overnight security.

- 1) Assumes 3 office trailers (based on previous setup at McCook & 149th) at \$600/mo each
Assumes rental of 1,000 ft of chain-link security fence, around trailer & equipment yard. Dimensions: 6 ft
- 2) H x 12 ft L panels and 2 gates
- 3) Assumes 2 Connex boxes at \$300/each/month
- 4) Assumes 6 portable toilets and two hand-wash stations at \$200/each/month

A group of key personnel are anticipated to mobilize to the site one week prior to the start of excavation activity to perform office and staging area setup tasks.

Office and Staging Area Setup, Equipment Mobilization

Personnel	#	Hourly Rate	Hours	Total
PM	1	\$110	20	\$2,200
Foreman	1	\$90	40	\$3,600
Operator	1	\$91	40	\$3,640
Laborer	2	\$58	40	\$4,640
Delivery Charges	Delivery		Total	
Excavator	5	\$150	Each	\$750
Skidsteer	4	\$150	Each	\$600
Dump Truck	18	\$150	Each	\$2,700
			Total	\$18,130

1 - Mobilization (Continued)

Site Security During Non-Working Hours

Security presence is anticipated during non-working hours for the full duration of temporary office usage (April to October). Security personnel are anticipated to rotate and not be subject to overtime pay. Subcontractor staff are anticipated to work M-F schedule, and will not be present on weekends.

Security Costs	Hourly Rate	Hours Onsite	Days Onsite	Cost
Weekdays	\$50	14	147	\$102,900
Weekends	\$50	24	58	\$69,600
Holidays	\$50	24	3	\$3,600
			Total Cost	\$176,100

Total Mobilization Costs	
Plans	\$33,200
Rentals	\$65,100
Delivery / Setup	\$18,130
Security	\$176,100
Total	\$292,530

2 - Pre-Construction Property Assessment and Property Owner Agreement

One agreement coordinator will work to complete restoration agreements with property owners and document pre-existing conditions after plan approval beginning two weeks prior to the start of excavation activity. Restoration agreement meetings will continue until all agreements are signed. Agreement coordinator will assist in resolving property owner and resident issues that arise during remediation, and will provide pre-excavation photos to restoration crews. The agreement coordinator will have a company or rental vehicle (14 weeks)

One office support personnel will assist the agreement coordinator with documentation management. Support related to other tasks will also be provided to project manager and/or superintendent, including utility notification, payroll, invoicing, etc. (14 weeks)

Pre-Construction Property Assessment Costs				
Personnel	Hourly Rate	Hours per week	Total Weeks	Cost
Agreement Coordinator	\$65	50	14	\$45,500
Office Support	\$60	50	14	\$42,000
Transportation Expenses	Monthly Rate		Total Months	Cost
Rental Vehicle	\$900	per month	3.5	\$3,150
Fuel for Rental Vehicle	\$120	per month	3.5	\$420
Surveying Expenses	Topographic Survey		Properties	Cost
Pre-Construction Survey	\$600	per prop.	94	\$56,400
			Total Cost	\$147,470
			Number of Properties	94
			Cost per Property	\$1,569

3 - Excavation (Mechanical) and Transportation & 4 - Excavation (Manual) and Transportation

Although manual excavation is more time-consuming, and therefore more expensive, manual and mechanical excavation will be performed concurrently. Therefore total excavation costs have been estimated, and a higher proportion of these costs has been assigned to the manual excavation portion

Each Excavation Crew is generally anticipated to consist of 1 operator, 2 laborers, and 2 truck drivers (five crews). Laborers will move between crews if needed at more manual labor-intensive properties.

Labor						
Personnel	#	Hourly Rate	Overtime Rate	Hours per Week	Number of Weeks	Cost
Operator	5	\$91	\$116	50	21	\$504,000
Laborer	10	\$58	\$77	50	21	\$648,900
Driver	10	\$71	\$91	50	21	\$787,500
Project Manager ¹		\$110	\$110	20	21	\$46,200
Superintendant ¹		\$90	\$90	60	21	\$113,400
QCM ¹		\$80	\$80	60	21	\$100,800
HSO ¹		\$80	\$80	55	21	\$92,400
Surveying Expense			Topographic Survey	Properties	Cost	
Post-Excavation Survey			\$300 per prop.	94		\$28,200
Total						\$2,321,400

Notes:

- 1) All time for QCM and HSO has been applied to excavation task.

Equipment				
Type	Equipment Onsite	Cost per month	Duration (months)	Cost
Excavator	5	\$1,800	5.25	\$47,250
Dump Trucks	10	\$1,900	5.25	\$99,750
Pickup Trucks ¹	9	\$1,000	5.25	\$47,250
Trailers	5	\$500	5.25	\$13,125
Materials				
Description	Unit Price	Units	Cost	
Fuel ²	\$3.00	59,850 gallons	\$179,550	
Plastic Sheeting	\$25	200 rolls	\$5,000	
T-posts	\$3	800 posts	\$2,400	
High-vis fencing ³	\$0.15	72,874 ft ²	\$10,931	
Safety signage	\$350	20 signs	\$7,000	
Misc. hand tools	\$3,000	1 lump sum	\$3,000	
Wheelbarrows	\$2,000	1 lump sum	\$2,000	
Safety Supplies	\$2,000	1 lump sum	\$2,000	
Total				\$419,256

Notes:

- 1) Included trucks for PM, foreman, QCM, and HSO
- 2) Estimated fuel consumption of 40 gal/day per dump truck, 25 gal/day for excavator, and 5 gal/day for pickup
- 3) High visibility fencing will also be needed to place around excavation boundaries and prevent unauthorized access, as well as placement at the bottom of some excavations. Upper bound of total; less may be required

3 - Excavation (Mechanical) and Transportation & 4 - Excavation (Manual) and Transportation (Continued)

Estimated Excavation Volumes	
Mechanical	9,621.0
Manual	740.6
Total Volume	10,361.5
Mechanical % Vol.	92.9%
Manual % Volume	7.1%
Mechanical % Cost ¹	85.0%
Manual % Cost ¹	15.0%

Excavation Cost	
Labor	\$2,321,400
Equipment and Materials	\$419,256
Total	\$2,740,656
Total % of Cost Mechanical	\$2,329,558
Total % of Cost Manual	\$411,098
Mechanical cu yd excavated \$	\$242.13
Manual cu yd excavated \$	\$555.11

1) As manual excavation is more labor intensive, a higher proportion of cost per cubic yard excavated is attributed to manual excavation than mechanical

5 - Backfill Placement

Each backfill crew is generally anticipated to consist of 1 operator, 2 laborers, and 2 truck drivers (three crews). One additional operator and skid-steer are anticipated to be required at the staging area to accept deliveries, load backfill into trucks, and manage the backfill stockpile. Two laborers are anticipated to work as the punch-list crew and uninstall/reinstall fences, repair damages, etc. Half of the project duration is anticipated to be attributable to backfill placement, compaction, and testing (10 weeks)

Labor						
Personnel	#	Hourly Rate	Overtime Rate	Hours per Week	Number of Weeks	Cost
Operator	4	\$91	\$116	50	11	\$211,200
Laborer	6	\$58	\$77	50	11	\$203,940
Driver	6	\$71	\$91	50	11	\$247,500
Surveying Expense			Topographic Survey	Properties	Cost	
Post-Backfill Survey			\$300 per prop.	94	\$28,200	

Equipment				
Type	Equipment Onsite	Cost per month	Duration (months)	Cost
Skidsteer	4	\$1,800	2.5	\$18,000
Dump Trucks	6	\$1,900	2.5	\$28,500
Pickup Trucks	4	\$1,000	2.5	\$10,000
Trailers	5	\$500	2.5	\$6,250
Materials ²				
Description	Unit Price	Units	Cost	
Backfill	\$20	2,888.3 yd ³	\$57,766	
Fuel ¹	\$3.00	20,075 gallons	\$60,225	
Plate Compactor	\$800	2 compactor	\$1,600	
Safety signage	\$350	5 signs	\$1,750	
Misc. hand tools	\$1,500	0.5 lump sum	\$750	
Wheelbarrows	\$1,000	0.5 lump sum	\$500	
Safety Supplies	\$1,000	0.5 lump sum	\$500	
Total				\$185,841

Skidsteer will be used for spreading and compaction of backfill. Vibratory plate compactor will be used for compaction of backfill near foundations and where skidsteer cannot access.

trailers include dump trailer and equipment trailers

1) estimated fuel consumption = 40/gal day dump truck, 25 gal/day skidsteer, and 5 gal/day pickup (plate compactor negligible)

5 - Backfill Placement (Continued)

Estimated Backfill Volume	
Backfill (yd ³)	2,888
Cost per yd ³	\$303.53

Backfill Cost	
Labor	\$690,840
Equipment and Materials	\$185,841
Total	\$876,681

6 - Topsoil Placement

Topsoil placement will be similar to backfill placement. Total equipment costs have been split 50/50 between backfill and topsoil.

Labor						
Personnel	#	Hourly Rate	Overtime Rate	Hours per Week	Number of Weeks	Cost
Operator	4	\$91	\$116	50	11	\$211,200
Laborer	6	\$58	\$77	50	11	\$167,690
Driver	6	\$71	\$91	50	11	\$247,500
Surveying Expense			Topographic Survey		Properties	Cost
Post-Topsoil Survey			\$300	per prop.	94	\$28,200

subtracted mulch, shrub, landscaping etc. hours from total laborer hours

Equipment				
Type	Equipment Onsite	Cost per month	Duration (months)	Cost
Skidsteer	4	\$1,800	2.5	\$18,000
Dump Trucks	6	\$1,900	2.5	\$28,500
Pickup Trucks	4	\$1,000	2.5	\$10,000
Trailers	5	\$500	2.5	\$6,250
Materials ²				
Description	Unit Price	Units	Cost	
Topsoil	\$35	4,063.6 yd ³	\$142,224	
Fuel ¹	\$3.00	20,075 gallons	\$60,225	
Plate Compactor	\$800	2 compactor	\$1,600	
Safety signage	\$350	5 signs	\$1,750	
Misc. hand tools	\$1,500	0.5 lump sum	\$750	
Wheelbarrows	\$1,000	0.5 lump sum	\$500	
Safety Supplies	\$1,000	0.5 lump sum	\$500	
Total				\$270,299

Skidsteer will be used for spreading and compaction of topsoil. Vibratory plate compactor will be used for compaction of backfill near foundations, under trees, and where skidsteer cannot access.

1) estimated fuel consumption = 40/gal day dump truck, 25 gal/day skidsteer, and 5 gal/day pickup (plate compactor negligible)

Estimated Topsoil Volume	
Topsoil (yd ³)	4,064
Cost per yd ³	\$228

Topsoil Cost	
Labor	\$654,590
Equipment and Materials	\$270,299
Total	\$924,889

7 - Gravel Placement

Very little gravel is anticipated to be placed, based on review of pre-existing conditions. Equipment and personnel are expected to be already be present on-site for backfill placement while gravel is placed.

Labor				
Personnel	#	Hourly Rate	Hours	Cost
Operator	1	\$91	2	\$182
Laborer	1	\$58	2	\$116
Driver	1	\$71	2	\$142
Materials				
	Unit Price	Units	Cost	
Gravel	\$60	3,407 yd ³	\$204,444	
			Total Cost	\$204,884
			Cost per yd ³	\$60.13

8 - Mulch Placement

Mulch will be agreed with property owner in the Restoration Agreement. Mulch is anticipated to be placed below trees where sod is not expected to survive and in flowerbeds. 80 yd³ of mulch has been input for estimation purposes. Mulch is expected to be purchased in bulk and placed by laborers using a pickup truck with an associated trailer (this equipment is included in backfill/topsoil)

Labor				
Personnel	#	Hourly Rate	Hours	Cost
Laborer	2	\$58	94	\$10,904
Materials				
	Unit Price	Units	Cost	
Geotextile	\$0.10	12,000 ft ²	\$1,200	
Mulch	\$45	80 yd ³	\$3,600	
			Total Cost	\$15,704
			Cost per yd ³	\$196

9 - Geotechnical Testing

In-place field density testing requires a representative Proctor test to determine laboratory maximum density, and a minimum of 2 field tests conducted at each lift placed in the 18-24", 12-18", and 6-12" depths. The testing firm usually charges by the hour, with a minimum charge (e.g. 3 hours) rather than by the test, so geotechnical testing costs are highly dependent upon subcontractor work procedures.

A minimum of 266 in-place field density tests will be required based on the designs (65 six-inch-lifts tested). 41 front or back yards have an excavation depth of 24", 39 yards are 18", and 65 yards are 12". Both the front and back yard or full four quads will be remediated at 53 properties. An average of 10 tests (5 lifts) will be performed per testing event. Each testing event is estimated at \$500.

Geotechnical Tests (Subcontracted)			
Type	Units	Unit Price	Cost
Proctor and gradation test	6	\$600	\$3,600
In-place field density	266	\$500	\$133,000
Total Cost			\$136,600
Cost per test			\$332

10 - High Visibility Barrier

High visibility barrier will be used at the bottom of excavations with a depth of 24 inches where contamination is present below this depth, and over the roots of trees and shrubs within the excavation area where the full excavation depth was not achieved. Fencing will be used to the extent feasible as excavation perimeter fencing prior to being placed at the bottom of the excavation.

High Visibility Barrier			
Description	Unit Price	Units	Cost
High-vis barrier ²	\$0.15	50,645 ft ²	\$7,597

11 - Sod Placement

Assumed alternate/subcontracted sod placement crew

Labor				
Personnel	#	Hourly Rate	Hours	Cost
Laborer	6	\$58	240	\$83,520
Materials				
	Unit Price	Units	Cost	
Sod ¹	\$0.25	242,277 ft ²	\$60,569	
Sod staples	\$0.15	1,000 each	\$150	
Sod knife	\$10	20 each	\$200	
Roller	\$200	2 each	\$400	
Equipment				
Type	Cost per day	Days	Cost	
Pickup Truck	\$50	24	\$1,200	
Trailer	\$25	24	\$600	
Total Cost			\$146,639	
Cost per ft ²			\$0.61	

1) 2% increase to sod square footage applied to account for cutting end pieces to fit yard

12 - Seed Placement

No costs are included for seed placement. If seed is applied, a reduction in sod costs is expected.

13 - Watering

It is anticipated that the remediation subcontractor will use the water from the residence for most watering activity. Two months of residential water bills will be reimbursed (estimated at \$200). Sod will be maintained for 30 days after placement. 1 laborer will work full-time for **20** weeks to travel to residences, setup hoses, and perform watering. For vacant lots, it is assumed that these will be scheduled in the same time period to minimize the need for rental of a water truck. One water truck driver will work full time for 4 weeks to water the lots and other properties as needed.

Labor						
Personnel	#	Hourly Rate	Overtime Rate	Hours per Week	Number of Weeks	Cost
Laborer	1	\$58	\$77	40	20	\$46,400
Driver	1	\$71	\$91	40	4	\$11,360

Materials			
	Unit Price	Units	Cost
Water	\$200	94 properties	\$18,800
Hoses	\$60	4 each	\$240
Fuel	\$3.00	750 gallons	\$2,250
Equipment			
Type	Cost per month	Months	Cost
Pickup Truck	\$1,000	6	\$6,000
Water Truck	\$2,800	1	\$2,800

Watering Cost	
Labor	\$57,760
Equipment and Materials	\$30,090
Total	\$87,850
Number of properties	94
Total	\$935

SubContractor Assumptions and Calculations

14 - Trees

Most trees present in Zone 3 (202 trees) are expected to remain in place, and manual excavation of soil within the drip zone will be performed. 11 trees have a diameter of less than 4 inches and are expected to be removed and replaced. Watering will be performed concurrent with sod, under the watering line item.

Labor				
Personnel	#	Hourly Rate	Hours	Cost
Laborer	2	\$58	4.5	\$522
Materials				
	Unit Price	Units	Cost	
Tree	\$150	12 each	\$1,800	
Stakes/ Lines	\$50.00	1 lump sum	\$50	
			Total Cost	\$2,372
			Cost per tree	\$791

15 - Shrubs

All shrubs have conservatively been estimated to be removed and replaced. Some property owners are expected to request the shrub(s) stay in place. Shrub removal is expected to take place during the excavation. Watering will be performed concurrent with sod, under the watering line item.

Labor				
Personnel	#	Hourly Rate	Hours	Cost
Laborer	2	\$58	125	\$14,500
Materials				
	Unit Price	Units	Cost	
Shrub	\$50	163 each	\$8,150	
			Total Cost	\$22,650
			Cost per shrub	\$138.96

16 - Stump Removal

36 stumps and associated roots will be cleared and grubbed. Removal may or may not occur on different days.

Labor				
Personnel	#	Hourly Rate	Hours	Cost
Laborer	2	\$58	14	\$1,624
Equipment				
	Unit Price	Units	Cost	
Chainsaw	\$25	36 days	\$900	
Grinder	\$150	36 days	\$5,400	
			Total Cost	\$7,924
			Cost per stump	\$1,132

SubContractor Assumptions and Calculations

17 - Miscellaneous Landcaping

Miscellaneous perennial flowers/bulbs, garden edging, etc.

Labor				
Personnel	#	Hourly Rate	Hours	Cost
Laborer	2	\$58	94	\$10,904
Materials				
	Unit Price	Units	Cost	
Misc	\$50	94 properties	\$4,700	
			Total Cost	\$15,604
			Cost per property	\$166

18 - Property Closeout

The agreement coordinator will document post-restoration conditions and meet with property owners to sign completion agreements after the sod maintenance period is complete. Coordinator will work with punch list crew to resolve issues.

One office support personnel will assist the agreement coordinator with documentation management and the QCM with As-Built preparation. (QCM is anticipated to generate draft As Built as part of normal duties accounted for in excavation line item). Support related to other tasks will also be provided to project manager and/or superintendent, including utility notification, payroll, invoicing, etc. (16 weeks)

Property Close-Out Costs				
Personnel	Hourly Rate	Hours per week	Total Weeks	Cost
Agreement Coordinator	\$65	50	16	\$52,000
Office Support	\$60	50	16	\$48,000
Transportation Expenses	Monthly Rate		Total Months	Cost
Rental Vehicle	\$900	per month	4	\$3,600
Fuel for Rental Vehicle	\$120	per month	4	\$480
			Total Cost	\$104,080
			Number of Properties	94
			Cost per Property	\$1,107

19 - Demobilization

SubContractor Assumptions and Calculations

The office area and associated rental items will be returned to the rental companies. A small group of key personnel will remain on-site to facilitate removal of items and return of the office/staging area to pre-existing conditions.

Rental Items	Unit Price	Units	Total
Trailer Removal	\$3,000	1 lump sum	\$3,000
Fence Removal	\$500	1 lump sum	\$500
Conex Removal	\$300	1 lump sum	\$300
Excavator Removal	\$150	4 each	\$600
Skidsteer Removal	\$150	4 each	\$600
Dump Truck	\$150	14 each	\$2,100

Labor				
Personnel	#	Hourly Rate	Hours	Total
PM	1	\$110	20	\$2,200
Foreman	1	\$90	40	\$3,600
Operator	1	\$91	40	\$3,640
Laborer	2	\$58	40	\$4,640

Total Demobilization Costs	
Removal	\$7,100
Labor	\$14,080
Total	\$21,180

Contractor Oversight Assumptions and Calculations

<u>Contractor Personnel</u>	<u>Hourly Rate (loaded)</u>
Program Manager	\$120
Project Manager	\$110
Field Team Leader	\$80
Oversight Personnel	\$60
Office/Clerical Support	\$45

Procurement

Contractor will prepare RFP, conduct pre-bid meeting, review bids, and award subcontract.

Staff	Staff	Hourly Rate	Hours	Cost
Prepare RFP				
Program Manager	1	\$120	5	\$600
Project Manager	1	\$110	40	\$4,400
Office/Clerical Support	1	\$45	10	\$450
Conduct Pre-Bid Meeting				
Project Manager	1	\$110	20	\$2,200
Office/Clerical Support	1	\$45	10	\$450
Review Bids				
Program Manager	1	\$120	5	\$600
Project Manager	3	\$110	60	\$19,800
Office/Clerical Support	1	\$45	10	\$450
Award Subcontract				
Program Manager	1	\$120	10	\$1,200
Project Manager	1	\$110	20	\$2,200
Office/Clerical Support	1	\$45	20	\$900
Total Labor				\$33,250

Plan Generation

Contractor will need to prepare Work Plan, Sampling and Analysis Plan, Health and Safety Plan, and Quality Assurance Plan

Staff	Hourly Rate	Hours	Cost
Program Manager	\$120	10	\$1,200
Project Manager	\$110	40	\$4,400
Field Team Leader	\$80	80	\$6,400
Oversight Personnel	\$60	160	\$9,600
Office/Clerical Support	\$45	20	\$900
Total Labor			\$22,500

Contractor Oversight Assumptions and Calculations

Plan Review

Contractor will review plans generated by the Subcontractor

Staff	Hourly Rate	Hours	Cost
Program Manager	\$120	5	\$600
Project Manager	\$110	20	\$2,200
Field Team Leader	\$80	40	\$3,200
Oversight Personnel	\$60	80	\$4,800
Total Labor			\$10,800

Community Relations

Three community meetings with 30 hours for preparation and attendance per meeting are assumed

Staff	Hourly Rate	Hours	Cost
Program Manager	\$110	60	\$6,600
Office/Clerical Support	\$45	30	\$1,350
Total Labor			\$7,950

Office Rental Expense

Rental of a local office space for oversight personnel is anticipated for a period of 7 months.

	Unit Price	Units	Total
Office Rental	\$1,600	7 months	\$11,200
Office Utilities	\$500	7 months	\$3,500
Internet Service	\$100	7 months	\$700
Office Supplies	\$250	7 months	\$1,750
Office Furniture	\$250	7 months	\$1,750
Shipping Expenses	\$150	7 months	\$1,050
Field Logbooks	\$20	30 each	\$600
Digital Cameras	\$150	7 each	\$1,050
Total			\$21,600

Contractor Oversight Assumptions and Calculations

Contractor is anticipated to have 2 personnel onsite for two weeks when plans are approved for office setup and property owner agreements (FTL and agreement oversight). 10 oversight field staff are anticipated for 5.25 months during remediation (FTL, oversight for agreements, documentation, one oversight per excavation crew and one oversight per 2 backfill crews). Two oversight personnel are anticipated for 1 month during project close-out (FTL and one agreement oversight). Staff are anticipated to be staffed from CH2M Chicago office. Rental cars will be provided, but not lodging/per-diem. Staff are anticipated to work 55 hours/week.

Field Startup Activities

Staff	Staff	Hourly Rate	Hours per week	Duration (weeks)	Cost
Field Team Leader	1	\$80	55	2	\$8,800
Oversight Personnel	1	\$60	55	2	\$6,600
Total Labor					\$15,400

Travel Expenses	Units	Cost (per week)	Duration (weeks)	Cost
Rental Car	2	\$200	2	\$800
Fuel	2	\$50	2	\$200
Travel Costs				\$1,000

Total Field Startup Costs	\$16,400
---------------------------	----------

Remediation Oversight

Staff	Staff	Hourly Rate	Hours per week	Duration (weeks)	Cost
Project Manager	1	\$110	20	21	\$46,200
Field Team Leader	1	\$80	55	21	\$92,400
Oversight Personnel	9	\$60	55	21	\$623,700
Total Labor					\$716,100

Travel Expenses	Units	Cost (per week)	Duration (weeks)	Cost
Rental Car	10	\$200	21	\$42,000
Fuel	10	\$50	21	\$10,500
Travel Costs				\$52,500

Total Remediation Oversight Costs	\$768,600
-----------------------------------	-----------

Contractor Oversight Assumptions and Calculations

Air Sampling

Oversight personnel will collect air samples, manage sampling data, and prepare for shipment to the laboratory during the course of normal remediation oversight responsibilities.

Equipment	Unit Price	Units	Duration	Total
Particulate Monitor	\$1,000	5	5.25 months	\$26,250
GilAir Plus	\$300	12	5.25 months	\$18,900
Calibrator	\$250	4	5.25 months	\$5,250
Total				\$50,400

	Unit Price	Units	Total
Air Sample Cassettes	\$60	10 boxes	\$600
Air Sample Analysis	\$25	50 samples	\$1,250
Total			\$1,850

Total Air Sampling Costs	\$52,250
--------------------------	----------

Soil Sampling

Oversight personnel will collect backfill and topsoil samples for laboratory analysis (est. 20 samples). Hours have been assumed to be in addition to the normal oversight responsibilities.

Staff	Staff	Hourly Rate	Hours / Sample	Samples Collected	Cost
Project Manager	1	\$110	1	20	\$2,200
Field Team Leader	1	\$80	1	20	\$1,600
Oversight Personnel	1	\$60	2	20	\$2,400
Total Labor					\$4,000

	Unit Price	Units	Total
Soil Sample Analysis	\$650	20 samples	\$13,000
Sampling supplies	\$25	20 lump sum	\$500
Shipment supplies	\$25	20 lump sum	\$500
Overnight delivery	\$50	20 each	\$1,000
Total			\$15,000

Total Soil Sampling Costs	\$19,000
---------------------------	----------

Contractor Oversight Assumptions and Calculations

Close-Out Activities

Staff	Staff	Hourly Rate	Hours per week	Duration (weeks)	Cost
Field Activities					
Field Team Leader	1	\$80	55	4	\$17,600
Oversight Personnel	1	\$60	55	4	\$13,200
Total Labor					\$30,800

Travel Expenses	Units	Cost (per week)	Duration (weeks)	Cost
Rental Car	2	\$200	4	\$1,600
Fuel	2	\$50	4	\$400
Travel Costs				\$2,000

Staff	Hourly Rate	Hours	Cost
Remedial Action Report			
Program Manager	\$120	5	\$600
Project Manager	\$110	20	\$2,200
Field Team Leader	\$80	40	\$3,200
Oversight Personnel	\$60	80	\$4,800
Office/Clerical Support	\$45	10	\$450
Remediation Complete Letter Preparation and Delivery			
Oversight Personnel	\$60	240	\$14,400
Total Labor			\$25,650

Total Closeout Costs	\$58,450
----------------------	----------

APPENDIX F

**TO
Z2 SOIL UAO**

**COPY OF EPA'S ACCESS AGREEMENT
FOR SOIL SAMPLING AND CLEANUP**



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590**

**CONSENT FOR ACCESS TO PROPERTY
FOR SAMPLING AND TO TAKE RESPONSE ACTION**

Name: _____ Daytime Phone Number: _____
(Print)

Evening Phone Number: _____

Owner Tenant _____

Address(es) of Property(ies): _____

I consent to officers, employees, contractors and authorized representatives of U.S. Environmental Protection Agency entering and having continued access to the property described about (the Property) to perform the following response actions: (1) collecting soil samples; (2) excavating Property soils; (3) backfilling the excavated area(s) of the Property with clean soil and/or backfill; and (4) restoring to their pre-excavation condition grass, other vegetation or structures altered during sampling or excavation activities.

I realize that these actions taken by EPA are undertaken pursuant to its response and enforcement responsibilities under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. Section 9601 et seq. These activities are necessary to identify and clean up contaminated soils.

I give this written permission voluntarily on behalf of myself and all other co-owners of the Property, with knowledge of my right to refuse and without threats or promises of any kind. I understand that EPA or authorized representatives of EPA will contact me before the removal of soil begins to discuss the steps involved in the excavation and removal program, and to review all measures EPA will take to restore my Property.

This document can only be signed by the property owner.

Date

PLEASE CHECK ONLY ONE BOX AND SIGN BELOW

I grant access to my property for sampling and removal.

I grant access to my property for sampling only.

I do not grant access to my property.

Signature

Signature

Signature

The following option information will help us interpret the sampling results:

There are children under the age of six years living at this residence.

There are pregnant women living at this residence.

APPENDIX G

**TO
Z2 SOIL UAO**

**Letter from John N. Moscato, Senior Counsel, Dep't
of Justice, to E. Donald Elliott, Partner, Willkie Farr
& Gallagher LLP (Apr. 19, 2010)**



U.S. Department of Justice
Environment and Natural Resources Division

John N. Moscato
Environmental Enforcement Section
1961 Stout Street, 8th Floor
Denver, CO 80294

Telephone (303) 844-1380
Facsimile (303) 844-1360
Email: John.Moscato@USDOJ.gov

April 19, 2010

BY ELECTRONIC MAIL

E. Donald Elliott
Willkie Farr & Gallagher LLP
1875 K Street, N.W.
Washington, D.C. 20006
(202) 303-1120
delliott@willkie.com

Re: Eureka Mills Site: United States and Mueller Industries, Inc.

Dear Don:

On February 18, 2010 you sent me a letter on behalf of Mueller Industries, Inc. (“Mueller”) discussing at length certain legal issues which Mueller contends “preclude any right to recovery by the United States for its response costs at the Eureka, Utah Site against Mueller on account of the past disposal activities of, or assumptions of liabilities for disposal, by UV Industries, Inc. (“UV”) as opposed to Mueller itself.”^{1/} That letter, among other things contends that any such claims are precluded based on the 1986 - 1990 litigation in United States v. Sharon Steel, et al, Civil Action Nos. 86-C-136 and 86-C-924J (the “Midvale Litigation”) under the legal doctrines of: (1) novation and release; (2) res judicata; (3) collateral estoppel; and (4) judicial estoppel.^{2/} During our March 1, 2010 conference call we agreed that the United States would defer its response to Mueller’s February letter in light of our ongoing settlement discussions. Nonetheless, on April 1, 2010, in response to our March 1st discussion, Muller provided me with a supplemental letter intended to further buttress positions taken by Mueller’s in its February letter.^{3/}

^{1/} February 18, 2010 letter from E. Donald Elliott to John N. Moscato, Andrea Madigan and Steven B. Moores, at 1 - 2.

^{2/} Id. at 3.

^{3/} April 1, 2010 letter from E. Donald Elliott to John N. Moscato, Andrea Madigan and Steven B. Moores. Both of Mueller’s letters indicate that they are, “On the Record.” We understand this to only mean that they are not subject to the “Confidentiality Agreement Between the United States and Mueller Industries, Inc. for Settlement Negotiations Regarding Alleged CERCLA Liability at the Eureka Mills National Priorities List Site” since it is our opinion that neither the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”), 42 U.S.C. §9601

In light of the status of our settlement discussions, and with the hope that a further presentation of the United States' position will facilitate a prompt and amicable resolution to the matters at hand, I thought it would be timely to share with you my client's response to Mueller's two letters. While Mueller's analysis is thoughtful, my client remains unpersuaded. There is clearly a fundamental difference of opinion between the government and Mueller as to the preclusive effect of the Midvale Litigation. As explained more fully herein, the government believes that the Consent Decrees between the United States and Sharon Steel Corporation ("Sharon Decree") and the United States and UV Industries, Inc. and the UV Industries, Inc. Liquidating Trust ("UV Decree"), on their face, unequivocally preserve an action by the government against Mueller for EPA's response costs at the Eureka Mills Site under Section 107 of CERCLA, 42 U.S.C. § 9607, by virtue of, at a minimum: (1) Mueller's status as a past "owner" of a facility at the Site, within the meaning of Sections 101(20)(A) and 107(a)(2) of CERCLA, 42 U.S.C. §§ 9601(20)(A) and 9607(a)(2); and (2) Sharon Steel Corporation's express assumption of UV's liabilities under the November 26, 1979 Agreement for Purchase of Assets between UV Industries, Inc. and the Sharon Steel Corporation, the November 26, 1979 Instrument of Assumption of Liabilities between UV Industries, Inc. and the Sharon Steel Corporation, and the November 5, 1981 Grant Bargain and Sale Deed between UV Industries, Inc. and the UV Industries, Inc. Liquidating Trust and the Sharon Steel Corporation (hereafter, the "1979 Transaction"). In sum, Mueller's preclusion analysis is largely superfluous in light of the clear and plain terms of the Sharon and UV Decrees.

A. United States' Second Amended Complaint - Midvale Litigation

Because the covenants not to sue in both the Sharon and UV Decrees reference the "Actions," a brief review of the scope of the United States' Second Amended Complaint in the Midvale Litigation (the "Complaint") and the related pleadings, is warranted.

Paragraph 9 of the Complaint defines the "Site" as an area approximately 12 miles southwest from Salt Lake City, Utah covering approximately 260 acres. Both Decrees essentially adopt that definition.⁴ Therefore, when the Decrees discuss a resolution of claims contained in the "Actions," those claims are geographically limited to the Slag Site and the Tailings Site and no other site.

Both Mueller and the United States agree that the United States' Complaint against Sharon Steel Corporation ("Sharon") alleges that Sharon was liable at Midvale solely on the basis of Sharon's status as a present owner/operator of a portion of the Midvale Site. CERCLA Section 107(a)(1), 42 U.S.C. § 9607(a)(1). Both Mueller and the United States also agree that the United States did not assert that Sharon was liable at Midvale as a successor to UV by virtue of the 1979 Transaction. Mueller, however, implies that the government was obligated to proceed against Sharon at the Midvale Site on a successor theory if such a theory was available. That simply is not correct. See, Carrier Corp. v. Piper, 460 F. Supp. 2d 827, 845 (W.D. Tenn. 2006) ("When a successor company becomes a new 'owner or operator' of a facility, it becomes directly liable and successor liability doctrine is not needed." See also, United States v. Price,

et seq. (1980) ("CERCLA"), nor the Administrative Procedures Act, 5 U.S.C. § 500 et seq., provide for record review of either EPA's decision to refer a matter to DOJ, or DOJ's decision to institute a civil proceeding on behalf of EPA.

⁴ The Site is more specifically defined in the Sharon and UV Decrees as the "Slag Site" and "Tailings Site." See, the Sharon Decree at p. 2 and Section I.G. and H. See also and the UV Decree at p.2 and Section I.D. and E.

523 F. Supp. 1055, 1073-74 (D.N.J.1981), aff'd, 688 F.2d 204 (3rd Cir.1982) (“new facility owner liable although not creator of the hazardous condition”).

The United States’ Complaint also alleges that UV was liable at Midvale based on UV’s status as a past owner of the Site at the time of disposal, CERCLA Section 107(a)(2), 42 U.S.C. § 9607(a)(2), Complaint ¶¶ 11 - 12, and that the UV Industries Inc. Liquidating Trust (hereafter, the “Trust”) was liable at Midvale on the basis of the Trust’s status as the entity created to wind up UV’s business affairs. See, Complaint ¶ 7. Subsequent briefings in the Midvale Litigation make clear that the United State’s legal theory was that the Trust’s liability arose because of the Trust’s express assumption of UV’s liability.⁵⁷

The significance of the theories plead in the United States’ Complaint to an analysis of Mueller’s preclusion arguments is manifest. First, the transaction in which the Trust assumed UV’s liabilities is not the same as the 1979 Transaction in which Sharon assumed certain liabilities from UV. In Mueller’s analysis, including Mueller’s discussions of the Midvale motions to dismiss and partial summary judgment briefings, Mueller conflates these two distinct transactions. This is incorrect and consequential as Sharon was not privy to the UV / Trust assumption agreement. For that reason alone, Mueller’s preclusion arguments fail. Second, Mueller’s preclusion arguments fail because they rest on the implied proposition that the United States asserted either in its Complaint or pleadings that the Trust was the sole successor to UV’s liabilities – there is absolutely no support in the record of the Midvale Litigation for that proposition. Third, Mueller’s preclusion arguments fail because the 1979 Transaction was not an issue placed in dispute by the United States’ Complaint in the Midvale Litigation.⁵⁸ Fourth, Mueller’s *res judicata* argument fails because for *res judicata* to attach, there must be a final judgment. A fair reading of the August 14, 1990 hearing transcript in the Midvale Litigation reveals that the Court failed to articulate a final opinion on the issue of the Trust’s successorship.

I’ve expressed my Conclusions in reference to the Trust, on prior occasions; and I have indicated that I am willing to discuss that. There’s an effort to revisit that the third time; but I have indicated that we will revisit that at Pretrial, it at all... Generally, I’d indicated, that in times past, that the shareholders’ interest are residual interests. They get paid after all the creditors are paid. Ordinarily, if we have assets that are transmuted into money, the money rides with the burden. It’s not free money until we make sure that the creditors are taken care of ... And I might indicate, as well, that I felt that is made sense to at least indicate to you the Rulings and Holdings today. In doing so, I don't want to suggest that I have exhausted the reasons nor do I – and I should indicate that I reserve the Right to expand on the subject, if I feel inclined and if I have the time and energy, and reserve the Right to write on the subject, if time permits... But I thought, that because of the nature of what we’ve been doing, that it would be well to at least indicate to you the Rulings today. Emphasis added.

⁵⁷ See, e.g., Midvale Litigation, Plaintiff United States of America’s “Memorandum of Law In Reply to the Opposition of Defendants UV Industries, Inc. Liquidating Trust and UV Industries, Inc. to Plaintiff’s Cross-motion for Summary Judgment,” p. 8 and specifically, n. 10.

⁵⁸ It appears that to the extent the 1979 Transactions were put at issue, it was only in the context of cross-claims among Sharon, UV and ARCO. See, Midvale Litigation, Memorandum of Law In Opposition to Motion of Defendant UV Industries, Inc. Liquidating Trust To Dismiss The Complaint As To UV Industries, Inc., at p. 5 - 6 and n. 3.

August 14, 1990 hearing transcript 170 - 171,

Therefore, even assuming arguendo that the Sharon and UV Decrees did not clearly reserve the government's cause of action under CERCLA at the Eureka Site, Mueller's preclusion arguments would fail on other grounds.

B. Sharon Decree

Mueller contends that, "[t]here is nothing in the Partial Consent Decree with Sharon in *U.S. v. Sharon, UV Industries, and the UV Trust* that waives Sharon/Mueller's rights to rely on *res judicata*, collateral estoppel or other preclusion defenses based on these events in the prior litigation."⁷ That position is untenable because it contradicts the plain meaning of multiple clauses of the Sharon Decree.

The Sharon Decree begins with the following judicial pronouncement, "THEREFORE without adjudication of any issue of law or fact and upon the consent of the parties hereto it is hereby ORDERED ADJUDGED AND DECREED as follows . . ."⁸ The Decree itself is the court order resolving the litigation. It does so with the express caveat that resolution is by consent, not by the adjudication of "any issue of law or fact." In and of itself, this language undermines Mueller's preclusion arguments.

Section I, ¶ R of the Sharon Decree defines "Sharon Steel Corporation" to mean "Sharon Steel Corporation as debtor, debtor-in-possession or in reorganized form as result of the Bankruptcy Proceeding." Section I, ¶ Q.2 of the Sharon Decree further defines Sharon to include, "Any Person succeeding pursuant to a confirmed plan of reorganization, to any or all of Sharon Steel Corporations obligations under this Decree relating to the Sites . . ." If, as Mueller suggests, the intent of the Sharon Decree was to absolve Sharon from any liability Sharon assumed from UV in the 1979 Transaction, the Sharon Decree could have easily done so by explicitly expanding this definition to include Sharon in its capacity as a successor to UV. The fact that no such provision was made, particularly when both parties were aware of Sharon's potential liability at other locations purchased by Sharon under the 1979 Transaction, is damning.

Section V. of the Sharon Decree, Payment to the United States, at p. 14, specifies:

In full and complete satisfaction of all of Sharon's liabilities, duties and responsibilities arising out of or relating to the Actions and the Sites (except as limited by Paragraphs VIII.B and (hereof), and in consideration of the Covenant not to Sue set forth in Section VIII. hereof the United States shall receive the following consideration . . . (Emphasis added.)

In settlement of the United States' claims in the Midvale Litigation, the only thing Sharon paid for was Sharon's liability "arising out of or relating to the Actions and the [Midvale] Sites." There is no hint in the Decree that the payments made by Sharon under the Decree compensated the government for anything other than Sharon's role at the Midvale Sites.

⁷ February 18, 2010 letter from E. Donald Elliott to John N. Moscato, Andrea Madigan and Steven B. Moores at p. 16.

⁸ Sharon Decree at p. 5. Emphasis added.

Section VII. B. of the Sharon Decree, Effect of Settlement at 27 provides:

By virtue of its payment of the settlement amount identified in Section V. of this Decree, Sharon Steel Corporation shall have resolved Sharon's liability to the United States for the matters covered by the Covenant Not to Sue in Paragraph VIII. A. hereof .

Section VIII. A., Covent Not To Sue, at p. 28 provides:

[T]he United States and the State hereby covenant not to sue Sharon as to any matter alleged in either or both of the Actions, including any Future Liability with regard to the Tailings Site or the Slag Site . . . This Covenant not to Sue applies only to Sharon, the United States and the State.

The scope of the covenant is clearly limited to matters alleged in the "Actions" which themselves only reach the Midvale Site. While the meaning and effect of this provision could be no plainer, Section VII. F. of the Sharon Decree, Effect of Settlement, at p. 28 certainly removes any doubt:

This Decree shall have no effect on any claims of the United States except those brought by the United States on behalf of EPA as they relate to the Sites

The intent of the parties and the effect of settlement is yet again expressed in Section X. A., Sharon Decree, Preservation of Other Claims, at pp. 35 - 36, where it states that:

Nothing in this Decree shall be deemed to impair any claims identified in the United States' Proof of Claim, or any other claims of the United States on behalf of EPA, other than the United States' claims with respect to the Tailings Site and the Slag Site . . . all other such claims Other Claims shall not be affected by the confirmation of the Plan of Reorganization and shall not be discharged pursuant to Bankruptcy Code 1141 or otherwise.

Collectively, the foregoing provisions of the Sharon Decree absolutely and expressly reserve the United States' right to bring its claims against Mueller at the Eureka Mills Site. Muller as much as admits so:

Any potential claims that Sharon/Mueller, rather than the UV Trust, was the legal successor to UV Industries had already been destroyed, not by "this" Partial Consent Decree settling the owner/operator claim against Sharon, but by the positions taken, as well as the positions not taken, by the U.S. previously in US. v. Sharon, UV Industries, and the UV Trust. (Emphasis added.)^{9/}

Mueller's assertion is no more than bootstrapping. Reduced to its essence, Mueller argues, but for the Sharon Decree, Mueller's preclusion arguments would apply. To effectuate this but for argument, Mueller suggests that the above clauses in the Sharon Decree are insufficient:

^{9/} February 18, 2010 letter from E. Donald Elliott to John N. Moscato, Andrea Madigan and Steven B. Moores, at p. 16.

It is widely held that the reservation of a right to litigate a claim must be express. There was certainly no such express reservation here.^{10/}

We agree with Mueller that there was no such [single] express reservation in the Sharon Decree – there are at minimum three “express” reservations^{11/} and we think that any court will find the same based on a facial reading of the Sharon Decree.

When there has been an express reservation of rights, a prior consent decree does not bar a cause of action for those rights which have been reserved. See, United States v. Martell, 887 F. Supp. 1183, 1190 (N.D. Ind. 1995) (“[a]nother exception to the general rule [that a consent decree generally bars a new lawsuit arising from the same dispute] exists when there has been an express reservation of rights in a consent decree.” Due to the contractual nature of consent decrees, the general legal consensus is that the preclusive effects of consent decrees should be measured by the intent of the parties. See, Wright & Miller, Federal Practice and Procedure, Civ. 2d. § 4443 pp. 384-85 (1981). See also, May v. Parker-Abbott Transfer & Storage, Inc., 899 F.2d 1007, 1010 (10th Cir. 1990) (“Consent decrees are of a contractual nature and, as such, their terms may alter the preclusive effects of a judgment”).^{12/} Where as here, the United States has expressly reserved its rights, the prior (Sharon) decree will not be given preclusive effect because it was not a final judgment as to those matters which were reserved. See, United States v. Athlone Indus., Inc., 746 F.2d 977,983 n.5 (3d Cir. 1984); Beehler v. Jeffes, 664 F. Supp. 931, 935 (M.D. Penn. 1986).

C. UV Decree

Realizing that the Sharon Decree preserves the United States causes of action at all sites other than the Midvale Sites, Mueller seeks to assert that Sharon was released from liability at Eureka by virtue of the UV Decree. Sharon was not a party to the UV Decree nor was Sharon privy to that judgment.^{13/} Once again, Mueller’s preclusion arguments fail.

^{10/} Id.

^{11/} “Express” means, “clearly and unmistakably communicated; directly stated.” Black’s Law Dictionary (8th ed. 2004). We believe that, applying that definition, the reservations in the Sharon Decree are “express.”

^{12/} See also, See, 18 C. Wright, A. Miller & E. Cooper, Federal Practice and Procedure, § 4443 at 262 (1981); Young-Henderson v. Spartanburg Area Mental Health Center, 945 F.2d 770, 774-75 (4th Cir. 1991).

^{13/} As a general rule, successive representatives of the same interest are bound by judgment as to which their predecessors were parties. St. Louis Baptist Temple, Inc. v. Fed. Deposit Ins. Corp., 605 F.2d 1169, 1175 (10th Cir.1979), quoting 1 B Moore’s Federal Practice, § 0.411(1) (2nd Ed.1974). (“It is well understood, however, though not usually stated in express terms in works upon the subject, that no one is privy to a judgment whose succession to the rights of property thereby affected, occurred previously to the institution of the suit.”) Queenan v. Mays, 90 F.2d 525, 534 (10th Cir. 1937). Thus a judgment binds those who acquire an interest in the property affected thereby after suit is commenced, but it does not bind those whose interest attached prior to commencement of suit. Texas Co. v. Marlin, 109 F.2d 305, 308 (5th Cir. 1940) (One is not a privy to a judgment where his or her succession to the rights of property thereby affected occurred previous to the institution of the suit.). Because Sharon’s interest in Eureka arose before the commencement of the Midvale Litigation, it cannot be in privity with UV and the Trust when Sharon itself was not a party to the UV Decree.

Mueller's arguments also fail because a plain reading of the UV Decree contradicts Mueller's assertion that the covenants granted to UV and the Trust somehow "preclude the governments cost recovery claims at Eureka."^{14/}

The UV Decree narrowly defines UV and the Trust to mean only those entities and to exclude, "any past or present parent subsidiary or business affiliate of UV Industries Inc. or of the Trust."^{15/} Like the Sharon Decree, the UV Decree also begins with the judicial pronouncement, "THEREFORE without adjudication of any issue of law or fact and upon the consent of the parties hereto it is hereby ORDERED ADJUDGED AND DECREED as follows."^{16/} Again, this express caveat that resolution is by consent, not by the adjudication of "any issue of law or fact," vitiates Mueller's preclusion arguments.

The covenants in the UV Decree provide as follows:

Section VII. A. at p. 22:

A. Except as specifically provided hereafter in Section VII. C. and D. hereof, the United States and the State hereby covenant not to sue UV, the Trust, or any Trustee thereof (in their capacity as trustee) regarding the following matters

1. Any matter alleged in either or both of the Actions including any future liability with regard to the Tailings Site or the Slag Site . . . (Emphasis added)

Section VII. B. at p. 22 - 23:

Beyond the matters addressed in Paragraphs A. 1 and 2 of this Section, the United States is unaware of any other claims against UV or the Trust which it now or in the future may assert on behalf of the Environmental Protection Agency . . . Accordingly, to allow for the orderly liquidation and termination of the Trust in accordance with this Consent Decree, the United States agrees not to assert any such claims in the future on behalf of the Environmental Protection Agency . . .

It is important to note that the covenant not to sue contained in Section VII. A. is specifically limited to "[a]ny matter alleged in either or both of the Actions . . . with regard to the Tailings Site or the Slag Site. . ." Further, Section VII. A. is the only subsection among the Covenants not to Sue in Section VII. of the UV Decree that is characterized as a release. See, Section VI. B. at p. 20:

By virtue of the payment of the amounts identified in Section IV of this Decree the Trust and UV shall have finally and completely resolved all alleged liabilities

^{14/} February 18, 2010 letter from E. Donald Elliott to John N. Moscato, Andrea Madigan and Steven B. Moores, at p. 4.

^{15/} UV Decree, Section I., Definitions, at pp. 10 - 11.

^{16/} UV Decree at 8. See further discussion below regarding Section VI. I. at 22.

of the Trust and UV to the United States for the matters covered by the Covenant Not to Sue in Section VII A. hereof and are hereby released therefrom (Emphasis added.)

Section VI. does not characterize Section VII.B as a release. This is no accident or oversight and the conclusion that the distinction between Section VII. A. and Section VII. B. is intentional is fortified by the following payment provision of the UV Decree:

Section IV. at p. 12:

In full and complete satisfaction of all of UV's and the Trust's alleged liabilities, duties, and responsibilities arising out of or relating to the Actions and the Sites (except as limited by Section VII B., C. and D.)] and in consideration of the Covenant not to Sue set forth in Section VII A. hereof the United States shall receive the following consideration . . . (Emphasis added.)

Contrary to Mueller's contention, payments received by the United States from the Trust were only for the Midvale Sites.¹⁷ More importantly, sums paid by the Trust were specifically for the covenant and release in Section VII. A., not the covenant in VII. B.

In a futile attempt to prevail in its argument, Mueller conveniently blurs the legal distinction between a covenant and a release.¹⁸ Mueller does so by citing to one unpublished opinion, Robbins v. Physicians/or Womens's Health, Inc., No. CV065002633, 2009 WL 5303887 *4 (Conn. Super. Ct. Dec. 7, 2009),¹⁹ which, as best as we can tell, has not since been relied on in any subsequent decision. Mueller further attempts to bolster its position with the following extremely selective quote:

A covenant not to sue, like a release, is a contract and it is also an affirmative defense to an action.²⁰

We think that the full text of the citation is both more informative and more accurate:

A covenant not to sue is distinguishable from a release in that it is not a present abandonment or relinquishment of a right or claim but is merely an agreement not

¹⁷ "Your [EPA] current claims are literally an attempt to recover twice from Sharon/Mueller for the same liabilities of UV Industries for which Sharon/Mueller already paid in 1990 through the conduit of the UV Trust." February 18, 2010 letter from E. Donald Elliott to John N. Moscato, Andrea Madigan and Steven B. Moores, at p. 2.

¹⁸ "While we agree that there are distinctions between a covenant not to sue and a release for some purposes, there is no difference in their effect in this case." See, April 1, 2010 letter from E. Donald Elliott to John N. Moscato, Andrea Madigan and Steven B. Moores, at p. 2.

¹⁹ See, April 1, 2010 letter from E. Donald Elliott to John N. Moscato, Andrea Madigan and Steven B. Moores, at p. 2.

²⁰ 66 Am. Jur. 2d. Release § 4 (2002).

to sue on an existing claim or it is an election not to proceed against a particular party. In other words, a covenant not to sue is an agreement not to enforce an existing cause of action against another party to the agreement. Stated another way it is an agreement to discharge a non-settling wrongdoer to the extent of recovery against the covenantee. The touchstone of a covenant not to sue is its reservation of rights for the benefit of one party. *A covenant not to sue, like a release, is a contract and it is also an affirmative defense to an action.*

...

Where multiple defendants are involved a covenant not to sue with one defendant does not apply to all other joint tortfeasors therefore, a plaintiff's entire cause of action against a non-settling joint tortfeasor is preserved. Thus, when a 'covenant not to sue' has been entered into usually the covenanting tortfeasor is no longer a party to the litigation. Thus, a covenant not to sue differs from a release in that a 'release' extinguishes a cause of action as to all joint tortfeasors whereas a 'covenant not to sue' does not extinguish the cause of action and does not release other joint tortfeasors even if it does not specifically reserve rights against them.^{21/}

A covenant not to sue preserves a legal cause of action while, at the same time, bars the right of recovery from the particular person with whom the covenant is made. Southern Pac. Co. v. Raish, 205 F.2d 389, 393 (9th Cir. 1953). A document will be construed as a covenant not to sue when it speaks in terms of covenanting not to sue (as does Section VII. B. of the UV Decree) rather than releasing, when it contains an express reservation of rights against other persons, and when it is given in consideration of an amount that clearly is not in full satisfaction of plaintiff's claim. See, Dale Hilton, Inc. v. Triangle Publications, Inc., 198 F. Supp. 638, 639-40 (S.D. N.Y. 1961). See also, Rector v. Warner Bros. Pictures, 102 F. Supp. 263, 265 (S.D. Cal. 1952). A covenant not to sue one tortfeasor for a harm does not discharge any other potentially liable party for the harm. See, Western Spring Service Co. v. Andrew, 229 F.2d 413, 418 (10th Cir. 1956). See also, Pacific States Lumber Co. v. Bargar, 10 F.2d 335, 337 (9th Cir. 1926) (A covenant not to sue does not release another tortfeasor because a covenant not to sue is said not to have the effect, technically, of extinguishing any part of the cause of action).

Section VII. A. of the UV Decree, by virtue of the express provisions of Section VI. B., is both a covenant and a release which would have the effect of releasing a joint tortfeasor like Sharon but only for Sharon's liability at the Midvale Site. Section VII. B. of the UV Decree is only a covenant and therefore does not release Sharon from its liabilities at the Eureka Site. Consistent with that interpretation, the UV Decree itself provides that Section VII. B. only applies to UV and the Trust:

This Section shall not be construed as Covenant Not to Sue any other Person,

^{21/} Id. Emphasis added.

Mueller discusses at length Russell v. SunAmerica Securities, Inc., 1991 WL 352563 (S.D. Miss. 1991) and Russell v. SunAmerica Securities, 962 F.2d 1169 (5th Cir. 1992). Because those cases deal with releases, not covenants, they are not persuasive. Interestingly, the 1991 determination in Russell turns in part on a finding that the compensation paid was for all claims originally asserted. Russell, 1991 WL 352563*2. In contradistinction here, the UV and the Trust only compensated the United States for the Midvale Sites.

other than, UV, the Trust, or any Trustee thereof. This Covenant Not to Sue applies only to UV the Trust the Trustees the United States and the State.

Section VII. C., at p. 23. Emphasis added.

Finally, Mueller's preclusion arguments are clearly barred by the following provision in the UV Decree:

No previous ruling of this Court in the Actions on any issue of law or fact shall be deemed to be binding upon the parties hereto for any purpose in any other action or legal proceeding of any type or kind.

Section VI. I., Effect of Settlement, at p. 22.

Counsel for Mueller has suggested that this provision in the UV Decree was negated by a bench order; we disagree. In the November 13, 1990 proceedings regarding the motions to enter three pending decrees, the Court says that "one area that bothers me a little is the section of each [UV and ARCO] decree that says, 'No previous ruling of this Court in the Actions on any issue of law or fact shall be deemed to be binding upon the parties hereto for any purpose in any other action or legal proceeding of any type or kind.'"^{22/} After a brief explanation by Ben Fisherow, DOJ, that the language is intended to preserve the Trust's corporate defense, the Court notes that the clause applies to use in proceedings other than the present case and does not presume to require the Court to withdraw its rulings in the Midvale Litigation. See, Tr. 27 at l. 3 - 5. In light of that clarification, the Court then merely replies, "Well, whatever We Found, however We've ruled, is a historic fact."^{23/} The Court then enters the decrees without caveat and without striking the above-discussed language.^{24/} This supports one and only one conclusion – that while the Court would not withdraw its rulings, neither would the Court not bar the United States and UV and the Trust from contractually agreeing that any ruling in Midvale Litigation would not bind either party in the future.^{25/} In making its preclusion arguments, Mueller attempts to do so as if Mueller was standing in the shoes of UV and the Trust; to the extent UV and the Trust are estopped by this language, Mueller also is estopped from arguing that the rulings in the Midvale Litigation bind the United States.

^{22/} November 13, 1990 hearing Tr. at p. 26, l. 2 - 10.

^{23/} See, Tr. p. 27 at l. 7 - 8.

^{24/} See, Tr. p. 34 at l. 8 - 17.

^{25/} See also December 14, 1990 Order Entering Partial Consent Decree Between the United States, the State of Utah and UV Industries, Inc., Liquidating Trust which approves and enters the UV Decree without any qualification and without striking Section VII. C. of the UV Decree.

Conclusion

In closing, I wish to reiterate that the purpose of sharing our thoughts on these issues with you was the hope that a further presentation of the United States' position will facilitate a prompt and amicable resolution to the matters at hand. We wanted to be certain to avoid any impression that our lack of response to Mueller's letters evidenced in any way a lack of confidence in the government's claims against Mueller at the Eureka Site. That said, we look forward to our next meeting with you.

Sincerely,



JOHN N. MOSCATO

Senior Counsel

Environmental Enforcement Section

Environment and Natural Resource Division

U.S. Department of Justice

1961 Stout Street, 8th Floor

Denver, CO 80294

APPENDIX H

**TO
Z2 SOIL UAO**

**Letter from Annette Lang, Dep't of Justice, to E.
Donald Elliot, Senior Of Counsel, Covington &
Burling LLP (Apr. 7, 2017)**



U.S. Department of Justice

Environment and Natural Resources Division

90-11-3-10884/3

*Environmental Enforcement Section
P.O. Box 7611
Ben Franklin Station
Washington, DC 20044-7611*

*Telephone (202) 514-4213
Fax: (202) 616-6584
annette.lang@usdoj.gov*

April 7, 2017

BY EMAIL AND U.S. MAIL

Confidential Settlement Communication; Not for Public Release

E. Donald Elliott
Covington & Burling LLP
One CityCenter
850 Tenth St., NW
Washington, DC 20001-4956

Dear Don:

We are in receipt of your letters dated December 29, 2016 and January 25, 2017 (collectively, the "January 2017 Letters") regarding defenses that Mueller Industries, Inc. ("Mueller") asserts to potential CERCLA liability at the USS Lead Superfund Site in East Chicago, Indiana ("USS Lead Site").

Mueller's January 2017 Letters in turn attach two letters dated February 18, 2010 and April 1, 2010 to John Moscato, DOJ (collectively, the "*Moscato* Letters") regarding Mueller's defenses to potential CERCLA liability at the Eureka Mills Superfund Site in Eureka, Utah. In its January 2017 Letters, Mueller asserts that the defenses raised in the *Moscato* Letters apply with equal force to the USS Lead Site.

This letter provides the first response that the United States, regarding the USS Lead matter, makes to Mueller's January 2017 Letters and the *Moscato* Letters.¹ As we explain more fully later, we plan to supplement and expand this response over time.

Goal of this Letter. Mueller's reliance on transcripts, consent decrees, and numerous other filings in a thirty-year old case from Midvale, Utah, coupled with the sheer volume of arguments, assertions, and claims that Mueller raises in 40 single-spaced pages of letters with 104 copiously annotated footnotes, makes the task of responding to Mueller's defenses daunting, to say the least. After a first review of the materials, Mr. Khandeshi and I were tempted to throw up our

¹ The United States previously replied to Mueller's defenses in the Eureka Mills case.

hands and ask “why bother?” especially given the present resource pressures involved in the USS Lead Site.

However, once we took the time to apply a rigorous analysis to Mueller’s arguments, the arguments became relatively simple and quite questionable. The real challenge here lies in cutting out the “noise,” in separating the chaff from the wheat and in exposing the thinness of the arguments once they are laid bare.

Therefore, the goal of this letter is to distill Mueller’s arguments down to their core and respond to them simply. The goal is not to provide a comprehensive response, complete with citations to the relevant transcripts, case law, and documents. While we have come a long way toward such a comprehensive response, we are not there yet. We will supplement this letter at a later time.

We hope that Mueller will start the process of participating with the currently existing group of PRPs at the Site and will work with the United States to resolve its liability. So far, neither USS Lead nor Mueller has contributed any money toward a cleanup that already has cost over \$20 million and will require tens of millions more dollars before completion. We do not believe that Mueller’s debatable view of the law justifies inaction any longer.

Definitions. Because of the nature and scope of Mueller’s arguments, we found it useful to develop a list of definitions. Please see Appendix A.

Essence of Mueller’s Arguments. The essence of Mueller’s arguments against CERCLA liability relating to USS Lead’s operation of the USS Lead Facility from 1920 to 1979 is that Mueller’s predecessor, Sharon, did not assume the CERCLA liabilities of UV/USSRAM, USS Lead’s parent. Instead, the CERCLA liabilities of UV/USSRAM were assumed by the UV Liquidating Trust. According to Mueller, the United States is now precluded from asserting that Sharon assumed UV/USSRAM’s CERCLA liabilities because of positions, Court rulings, and settlements in the Midvale Litigation.²

Summary of US Response. The United States has developed a line of arguments in response to Mueller’s defenses. That line of arguments can be found in Appendix B and its attachments at B-1 through B-5.³

Contrary to Mueller’s assertions, Sharon assumed the CERCLA liabilities of UV/USSRAM through the 1979 Liability Assumption Agreement. Specifically, in that Agreement, Sharon

² Mueller also asserts that UV/USSRAM itself likely is shielded from USS Lead’s CERCLA liability because of the decision in *United States v. Bestfoods*, 524 U.S. 51 (1998). See December 29, 2016 Letter from E. D. Elliott to A. Lang at 2. The United States acknowledges its burden of establishing UV/USSRAM’s liability for USS Lead. We have started to develop the facts necessary to carry this burden. However, we have not started a review of the documents from USS Lead’s Redding CA warehouse because we are waiting for them to be coded. The coding should narrow our review. We may need to revisit California to undertake a further review of additional Redding CA warehouse documents in order to complete our analysis.

³ We are also working on another line of arguments based on the radical undercapitalization of MRRC as a result of the Sharon bankruptcy. We are aware of the Bankruptcy Court’s approval of the Plan of Reorganization that had the consequence of enabling that radical undercapitalization.

assumed “contingent” liabilities, that is, future, unknown liabilities. Moreover, the liabilities that Sharon assumed were without restriction: the language in the 1979 Liability Assumption Agreement was extremely broad. Therefore, Sharon assumed CERCLA liability even though the Agreement pre-dated CERCLA. The later **1980** UV Liquidating Trust Agreement (which also pre-dated CERCLA) was irrelevant to, and did not render ineffective, Sharon’s *prior* assumption of liabilities in the **1979** Liability Assumption Agreement.

By virtue of the 1979 Liability Assumption Agreement and the 1980 UV Liquidating Trust Agreement, Sharon *and* the UV Liquidating Trust held a *common liability* to third party claimants, including the United States suing under CERCLA. Mueller’s fundamental premise—that *either* Sharon *or* the UV Liquidating Trust assumed UV Industries’ liability, but not both—is wrong.

Neither the positions taken by the United States in the Midvale Litigation nor the Court’s statements made therein nor the two settlements reached in that Litigation preclude the United States from asserting that Sharon is a successor to UV/USSRAM in prospective USS Lead Litigation.

Because Mueller is a successor to Sharon, Mueller is a successor to UV/USSRAM.

Mueller’s Preclusion Defenses and the United States’ Response. We refer you to Appendices B–1 through B–5 for a more comprehensive response to Mueller’s preclusion defenses. However, Mueller’s preclusion defenses boil down to three. Our responses are as follows:

1. Argument: The Broad Covenant Not to Sue in the UV CD applies to Sharon and therefore to Mueller. (Mueller’s novation theory and its *Res Judicata* claim preclusion theory both hinge on this assertion.)

Response: The Covenants Not to Sue in the UV CD, including the Broad CNTS, expressly applied only to UV Industries and the UV Trust. Sharon was a not party to the UV CD. In Sharon’s separate CD, the United States limited its CNTS to the Midvale Sites. Mueller is a successor to the Sharon CD, not the UV CD. Therefore, Mueller is the beneficiary of a CNTS only at the Midvale Sites, not the USS Lead Site.

2. Argument: The United States is precluded from asserting that Sharon succeeded to the liability of UV/USSRAM because in the Midvale Litigation the United States argued that the UV Trust succeeded to UV/USSRAM’s liability and the District Court issued a decision holding that the UV Trust was the successor. (Mueller’s *Res Judicata* claim splitting theory and its issue preclusion (*aka* “collateral estoppel”) theory both hinge on this assertion.)

Response: The District Court never issued any decision holding that the UV Trust succeeded to the liabilities of UV/USSRAM.

NOTE: The United States agrees that, in the Midvale Litigation, we argued that the UV Trust succeeded to UV/USSRAM's liability. But that position was not and is not inconsistent with the position that Sharon also succeeded to those liabilities. Both parties had a common shared liability. In the Midvale Litigation, the United States did not have to argue that Sharon succeeded to UV/USSRAM's liability because we argued that Sharon was liable under a direct owner/operator theory.

3. Argument: Judicial estoppel precludes the United States from now asserting that Sharon is the successor to UV/USSRAM's liability because in the Midvale Litigation, the United States asserted that the UV Trust was.

Response: None of the requirements of judicial estoppel are met: the United States' position in prospective USS Lead Litigation is not inconsistent with its position in the Midvale Litigation; the United States never persuaded the District Court in the Midvale Litigation that the UV Trust succeeded to UV/USSRAM's liability; and the equities required by judicial estoppel clearly do not lie in Mueller's favor: the United States was left with tens of millions of dollars in unrecovered costs at the Midvale Sites and the United States and other PRPs are facing tens of millions of dollars in costs at the USS Lead Site.

Conclusion. Mueller's arguments are clever, artful, but wrong. We look forward to working with Mueller to resolve its liability and to seeing Mueller start to participate in the already-existing PRP Group at the Site.

Sincerely,



Annette M. Lang
Senior Counsel

cc: Michael Elam
David Rieser
Patricia McGee
David Wallis
Robert Steinwurtzel
Sparsh Khandeshi
Steve Kaiser
Mary Fulghum
Leo Chingcuanco

APPENDIX I

**TO
Z2 SOIL UAO**

**Letter from Annette Lang, Dep't of Justice, to E.
Donald Elliot, Senior Of Counsel, Covington &
Burling LLP (Oct. 4, 2017)**



U.S. Department of Justice

Environment and Natural Resources Division

90-11-3-10884/3

*Environmental Enforcement Section
P.O. Box 7611
Washington, DC 20044*

*Telephone (202) 514-4213
Facsimile (202) 514-8865*

October 4, 2017

BY EMAIL AND U.S. MAIL

Settlement Confidential Communication; Not for Public Release

E. Donald Elliot
Covington & Burling LLP
One City Center
850 Tenth St. NW
Washington, DC 20001-4956

Re: Mueller's CERCLA Liability at the USS Lead Superfund Site

Dear Don:

This letter follows up on the United States' April 7, 2017 letter where we outlined the elements of our *prima facie* case regarding Mueller's succession to the CERCLA liability of UV/USSRAM for environmental contamination of the USS Lead Site in East Chicago, Indiana. *See* Exh. 1 ("April 2017 *Lang* Letter"). This letter fulfills our commitment to provide more details and supporting legal precedent. This letter also expands on our contention that the Midvale Litigation did not relieve Mueller of its liability for response actions and costs at the USS Lead Site and does not preclude the United States from asserting such claims against Mueller.

We have attached as Exhibit 2 the acronyms, shortened corporate names, and definitions that we use in this letter. In general, we have followed the conventions we used in the April 2017 *Lang* Letter. *See* Exh. 1 at App. A. However, we have added some definitions and we deviate in some respects from the conventions in the April 2017 *Lang* Letter, including but not limited to, sometimes using "Mueller" instead of "Sharon Steel" because Mueller indisputably is the successor to and assumed the liabilities of Sharon Steel.

Mueller has sent four letters identifying defenses to liability based on its contention that Sharon Steel was not a successor to the CERCLA liability of UV/USSRAM and the United States is precluded from claiming otherwise. The letters are formidable, spanning over 40 pages

with 104 copiously-annotated footnotes and multiple exhibits.¹ We appreciate Mueller’s forceful advocacy; however, we view the facts and law very differently. Stripped to their core—as we did in the April 2017 *Lang* Letter—Mueller’s arguments are thin and insubstantial. We hope that the April 2017 *Lang* Letter and this letter convince Mueller that the United States fully understands all of its arguments; we just fundamentally disagree.

We recognize and appreciate Mueller’s recent agreement to provide financial assurance to Mueller’s subsidiary, USS Lead, for the performance of a Remedial Investigation and Feasibility Study for Operable Unit 2 (“OU2”) of the USS Lead Site pursuant to an Administrative Settlement Agreement and Order on Consent. Mueller’s financial commitment there, however, is quite limited compared to the total past and expected future costs at the Site. Moreover, that commitment does not include any funds for soil remediation or interior cleanups of the yards and homes of the residential areas of the Site, also known as Operable Unit 1 (“OU1”). Meanwhile, EPA continues those cleanups with funds provided by several PRPs under a 2014 Consent Decree and a 2017 Administrative Settlement Agreement and Order on Consent. Those same PRPs also provide transportation and disposal services.

Therefore, we hope that Mueller will begin to work with the United States and engage with the existing PRPs to share the costs incurred and to be incurred in cleaning up the longstanding lead and arsenic contamination in the residential areas. The evidence and law are clear: Mueller succeeded to the CERCLA liability of UV/USSRAM and the Midvale Litigation does not provide Mueller with any meritorious defenses.²

I. Mueller Succeeded to UV/USSRAM’s CERCLA Liabilities

In a transaction dated November 26, 1979, Mueller purchased the assets of UV/USSRAM and assumed all of its associated liabilities. Mueller’s CERCLA liability for the USS Lead Site flows directly from this transaction. The plain language of the transaction agreements includes the assumption of *all* liabilities, including *contingent* liabilities, *whether asserted before or after* November 26, 1979. Thus, even though the transaction pre-dated CERCLA, Mueller’s assumption of liability included UV/USSRAM’s CERCLA liabilities.

¹ These letters (without exhibits) are attached as:

- Exhibit 6 (February 18, 2010 Letter from D. Elliott to J. Moscato) (“First *Moscato* Letter”)
- Exhibit 9 (April 1, 2010 Letter from D. Elliott to J. Moscato) (“Second *Moscato* Letter”)
- Exhibit 15 (December 29, 2016 Letter from D. Elliott to A. Lang)
- Exhibit 16 (January 25, 2017 Letter from T. Brugato to A. Lang)

² This letter does not address the issue of UV/USSRAM’s liability for USS Lead. We will be talking with you separately about that.

A. The Plain Language of the 1979 Asset Purchase and Liability Assumption Agreements is General Enough to Encompass Environmental Liability, including Subsequent CERCLA Liability

In the Seventh Circuit and elsewhere, a purchaser may assume CERCLA liabilities by contract, even when the contract predates CERCLA.³ A pre-CERCLA agreement transfers CERCLA liability if the agreement “is specific enough to include CERCLA liability or *general enough* to include any and all environmental liability.” *Peoples Gas Light and Coke Co. v. Beazer East, Inc.*, 802 F.3d 876, 883 (7th Cir. 2015) (emphasis in original) (citing *Beazer East, Inc. v. Mead Corp.*, 34 F.3d 206, 211 (3rd Cir. 1994)); *accord White Consol.*, 179 F.3d at 410; *John S. Boyd Co., Inc. v. Boston Gas Co.*, 992 F.2d 401, 406 (1st Cir. 1993) (“To transfer CERCLA liability, the Agreement must contain language broad enough to allow us to say that the parties intended to transfer either contingent environmental liability or all liability”); *Olin Corp.*, 5 F.3d at 15–16 (2nd Cir. 1993) (“Notwithstanding the fact that CERCLA did not exist at the time these contracts were executed, we hold that . . . these contractual provisions are sufficiently broad enough to encompass CERCLA liability.”). The language of the liability assumption in this case is general enough to include any and all environmental liability, including subsequent CERCLA liability.

Two documents govern Mueller’s assumption of UV/USSRAM’s liabilities: (1) a 1979 Asset Purchase Agreement;⁴ and (2) a 1979 Liability Assumption Agreement⁵ (collectively, the “1979 Asset Purchase and Liability Assumption Agreements” or the “1979 Agreements”). Both use extremely broad and general language to describe the scope of Mueller’s assumption of UV/USSRAM’s liabilities.

The 1979 Asset Purchase Agreement defines “Assumed Liabilities” and “Non-Assumed Liabilities” as follows:

‘Assumed Liabilities’ shall mean ***all*** debts, obligations, contracts and liabilities of the Seller [*i.e.*, UV/USSRAM] as of the Closing Date ***of any kind character or description***, direct or indirect, whether accrued, absolute, ***contingent*** or otherwise, except the Non-Assumed Liabilities as hereinafter defined, together with all administrative expenses (other than income taxes) incident to the liquidation under the UV Liquidating Trust. [Exh. 3 at ¶ 1(d); emphasis added.]

³ *Kerr-McGee Chem. Corp. v. Lefton Iron & Metal Co.*, 14 F.3d 321, 327 (7th Cir. 1994); *E.I. Du Pont de Nemours and Co. v. U.S.*, 365 F.3d 1367, 1372 (Fed. Cir. 2004); *White Consol. Indus., Inc. v. Westinghouse Elec. Corp.*, 179 F.3d 403, 410 (6th Cir. 1999); *Dent v. Beazer Materials and Services*, 156 F.3d 523, 534 (4th Cir. 1998); *ALCOA v. Beazer East, Inc.*, 124 F.3d 551, 565-66 (3rd Cir. 1997); *Smithkline Beecham Corp. v. Rohm and Haas Co.*, 89 F.3d 154, 159-60 (3rd Cir. 1996); *Joslyn Mfg. Co. v. Koppers Co., Inc.*, 40 F.3d 750, 754–55 (5th Cir. 1994); *Olin Corp. v. Consol. Alum. Corp.*, 5 F.3d 10, 15-16 (2nd Cir. 1993); see *Marmon Group, Inc. v. Rexnord, Inc.*, 822 F.2d 31, 33 (7th Cir. 1986) (motion to dismiss reversed because a pre-CERCLA indemnity provision could be interpreted to cover CERCLA costs).

⁴ Attached as Exhibit 3.

⁵ Attached as Exhibit 4.

'Non-Assumed Liabilities' shall mean any tax liabilities attributable to the Seller's failure to satisfy the requirements of Section 337 of the Internal Revenue Code of 1954 except as otherwise provided in a letter agreement concerning Section 337 of the Code dated the date hereof between Buyer and Seller." [*Id.* at ¶ 1(e).]

The 1979 Asset Purchase Agreement thereafter states: "On the closing date, [*Mueller*] shall assume and thereafter pay, perform and discharge in the ordinary course of business and on or before the applicable due date **all of the Assumed Liabilities**. . . . [*Mueller*] shall not assume or pay, perform or discharge, nor shall [*Mueller*] be responsible, directly or indirectly, for the Non-Assumed Liabilities." *Id.* at ¶ 2(e) (emphasis added).

The simultaneously executed 1979 Liability Assumption Agreement describes *Mueller's* assumed liabilities with equally broad language:

[*Mueller*] hereby assumes and agrees to pay, perform and discharge and to indemnify and hold UV harmless from and against . . . **all** the debts, obligations, contracts and liabilities of UV as of the date hereof, **of any kind, character or description**, direct or indirect, whether accrued, absolute, **contingent** or otherwise, and **whether asserted before or after such date** The debts, obligations, contracts, and liabilities so assumed being, **without limitation on the generality of the foregoing**, more particularly described as follows:

[A list of nine areas of liabilities follows]; and

(x) **all** other debts, obligations and liabilities of UV as of the date hereof **of any kind character or description**, whether direct or indirect, whether accrued, absolute, **contingent** or otherwise, whether asserted before or after the execution hereof and whether or not specifically mentioned or described here."

Exh. 4 at pp. 2, 5 (emphasis added). Thus, the 1979 Agreements state on four separate occasions that *Mueller* assumed "**all**" of UV/USSRAM's liabilities. They state on two separate occasions that *Mueller* assumed liabilities "**of any kind, character or description**."

Courts presented with pre-CERCLA contracts containing similarly broad language to describe the scope of assumed liabilities have consistently held that the parties intended to transfer the CERCLA liabilities. *White Consol.*, 179 F.3d at 410 (agreement to assume "all of the liabilities and obligations of the Business, contingent or otherwise" included a transfer of CERCLA liabilities); *ALCOA*, 124 F.3d at 556 (agreement to assume "all of the liabilities and obligations of the [seller] of whatsoever nature" included transfer of CERCLA liabilities); *United States v. Iron Mountain Mines, Inc.*, 987 F.Supp. 1233, 1241 (E.D. Cal. 1997) ("Courts universally have held that language transferring 'all liabilities' is sufficiently broad to include environmental liability"); accord caselaw in Note 3, *supra*. Because *Mueller's* assumption of UV/USSRAM liabilities uses similarly broad language, *Mueller* has succeeded to UV/USSRAM's CERCLA liabilities.

Mueller's liability assumption also clearly includes liabilities that may not have been known or existing as of November 26, 1979. On two occasions, the Agreements include the assumption of "**contingent**" liability, meaning liability "dependent on something that might or might not happen in the future." *Black's Law Dictionary* (10th ed. 2014). And, the Agreements expressly include the assumption of liabilities "**asserted before or after**" the November 26, 1979 date of the Agreements.

Courts have held that pre-CERCLA contracts that include a transfer of or indemnification for "contingent" liabilities include future CERCLA liabilities not existing at the time of the contract. *White Consol.* 179 F.3d at 409 (pre-CERCLA purchase agreement that transferred "all obligations and liabilities . . . contingent or otherwise," transferred CERCLA liabilities); *Olin Corp.*, 5 F.3d at 15 (pre-CERCLA indemnity agreement that indemnified purchaser for "all liabilities (absolute or contingent)" encompassed CERCLA liabilities); cf. *North Shore Gas Co. v. Salomon Inc.*, 152 F.3d 642, 652 (7th Cir. 1998) (pre-CERCLA agreement to assume "existing" liabilities does not succeed to "contingent" liabilities); *John S. Boyd*, 992 F.2d at 406–407 (pre-CERCLA contract did not transfer CERCLA liabilities because the contract did not include any reference to "future or contingent liabilities").

Mueller's broad assumption of liability is not limited in any way by the identification of certain specific liabilities in the 1979 Liability Assumption Agreement. Indeed, the itemization of certain specific liabilities does not limit **the generality of** Mueller's assumption. Exh. 4 at p. 2. For this reason, several cases finding that buyers did not assume CERCLA liabilities are inapplicable.⁶

Though Mueller hopes otherwise, the use of the words "as of" in the 1979 Liability Assumption Agreement does not limit Mueller's assumption to existing liabilities. The "as of" phrase in this Agreement simply provides a cut-off date for the acts or omissions of UV/USSRAM that Mueller assumes liability for, specifically, those acts or omissions that occurred prior to, or "as of," the Closing Date. Mueller does not assume liability for UV/USSRAM's acts or omissions that occur after the Closing Date.

Mueller's argument—that the words "as of," should be interpreted to mean that it assumed only liabilities existing "as of" the closing date—is misplaced. Interpreting the one-time use of the phrase "as of" to mean "existing" would render the Agreements' many references to "all," "any kind, character, or description," and "contingent" superfluous, which is clearly contrary to the case law. *Oxford Financial Group, Ltd. v Evans*, 795 N.E.2d 1135, 1142 (Ind. Ct. App. 2003); *Ruttenberg v. Davidge Data Systems Corp.*, 215 A.D.2d 191, 194–95 (N.Y. 1995). In addition, Mueller's reading would require adding a word into the contract—"existing"—that is not there. That too is contrary to established case law. *Oxford Financial*

⁶ *Boyd*, 992 F.2d at 407 (CERCLA liability not included in the "all liabilities" language where the covered liabilities were explicitly listed); *United States v. Vermont Am. Corp.*, 871 F. Supp. 318, 321 (W.D. Mich. 1994) (CERCLA liability not included in the "all liabilities" language because the liabilities were limited to those "reflected or reserved against on the December 31, 1979 balance sheet" or "disclosed in the Disclosure Letter" or "existing on the Closing Date"); *Georgia-Pacific Consumer Products, LP v. International Paper Co.*, 566 F. Supp. 2d 246, 249 (S.D.N.Y. 2008) (CERCLA liability not included in the liabilities "of every kind, character or description, whether known or unknown, whether disclosed or undisclosed, whether accrued, absolute, contingent or otherwise" because the liabilities had to be "directly attributable to the New Jersey Operations, as the same exist on the date hereof").

Group, 795 N.E.2d at 1142; (courts should not “add provisions not agreed upon by the parties”); see *Osprey Partners, LLC v. Bank of New York Mellon Corp.*, 982 N.Y.S.2d 119, 120 (N.Y. 2014) (“the best evidence of the parties’ intent is what they say in their writing”).

B. Mueller and the UV Liquidating Trust Share a Common Liability for UV/USSRAM’s CERCLA Liabilities

Ignoring the 1979 Asset Purchase and Liability Assumption Agreements, Mueller contends that UV/USSRAM transferred its CERCLA liability to the UV Liquidating Trust by means of the 1980 UV Liquidating Trust Agreement. Mueller focuses much of its defense on the misconception that it and the Trust cannot both be liable for UV/USSRAM’s CERCLA liability. The law, however, clearly holds otherwise.

The UV Liquidating Trust’s assumption of UV/USSRAM’s liability occurred *after* Mueller’s assumption of UV/USSRAM’s liability: 1980 v. 1979. A careful review of the 1980 Liquidating Trust Agreement demonstrates that no terms or provisions contained therein renders the 1979 Agreements null and void. See Exh. 17. Mueller (in the form of Sharon Steel) was not even a party to the 1980 Liquidating Trust Agreement.

Two parties can hold a shared and common liability for another’s CERCLA liability:

CERCLA precludes efforts to divest liability. . . . But that is not the same as saying that CERCLA prohibits a non-liable party from entering into an agreement to take on direct liability *in addition to* that of the already-liable party; the only condition that CERCLA imposes is that the directly liable party must remain liable.

United States v. NCR Corp., 840 F.Supp.2d 1093, 1097 (E.D. Wisc. 2011) (emphasis in original) *rev’d on reh’g on other grounds*, *United States v. NCR Corp.*, Case No. 10-C-910 (E.D. Wisc. April 10, 2012) (Decision Granting Motion for Reconsideration) (attached as Exhibit 14); see *Harley-Davidson, Inc. v. Minstar, Inc.*, 41 F.3d 341, 342 (7th Cir. 1994) (“we agree with every other court that has been called on to interpret [Section 107(e)] that it does not outlaw indemnification agreements, but merely precludes efforts to divest a responsible party of his liability”).

Stated otherwise, Mueller’s assumption of UV/USSRAM’s CERCLA liability in 1979 did not extinguish UV/USSRAM’s CERCLA liability. Rather, it created *two* parties from whom the United States and other third parties could recover: Mueller and UV/USSRAM.⁷

⁷ The same non-divestiture rule applied at common law in the context of tort liability. *Grant-Howard Assoc. v. Gen. Housewares Corp.*, 472 N.E.2d 1, 3 (N.Y. 1984). *Accord* 15 WILLIAM MEAD FLETCHER ET AL., FLETCHER CYCLOPEDIA OF THE LAW OF CORPORATIONS § 7123 (perm. ed., rev. vol. 2008) (citing *Grant-Howard*); *In re Silicone Gel Breast Implants Prods. Liab. Litig.*, 837 F.Supp. 1123, 1126 (N.D. Ala. 1993) (“It is beyond dispute that one company’s transfer of assets to another under circumstances resulting in the transferee’s becoming responsible for tort liabilities to third-parties as upon an express agreement to assume such liabilities – does not, as to the third parties, relieve the transferor of those same responsibilities.”).

In 1980, when UV/USSRAM decided to liquidate, it established the UV Liquidating Trust as part of the corporate wind-down process. In that process, UV/USSRAM was required to arrange for the resolution of its outstanding liabilities. Those liabilities would have included the liabilities specifically excluded by the 1979 Asset Purchase and Liability Assumption Agreements and other liabilities that UV/USSRAM could not divest by law, like CERCLA. Accordingly, the corporate dissolution, windup, and liquidation of UV/USSRAM—and the associated distribution of UV/USSRAM’s CERCLA liability to the UV Liquidating Trust—had no impact on Mueller’s earlier assumption of liabilities through the 1979 Agreements with UV/USSRAM. *See Iron Mountain Mines*, 987 F. Supp. at 1238–44 (buyer’s assumption of CERCLA liabilities for a particular site was not affected by the liquidation of the seller); *United States v. Chrysler Corp.*, Nos. 88-341, 88-534, 1990 WL 127160, at *4-7 (D. Del. Aug. 28, 1990) (United States’ settlement with asset seller did not resolve asset purchaser’s successor liability based on an express assumption).

The United States is entitled to recover CERCLA cleanup costs from Mueller or the UV Liquidating Trust or both because the Trust and Mueller share UV/USSRAM’s CERCLA liability.⁸

II. Mueller’s Defenses to Liability for the USS Lead Site Based on the Midvale Litigation are Without Merit

In the 1980’s, EPA started the process of cleaning up the Midvale Slag and Tailings Superfund Sites located outside of Salt Lake City, Utah.⁹ An estimated 2 million tons of hazardous waste from more than 70 years of smelting activity and tailings disposal covering approximately 330 acres of land required clean up. EPA’s costs to clean up the Sites exceeded \$114 million.

In 1986, the United States filed complaints against, *inter alia*, Sharon Steel, UV/USSRAM, the UV Liquidating Trust, and Atlantic Richfield Co. (“ARCO”) to recover cleanup costs for the Midvale Sites. The “Midvale Litigation” ensued. Ultimately, the Midvale Litigation settled. The United States entered into several separate consent decrees and recovered a total of \$61 million: \$18 million from UV/USSRAM and the UV Liquidating Trust; \$22 million from Sharon Steel; and \$21 million from ARCO. These payments left more than \$53 million in outstanding costs that the United States itself had to cover.

In a February 2010 letter to the United States involving another Superfund site known as Eureka Mills, Mueller raised numerous defenses to liability based on the Midvale Litigation. *See* Exh. 6 (February 18, 2010 Letter from D. Elliott to J. Moscato, *et al.*) (“First Moscato Letter”).

⁸ The United States again refers Mueller to the *Plaintiffs’ Joint Brief in Response to Motion for Summary Judgment on Non-Liability Filed by Defendant Appleton Papers Inc.* (“Joint Brief”) filed on August 26, 2011, in the case of *United States v. NCR Corp. et al.*, Case No. 10-C-910 (E.D. Wisc.). *See* Exh. 5. This Joint Brief clearly and persuasively articulates the law and arguments supporting the shared, common liability of the UV Liquidating Trust and Mueller.

⁹ EPA nominated the Midvale Sites to the National Priority List in June of 1986.

Mueller asserts that those defenses apply with equal force to a claim against Mueller related to the USS Lead Site. Those defenses are:

- (1) The United States is precluded from asserting liability against Mueller because the covenant not to sue in the UV CD bars such a claim (Exh. 6 at 4–7);
- (2) *Res Judicata* arising from the Midvale Litigation precludes the United States from asserting any claims against Mueller at the USS Lead Site:
 - (a) The liability release in the UV CD precludes the United States (*id.* at 7–8)
 - (b) The “claim splitting” branch of the doctrine of *Res Judicata* precludes the United States (*id.* at 8–13)
 - (c) Collateral estoppel—also known as “issue preclusion”—precludes the United States (*id.* and at 13–15);
- (3) Judicial Estoppel arising from the Midvale Litigation precludes the United States from asserting any claims against Mueller at the USS Lead Site (*id.* at 15–17).

While Mueller’s arguments are long and expansive, when reduced to their core, they are without merit.

A. In the Midvale Litigation, the United States Never “Released” Mueller from CERCLA Liability for the USS Lead Superfund Site¹⁰

The United States resolved its Midvale CERCLA claims through two separate consent decrees:

- (1) One with the UV Liquidating Trust and UV/USSRAM (the “UV CD”); *see* Exh. 7;
- (2) One with Sharon Steel (Mueller’s predecessor) (the “Sharon Steel CD”); *see* Exh. 8.¹¹

Mueller was not required to and did not take any actions or pay any costs under the UV CD; only UV/USSRAM and the UV Liquidating Trust did. Mueller did not provide any “consideration” to the United States pursuant to the UV CD. Notwithstanding this, Mueller remarkably claims

¹⁰ Section II.A of this letter addresses Mueller’s arguments at Section I.A of the First *Moscato* Letter at 4–7.

¹¹ The United States also entered into a Consent Decree with ARCO but that is not relevant for the purposes of this letter.

that the covenants not to sue in the UV CD apply to Mueller. Mueller’s entire “release” or “novation” defense is based on this false premise.¹²

1. Sharon Steel (i.e., Mueller) Is Not Named in—and is Expressly Excluded From—the Covenant Not to Sue in the UV CD

Under the UV CD, the United States covenanted not to sue UV, the UV Trust, and the Trustees for three specific Sites: the Tailings and Slag Sites (i.e., the Midvale Sites) and the Re-Solve Site in Massachusetts. Exh. 7 at ¶ VII.A. In addition, the United States, “on behalf of the Environmental Protection Agency [and] the Department of the Interior” also covenanted not to sue these same three parties “for any [environmental] claims in the future.” *Id.* at ¶ VII.B. The United States provided this second broad covenant not to sue for one express purpose: “to allow for the orderly liquidation and termination of the Trust in accordance with this Consent Decree.” *Id.*

The Broad CNTS in the UV CD does not shield Mueller from liability for the USS Lead Superfund Site. The covenant’s language specifically limits its applicability to UV, the UV Liquidating Trust, and the Trustees. *Id.* at ¶ VII.A. Moreover, parties other than UV, the Trust, and the Trustees are expressly excluded from the benefits of the UV CD covenants not to sue:

This Section [Section VII] shall not be construed as a Covenant Not to Sue any other Person, other than, UV, the Trust, or any Trustee thereof. This Covenant Not to Sue applies only to UV, the Trust, the Trustees, the United States, and the State [Utah].

Exh. 7 at ¶ VII.C.

Federal courts long have construed consent decrees as contracts. *United States v. ITT Continental Banking Co.*, 420 U.S. 223, 238 (1975) (“[A] consent decree or order is to be construed for enforcement purposes basically as a contract”). “The scope of a consent decree must be discerned within its four corners.” *United States v. Armour & Co.*, 402 U.S. 673, 682 (1971)); *Alliance to End Repression v. City of Chicago*, 119 F.3d 472, 474 (7th Cir. 1997); *Sinclair Oil Corp., v. Scherer*, 7 F.3d 191, 194 (10th Cir. 1993).

Particularly in the case of environmental covenants not to sue, federal courts carefully limit the scope to the express language of the consent decree.¹³ To do otherwise not only would

¹² We do not believe that Mueller’s “release” defense is different from its first “claim preclusion” defense. Nevertheless, because Mueller separated them out (*see* First *Moscato* Letter, Section I.A v. Section I.B, first two paragraphs), we will do so as well.

¹³ *Sinclair Oil*, 7 F.3d at 194 (United States’ covenant not to sue for the violations alleged in the claims in the complaint did not include violations, that while known at the time of the settlement, were not specifically alleged in the complaints’ claims); *United States v. Land O’Lakes, Inc.*, No. CIV-16-170-R, 2017 WL 706346, *4–*5 (W.D. Okla., Feb. 22, 2017) (United States’ covenant not to sue for environmental cleanup under the Resource Conservation and Recovery Act did not preclude suit for cleanup under CERCLA); *Berry v. Farmland Indus. Inc.*, 114 F. Supp. 2d 1150, 1155–58 (D. Kan. 2000) (United States’ covenant not to sue for reporting claims in the complaint and one other set of claims did not preclude citizen suit for other reporting claims that were known at the time but not alleged in the complaint); *Neighbors for a Toxic Free Community v. Vulcan Materials Co.*, 964 F.

contravene the express language of the covenants not to sue but also would undermine the public policy in favor of requiring the polluters—not the government—to pay for cleanups. *North Shore Gas Co.*, 152 F.3d at 649 (“When Congress enacted CERCLA, it enabled the federal government to provide an efficacious response to environmental hazards and to assign the cost of that response to the parties who created or maintained the hazards”). Therefore, Sharon Steel (*i.e.*, Mueller) is clearly excluded from the covenants not to sue in the UV CD.

Moreover, the express rationale for the Broad CNTS in the UV CD—to allow the orderly dissolution of the UV Liquidating Trust—does not apply to Sharon Steel.

Instead, Sharon Steel (*i.e.*, Mueller) was the beneficiary of the covenants not to sue in the Sharon Steel CD. Sharon Steel was required to take actions and pay costs under the Sharon Steel CD. In exchange for that consideration, the United States provided Sharon Steel with the covenants not to sue contained in that CD.

However, the covenants not to sue were limited. Specifically, the United States covenanted not to sue Sharon Steel only for the Tailings and Slag Sites. Exh. 8 at ¶ VIII.A. There was no broader covenant regarding potential future environmental claims.

Moreover, in the Sharon Steel CD, the United States expressly reserved its claims against Sharon Steel for every site in the country except for the Tailings and Slag Sites:

Nothing in this Decree shall be deemed to impair any claims identified in the United States’ Proof of Claim, or any other claims of the United States on behalf of EPA, other than the United States’ claims with respect to the Tailings Site and the Slag Site.

Id. at ¶ X.A (emphasis added). This limitation on the scope of the United States’ covenant not to sue with Sharon Steel would have no meaning or effect if the Broad Covenant Not to Sue in the UV CD was interpreted to apply to Sharon Steel.

To the extent that Mueller asserts that the one-time use of the term “release” in Paragraph VI.B of the UV CD serves to extinguish all future causes of action against all parties to the *Midvale Litigation*, Mueller is wrong. The full text of the relevant sentence in Paragraph VI.B reads: “By virtue of the payment of the amounts identified in Section IV of this Decree, ***the Trust and UV*** shall have finally and completely resolved all alleged liabilities of the Trust and UV to the United States ***for the matters covered by the Covenant Not to Sue in Section VII.A*** hereof and are hereby released therefrom.” Exh. 7 at ¶ VI.B (emphasis added). This language clearly establishes: (1) the “release” applies only to “the Trust and UV;” and (2) it applies only to the covenant not to sue in Paragraph VII.A. That covenant not to sue is the narrow covenant not to sue for the Midvale Sites and the Re-Solve Site. It is not the Broad Covenant Not to Sue in Section VII.B. Moreover, to construe this sentence as broadly as

Supp. 1448, 1451–52 (D. Colo. 1997) (EPA’s consent agreement resolving reporting failures under CERCLA did not preclude citizen suit for those same failures under EPCRA).

Mueller construes it would eviscerate the carefully crafted language and limitations in the UV CD and the equally carefully crafted limitations in the Sharon Steel CD.

2. Mueller’s Status as a Successor to UV/USSRAM’s Liability does not Render it a Beneficiary of the Covenant Not to Sue in the UV CD

In asserting that it is the beneficiary of the Broad Covenant Not to Sue in the UV CD, Mueller relies on the principle that successor liability does not attach if the predecessor’s liability has been discharged. Exh. 6 at 7–8. Mueller, however, misapplies this principle.

A successor is entitled to the benefits of a predecessor’s covenants not to sue when the basis of the succession is as a “mere continuation” of the predecessor. *Robbins v. Physicians for Women’s Health Inc.*, No. CV065000633, 2009 WL 5303887 (Conn. Super. Ct. Dec. 7, 2009). When a company is the same company as the predecessor (such as with a name change), it provided the consideration given in a prior settlement. Therefore, it makes sense that it is entitled to the benefit (*i.e.*, the covenant not to sue) of that settlement.

But Mueller indisputably is not a “mere continuation” of UV/USSRAM. Rather, Mueller is a successor by virtue of an asset purchase agreement and an express assumption of liability. Under these circumstances, the purchaser is not entitled to the seller’s covenants not to sue. *Chrysler*, Nos. 88-341, 88-534, 1990 WL 127160, at *7 (CERCLA consent decree covenants did not apply to an asset purchaser successor who expressly assumed a predecessor’s liabilities).

Mueller’s position here is much less persuasive than that of the *Chrysler* defendant. In *Chrysler*, the covenant included the term “successors.” Nevertheless, the court declined to apply the covenant to the asset purchaser, finding that the purchaser was not the type of successor the government’s covenant not to sue was intended to cover. *Id.*

The UV CD uses extremely careful language to limit the United States’ covenants not to sue to UV, the UV Liquidating Trust, and the Trustees. The UV CD does not include any language referring to successors of those three named beneficiaries. Accordingly, the language used, as well as the language *omitted from*, the UV CD clearly demonstrates that the covenant not to sue does not apply to Mueller.

The existence of two separate Consent Decrees in the Midvale Litigation—with two separate covenants not to sue—was a deliberate choice. One CD applied to UV, the UV Liquidating Trust, and the Trustees. The other CD applied to Sharon Steel. If the covenants not to sue in either of these Consent Decrees had been intended for the benefit of the other parties to the Midvale Litigation—or their successors—there would have been no need for two separate Consent Decrees with two distinct covenants not to sue.

3. Mueller Cannot Make Defensive Use of the UV CD Because Mueller was Not a Party to It

Even if Mueller were an intended beneficiary of the UV CD—which it is not—Mueller could not take advantage of the UV CD’s covenant not to sue. Under Supreme Court precedent,

reaching back nearly 100 years, “a consent decree is not enforceable directly or in collateral proceedings by those who are not parties to it even though they were intended to be benefitted by it.” *Blue Chip Stamps v. Manor Drug Stores*, 421 U.S. 723, 750 (1975) (citing *Armour*, 402 U.S. 673)); *Buckeye Coal & Ry. Co. v. Hocking Valley Ry. Co.*, 269 U.S. 42 (1925).

This prohibition applies equally to the defensive use of a consent decree. *IBM v. Comdisco*, 834 F. Supp 264, 267 (N.D. Ill. 1993) (citing *May Dep’t Stores Co. v. First Hartford Corp.*, 435 F. Supp. 849 (D. Conn. 1977)).

Courts strictly adhere to this prohibition in the context of a consent decree secured by the government. “Only the Government can seek enforcement of its consent decrees; therefore, even if the Government intended its consent decree to benefit a third party, that party could not enforce it unless the decree so provided.” *Beckett v. Air Line Pilots Ass’n*, 995 F.2d 280, 288 (D.C. Cir. 1993); *Dale v. Selene Fin. LP*, No. 3:15CV1762, 2016 WL 1170772, at *13 (N.D. Ohio, March 25, 2016).

The prohibition on third party enforcement of consent decrees extends to successors, unless they are mere continuations of their predecessors. *Bauman v. City of Cleveland*, No. 1:04-CV-1757, 2015 WL 893285, at *4 (N.D. Ohio March 3, 2015). In *Bauman*, the court denied a successor company standing to sue a party for violating a consent decree that was entered into between its predecessor and the alleged violator of the consent decree. *Bauman*, 2015 WL 893285 at *4. The court’s reasoning was that “because the [plaintiff] was not a party to the underlying litigation, or the Consent Decree that grew out of it, it lacks standing.” *Id.* Similarly, Mueller’s status as a successor to UV/USSRAM’s liability does not enable it to use UV/USSRAM’s covenant not to sue as an affirmative defense.

4. Mueller’s Counter Argument is Unsupported and Unpersuasive

Mueller’s position that the United States’ Broad Covenant Not to Sue in the UV CD shields it from liability at the USS Lead Site is based on a single case from Connecticut, *Robbins*, 2009 WL 5303887. This case is readily distinguishable.

- In *Robbins*, the plaintiff’s claim against the defendant was based on the “mere continuation” theory of successor liability. *Robbins v. Physicians for Women’s Health, LLC*, 311 Conn. 707, 715 (Conn. 2014).¹⁴ Here, by contrast, Mueller is a successor by virtue of asset purchase and liability assumption agreements where Mueller agreed to assume liabilities of “any kind character or description, direct or indirect, whether accrued, absolute, contingent or otherwise.”
- In the absence of a clear intent on behalf of the United States, a covenant not to sue by the United States in an environmental settlement does not apply to successors. *Chrysler Corp.*, Nos. 88-341, 88-534, 1990 WL 127160 at *7.

¹⁴ While the intermediate appellate court in *Robbins v. Physicians for Women’s Health, LLC*, 38 A.3d 142 (Conn. App. Ct. 2012) reversed the lower court case that Mueller cites, the Supreme Court of Connecticut ultimately reinstated the trial court’s decision, *Robbins v. Physicians for Women’s Health, LLC*, 311 Conn. 707 (Conn. 2014).

- The *Robbins* decision involved a covenant not to sue in a settlement agreement executed by private litigants. The covenant not to sue was not made by the United States in a consent decree resolving environmental claims. Accordingly, the defendants in *Robbins* did not have to overcome the Supreme Court’s prohibition on third-party enforcement of consent decrees and the Court’s directive that consent decree language is to be strictly construed.

B. Mueller’s Res Judicata Defenses to CERCLA Liability at the USS Lead Site are Without Merit¹⁵

1. Claim Preclusion Does Not Protect Mueller from Liability at the USS Lead Site

Claim preclusion arising from the Midvale Litigation does not protect Mueller from liability at the USS Lead Site. As we stated in Note 12, we do not believe that Mueller’s first claim preclusion defense is any different from its “release” defense (*i.e.*, that the Broad Covenant Not to Sue in the UV CD applies to Mueller). Indeed, when we analyze Mueller’s first “claim preclusion” defense on the basis of the clear legal requirements for claim preclusion, Mueller’s defense withers.

The Seventh Circuit has identified three requirements to satisfy claim preclusion:

- “(1) identity of the claim,
- “(2) identity of parties, which includes those in ‘privity’ with the original parties, and
- “(3) a final judgment on the merits.”

Ross ex. rel. Ross v. Board of Educ. Of Twp. High Sch. Dist. 211, 486 F.3d 279, 283 (7th Cir. 2007) (cited in *Cannon v. Burge*, 752 F.3d 1079, 1101 (7th Cir. 2014)); *accord Barr v. Board of Trustees of W. Illinois Univ.*, 796 F.3d 837, 840 (7th Cir. 2015) (“Res judicata blocks a second lawsuit if there is (1) an identity of the parties in the two suits; (2) a final judgment on the merits in the first; and (3) an identity of the causes of action”).¹⁶

These three requirements apply to both “branches” of claim preclusion: (1) preclusion based on a claim being resolved in a prior lawsuit; and (2) preclusion based on a claim *not* being brought in a prior lawsuit when it could and should have been (*i.e.*, claim splitting). *Ross*, 486

¹⁵ Section II.B of this letter address Mueller’s arguments at Sections I.B and I.C of the First *Moscato* Letter at 7–15. As we mention later in this letter, we believe that Mueller’s claim splitting argument is no different from its issue preclusion argument. That is why we largely address Mueller’s “claim splitting” argument in our response to Mueller’s issue preclusion (*i.e.*, collateral estoppel) argument.

¹⁶ Mueller never specifically identifies the three legal requirements for satisfying claim preclusion in any of its four letters to the United States. *See* Exhs. 6, 9, 15, and 16. This omission likely is due to Mueller’s inability to satisfy those requirements if they were plainly stated.

F.3d at 283 (identifying the three requirements listed above and affirming dismissal based on the claim having been resolved in a prior lawsuit); *Barr*, 796 F.3d at 840 (identifying the three requirements listed above and affirming dismissal based claim splitting).

Mueller asserts a claim preclusion defense under both branches.¹⁷ Under both branches, Mueller cannot satisfy the first two requirements: identity of the claim and identity of the parties, including those in privity with the original parties. Under the claim splitting branch, Mueller also cannot satisfy the third requirement: a final judgment on the merits.

a. There is No Identity of Claim

i. The Factual Allegations Giving Rise to the Injuries at the USS Lead Site are not Based on the Same, or Nearly the Same, Factual Allegations as those in the Midvale Litigation

“Two claims are one for purposes of res judicata if they are based on the same, or nearly the same, factual allegations.” *Herrimann v. Cencom Cable Assocs. Inc.*, 999 F.2d 223, 226 (7th Cir. 1993), *quoted in Barr*, 796 F.3d at 840; *Adams v. City of Indianapolis*, 742 F.3d 720, 736 (7th Cir. 2014) (“Whether there is an identity of the cause of action depends on ‘whether the claims comprise the same core of operative facts that give rise to a remedy’”) (quoting *Matrix IV. Inc. v. Am. Nat’l Bank & Trust Co. of Chicago*, 649 F.3d 539, 547 (7th Cir. 2011)). By contrast, claims are independent of each other when the alleged injuries do not arise from the same core of operative facts and the harm occurred at different times. *Midwest Operating Eng’rs Welfare Fund, v. Cordova Dredge*, 147 F. Supp. 3d 724, 740 (N.D. Ill. 2015) (citing *Andresen v. Chrysler Corp.*, 99 F. 3d 846, 852-53 (7th Cir. 1996)).

The United States’ claims in the Midvale Litigation and our claims in the USS Lead Litigation are not based on the same, or nearly the same, factual allegations. They are temporally and geographically distinct. Our claims in the Midvale Litigation involved two Superfund sites in Utah. The transactions that gave rise to the injury were the release and disposal of hazardous substances at those Utah sites. By contrast, the United States’ claims in the USS Lead Litigation involve the USS Lead Superfund Site in East Chicago, Indiana. The transactions that give rise to the injury were the release and disposal of hazardous substances in East Chicago, Indiana. While CERCLA establishes the United States’ right to secure response actions and costs at both the Midvale and USS Lead Sites, this right arises from completely separate underlying transactions and results in completely separate injuries: one in Utah and one in Indiana. The claims manifestly do not arise from “the same core of operative facts.” *Adams*, 742 F.3d at 736.

Mueller’s claim preclusion arguments and defenses rest on one overriding fallacy: that the relevant “transaction” for purposes of claim preclusion is the 1979 Asset Purchase

¹⁷ First *Moscato* Letter at Section I.B (the argument under the first branch is from the bottom of page 7 through the middle of page 8; the argument under the second branch is from the middle of page 8 through the middle of page 13).

Agreement and the 1980 UV Liquidating Trust Agreement.¹⁸ This is patently untrue: these agreements did not result in the injuries at either the USS Lead Site or the Midvale Site. Instead, the release and disposal of hazardous substances—at different times and different places—did.

Mueller’s position conflates an element of the United States’ theory of liability against one defendant (*i.e.*, that the UV Liquidating Trust succeeded to the liabilities of UV/USSRAM) with the *claims* that the United States asserted in its complaint in the Midvale Litigation (*i.e.*, that Sharon Steel, UV, and the UV Liquidating Trust were liable under CERCLA for response actions and costs at the Midvale Site). The two are not the same.

The logical extension of Mueller’s argument would lead to an absurdity. It would mean that any time the United States sued a company under CERCLA to secure response actions or recover response costs at one Superfund site, the United States would also have to sue that company for liability at every other Superfund Site in the country where the company might also have liability. That is not the law. Neither Mueller nor any party to the Midvale Litigation has yet been subject to a claim involving the releases and disposals of hazardous substances at the USS Lead Site.

The first requirement of any claim preclusion defense—identity of the claim—is not met here.

ii. Mueller Misapplies the Doctrine of “Claim Splitting”

Mueller misapplies the doctrine of claim splitting. Mueller asserts that the United States cannot identify Mueller as a successor to UV/USSRAM in the USS Lead Litigation because the United States could have, but did not, identify Mueller as a successor to UV/USSRAM in the Midvale Litigation.

Mueller is correct that the United States did not claim that Mueller was a successor to UV/USSRAM in the Midvale Litigation. We did not need to. We had a straightforward theory of Mueller’s liability: Mueller was the then-current owner and operator of the Midvale Sites. 42 U.S.C. § 9607(a)(1).

Claim splitting does not turn on whether arguments or liability theories could have been raised in a prior litigation. Rather, it turns on whether the “allegations in [two lawsuits] are essentially the same.” *Barr*, 796 F.3d at 840 (citing *Czarniecki v. City of Chicago*, 633 F.3d 545, 549 (7th Cir. 2011)) (brackets in original). If they are, the second suit is barred.

[A] plaintiff cannot evade preclusion by ‘identify[ing] a *slightly different cause of action* with one element different from those in the first, second, or third lawsuits between the same parties *arising from the same events*.’

Barr, 796 F.3d at 840 (emphasis added) (quoting *Czarniecki* 633 F.3d at 550).

¹⁸ See Exh. 6 at 9–10.

The causes of action in a lawsuit against Mueller involving the USS Lead are not “slightly different” from those in the Midvale Litigation. They are completely different. They do not “arise from the same events.” They arise from events (*i.e.*, hazardous substance releases) that occurred at different times in different locations.

The Seventh Circuit’s *Barr* case illustrates the proper application of “claim splitting.” In *Barr*, a dismissed tenure-track professor filed a first complaint against her employer alleging unlawful retaliation under Title VII of the Civil Rights Act. That complaint was dismissed with prejudice for want of prosecution. Prior to dismissal, the professor filed a second complaint for both retaliation under Title VII and age discrimination under the Age Discrimination in Employment Act of 1967. The Seventh Circuit affirmed dismissal of the second complaint because the professor’s second suit arose from the same events as the first suit and was just a slightly different cause of action. In this case, nothing analogous to the plaintiff’s filing of the second complaint in the *Barr* case would arise if the United States filed a complaint against Mueller for the USS Lead Site.

b. There is no Identity of Nor Privity between the UV CD Defendants and Mueller

It is undisputed that Mueller is “identical to” and/or “in privity with” *one* of the defendants in the Midvale Litigation, namely, Sharon Steel.¹⁹ However, Mueller’s identity and/or privity with Sharon Steel is irrelevant because Mueller does not seek to be the beneficiary of limited covenant not to sue in the Sharon Steel CD. Rather, Mueller seeks to be the beneficiary of the Broad Covenant Not to Sue in the UV CD. Mueller, however, is neither “identical to” nor “in privity with” the defendants to the UV CD, namely, UV, the UV Liquidating Trust, and the Trustees.²⁰

Mueller cannot and does not assert that it is “identical to” UV, the UV Liquidating Trust, or the Trustees (hereafter, the “UV CD Defendants”). Therefore, Mueller’s claim preclusion defense must rest on it being “in privity with” one or more of the UV CD Defendants.²¹

In order to be in privity with a litigant in a prior lawsuit, the current litigant must show “a sufficiently close identity of interests” with the prior litigant. *Tice v. Am. Airlines*, 162 F.3d 966, 971 (7th Cir. 1998). One of the key factors in determining if a “privity” relationship exists is if

¹⁹ A non-party to a prior lawsuit can raise a claim preclusion defense to a current lawsuit even if it was not a party to the prior action provided it can show that it has a privity relationship with a litigant in the prior lawsuit. *Nevada v. United States*, 463 U.S. 110, 129 (1983).

²⁰ Only one defendant signed the UV CD: the UV Liquidating Trust. However, UV, the UV Liquidating Trust, and the Trustees all were expressly identified in the covenants not to sue in the UV CD and were the intended beneficiaries. Therefore, for the purposes of the covenants not to sue, the “defendants” to the UV CD were UV, the UV Liquidating Trust, and the Trustees.

²¹ Mueller never plainly asserts that it was “in privity with” the UV CD Defendants in either its First or Second *Moscato* Letters. *See* Exhs. 6 and 9. However, the United States assumes that Mueller must be claiming to be in privity with one or more of the UV CD Defendants because that is an element of proof of the affirmative defense of claim preclusion.

the non-party to the prior lawsuit has a parallel interest with one of the original parties. *Id.* (citing Wright § 4457 (1998 Supp.) at 420).

Mueller has not provided any evidence or facts demonstrating that its interests and those of UV CD Defendants were “parallel.” Indeed, Mueller cannot. Mueller and the UV CD Defendants had diametrically opposed interests. They filed cross-claims against each other on the issue of liability for the Midvale Sites.²²

Mueller and the UV CD Parties also do not have “parallel” interests now. None of the UV CD Defendants are in existence any longer. They have no interests.

Mueller’s status as a successor to the liability of UV/USSRAM does not create a privity relationship between Mueller and UV.²³ That would be true only if Mueller were a successor by virtue of the “mere continuation” theory of successor liability. *Russell v. SunAmerica Sec. Inc.*, 962 F.2d 1169 (5th Cir. 1992).²⁴ While Mueller cites the *Russell* for the broad proposition that all successors are entitled to the benefit of covenants not to sue running to their predecessors, the *Russell* holding is much narrower:

[W]e hold that the relationship between [the predecessor] and the [successor] is close enough to justify the application of res judicata so as to bar a second suit based on the same cause of action as the first suit, particularly where, as here, ***the gravamen of the Plaintiffs’ second suit is that the defendant*** in that suit ***is a mere continuation*** of the defendant in the first suit.

Id. at 1176 (emphasis added).

In the USS Lead Litigation, the United States will not assert that Mueller is a mere continuation of UV/USSRAM. Quite the contrary, we will assert that Mueller is a successor to UV/USSRAM’s liability based on an express assumption of liability. The *Russell* holding is inapplicable. Mueller’s reliance on it is misplaced.

²² See 1991 Annual Report of UV Liquidating Trust at 8 (Exhibit 10).

²³ First *Moscato* Letter at 8.

²⁴ “Mere continuation” successor liability applies when there is a common identity of stock, directors, and stockholders and when the predecessor ceases to exist after the transaction is complete. *Travis v. Harris Corp.*, 565 F.2d 443, 447 (7th Cir. 1977); see also *North Shore Gas*, 152 F.3d at 654. These factors justify holding a successor liable because they show a continuity and uniformity of corporate control. David J. Marchitelf, *Liability of Successor Corporation for Injury or Damage Caused by Predecessor, Based on Mere Continuation or Continuity of Enterprise Exceptions to Nonliability*, 13 A.L.R. 355 (2006) (“Since many courts consider common control of the successor and predecessor to be a highly significant consideration in favor of liability under the mere continuation . . . exception, a factor common to virtually all tests applied by courts is whether there was a continuation of stockholders, directors, and officers between the two entities”). These factors also support establishing a privity relationship.

Mueller's reliance on the *Russell* case also ignores the well-established principle that privity between parties is fact-specific inquiry that turns on an analysis of each party's specific interests. The diametrically-opposed interests between Mueller and UV in the Midvale Litigation are critical facts that belie Mueller's claim to be in privity with UV.

c. **In the Midvale Litigation, Neither the UV CD nor the Sharon Steel CD was a Judgment on the Merits of Who Succeeded to the Liability of UV/USSRAM**

Mueller's claim splitting argument fails to satisfy the third requirement for claim preclusion: a final judgment on the merits. While it is undisputed that there were two final judgments on the merits in the Midvale Litigation (the UV CD and the Sharon Steel CD), these final judgments were judgments on the *claims* in the complaint; they were not final judgments on any issue of law or fact.

The allegations in the Midvale complaint did not include any references to who succeeded to the liabilities of UV/USSRAM.²⁵ Therefore, even if the Consent Decrees were final judgments on issues of fact or law pled in the complaint, the Consent Decrees did not resolve the issue of succession to the liability of UV/USSRAM. *See* caselaw cited in Note 12, *supra*.

Indeed, the plain language of both the UV and Sharon Steel CDs refutes Mueller's claim that the Consent Decrees served as final judgments on the merits of any issue of fact or law:

THEREFORE, *without any adjudication of any issue of law or fact* and upon the consent of the parties thereto, it is hereby ORDERED, ADJUDGED, and DECREED, as follows:

Exh. 7 at p. 8 (bold and italics added); Exh. 8 at p. 5 (bold and italics added). The UV CD further refutes Mueller's claim:

No previous ruling of this Court in the Actions on any issue of law or fact shall be deemed to be binding upon the parties hereto for any purpose in any other action or legal proceeding of any type or kind.

Exh. 7 at ¶ VI.I (bold and italics added). Similarly, nothing in the Sharon Steel CD addresses the question of successorship liability.

Mueller's claim splitting argument is really an "issue preclusion" argument intended to cause confusion.

²⁵ *See* Exhibit 11 (Complaint and Seconded Amended Complaint in Midvale Litigation).

2. Mueller's Issue Preclusion Defense to CERCLA Liability at the USS Lead Site is Without Merit²⁶

Mueller spends a significant amount of effort trolling the pleadings and transcripts of the Midvale Litigation to establish the following two propositions:

- (1) In the Midvale Litigation, the United States took the position orally and in writing that the UV Liquidating Trust was liable under CERCLA as a successor to UV/USSRAM;
- (2) By contrast, the United States' liability case against Mueller was based exclusively on Mueller's status as an owner/operator of the Midvale Sites; the United States never took the position that Mueller was liable as a successor to UV/USSRAM.

The United States concedes both of these points. Unfortunately, neither of them is legally significant for purposes of issue preclusion. Only if the Midvale court had held that Mueller *did not* succeed to the liabilities of UV/USSRAM would the United States now be precluded from asserting that Mueller did. The Midvale court, however, issued no such ruling.

a. Mueller's Succession to the Liability of UV/USSRAM was not "Actually Litigated and Resolved" in the Midvale Litigation

Issue preclusion applies to "an issue of fact or law actually litigated and resolved in a valid court determination essential to the prior judgment." *New Hampshire v. Maine*, 532 U.S. 742, 748–49 (2001). "[O]nce a court has decided an issue of fact or law necessary to its judgment, that decision may preclude relitigation of the issue in a suit on a different cause of action involving a party to the first case." *Allen v. McCurry*, 449 U.S. 90, 94 (1980); *Brown v. Felsen*, 442 U.S. 127, 139 n. 10 (1979) (issue preclusion only attaches to questions of fact or law "actually and necessarily decided in a prior suit"); *accord Montana v. United States*, 440 U.S. 147, 153 (1979) ("Under collateral estoppel, once an issue is actually and necessarily determined . . . that determination is conclusive in subsequent suits.").

Mueller's succession to the liability of UV/USSRAM was not "actually litigated and resolved" by the Midvale court. The issue was not "actually litigated" by the United States because we never claimed in the Midvale Litigation that Mueller succeeded to the liabilities of UV/USSRAM. And, while UV and Mueller cross-claimed against each other on the issue of who succeeded to UV/USSRAM's liabilities, those cross-claims were never "resolved." Mueller and UV settled the cross-claims without any decision. Thus, a decision on Mueller's succession to UV/USSRAM's liability was not "essential" to the resolution of the cross-claims.

²⁶ Mueller styles this defense as "collateral estoppel." First *Moscato* Letter at 13–15 (Argument I.C). We use the term "issue preclusion" instead. We believe it is a more descriptive formulation of the underlying concept. We understand, however, that "issue preclusion" and "collateral estoppel" represent the same defense.

Because the Midvale Court did not render any judgment—one way or the other—on Mueller’s succession to the liability of UV/USSRAM, issue preclusion does not bar the United States from asserting that Mueller is liable as a successor to UV/USSRAM now.

b. The Trust’s Succession to the Liability of UV/USSRAM was not “Actually Litigated and Resolved” in the Midvale Litigation

Recognizing that the Midvale court never held that Mueller *was not* a successor to UV/USSRAM, Mueller instead claims that the Midvale court held that the UV Liquidating Trust *was*. Mueller then reiterates its false assertion that because the UV Liquidating Trust was the successor, Mueller could not be.

We already have demonstrated that *both* Mueller and the UV Liquidating Trust *could be* and *were* the successors to UV/USSRAM. *See infra* at Section I.B. Therefore, Mueller’s contention that *either* Mueller *or* the UV Liquidating Trust was the successor—but not both—is wrong.

In any event, however, the Midvale court never “resolved” the issue of the Trust’s succession to UV/USSRAM’s liability. Such a decision was not “necessary”: the case was settled by agreement of the parties before the Midvale court had to decide the matter.

Mueller relies on one short passage of the transcript of an oral argument hearing to claim that the Midvale court held that the Trust was the successor to UV/USSRAM. An unedited version of that transcript—unlike Mueller’s heavily edited abstract—belies Mueller’s claim.

At oral argument, the United States asked Judge Jenkins about the Trust’s succession to UV/USSRAM’s liability:

Gov’t: Excuse me, Your Honor. You have spoken on the question of successor liability, but your comments were directed to ARCO. I know Your Honor has, on two occasions before, considered the issue of successor liability with respect to the Trust.

Judge: Yeah.

Gov’t: Did your honor want to express a conclusion today in that regard?²⁷

Judge Jenkins demurred:

Judge: Well, I’ve expressed my Conclusions in reference to the Trust, on prior occasions; ***and I have indicated that I am willing to discuss that.*** There’s

²⁷ *United States v. Sharon Steel, et al.*, Transcript of Oral Argument on Motions for Summary Judgment, Civ. No. 86-C-924J, 89-C-136J, at 170 (Aug. 14, 1990) (Exhibit 12) (“Oral Argument Transcript”) (emphasis added).

an effort to revisit that the third time; *but I have indicated that we will revisit that at Pretrial if at all.*

Generally I'd indicated, that in times past, that the shareholders' interests are residual interests. They get paid after all creditors get paid. Ordinarily, if we have assets that are transmuted into money, the money rides with the burden. It's not free money until we make sure that the creditors are taken care of.

And that's essentially what we talked about before; *but, and I didn't really feel constrained to deal with that again today, but I did promise people I would deal with that in context of Pretrial, and am willing—and am willing—to do that.*²⁸

Taken as a whole, Judge Jenkins clearly did not make any determination about the Trust's succession to the liability of UV/USSRAM. Not once, but three times in that single passage, the Court reserved judgment on the issue of the Trust's liability for a later date:

- (1) "And I have indicated that I am willing to discuss that."
- (2) "But I have indicated that we will revisit that at Pretrial if at all"
- (3) "I didn't feel constrained to deal with that again today, but I did promise people I would deal with that in the context of the Pretrial, and am willing—and am willing—to do that."

In the First *Moscato* Letter, Mueller selectively edits this passage of the transcript—omitting key sentences and adding a phrase that is not there—to give the Judge's words an air of finality that clearly does not exist (Mueller's addition is in bold and italics):

Ben Fisherow specifically requested a ruling as to UV Trust's successor liability. He stated 'I know your honor has, on two occasions before, considered the issue of successor liability with respect to the Trust . . . Did your honor want to express a conclusion today in that regard?' Chief Judge Jenkins responded that he had 'expressed [his] Conclusions in reference to the Trust on prior occasions' *and that the UV Trust succeeded to the liabilities of UV Industries because* '[o]rdinarily, if we have assets that are transmuted into money, the money rides with the burden. It's not free money until we make sure that the creditors are taken care of.' He concluded: 'There's an effort to revisit that the third time; but I have indicated that we will revisit that at Pretrial, if at all.'²⁹

²⁸ *Id.* at 170–71 (emphasis added).

²⁹ Exh. 6 at 14 (internal citations to the Oral Argument Transcript omitted).

Mueller's claim that Judge Jenkins found that the Trust succeeded to UV/USSRAM's liability is based on little more than wishful thinking. Judge Jenkins' actual words indicate nothing more than that, in ordinary circumstances, money from a liquidation is not distributed to shareholders until creditors are paid. Judge Jenkins did not make any statements regarding the Trust's position vis-à-vis UV/USSRAM's liability or whether that was an ordinary situation.

Even if Judge Jenkins indirectly opined on the Trust's succession to UV/USSRAM's liability, incidental remarks made by a judge do not give rise to issue preclusion. *Carter v. AMC, LLC*, 645 F.3d 849, 842 (7th Cir. 2011); *American Prairie Constr. Co. v. Hoich*, 594 F.3d 1015, 1022 (8th Cir. 2010); *Gentry v. Duckworth*, 65 F.3d 555, 560–61 (7th Cir. 1995); *United States v. Confederate Acres Sanitary Sewage and Drainage System, Inc.*, 935 F.2d 796, 799 (6th Cir. 1991).

Moreover, even if Judge Jenkins' statements were clear and definitive—which they were not—those statements would not be binding because the Midvale Litigation was resolved by a settlement prior to trial. In such circumstances, there is no “judgment” and certainly no “valid court determination essential to the judgment.” *Schmieder v. Hall*, 421 F. Supp. 1208, 1216 n.10 (S.D. N.Y. 1976) (“Judge Holtzoff, who presided over the suit. . . in fact indicated during that proceeding that he felt [the claimant] had no title in the property, and simply was a ‘straw’ Obviously, since the action in that case was settled by stipulation, and never formally tried by Judge Holtzoff, his remarks are not binding”) (citation omitted), *judgment aff'd* 545 F.2d 768 (2nd Cir. 1976); *see also Alexander v. National Fire Ins. of Hartford*, 454 F.3d 214, 224–25 (3rd Cir. 2006) (explaining that where a judge expressly declined to issue a definitive ruling on a matter . . . “there was no final definitive ruling on the subject that could have barred later relitigation”).

Other evidence clearly demonstrates that Judge Jenkins never issued a ruling on the Trust's succession to UV/USSRAM's liabilities:

- In the Midvale Litigation, the UV Liquidating Trust filed a cross-claim against Mueller alleging, *inter alia*, that pursuant to the 1979 Asset Purchase and Liability Assumption Agreements, Mueller was liable as a successor to UV/USSRAM for the CERCLA cleanup of the Midvale Sites.³⁰ No decision on this issue was ever rendered by the Midvale Court³¹ because the parties subsequently settled their claims instead.³² If a decision on Mueller's or the Trust's successor liability had

³⁰ *See* Exh. 10 at 9–10 (1991) (“The Liquidating Trust asked the District Court to declare that, pursuant to the terms of an Agreement for Purchase of Assets and a related Instrument of Assumption of Liabilities, dated November 26, 1979, Sharon had assumed all the liabilities of UV . . . and that Sharon was liable to the Liquidating Trust for the full amount of any costs, expenses, damages, or other expenditures incurred by the Liquidating Trust in connection with the claims of the United States relating to the Tailings Site Sharon's cross-claims against the Liquidating Trust original sought . . . contribution or indemnification for the cost of any relief awarded to the United States with respect to CERCLA and RCRA claims against Sharon”).

³¹ *Id.* at 10.

³² *Id.* at 13.

in fact been issued, it seems highly unlikely that the Trust would have claimed otherwise in an annual report to its unit holders.

- On October 15, 1990—some two months *after* the hearing on the Motions for Summary Judgment—Mueller entered into a separate settlement agreement with the UV Liquidating Trust to settle all pending claims between the Trust and Mueller, “including the claims filed by the Liquidating Trust in the Sharon Steel Bankruptcy Proceeding and the cross-claims pending by each against the other in the Midvale Tailings Site Superfund Litigation.”³³ Pursuant to this agreement, Mueller agreed to pay the UV Liquidating Trust \$7.5 million.³⁴ If Judge Jenkins had issued a judgment finding the Trust liable as the successor to UV/USSRAM, it seems implausible that Mueller would have paid the Trust, instead of the other way around.

Given the totality of these circumstances, Mueller’s assertion that Judge Jenkins issued a decision finding that the Trust succeeded to UV/USSRAM’s liabilities is wrong.

c. The Plain Language of the UV CD and Sharon Steel CD Refutes Mueller’s Claim that the Court Issued a Judgment Finding that the Trust Was the Successor to UV/USSRAM

We previously identified the express language of the UV and Sharon Steel Consent Decrees which refutes Mueller’s claim that the Midvale court held that the Trust succeeded to the liability of UV/USSRAM. *See* Section II.B.1.c, *supra* (Consent Decrees were issued “without any adjudication of any issue of law or fact”); (“No previous ruling of this Court . . . on any issue of law or fact shall be deemed to be binding . . . for any purpose in any other action or legal proceeding”).

Mueller argues, however, that statements made by Judge Jenkins at a hearing on the entry of the Consent Decrees nullifies the express language of the Court’s orders embodied in the two Consent Decrees.³⁵ We quote from Mueller’s First *Moscato* Letter because copies of the transcript of the hearing were not included in the attachments to the First or Second *Moscato* Letters:

Judge Jenkins clarified that the language in the Consent Decree that says ‘No previous Ruling of this Court in the Actions on any issue of Law or fact shall be deemed to be binding upon the Parties hereto for any purpose in any other Action or Legal Proceeding of any type or kind’ does not ‘contemplate that The Court in any way has withdrawn any Finding or any Opinion or any Order,

³³ *Id.*

³⁴ *Id.*

³⁵ First *Moscato* Letter at 14.

because I don't intend to do that . . . **They exist and they're for whatever value they have.**³⁶

Mueller's quotation leaves out part of Judge Jenkins' actual statement. In light of Mueller's selective editing of the summary judgment transcript, we would need to review the actual transcript of this hearing before agreeing that this quotation represents an accurate view of what Judge Jenkins said.

However, John Moscato, counsel for the United States in the Eureka Mills matter, replied as follows to Mueller's assertion:

In the November 13, 1990 proceedings regarding the motions to enter three pending decrees, the Court says that "one area that bothers me a little is the section of each [UV and ARC] decree that says, 'No previous ruling of this Court in the Actions on any issue of law or fact shall be deemed to be binding upon the parties hereto for any purpose in any other action or legal proceeding of any type or kind.'" After a brief explanation by Ben Fisherow, DOJ, that the language is intended to preserve the Trust's corporate defense, the Court notes that the clause applies to use in proceedings other than the present case and does not presume to require the Court to withdraw its rulings in the Midvale Litigation. See, Tr. 27 at l. 3-5. In light of that clarification, the Court then merely replies, 'Well, whatever We Found, however We've ruled, is a historic fact.' The Court then enters the decrees without caveat and without striking the above-discussed language. This supports one and only one conclusion – that while the Court would not withdraw its rulings, neither would the Court not bar the United States and UV and the Trust from contractually agreeing that any ruling in [the] Midvale Litigation would not bind either party in the future.

Letter dated April 19, 2010, from J. Moscato to D. Elliott at 10 (Exh. 13) (citations in footnotes to transcript are omitted) (emphasis in original).³⁷

In any event, Judge Jenkins' statement does not support Mueller's position. Judge Jenkins' statement that his prior determinations "exist and they're for whatever value they have" makes the obvious explicit: the binding effect of his prior rulings should be governed by existing *res judicata* principles. We do not disagree. However, Judge Jenkins never rendered any decision on the successorship to UV/USSRAM's liability.

³⁶ *Id.* (emphasis in original).

³⁷ As of the date of this letter, we have been unable to locate a copy of the transcript.

C. Mueller’s Judicial Estoppel Defense to CERCLA Liability at the USS Lead Site is Without Merit³⁸

Mueller claims that because the United States took the position in the Midvale Litigation that the Trust succeeded to the liabilities of UV/USSRAM, the United States is judicially estopped in the USS Lead Litigation from claiming that Mueller succeeded to those liabilities. This claim is without merit.

In the leading case on judicial estoppel, the Supreme Court laid out three requirements for judicial estoppel:

- (1) “[A] party’s later position must be ‘clearly inconsistent’ with its earlier position.”³⁹
- (2) The party must have “succeeded in persuading a court to accept that party’s earlier position.”⁴⁰
- (3) “[T]he party seeking to assert an inconsistent position would derive an unfair advantage or impose an unfair detriment on the opposing party if not estopped.”⁴¹

Mueller cannot satisfy any of these three requirements.

1. The United States’ Current Position in the USS Lead Litigation is Not “Clearly Inconsistent” With our Position in the Midvale Litigation

There is *no* inconsistency—let alone a “*clear*” inconsistency—between the United States’ position in the Midvale Litigation that the Trust succeeded to the liability of UV/USSRAM and our position in the USS Lead Litigation that Mueller did too. *Both* the Trust and Mueller can and do hold a common shared CERCLA liability as successors to UV/USSRAM. *See supra* Section I.B and Exh. 5 (Joint Brief in *NCR* case).

In order for judicial estoppel to apply, the United States would have had to assert that Mueller was *not* a successor to UV/USSRAM. That is the only position that is “clearly inconsistent” with our assertion now that Mueller *is* a successor to UV/USSRAM.

In fact, the United States never took *any* position in the Midvale Litigation about whether Mueller succeeded to the liabilities of UV/USSRAM. We did not have to. Mueller was directly liable as an owner/operator. Neither the United States nor any other plaintiff is required to raise two liability theories against a defendant when one will suffice. Silence on an issue is not “clearly inconsistent” with a later position on an issue.

³⁸ Section II.C of this letter address Mueller’s arguments at Section I.D of the First *Moscato* Letter at 15–17.

³⁹ *New Hampshire*, 532 U.S. at 750.

⁴⁰ *Id.*

⁴¹ *Id.*

2. The United States Never Succeeded in Persuading the Midvale Court that Mueller Succeeded to UV/USSRAM's CERCLA Liabilities

The United States clearly never succeeded in persuading the Midvale Court that Mueller was *not* the successor to UV/USSRAM: we never took that position in the Midvale Litigation in the first place.

Moreover, the United States never succeeded in persuading the Midvale court that the Trust succeeded to UV/USSRAM's liability either. *See supra* Section II.B.2.b. Nevertheless, judicial estoppel would not apply even if the Midvale court had determined that the Trust succeeded to UV/USSRAM's liability. That determination is not inconsistent with Mueller's common, shared liability.

3. The United States Will Not Derive an Unfair Advantage over Mueller or Impose an Unfair Detriment on Mueller by Asserting that Mueller Succeeded to the Liability of UV/USSRAM

a. The United States Will Not Derive an Unfair Advantage

Mueller's judicial estoppel argument ignores the doctrine's foundation in equity. The United States will not obtain an unfair advantage over Mueller by advancing a CERCLA claim against it for liabilities at the USS Lead Site. The United States—which had no liability at the Midvale Site—was left holding more than \$53 million in unreimbursed costs at Midvale, approximately 46% of all costs.⁴² Mueller, by contrast, paid only \$22 million, approximately 19%.

In addition, the same bankruptcy proceeding that created Mueller as the successor to Sharon Steel also created Mueller's subsidiary, MRRC. MRRC was radically underfunded for the purpose for which it was created: to fund CERCLA liabilities around the country.⁴³ MRRC now claims that it cannot contribute any money to the cleanup of the USS Lead Site, a cleanup that already has cost more than \$40 million and will substantially increase by the time the cleanup is complete.

This is not a case where the United States seeks to recover twice for the same injury. *Cf. American Transp. Group, LLC v. California Cartage Co., LLC*, 168 F. Supp. 3d 1074, 1079–80 (N.D. Ill. 2016) (holding that it is unfair for a party to secure judgments against multiple defendants for the same injury without proving any kind of joint or derivative liability). Mueller has not yet paid any money to the United States for our CERCLA claims at the USS Lead Site.

⁴² Total costs at the Midvale Sites ultimately exceeded \$114 million. Mueller paid \$22 million; ARCO paid \$21 million; and the Trust paid a little more than \$18 million.

⁴³ We recognize that a Bankruptcy Court approved a Plan of Reorganization that radically underfunded MRRC. That may or may not have legal consequences. It does not speak to equity at all.

In fact, it is Mueller that would derive an unfair advantage over taxpayers and other potentially-responsible parties at the USS Lead Site if Mueller does not contribute to the cleanup. Other companies already have contributed more than \$23 million (excluding their costs of transportation and disposal) for the cleanup of the USS Lead Site. The United States currently has more than \$20 million in outstanding unreimbursed costs and more continue to accrue. All the while, Mueller has contributed nothing to the soil remediation and interior cleanups in residential areas of the Site.

In these circumstances, Mueller's claim that it would be unfairly burdened by being found liable for UV/USSRAM's CERCLA liability at the USS Lead Site rings hollow.

b. Mueller did not Detrimentially Rely on an Alleged Decision in the Midvale Litigation

Mueller did not detrimentally rely on the Midvale court's alleged decision that the Trust was the exclusive successor to UV/USSRAM's CERCLA liability. First, the Midvale court never issued such decision, making detrimental reliance impossible.

Second, the summary judgment hearing shows that the United States and Mueller reached a settlement of the United States' claims *before* the Court reached its alleged decision regarding the Trust. Mueller's counsel states on page 142 of the transcript:

The United States and Sharon Steel Corporation [*i.e.*, Mueller] have reached a settlement, subject to your Honor's approval, of course, on both the Mill site Case and the Smelter Case; and we are also currently working very hard on settling our differences with UV.⁴⁴

By contrast, the Court's alleged decision on the Trust's succession to UV/USSRAM's liability does not occur until pages 170 and 171, *after* Mueller's counsel had announced a settlement with the United States. Exh. 12 at 170-71. Therefore, it is impossible for Mueller's settlement with the United States to have been made in reliance on the court's determination that the Trust was the exclusive successor to UV/USSRAM's liability.

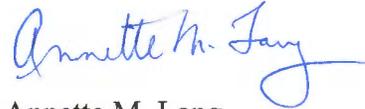
Third, Mueller entered into a separate settlement with the Trust requiring Mueller to pay the Trust \$7.5 million, which amounts to over 40% of the Trust's \$18 million payment to the United States. This transaction demonstrates that the Trust's liability as a successor to UV/USSRAM was not decided in the Midvale Litigation. Accordingly, Mueller's assertion that it was misled, justifying the application of judicial estoppel, is baseless.

⁴⁴ Exh. 12 at 142.

III. CONCLUSION

We hope that Mueller will begin to work with EPA and to engage with the existing PRPs to share the costs incurred and to be incurred to clean up the longstanding lead and arsenic contamination in the residential areas. We will talk soon.

Sincerely,



Annette M. Lang
Senior Counsel
Sparsh S. Khandeshi
Trial Attorney

Att.

cc: Marcy Toney
Steve Kaiser
Leo Chingcuanco

APPENDIX J

**TO
Z2 SOIL UAO**

**Letter from E. Donald Elliott, Partner, Willkie Farr
& Gallagher LLP, to John N. Moscato, Senior
Counsel, Dep't of Justice (Feb. 18, 2010)**

On the Record - Not a Privileged Settlement Communication

February 18, 2010

Via Electronic and U.S. Mail

Mr. John N. Moscato
Senior Counsel, Natural Resources Division
Environmental Enforcement Section
U.S. Department of Justice
1961 Stout Street, 8th Floor
Denver, CO 80294

Ms. Andrea Madigan and Steven B. Moores
Enforcement Attorneys
Legal Enforcement Program
U.S. EPA Region 8
1595 Wynkoop Street
Denver, CO 80202

Dear John, Andrea and Steven:

Re: Eureka Mills Superfund Site

We do appreciate the open communications that we have had to date regarding a possible settlement, including Steven's letter of October 16, 2009 explaining EPA's legal theory, and the background materials re the production allocations sent with Andrea's letter of February 1, 2010, and our call yesterday. In that same spirit of open communication, we note that over 90% of the production volume that you've "allocated" to Mueller relates to some but not other mines located on the other side of the mountain that couldn't possibly be affecting the clean-up, or to sites that were not even owned or operated by Mueller's alleged predecessor, UV Industries. We really do feel that any claims against Mueller at this site based on anything other than the properties that it actually owned would be quite a stretch.

But as discussed by telephone, before plunging into a more detailed discussion of cost allocation, we feel that it is necessary to address certain threshold legal issues that we believe preclude any right to recovery by the United States for its response costs at the Eureka, Utah site against Mueller on account

Mr. John N. Moscato
Ms. Andrea Madigan
Mr. Steven B. Moores
Page 2 of 22

of the past disposal activities of, or assumptions of liabilities for disposal, by UV Industries as opposed to Mueller itself.¹

Mueller maintains that the government's CERCLA cost recovery claims against Sharon Steel/Mueller² at Eureka were already definitively resolved in *United States v. Sharon Steel, UV Industries, Inc, UV Industries, Inc., Liquidating Trust and Atlantic Richfield Company, Inc.*, (D. Utah, C.A. No. 86-C-924, filed Oct 10, 1986) (hereafter, "*U.S. v. Sharon, UV Industries, and the UV Trust*"). This case was originally occasioned by the government's cost recovery claims in connection with the Midvale, Utah Superfund site but it was ultimately resolved via a global settlement of all future CERCLA claims against both UV Industries and the UV Trust, which also had the effect of releasing Sharon/Mueller from any possible future claims at other sites predicated on the theory that Sharon/Mueller was the successor to the CERCLA obligations of UV Industries. Accordingly, the government's possible claims against Sharon/Mueller at Eureka that we have begun discussing with you were resolved twenty years ago in *U.S. v. Sharon, UV Industries, and the UV Trust*. Consequently, in parallel with further settlement discussions, we want to explore with you the proper procedure for getting closure on our position that the government is precluded from seeking to hold Sharon/Mueller liable for the past disposal practices of UV Industries, from which Sharon/Mueller bought certain assets and assumed certain liabilities in 1979.³

Your October 16, 2009 letter stating the government's preliminary legal position at Eureka, as well as our meeting in Denver on November 12, 2009, proceeded as if the government were writing on a clean slate to address for the first time the legal issue of what entity was the successor to the CERCLA liabilities of UV Industries. In fact, however, as explained below, that issue was already definitively resolved in litigation between the same parties in 1986 to 1990 in *U.S. v. Sharon, UV Industries, and the UV Trust*. As noted by both the government and the Court in that case, the proceeds from the sale to Sharon/Mueller went into the UV Trust, which in turn used them in part to pay the settlement for all of UV Industries' CERCLA liabilities in the 1986-1990 case. Your current claims are literally an attempt to recover twice from Sharon/Mueller for the same liabilities of UV Industries for which Sharon/Mueller already paid in 1990 through the conduit of the UV Trust.

The purpose of this letter is to summarize why the government's cost-recovery claims at Eureka (as well as any other CERCLA or RCRA sites around the country) against Sharon/Mueller for the past practices of UV Industries are barred as a matter of law. In addition to its strong contractual defense that we have already discussed with you that Sharon/Mueller could not have assumed the CERCLA

¹ As indicated in my letter of April 6, 2009 to Mike Rudy and Steven Moores responding to your third information request, and reiterated yesterday and during our meeting in Denver on November 12, 2009, Mueller is amenable to considering making a settlement payment attributable to any disposal that may have occurred during its period of actual ownership of the site, although as noted in the same letter, we are aware of no such disposal. See CERCLA §107(a)(2)(former owner/operator is only liable for disposal that occurred during its period of ownership).

² In 1991, Sharon Steel, which was a party to *U.S. v. Sharon, UV Industries, and the UV Trust*, merged into its wholly-owned subsidiary, Mueller Industries, Inc., with Mueller being the surviving corporation in the merger. Thus, Mueller succeeded to all of the rights of Sharon Steel, and for convenience we refer to them as Sharon/Mueller.

³ Agreement for Purchase of Assets between Sharon Steel Corp. and UV Industries, Inc., Nov. 26, 1979.

Mr. John N. Moscato
Ms. Andrea Madigan
Mr. Steven B. Moores
Page 3 of 22

liabilities of UV Industries in 1979 because CERCLA did not yet exist,⁴ Mueller believes that four separate but related preclusion doctrines undeniably bar the government from coming back twenty years later for a “second bite at the apple” to re-litigate the issue of whether Sharon/Mueller or the UV Liquidating Trust is the legal successor to UV Industries for purposes of cost-recovery actions under CERCLA. Those legal doctrines of preclusion based on the 1986-1990 litigation in *U.S. v. Sharon, UV Industries, and the UV Trust* are (1) novation and release, (2) *res judicata*, (3) collateral estoppel, and (4) judicial estoppel. Each of them individually is sufficient to bar the government’s claims, but collectively, they are over-whelming and simply cannot continue to be ignored.

In addition to the legalities, as a policy matter, the United States, the Department of Justice and EPA should voluntarily abide by their prior agreements to a global settlement of all the CERCLA liabilities of UV Industries, which was reached in good faith in *U.S. v. Sharon, UV Industries, and the UV Trust*. Sharon/Mueller should not be threatened with the additional expense of re-litigating issues correctly decided and settled twenty years ago.⁵ Therefore, we respectfully request that you review the history with Main Justice and drop the CERCLA claims against Sharon/Mueller at Eureka voluntarily in light of the information about the past history of the UV successorship issue that we are now bringing to your attention in this letter and the accompanying documents.

If you are unwilling to drop the claims at Eureka voluntarily, then we would like to discuss with you the best method for getting a decision from a third party on the threshold legal issue whether a claim by the government that Sharon/Mueller is liable for past disposal by UV Industries is barred. At the end of this letter, we propose several possible procedural routes that we might agree on for getting a final resolution of these threshold legal issues. Again, however, we sincerely hope that it will not be necessary for either side to expend further resources re-litigating issues that were correctly decided and laid to rest twenty years ago after a four year period of discovery and litigation.

As we discussed when we met in Denver on November 12, 2009, this is a larger issue for our client than merely the costs at the Eureka site and therefore we are recommending that our client should work with you to find a way to obtain a clear resolution of this issue once and for all in this matter. We hope that this can be resolved by an agreement with you and Main Justice that the claims against UV

⁴ We note that the government made a similar argument to avoid the statute of limitations in *U.S. v. Sharon, UV Industries, and the UV Trust*:

There is no question in this case that the cause of action of the United States under CERCLA did not accrue until after UV filed its article of dissolution with the Maine Secretary of State [on March 25, 1980]. Although the risk to public health and the injury to the environment at the Midvale Site occurred as soon as hazardous substances were released, the United States’ cause of action under CERCLA obviously did not arise until after the date of enactment of the statute in December 1980.

Plaintiff United States of America’s Memorandum of Law in Opposition to Motion of Defendant UV Industries, Inc. Liquidating Trust to Dismiss the Complaint as to UV Industries, Inc. at 27, *U.S. v. Sharon, UV Industries, and the UV Trust*, C.A. No. 86-C-924 (D. Utah Mar. 9, 1987) (emphasis added).

⁵ See generally *Summers v. Earth Island Institute*, 555 U.S. ___, 129 S. Ct. 1142 (2009) (a party lacks standing to sue on issue that it previously settled).

Industries and its successor for its past disposal practices were finally resolved by the global settlement of all such claims of the United States in *U.S. v. Sharon, UV Industries, and the UV Trust*. However, if we are not able to get a voluntary agreement on that, then we would like to at least agree with you on some other form of agreed dispute resolution or prompt, targeted judicial decision.

I. The U.S./EPA is Legally Precluded from Claiming Sharon/Mueller is the Successor to the CERCLA Liabilities of UV Industries.

A. The U.S. Released its Future Claims for Past Disposal by UV Industries, including those at Eureka, in the 1990 Case. The doctrine of *novation*, or settlement and release, precludes the government's cost-recovery claims at Eureka. In the 1990 *U.S. v. Sharon, UV Industries, and the UV Trust* settlement, the government specifically released UV Industries, Sharon/Mueller's alleged predecessor, as well as the actual legal successor to the CERCLA liabilities of UV Industries, the UV Trust, not only from CERCLA-related claims at Midvale but also from all other future sites, including the Eureka site.⁶ This release was extremely broad, covering any future CERCLA claims at any site nationwide. While the agreement recited that the U.S. was presently unaware of any such claims at other sites, as part of the bargain for a global settlement, the U.S. explicitly assumed the risk that such claims might arise in the future, as they apparently now have at Eureka. Thus, even assuming *arguendo* that the government were correct in its creative new contractual arguments that Mueller/Sharon is the successor by contract to the CERCLA liabilities of UV Industries (which of course we controvert on contractual grounds), these claims were long-ago released by the government and cannot now be brought against Mueller.

"There is a significant body of law holding that successor liability does not attach if the predecessor's liability has been discharged or extinguished."⁷ As a matter of law, a release of a predecessor also releases its alleged successor. The successor company and the predecessor company are by law considered the same entity for these purposes.⁸ Many courts have held that the liability of the

⁶ UV Trust Partial Consent Decree at 20, *U.S. v. Sharon, UV Industries, and the UV Trust*, C.A. No. 86-C-924 (D. Utah. Sept. 17, 1990) ("By virtue of the payment of the amounts identified in . . . this Decree, the Trust and UV shall have finally and completely resolved all alleged liabilities of the Trust and UV to the United States for the matters covered by the Covenant Not to Sue in Section VII A. [regarding Superfund liability at Midvale and Superfund liability at North Dartmouth, Massachusetts] and are hereby released therefrom."). The government also explicitly took on the risk of any unknown liability in providing a global release. *See Id.* at 22-23 ("Beyond the matters addressed [in Section VII A.], the United States is unaware of any other claims against UV or the Trust which it now or in the future may assert on behalf of the Environmental Protection Agency pursuant to [the] Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. § 9601 *et seq.* Accordingly, to allow for the orderly liquidation and termination of the Trust in accordance with the Consent Decree, the United States agrees not to assert any such claims in the future on behalf of the Environmental Protection Agency . . . or to otherwise object to or oppose the distribution of assets remaining in the Trust to the unitholders thereof") (emphasis added).

⁷ *Robbins v. Physicians for Womens's Health, Inc.*, No. CV065002633, 2009 WL 5303887 *4 (Conn. Super. Ct. Dec. 7, 2009).

⁸ Unless provided otherwise, a "resulting corporation succeeds to the powers, privileges, and property of the constituents or merged corporation." 19 AM. JUR. 2D § 2254 (citing *State of Tennessee v. Whitworth*, 117 U.S. 139 (1886)). Further, "all

successor is derivative. For example, the Seventh Circuit has stated “[w]hen a buyer of a business is liable as a successor for the torts of the seller, it is automatically liable for all the predecessor's torts. Its liability is not personal but vicarious.”⁹ As a result, where the predecessor has been released from a particular liability, its successor cannot be held responsible for that liability even if it was not specifically named in the release.¹⁰ Thus, the release of UV Industries in *U.S. v. Sharon, UV Industries, and the UV Trust* also releases any and all alleged successors of UV Industries from claims relating to the released liabilities.

The principle that a full release of a predecessor also releases an alleged successor from having to pay for the same liabilities a second time has rarely been litigated. However, one case directly on point is *Russell v. SunAmerica Securities, Inc.*¹¹ There, the plaintiff had executed a release in prior litigation against SunAmerica’s predecessor, Southmark Financial Services, Inc. SunAmerica later purchased the assets of Southmark. The plaintiff then attempted to bring a second lawsuit against SunAmerica, alleging that it was the successor to the liabilities of Southmark. The court granted summary judgment. The court first concluded that any liability would be derivative in nature, writing:

Reason dictates that in an action such as this, where liability is sought to be imposed against a successor corporation for the torts of its predecessor, the successor’s liability, if any, derives exclusively from and is coterminous with the liability to which the predecessor could have been subjected. Thus, SunAmerica can have no greater liability to plaintiffs than did Southmark.¹²

The court relied upon well-established doctrine in concluding that where the liability is derivative, the release of the primarily liable party also covers the derivatively liable party, even “despite an attempted reservation of rights against the person secondarily liable.”¹³ Thus, because SunAmerica could not have liability beyond that which Southmark had, and Southmark’s liability had been discharged by the release, the court concluded that the plaintiff could not maintain a cause of action against SunAmerica.¹⁴

defenses which were open to the constituent company are likewise available to the consolidated corporation.” 19 Am. Jur. 2d § 2256 (citing *Southern Steel Co. v. Hopkins*, 157 Ala. 175 (1908)).

⁹ *Clark Equipment Co. v. Dial Corp.*, 25 F.3d 1384 (7th Cir. 1994); see also *Archer Daniels Midland Company v. Brunswick County*, 129 Fed. Appx. 16, 25 (4th Cir. 2005) (“A contractual successor stands in its predecessor's shoes for both rights and responsibilities.”).

¹⁰ See *Russell v. SunAmerica Securities, Inc.*, 1991 WL 352563 (S.D. Miss. 1991), *affirmed on other grounds by Russell v. SunAmerica Securities*, 962 F.2d 1169 (5th Cir. 1992).

¹¹ 962 F.2d 1169 (5th Cir. 1992), *affirmed on narrower but applicable grounds at Russell v. SunAmerica Securities, Inc.*, 962 F.2d 1169 (5th Cir. 1992), discussed in greater detail below.

¹² *Id.* at *2.

¹³ *Id.* (quoting 76 C.J.S. Release § 50b (1976). A more recent edition of C.J.S. continues to include similar language regarding the effect of a release on a derivatively liable party at 76 C.J.S. § 63 (2007).

¹⁴ *Id.* at *2.

These legal principles are fully applicable to CERCLA liability. *United States v. Atlantic Richfield Company* provides a clear example of a court treating a predecessor and a successor as the same entity when analyzing whether or not a party was previously released from CERCLA liability.¹⁵ Thus, even if the government were able to assert¹⁶ and prevail on its newly-minted legal theory that Mueller, not the UV Trust, is the successor to the CERCLA liabilities of UV Industries, Mueller still could not be held liable for the alleged environmental liabilities of UV Industries at Eureka because those claims were all released in 1990 in settlement of *U.S. v. Sharon, UV Industries, and the UV Trust*.

That result is also dictated by the specific contractual language in this case. Under the government's new contractual theory, in 1979, Mueller/Sharon allegedly assumed the CERCLA "liabilities" of UV Industries "as of the [1979] Closing Date," or the 1981 Quit Claim deed, but such "liabilities" did not arise at Eureka until 2000 when the government began spending response costs. But by then, any CERCLA "liabilities" of UV Industries relating to Eureka and all other sites were already explicitly discharged in exchange for the \$11 million payment from the UV Trust as the successor to UV Industries in *U.S. v. Sharon, UV Industries, and the UV Trust*.¹⁷ Even the government is not entitled to

¹⁵ No. CV-89-39-BU-PGH, 1998 U.S. Dist. Lexis 23558 (D. Mont. Oct. 7, 1998). The court framed the issue as whether "it was the intent of the United States to release ARCO, as successor, from all liability arising from Anaconda Co.'s smelting operations." *Id.* at *16. Although it concluded that there was not a viable release, it ended its opinion with the quote "The settlement agreement [between the government and Anaconda Co.] was supposed to end the interaction between ARCO and the government once and for all." *Id.* at *42. These quotes indicate that the court viewed the successor and predecessor as the same entity for purposes of the release.

¹⁶ Note that we do not concede that the government has standing to enforce or advance its own interpretation of the 1979 Agreement. To the contrary, the government is precluded on independent grounds from asserting that Sharon/Mueller is liable by private contract for the CERCLA liabilities of UV Industries. This is because under the language of CERCLA, a private agreement is not effective to transfer CERCLA liability from one company to another, but is only an indemnity that is binding "between the parties." 42 U.S.C. Sec. 9607(e)(1) ("No Indemnification, hold harmless, or similar agreement or conveyance shall be effective to transfer from the owner or operator of any . . . facility or from any person who may be liable for a release or threat of release . . . to any other person . . ."). Courts interpret Section 107(e) of CERCLA to mean "agreements to indemnify or hold harmless are enforceable *between the parties* but not against the government." *Smith Land & Improvement Corp. v. Celotex Corp.*, 851 F.2d 86, 89 (3d Cir. 1988), *cert. denied*, 488 U.S. 1029 (1989) (*emphasis added*). Because the government is not a party to or third party beneficiary of the 1979 Agreement, it has no standing to sue to enforce its interpretation of the terms of that indemnity agreement, which could only be enforced by one of the parties to it. *AT&T Mobility v. National Ass'n for Stock Car Auto Racing, Inc.*, 494 F.3d 1356 (11th Cir. 2007) (holding that where a third party is neither a party to the contract nor an intended third party beneficiary of the contract, it lacks standing to sue on the contract because it cannot establish that it has suffered a legally cognizable injury in fact). Furthermore, the government cannot argue that Sharon/Mueller is liable for the CERCLA liabilities of UV Industries based solely on the 1979 Agreement, because this basis for liability does not fall within any of the four categories of liability set forth in the statute. *See* 42 U.S.C. § 9607(a)(1)-(4). As the Supreme Court of the United States held in *Burlington Northern and Santa Fe Railway Company v. United States*, CERCLA liability "may not extend beyond the limits of the statute itself." 129 S. Ct. 1870, 1879 (2009).

¹⁷ UV Trust Partial Consent Decree at 22-23, *U.S. v. Sharon, UV Industries, and the UV Trust*, C.A. No. 86-C-924 (D. Utah. Sept. 17, 1990) (" . . . the United States is unaware of any other claims against UV or the Trust which it now or in the future may assert on behalf of the Environmental Protection Agency pursuant to [the] Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. § 9601 *et seq.* Accordingly, to allow for the orderly liquidation and termination of the Trust in accordance with the Consent Decree, the United States agrees not to assert any such claims

recover for the same “liabilities” twice -- once from the UV Trust in *U.S. v. Sharon, UV Industries, and the UV Trust*, and a second time in its threatened cost recovery action at Eureka against Sharon/Mueller under its new legal theory that Sharon/Mueller, rather than the UV Trust, as it previously contended, is actually the proper successor to the CERCLA “liabilities” of UV Industries.

The government has no independent cause of action against Sharon/Mueller at Eureka; Sharon was merely an interim owner that did not own the property at the time that the overwhelming majority of the disposal occurred. Rather, the United States on behalf of EPA now seeks to collect a second payment from Sharon/Mueller as an alleged successor to the CERCLA “liabilities” of UV Industries, but no such “liabilities” any longer exist because the government was already paid for them in 1990 and gave a full, global release to Sharon/Mueller’s alleged predecessor, UV Industries. The release explicitly applied not only to the Midvale site but also to all future CERCLA sites.¹⁸ It is binding on the government not only as a contractual matter, but also as a final judgment under the doctrine of *res judicata*, as we explain in the next section. By law, Sharon/Mueller gets the benefit of the judgment releasing UV Industries, because Sharon/Mueller is in privity with UV Industries by virtue of their connections, especially the government’s claim that Sharon/Mueller is liable as successor to UV Industries’ liabilities.

In sum, even if the government’s tortured contractual arguments were correct that somehow in 1979 (or 1981) Sharon/Mueller assumed liability for cost recovery claims that did not arise until the government began spending money at Eureka in 2000, the CERCLA liabilities of UV Industries no longer exist because they were explicitly discharged in 1990. The government is not without a remedy; to the contrary, it already received a substantial sum of money in 1990 from the actual legal successor to the liabilities of UV Industries: the UV Trust, in exchange for the global release of any CERCLA claims against UV Industries, which as a matter of law applies to its alleged successors, including Sharon/Mueller. The government simply has no legitimate basis to attempt to collect a second time on these previously-released claims.¹⁹

B. *Res Judicata* Precludes the U.S. from Contending at this late Date that Sharon/Mueller is the Successor to the CERCLA Liabilities of UV Industries. The government is also barred from contending that Sharon/Mueller is the successor to the liabilities of UV Industries based on the doctrine of *res judicata*, which applies here in two ways: (1) based on the global release of UV Industries; and (2) based also on the failure of the U.S. to allege a claim of successor liability against Sharon/Mueller in the prior case.

First, the government’s attempt to assert CERCLA claims against Mueller as an alleged successor to UV Industries is barred by *res judicata* based upon the release of UV Industries in *U.S. v. Sharon, UV Industries, and the UV Trust* because it was entered as a final judgment by consent decree. Where a

in the future on behalf of the Environmental Protection Agency . . . or to otherwise object to or oppose the distribution of assets remaining in the Trust to the unitholders thereof”) (emphasis added).

¹⁸ *Id.*

¹⁹ As noted above, the payments made from the UV Trust included funds received from Sharon/Mueller.

plaintiff had previously agreed to a release of claims with a predecessor, it may not sue an alleged successor on the same claims under a theory that it was a different legal entity.²⁰ Courts have specifically held that a predecessor corporation and successor corporation are sufficiently related to be in privity for purposes of *res judicata*.²¹ The law is well-established that a consent judgment is a final judgment on the merits of an action, satisfying the requirements for claim preclusion.²² Thus, where a plaintiff enters into a consent decree with one corporate entity, releasing its claims against that entity, the plaintiff is also barred by the doctrine of *res judicata* from later asserting the same claims against the entity's alleged corporate successor.²³ Put differently, a defendant's liability "as a successor corporation is, if anything, derivative; that is, [the successor's] alleged liability . . . derives from that of [the predecessor], and if [the predecessor] is not liable to Plaintiffs, then [the successor] is likewise not liable."²⁴ Likewise, the government's 1990 release of UV Industries for any future CERCLA liability is a final judgment that, under the doctrine of *res judicata*, precludes the government from asserting these claims again against any alleged successor of UV Industries.

Second, even if there had not been an explicit release of UV Industries' CERCLA liabilities at Eureka in the *U.S. v. Sharon, UV Industries, and the UV Trust* settlement, the government would still be independently precluded by another branch of *res judicata* which prohibits "claim splitting" from asserting that Mueller/Sharon is liable as a successor by agreement to the CERCLA liabilities of UV Industries. This is because Sharon/Mueller was also named as a defendant in the *U.S. v. Sharon, UV Industries, and the UV Trust* case but the government did not assert in that case that Sharon/Mueller was liable as a successor by assumption agreement to the Superfund liabilities of UV Industries. On the contrary, the government only asserted claims against Sharon/Mueller in the 1986 case on the basis that Sharon was liable for its own activities as an owner/operator of the Midvale site.²⁵

Under the merger branch of the *res judicata* doctrine (also known as the prohibition against "claim splitting"), a judgment is binding and conclusive on the parties not only on the legal theories that *were* advanced, but also on those growing out of the same transaction or series of transactions that *could* have been advanced but were not.²⁶ It is "well established that a party may not split a cause of action

²⁰ 962 F.2d at 1172.

²¹ *Id.* at 1176.

²² *Id.* at 1173.

²³ *Id.* at 1176.

²⁴ *Id.* at 1174.

²⁵ The government set forth only one theory of liability in regard to Sharon during the *U.S. v. Sharon, UV Industries, and the UV Trust* proceeding, as follows: "Sharon has owned the site since its purchase in 1979. Sharon is thus liable, under section 107(a)(1) [of CERCLA], as a current owner of the facility." Plaintiff United States of America's Memorandum of Law in Support of Its Motion for Partial Summary Judgment As to Liability at 30, *U.S. v. Sharon, UV Industries, and the UV Trust*, C.A. No. 86-C-924 (D. Utah Mar. 30, 1990).

²⁶ RESTATEMENT (SECOND) OF JUDGMENTS § 24.1 (1982) ("When a valid and final judgment rendered in an action extinguishes the plaintiff's claim pursuant to the rules of merger or bar, the claim extinguished includes all rights of the plaintiff to remedies against the defendant with respect to all or any part of the transaction, or series of connected transactions, out of which the action arose."). See also *Allen v. McCurry*, 449 U.S. 90, 94 (1980) (citing *Cromwell v. County of Sac*, 94 U.S. 351, 352 (1876)) ("Under *res judicata*, a final judgment on the merits of an action precludes the parties or their privies from re-litigating issues that were or could have been raised in that action."). *Res Judicata*, or claim

into separate grounds of recovery and raise the separate grounds in successive lawsuits.”²⁷ In other words, the government may not come back against a party to a prior case for a second bite at the apple just because it now asserts a different legal theory.²⁸ Allowing that would contravene a major function of *res judicata*, which is to “avoid piecemeal litigation of claims arising from the same events.”²⁹ Here the crucial “events” in question are the determination of who is the “successor” to UV Industries, which includes but is not limited to the question of the proper interpretation of the assumption of liabilities in the 1979 Asset Purchase Agreement as part of an integrated series of transactions to dissolve UV Industries.

The “transaction or series of transactions” at issue in *U.S. v. Sharon, UV Industries, and the UV Trust* is exactly the same as is at issue at Eureka Mills, namely, the legal consequences for the CERCLA liabilities of UV Industries of the process by which UV Industries sold off its assets to various companies including Sharon/Mueller and then formed the UV Liquidating Trust with the proceeds in order to distribute those proceeds to creditors and former UV Industries stockholders. “What constitutes a ‘transaction’ or a ‘series’ is to be determined pragmatically considering whether the facts are related in time, space, origin, or motivation, and whether they form a convenient trial unit.”³⁰ The agreements related to the selling and dissolution of UV Industries are clearly interrelated such that any claims related to the transfer of liability under these agreements should have been brought together. The 1979 Asset Purchase Agreement and the 1980 Assumption Agreement by the UV Trust were part of an integrated “series of transactions” to liquidate UV Industries. As stated by the government itself in *U.S. v. Sharon, UV Industries, and the UV Trust*, “The Trust contains assets derived from the sale of UV to Sharon.”³¹ The courts have also repeatedly recognized that the process by which UV Industries sold off all its assets and accumulated the proceeds in the UV Trust for the benefit of its unit-holders as

preclusion, “reflect[s] the policy that once there has been a valid and final judgment, courts should not be required to adjudicate, nor parties to answer for, successive suits arising out of the same transaction. . . Finality and repose are the most significant policies underlying preclusion. . . Many jurisdictions now follow the ‘transactional test’ , described in the Restatement (Second) of Judgments, § 24, as extinguishing ‘all rights of the plaintiff to remedies against the defendant with respect to all or any part of the transaction, or series of connected transactions, out of which the action arose.’” RICHARD L. MARCUS & EDWARD F. SHERMAN, *COMPLEX LITIGATION: CASES AND MATERIALS ON ADVANCED CIVIL PROCEDURE* 786-87 (4th Ed. 2004) (quoting RESTATEMENT (SECOND) OF JUDGMENTS § 24.1 (1982)).

²⁷ *Mars Inc. v. Nippon Conlux Kabushiki-Kaisha*, 58 F.3d 616, 619 (Fed. Cir. 1995) (citing RESTATEMENT (SECOND) OF JUDGMENTS § 24.2 (1982)).

²⁸ GREGORY C. SISK & URBAN A. LESTER, *LITIGATION WITH THE FEDERAL GOVERNMENT* 411 (Am. Law Inst., 2d ed. 2006) (“The general application of *res judicata* or claim preclusion to the United States has never been in doubt. If a law suit between the United States and a party is concluded with a final judgment, the United States ordinarily is barred from reopening that dispute in a new lawsuit.”)

²⁹ See *GE v. Deutz AG*, 270 F.3d 144, 157-58 (3d Cir. 2001)

³⁰ *King v. Union Oil Co.*, 117 F.3d 443, 446 (10th Cir. 1997).

³¹ Plaintiff United States of America’s Memorandum of Law in Reply to the Opposition of Defendant UV Industries, Inc. Liquidating Trust and UV Industries, Inc. to Plaintiff’s Cross-Motion for Summary Judgment at 6, *U.S. v. Sharon, UV Industries, and the UV Trust*, C.A. No. 86-C-924 (D. Utah Sep. 11, 1989).

an integrated “series of transactions.”³² For example, in a case to which the United States was also a party and thus is bound, the Utah District Court found as a fact that “In 1979, to facilitate its dissolution, UV sold its assets to Sharon Steel. UV was dissolved in 1980.”³³ This clearly indicates that the sale to Sharon, the satisfaction of creditors by the UV Trust from the proceeds, and then the dissolution and distribution of the remaining assets are a classic example of an integrated series of transaction for *res judicata* purposes.

Where two suits are “based upon the same connected series of transactions between [the parties] -- a grouping of interrelated contracts and agreements made during the course of an on-going business relationship” a second suit is barred.³⁴ Here, all the facts related to the transaction were known to the government at the time of the first suit and it could have argued in 1986 that Sharon/Mueller, not the UV Trust, was the successor to UV Industries’ CERCLA liabilities; however, it chose not to. “When a person has alternative remedies in tort or for restitution he may in the same action apply for the two remedies alternatively and try them both out. On the other hand he may content himself from the outset with seeking only one remedy. In either case, judgment for the plaintiff for one of the remedies or against him with respect to the relief sought ordinarily extinguishes the entire claim.”³⁵ In *U.S. v. Sharon, UV Industries, and the UV Trust*, relying on the same underlying agreements and transactions, the government failed to argue or preserve the argument that Mueller was the successor to UV Industries’ CERCLA liabilities and is now barred from doing so.

The government’s recent “discovery” of the 1981 quit claim deed does not change this result. The government was fully aware that the documentation for property transfers under the 1979 Agreement for Purchase of Assets were not recorded until 1981 when it took the legal positions that it took in *U.S. v. Sharon, UV Industries, and the UV Trust*.³⁶

After notice and public comment, the Assistant Attorney General for Environment and Natural Resources signed a consent decree that was subsequently entered as a final judgment by the court reciting the government’s official position that a different entity, the UV Trust, rather than

³² *UV Industries, and the UV Trust*, 681 F. Supp. 1492, 1493 (D. Utah 1987) (“In 1979 UV decided to liquidate its assets. Sharon Steel Corporation bought most of the assets, including the Midvale site. On March 25, 1980, UV, a Maine corporation, filed its articles of dissolution with the Maine Secretary of State.”).

³³ *U.S. v. Sharon, UV Industries, and the UV Trust*, No. 86-C-0924J, 1989 U.S. Dist. LEXIS 19037 *11 n.1 (D. Utah May 17, 1989) (“In 1979, to facilitate its dissolution, UV sold its assets to Sharon Steel. UV was dissolved in 1980.”).

³⁴ *Mademoiselle Knitwear, Inc. v. Liz Claiborne, Inc.*, 98 Civ. 3252(HB), 1999 U.S. Dist. LEXIS 8592 *15 (S.D.N.Y June 9, 1999) (holding that dismissal was warranted on *res judicata* grounds because both “the instant case and the proceedings before Judge Sweet are based upon the same connected series of transactions”).

³⁵ RESTATEMENT (SECOND) OF JUDGMENTS § 25 cmt. g (1982).

³⁶ See, e.g., Sharon Steel Corp. Partial Consent Decree at 9, *U.S. v. Sharon, UV Industries, and the UV Trust*, C.A. No. 86-C-924 (D. Utah. Aug. 21, 1990) (“Pursuant to an agreement dated November 26, 1979, Sharon Steel Corporation agreed to purchase from UV all of its assets, including approximately 260 acres of property which are part of the [Midvale] Tailings Site . . . Sharon Steel Corporation obtained title to the Tailings Site pursuant to a deed dated November 5, 1981.”) (emphasis added).

Sharon/Mueller, was the legal successor to the CERCLA liabilities of UV Industries.³⁷ Thus, independent of the global release of UV Industries and regardless of how the language of that release is construed, the government is precluded from contending at this late date that Sharon/Mueller is responsible for the CERCLA liabilities of UV Industries as a successor because it did not advance that legal theory when it had the chance in 1986 in *U.S. v. Sharon, UV Industries, and the UV Trust*.

The government's decision not to claim that Sharon/Mueller was the successor to UV Industries in *U.S. v. Sharon, UV Industries, and the UV Trust* was a well-considered legal and policy decision. Legally, Sharon could not have assumed UV Industries' CERCLA liabilities because Sharon only agreed to assume UV Industries' liabilities as of the 1979 closing date, which was prior to the enactment of CERCLA.³⁸ In addition, the 1979 Purchase Agreement is governed by New York law which imposes a rigorous requirement that a contract demonstrate an "unmistakable intent" to indemnify or transfer liabilities before a court will enforce such an obligation.³⁹ It cannot possibly be argued that the language of the 1979 Purchase Agreement demonstrated an "unmistakable intent" to impose UV Industries' CERCLA liabilities on Sharon.

³⁷ UV Trust Partial Consent Decree at 5, *U.S. v. Sharon, UV Industries, and the UV Trust*, C.A. No. 86-C-924 (D. Utah. Sept. 17, 1990) ("the United States alleges that the Trust has succeeded to the liabilities of UV"). The full context is quoted in the appendix and copies of the relevant pages are attached in the exhibits.

³⁸ Under the 1979 Purchase Agreement, Sharon agreed only to assume those liabilities of UV "as of the Closing Date". At the time of the Closing Date, which is a defined term under the agreement, the federal Comprehensive Environmental Response Compensation and Liability Act, 42 U.S.C. § 9601 *et seq.* ("CERCLA") had not been enacted. Thus, Sharon did not assume UV's CERCLA liability. The district court in *Georgia-Pacific v. International Paper Co.*, 533 F. Supp. 2d 246 (S.D.N.Y. July 16, 2008) was confronted with a contract almost identical in pertinent part to the agreement here, and after reviewing all of the appellate cases reached the same conclusion that the assumed liabilities did not include after-enacted CERCLA liabilities. Furthermore, in *U.S. v. Sharon, UV Industries, and the UV Trust*, the government survived a Motion to Dismiss on a statute of limitations issue by arguing that CERCLA claims could not have arisen until after CERCLA was enacted. See U.S. Opposition to Motion to Dismiss, *supra* note 4, at 27. In that case, the government argued that as a contractual matter, the after-enacted CERCLA liabilities of UV Industries were assumed by the UV Trust as an "unascertained" liability. Plaintiff United States of America's Memorandum in Response to the Motions for Reconsiderations and Summary Judgment on Behalf of Defendants UV Industries, Inc. Liquidating Trust and UV Industries, Inc., and in Support of its Cross Motion for Summary Judgment at p.22 fn.18, *U.S. v. Sharon, UV Industries, and the UV Trust*, C.A. No. 86-C-924 (D. Utah July 6, 1989) ("Although the language of the assumption instrument states that the Trust assumed UV's liabilities as of the date the agreement was executed, it goes on to provide that the Trust assumed liabilities that were "contingent" and not yet ascertained or accrued. But even if the language of the assumption agreement were not clear on the point, liability for the Midvale site must be included among the liabilities assumed by the Trust. . . . Since the Trust stands in UV's shoes, and since UV -- if fully alive today -- could be held liable for the site, the Trust must be held accountable for that liability by virtue of having expressly assumed UV's liabilities.").

³⁹ The 1979 Purchase Agreement is "governed by and construed and enforced in accordance with the laws of the State of New York." New York law applies the rigorous requirement that a contract demonstrate an "unmistakable intent" to indemnify or transfer liabilities before a court will enforce such an obligation. *Haynes v. Kleinewefers*, 921 F.2d 453, 456 (2d Cir. 1990) (citing *Heimbach v. Metropolitan Transp. Auth.*, 75 N.Y.2d 387 (1990)). Thus "[w]hen a claim is made that a duty to indemnify is imposed by an agreement, that agreement must be strictly construed so as not to read into it any obligations the parties never intended to assume." *Id.*

The policy rationale for the government's decision to hold the UV Trust rather than Sharon/Mueller responsible for the CERCLA liabilities of UV Industries was explained in a 1989 brief filed by the United States in *U.S. v. Sharon, UV Industries, and the UV Trust*, as follows:

“important equitable considerations . . . call for a finding of successorship [against the UV Trust]. . . . the [UV Trust’s] unitholders are all people who have profited, or seek to profit, from UV’s former business activities In these circumstances, it would be inequitable to allow the Trust, which holds the assets of UV’s former directors and shareholders, to hide behind UV’s dissolution and escape the obligation to contribute towards the clean-up of the Midvale site.”⁴⁰

In support of its equitable argument that the UV Trust, not Sharon/Mueller, had benefited economically from the past disposal practices of UV Industries,⁴¹ the United States specifically cited an employment case that held that “the equities . . . favor successor liability [where] it is the successor who has benefited from the discriminatory employment practices of its predecessor.”⁴² Other federal courts have applied this same logic to hold liable as successors under CERCLA those who profited from past sub-standard disposal practices. For instance, the United States Court of Appeals for the Third Circuit held that:

Congressional intent supports the conclusion that, when choosing between the taxpayers or a successor corporation, the successor should bear the cost. Benefits from use of the pollutant as well as savings resulting from the failure to use non-hazardous disposal methods inured to the original corporation, its successors, and their respective stockholders and accrued only indirectly, if at all, to the general public.⁴³

Thus, the United States correctly decided in 1990 that the unit-holders of the UV Trust, not Sharon/Mueller, had benefited economically from the past disposal practices of UV Industries, and therefore, that the UV Trust, not Sharon/Mueller, should be held liable as the successor to UV industries based on these “important equitable considerations.”

⁴⁰ Plaintiff United States of America’s Memorandum in Response to the Motions for Reconsideration and Summary Judgment on Behalf of Defendants UV Industries, Inc. Liquidating Trust and UV Industries, Inc., and in Support of its Cross Motion for Summary Judgment at 23-24, *U.S. v. Sharon, UV Industries, and the UV Trust*, C.A. No. 86-C-924 (D. Utah July 6, 1989) (emphasis added).

⁴¹ Sharon/Mueller paid fair market value for the assets of UV Industries that it purchased in 1979. The purchase price could not possibly have been discounted because of the risks of a CERCLA clean-up, because CERCLA was not enacted until December, 1980. The U.S. rightly and successfully argued that the proceeds received by the UV Trust from Sharon/Mueller should be charged with the unsatisfied CERCLA liabilities of UV Industries.

⁴² *Trujillo v. Longhorn Mfg. Co.*, 694 F.2d 221, 225 (10th Cir. 1982) (quoting *E.E.O.C. v. MacMillan Bloedel Containers, Inc.*, 503 F.2d 1086, 1092 (6th Cir. 1974)). The government cites *Trujillo* on page 23 and 24 of its July 6, 1989 Memorandum in Reponse to Motions for Reconsideration and Summary Judgment, *supra* note 31.

⁴³ *Smith Land & Improvement Corp. v. The Celotex Corp.*, 851 F.2d 86 (3d Cir. 1988) (citing *Oner II, Inc. v. E.P.A.*, 597 F.2d 184 (9th Cir. 1979)) (emphasis added).

Ben Fisherow, one of DOJ's top Superfund lawyers from Main Justice in Washington, came out to Utah to argue in person the government's Motion for Summary Judgment that the UV Trust should be held liable as the legal successor to the Superfund liabilities of UV Industries. Fisherow stated flatly on the record in open court the official position of the United States that: "all issues with respect to the Trust's liability under the Statute are resolved. The Trust is the successor to The United States Smelting, Mining & Refining Company which owned [and] operated this site for decades."⁴⁴

This was not a passing reference. The United States, on behalf of EPA, *repeatedly and unequivocally* took the legal position over and over again in numerous official pleadings, legal memoranda and arguments collected in the Appendix to this letter that the UV Trust, not Sharon/Mueller, was the legal successor to the legal liabilities of UV Industries. For example, in one of its briefs the United States stated "The [UV] Trust is the successor to UV. The instrument of Assumption of Liabilities executed by the Trust is already before the Court and provides that the Trust assumed UV's liabilities."⁴⁵

Based on this legal position, which was adopted by the Court in an oral ruling from the bench, the United States obtained a settlement payment of \$11 million, which comprised approximately 60 percent of the assets of the UV Trust,⁴⁶ and in exchange gave *both* UV Industries and the UV Trust a complete and unconditional global release of all future civil CERCLA cost recovery claims at any and all sites and permitted the UV Trust to dissolve.⁴⁷ This settlement was subject to public notice and comment before it was approved by the court.

C. Collateral Estoppel Also Precludes the U.S. from Arguing that Sharon/Mueller, rather than the UV Trust, Succeeded to the Liabilities of UV Industries. Then-District Court Chief Judge Bruce S. Jenkins, who presided over *U.S. v. Sharon, UV Industries, and the UV Trust*, also ruled from the bench in favor of the United States' argument the UV Trust was the successor to the liabilities of

⁴⁴ Transcript of Summary Judgment Hearing at 37-38, *U.S. v. Sharon, UV Industries, and the UV Trust*, C.A. No. 86-C-924 (D. Utah Aug. 14, 1990) (emphasis added).

⁴⁵ Reply of the United States of America to Defendants' Oppositions to the US Motion for Partial Summary Judgment and Answer in Opposition to Defendants' Cross-Motions for Summary Judgment at 17, *U.S. v. Sharon, UV Industries, and the UV Trust*, C.A. No. 86-C-924 (D. Utah June 22, 1990) (emphasis added). A compendium of statements of the position of the U.S. that the UV Trust, not Sharon/Mueller, was the legal successor to the CERCLA liabilities of UV Industries are provided in the **Appendix**.

⁴⁶ Defendant UV Industries, Inc. Liquidating Trust's Memorandum in Support of the United States' Conditional Motion to Enter Partial Consent Decree at 5, *U.S. v. Sharon, UV Industries, and the UV Trust*, C.A. No. 86-C-924 (D. Utah Nov. 7, 1990).

⁴⁷ UV Trust Partial Consent Decree at 22-23, *U.S. v. Sharon, UV Industries, and the UV Trust*, C.A. No. 86-C-924 (D. Utah. Sept. 17, 1990) ("the United States is unaware of any other claims against UV or the Trust which it now or in the future may assert on behalf of the Environmental Protection Agency pursuant to [the] Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. § 9601 *et seq.* . . . Accordingly, to allow for the orderly liquidation and termination of the Trust in accordance with the Consent Decree, the United States agrees not to assert any such claims in the future on behalf of the Environmental Protection Agency . . . or to otherwise object to or oppose the distribution of assets remaining in the Trust to the unitholders thereof") (emphasis added). Sharon/Mueller is not specifically named in the release of all future liabilities of UV Industries because the government wanted to maintain its ability to sue Sharon/Mueller at other sites for its own disposal activities and because at the time the government was not contending that Sharon/Mueller was liable as the successor to UV Industries.

UV Industries at the Hearing for the Motion for Summary Judgment. This finding was never vacated. On March 30, 1990 the United States moved for partial summary judgment as to the liability of the UV Trust as the successor to the CERCLA liabilities of UV Industries. At the hearing on the related motions Ben Fisherow specifically requested a ruling as to UV Trust's successor liability. He stated "I know your honor has, on two occasions before, considered the issue of successor liability with respect to the Trust. . . Did your honor want to express a conclusion today in that regard?"⁴⁸ Chief Judge Jenkins responded that he had "expressed [his] Conclusions in reference to the Trust, on prior occasions"⁴⁹ and that the UV Trust succeeded to the liabilities of UV industries because "[o]rdinarily, if we have assets that are transmuted into money, the money rides with the burden. It's not free money until we make sure that the creditors are taken care of."⁵⁰ He concluded: "There's an effort to revisit that the third time; but I have indicated that we will revisit that at Pretrial, if at all."

After the hearing on the motions for partial summary judgment the parties settled based on Chief Judge Jenkins's ruling. At the subsequent hearing on the entry on the consent decrees settling the case, Judge Jenkins clarified that the language in the Consent Decrees that says "No previous Ruling of this Court in the Actions on any issue of Law or fact shall be deemed to be binding upon the Parties hereto for any purpose in any other Action or Legal Proceeding of any type or kind" does not "contemplate that The Court in any way has withdrawn any Finding or any Opinion or any Order, because I don't intend to do that. . . They exist and they're there for whatever value they have."⁵¹

As a result of Chief Judge Jenkins' ruling granting the motion of the United States for Partial Summary Judgment against the UV Trust, and his later explicit refusal to vacate his prior rulings, there was a final partial summary judgment determining that the UV Trust is the successor to the CERCLA liabilities of UV Industries. Therefore, the government is now collaterally estopped from arguing that Mueller is the successor to the same liabilities. In the Tenth Circuit, collateral estoppel or issue preclusion requires:

- (1) the issue previously decided is identical to the one presented in the action in question, (2) the prior action has been finally adjudicated on the merits, (3) the party against whom the doctrine is invoked was a party to the prior adjudication, and (4) the party against whom the doctrine is raised had a full and fair opportunity to litigate the issue in the prior action."

Here, the issue of who was the successor to the CERCLA liabilities of UV Industries is identical to the one addressed by Chief Judge Jenkins in *U.S. v. Sharon, UV Industries, and the UV Trust* and the US was not only a party to the prior action but is the party that put forth the argument that the UV Trust rather than Sharon/Mueller was the successor to those liabilities.

⁴⁸ Transcript of Summary Judgment Hearing at 170, *U.S. v. Sharon, UV Industries, and the UV Trust*, C.A. No. 86-C-924 (D. Utah Aug. 14, 1990).

⁴⁹ *Id.*

⁵⁰ *Id.* at 171.

⁵¹ Transcript of Presentation of Consent Decrees Hearing at 26, *U.S. v. Sharon, UV Industries, and the UV Trust*, C.A. No. 86-C-924 (D. Utah Nov. 13, 1990).

Courts hold that while an order granting partial summary judgment may not be final and appealable for other purposes, “preclusion seems warranted so long as the court clearly intended to terminate all proceedings as to the claims or parties involved and no attempt to appeal was thwarted.”⁵² Here, the parties settled and the claim was dismissed. At that point the partial summary judgment order became final.⁵³ Furthermore, neither party appealed and the judge specifically refused to vacate any of his previous findings. The Supreme Court has held that where a party voluntarily forfeits its right to appeal “[t]he judgment is not unreviewable, but simply unreviewed by his own choice.”⁵⁴

D. Judicial Estoppel Precludes the U.S. from Contending that any Party Other than the UV Trust is the Successor to the CERCLA Liabilities of UV Industries. Even if the government’s claims were not already precluded by release, *res judicata* and collateral estoppel, the fact that the United States previously maintained a legal position totally inconsistent with bringing a cost-recovery claim against Mueller at Eureka⁵⁵ and obtained substantial judicial relief based on that position in a different case involving the same agreements would be sufficient under the doctrine of *judicial estoppel* to preclude the United States from now taking a new and inconsistent position in subsequent litigation.

Judicial estoppel is a well-established equitable doctrine that holds that where a party assumes a certain position in a legal proceeding and succeeds, he may not thereafter, simply because his interests have changed, assume a contrary position.⁵⁶ This principle is especially strong if, as is clearly the case here, another party was prejudiced or relied upon the former position.⁵⁷ Although the settlement with Sharon/Mueller in *U.S. v. Sharon, UV Industries, and the UV Trust* was embodied in a separate Partial Consent Decree, there is no question that the settlements were all part of an integrated deal among all of the parties to resolve the government’s claims and dismiss the case. In making its own settlement with the government, Sharon/Mueller clearly relied upon the government’s position that the UV Trust, not Sharon/Mueller, was the successor to UV Industries and upon the global release from future claims involving UV Industries’ past disposal practices in exchange for a substantial payment by the UV Trust as its successor. Courts do not hesitate to apply the doctrine of judicial estoppel against the

⁵² WRIGHT ET AL., FEDERAL PRACTICE & PROCEDURE: JURISDICTION 2D §4432, at p. 60 (2002); see also *Royal Ins. Co. of Am. v. Kirksville College of Osteopathic Med.*, 304 F.3d 804, 808 (8th Cir. 2002) (quoting WRIGHT ET AL., FEDERAL PRACTICE & PROCEDURE: JURISDICTION 2D §4432, at p. 60 (2002)).

⁵³ See *Royal Ins. Co. of Amer.*, 304 F.3d at 808 (“the parties settled, and the trespass claim was dismissed with prejudice. At that point, the partial summary judgment ruling became final.”).

⁵⁴ *U.S. Bancorp Mortgage Co. v. Bonner Mall P’ship*, 513 U.S. 18, 25 (1994).

⁵⁵ The government must argue that the CERCLA liabilities of UV Industries either passed to Sharon/Mueller in 1979 or they were retained by the UV Trust. They could not be in both places at once. Of course, it is Mueller’s position today, as it was the government’s position in 1986-1990, that these liabilities were retained by the UV Trust.

⁵⁶ *New Hampshire v. Maine*, 532 U.S. 742, 749 (2001) (citing *Davis v. Wakelee*, 156 U.S. 680, 689 (1895)). The court’s approval and entry of the consent decree satisfies the requirement that the government have succeeded in the position it took, under well-established precedent from the Supreme Court of the United States. *New Hampshire v. Maine*, 532 U.S. at 752.

⁵⁷ *Id.*

government in situations like this, in which the government is attempting to take a position inconsistent with its prior legal position simply to obtain a second recovery from a different party.⁵⁸

E. The Partial Consent Decree with Sharon Does Not Waive Preclusion. As shown above, under four independent preclusion doctrines, novation, *res judicata*, collateral estoppel and judicial estoppel, any possible cost recovery claim against Mueller at Eureka relating to the past disposal activities of UV Industries was irrevocably eliminated by the government’s well-considered and legally correct decision to take the strategic position for “important equitable reasons” in *U.S. v. Sharon, UV Industries, and the UV Trust* that the UV Trust was the successor to the CERCLA liabilities of UV Industries. Based upon that legal position, all of the parties, including Sharon/Mueller settled and the United States released any possible future claims against both the UV Trust and UV Industries in exchange for a substantial settlement payment from the UV Trust as the successor to UV Industries. There is nothing in the Partial Consent Decree with Sharon in *U.S. v. Sharon, UV Industries, and the UV Trust* that waives Sharon/Mueller’s rights to rely on *res judicata*, collateral estoppel or other preclusion defenses based on these events in the prior litigation.

It is true that the separate Partial Consent Decree with Sharon/Mueller in *U.S. v. Sharon, UV Industries, and the UV Trust* settling the government’s claim against Sharon/Mueller as an owner/operator of the Midvale site does state that the consent decree is intended only to “compromise and settle their disputes over Sharon Steel Corporation’s potential liability for any and all costs, liabilities and damages arising out of or relating to the [Midvale] Sites”⁵⁹ and that “[t]his Decree shall have no effect” on other sites.⁶⁰ However, that consent decree language does not in any way restore the government’s right to make successor by contract claims against Sharon/Mueller for the past disposal activities of UV Industries at other sites, including Eureka. Any potential claims that Sharon/Mueller, rather than the UV Trust, was the legal successor to UV Industries had already been destroyed, not by “this” Partial Consent Decree settling the owner/operator claim against Sharon, but by the positions taken, as well as the positions not taken, by the U.S. previously in *U.S. v. Sharon, UV Industries, and the UV Trust*. It is widely held that the reservation of a right to litigate a claim must be express.⁶¹ There was certainly no such express reservation here.⁶²

⁵⁸ See, e.g., *United States v. Sherwin-Williams*, 165 F. Supp. 2d 797, 810 (C.D. Ill. 2000).

⁵⁹ Sharon Steel Corp. Partial Consent Decree at 13, *U.S. v. Sharon, UV Industries, and the UV Trust*, C.A. No. 86-C-924 (D. Utah. Aug. 21, 1990).

⁶⁰ *Id.* at 28 (emphasis supplied).

⁶¹ See, e.g., *Pactiv Corp. v. Dow Chem. Co.*, 449 F.3d 1227, 1231 (Fed. Cir. 2006) (for a party to “reserve the right to litigate a claim that would otherwise be barred by *res judicata*. . . that reservation must be express.”); *D & K Properties Crystal Lake v. Mutual Life Insurance Co.*, 112 F.3d 257, 260 (7th Cir.1997) (“To avoid a defense of *res judicata*, the claim would have to have been ‘expressly’ reserved”).

⁶² It can not be argued that the government was expressly reserving the right to litigate the issue of Sharon/Mueller’s potential liability as a successor where this claim was not even raised in the suit. Furthermore, when the government wants to attempt to reserve a general defense of *res judicata* it knows how to do so. See *infra* note 50. Regardless, any attempt to reserve any claims in no way overcomes the principle that the release of a predecessor will release the successor. See *supra* pp. 4-6.

The government's successful litigating position in the prior case, rather than the consent decree with Sharon, extinguished any right that the government might otherwise have had to claim that Sharon/Mueller was the successor to the CERCLA liabilities of UV Industries. That had nothing to do with the Partial Consent Decree settling the entirely separate owner/operator claims against Sharon at the Midvale site. On the contrary, what destroyed the government's right to contend that Sharon/Mueller succeeded to the CERCLA liabilities of UV Industries was (1) giving a global release to UV Industries for its past disposal activities at all other future sites in a separate Partial Consent Decree, (2) failing to assert a cause of action against Sharon/Muller as an alleged successor by contract to UV Industries, and (3) taking the legal position for good and sufficient reasons that another entity, the UV Trust, was the legal successor to the CERCLA liabilities of UV Industries, and obtaining substantial compensation in reliance on that position and then allowing the UV Trust to dissolve and distribute its remaining assets.

The legal consequences of these legal positions taken by the United States in *U.S. v. Sharon, UV Industries, and the UV Trust* preclude re-litigating today the issues decided in 1990. These preclusion defenses are in no way affected by the language of the Partial Consent Decree settling entirely different legal claims with Sharon. That is clearly what the plain language of the Partial Consent Decree says when it says only that "*This Decree*" shall have no effect on the government's claims at other sites.

Moreover, unlike the Model Consent Decree, the consent decree with Sharon does not contain any waiver of the settling party's right to rely on *res judicata* and other preclusion doctrines.⁶³ At the time it entered into this Partial Consent Decree, Sharon had no need to secure a release of claims for liability as an alleged successor to UV Industries, because the government had already failed to allege or make this argument as to Sharon, and in any event, the earlier-entered Partial Consent Decree between the government and UV Industries contained a release that covered any such liabilities. Simply put, the government may not now try to distort the language of the separate and later-entered Partial Consent Decree with Sharon/ Mueller to try to restrict the scope and effect of either the litigating positions it took and failed to take in the case or limit the effect of its prior release of all CERCLA liabilities of UV Industries.

II. Possible Routes to a Definitive Resolution of the Threshold Issue that the Government is Barred from Advancing a New Legal Theory at this Late Date that Sharon/Mueller is the Successor to the CERCLA Liabilities of UV Industries.

⁶³ The Model Consent Decree at Sec. IX, par. 18, contains suggested language by which settling parties waive their rights to rely on *res judicata* and related doctrines based on the government's failure to assert all of its legal theories in a case. "In any subsequent administrative or judicial proceeding initiated by the United States for injunctive relief, recovery of response costs, or other relief relating to the Site, Settling Defendants shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, *res judicata*, collateral estoppel, issue preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States in the subsequent proceeding were or should have been brought in the instant case." http://www.justice.gov/enrd/Model_CERCLA_Agreement_107.html IX. par. 18. This provision was NOT included in the Sharon Steel Partial Consent Decree in *U.S. v. Sharon, UV Industries, and the UV Trust*. Its omission strongly supports our argument that the parties did intend the government to be barred from a second bite at the apple -- as it would be automatically under the background law in the absence of an agreement to the contrary.

Mr. John N. Moscato
Ms. Andrea Madigan
Mr. Steven B. Moores
Page 18 of 22

The simplest and most straight-forward route to obtaining a definitive determination that any cost-recovery claim against Mueller/Sharon based on the past disposal activities of UV Industries is barred by the prior proceedings in *U.S. v. Sharon, UV Industries, and the UV Trust* would be for DOJ and EPA to review the history and legal principles set out in this letter and write a letter to Mueller acknowledging that they agree with our legal conclusions. We hereby formally request DOJ and EPA to review the issues raised by this letter and give us a written ruling.

In the event that the United States does not agree with our conclusion that further Superfund and RCRA claims against Mueller growing out of the past disposal activities of UV Industries are precluded by the release and other proceedings in *U.S. v. Sharon, UV Industries, and the UV Trust* as outlined above, then we would request further discussions with you regarding how best to obtain a definitive resolution of that issue from a third party. Several possibilities have occurred to us, but we also solicit your suggestions:

1. A declaratory judgment action. *See, e.g. Penn Central Corp v. United States*. 814 F. Supp 1116 (Regional Rail Reorg. Ct. 1993); *In re Manville*, 139 B.R. 97, 105 (S.D.N.Y. 1992).
2. A motion for clarification in the court that entered the judgment in *U.S. v. Sharon, UV Industries, and the UV Trust* and retained jurisdiction over the consent decree. *See, e.g. Henderson v. State of Oregon*, 2006 WL 2818068, *52 (9th Cir. 2006).
3. Judicial review under the Administrative Procedure Act, and CERCLA §113(b), of EPA's ruling on the issues we have raised.
4. Arbitration, or another form of Alternative Dispute Resolution.
5. A settlement of cost recovery claims at Eureka, based on the possibility of some incidental disposal during Sharon/Mueller's period of ownership, that also acknowledges that the U.S. is barred from any further claims against Mueller as an alleged contractual successor for the past activities of UV Industries by the prior proceedings in *U.S. v. Sharon, UV Industries, and the UV Trust*.

We recognize that some of the above may not be consistent with the spirit of the tolling agreement between the parties, even if they are arguably consistent with its literal language.⁶⁴ Therefore, we are raising the issue with you now, well in advance of the expiration of the current tolling agreement May 31, 2010, so that we can discuss how best to proceed.

⁶⁴ The tolling agreement provides for "the Parties' mutual forbearance in filing claims" while it is in effect (¶7).

Mr. John N. Moscato
Ms. Andrea Madigan
Mr. Steven B. Moores
Page 19 of 22

I look forward to discussing your thoughts re next steps with you on the call that we have scheduled for 9:30 a.m. your time on March 1.

Very truly yours,

A handwritten signature in black ink that reads "E. Donald Elliott". The signature is written in a cursive, flowing style with a prominent initial "E".

E. Donald Elliott
Willkie Farr & Gallagher LLP
Counsel to Mueller Industries, Inc.

APPENDIX

During the *U.S. v. Sharon, UV Industries, and the UV Trust* case, the government repeatedly took the position that the UV Trust was the successor to UV Industries and was therefore liable for the actions of UV Industries. This position was emphasized repeatedly through the proceeding, as illustrated in the following examples:

(1) The government's 1990 brief in support of summary judgment emphasized its position that the UV Trust was the successor to the CERCLA liabilities of UV Industries as follows:

The [UV] Trust is the successor to UV. The instrument of Assumption of Liabilities executed by the Trust is already before the Court and provides that the Trust assumed UV's liabilities . . . where a party expressly assumes the liabilities of its predecessor, or succeeds to those liabilities through a merger, as . . . the Trust did here, it ought to be held accountable for those liabilities.⁶⁵

(2) On July 6, 1989, the government argued in its memorandum docketed at #468 that “[t]he Trust is answerable for all liabilities and expenses of UV, including unascertained or contingent liabilities and expenses, and is obligated to pay those liabilities and expenses out of the assets held in trust.”⁶⁶ The government quotes the assumption agreement between UV and the UV Trust, as follows:

The Trust expressly assumed all debts, obligations, contracts and liabilities and expenses of UV as of the date [of the assumption], of any kind, character or description, direct or indirect, whether accrued, absolute, contingent, ascertained or otherwise, and whether asserted before or after such date to the extent not assumed and paid for by Sharon Steel Corporation⁶⁷

(3) As the government noted later in the same document, this interpretation of the assumption of liabilities was supported by “important equitable considerations,” because the unitholders of the UV Trust, as former stockholders and officers of UV Industries, were in a position to reap the financial rewards from UV Industries' prior history of disposal practices. As argued by the government:

[There are] “important equitable considerations which call for a finding of successorship [against the UV Trust]. The beneficiaries of the Trust are, for the most part, former shareholders of UV. Those who are not nonetheless chose to acquire interests in a Trust

⁶⁵ Reply of the United States of America to Defendants' Oppositions to the US Motion for Partial Summary Judgment and Answer in Opposition to Defendants' Cross-Motions for Summary Judgment at 17, *U.S. v. Sharon, UV Industries, and the UV Trust*, C.A. No. 86-C-924 (D. Utah June 22, 1990) (emphasis added).

⁶⁶ Plaintiff United States of America's Memorandum in Response to the Motions for Reconsiderations and Summary Judgment on Behalf of Defendants UV Industries, Inc. Liquidating Trust and UV Industries, Inc., and in Support of its Cross Motion for Summary Judgment at 11, *U.S. v. Sharon, UV Industries, and the UV Trust*, C.A. No. 86-C-924 (D. Utah July 6, 1989) (emphasis added).

⁶⁷ *Id.* at 21.

that had as one of its stated purposes the payment of UV's corporate liabilities. On the whole, then, the unitholders [in the UV Trust] are all people who have profited, or seek to profit, from UV's former business activities. In addition, the Liquidating Trustees are all former directors of the corporation. As substantial unitholders, those former directors have gained significantly, and stand to gain further, from the distribution of the UV sale proceeds. In these circumstances, it would be inequitable to allow the Trust, which holds the assets of UV's former directors and shareholders, to hide behind UV's dissolution and escape the obligation to contribute towards the clean-up of the Midvale site.⁶⁸

The government concluded its lengthy discussion on UV liability with the following statement:

"Because the Trust is charged with the burden of paying off UV's liabilities, the Trust is answerable now for remedying the environmental harm caused by UV."⁶⁹

(4) As explained in oral argument by Ben Fisherow, a high ranking career DOJ lawyer on Superfund matters, "it can be said that all issues with respect to the Trust's liability under the Statute are resolved. The Trust is the successor to The United States Smelting, Mining & Refining Company which owned [and] operated this site for decades."⁷⁰ Mr. Fisherow was referring to UV Industries, Inc by its prior name.

(5) In response to Ben Fisherow's request for a ruling on the claim of the U.S. that the UV Trust was liable as the successor to UV Industries, District Court Chief Judge Bruce S. Jenkins stated on the record that "Generally . . . the shareholders' interests are residual interests. They get paid after all the creditors get paid. Ordinarily, if we have assets that are transmuted into money, the money rides with the burden. It's not free money until we make sure that the creditors are taken care of."⁷¹

(6) Also in the July 6, 1989 memorandum, at footnote 18, the government stated that:

Although the language of the assumption instrument states that the Trust assumed UV's liabilities as of the date the agreement was executed, it goes on to provide that the Trust assumed liabilities that were "contingent" and not yet ascertained or accrued. But even if the language of the assumption agreement were not clear on this point, liability for the Midvale site must be included among the liabilities assumed by the Trust. Because CERCLA imposes liability retroactively, it gives rise to a claim for actions performed prior to the date on which the assumption agreement was executed. Since the Trust stands in UV's shoes, and since UV -- if fully alive today -- could be held liable for the

⁶⁸ *Id.* at 23-24 (emphasis added) (internal citations omitted).

⁶⁹ *Id.* at 26 (internal citations omitted).

⁷⁰ Transcript of Summary Judgment Hearing at 37-38, *U.S. v. Sharon, UV Industries, and the UV Trust*, C.A. No. 86-C-924 (D. Utah Aug. 14, 1990) (emphasis added).

⁷¹ *Id.* at 171 (emphasis added).

site, the Trust must be held accountable for that liability by virtue of having expressly assumed UV's liabilities.⁷²

(7) Based on the Judge's oral ruling granting the government's motion for partial summary judgment that the UV Trust was the successor to the CERCLA liabilities of UV Industries,⁷³ the parties quickly reached a compromise settlement resolving the case. The government entered into a partial consent decrees with the UV Trust and UV Industries that included the government's position that "the Trust has succeeded to the liabilities of UV."⁷⁴ As pointed out above, in exchange for a substantial payment amounting to sixty percent of the Trust's assets, the government then gave a full release to both the UV Trust and UV Industries of any and all future liabilities under CERCLA not just at the Midvale site, but at all other future sites around the country, including Eureka:

Beyond the matters addressed [in this Partial Consent Decree], the United States is unaware of any other claims against UV or the Trust which it now or in the future may assert on behalf of the Environmental Protection Agency pursuant . . . [CERCLA or other environmental statutes] . . . Accordingly, to allow for the orderly liquidation and termination of the Trust in accordance with the Consent Decree, the United States agrees not to assert any such claims in the future on behalf of the Environmental Protection Agency . . . or to otherwise object to or oppose the distribution of assets remaining in the Trust to the unitholders thereof.⁷⁵

The consent decree with UV industries and the UV Trust was approved and entered as a final judgment by the court on November 13, 1990.⁷⁶

A separate but related partial consent decree with Sharon resolved the only claims that the government made against Sharon in the case, namely, that Sharon had owned and operated the Midvale sites during a period when disposal occurred. There was no claim made by the government anywhere during the extensive proceedings over four years that Sharon, as opposed to the UV Trust, succeeded to the CERCLA liabilities of UV Industries.

Relevant excerpts from the documents quoted above, as well as other filings in *U.S. v. Sharon, UV Industries, and the UV Trust* cited in the letter, are attached as exhibits in chronological order.

⁷² Plaintiff United States of America's Memorandum in Response to the Motions for Reconsiderations and Summary Judgment on Behalf of Defendants UV Industries, Inc. Liquidating Trust and UV Industries, Inc., and in Support of its Cross Motion for Summary Judgment at 22 n.18, *U.S. v. Sharon, UV Industries, and the UV Trust*, C.A. No. 86-C-924 (D. Utah July 6, 1989) (internal citations omitted) (emphasis added).

⁷³ The independent *res judicata* effect of the Judge granting the government motion for summary judgment on this point is discussed *infra*.

⁷⁴ UV Trust Partial Consent Decree at 5, *U.S. v. Sharon, UV Industries, and the UV Trust*, C.A. No. 86-C-924 (D. Utah. Sept. 17, 1990) (emphasis added).

⁷⁵ *Id.* at 22-23 (emphasis added).

⁷⁶ Order Entering Partial Consent Decree Between the United States, the State of Utah and UV Industries, Inc., Liquidating Trust, *U.S. v. Sharon, UV Industries, and the UV Trust*, C.A. No. 86-C-924 (D. Utah Nov. 13, 1990).

APPENDIX K

**TO
Z2 SOIL UAO**

**Appendix K: Letter from E. Donald Elliott, Partner,
Willkie Farr & Gallagher LLP, to John N. Moscato,
Senior Counsel, Dep't of Justice (Apr. 1, 2010)**

On the Record - Not a Privileged Settlement Communication

April 1, 2010

Via Electronic and U.S. Mail

Mr. John N. Moscato
Senior Counsel, Natural Resources Division
Environmental Enforcement Section
U.S. Department of Justice
1961 Stout Street, 8th Floor
Denver, CO 80294

Ms. Andrea Madigan and Steven B. Moores
Enforcement Attorneys
Legal Enforcement Program
U.S. EPA Region 8
1595 Wynkoop Street
Denver, CO 80202

Re: Eureka Mills Superfund Site

Dear John, Andrea and Steven:

Thank you for taking the time on March 1 to discuss our position that the government's CERCLA cost recovery claims against Sharon Steel/Mueller¹ at Eureka were already definitively resolved in *United States v. Sharon Steel, UV Industries, Inc, UV Industries, Inc., Liquidating Trust and Atlantic Richfield Company, Inc.*, (D. Utah, C.A. No. 86-C-924, filed Oct 10, 1986) (hereafter, "*U.S. v. Sharon, UV Industries, and the UV Trust*"). The purpose of this letter is to respond to the main points that you raised on the call regarding the preclusion arguments in our letter dated February 18, 2010.

¹ In 1991, Sharon Steel, which was a party to *U.S. v. Sharon, UV Industries, and the UV Trust*, merged into its wholly-owned subsidiary, Mueller Industries, Inc., with Mueller being the surviving corporation in the merger. Thus, Mueller succeeded to all of the rights of Sharon Steel, and for convenience we refer to them as Sharon/Mueller.

Mr. John N. Moscato
Ms. Andrea Madigan
Mr. Steven B. Moores
April 1, 2010
Page 2

I. A Covenant Not to Sue and a Release Entered into by a Predecessor Both Discharge a Successor's Liability.

We understand you to be arguing that the language of the 1990 consent decree with UV and the UV Trust was a "covenant not to sue" rather than a "release." While we don't necessarily agree with your reading, even if you were correct, the distinction would not make a difference for purposes of our preclusion arguments.

While we agree that there are distinctions between a covenant not to sue and a release for some purposes, there is no difference in their effect in this case. Whether UV Industries' future CERCLA liabilities were discharged pursuant to either a covenant not to sue or pursuant to a release, both means would also discharge an alleged successor. As we stated in our February letter, "[t]here is a significant body of law holding that successor liability does not attach if the predecessor's liability has been discharged or extinguished."² The case law and secondary literature indicate that this applies equally, whether the liability has been discharged by a covenant not to sue or by a release. "A covenant not to sue, like a release, is a contract and it is also an affirmative defense to an action."³ *Robbins* addressed a successor seeking to enforce a covenant not to sue that was entered into by its predecessor. The Court held that this was a valid defense, stating "[t]he Covenant Not to Sue discharged and extinguished the claim against Shoreline Obstetrics, the predecessor corporation. Therefore, there is no viable liability or claim against the successor corporations, Physicians for Women's Health and Women's Health."⁴ Likewise, if Mueller is alleged to be a successor to UV Industries, it would benefit from the language in VII. B. of the Partial Consent Decree between the United States and UV Industries and the UV Trust in *U.S. v. Sharon, UV Industries, and the UV Trust*, regardless of whether it is read as a release or a covenant not to sue. This section states that the "United States agrees not to assert any such [CERCLA] claims in the future on behalf of the Environmental Protection Agency or the Department of the Interior or to otherwise object to or oppose the distribution of assets remaining in the Trust to the unitholders thereof."

II. Res Judicata Applies Even if the United States Became Aware of Additional Facts After the Initial Judgment

Regardless of whether the United States knew about any potential contamination in Eureka at the time of the initial 1990 Consent Decree, it is now barred from arguing that Sharon/Mueller is the successor to the liabilities of UV Industries. Courts focus on when the facts arose, rather than when the plaintiff

² *Robbins v. Physicians for Womens's Health, Inc.*, No. CV065002633, 2009 WL 5303887 *4 (Conn. Super. Ct. Dec. 7, 2009).

³ 66 Am. Jur. 2d Release § 4 (2002).

⁴ *Robbins*, 2009 WL 5303887 *7. The court came to this conclusion despite the following language in the covenant not to sue: "This covenant not to sue does not effect claims against the Physicians for Women's Health LLC entities, which remain defendants in the pending action." The court reasoned that because the current lawsuit depended on Physicians for Women's Health's position as a successor, that language was not relevant.

Mr. John N. Moscato
Ms. Andrea Madigan
Mr. Steven B. Moores
April 1, 2010
Page 3

discovered the facts, in determining whether the *res judicata* bar applies. While *res judicata* does not generally apply to actions based on facts occurring after the initial judgment, it does apply when it was only the plaintiff's *awareness* of the facts that came later. The Second Circuit clearly states:

“*Res judicata* applies even where new claims are based on newly discovered evidence, unless the evidence was either fraudulently concealed or it could not have been discovered with due diligence. . . Plaintiff's discovery of additional facts following entry of summary judgment does not block the application of *res judicata*. The facts and events themselves arose prior to the filing of the original complaint -- it was only [Plaintiff's] awareness of these facts that came later.”⁵

The Seventh Circuit explains this rule as follows: “Since all claims arose from the same factual context and since the appellants had sufficient knowledge to sue on one claim, they also had sufficient knowledge to sue on the rest of their claims. When a litigant files a lawsuit, the courts have a right to presume that he has done his legal and factual homework. It would undermine the basic policies protected by the doctrine of *res judicata* to permit the appellants to once again avail themselves of judicial time and energy while another litigant, who has yet to be heard even once, waits in line behind them.”⁶

When the United States settled with UV Industries and Sharon in 1990 it knew that there were other properties at issue in the transaction between UV Industries, the UV Trust and Sharon.⁷ It was the United States' responsibility to consider this when deciding to pursue the UV Trust as the successor to UV Industries' CERCLA liabilities. The argument that the United States only later became *aware* of the contamination at Eureka does not remove the *res judicata* bar, where the facts existed and could have been discovered prior to the 1990 judgment.

In fact, however, there is ample evidence from many sources that the United States was well-aware of the mining wastes in the Tintic area, long before EPA began its clean-up and certainly at the time that it settled with UV, the UV Trust and Sharon in 1990. For example, the Eureka mines were placed on the National Register of Historic Places in March 1979. The Centennial Eureka mine is listed with the following description of its significance: “The largest wood headframe in the district, purportedly with

⁵ *L-Tec Electronics Corp. v. Cougar Electronic Org., Inc.*, 198 F.3d 85, (2d Cir. 1999).

⁶ *Car Carriers, Inc. v. Ford Motor Co.*, 789 F.2d 589, (7th Cir. 1986)

⁷ See UV Trust Partial Consent Decree at 19, *U.S. v. Sharon, UV Industries, and the UV Trust*, C.A. No. 86-C-924 (D. Utah. Sept. 17, 1990) (“the State hereby releases and agrees to hold UV and the Trust harmless for . . . (ii) any and all other claims regarding environmental matters as to the Sites or any other sites, regardless of whether such claims exist at the effective date of this Decree or come into existence after such effective date.) This language demonstrates that the parties to the Consent Decree acknowledged that there were other sites at issue.

Mr. John N. Moscato
Ms. Andrea Madigan
Mr. Steven B. Moores
April 1, 2010
Page 4

timbers from Norway. The Centennial-Eureka was also a large Tintic producer, originally known as the 'Blue Rick.'"⁸ The description of the Eagle and Blue Bell Mine even specifically highlights a "dump": "The Eagle and Blue Bell represents an extensive remain of a 'surface plant,' sitting together with its ore dump."⁹ Thus, the United States was effectively on inquiry notice that these sites involved historic abandoned mines and therefore contamination issues.

III. A Very Substantial Litigation Discount is Warranted Because of Mueller's Strong Preclusion Defenses.

After additional legal research into the points raised during our last call on March 1, we continue to believe and advise our client that Mueller has a very strong set of preclusion arguments, including *res judicata*, judicial and collateral estoppel. These arguments all work to legally bar the government from changing its prior position and now asserting that Mueller rather than the UV Trust is the successor to UV Industries' CERCLA liabilities.

Nonetheless, our client is prepared to make a good faith offer of settlement to avoid the expense and uncertainty of litigation after we have all visited the site in early May. We will, however, be building a substantial litigation discount into our offer to reflect our opinion that the claims of the United States are barred by the 1990 litigation, as well as by our contractual arguments relating to the Closing Date that we have previously communicated to you.

IV. Role of the State of Utah in Future Negotiations.

In advance of meeting for further negotiations, we also wish to call to your attention that the State of Utah not only released UV and the UV Trust in the 1990 settlement agreement, but also agreed to indemnify them and hold them harmless against any further claims for environmental clean-up at other sites.¹⁰ Our legal research indicates that this type of "hold harmless" clause also inures to the benefit of Mueller as an alleged successor to UV and the UV Trust for liabilities relating to the past activities of UV Industries.¹¹ And of course, under CERCLA, such hold harmless agreements are binding and

⁸ <http://pdfhost.focus.nps.gov/docs/NRHP/Text/79003481.pdf>, located at <http://nrhp.focus.nps.gov/natreg/home.do;jsessionid=689B70CA892F94AD73C6110DF62F0048>

⁹ *Id.*

¹⁰ UV Trust Partial Consent Decree at 19, *U.S. v. Sharon, UV Industries, and the UV Trust*, C.A. No. 86-C-924 (D. Utah, Sept. 17, 1990) ("the State hereby releases and agrees to hold UV and the Trust harmless for . . . (ii) any and all other claims regarding environmental matters as to the Sites or any other sites, regardless of whether such claims exist at the effective date of this Decree or come into existence after such effective date."). An agreement to hold harmless is one "in which one party agrees to indemnify the other. — Also termed *save-harmless agreement*. See INDEMNITY." BLACK'S LAW DICTIONARY 737 (7th ed. 1999).

¹¹ See *EEOC v. Outrigger Restaurant, Inc.*, No. 97-1189-CB-M, 2000 U.S. Dist. LEXIS 330 (S.D. Al. Jan. 10, 2000) (holding that Outrigger Restaurant was obligated to indemnify a successor, where Outrigger Restaurant had entered into an indemnification agreement with the predecessor). This is consistent with the general premise that "[a] contractual successor stands in its predecessor's shoes for both rights and responsibilities." *Archer Daniels Midland Company v. Brunswick*

Mr. John N. Moscato
Ms. Andrea Madigan
Mr. Steven B. Moores
April 1, 2010
Page 5

enforceable among the parties, even though they do not bar the claims of the United States.¹² As negotiations go forward, we should consider whether to bring in the State of Utah as an interested third party, due to its obligation to hold harmless Sharon/Mueller if Sharon/Mueller is found to be a successor to UV.

Very truly yours,



E. Donald Elliott
Willkie Farr & Gallagher LLP
Counsel to Mueller Industries, Inc.

County, 129 Fed. Appx. 16, 25 (4th Cir. 2005). See also 6 AM. JUR. 2D *Assignments* § 47 (2005) (“The benefit of a contract provision requiring one party to ‘indemnify, defend and save harmless’ the other party from any ‘liabilities’ is assignable.”)

¹² See 42 U.S.C. Sec. 9607(e)(1) (“No Indemnification, hold harmless, or similar agreement or conveyance shall be effective to transfer from the owner or operator of any . . . facility or from any person who may be liable for a release or threat of release . . . to any other person”) Courts interpret Section 107(e) of CERCLA to mean “agreements to indemnify or hold harmless are enforceable *between the parties* but not against the government.” *Smith Land & Improvement Corp. v. Celotex Corp.*, 851 F.2d 86, 89 (3d Cir. 1988), cert. denied, 488 U.S. 1029 (1989) (*emphasis added*).

APPENDIX L

**TO
Z2 SOIL UAO**

**Letter from E. Donald Elliott, Senior Of Counsel,
Covington & Burling LLP, to Annette Lang, Senior
Counsel, Dep't of Justice (Dec. 29, 2016)**

COVINGTON

BEIJING BRUSSELS LONDON LOS ANGELES
NEW YORK SAN FRANCISCO SEOUL
SHANGHAI SILICON VALLEY WASHINGTON

E. Donald Elliott

Covington & Burling LLP
One CityCenter
850 Tenth Street, NW
Washington, DC 20001-4956
T +1 202 662 5631
delliott@cov.com

BY EMAIL AND U.S. MAIL

Settlement Communication – Protected by Fed. R. Evid. 408

December 29, 2016

Annette M. Lang
Senior Counsel
Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, DC 20044
Annette.lang@usdoj.gov

Re: Factual Background of Minimal Connections of Arava Natural Resources Co., Inc. and Mueller Industries, Inc. to the U.S. Smelter and Lead Refinery Site in East Chicago, Indiana

Dear Annette:

As background for our meeting in Washington on January 5, 2017, we provide this brief overview of the very attenuated connection of our clients Arava Natural Resources Co., Inc. (“Arava”) and Mueller Industries, Inc. (“Mueller”) to what EPA calls Zone 2 of Operable Unit 1 of the “U.S. Smelter and Lead Refinery Site” in East Chicago, Indiana. (In fact, multiple smelters and lead sources other than USS Lead operated in the immediate area, some of which are closer to much of Zone 2 than USS Lead).¹

Allocation Percentages of Zone 2 Contamination Attributable to the USS Lead Site.

I understand from our prior discussions that, despite many years and millions of dollars of study, to date EPA has still not determined what percentage of the lead in Zone 2 it believes is attributable to the operations of U.S.S. Lead Refinery, Inc., as opposed to the many other

¹ For the record, we are preserving all our defenses, including our position that incidental air deposition of lead particulate does not constitute disposal. *See Pakootas v. Teck Cominco Metals, Ltd.*, No. 15-35228, 2016 WL 4011196 15-35228 (9th Cir., July 27, 2016), *available at* <https://cdn.ca9.uscourts.gov/datastore/opinions/2016/07/27/15-35228.pdf>

COVINGTON

Annette Lang
December 29, 2016
Page 2

sources in the area. In the absence of better data, for purposes of these discussions, we are willing to assume *arguendo* that perhaps 25% of the lead in Zone 2 came from operations at the USS Lead site as opposed to those other nearby sources; the actual number might be higher or lower and would vary from property to property. We are working to develop more accurate estimates, and as previously discussed, would welcome any data that EPA may have in this regard.

USS Lead Site History.

We understand that active operations involving lead at the USS Lead site occurred from 1905 to 1985, a period of approximately 80 years.

The 1905 to 1919 Period of Operations.

From 1905 to 1919, or 18.75% of the total period of operation, the site was operated by U.S. Metals Refining Co., whose current parent Cyprus Amax is alleged by EPA to be a successor and responsible for that period of operations. Thus, U.S. Metals Refining Co. and/or Cyprus Amax would seem to be liable for approximately 4.7% of the cost of cleaning-up Zone 2. ($25\% \times 18.75\% = 4.69\%$).² Our understanding is that to date they have made zero contribution toward cleaning up the area. This stands in stark contrast to the \$16.5 million Mueller's affiliates USS Lead and MRRC have already spent, and the combined \$13.5 million you have advised that Chemours and Atlantic Richfield will have spent by the end of 2016.

The 1920 to 1979 Period of Operations.

From 1920 to 1979, or 73.75% of the total period of operations, the site was operated by U.S.S. Lead Refinery, Inc., while it was a subsidiary of United States Smelting Refining and Mining Company, later renamed UV Industries ("UV"). As you know, in 1998, the Supreme Court specifically rejected EPA's position that parent companies are automatically liable for the clean-up obligations of their direct and lower tier subsidiaries, holding instead that parent companies become liable only if they become so involved in directing disposal operations at the site that they become "operators," or if traditional grounds otherwise exist for piercing the corporate veil, such as a failure to observe proper corporate formalities. *United States v. Bestfoods*, 524 U.S. 51 (1998) (copy attached as Exhibit 1 for convenience).

We have no reason to believe that UV would not be protected by the corporate veil regarding U.S.S. Lead Refinery, Inc.'s operations during the 73.75% of the period of operations when U.S.S. Lead Refinery, Inc. was owned by UV. Of course, if UV itself were protected by the corporate veil, Mueller and Arava would also be protected under any theory that somehow they had succeeded to UV's liabilities. In any event, that issue is now irrelevant because the United States litigated and settled all of its Superfund claims relating to UV's operations, including

² In *Burlington Northern*, the Court approved the use of years of operations to allocate liability between PRPs under CERCLA. *Burlington N. & Santa Fe Ry. Co. v. United States*, 556 U.S. 599, 617-18 (2009).

COVINGTON

Annette Lang
December 29, 2016
Page 3

those relating to the USS Lead site, for an \$11 million payment in the *Midvale* case in 1990.³ The issue of how to interpret the various documents and transactions relating to the assumption of UV's environmental liabilities was extensively litigated and definitively, correctly and conclusively resolved 26 years ago. It cannot now be reopened. For example, in arguments to the court in *Midvale*, your colleague Ben Fisherow of Main Justice flatly represented to the court the United States's position that "The [UV] Trust is the successor to The United States Smelting, Mining & Refining Company which owned [and] operated this site for decades."⁴ Indeed, the court granted summary judgment to the United States on that basis. Accordingly, the doctrines of novation, *res judicata*, collateral estoppel and judicial estoppel all now preclude the United States and EPA from claiming that Mueller and Arava are responsible for UV's period of ownership, as is further explained in the attached Exhibit 2. That is because the United States and EPA have already recovered against another party for UV's period of ownership based on an inconsistent legal theory that the UV Liquidating Trust, rather than Sharon Steel Corp. ("Sharon Steel"), was the successor to the environmental liabilities of UV, including any possible claims relating to UV's period of ownership of the USS Lead site.

Separately, and in addition to the legal doctrines mentioned above, which are based on the position that the U.S. successfully took in the *Midvale* litigation, it is well established that the global settlement of all environmental claims with UV, Sharon Steel's alleged predecessor at the

³ *United States v. Sharon Steel Corporation, et al.*, Civil Action Nos. 86-C-924J and 89-C-136J ("the *Midvale* case"). The *Midvale* case was brought by the United States against Sharon Steel, UV Industries, the UV Liquidating Trust, and other parties in the 1980's in connection with the clean-up of the *Midvale* Property. In addition to settling and entering into a consent decree with Sharon Steel for the clean-up, the Government also entered into a global settlement in the form of a Partial Consent Decree with the UV Liquidating Trust that included the Government's allegation that "the Trust has succeeded to the liabilities of UV." This consent decree was approved and entered by the court on November 13, 1990. Under the terms of the consent decree, EPA received 60% of the UV Liquidating Trust's then-current assets (at least \$11 million), as well as 60% of any future assets that came into the Trust. The basis for the settlement was the legal position of the United States that the UV Liquidating Trust, not Sharon Steel, was the successor to UV Industries for the environmental clean-up liabilities at all formerly owned UV sites. Shortly thereafter, on November 21, 1990, the bankruptcy court overseeing Sharon Steel's bankruptcy approved the Plan. As contemplated in the settlement agreement with the UV Liquidating Trust, EPA subsequently took no action to prevent the Trust from distributing its remaining assets and winding down its business after it paid numerous claims between 1980 and 1990 relating to the prior operations of UV.

⁴ Transcript of Summary Judgment Hearing at line 24, page 37 to line 1, page 38, *U.S. v. Sharon, UV Industries, and the UV Trust*, C.A. No. 86-C-924 (D. Utah Aug. 14, 1990) (attached as Exhibit 4).

COVINGTON

Annette Lang
December 29, 2016
Page 4

site, releases Sharon Steel/Mueller as UV's alleged successor from any liability.⁵ The United States simply cannot recover twice for the same liability, and this same result applies regardless of whether the settlement is characterized as a release or a covenant not to sue. (See attached Exhibit 3.)

You have informed us orally that United States Smelting, Refining, and Mining Company itself briefly operated the site in 1919 and 1920, before the site was transferred to U.S.S. Lead Refinery, Inc. However, these same arguments as to why Sharon Steel is not liable for the environmental liabilities of UV would apply equally to UV's direct operation of the site. In any event, this brief period of operation would amount to only 0.3% of possible liability for the USS Lead site ($25\% \times 1.25\% = 0.3125\%$).

Sharon Steel's Brief Ownership of USS Lead while Operating (1979-1985).

In 1979, UV decided to sell off its assets and liquidate. Mueller's predecessor, Sharon Steel, bought about 40% of the assets of UV, including U.S.S. Lead Refinery, Inc., with the bulk of the assets being purchased by several other companies, and proceeds from those sales going into a trust ("The UV Liquidating Trust"). The UV Liquidating Trust eventually held \$518 million and paid claims from 1980 to 1990, including the environmental clean-up claims of the United States.⁶ As is standard for such asset sales, Sharon Steel and the other purchasers agreed to assume the existing debts of the businesses they bought "as of" the closing date, but the "unascertained" obligations of UV as of the 1979 closing date were assumed by the UV Liquidating Trust, not Sharon Steel.⁷ Obviously, the CERCLA claims of the United States either did not exist "as of the closing date" because CERCLA had not yet been enacted, or at worst fall

⁵ *Foster v. Cone-Blanchard Machine Co.*, 460 Mich. 696, 706, 597 N.W.2d 506 (1999); *Synergy Methods, Inc. v. Kelly Energy Systems, Inc.*, 695 F. Sup. 1362 (D.R.I. 1988); *Robbins v. Physicians for Women's Health, Inc.*, 2009 WL 503887 *4 (Ct. Super Ct, 2009); 66 AM. JUR. 2d § 4 (2002).

⁶ The U.S. and EPA were on notice about contamination of the USS Lead site while the UV Liquidating Trust was still in existence and paying claims.

⁷ The UV Industries Liquidating Trust Agreement provided that the Liquidating Trust assumed "all the liabilities and claims (including unascertained or contingent liabilities and expenses) of UV." UV Industries Liquidating Trust Agreement § 2.4 (Mar. 24, 1980). In the Midvale case, *United States v. Sharon, UV Industries, and the UV Trust*, No. 86-C-924 (D. Utah), the Government survived a motion to dismiss on a statute of limitations issue by arguing that CERCLA claims could not have arisen until after CERCLA was enacted. United States's Memorandum of Law in Opposition to Motion to Dismiss at 27, *United States v. Sharon*, No. 86-C-924 (D. Utah Mar. 9, 1987). The Government also argued that as a contractual matter, the CERCLA liabilities of UV Industries were assumed by the UV Trust as an "unascertained" liability. United States's Memorandum in Response to the Motions for Reconsideration and Summary Judgment at 22 n.18, *United States v. Sharon*, No. 86-C-924 (D. Utah July 6, 1989). See Exhibit 2 at 11 & nn.37 & 38.

COVINGTON

Annette Lang
December 29, 2016
Page 5

into the "unascertained" bucket because even today, 37 years later, EPA still does not know how much it will cost to clean up Zone 2 or what proportion of the costs are attributable to the operations of USS Lead during UV's period of ownership.

However, the proper construction of those documents and transactions is no longer an open issue, because extensive litigation of these issues already occurred in the 1990 *Midvale* litigation discussed above, and the United States settled all its future CERCLA claims relating to UV's period of operations at all sites, including USS Lead. Those conclusions were correct, but even if they were not, the issues cannot now be reopened 26 years later.

The ownership of USS Lead by Sharon Steel, the predecessor of Mueller, constitutes at most six out of the 80 years that the site operated, or 7.5% of the total period of USS Lead's operations. Assuming again that USS Lead contributed 25% of the contamination in Zone 2, even on an unreasonable worst case basis, Mueller and Arava would potentially be exposed to liability for only 1.875% of the costs of cleaning up Zone 2. ($25\% \times 7.5\% = 1.875\%$) However, this percentage would have to be further discounted to reflect the defenses described below, including three levels of corporate veils.

The Sharon Steel Bankruptcy and Formation of MRRC.

In 1985, Sharon Steel defaulted on its bonds, and in April, 1987, went into bankruptcy. As part of the 1990 bankruptcy reorganization plan, certain of Sharon Steel's contaminated sites, including the USS Lead site, were transferred into an entity now called Mining Remedial Recovery Corporation ("MRRC"). MRRC was incorporated in 1987, two years after the USS Lead site ceased operating, and is a subsidiary of Arava, which in turn, is a subsidiary of Mueller. MRRC received the real property of those sites, their equipment, and certain related insurance assets, plus \$7.85 million in cash from the reorganized Sharon Steel, now called Mueller Industries, Inc. Significantly, the bankruptcy court specifically found that MRRC was adequately capitalized if only \$4 million of cash and certain insurance policies were transferred to it, but in fact an additional \$3.85 million, for a grand total of \$7.85 million actually paid.⁸ Moreover, pursuant to the bankruptcy court's order, MRRC specifically assumed any liabilities of Sharon Steel/Mueller relating to the USS Lead and other sites transferred to MRRC under the bankruptcy plan. Critically, the United States was a party to the Sharon Steel bankruptcy proceedings and is therefore bound by all of the bankruptcy court's rulings on this issue.⁹

⁸ On November 20, 1990, the bankruptcy court approved Sharon Steel's Third Amended & Restated Plan of Reorganization, *In re Sharon Steel Corp.*, No. 87-00207E (Bankr. W.D. Pa. Sept. 27, 1990). The court's order specifically found that the entity that became MRRC will "be adequately capitalized and solvent and the sum of each of such entity's property, at a fair valuation, is greater than the sum of each such entity's debts." Order Confirming Third Amended & Restated Plan of Reorganization, *In re Sharon Steel Corp.*, No. 87-00207E (Bankr. W.D. Pa. Nov. 20, 1990), ¶ 40, at pages 17-18.

⁹ *Adair v. Sherman*, 230 F.3d 890 (7th Cir. 2000).

COVINGTON

Annette Lang
December 29, 2016
Page 6

Loans to USS Lead to Fund Environmental Remediation.

Subsequently, USS Lead has spent approximately \$16.5 million dollars to date to clean-up the East Chicago site, including certain off site areas, but as far as we know, not in Zone 2. Most of this money was loaned to USS Lead by Arava and Mueller, who are now secured lenders specifically protected from liability relating to their loans by Section 101(20)(A) of CERCLA. In any event, it is well-settled that merely loaning money to a subsidiary, particularly as a “good Samaritan” so that it can clean-up contamination to protect public health and the environment, does not waive the protection of the corporate veil or subject the grandparent or great grandparent to liability.¹⁰

Corporate Veils.

Although, as detailed above, Arava and Mueller’s worst case potential exposure for Zone 2 clean-up costs is limited to 1.875% of such costs, under *Bestfoods, supra*, Arava and Mueller are also entirely protected from liability by multiple levels of corporate veils: (1) from USS Lead to MRRC; (2) from MRRC to Arava; and (3) from Arava to Mueller.¹¹ As indicated in the attached affidavit from USS Lead’s president, proper corporate formalities have been observed between these entities and we are aware of no basis for piercing even one of the three corporate veils. Affidavit of Michael Baum, Exhibit 5.

¹⁰ “Absent evidence that . . . loans were made for an improper purpose, financial assistance provided to a subsidiary by a parent does not support piercing the corporate veil.” *United States v. Friedland*, 137 F. Supp. 2d 1077, 1091 (D. Colo. 2001) (CERCLA case); *see also, e.g., Lowell Staats Min. Co., Inc. v. Pioneer Uravan, Inc.*, 878 F.2d 1259, 1263 (10th Cir. 1989) (“[Parent] will not be exposed to liability for the obligations of [subsidiary] when [parent] contributes funds to [subsidiary] for the purpose of assisting [subsidiary] in meeting its financial obligations and not for the purpose of perpetuating a fraud.”); *Cambridge Electronics Corp. v. MGC Electronics, Inc.*, 227 F.R.D. 313, 329 (C.D. Cal. 2004) (shareholder loaning funds to a corporation is “inconsistent with an alter ego finding” and does not support piercing the corporate veil); *Teamsters Health & Welfare Fund v. World Transp., Inc.*, 499 F. Supp. 2d 499, 504 (E.D. Pa. 2003) (rejecting piercing the corporate veil where a defendant “in loaning the corporation large sums of money, acted like a good samaritan for the survival of the corporation”); *Interfaith Community Org. v. Honeywell Int’l, Inc.*, 215 F. Supp. 2d 482, 500 (D.N.J. 2002) (the fact that an entity is “a nonoperating entity with no revenue that relies solely on [a parent entity] for its financial survival” does not weigh in favor of piercing the corporate veil, because under those circumstances the parent is not “extracting funds” from the subsidiary).

¹¹ The case law establishes that where there are multiple layers of parent entities, a party seeking to access the assets of the ultimate parent “must pierce a succession of corporate veils” up to the ultimate parent. *Corrigan v. U.S. Steel. Corp.*, 467 F.3d 718, 725 (6th Cir. 2007).

COVINGTON

Annette Lang
December 29, 2016
Page 7

Moreover, under *Bestfoods*, evidence in support of piercing the corporate veil would have to relate to the period during which disposal allegedly occurred, namely 1979 to 1985.¹² To date, EPA has brought to our attention no facts whatsoever relating to this period that would support piercing the corporate veil, or treating Arava or Mueller as owners or operators of the site, and we are aware of no such facts.

Mueller Brass Co.

You have also suggested orally that Mueller Brass Co. purportedly sent a small quantity of material to USS Lead. Mueller Brass Co. is separately incorporated as second tier subsidiary of Mueller Industries, Inc. Accordingly, the same corporate veil arguments discussed above would apply. But more fundamentally, Mueller Brass Co. did not “arrange for disposal” by selling valuable material to USS Lead for recycling.¹³

* * * *

As you know, the purpose of the Superfund funded with tax money was to pay for the orphan shares of defunct companies such as USS Lead at sites such as the East Chicago site. With 20/20 hindsight, the United States may regret its decision to make a global settlement with the UV Liquidating Trust in the *Midvale* case for \$11 million for all of UV’s legacy sites, or perhaps even its decision not to object to the capitalization of MRRC during the Sharon Steel bankruptcy. But disagreement with historical decisions does not justify now trying to obtain additional funding for the East Chicago lead cleanup from parties such as Arava and Mueller, who not only do not bear legal responsibility under established Supreme Court precedent, but who have also already voluntarily paid more than their fair share.

Based on this history, we respectfully suggest that EPA has no colorable basis to name Arava and/or Mueller as responsible parties on a unilateral administrative order to clean-up Zone 2. Clearly, EPA is on notice that both Mueller and Arava have abundant “sufficient cause” not to

¹² It is black-letter law that whether to pierce the corporate veil is determined as of “the time of the transaction complained of.” *Wm. Passalacqua Builders, Inc. v. Resnick Developers S., Inc.*, 933 F.2d 131, 138 (2d Cir. 1991); *Cont’l Bankers Life Ins. Co. v. Bank of Alamo*, 578 S.W.2d 625, 632 (Tenn. 1979) (same). See also *New York State Electric & Gas Corp. v. FirstEnergy Corp.*, 808 F. Supp. 2d 417, 499–500 (N.D.N.Y. 2011), *aff’d in part, vacated in part, remanded*, 766 F.3d 212 (2d Cir. 2014) (applying this rule to environmental pollution).

¹³ To hold an entity liable as having “arranged for disposal . . . of hazardous substances” under 42 U.S.C. § 9607(a)(3) requires showing an “intentional step[.]” to dispose of those substances; “[L]egitimate sale[s]” of “useful product[s],” do not qualify even if the “peripheral result” is some disposal of a hazardous substance, *Burlington Northern & Santa Fe Railway Co. v. United States*, 556 U.S. 599, 611, 612 (2009). The Seventh Circuit recently rejected a claim of arranger liability in *NCR Corp. v. George A. Whiting Paper Co.*, 768 F.3d 682 (7th Cir. 2014) in circumstances directly analogous to those of Mueller Brass. Copy attached as Exhibit 6.

COVINGTON

Annette Lang
December 29, 2016
Page 8

comply with such an order under CERCLA § 106(b)(1), and EPA has provided no facts or legal theories whatsoever to suggest otherwise. No valid purpose would be served by naming these entities. Indeed, the only effect would be to redirect public scrutiny away from EPA for its handling of Zone 2 of the East Chicago site by blaming parties who are clearly not responsible under governing Supreme Court precedents, thereby unjustly making such parties targets for ancillary private litigation.

We look forward to our further discussions on January 5.

Very truly yours,

A handwritten signature in black ink that reads "E. Donald Elliott". The signature is written in a cursive, flowing style.

E. Donald Elliott
Thomas R. Brugato

cc: Steven Kaiser Office of Regional Counsel, Environmental Protection Agency-Region 5
Gary Wilkerson, Vice President, General Counsel and Secretary, Mueller Industries, Inc.
Chris Miritello, Deputy General Counsel, Mueller Industries, Inc.

APPENDIX M

**TO
Z2 SOIL UAO**

**Letter from E. Donald Elliott, Senior Of
Counsel, Covington & Burling LLP, to John
N. Moscato, Senior Counsel, Dep't of Justice
(Nov. 6, 2017)**

COVINGTON

BEIJING BRUSSELS LONDON LOS ANGELES
NEW YORK SAN FRANCISCO SEOUL
SHANGHAI SILICON VALLEY WASHINGTON

E. Donald Elliott

Covington & Burling LLP
One CityCenter
850 Tenth Street, NW
Washington, DC 20001-4956
T +1 202 662 5631
delliott@cov.com

BY EMAIL to Annette.lang@usdoj.gov AND U.S. MAIL

November 6, 2017

Annette M. Lang
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, DC 20044

**Re: Response to DOJ's Letter Alleging Mueller CERCLA Liability at
the East Chicago Superfund Site**

Dear Annette:

We write in response to your letter of October 4, 2017 on behalf of Mueller Industries, Inc. (“Mueller”¹) and Arava Natural Resources Co., Inc. We appreciate you setting forth the basis for your contentions that Mueller “succeeded to the CERCLA liability of UV/USSRAM” even before the statute was enacted by purchasing certain assets in 1979.² **The central fallacy in the government’s argument is that it ignores that the 1979 purchase agreement is governed by New York law,³ and that the New York courts, including the highest court of the state, have ruled that the language used did NOT transfer any such future, after-arising obligations.** *Grant-Howard Assocs. v. Gen. Housewares Corp.*, 472 N.E.2d 1 (N.Y. 1984); *Georgia-Pacific Consumer Prods., LP v. Int’l Paper Co.*, 566 F. Supp. 2d 246 (S.D.N.Y. 2008).

For purposes of brevity, we focus on responding to your arguments relating to the interpretation of the 1979 asset purchase agreement, which conclusively demonstrate that Sharon Steel, Inc. (“Sharon”) did *not* assume from UV Industries, Inc. (“UV”) the risk that pre-acquisition operations of USS Lead would later result in a claim for response costs under an after-enacted

¹ We use the term “Mueller” to refer to reorganized Sharon Steel as well as Arava as indicated by context.

² We regret, however, that you have refused to disclose to us your basis for claiming that Mueller is responsible for the smaller portion of clean-up costs attributable to USS Lead’s period of operation from 1979-1985 as a lower tier subsidiary of Mueller. This impedes the settlement process, as we are unable to evaluate the strength or weakness of your arguments, and we hope you will reconsider.

³ Agreement for Purchase of Assets ¶ 19 (Nov. 26, 1979), Ex. 1 at ¶ 19.

COVINGTON

Annette Lang
November 6, 2017
Page 2

statute.⁴ We fully agree with your position that “Mueller indisputably is not a ‘mere continuation’ of UV/USSRAM,” Letter at 11, and the corresponding implication that the 1979 asset purchase agreement and related assumption of liabilities is your lone basis for attempting to hold Mueller responsible for the debts of UV/USSRAM. Moreover, as discussed below, the government offers no basis whatsoever for assuming that USS Lead’s clean-up obligations, even if had they existed in 1979, had become the debts of its parent UV/USSRAM by 1979 and were assumed by contract by Sharon, as at that time USS Lead was a going concern and capable of answering for its own debts.

There are too many factual omissions, incorrect legal assertions, and half-truths in the Government’s October 4, 2017 letter to respond to them all. However, the following key points demonstrate that the Government’s position is flat-out wrong:

- 1. New York Law Is Clear that Claims for Future Superfund Response Costs Were NOT a Liability “as of” a Pre-Enactment Closing Date.** The transactional documents provided that Sharon as asset purchaser was only assuming liabilities “as of the closing date.” New York case law is directly on point that the assumption of existing liabilities as of the closing date does NOT include after-enacted statutory liability for response costs that had not yet been incurred. *Georgia-Pacific Consumer Prods., LP v. Int’l Paper Co.*, 566 F. Supp. 2d 246 (S.D.N.Y. 2008); *Grant-Howard Assocs. v. Gen. Housewares Corp.*, 472 N.E.2d 1 (N.Y. 1984). Other cases addressing CERCLA all reach the same conclusion, and the Government cites no contrary authority addressing agreements with similar language. *State ex rel. Bellaire Sanitation, Inc. v. Gopher Oil Co.*, No. C8-94-225, 1994 WL 328631 (Minn. Ct. App. Sept. 16, 1994); *Gopher Oil Co. v. Bunker*, 84 F.3d 1047 (8th Cir. 1996); *United States v. Vermont Am. Corp.*, 871 F. Supp. 318 (W.D. Mich. 1994).
- 2. New York Law Clearly Holds that Claims for Future Superfund Response Costs Are NOT a Contingent Liability.** The “contingent” liability language simply cannot bear the weight the Lang letter places on it. Enactment of a new statute creates a new liability; it is not a contingent liability. *Grant-Howard*, 472 N.E.2d at 3-4 (New York law). Indeed, a court has reached precisely that conclusion in the context of CERCLA: “On its face, defendants’ argument seems to stretch the meaning of the word contingent. A contingent liability is defined as, ‘One which is not now fixed and absolute, but which will become so in the case of the occurrence of some future and uncertain event.’ BLACK’S LAW DICTIONARY, 321 (6th Ed. 1990). To say that the ‘future event’ may include the passage of a law creating the liability is pointless and illogical. A liability is nonexistent until it is created by law.” *Chrysler Corp. v. Ford Motor Co.*, 972 F. Supp. 1097, 1108-09 (E.D. Mich. 1997).

⁴ For the record, we are preserving all our defenses and reserve the right to respond in the future to the various other arguments you advance in your letter. We are not doing so at this time because the contractual argument is dispositive in Mueller’s favor.

3. **Multiple Contemporaneous Documents Support Mueller's Position, and Any Ambiguity Weighs Against the Government.** As described below, there are multiple contemporaneous transaction documents that indicate the parties did not intend Sharon to assume new obligations arising under after-enacted statutes, but in fact intended them to remain with UV and then go to the UV Liquidating Trust. To the extent the contractual language is ambiguous, these contemporaneous indications of the parties' intent are conclusive in Mueller's favor. Moreover, any ambiguity cuts *against* the government's current argument and must be resolved in Mueller's favor: New York law requires an "unmistakable intent" to transfer liabilities before a court will enforce such an obligation. *Haynes v. Kleinfewers*, 921 F.2d 453, 456 (2d Cir. 1990) (applying New York law, citing *Heimbach v. Metro. Transp. Auth.*, 553 N.E.2d 242 (N.Y. 1990)). Indeed, an alleged indemnification provision "must be strictly construed to avoid reading into it a duty which the parties did not intend to be assumed." *Hooper Assocs., Ltd. v. AGS Computers, Inc.*, 548 N.E.2d 903, 905 (N.Y. 1989); *see also Olin Corp. v. Consol. Aluminum Corp.*, 5 F.3d 10, 15 (2d Cir. 1993) (applying same standard in the CERCLA context).
4. **Federal Precedent Directly on Point Demonstrates that Under These Specific Agreements the UV Trust, NOT Sharon Steel/Mueller, Was and Is the Successor to the Superfund Liabilities of UV Industries.** In 1989-1990, the government successfully litigated the point that the Superfund liabilities of UV Industries under the very same documents at issue here were "unascertained" liabilities that went to the UV Liquidating Trust. *See* Plaintiff United States of America's Memorandum in Response to the Motions for Reconsideration and Summary Judgment on Behalf of Defendants UV Industries, Inc. Liquidating Trust and UV Industries, Inc., and in Support of its Cross Motion for Summary Judgment at 22 n.18, *United States v. Sharon, UV Industries, and the UV Trust*, No. 86-C-924J (D. Utah July 6, 1989). It won summary judgment, recovered \$9.8 million and consented to the liquidation of the UV Trust in exchange for an increase of the payment to \$11 million. The government's position was based on its considered (and correct) reading of the contract language, as well as the equitable policy judgment that the UV stockholders, who were the beneficiaries of the UV Liquidating Trust, had benefitted financially from the historic disposal policies of UV and its subsidiaries rather than the innocent purchaser of assets that had had nothing to do with disposal practices prior to 1979. That precedent is controlling here.⁵
5. **The Corporate Veil Between USS Lead and UV Industries.** Even assuming *arguendo* that all of the government's contractual arguments about the 1979 asset

⁵ As you were one of the attorneys who represented the UV Trust in the Midvale case, I am sure you are aware that the government is now making many of the same arguments that the UV Trust made in 1989, and which were rejected by the Court. We stand by the preclusion arguments in our December 29, 2016 letter that the government is bound by its positions in the Midvale case despite its change in attorneys.

COVINGTON

Annette Lang
November 6, 2017
Page 4

purchase are correct, and are not precluded by its inconsistent positions in the 1989 litigation, Sharon/Mueller would have only assumed the liabilities of *UV Industries, Inc.*, NOT its subsidiary USS Lead. The government's theory that purchasers of assets automatically succeed to Superfund liabilities related to all the assets they purchase was specifically rejected by the Supreme Court in *United States v. Bestfoods*, 524 U.S. 51 (1998) in favor of traditional tests for piercing the corporate veil.

I. **The Plain Text of the Contract, the Governing Case Law, and Multiple Other Lines of Reasoning Compel the Conclusion That Sharon Did *Not* Assume UV's CERCLA Liabilities.**

A. **The Plain Language of the Contract Is Limited to Liabilities "as of the Closing Date," and Courts Have Held That This Type of Language In Pre-CERCLA Agreements Precludes Assumption of a CERCLA Liability That Did Not Yet Exist.**

The contractual language provides that the "assumed liabilities" of UV that were assumed by Sharon were in relevant part limited to those "as of the Closing Date" in 1979:

all debts, obligations, contracts and liabilities of the Seller ***as of the Closing Date*** of any kind character or description, direct or indirect, whether accrued, absolute, contingent or otherwise, except the Non-Assumed Liabilities as hereinafter defined

Agreement for Purchase of Assets ¶ 1(d) (Nov. 26, 1979) (emphasis added) (Exhibit 1).

The Instrument of Assumption of Liabilities used similar language, providing that Sharon assumed liabilities "as of the date hereof":

all the debts, obligations, contracts and liabilities of UV ***as of the date hereof***, of any kind, character or description, direct or indirect, whether accrued, absolute, contingent or otherwise, and whether asserted before or after such date

Instrument of Assumption of Liabilities at 2 (Nov. 26, 1979) (emphasis added) (Exhibit 2).

The case law is quite clear that the "as of the Closing Date" language means that Sharon did *not* assume any liabilities under a later-enacted statute, such as CERCLA.

In *Georgia-Pacific Consumer Products, LP v. International Paper Co.*, 566 F. Supp. 2d 246 (S.D.N.Y. 2008), the court interpreted very similar language under New York law and held that after-enacted CERCLA liabilities were not within the scope of the assumption. There, the purchaser assumed:

all of Federal's debts and liabilities of every kind, character or description, whether known or unknown, whether disclosed or undisclosed, whether accrued,

COVINGTON

Annette Lang
November 6, 2017
Page 5

absolute, contingent or otherwise, and whether or not reflected or reserved against in Schedules A or B to the Agreement and which are directly attributable to the New Jersey Operations, as the same exist on the date hereof, and does hereby agree to pay, perform and discharge, when due, all of the said debts and liabilities.

Id. at 249.

This language is nearly identical to that of the 1979 APA: the purchaser assumed “all . . . liabilities,” including those of “every kind, character or description,” and “contingent” liabilities – the very same language you rely on in arguing that Mueller assumed after-arising CERCLA liabilities. Yet the court found it quite clear that the purchaser’s “assumption of liabilities did not include those arising under CERCLA, a later-enacted . . . law.” *Id.* at 250. While you briefly mention the case in a footnote, the only distinguishing language you point to is the phrase “directly attributable to the New Jersey Operations, as the same exist on the date hereof.” But the language the court obviously relied on was the “on the date hereof” language, which is effectively identical to that in the 1979 APA.

Substantial additional authority confirms this result, with courts regularly reaching the same conclusion as *Georgia-Pacific*. In *State ex rel. Bellaire Sanitation, Inc. v. Gopher Oil Co.*, No. C8-94-225, 1994 WL 328631 (Minn. Ct. App. Sept. 16, 1994), the court interpreted the following language, which is again nearly identical to that of the 1979 APA:

*All liabilities of the Company of any nature, whether accrued, absolute, contingent, or otherwise, existing at closing, to the extent not reflected or reserved against in full in the Company's financial statements or otherwise mentioned or excepted herein, * * * arising out of transactions entered into, or any state of facts existing, prior to such date.*

Id. at *1 (emphasis and omission in original).

Once again, the court had no difficulty in concluding that an after-enacted state statute analogous to CERCLA was not within the scope of the assumed liabilities, because “[t]he qualifying phrase ‘existing at closing’ clearly limits Gopher State’s liability,” notwithstanding the fact that “[a]ll liabilities” of “any nature” including “contingent” liabilities were assumed. *Id.* The Eighth Circuit followed this decision, holding that CERCLA liabilities did not arise until “after the agreement” was entered into. *Gopher Oil Co. v. Bunker*, 84 F.3d 1047, 1052 (8th Cir. 1996).

A similar agreement was addressed in *United States v. Vermont American Corp.*, 871 F. Supp. 318 (W.D. Mich. 1994). There, the agreement provided that the buyer assumed, among other obligations, “[a]ll additional debts, obligations, and liabilities of the seller, whether or not matured and whether or not contingent, existing on the Closing date.” *Id.* at 321. The court

COVINGTON

Annette Lang
November 6, 2017
Page 6

found that because CERCLA was enacted after the agreement “as a matter of law . . . there is no question that the CERCLA liability was not a liability that existed on the closing date.” *Id.*⁶

B. New York Case Law Further Supports the Conclusion that Future CERCLA Liabilities of USS Lead Were Not Assumed by Sharon Steel.

New York law, which governs interpretation of the 1979 APA agreement,⁷ reinforces this CERCLA case law.

In *Grant-Howard Associates v. General Housewares Corp.*, 472 N.E.2D 1 (N.Y. 1984), the New York Court of Appeals considered a clause whereby the purchaser agreed to assume only those “obligations and liabilities” of the seller’s business “which exist[ed] at the Closing Date,” *id.* at 2. The seller brought suit, arguing that tort claims based on injuries which occurred after the sale were contingent liabilities which the buyer had assumed. The Court of Appeals rejected this argument because it concluded that the liabilities did not exist at the time of sale. The Court of Appeals recognized that “‘contingency’ invokes uncertain events,” but held that “the uncertainty should be restricted to the success of asserting an existing claim, *rather than expanding it to include [an] altogether unpredictable event . . .* Were plaintiffs’ position to be adopted, a purchaser would be unable to meaningfully limit its liability . . .” *Id.* at 3-4 (emphasis added). Precisely the same rationale applies to the 1979 APA, and requires concluding that the after-arising CERCLA obligations were not transferred to Sharon.

New York courts have also repeatedly held that “[a] court may not construe an agreement so that it is modified by a subsequent statutory enactment which changes the rights and obligations of the parties absent a clear expression in the contract that such is the parties’ intention.” *Huskission v. Sentry Ins.*, 123 A.D.2d 832, 833 (N.Y. App. Div. 2d Dep’t 1986); *see also Travelers Indem. Co. v. Orange & Rockland Utilities, Inc.*, 73 A.D.3d 576, 577 (N.Y. App. Div. 1st Dep’t 2010) (“[A] contract generally incorporates the state of the law in existence at the time of its formation . . .”); *Pioneer Transp. Corp. v. Kaladjian*, 105 A.D.2d 698, 698 (N.Y. App. Div. 2d Dep’t 1984) (“In the absence of a clear expression in the contract that such is the parties’ intention, a court may not construe an agreement so that it is modified by a subsequent statutory enactment which changes the rights and obligations of the parties.”).

Moreover, to the extent there is ambiguity in the contract, that compels a conclusion that Sharon did *not* assume CERCLA liabilities. New York requires an “unmistakable intent” to

⁶ The one case reaching a contrary result is *A-C Reorganization Trust v. E.I. DuPont De Nemours & Co.*, No. 94-574, 1997 WL 381962 (E.D. Wis. Mar. 10, 1997). However, that court failed entirely to discuss the limiting language in the assumption agreement that limited the assumed liabilities to those that “exist at the closing date.” *Id.* at *5. That unpublished decision has never been followed, and indeed the *Georgia-Pacific* court expressly declined to follow it, commenting on the decision’s lack of “analysis.” *Georgia-Pacific*, 566 F. Supp. 2d at 253.

⁷ Ex. 1 at ¶ 19.

COVINGTON

Annette Lang
November 6, 2017
Page 7

transfer liabilities before a court will enforce such an obligation. *Haynes v. Kleinewefers*, 921 F.2d 453, 456 (2d Cir. 1990) (applying New York law, citing *Heimbach v. Metro. Transp. Auth.*, 553 N.E.2d 242 (N.Y. 1990)). Indeed, an alleged indemnification provision “must be strictly construed to avoid reading into it a duty which the parties did not intend to be assumed.” *Hooper Assocs., Ltd. v. AGS Computers, Inc.*, 548 N.E.2d 903, 905 (N.Y. 1989); *see also Olin Corp. v. Consol. Aluminum Corp.*, 5 F.3d 10, 15 (2d Cir. 1993) (applying same standard in the CERCLA context).

C. The Government’s Alternative Interpretation of the “as of the Closing Date” Language Is Unsupported by Precedent and Incorrect.

Your attempt to distinguish the favorable case law – which deals with nearly identical language – rests on two paragraphs arguing that there is an outcome-determinative difference between language referring to “liabilities . . . existing as of the closing date” and “liabilities . . . as of the closing date.” Letter at 5-6. That is wrong, and you cite no case law finding that the former language is *required* to limit assumed liabilities to those existing at the time of sale, nor any finding that the latter language is *sufficient* to transfer after-enacted CERCLA liabilities.⁸

⁸ All of the cases you cite in support of your position that Sharon assumed the future-arising CERCLA liabilities do not contain limitations to liabilities as of the closing date in the relevant contractual language, and so are entirely inapposite. *Peoples Gas Light & Coke Co. v. Beazer East, Inc.*, 802 F.3d 876, 881-82 (7th Cir. 2015) (release of “liability of any character” includes release of CERCLA liabilities); *Kerr-McGee Chem. Corp. v. Lefton Iron & Metal Co.*, 14 F.3d 321, 326-27 (7th Cir. 1994) (assumption of “any and all” liabilities relating to “pollution”); *E.I. Du Pont de Nemours & Co. v. United States*, 365 F.3d 1367, 1372 (Fed. Cir. 2004) (assumption of “any” losses arising out of certain conduct); *White Consol. Indus., Inc. v. Westinghouse Elec. Corp.*, 179 F.3d 403, 410 (6th Cir. 1999) (assumption of “[a]ll” *unknown* liabilities); *Dent v. Beazer Materials & Servs.*, 156 F.3d 523, 534 (4th Cir. 1998) (assumption of “any and every claim”); *ALCOA v. Beazer E., Inc.*, 124 F.3d 551, 566 (3d Cir. 1997) (assumption of “all of the liabilities and obligations”); *Smithkline Beecham Corp. v. Rohm & Hass Co.*, 89 F.3d 154, 159 (3d Cir. 1996) (assumption of “[a]ll” liabilities arising out of pre-closing conduct); *Joslyn Mfg. Co. v. Koppers Co.*, 40 F.3d 750, 754 (5th Cir. 1994) (assumption of “all” liability relating to certain conduct); *United States v. Iron Mountain Mines, Inc.*, 987 F. Supp. 1233, 1241 (E.D. Cal. 1997) (assumption of “all of the liabilities”); *see also Marmon Grp., Inc. v. Rexnord, Inc.*, 822 F.2d 31, 33 (7th Cir. 1987) (reversing on procedural grounds, holding that the scope of the indemnity clause could not be determined at the motion to dismiss stage, but declining to opine about the clause’s scope).

Indeed, two of the cases you cite (in addition to *Vermont American and Georgia-Pacific*) *support* the position that the assumption of liabilities as of the closing date does not include future-arising liabilities. In *Olin Corp. v. Consolidated Aluminum Corp.*, 5 F.3d 10 (2d Cir. 1993), the purchaser assumed “all liabilities” “as they exist on the Effective Time *or arise thereafter*,” which the court held was language sufficient to encompass “future unknown” CERCLA liabilities, *id.* at 15-16 (emphasis added). The court relied on the “arise thereafter” (continued...)

COVINGTON

Annette Lang
November 6, 2017
Page 8

As a textual matter, an agreement to assume “liabilities of the Seller as of the closing date” would, in common usage, be understood to encompass those liabilities that existed (including in contingent or other form) as of the closing date. Your alternative reading, that the language “simply provides a cut-off date for the acts or omissions of UV/USSRAM that Mueller assumes liability for,” Letter at 5, does not square with the text – had that been the intended position, then the agreement would have assumed all liabilities arising out of actions that took place *before* the closing date, not liabilities “as of” the closing date.

Indeed, the case law confirms that assumption of liabilities “as of” a date limits the assumption to liabilities that exist as of that date. For example, one court has held that the plain language of an assumption of liability “as of” a closing date means that “the agreement says that the [purchaser] agrees to assume only those liabilities in existence ‘as of [the closing].’” *Alabama v. FDIC*, 840 F. Supp. 2d 1305, 1311 (M.D. Ala. 2012); *see also Fisher v. A.O. Smith Harvestore Prods., Inc.*, 145 A.3d 738, 751 (Pa. Super. 2016) (Dubow, J., concurring) (agreement to pay for “liabilities . . . as of the Closing Date” means that in order for the buyer “to assume a liability, the liability must exist as of the closing date”). You cite no authority in support of an opposite interpretation of the language “as of the closing date.”

Finally, you argue that Mueller’s interpretation would render the phrases “all,” “any kind, character, or description,” and “contingent” superfluous. That is not so: there can be contingent liabilities, and other forms of liabilities, “as of the closing date.” Mueller’s position is it did indeed assume “all” liabilities of “any kind,” but *only* those existing “as of” the date of the asset sale. And, as discussed in the following section, liabilities created by an after-arising statute are not contingent. No word is being read out of the contract, nor is any word being rendered superfluous. Rather, the contract is simply being afforded its plain textual meaning.

D. Future CERCLA Liabilities Were Not Contingent Liabilities in 1979.

Your argument that Sharon Steel must have assumed the after-arising CERCLA liabilities because they were “contingent” liabilities at the time of sale is incorrect. Construing a “contingent” liability to encompass the enactment of a new law would inappropriately expand the meaning of the term. Indeed, the one case to squarely address this issue in the CERCLA context has rejected your interpretation. *Chrysler Corp. v. Ford Motor Co.*, 972 F. Supp. 1097 (E.D. Mich. 1997). There, the purchaser assumed “all liabilities . . . existing on the closing date of every nature whatsoever, whether absolute [or] contingent.” *Id.* at 1108. The court found that CERCLA liabilities were not encompassed because the statute had not yet been enacted, and explained that the future enactment of a statute was not a “contingent” liability:

language, and acknowledged that under New York law such a “clear and unmistakable intent” to indemnify or assume liabilities must exist. *Id.*; *see also John S. Boyd Co. v. Boston Gas Co.*, 992 F.2d 401, 406-07 (1st Cir. 1993) (assumption of obligations “pertaining only to the existing business” and not “future” liabilities does not include CERCLA assumption of liabilities, even where the language indicates that “all the duties and liabilities” were assumed).

COVINGTON

Annette Lang
November 6, 2017
Page 9

On its face, defendants' argument seems to stretch the meaning of the word contingent. A contingent liability is defined as, 'One which is not now fixed and absolute, but which will become so in the case of the occurrence of some future and uncertain event.' BLACK'S LAW DICTIONARY, 321 (6th Ed. 1990). To say that the 'future event' may include the passage of a law creating the liability is pointless and illogical. A liability is nonexistent until it is created by law.

Id. at 1108-09. Precisely the same analysis applies to your attempt to broadly construe the term "contingent" in the 1979 APA to encompass liability stemming from after-enacted statutes.⁹

Other courts, including those of New York law, are in accord with this conclusion. As the Second Circuit has explained:

There is a difference between a contingent liability and a plain 'contingency.' A contingent liability is one thing, a contingency, the happening of which may bring into existence a liability, is another, and a very different thing. In the former case there is a liability which will become absolute upon the happening of a certain event; in the latter there is none until the event happens. The difference is simply that which exists between a conditional debt or liability and none at all.

Bush v. Remington Rand, 213 F.2d 456, 462 (2d Cir. 1954) (internal quotation marks omitted). CERCLA's passage created new liability; it makes no sense to see it as an extant liability at the time of the 1979 Purchase Agreement that was triggered by the occurrence of a subsequent event.

Grant-Howard Associates v. General Housewares Corp., 472 N.E.2d 1 (N.Y. 1984), discussed above, also plainly held under New York law that "contingent" liabilities do not include liabilities based on events that occur after the transaction date, because "the uncertainty should be restricted to the success of asserting an existing claim, *rather than expanding it to include the altogether unpredictable event* Were plaintiffs' position to be adopted, a purchaser would be unable to meaningfully limit its liability" *Id.* at 3-4 (emphasis added).

Similarly, in *Climatrol Industries, Inc. v. Fedders Corp.*, 501 N.E.2d 292 (Ill. App. Ct. 1986), the court construed an agreement by which the buyer assumed "liabilities or obligations . . . of any nature, whether accrued, absolute, contingent or otherwise which exist on the Closing Date" – language effectively identical to that contained in the 1979 agreement, *id.* at 293. The court concluded that the agreement "unambiguously" covered "only those liabilities which existed on the closing date" and rejected an argument that tort claims accruing after the date of sale constituted contingent liabilities, *id.* at 294. To hold otherwise, the court concluded, would

⁹ Even if it were true that Sharon Steel assumed UV Industries' CERCLA liabilities, it would only have assumed the CERCLA liabilities of UV Industries itself, not UV's subsidiary, USS Lead. *See generally United States v. Bestfoods*, 524 U.S. 51 (1998).

COVINGTON

Annette Lang
November 6, 2017
Page 10

mean the purchaser “assumed unlimited liabilities, despite its clear intention to assume only specifically disclosed liabilities.” *Id.*; see also *Chigos v. Werner Co.*, No. 12-1350, 2014 WL 12596525, at *5 (M.D. Fla. Feb. 26, 2014) (rejecting expansive interpretation of contingent liability language in assumption of liability agreement because it would make it “difficult, if not impossible, for [the buyer] to have meaningfully limited the liability it was willing to assume, as it would have been practically impossible to forecast the scope of potential future claims”).

Precisely the same reasoning applies to the 1979 APA. Sharon agreed to assume “contingent liabilities,” but only those existing “as of” the closing date. Case law makes clear that contingent liability does not mean any subsequent imaginable liability, nor does it encompass after-enacted statutes.

E. Other Contemporary Agreements and Documents Demonstrate the Intent of the Parties to Transfer Only Liabilities Existing as of the Closing Date to Sharon.

Mueller submits that the ordinary, plain-language reading of the contractual language is that the liabilities assumed are only those as of the closing date, and the CERCLA liabilities plainly were not liabilities “as of the closing date,” because the statute had not even been enacted. However, even if the 1979 agreement was viewed as ambiguous on this point, other contemporaneous agreements between the parties conclusively show that the parties did *not* contract for Sharon to assume UV Industries’ future liabilities.¹⁰

First, a November 26, 1979 letter agreement between Sharon Steel and UV Industries – executed the same day as the asset purchase agreement – recites that under the asset purchase agreement “Sharon will purchase all of the assets and assume all of the liabilities of UV *existing on November 26, 1979.*” Sharon Steel - UV Industries, Inc. Agreement (Nov. 26, 1979) (Exhibit 3).

Second, the contemporaneous 10-K filings of both UV Industries and Sharon Steel confirm that only liabilities existing as of the closing date were transferred. In the 10-K filing attaching the liquidating trust agreement, UV Industries, Inc. explained that the UV-Sharon agreement involved Sharon assuming “all of UV’s debts, obligations, contracts and liabilities *existing on such date.*” UV Industries FY 1979 10-K at 2 (emphasis added) (Exhibit 4). Sharon Steel articulated precisely the same understanding in its 10-K filing, noting that Sharon assumed “all of UV’s liabilities (except for certain tax liabilities) *existing on such date.*” Sharon Steel FY 1979 10-K Item 1 (emphasis added) (Exhibit 5).

¹⁰ While Mueller believes the contractual assumption of liabilities unambiguously excludes any assumption of CERCLA liabilities, this extrinsic evidence provides further support for that position and may be considered to the extent the “contract is ambiguous.” *U.S. Fire Ins. Co. v. Gen. Reinsurance Corp.*, 949 F.2d 569, 574 (2d Cir. 1991).

COVINGTON

Annette Lang
November 6, 2017
Page 11

Third, a March 24, 1980 contract between UV Industries, Inc. and the UV Liquidating Trust's trustees recites that the 1979 asset purchase agreement involved Sharon Steel's "assumption of substantially all of UV's debts, obligations, contracts and liabilities *existing on such date . . .*" UV Industries – UV Liquidating Trust Agreement at 1 (Mar. 24, 1980) (emphasis added) (Exhibit 6). Thus, UV's own internal contractual documents demonstrate that only existing liabilities were transferred to Sharon.

Fourth, in the APA, UV represented and warranted as follows regarding its liabilities:

The financial statements contained (i) in Seller's annual report on Form 10-K for the year ended December 31, 1978 and (ii) in Seller's Quarterly Report on Form 10-Q for the quarter ended September 30, 1979 ("Seller's Interim Statements") are true and complete in all material respects . . . and *fairly reflect the financial condition, assets and liabilities (whether accrued, absolute, contingent or otherwise) of the Seller and its Subsidiaries (as defined below) as of the dates thereof . . .*

Ex. 1 ¶ 5.c. (emphasis added).

Accordingly, UV represented that its financial statements in its 10-K and 10-Q filings "fairly reflect" the "liabilities" of UV and its subsidiaries, "whether accrued, absolute, contingent or otherwise." But those filings do not contain any indication of environmental liabilities. Accordingly, because parallel language was used in this provision describing the liabilities of UV, and those liabilities did not include any CERCLA liabilities, that provides further evidence that the parties did not intend in the APA to transfer any post-enactment environmental liabilities to Sharon. See UV Industries, Inc., FY 1978 10-K at F-5 (April 05 1979) (listing only \$6 million in long-term liabilities, and not discussing potential CERCLA liabilities) (Exhibit 7); *id.* at 13 ("The Company believes it is in material compliance with applicable environmental laws and regulations and is not aware of any ecological problems at any of its operations which are material to its business."); UV Industries, Inc., 10-Q at 7 (Nov. 14, 1979) ("Management does not know of any material contingent liability.") (Exhibit 8); *id.* at 2 (listing \$33 million in "[d]eferred income taxes and other long-term liabilities," most of which are deferred income taxes, given that the 1978 10-K listed nearly \$29 million in deferred incomes taxes, see Ex. 7 at F-5).

Indeed, the *Chrysler* court reached precisely that conclusion with respect to a similar agreement, explaining in support of its conclusion that a pre-CERCLA agreement did not transfer CERCLA liabilities that when the buyer "accepted responsibility for contingent liabilities existing on the date of closing, neither party understood those contingent liabilities to include environmental liabilities. No such liability was disclosed in [seller's] Annual Reports for the period." 972 F. Supp. at 1110.

COVINGTON

Annette Lang
November 6, 2017
Page 12

F. The UV Liquidating Trust *Did* Assume UV Industries' After-Arising CERCLA Liabilities, as the Government Previously Argued.

In the *Midvale* litigation, the Government argued that the UV Liquidating Trust—and only the Trust—assumed UV's CERCLA liabilities.¹¹ In support, it relied on the assumption of liabilities agreement executed by the UV Liquidating Trust, which provided that the UV Liquidating Trust assumed:

all debts, obligations, contract and liabilities and expenses of UV as of the date [of the assumption], of any kind, character or description, direct or indirect, whether accrued, absolute, contingent, ascertained or otherwise, and whether asserted before or after such date to the extent not assumed and paid for by Sharon Steel Corporation

Plaintiff United States of America's Memorandum in Response to the Motions for Reconsideration and Summary Judgment on Behalf of Defendants UV Industries, Inc. Liquidating Trust and UV Industries, Inc., and in Support of its Cross Motion for Summary Judgment at 21, *U.S. v. Sharon et al.*, No. 86-C-924J (D. Utah July 6, 1989) (alterations in original) (quoting UV Liquidating Trust assumption agreement) (Exhibit 9).¹²

Because the Trust assumed liabilities only “to the extent not assumed and paid for by Sharon Steel Corporation,” the necessary implication of the Government's argument in the *Midvale* case that the UV Liquidating Trust was the successor to UV Industries is that Sharon Steel did *not* assume UV's CERCLA liabilities. That is because under the UV Liquidating Trust assumption agreement, the Liquidating Trust assumed only liabilities *not* assumed by Sharon Steel, and the Government successorship argument as to the UV Liquidating Trust was founded on the assumption of liabilities agreement.

Thus, while as a hypothetical matter it may be possible, as you suggest in your letter, for multiple entities to assume the same liability, the plain language of these agreements makes clear that the CERCLA liabilities could have gone *only* to one party, and the Government has already taken the (correct) position that those liabilities went to the Trust. See Reply of the United States to Defendants' Oppositions to the United States' Motion for Partial Summary Judgment and Answer in Opposition to Defendants' Cross-Motions for Summary Judgment at

¹¹ See, e.g., Transcript of Summary Judgment Hearing at 37:24-38:1, *U.S. v. Sharon et al.*, No. 86-C-924J (D. Utah Aug. 14, 1990) (Ben Fisherow representing to the court that “[t]he [UV] Trust is *the* successor to the United States Smelting, Mining & Refining Company which owned [and] operated this site for decades” (emphasis added)) (Exhibit 11).

¹² See also UV Industries, Inc. Liquidating Trust Agreement ¶ 2.4 (Exhibit 4) (“The Trustees hereby assume all of the liabilities and claims (including unascertained or contingent liabilities and expenses) of UV.”)

COVINGTON

Annette Lang
November 6, 2017
Page 13

17, *U.S. v. Sharon et al.*, No. 86-C-924J (D. Utah June 21, 1990) (“The Trust is the successor to UV. The instrument of Assumption of Liabilities executed by the Trust . . . provides that the Trust assumed UV’s liabilities.”) (Exhibit 10).

G. It Would Be Inequitable to Try to Force Mueller, a Successor to an Innocent Purchaser of Assets (Sharon), to Pay for UV’s CERCLA Liabilities.

Moreover, it would be fundamentally unfair to impose liability on Mueller for UV Industries’ CERCLA liabilities: it was the UV Liquidating Trust and its stockholders, *not* Sharon Steel, that benefitted from any release of hazardous substances from the USS Lead facility before Sharon’s purchase in 1979. *See Olin Corp. v. Consolidated Aluminum Corp.*, 5 F.3d 10, 16 (2d Cir. 1993) (noting the “very strong equitable argument” that it would be unfair to force an asset purchaser “to assume a liability that did not exist at the time of contract for conditions that it did not create”).

Indeed, in the *Midvale* case one of the Government’s arguments for holding the UV Liquidating Trust liable – characterized by the Government as an “important equitable consideration[,]” – was that the Trust beneficiaries “are all people who have profited, or seek to profit, from UV’s former business activities,” and “have gained significantly, and stand to gain further, from the distribution of the UV sale proceeds.” Ex. 9 at 23-24.

This argument was adopted by the *Midvale* court in ruling the on the Government’s motion for summary judgment seeking to the hold UV Liquidating Trust liable. The Court explained that it had previously held the Trust was liable as a successor, and indicated that “if we have assets that are transmuted into money, the money rides with the burden” – meaning that the burden of UV’s liabilities flowed with the money UV received from the sale of assets to Sharon, and thus flowed to the UV Liquidating Trust. *See* Tr. of Summary Judgment Hearing at 170:22-171:6 (Exhibit 11). The Government then settled with the UV Liquidating Trust and consented to its dissolution, in exchange for a payment of \$11 million. *See* Partial Consent Decree at 22-23, *U.S. v. Sharon et al.*, No. 86-C-924J (D. Utah Nov. 15, 1990) (Exhibit 12); Tr. of Hearing on Presentation of Settlement Decrees at 8:15-18, *U.S. v. Sharon et al.*, No. 86-C-924J (D. Utah Nov. 13 1990) (government statement that “UV’s settlement will bring 60 percent of the UV Trust’s current assets, which are currently approximately \$18 million, which nets us about 11 million”) (Exhibit 13).

* * *

We note that you decline to discuss “UV/USSRAM’s liability for USS Lead,” Letter at 2 n.2, which appears to refer to your argument that the corporate veil between USS Lead and its parent entity may be pierced. You also declined to discuss any of your evidentiary basis for that contention in a subsequent phone call. We are surprised at your unwillingness to provide any information about this, particularly given that you apparently intend to seek to recover response costs from Mueller for conducting the review of USS Lead documents. In any event, we do not see how it is in anyone’s interest to keep secret the government’s basis for believing the

COVINGTON

Annette Lang
November 6, 2017
Page 14

corporate veil can be pierced: that fosters neither goodwill nor settlement negotiations between Mueller, the Government, and the PRP group.

While we appreciate your making available for discussion portions of your legal position, we respectfully and strenuously disagree.

Very truly yours,

A handwritten signature in cursive script that reads "E. Donald Elliott".

E. Donald Elliott
Thomas R. Brugato

cc: Steven Kaiser Office of Regional Counsel, Environmental Protection Agency-Region 5
Chris Miritello, Vice President, General Counsel and Secretary, Mueller Industries, Inc.

APPENDIX N

**TO
Z2 SOIL UAO**

**104(e) Information Request Issued by EPA to USS
Lead (May 25, 2017)**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Norman Johnson, Vice President
U.S.S. Lead Refinery, Inc.
4780 Caterpillar Road Unit C
Redding, CA 96003

MAY 25 2017

Re: Supplemental Request for Information Pursuant to Section 104(e) of CERCLA for the U.S. Smelter and Lead Refinery Superfund Site, East Chicago, Indiana.

Dear Mr. Johnson:

The U.S. Environmental Protection Agency and U.S. Smelter and Lead Refinery, Inc. (USS Lead) have been corresponding with one another on issues arising out of the operations at the former USS Lead facility located at 5300 Kennedy Avenue, East Chicago, Indiana, since at least 1987. Previous correspondence has included EPA's formal requests for information in letters dated: January 26, 1987; March 27, 1991; September 22, 2005; December 12, 2006; and March 3, 2015. We appreciate USS Lead's prior responsiveness.

In response to previous requests for information, USS Lead has allowed EPA to review and copy information pertaining to the USS Lead facility, and USS Lead's former customers and material suppliers. This information allowed EPA to identify parties who may be potentially liable for either performing or funding the cleanup of contaminated soils.

EPA continues to develop a more complete understanding of USS Lead's operations at the East Chicago facility. As you are aware, in response to EPA's March 3, 2015 information request, EPA reviewed and made copies of some of the documents stored at USS Lead's warehouse in Redding, California.

By this letter, EPA is formally requesting additional access to approximately 350 specific boxes of USS Lead records at the Redding warehouse. As with EPA's prior review, we would examine the records in California and copy them as warranted.

We encourage you to give this matter your immediate attention and request that you provide a complete, accurate and truthful response to the enclosed questions (Enclosure C) within fifteen (15) calendar days of your receipt of this letter. A list of the boxes EPA is interested in is also included (Enclosure D). Instructions and Definitions (Enclosures A and B, respectively) as well as a Declaration (Enclosure E) also have been enclosed to assist you with completing your response. EPA would like to undertake its record review within forty-five (45) days of receiving your response to this information request.

Section 104(e)(2) of CERCLA, 42 U.S.C. § 9604(e)(2), gives EPA information gathering authority that allows EPA to require persons to furnish information or documents relating to:

- (a) The identification, nature and quantity of materials which have been or are generated, treated, stored or disposed of at facility or transported to facility;
- (b) The nature or extent of a release or threatened release of a hazardous substance or pollutant or contaminant at or from a facility; and
- (c) Information relating to the ability of a person to pay for or to perform a cleanup.

While EPA seeks your cooperation in this investigation, compliance with this request for information is required by law. Please note that false, fictitious or fraudulent statements or representations may subject you to civil or criminal penalties under federal law.

Some of the information EPA is requesting may be considered by you to be confidential. Please be aware that you may not withhold the information upon that basis. If you wish EPA to treat the information confidentially, you must advise EPA of that fact by following the procedures outlined in Enclosure A, including the requirement for supporting your claim for confidentiality.

If you have information about other parties who may have information that may assist the agency in its investigation of the Sites or may be responsible for the contamination at the Sites, that information should be submitted within the time frame noted above.

This request for information is not subject to the approval requirements of the Paperwork Reduction Act of 1995, 44 U.S.C. § 3501 et seq.

Your response to this request for information should be mailed to:

Steve Kaiser (C-14J)
U.S. Environmental Protection Agency, Region 5
Office of Regional Counsel
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

If you have additional questions about the history of the Site, the nature of the environmental conditions at the Sites or the status of cleanup activities, please visit EPA's website <https://www.epa.gov/uss-lead-superfund-site>. You also may contact Steve Kaiser, Assistant Regional Counsel at (312) 353-3804, or kaiser.steven@epa.gov.

We appreciate and look forward to your prompt response to this Information Request.

Sincerely,

Marcy Toney, Section Chief
Office of Regional Counsel

Enclosures

- A Instructions
- B Definitions
- C Requests
- D Box List
- E Declaration

Enclosure A
Information Request
USS Lead Site

INSTRUCTIONS

1. Answer Each Question Completely. You must provide a separate answer to each question and subpart set forth in this Information Request. Incomplete, evasive, or ambiguous answers shall constitute failure to respond to this Information Request and may subject you to the penalties set out in the cover letter.
2. Response Format and Copies. Provide the responses to this Information Request and copies of all requested documents either electronically or on paper (hard copy). Your submission, whether electronic or hard copy, must include an index that lists all the responsive documents provided, and that indicates where each document is referenced in the written response, and to which question or questions each document is responsive.

Any documents you determine to be Confidential Business Information (“CBI”) must be segregated out and submitted in a separate folder or on a separate compact disc (“CD”). These documents must be clearly marked as “Confidential Business Information.”

If providing your response electronically, it must be submitted on a CD in Portable Document Format (“PDF”) and comply with the following requirements:

- (a) CBI and personal privacy information (“PII”) should be provided on separate media (e.g., a separate CD) and marked as such to ensure information is appropriately handled.
 - (b) All documents originally smaller than 11 by 17 inches can be submitted electronically; any documents originally larger than 11 by 17 inches must be submitted in hard copy.
 - (c) Electronic PDF files must be text-searchable.
 - (d) The document index must clearly identify any single electronic document which has been separated into multiple electronic files (because of size limitation or otherwise) and each component file that comprises the full document.
3. Number Each Answer. Number each answer with the number of the question to which it corresponds.
 4. Provide the Best Information Available. You must provide responses to the best of your ability, even if the information sought was never put down in writing or if the written documents are no longer available. You should seek out responsive information from current and former employees/agents. Submission of cursory responses when other responsive information is available to the Respondent will be considered noncompliance with this Information Request.

5. Identify Information Sources. For each question, identify all persons and documents you relied on for your answer.
6. Confidential Information. You must provide the information requested even though you may contend that it includes confidential information or trade secrets. You may assert a confidentiality claim covering part or all of the information requested, pursuant to 42 U.S.C. §§ 9604(e)(7)(E) and (F), and 40 C.F.R. § 2.203(b). All information claimed to be confidential should be contained on separate sheet(s) and should be clearly identified as “trade secret,” “proprietary” or “company confidential”. Your confidentiality claim should be supported by the submission of information consistent with 40 C.F.R. Part 2. Information covered by a confidentiality claim will be disclosed by the EPA only to the extent, and only by means of the procedures, provided in 40 C.F.R. §§ 2.201-2.311. If no such claim accompanies the information received by the EPA, it may be made available to the public by the EPA without further notice to you.
- You should also provide a redacted version of the same document that removes all CBI and PII from the document. This redacted version of the document should remove all information that you claim is CBI or PII. Since all the CBI and PII is removed, this redacted version is not subject to the procedures of 40 C.F.R. Part 2. The EPA may make this redacted version available to the public without further notice to you.
7. Disclosure to the EPA Contractor. Information that you submit in response to this Information Request may be disclosed by the EPA to authorized representatives of the United States, pursuant to 40 C.F.R. § 2.310(h), even if you assert that all or part of it is confidential business information. The EPA may provide this information to its contractors for the purpose of organizing and/or analyzing the information contained in the responses to this Information Request. If you are submitting information that you assert is entitled to treatment as confidential business information, you may comment on this intended disclosure within twenty (20) business days of receiving this Information Request.
8. Personal Privacy Information. Personnel and medical files, and similar files the disclosure of which to the general public may constitute an invasion of privacy, should be segregated from your responses, included on separate sheet(s), and marked as “Personal Privacy Information.” You should note, however, that unless prohibited by law, the EPA may disclose this information to the general public without further notice to you.
9. Objections. While you may object to certain questions in this Information Request, you must provide responsive information notwithstanding those objections. To object without providing responsive information may subject you to the penalties set out in the cover letter.
10. Privilege. If you claim that any document responsive to this Information Request is a communication for which you assert that a privilege exists for the entire document, identify (see Definitions) the document and provide the basis for asserting the privilege. For any document for which you assert that a privilege exists for a portion of it, provide the portion of the document for which you are not asserting a privilege, identify the portion of the document for which you are asserting the privilege, and provide the basis for such an assertion. Please note that regardless of the assertion of any

privilege, any facts contained in the document that are responsive to the Information Request must be disclosed in your response.

11. Declaration. You must complete the enclosed declaration, in hard copy with an original signature, certifying the accuracy of all statements in your response.

Enclosure B
Information Request
USS Lead Site

DEFINITIONS

1. The terms “agreement” and “arrangement” means every separate contract, transaction, or invoice, between two or more persons, whether written or oral.
2. The terms “and” and “or” shall be construed either disjunctively or conjunctively, as necessary, to bring within the scope of this request any information which might otherwise be construed to be outside its scope.
3. The terms “document” and “documents” mean any method of recording, storing or transmitting information. “Document” includes, but is not limited to:
 - (a) writings of any kind, including, but not limited to, any of the following:
 - i. letters, memoranda, fax transmittals;
 - ii. meeting minutes, telephone records, notebooks;
 - iii. agreements and contracts;
 - iv. reports to shareholders, management, or government agencies;
 - v. transportation manifests;
 - vi. copies of any document;
 - (b) any film, photograph, or sound recording on any type of device;
 - (c) any blueprints or drawings; and
 - (d) attachments to, or enclosures with, any document.
4. The term “facility” shall have the same definition as that contained in Section 101(9) of CERCLA, and includes (a) any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft, or (b) any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located; but does not include any consumer product in consumer use or any vessel.
5. The term “identify” means, with respect to a natural person, to set forth: (a) the person’s full name; (b) present or last known business and home addresses and telephone numbers; and (c) present or last known employer (include full name and address) with job title, position or business.
6. The term “identify” means, with respect to a corporation, partnership, business trust or other entity, to set forth: (a) its full name; (b) complete street address; (c) legal form (e.g., corporation,

partnership); (d) the state under whose laws the entity was organized; and (e) a brief description of its business.

7. The term “identify” means, with respect to a document, to provide: (a) its customary business description (e.g., letter, invoice); (b) its date; (c) its number if any (e.g., invoice or purchase order number); (d) the identity of the author, addressee, and/or recipient; and (e) a summary of the substance or the subject matter. Alternatively, Respondent may provide a complete copy of the document.

8. The term “person” shall have the same definition as that contained in Section 101(21) of CERCLA, and includes an individual, firm corporation, association, partnership, consortium, joint venture, U.S. government, State, municipality, commission, political subdivision of a State or any interstate body.

9. The term “property” means any interest in real or personal property whatsoever, including fee interests, leases, licenses, rental and mineral rights.

10. The term “you” or “Respondent” means U.S. Smelter and Lead Refinery, Inc..

Enclosure C
Information Request
USS Lead Site

REQUESTS

1. Please provide times and dates within the forty-five (45) day period after your response to this request is due when representatives of EPA may have access to documents and/or records that are contained in the specific boxes identified on Enclosure D that are located in USS Lead's warehouse in Redding, California, for the purpose of inspecting and/or copying all such documents and/or records. The inspection of the records and potential copying likely will take more than one day; therefore, please provide dates of access on continuous days for as many one week periods as possible.
2. Identify all persons consulted in the preparation of the answers to this request for information.

Enclosure D
List of Requested Boxes
USS Lead Site

BOX LIST

106	662	708	861	1004	1181	1378	1460	1499	1537	1628
120	663	709	863	1005	1182	1379	1461	1503	1538	1630
336	666	710	866	1008	1183	1380	1462	1504	1539	1631
363	667	711	868	1009	1184	1381	1465	1505	1540	1632
378	668	712	869	1010	1185	1382	1466	1506	1541	1633
489	669	713	870	1011	1186	1385	1467	1507	1542	1761
628	670	714	872	1012	1187	1386	1468	1508	1543	1813
629	671	716	875	1013	1188	1397	1469	1509	1544	1835
630	672	717	876	1017	1189	1412	1470	1510	1553	1845
631	673	722	878	1020	1191	1419	1473	1511	1554	2285
632	674	723	879	1022	1208	1422	1474	1512	1555	2351
633	675	724	882	1025	1209	1424	1475	1513	1556	2397
634	677	725	899	1028	1222	1425	1476	1514	1557	2414
635	679	727	901	1029	1239	1428	1477	1515	1559	2742
636	680	731	911	1044	1280	1429	1478	1516	1562	2803
637	682	733	921	1045	1281	1432	1479	1517	1563	2825
638	683	739	931	1046	1282	1433	1481	1518	1566	2827
639	685	740	932	1047	1283	1435	1482	1519	1567	2848
640	686	743	956	1048	1286	1436	1483	1520	1568	2868
641	688	744	965	1088	1291	1437	1484	1521	1569	2869
642	689	745	970	1115	1297	1438	1485	1522	1570	2877
644	691	746	972	1127	1298	1439	1486	1524	1596	2878
645	692	747	974	1137	1301	1440	1487	1525	1597	3286
646	694	748	975	1164	1302	1441	1488	1526	1602	3794
647	695	750	980	1170	1303	1442	1489	1527	1607	3824
649	696	751	983	1172	1304	1447	1490	1529	1608	4247
650	697	765	984	1173	1305	1449	1491	1530	1611	4250
653	698	769	990	1174	1306	1452	1492	1531	1614	4267
654	699	813	991	1175	1307	1454	1493	1532	1615	5277
655	701	827	992	1176	1315	1455	1494	1533	1616	5343
657	702	848	995	1178	1338	1456	1496	1534	1621	5581
658	703	849	1000	1179	1345	1457	1497	1535	1624	5584
660	707	855	1001	1180	1369	1459	1498	1536	1625	

Enclosure E
Information Request
USS Lead Site

DECLARATION

I declare under penalty of perjury that I am authorized to respond on behalf of the Respondent and that the foregoing is complete, true, and correct.

Executed on _____, 2017.

Signature

Type or Print Name

Title

APPENDIX O

**TO
Z2 SOIL UAO**

**104(e) Information Request Issued by EPA to
USS Lead (Mar. 3, 2015)**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

MAR 03 2015

REPLY TO THE ATTENTION OF:

SC-5J

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Norman Johnson, Vice President
U.S.S. Lead Refinery, Inc.
4780 Caterpillar Road Unit C
Redding, CA 96003

Re: Supplemental Request for Information Pursuant to Section 104(e) of CERCLA for the U.S. Smelter and Lead Refinery Superfund Site, East Chicago, Indiana.

Dear Mr. Johnson:

The U. S. Environmental Protection Agency (EPA) and U.S.S. Lead Refinery, Inc. (USS Lead) have been corresponding with one another on issues arising out of the operations at the former USS Lead facility located at 5300 Kennedy Avenue, East Chicago, Indiana, since at least 1987. Previous correspondence has included formal requests for information by EPA in letters dated: January 26, 1987; March 27, 1991; September 22, 2005; and December 12, 2006. USS Lead has been forthcoming in its responses to these requests for information, and EPA and the public have benefited from the information provided by USS Lead.

In response to previous requests for information, USS Lead has allowed EPA to review and copy information pertaining to the USS Lead facility, USS Lead's former customers and material suppliers. This information has allowed EPA to identify parties who may be potentially liable for the either performing or funding the cleanup of contaminated soils.

At this time, EPA is continuing to develop a more complete understanding of USS Lead's operations at the USS Lead facility, of its customer base, and of its suppliers. In a letter to Mr. Steinwurtzel dated April 24, 2014, Annette Lang, an attorney for the U.S. Department of Justice, inquired about access to "approximately 400 boxes of documents" in the custody of USS Lead that relate to the USS Lead Site. On April 25, 2014, Mr. Steinwurtzel responded to this inquiry noting that "there are approximately 1,200 boxes of USS Lead records which are currently located in Redding, California."

The purpose of this letter is to formally request, pursuant to the authority granted EPA in Section 104(e) of CERCLA, 42 U.S.C. § 9604(e)(2), access to these approximately 1,200 boxes of USS Lead records. EPA believes that these records contain information that pertains to one or more of the following:

- (A) The identification, nature, and quantity of materials which have been generated, treated, stored, or disposed of at a vessel or facility or transported to a vessel or facility;
- (B) The nature or extent of a release or threatened release of a hazardous substance or pollutant or contaminant at or from a vessel or facility; or
- (C) Information relating to the ability of a person to pay for or to perform a cleanup.”

EPA and DOJ understand that because of the condition of the records it is preferable to examine the records in Redding, California and to copy them there if any copying is warranted. The government would like to undertake this record review within sixty (60) days after USS Lead's response to this request is due.

We encourage you to give this matter your immediate attention. Enclosure 1 is a summary of the information that EPA has about the Site and of the Agency's activities at the Site. Enclosure 2 contains an Information Request. Please provide complete and truthful responses to this Information Request within 15 days of your receipt of this letter. Instructions to guide you in the preparation of your response are in Enclosure 3. Definitions of the terms used in this Information Request and in the Questions are set forth in Enclosure 4.

You may consider confidential the information that EPA is requesting. Under CERCLA, you may not withhold information that you consider confidential; but you may ask EPA to treat the information as confidential. To request that the Agency treat your information as confidential, you must follow the procedures outlined in Enclosure 5, including the requirement that you support your claim for confidentiality.

CERCLA gives EPA the authority to assess the threats to human health and the environment posed by contaminated sites and to clean up those sites. Under Section 104(e)(2) of CERCLA, 42 U.S. C. § 9604(e)(2), EPA has information-gathering authority that allows the Agency to require persons and corporations to furnish information or documents. Enclosure 6 is a summary of EPA's legal authority.

Compliance with this Information Request is mandatory. The Superfund statute provides that failure to answer the questions fully and truthfully and within the prescribed time frame can result in an enforcement action and penalties. Other statutes provide that the submission of false, fictitious statements, or misrepresentations can result in sanctions.

EPA has the authority to use the information that it requests in an administrative, civil, or criminal action.

This Information Request is not subject to the approval requirements of the Paperwork Reduction Act of 1995, 44 U.S.C. § 3501 *et seq.*

Return your response to EPA within fifteen (15) days of your receipt of this letter to:

Michael Rafati, Enforcement Specialist
U.S. Environmental Protection Agency
Superfund Division, Enforcement and Compliance Assurance Branch
77 W. Jackson Blvd., SE-5J
Chicago, IL 60604-3590

If you have any legal questions, please call Steven P. Kaiser, Associate Regional Counsel at (312) 353-3804, e-mail kaiser.steven@epa.gov. If there are technical questions about this Site, call Michael Berkoff, Remedial Project Manager at (312) 353-8983, e-mail berkoff.michael@epa.gov.

We appreciate your assistance and look forward to your prompt response to this Information Request.

Sincerely,



Evette L. Jones, Acting Chief
Enforcement and Compliance Assurance Branch

Enclosures

1. Site History
2. Requests for Information
3. Instructions
4. Definitions
5. Confidential Business Information
6. Legal Authority
7. Small Business Administration Fact Sheet

cc: Robert Steinmurtzel

Enclosure 1

SITE HISTORY ELEMENTS

This information request concerns the U.S. Smelter and Lead Refinery, Inc. (USS Lead) Superfund Site in East Chicago, Indiana (the Site).

In 1985, the Indiana Department of Environmental Management (IDEM) determined that lead particles from neighboring industrial sources had contaminated soils within the residential portion of the Site. The lead contaminated soils in the residential portion of the Site may pose a risk to human health and the environment. Wetlands are also located within the portion of the Site formerly occupied by USS Lead.

In 2008, EPA added the Site to the National Priorities List. The Site is comprised of two Operable Units: Operable Unit 1 (OU1) and Operable Unit 2 (OU2). On November 30, 2012, EPA issued a Record of Decision for OU1 of the Site, which sets forth a strategy for addressing the contaminated soils in OU1.

In October 2014, the United States District Court for the Northern District of Indiana entered a Consent Decree between the United States, on behalf of EPA, the State of Indiana, on behalf of IDEM, Atlantic Richfield Company, and E.I. du Pont de Nemours and Company. The Consent Decree contains the terms pursuant to which the parties will address contaminated soils in Zones 1 and 3 of OU1 of the Site. Work has begun pursuant to the terms of the Consent Decree.

EPA and DOJ are continuing work to address Zone 2 of OU1 (OU1 is comprised of three Zones) as well as OU2 of the Site, which includes the former USS Lead facility and groundwater beneath the entire Site. This information request is a part of that process.

Enclosure 2

REQUESTS FOR INFORMATION

1. Please provide times and dates within the sixty (60) day period after your response to this request is due when a representative of EPA may have access to documents and/or records that pertain to the USS Lead facility in East Chicago, Indiana, between 1920 and 1985, for the purpose of inspecting and/or copying all such documents and/or records. The inspection of the records and potential copying likely will take more than one day; therefore, please provide dates of access on continuous days for as many one week periods as possible.
2. Identify all persons consulted in the preparation of the answers to these questions.

Enclosure 3

INSTRUCTIONS

1. Answer each of the questions in this Information Request separately.
2. Precede each answer with the number of the question to which it corresponds.
3. In answering each question, identify all persons and contributing sources of information.
4. The relevant time period for this request is 1920 to 1985.
5. Although EPA seeks your cooperation in this investigation, CERCLA requires that you respond fully and truthfully to this Information Request. False, fictitious, or fraudulent statements or misrepresentations may subject you to civil or criminal penalties under federal law. Section 104 of CERCLA, 42 U.S.C. § 9604, authorizes EPA to pursue penalties for failure to comply with that Section, or for failure to respond adequately to requests for submissions of required information.
6. You must supplement your response to EPA if, after submission of your response, additional information should later become known or available. Should you find at any time after the submission of your response that any portion of the submitted information is false or misrepresents the truth, you must notify EPA as soon as possible.
7. For any document submitted in response to a question, indicate the number of the question to which it responds.
8. You must respond to each question based upon all information and documents in your possession or control, or in the possession or control of your current or former employees, agents, contractors, or attorneys. Information must be furnished regardless of whether or not it is based on your personal knowledge, and regardless of source.
9. Your response must be accompanied by the following statement, or one that is substantially equivalent:

I certify under penalty of law that this document and all enclosures were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

The individual who prepared the response or the responsible corporate official acting on behalf of the corporation must sign and date the statement, affidavit, or certification. Include the corporate official's full title.

10. If any of the requested documents have been transferred to others or have otherwise been disposed of, identify each document, the person to whom it was transferred, describe the circumstances surrounding the transfer or disposition, and state the date of the transfer or disposition.
11. All requested information must be provided notwithstanding its possible characterization as confidential information or trade secrets. If desired, you may assert a business confidentiality claim by means of the procedures described in Enclosure 5.

Enclosure 4

DEFINITIONS

1. As used in this letter, words in the singular also include the neutral, and words in the masculine gender also include the feminine, and vice versa.
2. The term *person* as used herein includes in the plural as well as the singular any natural person, firm, contractor, unincorporated association, partnership, corporation, trust or governmental entity, unless the context indicates otherwise.
3. The term "*USS Lead facility*" shall mean the U.S.S. Lead Refinery, Inc. facility that operated at 5300 Kennedy Avenue, East Chicago, Indiana.
4. The terms *hazardous substance* shall have the same definition as that contained in Section 101(14) of CERCLA, including any mixtures of such hazardous substances with any other substances, including petroleum products.
5. The terms *pollutant* or *contaminant* shall have the same definition as that contained in Section 101(33) of CERCLA, and includes any mixtures of such pollutants and contaminants with any other substances.
6. The term *release* shall have the same definition as that contained in Section 101(22) of CERCLA, and means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance, pollutant, or contaminant.
7. The term *identify* means, with respect to a natural person, to set forth the person's full name, present or last known business address, and business telephone number; present or last known home address, and home telephone number; and present or last known job title, position, or business.
8. The term *identify* means, with respect to a corporation, partnership, business, trust or other association or business entity (including a sole proprietorship), to set forth its full name, address, legal form (e.g., corporation, partnership, etc.), organization, if any, and a brief description of its business.
9. The term *identify* means, with respect to a document, to provide its customary business description, its date, its number, if any (invoice or purchase order number), the identity of the author, addressor, addressee and/or recipient, and the substance or the subject matter.
10. All terms not defined herein will have their ordinary meaning, unless such terms are defined in CERCLA, RCRA, 40 C.F.R., Part 300 or 40 C.F.R., Part 260-280, in which case the statutory or regulatory definitions will apply.

Enclosure 5

CONFIDENTIAL BUSINESS INFORMATION

You may consider some of the information confidential that the U.S. Environmental Protection Agency (EPA or Agency) is requesting. You cannot withhold information or records upon that basis. The Regulations at 40 C.F.R. Part 2, Section 200 *et seq* require that EPA affords you the opportunity to substantiate your claim of confidentiality before the Agency makes a final determination on the confidentiality of the information.

You may assert a business confidentiality claim covering part or all of the information requested, in the manner described by 40 C.F.R. 2.203(b). Information covered by such a claim will be disclosed by EPA only to the extent and only by means of the procedures set forth in 40 C.F.R. Part 2, Subpart B. (See 41 Federal Register 36902 *et seq.* (September 1, 1976); 43 Federal Register 4000 *et seq.* (December 18, 1985).) If no such claim accompanies the information when EPA receives it, the information may be made available to the public by the Agency without further notice to you. Please read carefully these cited regulations, together with the standards set forth in Section 104(e)(7) of Comprehensive Environmental Response Compensation Liability Act (CERCLA); because as stated in Section 104(e)(7) (ii), certain categories of information are not properly the subject of a claim of confidential business information.

If you wish the EPA to treat the information or record as "confidential," you must advise EPA of that fact by following the procedures described below, including the requirement for supporting your claim of confidentiality. To assert a claim of confidentiality, you must specify which portions of the information or documents you consider confidential. Please identify the information or document that you consider confidential by page, paragraph, and sentence. You must make a separate assertion of confidentiality for each response and each document that you consider confidential. Submit the portion of the response that you consider confidential in a separate, sealed envelope. Mark the envelope "confidential," and identify the number of the question to which it is the response.

For each assertion of confidentiality, identify:

1. The period of time for which you request that the Agency consider the information confidential, e.g., until a specific date or until the occurrence of a specific event;
2. The measures that you have taken to guard against disclosure of the information to others;
3. The extent to which the information has already been disclosed to others and the precautions that you have taken to ensure that no further disclosure occurs;
4. Whether EPA or other Federal agency has made pertinent determination on the confidentiality of the information or document. If an agency has made such a determination, enclose a copy of that determination;

5. Whether disclosure of the information or document would be likely to result in substantial harmful effects to your competitive position. If you believe such harm would result from any disclosure, explain the nature of the harmful effects, why the harm should be viewed as substantial, and the causal relationship between disclosure and the harmful effect. Include a description of how a competitor would use the information; and
6. Whether you assert that the information is voluntarily submitted as defined by 40 C.F.R. 2.201(I). If you make this assertion, explain how the disclosure would tend to lessen the ability of EPA to obtain similar information in the future; and
7. Any other information that you deem relevant to a determination of confidentiality.

Please note that pursuant to 40 C.F.R. 2.208(e), the burden of substantiating confidentiality rests with you. EPA will give little or no weight to conclusory allegations. If you believe that facts and documents necessary to substantiate confidentiality are themselves confidential, please identify them as such so that EPA may maintain their confidentiality pursuant to 40 C.F.R. 2.205(c). If you do not identify this information and documents as "confidential," your comments will be available to the public without further notice to you.

Enclosure 6

DESCRIPTION OF LEGAL AUTHORITY

The Federal Superfund law (the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. Section 9601, *et seq.* (commonly referred to as **CERCLA** or **Superfund**) gives EPA the authority to, among other things: 1) assess contaminated sites, 2) determine the threats to human health and the environment posed by each site; and 3) clean up those sites.

Under Section 104(e)(2) of CERCLA, 42 U.S.C. § 9604 (e)(2), EPA has broad information gathering authority which allows EPA to require persons to furnish information or documents relating to:

- A. The identification, nature, and quantity of materials which have been or are generated, treated, stored, or disposed of at a vessel or facility, or transported to a vessel or facility;
- B. The nature or extent of a release or threatened release of a hazardous substance or pollutant or contaminant at/or from a vessel or facility;
- C. The ability to pay the costs of the clean-up.

Compliance with this Information Request is mandatory. Failure to respond fully and truthfully to each question within this Information Request and within the prescribed time frame can result in an enforcement action by EPA pursuant to Section 104(e)(5) of CERCLA. This Section also authorizes an enforcement action with similar penalties if the recipient of the Request does not respond and does not justify the failure to respond. Other statutory provisions (18 U.S.C. § 1001) authorize separate penalties if the responses contain false, fictitious or fraudulent statements. EPA has the authority to use the information requested in this Information Request in an administrative, civil or criminal action.

U.S. EPA Small Business Resources Information Sheet

The United States Environmental Protection Agency provides an array of resources, including workshops, training sessions, hotlines, websites and guides, to help small businesses understand and comply with federal and state environmental laws. In addition to helping small businesses understand their environmental obligations and improve compliance, these resources will also help such businesses find cost-effective ways to comply through pollution prevention techniques and innovative technologies.

EPA's Small Business Websites

Small Business Environmental Homepage - www.smallbiz-enviroweb.org

Small Business Gateway - www.epa.gov/smallbusiness

EPA's Small Business Ombudsman - www.epa.gov/sbo or 1-800-368-5888

EPA's Compliance Assistance Homepage

[www.epa.gov/compliance/assistance/
business.html](http://www.epa.gov/compliance/assistance/business.html)

This page is a gateway to industry and statute-specific environmental resources, from extensive web-based information to hotlines and compliance assistance specialists.

EPA's Compliance Assistance Centers

www.assistancecenters.net

EPA's Compliance Assistance Centers provide information targeted to industries with many small businesses. They were developed in partnership with industry, universities and other federal and state agencies.

Agriculture

www.epa.gov/agriculture/

Automotive Recycling

www.ecarcenter.org

Automotive Service and Repair

www.ccar-greenlink.org or 1-888-GRN-LINK

Chemical Manufacturing

www.chemalliance.org

Construction

www.cicacenter.org or 1-734-995-4911

Education

www.campuserc.org

Food Processing

www.fpeac.org

Healthcare

www.hercenter.org

Local Government

www.lgean.org

Metal Finishing

www.nmfrc.org

Paints and Coatings

www.paintcenter.org

Printed Wiring Board Manufacturing

www.pwbrc.org

Printing

www.pneac.org

Ports

www.portcompliance.org

U.S. Border Compliance and

Import/Export Issues

www.bordercenter.org

Hotlines, Helplines and

Clearinghouses

www.epa.gov/epahome/hotline.htm

EPA sponsors many free hotlines and clearinghouses that provide convenient assistance regarding environmental requirements. Some examples are:

Antimicrobial Information Hotline

info-antimicrobial@epa.gov or
1-703-308-6411

Clean Air Technology Center (CATC) Info-line

www.epa.gov/ttn/catc or 1-919-541-0800

Emergency Planning and Community Right-To-Know Act

[www.epa.gov/superfund/resources/
infocenter/epcra.htm](http://www.epa.gov/superfund/resources/infocenter/epcra.htm) or 1-800-424-9346

EPA Imported Vehicles and Engines Public Helpline

www.epa.gov/otaq/imports or
734-214-4100

National Pesticide Information Center

www.npic.orst.edu/ or 1-800-858-7378

National Response Center Hotline -

to report oil and hazardous substance spills
www.nrc.uscg.mil or 1-800-424-8802

Pollution Prevention Information Clearinghouse (PPIC)

www.epa.gov/opptintr/ppic or
1-202-566-0799

Safe Drinking Water Hotline

[www.epa.gov/safewater/hotline/index.
html](http://www.epa.gov/safewater/hotline/index.html) or 1-800-426-4791

Stratospheric Ozone Protection Hotline

www.epa.gov/ozone or 1-800-296-1996

Toxic Substances Control Act (TSCA) Hotline
tsc hotline@epa.gov or 1-202-554-1404

Wetlands Information Helpline
www.epa.gov/owow/wetlands/wetline.html or 1-800-832-7828

State and Tribal Web-Based Resources

State Resource Locators
www.envcap.org/statetools

The Locators provide state-specific contacts, regulations and resources covering the major environmental laws.

State Small Business Environmental Assistance Programs (SBEAPs)
www.smallbiz-enviroweb.org

State SBEAPs help small businesses and assistance providers understand environmental requirements and sustainable business practices through workshops, trainings and site visits. The website is a central point for sharing resources between EPA and states.

EPA's Tribal Compliance Assistance Center
www.epa.gov/tribalcompliance/index.html

The Center provides material to Tribes on environmental stewardship and regulations that might apply to tribal government operations.

EPA's Tribal Portal
www.epa.gov/tribalportal/

The Portal helps users locate tribal-related information within EPA and other federal agencies.

EPA Compliance Incentives

EPA provides incentives for environmental compliance. By participating in compliance assistance programs or voluntarily disclosing and promptly correcting violations before an enforcement action has been initiated, businesses may be eligible for penalty waivers or reductions. EPA has two such policies that may apply to small businesses:

EPA's Small Business Compliance Policy
www.epa.gov/compliance/incentives/smallbusiness/index.html

This Policy offers small businesses special incentives to come into compliance voluntarily.

EPA's Audit Policy
www.epa.gov/compliance/incentives/auditing/auditpolicy.html

The Policy provides incentives to all businesses that voluntarily discover, promptly disclose and expeditiously correct their noncompliance.

Commenting on Federal Enforcement Actions and Compliance Activities

The Small Business Regulatory Enforcement Fairness Act (SBREFA) established a SBREFA Ombudsman and 10 Regional Fairness Boards to receive comments from small businesses about federal agency enforcement actions. If you believe that you fall within the Small Business Administration's definition of a small business (based on your North American Industry Classification System designation, number of employees or annual receipts, as defined at 13 C.F.R. 121.201; in most cases, this means a business with 500 or fewer employees), and wish to comment on federal enforcement and compliance activities, call the SBREFA Ombudsman's toll-free number at 1-888-REG-FAIR (1-888-734-3247), or go to their website at www.sba.gov/ombudsman.

Every small business that is the subject of an enforcement or compliance action is entitled to comment on the Agency's actions without fear of retaliation. EPA employees are prohibited from using enforcement or any other means of retaliation against any member of the regulated community in response to comments made under SBREFA.

Your Duty to Comply

If you receive compliance assistance or submit a comment to the SBREFA Ombudsman or Regional Fairness Boards, you still have the duty to comply with the law, including providing timely responses to EPA information requests, administrative or civil complaints, other enforcement actions or communications. The assistance information and comment processes do not give you any new rights or defenses in any enforcement action. These processes also do not affect EPA's obligation to protect public health or the environment under any of the environmental statutes it enforces, including the right to take emergency remedial or emergency response actions when appropriate. Those decisions will be based on the facts in each situation. The SBREFA Ombudsman and Fairness Boards do not participate in resolving EPA's enforcement actions. Also, remember that to preserve your rights, you need to comply with all rules governing the enforcement process.

EPA is disseminating this information to you without making a determination that your business or organization is a small business as defined by Section 222 of the Small Business Regulatory Enforcement Fairness Act or related provisions.

APPENDIX P

**TO
Z2 SOIL UAO**

**Original Z2 Soil UAO (Excluding
Appendices)**

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:)
)
)
U.S. Smelter and Lead Refinery, Inc. Site)
in East Chicago, Lake County, Indiana)
)
Atlantic Richfield Company,)
The Chemours Company FC, LLC,)
E. I. du Pont de Nemours and Company,)
Mueller Industries, Inc.,)
United States Metals Refining Company,)
and U.S.S. Lead Refinery, Inc.,)
)
Respondents.)
)
Proceeding under Section 106(a))
of the Comprehensive Environmental)
Response, Compensation, and Liability)
Act, 42 U.S.C. § 9606(a).)
)

CERCLA Docket No. V-W-18-C-001

**UNILATERAL ADMINISTRATIVE
ORDER FOR REMEDIAL ACTION
IN ZONE 2 OF OPERABLE UNIT 1
OF THE U.S. SMELTER AND LEAD
REFINERY, INC. SUPERFUND SITE**

TABLE OF CONTENTS

I.	JURISDICTION AND GENERAL PROVISIONS.....	1
II.	PARTIES BOUND	1
III.	DEFINITIONS.....	1
IV.	FINDINGS OF FACT.....	7
V.	CONCLUSIONS OF LAW AND DETERMINATIONS.....	9
VI.	Z2 REMEDIAL ACTION WORK ORDER.....	12
VII.	OPPORTUNITY TO CONFER.....	12
VIII.	EFFECTIVE DATE.....	13
IX.	NOTICE OF INTENT TO COMPLY	14
X.	PERFORMANCE OF THE WORK.....	14
XI.	PROPERTY REQUIREMENTS	16
XII.	INSURANCE.....	19
XIII.	DELAY IN PERFORMANCE	20
XIV.	PAYMENT OF Z2 RA RESPONSE COSTS.....	20
XV.	ACCESS TO INFORMATION	21
XVI.	RECORD RETENTION	23
XVII.	ENFORCEMENT/WORK TAKEOVER	24
XVIII.	NOTICES AND SUBMISSIONS.....	24
XIX.	RESERVATIONS OF RIGHTS	25
XX.	OTHER CLAIMS	26
XXI.	ADMINISTRATIVE RECORD	27
XXII.	APPENDICES	27
XXIII.	SEVERABILITY.....	27

I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Order (“Z2 Soil UAO”) is issued under the authority vested in the President of the United States by Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9606(a). This authority was delegated to the Administrator of the United States Environmental Protection Agency (EPA) by Executive Order No. 12580, 52 Fed. Reg. 2923 (Jan. 23, 1987), and further delegated to the Regional Administrators by EPA Delegation Nos. 14-14-A and 14-14-B. On May 11, 1994, this authority was further redelegated by the Regional Administrator of EPA Region 5 to the Superfund Division Director of Region 5 by EPA Regional Delegation No. 14-14-B.

2. This Z2 Soil UAO pertains to property located at U.S. Smelter and Lead Refinery Inc., Site in East Chicago, Lake County, Indiana (the “USS Lead Site” or the “Site”). This Z2 Soil UAO directs Respondents to perform the remedial action (RA) described in the Record of Decision (ROD), dated November 30, 2012, for Zone 2 of Operable Unit 1 of the Site.

3. EPA has notified the State of Indiana (the “State”) of this action pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

II. PARTIES BOUND

4. This Z2 Soil UAO applies to and is binding upon Respondents and their successors and assigns. Any change in ownership or control of the Site or change in corporate or partnership status of a Respondent, including, but not limited to, any transfer of assets or real or personal property, shall not alter Respondents’ responsibilities under this Z2 Soil UAO.

5. Respondents are jointly and severally liable for implementing all activities required by this Z2 Soil UAO. Compliance or noncompliance by any Respondent with any provision of this Z2 Soil UAO shall not excuse or justify noncompliance by any other Respondent. No Respondent shall interfere in any way with performance of the Z2 RA Work in accordance with this Z2 Soil UAO by any other Respondent. In the event of the insolvency or other failure of any Respondent to implement the requirements of this Z2 Soil UAO, the remaining Respondents shall complete all such requirements.

6. Respondents shall provide a copy of this Z2 Soil UAO to each contractor hired to perform the Z2 RA Work required by this Z2 Soil UAO and to each person representing any Respondents with respect to the Site or the Z2 RA Work, and shall condition all contracts entered into hereunder upon performance of the Z2 RA Work in conformity with the terms of this Z2 Soil UAO. Respondents or their contractors shall provide written notice of the Z2 Soil UAO to all subcontractors hired to perform any portion of the Z2 RA Work required by this Z2 Soil UAO. Respondents shall nonetheless be responsible for ensuring that their contractors and subcontractors perform the Z2 RA Work in accordance with the terms of this Z2 Soil UAO.

III. DEFINITIONS

7. Unless otherwise expressly provided in this Z2 Soil UAO, terms used in this Z2 Soil UAO that are defined in CERCLA or in regulations promulgated under CERCLA shall have

the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Z2 Soil UAO or in its appendices, the following definitions shall apply solely for the purposes of this Z2 Soil UAO:

- a. “ARC” shall mean Atlantic Richfield Company.
- b. “CERCLA” shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9601-9675.
- c. “Chemours” shall mean The Chemours Company FC, LLC
- d. “Construction Contractor” shall mean the principal contractor retained by the Supervising Contractor to implement the Z2 RA Construction under this Z2 Soil UAO.
- e. “Day” or “day” shall mean a calendar day. In computing any period of time under this Z2 Soil UAO, where the last day would fall on a Saturday, Sunday, or federal or State holiday, the period shall run until the close of business of the next working day.
- f. “DuPont” shall mean E. I. du Pont de Nemours and Company
- g. “Effective Date” shall mean the effective date of this Z2 Soil UAO as provided in Section VIII.
- h. “EPA” shall mean the United States Environmental Protection Agency and its successor departments, agencies, or instrumentalities.
- i. “EPA Hazardous Substance Superfund” shall mean the Hazardous Substance Superfund established by the Internal Revenue Code, 26 U.S.C. § 9507.
- j. “Final ESD” or “Final Explanation of Significant Differences” shall mean the final Explanation of Significant Differences that EPA issues to explain the significant increase in cost between the estimated cost of the remedy selected in the 2012 Record of Decision for Zones 2 and 3 of Operable Unit 1 of the Site and the December 2017 estimated cost of the remedy for those two Zones. The Final ESD will be issued after notice and public comment on the Proposed ESD.
- k. “Former USS Lead Facility” shall mean the approximately 79-acre parcel of land that forms a part of Operable Unit 2 and that, from approximately 1906 to 1985, housed operations including but not limited to lead refining and secondary lead smelting. The street address of the Former USS Lead Facility is 5300 Kennedy Ave., East Chicago, Indiana.
- l. “IDEM” shall mean the Indiana Department of Environmental Management and any successor departments or agencies of the State.
- m. “Institutional Controls” or “ICs” shall mean Proprietary Controls and state or local laws, regulations, ordinances, zoning restrictions, or other governmental controls or notices that: (a) limit land, water, or other resource use to minimize the potential for human exposure to Waste Material at or in connection with the Site; (b) limit land, water, or other

resource use to implement, ensure non-interference with, or ensure the protectiveness of the RA; and/or (c) provide information intended to modify or guide human behavior at or in connection with the Site.

n. “Interest” shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund, compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year. Rates are available online at <https://www.epa.gov/superfund/superfund-interest-rates>.

o. “Mueller” shall mean Mueller Industries, Inc.

p. “National Contingency Plan” or “NCP” shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

q. “Non-Respondent Owner” shall mean any person, other than a Respondent, that owns or controls any Affected Property. The phrase “Non-Respondent Owner’s Affected Property” means Affected Property owned or controlled by Non-Respondent Owner.

r. “OU1” or “Operable Unit 1” shall mean the surface and subsurface soil of the area located inside the red highlighted boundaries on Appendix B. OU1 is generally bounded on the north by East Chicago Avenue; on the east by Parrish Avenue; on the south by East 151st Street/149th Place; and on the west by the Indiana Harbor Canal.

s. “OU2” or “Operable Unit 2” shall mean groundwater associated with the Site as well as the surface soil, subsurface soil, and sediments located inside the blue highlighted boundaries on Appendix B. The area within the blue highlighted boundaries on Appendix B consists of approximately 79 acres, is commonly known as 5300 Kennedy Avenue, and is generally bounded on the north by the Indiana Harbor Belt Railroad; on the east by Kennedy Avenue; on the south and west by the Grand Calumet River; and on the northwest by the Indiana Harbor Canal.

t. “Paragraph” or “¶” shall mean a portion of this Z2 Soil UAO identified by an Arabic numeral or an upper or lower case letter.

u. “Parties” shall mean EPA and Respondents.

v. “Performance Standards” shall mean the cleanup standards and other measures of achievement of the goals of the remedial action objectives, as set forth in the ROD.

w. “Personally Identifiable Information” or “PII” means “Personally Identifiable Information” as defined in 2 C.F.R. § 200.79 and EPA’s Privacy Policy, and generally includes information that can be used to distinguish, trace, or identify an individual’s identity, including personal information which is linked or linkable to an individual. Personally Identifiable Information includes but is not limited to names, addresses, GPS coordinates, telephone numbers, fax numbers, email addresses, social security numbers, or labels (including,

e.g., character strings linked with real estate depicted in maps or assigned to sampling data) or other personal information that can be linked to an individual. EPA's Privacy Policy is available at <https://www.epa.gov/privacy/epa-policy-21510-privacy-policy>.

x. "Proposed ESD" or "Proposed Explanation of Significant Differences" shall mean the EPA document, noticed on December 11, 2017, and made available for public comment, which explains the significant increase in cost between the estimated cost of the remedy selected in the 2012 Record of Decision for Zones 2 and 3 of Operable Unit 1 of the Site and the December 2017 estimated cost of the remedy for those two Zones. The Proposed ESD is attached as Appendix E.

y. "Proprietary Controls" shall mean easements or covenants running with the land that: (a) limit land, water, or other resource use and/or provide access rights; and (b) are created pursuant to common law or statutory law by an instrument that is recorded in the appropriate land records office.

z. "RCRA" shall mean the Resource Conservation and Recovery Act, also known as the Solid Waste Disposal Act, 42 U.S.C. §§ 6901-6992.

aa. "Record of Decision" or "ROD" shall mean the EPA Record of Decision relating to Operable Unit 1 at the Site signed on November 30, 2012, by the Director of the Superfund Division, EPA Region 5, or his/her delegate, and all attachments thereto. The ROD is attached as Appendix D.

bb. "Remedial Action" or "RA" shall mean the remedial action selected in the ROD.

cc. "Remedial Action Levels" or "RALs" shall mean, for residential properties, 400 milligrams per kilogram (mg/kg) for lead and 26 mg/kg for arsenic, and for commercial/industrial properties, 800 mg/kg for lead and 26 mg/kg for arsenic.

dd. "Remedial Design" or "RD" shall mean those activities already undertaken or to be undertaken by EPA to develop final plans and specifications for the RA.

ee. "Respondents" shall mean Atlantic Richfield Company, The Chemours Company FC, LLC, E. I. du Pont de Nemours and Company, Mueller Industries, Inc., United States Metals Refining Company, and U.S.S. Lead Refinery, Inc.

ff. "Section" shall mean a portion of this Z2 Soil UAO identified by a Roman numeral.

gg. "Site" or "USS Lead Site" shall mean the U.S. Smelter and Lead Refinery, Inc. Superfund Site in East Chicago, Lake County, Indiana, and depicted generally on the map included with Appendix B. The Site includes both OU1 and OU2.

hh. "Staging Area" shall mean a parcel of land, if any, utilized by Respondents to temporarily store and stage excavated soil and other Waste Materials prior to transportation to a disposal facility.

- ii. “State” shall mean the State of Indiana.
- jj. “Supervising Contractor” shall mean the principal contractor retained by Respondents to supervise and direct the implementation of the Z2 RA Work under this Z2 Soil UAO.
- kk. “Transfer” shall mean to sell, assign, convey, lease, mortgage, or grant a security interest in, or where used as a noun, a sale, assignment, conveyance, or other disposition of any interest by operation of law or otherwise.
- ll. “United States” shall mean the United States of America and each department, agency, and instrumentality of the United States, including EPA.
- mm. “USMR” shall mean United States Metals Refining Company.
- nn. “USS Lead” shall mean U.S.S. Lead Refinery, Inc.
- oo. “Waste Material” shall mean: (a) any “hazardous substance” under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (b) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); (c) any “solid waste” under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27), or under Indiana Code § 13-11-2-205; (d), any “hazardous material” under Indiana Code § 13-11-2-96(b); and (e) any “hazardous waste” under Indiana Code § 13-11-2-99(c).
- pp. “Z1” or “Zone 1” shall mean the surface and subsurface soil found in an area located inside the yellow highlighted boundaries on Appendix C and labeled as “Zone 1.” Zone 1 is generally bordered: (1) on the north by the northern boundary of the Carrie Gosch Elementary School and a line extending eastward from that boundary to the eastern edge of a north/south utility right of way that runs parallel to McCook Avenue north of East 149th Place; (2) on the east by: (i) the eastern-most edge of a north/south utility right of way that runs parallel to McCook Avenue until East 149th Place, and (ii) McCook Avenue between East 149th Place and 151st Street; (3) on the south by East 151st Street; and (4) on the west by the Indiana Harbor Canal.
- qq. “Z2” or “Zone 2” shall mean the surface and subsurface soil found in an area located inside the yellow highlighted boundaries on Appendix C and labeled as “Zone 2.” Zone 2 is generally bordered: (1) on the north by Chicago Avenue; (2) on the east, by the eastern edge of the railroad right of way that runs principally north and south and is labeled on Appendix C as “Elgin Joliet and Eastern Rlwy”; (3) on the south by East 151st Street; and (4) on the west by: (i) the Indiana Harbor Canal between Chicago Avenue and the northern boundary of the Carrie Gosch Elementary School; (ii) the eastern-most edge of a north/south utility right of way that runs parallel to McCook Avenue until East 149th Place, and (iii) McCook Avenue between East 149th Place and 151st Street.
- rr. “Z3” or “Zone 3” shall mean the surface and subsurface soil found in an area located inside the yellow highlighted boundaries on Appendix C and labeled as “Zone 3.” Zone 3 is generally bordered: (1) on the north by Chicago Avenue; (2) on the east by Parrish Avenue; (3) on the south by the northern edge of the railroad right of way located generally to

the south of East 149th Place and labeled on Appendix C as “Elgin Joliet and Eastern Rlwy”; and (4) on the west by the eastern edge of the railroad right of way that runs principally north and south and is labeled on Appendix C as “Elgin Joliet and Eastern Rlwy.” The triangular plot of land bounded by several railroad spurs in the southeastern portion of the area labeled Zone 3 on Appendix C is a part of Zone 3.

ss. “Z2 Affected Property” shall mean all real property in Zone 2, Operable Unit 1, of the Site and any other real property where EPA determines, at any time, that access, land, water, or other resource use restrictions, and/or Institutional Controls are needed to implement the Zone 2 Remedial Action.

tt. “Z2 Excluded Properties” shall mean the properties on the final list that EPA develops and provides to Respondents pursuant to Paragraph 4.8(a)(2) of the Z2 Soil SOW.

uu. “Z2 ICIAP” or Z2 Institutional Controls Implementation and Assurance Plan” shall mean the plan that Respondents prepare for EPA’s approval pursuant to ¶ 6.7(j) of the Z2 Soil SOW.

vv. “Z2 O&M” or “Z2 Operation and Maintenance” shall mean all activities related to the implementation and maintenance of Institutional Controls in Zone 2 to ensure the effectiveness of the Z2 Remedial Action in accordance with the ROD as specified in the Z2 Soil SOW or the EPA-approved Z2 O&M Plan.

ww. “Z2 RA” or “Z2 Remedial Action” shall mean the remedial action selected in the ROD as applied to Zone 2. The Z2 RA includes Z2 Remedial Action Construction and the implementation of Institutional Controls.

xx. “Z2 RA Construction” “Z2 Remedial Action Construction” shall mean the excavation and disposal of Waste Material from Z2 Affected Properties and the restoration of those properties, but shall not include implementation of Institutional Controls.

yy. “Z2 RA Data Management” or “Z2 Remedial Action Data Management” shall mean those activities undertaken by Respondents to develop, manage, and implement proper data management for the data generated in implementing this Z2 Soil UAO.

zz. “Z2 RA Response Costs” shall mean all costs, including, but not limited to, direct and indirect costs, that the United States incurs in monitoring and supervising Respondents’ performance of the Z2 RA Work to determine whether such performance is consistent with the requirements of this Z2 Soil UAO, including costs incurred in reviewing deliverables submitted pursuant to this Z2 Soil UAO, as well as costs incurred in overseeing implementation of this Z2 Soil UAO, including, but not limited to, payroll costs, contractor costs, travel costs, laboratory costs and Department of Justice costs.

aaa. “Z2 RA Work” or “Zone 2 Remedial Action Work” shall mean all activities and obligations Respondents are required to perform under this Z2 Soil UAO, except those required by Section XVI (Record Retention). The Z2 RA Work encompasses all activities within the definition of “Z2 Remedial Action,” but, in addition, it includes the Z2 O&M.

bbb. “Z2 RD” or “Z2 Remedial Design” shall mean those activities already undertaken or to be undertaken by EPA to develop final plans and specifications for Z2 Remedial Action.

ccc. “Z2 Soil UAO” shall mean this Unilateral Administrative Order and all appendices attached hereto. In the event of conflict between this Z2 Soil UAO and any appendix, this Z2 Soil UAO shall control.

ddd. “Z2 Soil SOW” or “Zone 2 Soil Statement of Work” shall mean the document describing the activities Respondents must perform to implement the Z2 RA and the Z2 O&M. The Z2 Soil SOW is attached as Appendix A.

IV. FINDINGS OF FACT

8. EPA hereby makes the following findings of fact:

a. Pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, EPA placed the Site on the National Priorities List (NPL), set forth at 40 C.F.R. Part 300, Appendix B, by publication in the Federal Register on April 9, 2009, 74 Fed. Reg. 16,126–34.

b. The Site consists of two Operable Units: OU1 and OU2, both defined above. OU1 has been further divided into three zones: Zone 1 (Z1), Zone 2 (Z2), and Zone 3 (Z3), also defined above.

c. In response to a release or a substantial threat of a release of hazardous substances at or from OU1 of the Site, EPA commenced, in June 2009, a Remedial Investigation and Feasibility Study (RI/FS) of OU1 of the Site pursuant to 40 C.F.R. § 300.430.

d. EPA completed a Remedial Investigation (RI) Report and a Feasibility Study (FS) Report of OU1 in June 2012.

e. Pursuant to Section 117 of CERCLA, 42 U.S.C. § 9617, EPA published notice of the completion of the FS for OU1 and of the proposed plan for remedial action for OU1 on July 12, 2012, in a major local newspaper of general circulation. EPA provided an opportunity for written and oral comments from the public on the proposed plan for remedial action. A copy of the transcript of the public meeting is available to the public as part of the administrative record upon which the Director of the Superfund Division, EPA Region 5, based the selection of the response action for OU1.

f. The decision by EPA on the remedial action to be implemented at OU1 of the Site is embodied in a final Record of Decision (ROD), executed on November 30, 2012, on which the State has given its concurrence. The ROD includes a responsiveness summary to the public comments. Notice of the final plan was published in accordance with Section 117(b) of CERCLA, 42 U.S.C. § 9617(b). The remedy selected in that ROD included:

(1) Excavation of soil that contains lead or arsenic in concentrations that exceed the Remedial Action Levels (RALs) to a maximum depth of 24 inches;

(2) Disposal of excavated soil at a CERCLA-approved disposal facility;

(3) If contaminated soil is identified at a depth greater than 24 inches below ground surface (bgs), placement of a visual barrier over that contaminated soil before the yard is backfilled, and implementation of institutional controls to protect users of the property from exposure to contaminated soils that remain at depth; and

(4) Restoration of the excavated yards.

g. By Consent Decree entered on October 28, 2014, EPA and certain parties reached an agreement regarding remedial design and remedial action (RD/RA) in Zones 1 and 3 of OU1 of the Site. RD/RA work under the 2014 Consent Decree commenced in November 2014. In the summer of 2016, EPA suspended RD/RA work in Zone 1 because of actions of other governmental bodies leading to the permanent relocation of residents there. EPA is undertaking an Addendum to the FS as it applies to all of Zone 1, except for the property in Zone 1 that includes the former Carrie Gosch Elementary School. EPA continues RD/RA work in Zone 3 pursuant to the 2014 Consent Decree.

h. In July 2016, outside of the 2014 Consent Decree, EPA began conducting extensive soil sampling within Zone 2 as part of the Remedial Design process for OU1. As of December 4, 2017, EPA has sampled 528 out of approximately 590 properties in Zone 2. Approximately 446 of the sampled properties had contamination that equals or exceeds 400 mg/kg for lead and/or 26 mg/kg for arsenic in the top 24 inches of soil.

i. In the fall of 2016, outside of the 2014 Consent Decree, EPA remediated the soil of 17 properties in Zone 2.

j. On March 16, 2017, EPA and certain parties entered into an Administrative Settlement Agreement and Order on Consent (“Z2&3 ASAOC”) regarding, *inter alia*, exterior removal actions at properties in Zone 2 which had: (1) concentrations in surface soil (0 to 6 inches bgs) at or above 1200 mg/kg for lead or at or above 68 mg/kg for arsenic; and/or (2) concentrations in surface soil at or above 400 mg/kg for lead where EPA had reason to believe sensitive populations (pregnant women and/or children six and under) lived; and/or (3) concentrations in soil at or above 24 inches bgs at or above 400 mg/kg for lead where one or more children six and under had blood lead levels equal to or greater than 10 micrograms/deciliter. Exterior soil contamination at properties addressed under the Z2&3 ASAOC was remediated in a manner consistent with the ROD. As of December 1, 2017, exterior soil contamination at 109 Zone 2 properties has been addressed under the Z2&3 ASAOC.

k. A limited number of properties in Zones 2 and 3 that were remediated in 2016 and 2017 had lead and/or arsenic contamination below 24 inches bgs. However, no Institutional Controls will be required at any of these properties because all contamination that had existed below 24 inches bgs was removed.

l. On December 11, 2017, EPA noticed a Proposed Explanation of Significant Differences, with the State’s concurrence. That ESD documents only the increased

cost of implementing the ROD in Zones 2 and 3 of OU1 as compared to the original estimate provided in the Feasibility Study. The Proposed ESD has been published for public comment.

m. Lead is a hazardous substance, as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14). The Agency for Toxic Substances and Disease Registry (ATSDR) has determined that exposure to lead presents human health risks. Lead exposure via inhalation and/or ingestion can have detrimental effects on almost every organ and system in the human body. Exposure may occur from direct ingestion of soil in yards, soil tracked indoors (house dust), and inhalation of fugitive dust. Lead can cause a variety of health problems to people who are exposed to it. Potential human receptors include residents, with a particular concern for children six years of age and under, and pregnant or nursing women. Children are at greatest risk from the toxic effects of lead. Initially, lead travels in the blood to the soft tissues (heart, liver, kidney, brain, etc.). Then, it gradually redistributes to the bones and teeth where it tends to remain. Children exposed to high levels of lead have exhibited nerve damage, liver damage, colic, anemia, brain damage, and death. The most serious effects associated with markedly elevated blood lead levels include neurotoxic effects such as irreversible brain damage.

n. Arsenic is a hazardous substance, as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14). ATSDR has determined that exposure to arsenic presents human health risks. Ingesting very high levels of arsenic can result in death. Exposure to lower levels can cause nausea and vomiting, decreased production of red and white blood cells, abnormal heart rhythm, damage to blood vessels, and a sensation of “pins and needles” in hands and feet. Ingesting or breathing low levels of inorganic arsenic for a long time can cause a darkening of the skin and the appearance of small “corns” or “warts” on the palms, soles, and torso. Skin contact with inorganic arsenic may cause redness and swelling. Several studies have shown that ingestion of inorganic arsenic can increase the risk of skin cancer and cancer in the liver, bladder, and lungs. Inhalation of inorganic arsenic can cause increased risk of lung cancer. The Department of Health and Human Services (DHHS) and the EPA have determined that inorganic arsenic is a known human carcinogen (ATSDR, Chemical Abstract Services [CAS] # 7440-38-2], August 2007).

o. EPA has already implemented and will continue to implement—outside the coverage of this Z2 Soil UAO—the activities (including sampling) necessary for designing the excavation activities in the yards in Zone 2.

V. CONCLUSIONS OF LAW AND DETERMINATIONS

9. Based on the Findings of Fact set forth above, and the administrative record, EPA has determined that:

a. The U.S. Smelter and Lead Refinery, Inc. Superfund Site is a “facility” as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

b. The Former USS Lead Facility is a “facility” as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9). The Former USS Lead Facility is a part of the Site.

c. The property and former manufacturing plants located at 5215 Kennedy Avenue in East Chicago, Indiana, previously owned and/or operated by Respondent E. I. du Pont

de Nemours and Company (“Former DuPont Facility”) and currently owned and/or operated by Respondent The Chemours Company FC, LLC, is a “facility” as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

d. The property and former manufacturing plants previously located in Zone 1 of OU1 of the Site (“Former Anaconda Facility”) and previously owned and/or operated by predecessors of Respondent Atlantic Richfield Company is a “facility” as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9). The Former Anaconda Facility is a part of the Site.

e. Each Respondent is a “person” as defined by Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

f. Each Respondent is a liable party under one or more provisions of Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

(1) From 1920 to the present, Respondent U.S.S. Lead Refinery, Inc. (“USS Lead”) has been an “owner” and/or “operator”—as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Sections 107(a)(1) and (a)(2) of CERCLA, 42 U.S.C. §§ 9607(a)(1), (a)(2)—of the Former USS Lead Facility at which hazardous substances were disposed of and from which there were releases of hazardous substances.

(2) Respondent Mueller Industries, Inc. (“Mueller”) is liable as a successor to two companies: (i) United States Smelting Refining and Mining Company, which later changed its name to UV Industries, Inc. (“UV/USSRAM”); and (ii) Sharon Steel Corporation (“Sharon Steel”).

- i. UV/USSRAM was one or more of the following:
 - a. From 1919 to 1920, a person who, at the time of disposal of hazardous substances, “owned” and/or “operated”—within the meaning of Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2)—the Former USS Lead Facility at which hazardous substances were disposed of and from which there were releases of hazardous substances.
 - b. For some or all of the time between 1920 and 1979, a person who “operated”—within the meaning of Section 101(20) of CERCLA, 42 U.S.C. §§ 9601(20), and Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2)—the Former USS Lead Facility at which hazardous substances were disposed of and from which there were releases of hazardous substances.
 - c. A parent company who, for some or all of the time between 1920 and 1979, is indirectly liable, under a

corporate veil piercing theory, for the acts of its subsidiary, USS Lead (which is liable as described in Paragraph 9.f(1) above).

- d. For some or all of the time between 1920 and 1979, a person who arranged with USS Lead for the disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances at the Former USS Lead Facility, within the meaning of Section 107(a)(3) of CERCLA, 42 U.S.C. § 9607(a)(3).
- ii. Sharon Steel, for some or all of the time between 1979 and 1985, was a person who “operated”—within the meaning of Section 101(20) of CERCLA, 42 U.S.C. §§ 9601(20), and Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2)—the Former USS Lead Facility at which hazardous substances were disposed of and from which there were releases of hazardous substances.

(3) Respondent Atlantic Richfield Company is liable as a successor to: (i) one or more persons, including Anaconda Lead Products Company, International Lead Refining Company, and International Smelting and Refining Company, who, at the time of disposal of hazardous substances, “owned” and/or “operated”—within the meaning of Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2)—the Former Anaconda Facility at which hazardous substances were disposed of and from which there were releases of hazardous substances; and/or (ii) one or more persons, including Anaconda Lead Products Company, International Lead Refining Company, and International Smelting and Refining Company, who arranged with USS Lead for the disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances at the Former USS Lead Facility, within the meaning of Section 107(a)(3) of CERCLA, 42 U.S.C. § 9607(a)(3).

(4) Respondent E. I. du Pont de Nemours and Company is a person who: (i) at the time of disposal of hazardous substances, “owned” and/or “operated”—within the meaning of Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2)—the Former DuPont Facility at which hazardous substances were disposed of and from which there were releases of hazardous substances to the Site; and/or (ii) arranged with USS Lead for the disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances at the Former USS Lead Facility, within the meaning of Section 107(a)(3) of CERCLA, 42 U.S.C. § 9607(a)(3).

(5) Respondent The Chemours Chemical Company FC, LLC, is liable as a successor to E. I. du Pont de Nemours and Company (which is liable as described in Paragraph 9.f(4) above).

(6) Respondent United States Metals Refining Company is a person who at the time of disposal of hazardous substances, “owned” and/or “operated”—within the meaning of Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2)—the Former USS Lead Facility at which hazardous substances were disposed of and from which there were releases of hazardous substances.

g. The lead and arsenic contamination found in Zone 2, as identified in the Findings of Fact above, includes “hazardous substances” as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), and also includes “pollutants or contaminants” that may present an imminent and substantial danger to public health or welfare under Section 104(a)(1) of CERCLA, 42 U.S.C. § 9604(a)(1).

h. The conditions described in Paragraph 8.h of the Findings of Fact above constitute an actual or threatened “release” of a hazardous substance from the facility as defined by Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

i. The conditions described in Paragraph 8.h of the Findings of Fact above may constitute an imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance from the facility within the meaning of Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

j. Solely for purposes of Section 113(j) of CERCLA, 42 U.S.C. § 9613(j), the remedy set forth in the ROD and the Z2 RA Work to be performed by Respondents shall constitute a response action taken or ordered by the President for which judicial review shall be limited to the administrative record.

k. The actions required by this Z2 Soil UAO are necessary to protect the public health, welfare, or the environment.

VI. Z2 REMEDIAL ACTION WORK ORDER

10. Based on the Findings of Fact and Conclusions of Law and Determinations set forth above, and the administrative record, Respondents are hereby ordered to comply with this Z2 Soil UAO and any modifications to this Z2 Soil UAO, including, but not limited to, all appendices and all documents incorporated by reference into this Z2 Soil UAO. Consistent with the work schedule set forth ¶ 7.2 of the Z2 Soil SOW, in no event shall Respondents mobilize for Z2 RA Construction or commence Z2 RA Construction until after issuance of the Final ESD.

VII. OPPORTUNITY TO CONFER

11. No later than 5 days after the Z2 Soil UAO is signed by the Regional Administrator or his/her delegatee, Respondents may, in writing, (a) request a conference with EPA to discuss this Z2 Soil UAO, including its applicability, the factual findings and the

determinations upon which it is based, the appropriateness of any actions Respondents are ordered to take, or any other relevant and material issues or contentions that Respondents may have regarding this Z2 Soil UAO, or (b) notify EPA that they intend to submit written comments or a statement of position in lieu of requesting a conference.

12. If a conference is requested, Respondents may appear in person or by an attorney or other representative at the conference. Any such conference shall be held no later than 5 days after the conference is requested. Any written comments or statements of position on any matter pertinent to this Z2 Soil UAO must be submitted no later than 5 days after the conference or, if Respondents do not request a conference, within 15 days after this Z2 Soil UAO is signed. This conference is not an evidentiary hearing, does not constitute a proceeding to challenge this Z2 Soil UAO, and does not give Respondents a right to seek review of this Z2 Soil UAO. Any request for a conference or written comments or statements should be submitted to:

Steven Kaiser
Office of Regional Counsel
Region 5, US EPA
77 West Jackson Blvd. (C-14J)
Chicago, IL 60604-3590
kaiser.steven@epa.gov
(312) 353-3804

Leonardo Chingcuanco
Office of Regional Counsel
Region 5, US EPA
77 West Jackson Blvd. (C-14J)
Chicago, IL 60604-3590
chingcuanco.leonardo@epa.gov
(312) 886-7236

VIII. EFFECTIVE DATE

13. This Z2 Soil UAO shall be effective 5 days after the Z2 Soil UAO is signed by the Regional Administrator or his/her delegatee unless a conference is requested or notice is given, in accordance with Section VII (Opportunity to Confer), that written materials will be submitted in lieu of a conference. If a conference is requested or such notice is submitted, this Z2 Soil UAO shall be effective on 10th day after the day of the conference, or if no conference is requested, on the 5th day after written materials, if any, are submitted, unless EPA determines that the Z2 Soil UAO should be modified based on the conference or written materials. In such event, EPA shall notify Respondents, within the applicable period, that EPA intends to modify the Z2 Soil UAO. The modified Z2 Soil UAO shall be effective 5 days after it is signed by the Regional Administrator or his/her delegatee.

IX. NOTICE OF INTENT TO COMPLY

14. On or before the Effective Date, each Respondent shall notify EPA in writing of Respondent's irrevocable intent to comply with this Z2 Soil UAO. Such written notice shall be sent to EPA as provided in ¶ 12.

15. Each Respondent's written notice shall describe, using facts that exist on or prior to the Effective Date, any "sufficient cause" defenses asserted by such Respondent under Sections 106(b) and 107(c)(3) of CERCLA, 42 U.S.C. §§ 9606(a) and 9607(c)(3). The absence of a response by EPA to the notice required by this Section shall not be deemed to be acceptance of any Respondent's assertions. Failure of any Respondent to provide such notice of intent to comply within this time period shall, as of the Effective Date, be treated as a violation of this Z2 Soil UAO by such Respondent.

X. PERFORMANCE OF THE WORK

16. **Compliance with Applicable Law.** Nothing in this Z2 Soil UAO limits Respondents' obligations to comply with the requirements of all applicable federal and state laws and regulations. Respondents must also comply with all applicable or relevant and appropriate requirements of all federal and state environmental laws as set forth in the ROD and the Z2 Soil SOW.

17. Permits.

a. As provided in Section 121(e) of CERCLA, 42 U.S.C. § 9621(e), and Section 300.400(e) of the NCP, no permit shall be required for any portion of the Z2 RA Work conducted entirely on-site or at any other property which is within the areal extent of contamination or in very close proximity to the contamination and necessary for implementation of the Z2 RA Work. Where any portion of the Z2 RA Work that is not on-site requires a federal or state permit or approval, Respondents shall submit timely and complete applications and take all other actions necessary to obtain all such permits or approvals.

b. This Z2 Soil UAO is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation

18. Coordination and Supervision.

a. Project Coordinators and Remedial Project Managers.

(1) Respondents' Project Coordinator and Alternate Project Coordinator must have sufficient technical expertise to coordinate the Z2 RA Work. Respondents' Project Coordinator and Alternate Project Coordinator may not be an attorney representing any Respondent in this matter and may not act as the Supervising Contractor. Respondents' Project Coordinator and Alternate Project Coordinator may assign other representatives, including other contractors, to assist in coordinating the Z2 RA Work.

(2) EPA has designated Timothy Drexler and Sarah Rolfes as EPA's Remedial Project Managers (RPMs). EPA may designate other representatives, which may include its employees, contractors and/or consultants, to oversee the Z2 RA Work. EPA's RPM will have the same authority as a remedial project manager and/or an on-scene coordinator, as described in the NCP. This includes the authority to halt the Z2 RA Work and/or to conduct or direct any necessary response action when he or she determines that conditions at the Site constitute an emergency or may present an immediate threat to public health or welfare or the environment due to a release or threatened release of Waste Material.

(3) Respondents' Project Coordinator(s) shall communicate with EPA's RPMs regularly.

b. **Supervising Contractor.** Respondents' proposed Supervising Contractor must have sufficient technical expertise to supervise the Z2 RA Work and a quality assurance system that complies with ASQ/ANSI E4:2014, "Quality management systems for environmental information and technology programs - Requirements with guidance for use" (American Society for Quality, February 2014).

c. Procedures for Disapproval/Notice to Proceed.

(1) Respondents shall designate, and notify EPA, within 10 days after the Effective Date, of the names, titles, contact information, and qualifications of the Respondents' proposed Project Coordinator, Alternate Project Coordinator, and Supervising Contractor, whose qualifications shall be subject to EPA's review for verification based on objective assessment criteria (e.g., experience, capacity, technical expertise) and that they do not have a conflict of interest with respect to the project.

(2) EPA shall issue notices of disapproval and/or authorizations to proceed regarding the proposed Project Coordinator, Alternate Project Coordinator, and Supervising Contractor, as applicable. If EPA issues a notice of disapproval, Respondents shall, within 15 days, submit to EPA a list of supplemental proposed Project and Alternate Project Coordinators and/or Supervising Contractors, as applicable, including a description of the qualifications of each. EPA shall issue a notice of disapproval or authorization to proceed regarding each supplemental proposed coordinator/alternate coordinator and/or contractor. Respondents may select any coordinator/contractor covered by an authorization to proceed and shall, within 7 days, notify EPA of Respondents' selection.

(3) Respondents may change their Project Coordinator and/or Supervising Contractor, as applicable, by following the procedures of ¶¶18.c(1) and 18.c(2).

19. **Performance of Z2 RA Work in Accordance with Z2 Soil SOW.** Respondents shall: (a) perform the Z2 Remedial Action; (b) perform the Z2 O&M; and (c) support, if and as

necessary, EPA's periodic review efforts; all in accordance with the Z2 Soil SOW and all EPA-approved, conditionally-approved, or modified deliverables as required by the Z2 Soil SOW. All deliverables required to be submitted for approval under the Z2 Soil UAO or Z2 Soil SOW shall be subject to approval by EPA in accordance with ¶ 6.6 (Approval of Deliverables) of the Z2 Soil SOW.

20. **Emergencies and Releases.** Respondents shall comply with the emergency and release response and reporting requirements under ¶ 4.6 (Emergency Response and Reporting) of the Z2 Soil SOW.

21. **Community Involvement.** Respondents shall conduct community involvement activities under EPA's oversight as provided for in, and in accordance with, Section 2 (Community Involvement) of the Z2 Soil SOW. Such activities include, but are not limited to, designation of a Community Involvement Coordinator.

22. **Modification.**

a. EPA may, by written notice from the EPA RPM to Respondents, modify, or direct Respondents to modify, the Z2 Soil SOW and/or any deliverable developed under the Z2 Soil SOW, if such modification is necessary to achieve or maintain the Performance Standards or to carry out and maintain the effectiveness of the Z2 Remedial Action, and such modification is consistent with the Scope of the Remedy set forth in ¶ 1.3 of the Z2 Soil SOW. Any other requirements of this Z2 Soil UAO may be modified in writing by signature of the Superfund Division Director for Region 5 if such modification is consistent with the ROD.

b. Respondents may submit written requests to modify the Z2 Soil SOW and/or any deliverable developed under the Z2 Soil SOW. If EPA approves the request in writing, the modification shall be effective upon the date of such approval or as otherwise specified in the approval. Respondents shall modify the Z2 Soil SOW and/or related deliverables in accordance with EPA's approval.

c. No informal advice, guidance, suggestion, or comment by the EPA RPM or other EPA representatives regarding reports, plans, specifications, schedules, or any other writing submitted by Respondents shall relieve Respondents of their obligation to obtain any formal approval required by this Z2 Soil UAO, or to comply with all requirements of this Z2 Soil UAO, unless it is formally modified.

d. Nothing in this Z2 Soil UAO, the attached Z2 Soil SOW, any deliverable required under the Z2 Soil SOW, or any approval by EPA constitutes a warranty or representation of any kind by EPA that compliance with the work requirements set forth in the Z2 Soil SOW or related deliverable will achieve the Performance Standards.

XI. PROPERTY REQUIREMENTS

23. **Agreements Regarding Access.**

a. EPA to Provide Respondents with Previously-Executed Access Agreements. With respect to Zone 2 Affected Properties that require remediation but still have

not been remediated, by no later than 10 days after the Effective Date, EPA shall either provide Respondents with a copy of each previously-executed access agreement or shall provide Respondents with access to a secure, non-public website where these access agreements can be found. An unexecuted, blank copy of the access agreement that EPA has used in Zone 2 is attached as Appendix F.

b. Respondents' Use of Previously-Executed Access Agreements. With respect to the previously-executed access agreements, Respondents are hereby deemed "authorized representatives" of EPA for purposes of this Z2 Soil UAO. If a previously-executed access agreement includes access for both sampling and "removal" activities, Respondents are authorized to access the subject Z2 Affected Property and undertake the activities required by this Z2 Soil UAO. If a previously-executed access agreement does not include access for "removal" activities or if a property owner does not continue to consent to or grant access notwithstanding his/her previous execution of an access agreement, Respondents shall use best efforts to secure from the property owner an access agreement substantially in the form attached as Exhibit F. Because completion of the Z2 RA Construction under this Z2 Soil UAO shall take more than one construction season, Respondents shall continue to use "best efforts," as defined in Paragraph 25.b, to secure access during each year up to and including three months prior to the expected final demobilization of Z2 RA Construction, unless EPA informs Respondents that, with respect to a particular property(ies), EPA will take independent action to obtain access. Respondents shall provide a copy of any newly-executed access agreements to EPA.

c. Respondents' use of an access agreement that is substantially in the form attached as Appendix F shall be deemed sufficient to enable the Respondents, their contractors, EPA, and its contractors to undertake, as applicable, the following activities:

- (1) Performing the Z2 RA Work;
- (2) Monitoring the Z2 RA Work;
- (3) Verifying any data or information submitted to EPA;
- (4) Conducting investigations regarding contamination at or near the Z2 Affected Property;
- (5) Obtaining samples;
- (6) Assessing the need for, planning, or implementing additional response actions at or near the Z2 Affected Property;
- (7) Assessing implementation of quality assurance and quality control practices as defined in the approved construction quality assurance quality control plan as provided in the Z2 Soil SOW;
- (8) Implementing the Z2 RA Work pursuant to the conditions set forth in ¶ 39 (Z2 RA Work Takeover);
- (9) Assessing Respondents' compliance with the Z2 Soil UAO;

(10) Determining whether the Z2 Affected Property is being used in a manner that is prohibited or restricted, or that may need to be prohibited or restricted under the Z2 Soil UAO; and

(11) Implementing, monitoring, maintaining, reporting on, and enforcing any land, water, or other resource use restrictions and any Institutional Controls regarding the Z2 Affected Property.

If Respondents do not use an access agreement substantially in the form attached in Appendix F, Respondents shall ensure that its access agreement enables access for the activities identified in this Paragraph 23.c.

24. **Proprietary and Institutional Controls.** Pursuant to the schedule set forth in Paragraph 7.2 of the Z2 Soil SOW, if contamination that requires Institutional Controls pursuant to the ROD remains at one or more Z2 Affected Properties, Respondents shall submit an Institutional Controls Implementation and Assurance Plan (ICIAP) for EPA approval. If an ICIAP is necessary, it shall include, but not be limited to, consideration of the following types of restrictions, as appropriate:

(1) Prohibitions on activities that could interfere with the Z2 Remedial Action;

(2) Prohibitions on the use of contaminated groundwater;

(3) Prohibitions on activities that could result in exposure to contaminants in subsurface soils and groundwater;

(4) Requirements ensuring that any new structures on the Z2 Affected Property will not be constructed in a manner that could interfere with the Z2 Remedial Action; and

(5) Requirements ensuring that any new structures on the Z2 Affected Property will be constructed in a manner that will minimize potential risk of inhalation of lead and arsenic contaminants.

The ICIAP shall include a schedule for implementation. Respondents shall implement the approved ICIAP consistent with the approved schedule.

25. **Proprietary Controls and Best Efforts.**

a. With respect to any Z2 Affected Property, Respondents shall use best efforts to secure the owner's cooperation in executing and recording, in accordance with the procedures of the ICIAP, Proprietary Controls that: (i) grant a right of access to conduct any activity regarding the Z2 Soil UAO, including those activities listed in ¶ 24; and (ii) grant the right to enforce the land, water, or other resource use restrictions set forth in the ICIAP, if necessary.

b. As used in this Paragraph: (1) “Prior Encumbrances” means any encumbrance that affects the title to the Z2 Affected Property, including but not limited to prior liens, claims, rights (such as easements) and mortgages; and (2) “best efforts” means the efforts that a reasonable person in the position of Respondents would use so as to achieve the goal in a timely manner, including the cost of employing professional assistance and the payment of reasonable sums of money to secure access and/or use restriction agreements, Proprietary Controls, releases, subordinations, modifications, or relocations of Prior Encumbrances that affect the title to the Z2 Affected Property, as applicable.

c. Notification to EPA regarding Best Efforts.

(1) For Access Agreements. By no later than October 31 of the year preceding the year that Respondents expect to complete the Z2 RA Construction for all Z2 Affected Properties for which access has been granted, Respondents shall notify EPA of the Z2 Affected Properties, if any, for which they still have not secured access. In the notice, Respondents shall include a description of the steps they have taken to comply with the requirement to use “best efforts” to secure access. If EPA deems it appropriate, it may assist Respondents, or take independent action, in obtaining such access. EPA reserves the right to pursue cost recovery regarding all costs incurred by the United States in providing such assistance or taking such action, including the cost of attorney time and the amount of monetary consideration or just compensation paid.

(2) Land, Water, or Other Resource Use Restrictions. By no later than 180 days after completion of the Z2 RA Construction, Respondents shall notify EPA of the Z2 Affected Properties, if any, where they have not been able to secure land, water, or other resource use restrictions set forth in the ICIAP. In the notice, Respondents shall include a description of the steps they have taken to comply with the requirement to use “best efforts” to secure these restrictions. If EPA deems it appropriate, it may assist Respondents, or take independent action, in obtaining such use restrictions, Proprietary Controls, releases, subordinations, modifications, or relocations of Prior Encumbrances that affect the title to the Z2 Affected Property, as applicable. EPA reserves the right to pursue cost recovery regarding all costs incurred by the United States in providing such assistance or taking such action, including the cost of attorney time and the amount of monetary consideration or just compensation paid.

26. In the event of any Transfer of any Z2 Affected Property, unless EPA otherwise consents in writing, Respondents shall continue to comply with their obligations under the Z2 Soil UAO, including their obligation to secure access and ensure compliance with any land, water, or other resource use restrictions regarding the Z2 Affected Property, and to implement, maintain, monitor, and report on Institutional Controls.

XII. INSURANCE

27. Not later than 15 days before commencing any on-site Z2 RA Work, Respondents shall secure, and shall maintain until the first anniversary after the Certification of Z2 RA

Construction Completion pursuant to ¶ 4.8 of the Z2 Soil SOW, commercial general liability insurance with limits of liability of \$1 million per occurrence, and automobile insurance with limits of liability of \$1 million per accident, and umbrella liability insurance with limits of liability of \$5 million in excess of the required commercial general liability and automobile liability limits, naming the United States as an additional insured with respect to all liability arising out of the activities performed by or on behalf of Respondents pursuant to this Z2 Soil UAO. In addition, for the duration of the Z2 Soil UAO, Respondents shall satisfy, or shall ensure that their contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing Z2 RA Work on behalf of Respondents in furtherance of this Z2 Soil UAO. Within the same time period, Respondents shall provide EPA with certificates of such insurance and a copy of each insurance policy. Respondents shall submit such certificate and copies of policies each year on the anniversary of the Effective Date. If Respondents demonstrate by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in a lesser amount, then, with respect to that contractor or subcontractor, Respondents need provide only that portion of the insurance described above that is not maintained by the contractor or subcontractor. Respondents shall ensure that all submittals to EPA under this Paragraph identify the USS Lead Site in East Chicago, Indiana, and the EPA docket number for this action.

XIII. DELAY IN PERFORMANCE

28. Respondents shall notify EPA of any delay or anticipated delay in performing any requirement of this Z2 Soil UAO. Such notification shall be made by telephone and email to the EPA RPM within 48 hours after Respondents first knew or should have known that a delay might occur. Respondents shall adopt all reasonable measures to avoid or minimize any such delay. Within seven days after notifying EPA by telephone and email, Respondents shall provide to EPA written notification fully describing the nature of the delay, the anticipated duration of the delay, any justification for the delay, all actions taken or to be taken to prevent or minimize the delay or the effect of the delay, a schedule for implementation of any measures to be taken to mitigate the effect of the delay, and any reason why Respondents should not be held strictly accountable for failing to comply with any relevant requirements of this Z2 Soil UAO. Increased costs or expenses associated with implementation of the activities called for in this Z2 Soil UAO is not a justification for any delay in performance.

29. Any delay in performance of this Z2 Soil UAO that, in EPA's judgment, is not properly justified by Respondents under the terms of ¶ 28 shall be considered a violation of this Z2 Soil UAO. EPA will notify Respondents of any such violation, or of any change to the deadline for deliverables. Any delay in performance of this Z2 Soil UAO shall not affect Respondents' obligations to fully perform all obligations under the terms and conditions of this Z2 Soil UAO.

XIV. PAYMENT OF Z2 RA RESPONSE COSTS

30. Z2 RA Response Cost Payments

a. On a periodic basis, EPA will send Respondents a bill requiring payment of all Z2 RA Response Costs incurred by the United States regarding this Z2 Soil UAO that includes an Itemized Cost Summary. Respondents shall, within 30 days, make full payment of the amount billed, in accordance with ¶ 30.b.

b. Respondents shall make payment by Fedwire EFT, referencing the Site/Spill ID number. The Fedwire EFT payment must be sent as follows:

Federal Reserve Bank of New York
ABA = 021030004
Account = 68010727
SWIFT address = FRNYUS33
33 Liberty Street
New York NY 10045
Field Tag 4200 of the Fedwire message should read
“D 68010727 Environmental Protection Agency”

c. At the time of payment, Respondents shall send notice that payment has been made to the EPA representatives identified in ¶ 12 and to the EPA Cincinnati Finance Office by mail or by email at:

EPA Cincinnati Finance Center
26 W. Martin Luther King Drive
Cincinnati, Ohio 45268
cinwd_acctsreceivable@epa.gov

Such notice shall reference Site/Spill ID Number 05-3J and the EPA docket number for this matter.

31. **Interest.** In the event that the payments for Z2 RA Response Costs are not made within 30 days after Respondents’ receipt of a written demand requiring payment, Respondents shall pay Interest on the unpaid balance. The Interest on Z2 RA Response Costs shall begin to accrue on the date of the written demand and shall continue to accrue until the date of payment. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to EPA by virtue of Respondents’ failure to make timely payments under this Section. Respondents shall make all payments under this Paragraph in accordance with ¶ 30.b.

XV. ACCESS TO INFORMATION

32. Respondents shall provide to EPA, upon request, copies of all records, reports, documents, and other information (including records, reports, documents, and other information in electronic form) (hereinafter referred to as “Records”) within Respondents’ possession or control or that of their contractors or agents relating to activities at the Site or to the implementation of this Z2 Soil UAO, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information regarding the Z2 RA Work. Respondents shall also make available to EPA, for purposes of investigation, information gathering, or

testimony, their employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Z2 RA Work.

33. Privileged and Protected Claims.

a. Respondents may assert that all or part of a Record requested by EPA is privileged or protected as provided under federal law, in lieu of providing the Record, provided Respondents comply with ¶ 33.b, and except as provided in ¶ 33.c.

b. If Respondents assert a claim of privilege or protection, they shall provide EPA with the following information regarding such Record: its title; its date; the name, title, affiliation (e.g., company or firm), and address of the author, of each addressee, and of each recipient; a description of the Record's contents; and the privilege or protection asserted. If a claim of privilege or protection applies only to a portion of a Record, Respondents shall provide the Record to EPA in redacted form to mask the privileged or protected portion only. Respondents shall retain all Records that they claim to be privileged or protected until EPA has had a reasonable opportunity to dispute the privilege or protection claim and any such dispute has been resolved in the Respondents' favor.

c. Respondents may make no claim of privilege or protection regarding: (1) any data regarding the Site, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, radiological, or engineering data, or the portion of any other Record that evidences conditions at or around the Site; or (2) the portion of any Record that Respondents are required to create or generate pursuant to this Z2 Soil UAO.

34. Business Confidential Claims. Respondents may assert that all or part of a Record provided to EPA under this Section or Section XVI (Record Retention) is business confidential to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Respondents shall segregate and clearly identify all Records or parts thereof submitted under this Z2 Soil UAO for which Respondents assert business confidentiality claims. Records claimed as confidential business information will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies Records when they are submitted to EPA, or if EPA has notified Respondents that the Records are not confidential under the standards of CERCLA § 104(e)(7) or 40 C.F.R. Part 2, Subpart B, the public may be given access to such Records without further notice to Respondents.

35. Personally Identifiable Information.

a. In the course of implementing this Z2 Soil UAO, Respondents shall receive from EPA and shall generate themselves written and/or electronic materials that contain Personally Identifiable Information. Respondents shall keep PII confidential and not disclose it to other persons or entities except as required by law, court order or other lawful process that protects disclosure to the public of PII. Respondents shall take all necessary and appropriate measures to maintain the confidentiality of PII and to retain written or electronic materials in a secure manner.

b. Respondents may share PII with agents and contractors of theirs who are responsible for assisting in the implementation of this Z2 Soil UAO provided that any such person with whom such information is shared either: (i) is specifically made aware of, and, prior to receiving the information, agrees in writing with Respondents to comply with the substantive requirements of Paragraph 35.a as if he/she were a Respondent; or (ii) already has executed a confidentiality agreement with the Respondent that is broad enough to cover PII.

c. PII otherwise admissible, discoverable or subject to subpoena in any proceeding shall not be rendered inadmissible, non-discoverable or not subject to subpoena because of its coverage under this Z2 Soil UAO.

d. In the event that Respondents conclude in good faith that applicable law, a subpoena or other lawful process, or a court order, requires disclosure of PII to a third party, Respondents shall provide, as far as is practicable, advance written notice to EPA of the intent to disclose, including a description of the applicable law or a copy of the subpoena, process or order requiring disclosure. Respondents shall not disclose any Personally Identifiable Information sooner than one day following provision of such written notice, unless required by law or order of a court.

e. Each Respondent shall promptly report to EPA breaches of PII, unauthorized disclosures or releases, and/or system vulnerability (to the extent known). Any disclosure of PII in contravention of this Z2 Soil UAO shall not result in a waiver of the claim of confidentiality, except as provided by law.

XVI. RECORD RETENTION

36. During the pendency of this Z2 Soil UAO and for a minimum of 10 years after EPA provides Notice of Z2 RA Work Completion under ¶ 4.11 of the Z2 Soil SOW, each Respondent shall preserve and retain all non-identical copies of Records (including Records in electronic form) now in its possession or control or that come into its possession or control that relate in any manner to its liability under CERCLA with respect to the Site, provided, however, that Respondents who are potentially liable as owners or operators of the Site must retain, in addition, all Records that relate to the liability of any other person under CERCLA with respect to the Site. Each Respondent must also retain, and instruct its contractors and agents to preserve, for the same period of time specified above, all non-identical copies of the last draft or final version of any Records (including Records in electronic form) now in its possession or control or that come into its possession or control that relate in any manner to the performance of the Z2 RA Work, provided, however, that each Respondent (and its contractor and agents) must retain, in addition, copies of all data generated during performance of the Z2 RA Work and not contained in the aforementioned Records to be retained. Each of the above record retention requirements shall apply regardless of any corporate retention policy to the contrary.

37. At the conclusion of this document retention period, Respondents shall notify EPA at least 90 days prior to the destruction of any such Records, and, upon request by EPA, and except as provided in ¶ 33, Respondents shall deliver any such Records to EPA.

38. Within 30 days after the Effective Date, each Respondent shall submit a written certification to EPA's RPM that, to the best of its knowledge and belief, after thorough inquiry, it has not altered, mutilated, discarded, destroyed, or otherwise disposed of any Records (other than identical copies) relating to its potential liability regarding the Site since notification of potential liability by the United States or the State and that it has fully complied with any and all EPA requests for information regarding the Site pursuant to Sections 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. § 6927, and state law. Any Respondent unable to so certify shall submit a modified certification that explains in detail why it is unable to certify in full with regard to all Records.

XVII. ENFORCEMENT/WORK TAKEOVER

39. Any willful violation, or failure or refusal to comply with any provision of this Z2 Soil UAO may subject Respondents to civil penalties of up to \$53,907 per violation per day, as provided in Section 106(b)(1) of CERCLA, 42 U.S.C. § 9606(b)(1), and the Civil Monetary Penalty Inflation Adjustment Rule, 81 Fed. Reg. 43,091, 40 C.F.R Part 19.4. In the event of such willful violation, or failure or refusal to comply, EPA may carry out the required actions unilaterally, pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604, and/or may seek judicial enforcement of this Z2 Soil UAO pursuant to Section 106 of CERCLA, 42 U.S.C § 9606. Respondents may also be subject to punitive damages in an amount up to three times the amount of any cost incurred by the United States as a result of such failure to comply, as provided in Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3).

XVIII. NOTICES AND SUBMISSIONS

40. All approvals, consents, deliverables, modifications, notices, notifications, objections, proposals, reports, and requests specified in this Z2 Soil UAO must be in writing unless otherwise specified. Whenever, under this Z2 Soil UAO, notice is required to be given, or a report or other document is required to be sent, by one Party to another, it must be directed to the person(s) specified below at the address(es) specified below. Any Party may change the person and/or address applicable to it by providing notice of such change to all Parties. All notices under this Section are effective upon receipt, unless otherwise specified. Except as otherwise provided, notice to a Party by email (if that option is provided below) or by regular mail in accordance with this Section satisfies any notice requirement of the Z2 Soil UAO regarding such Party.

As to EPA:

Director, Superfund Division
Region 5, US EPA
77 W. Jackson Blvd. (SR-6J)
Chicago, IL 60604-3590

Timothy Drexler
EPA RPM
Region 5, US EPA
77 W. Jackson Blvd. (SR-6J)
Chicago, IL 60604-3590

drexler.timothy@epa.gov
(312) 353-4367

Sarah Rolfes
EPA RPM
Region 5, US EPA
77 W. Jackson Blvd. (SR-6J)
Chicago, IL 60604-3590
rolfes.sarah@epa.gov
(312) 886-6551

Steven Kaiser
Office of Regional Counsel
Region 5, US EPA
77 West Jackson Blvd. (C-14J)
Chicago, IL 60604-3590
kaiser.steven@epa.gov
(312) 353-3804

Leonardo Chingcuanco
Office of Regional Counsel
Region 5, US EPA
77 West Jackson Blvd. (C-14J)
Chicago, IL 60604-3590
chingcuanco.leonardo@epa.gov
(312) 886-7236

As to the Regional Financial
Management Officer:

Chief, Program Accounting and Analysis Section
United States Environmental Protection Agency
Region 5, MF-10J
77 West Jackson Blvd.
Chicago, IL 60604-3590

As to EPA Cincinnati Finance
Center

EPA Cincinnati Finance Center
26 W. Martin Luther King Dr.
Cincinnati, OH 45268
cinwd_acctsreceivable@epa.gov

XIX. RESERVATIONS OF RIGHTS

41. Nothing in this Z2 Soil UAO limits the rights and authorities of EPA and the United States:

- a. To take, direct, or order all actions necessary, including to seek a court order, to protect public health, welfare, or the environment or to respond to an actual or threatened release of Waste Material on, at, or from the Site;
- b. To select further response actions for the Site in accordance with CERCLA and the NCP, including but not limited to further response actions relating to soils in Zone 2 that currently are covered by impermeable barriers but become exposed due to the removal of existing impermeable barriers and further response actions at Z2 Excluded Properties;
- c. To seek legal or equitable relief to enforce the terms of this Z2 Soil UAO;
- d. To take other legal or equitable action as they deem appropriate and necessary, or to require Respondents in the future to perform additional activities pursuant to CERCLA or any other applicable law;
- e. To bring an action against Respondents under Section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of any costs incurred by EPA or the United States regarding this Z2 Soil UAO or the Site and not paid by Respondents pursuant to this Z2 Soil UAO;
- f. Regarding access to, and to require land, water, or other resource use restrictions and/or Institutional Controls regarding the Site under CERCLA, RCRA, or other applicable statutes and regulations; or
- g. To obtain information and perform inspections in accordance with CERCLA, RCRA, and any other applicable statutes or regulations.

XX. OTHER CLAIMS

42. By issuance of this Z2 Soil UAO, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondents. The United States or EPA shall not be deemed a party to any contract entered into by Respondents or their directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out actions pursuant to this Z2 Soil UAO.

43. Nothing in this Z2 Soil UAO constitutes a satisfaction of or release from any claim or cause of action against Respondents or any person not a party to this Z2 Soil UAO, for any liability such person may have under CERCLA, other statutes, or common law, including but not limited to any claims of the United States under Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607.

44. Nothing in this Z2 Soil UAO shall be deemed to constitute preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or C.F.R. § 300.700(d).

45. No action or decision by EPA pursuant to this Z2 Soil UAO shall give rise to any right to judicial review, except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

XXI. ADMINISTRATIVE RECORD

46. EPA has established an administrative record that contains the documents that form the basis for the issuance of this Z2 Soil UAO, including, but not limited to, the documents upon which EPA based the selection of the Remedial Action selected in the ROD. EPA will make the administrative record available for review at the EPA Region 5 Superfund Record Center located 77 W. Jackson Blvd., Chicago, IL 60604. A copy of the administrative record is also available for viewing at <https://www.epa.gov/uss-lead-superfund-site>.

XXII. APPENDICES

47. The following appendices are attached to and incorporated into this Z2 Soil UAO:
- a. Appendix A: Z2 Soil SOW
 - b. Appendix B: Map of USS Lead Site OU1 and OU2
 - c. Appendix C: Map of USS Lead Site OU1 – Zones 1, 2, and 3
 - d. Appendix D: Record of Decision
 - e. Appendix E: Proposed Explanation of Significant Differences
 - f. Appendix F: Copy of EPA's access agreement for soil sampling and clean-up

XXIII. SEVERABILITY

48. If a court issues an order that invalidates any provision of this Z2 Soil UAO or finds that Respondents have sufficient cause not to comply with one or more provisions of this Z2 Soil UAO, Respondents shall remain bound to comply with all provisions of this Z2 Soil UAO not invalidated or determined to be subject to a sufficient cause defense by the court's order.

It is so ORDERED

BY:


for Margaret M. Guerriero
Acting Division Director, Superfund Division
Region 5
U.S. Environmental Protection Agency

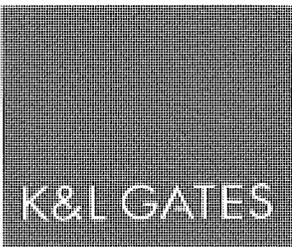
DATE:

12/14/2019

APPENDIX Q

**TO
Z2 SOIL UAO**

**Comments on Original Z2 Soil UAO and Z2&3
Interior UAO from ARC, Chemours, DuPont, and
USMR to EPA (Jan. 10, 2018)**



January 10, 2018

David L. Rieser
david.rieser@klgates.com

VIA EMAIL AND REGULAR MAIL

T +1 312 807 4359

Mr. Steven Kaiser
Mr. Leo Chingcuanco
Office of Regional Counsel
Region 5
U.S. Environmental Protection Agency
77 W. Jackson Blvd. (C-14J)
Chicago, IL 60604-3590

**Re: USS Lead Superfund Site - Opportunity to Confer Comments
UAO for Zone 2 Remedial Action, CERCLA Docket No. V-W-18-C-001
UAO for Zones 2 and 3 Interior Removal Action, CERCLA Docket No. V-W-18-C-002**

Dear Steve and Leo:

Having had an opportunity to confer, I am writing on behalf of the following respondents to the above Unilateral Administrative Orders ("UAOs"): the Atlantic Richfield Company, the Chemours Company, FC, LLC, E.I. Du Pont de Nemours and Company and United States Metals Refining Company (collectively the "ASAOC Respondents") to submit comments in response to our conference held on January 5, 2018. In general, these comments memorialize the discussion we had at that conference and address the same topics.

I. Arranger PRPs

We discussed again the importance of issuing the UAO so as to include the arranger PRPs, at least those which received notification of potential liability from EPA. We have stressed the importance of requiring these PRPs to participate in remedial activities for several years, including providing a legal basis to support issuing notice letters to the arranger PRPs. We worked with EPA on these UAOs because we believed their issuance would encourage other PRPs to participate. It was not until our meeting on November 12, 2017 that we were advised that the arranger PRPs would not be included due to concerns regarding the relative size of the contribution from the arranger PRPs and SREA issues. In a subsequent letter we addressed those concerns, pointing out that parties could not be identified as de minimis outside the

settlement context and that SREA placed the burden of proof on the PRPs to document that the exemption applied.

At the January 5 meeting, we referenced these prior discussions and focused on several additional issues. We addressed DOJ's comment that liability for entities which arranged for treatment as opposed to disposal was an untested theory that would not support liability for these arrangers. We pointed out that CERCLA assessed liability for people who arranged for "disposal or treatment," stating clear Congressional intent that arranging for treatment was a basis for liability, separate and apart from arranging for disposal. We analogized to *Cooper Industries Inc. v. Aviall Services, Inc.*, 543 U.S. 157 (2004) in which the Supreme Court overturned years of circuit court decisions to find that the plain language of CERCLA prohibited PRPs from bringing contribution actions if they have not been previously sued based on the plain language of CERCLA. We also note that there are a number of cases which have based liability on arranging for treatment as discussed in the attached article (*CERCLA Enforcement: Terminology and Meaning of "Treatment" Arranger Liability*, 38 W. New Eng. L. Rev. 425 (2016)).

We also discussed EPA's other stated bases not to include arrangers but that discussion mainly recapitulated our letter after the November meeting. EPA's position on these matters has also been left uncertain by Annette Lang's email of December 13, which appeared to reject some of the rationales provided for not including the arranger PRPs. As a result, we request that EPA reconsider its decision not to name the arranger PRPs in this UAO.

II. EPA Cost Payment

We herein renew our requests, based upon the equitable and legal reasons discussed with you, that EPA reconsider and remove from the UAOs the provisions relating to payment of EPA's response costs. We recognize that EPA has and will otherwise retain its legal authority to seek recovery of its response costs outside of the context of the UAOs.

As referenced above, the UAOs seek to require a subset of the USS Lead site PRPs to undertake significant remedial activities and incur significant cost. Therefore equity and fairness requires removing the provisions seeking to require the PRPs named in the UAOs to reimburse response costs pursuant to the UAOs.

Additionally, the UAOs do not provide any opportunity for the respondents to review, question, or object to the payment of any such bill, or item in any such bill, for response costs received pursuant to the UAOs. We respectfully suggest that the potential to receive a bill from EPA which contains errors or questionable response costs exists. We are all aware that this is a complex site and significant unanticipated costs have been incurred to date. Again, equity and fairness dictate providing an opportunity to review and question response costs included in a bill received for response costs.

Furthermore, we respectfully request that EPA provide us with the statutory and regulatory authority for seeking to require payment of response costs in the UAOs. More specifically the

UAOs are issued under the authority of Section 106(a) of CERCLA. EPA's authority under Section 106(a) of CERCLA is limited to the issuance of orders for "abatement actions as may be necessary to protect public health welfare and the environment." Section 106(a), among other limitations, does not authorize EPA to order a PRP to reimburse EPA for response costs. EPA has reserved its right to pursue a separate civil action to recover response costs in the UAO's Reservation of Rights provisions.

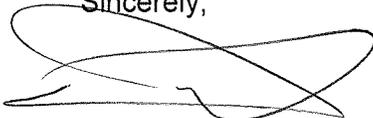
III. Orphan Share Consideration

Numerous PRPs for the work required under the UAOs are "orphan" parties because they are insolvent or defunct. For example, U.S.S. Lead Refinery, Inc. is an insolvent party who owned and operated the USS Lead facility from 1919 until it was closed in 1985, and several parties who arranged for disposal or treatment of hazardous substances at the USS Lead facility are insolvent or defunct. Further, EPA has recognized that slag is present in the soil that has been or needs to be removed in OU1. This slag appears to be from local steel mills, the owners and operators of which are insolvent or defunct.

We request that EPA provide orphan share funding to address the unfairness of the UAO Respondents being required to pay for all of the orphan parties' liability at this site. While the share of the orphan parties' liability has not been fully determined by EPA, we believe it exceeds the 25% that EPA is readily allowed to fund as an orphan share. Accordingly, we request that EPA provide 25% of the funding required to perform the work under the UAOs.

As always, we appreciate your consideration of these matters. If you have any questions, please contact me.

Sincerely,



David L. Rieser

cc: Annette Lang
Sparsh Khandeshi
Bernard Reilly
Michael Elam
Doug Reinhart
Patricia McGee
Jason Hughes
David Wallis
Ben Lippard

APPENDIX R

**TO
Z2 SOIL UAO**

**Comments on Original Z2 Soil UAO and
Z2&3 Interior UAO from USS Lead to EPA
(Dec. 26, 2017)**

BakerHostetler

Baker&Hostetler LLP

Washington Square, Suite 1100
1050 Connecticut Avenue, N.W.
Washington, DC 20036-5403

T 202.861.1500
F 202.861.1783
www.bakerlaw.com

Robert N. Steinwurtzel
Direct dial: 202.861.1708
rsteinwurtzel@bakerlaw.com

December 26, 2017

VIA E-MAIL

Leonardo Chingcuanco
Office of Regional Counsel
U.S. EPA – Region 5 (C-14J)
77 West Jackson Blvd.
Chicago, IL 60604

Steven P. Kaiser
Office of Regional Counsel
U.S. EPA Region 5 (C-14J)
77 West Jackson Blvd.
Chicago, IL 60604

Re: U.S. Smelter and Lead Refinery, Inc.

Dear Leo and Steve:

On behalf of our client U.S. Smelter and Lead Refinery, Inc. (“USS Lead”) we hereby provide USS Lead’s written comments, pursuant to paragraphs 11-12 of the Unilateral Administrative Orders relating to the East Chicago Site that were signed on December 14, 2017 (the “UAOs”). We provided notice of USS Lead’s intent to make this submission by letter dated December 19, 2017. These comments respond to the language that provides USS Lead with the opportunity to comment on the “applicability” of the orders to the company.

USS Lead requests that EPA remove it as a respondent to the UAOs prior to their effective date on the grounds that USS Lead does not have the financial ability to comply and based upon EPA’s policy against issuing UAOs to entities that are not financially viable.

BACKGROUND

USS Lead commenced operations approximately one hundred years ago as a refinery of lead bullion. In the early 1970’s, USS Lead converted its full operation to a lead recycling facility. Smelting operations ceased in 1983 and the facility permanently closed in 1985. USS

Lead has no ongoing operations, revenue streams or assets. It is in debt to multiple creditors and is currently delinquent in payment of its property taxes in the approximate amount of \$2.8 mm. *See, Exhibit 1.*

REMOVAL OF USS LEAD

EPA's policy against issuing UAOs to entities that are not financially viable is set forth in its "Guidance on CERCLA Section 106(a) Unilateral Administrative Orders for Remedial Designs and Remedial Actions," dated March 7, 1990 (the "1990 Guidance"). The guidance lists case-specific considerations to determine whether a party should be named as a respondent in a UAO. One of the criteria is that the "PRPs are Financially Viable." Guidance at 14. The Guidance states: "The financial viability of PRPs should be considered before an order is issued" and "the order should not include PRPs that lack any substantial resources, unless the activities required of those persons do not involve expenditures of money (e.g., providing access)." *Id.*; *see also id.* at 15 (stating that "financial viability should be considered" when evaluating whether to name an individual PRP in an order). EPA reiterated this policy in "Evaluation of, and Additional Guidance on, Issuance of Unilateral Administrative Orders (UAOs) for RD/RA," dated June 20, 1991 (the "1991 Guidance"), stating that "order involving expenditures of money should generally not be issued to PRPs that lack any substantial resources." 1991 Guidance at 4. EPA's policy is consistent with CERCLA's legislative history, which states that PRPs who did not at the time have the financial resources to comply with a UAO would have a sufficient cause not to do so. 126 Cong. Rec. 30873, 30986 (Nov. 24, 1980) ("There could also be 'sufficient cause' for not complying with an order if the party subject to the order did not at the time have the financial or technical resources to comply").

EPA is required to comply with its policy in this case. It has already determined that USS Lead lacks any substantial resources. EPA confirmed this by letter dated July 28, 2006, stating that EPA "has examined the financial documentation submitted by USS Lead, and determined that USS Lead itself appears to have limited financial ability to complete all of the RCRA and other remediation-related activities currently required or expected to be required for the facility," including "remediation activities in the East Chicago area currently required or expected to be required by the Superfund Program under CERCLA." (July 28, 2006 Letter from Mr. McClary, EPA Associate Regional Counsel, re USS Lead Refinery, Inc. at 1.) A copy of this letter is included as Exhibit 2.

The exception noted in the guidance does not apply for situations where EPA has cause to name respondents who are not financially viable because there are "activities required of those persons [that] do not involve expenditures of money (e.g., providing access)." 1990 Guidance at 14. There are no "activities" required of USS Lead for the work under the UAOs to be accomplished. USS Lead offered to make its facility available as a staging or disposal location in connection with any remediation relating to the USS Lead site, including the residential areas (given that USS Lead does not have resources to contribute financially to the cleanup). EPA declined this offer. Of course, USS Lead does not own the residential areas that are the subject of the UAOs, but even if access to USS Lead's property were necessary, the company has and would continue to provide access voluntarily, without the need for EPA to resort to a UAO.

Leonardo Chingcuanco
December 26, 2017
Page 2

Indeed, in May 2015, USS Lead entered into an access agreement with EPA, East Chicago Waterway Management District, and EPA's Great Lakes National Program Office to collect on-site samples in connection with the restoration of the Grand Calumet River. This access was granted without the need to resort to an enforcement order. USS Lead has a long history of cooperating with EPA regarding its Site, including repeatedly accommodating EPA's request to review documents and providing substantial logistical assistance to EPA in those efforts.

* * *

For these reasons, we respectfully request that EPA remove USS Lead as a respondent, based on its longstanding policy against issuing UAOs to entities that are not financially viable. Please contact the undersigned if you have any questions regarding this submission or need additional information. Thank you.

Sincerely yours,



Robert N. Steinwurtzel

Attachments: Exhibits 1 and 2

EXHIBIT 1

SRI, INCORPORATED
 LAKE COUNTY AUDITOR'S OFFICE
 P.O. BOX 501610
 INDIANAPOLIS IN 46250-1610

9214 8901 0661 5400 0108 9622 13

DO NOT SEND PAYMENTS TO THIS ADDRESS; SEND PAYMENTS TO THE ADDRESS AT THE BOTTOM OF THE LETTER

OWNER OF RECORD: U S S Lead Refining Inc
 4780 CATERPILLAR RD
 Redding CA 96003

PRESCRIBED BY STATE BOARD OF ACCOUNTS

NOTICE OF TAX SALE

COUNTY FORM NO. 137A (2001)

Township or Corporation: East Chicago

Pursuant to the laws of the Indiana General Assembly, notice is hereby given that the following described property is listed for sale for delinquent taxes and/or special assessments. The county auditor and county treasurer will apply on or after 8/23/2017 for a court judgment against the tracts or real property for an amount that is not less than the amount set out below and for an order to sell the tracts or real property at public auction to the highest bidder, subject to the right of redemption.

The period of redemption will expire on Wednesday, September 19, 2018 for property sold on this sale. The period of redemption for a property not sold on this sale will expire on: Wednesday, January 17, 2018 if the county intends to pursue title to the parcel. The terms of the redemption are specified at IC 6-1.1-25-2 and IC 6-1.1-25-4.

Any defense to the application for judgment must be filed with the Lake County Circuit Court before 8/23/2017. The auditor and treasurer must receive all pleadings. The court will set a date for a hearing at least seven (7) days before the advertised date of sale and the court will determine any defenses to the application for judgment at the hearing. The public auction will be conducted as an electronic sale under IC 6-1.1-24-2(b), at the following website: www.zeusauction.com. The public auction will begin on September 11, 2017 at 8:00 am local time. The properties in the online auction will commence closing in batches beginning at 12:00 pm local time on September 18, 2017 at www.zeusauction.com. Each property will have its specific closing time posted on the auction website.

DESCRIPTION OF TRACT OR ITEM OF REAL PROPERTY

Property ID # / Key Number	Location and Street Address or Common Description of Real Property	Brief Legal Description
45-03-33-300-002.000-024	5300 KENNEDY AVE EAST CHICAGO 46312	PT. N. RIV. W2. S.33 T.37 R.9 SUBJ. TO EASMT, 79.003 A.

** THE COUNTY DOES NOT WARRANT THE ACCURACY OF THE STREET ADDRESS OR COMMON DESCRIPTION OF REAL PROPERTY **

DELINQUENT TAX	AMOUNTS DUE
Prior Year's Spring Installment or Before Delinquent	\$735,306.69
Prior Year's Second Installment	\$0.00
Current Year's First Installment	\$5.00
PENALTIES	
Penalties	\$2,055,984.05
SPECIAL ASSESSMENTS	
Delinquent (Prior Year's Spring Installment or Before) Current Year	\$0.00
Postage and Publication Costs and Any Other Actual Costs Incurred by the County	\$150.00
Actual Costs Incurred by the County From a Previous Tax Sale and Not Yet Recovered by the County	\$955.00
Partial Payments	\$0.00
Amount To Remove From Sale (Amount For Judgment)	\$2,792,400.74
Current Year's Second Installment 2016 Payable 2017 Taxes	\$0.00
Current Year's Second Installment 2016 Payable 2017 Special Assessments	\$0.00
Amount Subject To Sale	\$2,792,400.74

No property described above shall be sold if, at any time before the sale, the Total Amount for Judgment as noted above, is paid in full. If the real property is sold in the tax sale, the amount required to redeem such property will be 110% of the minimum bid for which the tract or real property was offered at the time of sale, if redeemed not more than six (6) months after the date of sale, or 115% of the minimum bid for which the tract or real property was offered at the time of sale, if redeemed more than six (6) months after the date of sale, plus the amount by which the purchase price exceeds the minimum bid on the real property plus five percent (5%) per annum interest on the amount by which the purchase price exceeds the minimum bid on the property.

All taxes and special assessments upon the property paid by the purchaser subsequent to the sale, plus five percent (5%) per annum interest on those taxes and special assessments, will also be required to be paid to redeem such property. In addition, IC 6-1.1-25-2(e) states that the total amount required for redemption may include the following costs incurred and paid by the purchaser or the purchaser's assignee or the county before redemption: (1) The attorney's fees and costs of giving notice under IC 6-1.1-25-4.5; (2) The costs of a title search or examining and updating the abstract of title for the tract or item of real property. If the tract or item of real property is sold for an amount more than the minimum bid and the property is not redeemed, the owner of record of the real property who is divested of ownership at the time the tax deed is issued may have a right to the tax sale surplus.

All payments must be made in cash or certified funds made payable to the Lake County Treasurer and mailed to 2293 North Main Street, Crown Point, IN 46307. Payments may also be made in person at the same address.

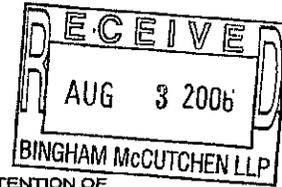
The above property will be advertised in the local newspaper as having delinquent taxes and it will be offered on the tax sale scheduled to commence on 9/11/2017 at 8:00 am local time. To remove this property from the publication the Amount To Remove From Sale (Amount For Judgment) must be paid by 4:30 pm on July 14, 2017. In order to remove the property from the tax sale the Amount To Remove From Sale (Amount For Judgment) must be paid by 4:30 pm on September 8, 2017.

Dated: 6/30/2017

John Petalas
 Auditor, Lake County, Indiana



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 REGION 5
 77 WEST JACKSON BOULEVARD
 CHICAGO, IL 60604-3590



JUL 28 2006

REPLY TO THE ATTENTION OF

(C14J)

Robert N. Steinwurtzel, Esq.
 Swidler Berlin LLP
 The Washington Harbour
 3000 K Street, NW, Suite 300
 Washington, DC 20007-5116

Re: USS Lead Refinery, Inc.

Dear Mr. Steinwurtzel:

This is to respond to your email inquiries regarding various aspects of USS Lead Refinery's (USS Lead) facility located at 5300 Kennedy Avenue, East Chicago, Indiana, and regarding the environmental remediation activities taking place or planned at the facility and the surrounding area. More specifically, this is to address your inquiries regarding termination of the current Administrative Order on Consent (AOC) issued to USS Lead under the Resource Conservation and Recovery Act (RCRA); furthering (or, in your words, "authorizing the funding of") USS Lead's post-closure permit process with the State of Indiana; "allowing" USS Lead to enter into the Natural Resource Damages (NRD) settlement, and "resolving" issues related to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

First, U.S. EPA has examined the financial documentation submitted by USS Lead, and determined that USS Lead itself appears to have limited financial ability to complete all of the RCRA and other remediation-related activities currently required or expected to be required for the facility: i.e., RCRA corrective action under the AOC between U.S. EPA and USS Lead, post-closure activities for a Corrective Action Management Unit that may be required by the Indiana Department of Environmental Management (IDEM), and remediation activities in the East Chicago area currently required or expected to be required by the Superfund Program under CERCLA.

Questions remain, however, regarding the financial ability of USS Lead's corporate parent(s) to fund such activities, which questions U.S. EPA Region 5's RCRA Corrective Action Program ("RCRA Program") does not find it necessary to resolve at this time. Rather, the RCRA Program believes that because any remaining corrective action and other RCRA requirements can and will be imposed on USS Lead by IDEM through its post-closure permit process, no further RCRA corrective action activities will be required by U.S. EPA at this time for the USS Lead facility under the AOC, pending the completion of IDEM's permit process. The RCRA Program is thus deferring to the Region's Superfund Program to address the remediation requirements for the facility and its neighboring affected properties, and deferring to IDEM to

address RCRA requirements under a post-closure permit. U.S. EPA acknowledges the desirability of terminating the current RCRA AOC governing the facility once the IDEM permit has become effective, but it is unable, pursuant to longstanding policy, to terminate the AOC until after the effective date of a permit issued by IDEM (i.e., after public comment and any revisions based thereon have been finalized). Accordingly, U.S. EPA is also unwilling to issue any covenant not to sue.

U.S. EPA plans to terminate the AOC once the post-closure permit is effective. However, as USS Lead's funding and IDEM's post-closure permitting are independent of the AOC, U.S. EPA has no role in "authorizing the funding of" USS Lead's post-closure responsibilities. U.S. EPA does not believe there is or has been any reason for USS Lead to delay its completion of the IDEM permit process.

Second, U.S. EPA Region 5 is not in a position to "allow" or "disallow" USS Lead's entry into the NRD settlement being negotiated for the Grand Calumet River. The authority for that role belongs to the Natural Resource Damages Trustee, with whom you have indicated you have been in contact. You are free to contact Region 5's attorney with lead authority for U.S. EPA's involvement with that effort, Mr. Richard Nagle, to discuss the NRD settlement. His number is 312-353-8222.

Third, with regard to "resolving" CERCLA issues, as I have indicated above U.S. EPA Region 5 is proceeding with its efforts to have USS Lead and other Potentially Responsible Parties conduct remediation activities under Superfund. The Region 5's attorney handling that effort is Mr. Steven Kaiser, and you may contact him at 312-353-3804.

Once an IDEM post-closure permit to USS Lead is effective, U.S. EPA expects to initiate the AOC termination process. In the meantime, if you have further questions or concerns, don't hesitate to raise them.

Very truly yours,



Michael J. McClary
Associate Regional Counsel

APPENDIX S

**TO
Z2 SOIL UAO**

**Comments on Original Z2 Soil UAO and Z2&3
Interior UAO from Mueller to EPA (Dec. 29, 2017)**

COVINGTON

BEIJING BRUSSELS DUBAI JOHANNESBURG LONDON
LOS ANGELES NEW YORK SAN FRANCISCO SEOUL
SHANGHAI SILICON VALLEY WASHINGTON

E. Donald Elliott

Covington & Burling LLP
One CityCenter
850 Tenth Street, NW
Washington, DC 20001-4956
T +1 202 662 5631
delliott@cov.com

BY EMAIL AND U.S. MAIL

December 29, 2017

Steven Kaiser
Office of Regional Counsel
Region 5, US EPA
77 West Jackson Blvd. (C-14J)
Chicago, IL 60604-3590
kaiser.steven@epa.gov

Leonardo Chinguanco
Office of Regional Counsel
Region 5, US EPA
77 West Jackson Blvd. (C-14J)
Chicago, IL 60604-3590
chinguanco.leonardo@epa.gov

Re: Mueller Industries, Inc. Written Comments
Soil and Interior UAOs - OU1 Zones 2 and 3
U.S. Smelter and Lead Refinery, Inc. Site
East Chicago, Lake County, Indiana
CERCLA Docket Nos. V-W-18-C-001 and V-W-18-C-002

Dear Mr. Kaiser and Mr. Chinguanco:

On behalf of our client Mueller Industries, Inc. (“Mueller”) we hereby provide these written comments regarding the two Unilateral Administrative Orders (UAOs) dated December 14, 2017 cited above.

Mueller respectfully submits that it is not a proper party to be named as a respondent on the UAOs at the East Chicago site because there are no factual findings in the UAOs that Mueller is a potentially responsible party (PRP) for the portions of the site addressed by the UAOs. The UAOs allege only two liability theories against Mueller:

- (1) That Mueller is somehow liable as a “successor” based on unspecified events that occurred from 1919 to 1979, BEFORE Mueller purchased the stock of USS Lead; and
- (2) that Mueller somehow became an “operator” of the USS Lead site by virtue of

COVINGTON

Mueller's Written Comments

December 29, 2017

Page 2

unspecified actions between November 1979 and 1985.¹

Both legal theories are invalid as a matter of law and therefore the final UAOs should drop Mueller as a respondent. The unanimous case law reviewed in section 1 below is clear that events that occurred BEFORE a company purchases the stock of a subsidiary cannot form the basis for piercing the corporate veil against the new owner that was not involved in those events. As there is no legal support whatsoever for the successor liability theories in section V.9.f(2)(i), which are based solely on events that occurred entirely BEFORE Mueller acquired the stock of

¹ Section V.9.f(2) of the UAOs, on pages 10-11 claims:

Respondent Mueller Industries, Inc. ("Mueller") is liable as a successor to two companies: (i) United States Smelting Refining and Mining Company, which later changed its name to UV Industries, Inc. ("UV/USSRAM"); and (ii) Sharon Steel Corporation ("Sharon Steel").

i. UV/USSRAM was one or more of the following:

a. *From 1919 to 1920*, a person who, at the time of disposal of hazardous substances, "owned" and/or "operated"—within the meaning of Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2)—the Former USS Lead Facility at which hazardous substances were disposed of and from which there were releases of hazardous substances.

b. For some or all of the time *between 1920 and 1979*, a person who "operated"—within the meaning of Section 101(20) of CERCLA, 42 U.S.C. §§ 9601(20), and Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2)—the Former USS Lead Facility at which hazardous substances were disposed of and from which there were releases of hazardous substances.

c. A parent company who, *for some or all of the time between 1920 and 1979*, is indirectly liable, under a corporate veil piercing theory, for the acts of its subsidiary, USS Lead (which is liable as described in Paragraph 9.f(1) above).

d. For some or all of the time *between 1920 and 1979*, a person who arranged with USS Lead for the disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances at the Former USS Lead Facility, within the meaning of Section 107(a)(3) of CERCLA, 42 U.S.C. § 9607(a)(3).

ii. Sharon Steel, for some or all of the time between 1979 and 1985, was a person who "operated"—within the meaning of Section 101(20) of CERCLA, 42 U.S.C. §§ 9601(20), and Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2)—the Former USS Lead Facility at which hazardous substances were disposed of and from which there were releases of hazardous substances."

(emphasis supplied).

COVINGTON

Mueller's Written Comments
December 29, 2017
Page 3

USS Lead on November 26, 1979, EPA should drop these paragraphs entirely from the UAOs.

With regard to the second liability theory against Mueller, that it became an “operator” of the site by virtue of unspecified actions between 1979 and 1985, the failure to identify any such acts or make factual findings that they actually occurred is fatal to this theory as well, and section V.9.f(2)(ii) also should be dropped from the final version of the UAOs.

Mueller is entitled to notice and an opportunity to rebut the facts that purport to require it to spend millions of dollars under a unilateral administrative order not only by EPA guidance and practice, but also by basic principles of administrative law, fairness, and constitutional due process.² *Tennessee Valley Authority v. Whitman*, 336 F.3d 1236, 1258-59 (11th Cir. 2003) (imposition of monetary penalties for failure to abide by an administrative order issued without a record and an opportunity to respond to factual allegations would be unconstitutional), *cert. denied*, 541 U.S. 1030 (2004). *See also Sackett v. EPA*, 566 U.S. 120 (2012).

Moreover, EPA cannot constitutionally issue UAOs for which pre-enforcement review is unavailable, particularly when EPA has failed to provide a meaningful opportunity to be heard regarding EPA's liability theories administratively. *Certiorari* on this due process issue was granted in *Sackett*, where the Supreme Court agreed to review whether the “inability to seek pre-enforcement judicial review of the administrative compliance order violate[s] [petitioners'] rights under the Due Process Clause,” 564 U.S. 1052, and the issue was briefed by petitioners, *Petitioners' Brief on the Merits, Sackett v. EPA*, 2011 WL 4500687 (U.S. 2011). The Court ultimately did not need to reach the question because it found the Clean Water Act orders at issue there subject to pre-enforcement review. Here, however, CERCLA prohibits “review [of] any order issued under section 9606(a)” until all of the work required by the UAO has been completed or until EPA brings an enforcement action. 42 U.S.C. § 9613(h). This bar on pre-enforcement judicial review violates Mueller's constitutional right to due process. The lack of any meaningful notice and opportunity to be heard is further heightened here because the UAOs are devoid of any factual findings for Mueller to respond to, and because EPA considers conferences or comments submitted on the UAOs to not be “an evidentiary hearing,” a “proceeding to challenge” the UAOs, or as providing “a right to seek review” of the UAO. UAOs ¶ 12.

In addition to these fatal flaws with the UAOs, Mueller makes the following points as to why there is no basis to name Mueller as a respondent.³

² That Mueller may have the opportunity, years from now, to seek reimbursement does not remedy the due process concerns presented by the UAOs. *See, e.g., Fuentes v. Shevin*, 407 U.S. 67, 81-82 (1972) (“[N]o later hearing and no damage award can undo the fact that the arbitrary taking that was subject to the right of procedural due process has already occurred. This Court has not . . . embraced the general proposition that a wrong may be done if it can be undone.”) (quotation omitted).

³ Moreover, Mueller reserves all defenses and rights in this matter.

COVINGTON

Mueller's Written Comments

December 29, 2017

Page 4

1. Pre-November 1979 Actions Are Irrelevant to Mueller's Liability. The UAOs assert Mueller is liable based on events that occurred from 1919 to 1979, including events supposedly justifying piercing the corporate veil against a prior owner, UV Industries, Inc., which is not named as a respondent. What may or may not have occurred between USS Lead and its prior stockholder UV Industries before Mueller came on the scene November 26, 1979 is entirely irrelevant to any claim that Mueller is a proper PRP to be named on the UAOs. This is because Mueller did not merge with UV Industries in 1979, nor did Mueller assume UV Industries' "unascertained liabilities," but merely bought certain assets and assumed existing liabilities by contract. That contractual assumption of liability did not include any CERCLA liabilities for which UV Industries may have become liable due to piercing the corporate veil between UV Industries and USS Lead, as CERCLA had not even been enacted at the time of the transaction.

The courts have squarely and repeatedly held that veil piercing is personal to the entities involved and does not follow assets that are later purchased by a third party. *New York State Elec. & Gas Corp. v. FirstEnergy Corp.*, 766 F.3d 212, 229-30 (2d Cir. 2014) (rejecting theory in CERCLA case that veil piercing follows assets purchased later by a third party).⁴ We are aware of no authority, and the Government has cited none, indicating that piercing of the corporate veil against a prior parent makes a subsequent purchaser of the subsidiary's stock liable for pre-purchase disposal by the subsidiary.

Whether the government would have had a basis to pierce the corporate veil or for operator liability against the prior owner of USS Lead's stock, UV Industries, based on its actions prior to 1979, is totally irrelevant to whether Mueller is a proper party to the current UAOs, which could

⁴ The *First Energy* case *supra* is directly on point. The Second Circuit specifically rejected the argument that a later owner could be held liable to clean-up property contaminated during a prior owner's period of ownership merely because the corporate veil could be pierced against the prior owner. The court reasoned that a mere showing of domination by the prior parent is not enough; a plaintiff must also show that "such domination was used to commit a fraud or wrong against the plaintiff which resulted in a plaintiff's injury." 766 F.3d at 229 (citation omitted). The actions of a *new* corporate parent could in no way have resulted in a wrong *prior* to the parent acquiring ownership of the subsidiary. As the Second Circuit explained, there is no basis to think that a new parent "was directing the creation of [pollution] at the subsidiaries *prior* to purchasing them." *Id.* Accordingly, the Second Circuit specifically declined "to pierce the corporate veil to hold" the current parent company "responsible for contamination on sites that occurred prior to when" the current parent acquired the subsidiary. *Id.* at 229-30. *Accord Next Millennium Realty, LLC v. Adchem Corp.*, 690 F. App'x 710, 715 (2d Cir. 2017) (noting that piercing the corporate veil in the CERCLA context requires, among other requirements "show[ing] that the domination caused the contamination at the site," and rejecting attempt to pierce the corporate veil); *Bedford Affiliates v. Sills*, 156 F.3d 416, 431 (2d Cir. 1998) (to pierce the corporate veil, a plaintiff must show that the parent's "control was used to commit a wrong that resulted in contamination at the Site").

COVINGTON

Mueller's Written Comments
December 29, 2017
Page 5

as a matter of established law only be based on what occurred during Mueller's period of stock ownership, November 26, 1979 to the present.

2. The Absence of Factual Findings Against Mueller in the UAOs Renders Them Invalid. The UAOs do not contain sufficient factual findings that Mueller is liable at the site. The UAOs merely assert in conclusory terms utterly devoid of any facts that Mueller "is liable as a successor" because a PRIOR owner, UV Industries, was supposedly "indirectly liable, under a corporate veil piercing theory, for the acts of its subsidiary," based on unspecified actions by UV Industries that occurred during the period of 1919-1979, before Mueller purchased the stock of USS Lead. UAOs, at 10-11. No supporting legal authority is provided for this unprecedented theory of vicarious liability for the alleged acts of a prior owner, and we have been unable to find any.

EPA also asserts without identifying any evidence or providing an opportunity to respond that Sharon Steel is liable as an "operator" of the Former USS Lead Facility "for some or all of the time between 1979 and 1985." *Id.* However, these assertions are wholly conclusory in nature; they merely state legal conclusions that Mueller is liable rather than providing any meaningful factual findings that support EPA's claim that Mueller is liable at the site. The lack of any factual findings to support its legal conclusions means that the UAOs are invalid as to Mueller on their face. *See, e.g., W.R. Grace & Co. v. EPA*, 261 F.3d 330, 340-42 (3d Cir. 2001) (vacating emergency EPA order because agency failed to provide factual basis in support of conclusion that action was necessary to protect public health); *United States v. Tarkowski*, 248 F.3d 596, 598-99 (7th Cir. 2001) (affirming denial of EPA's requested access order under CERCLA because EPA failed to provide "any factual basis" for its conclusion that contamination at the site presented an imminent and substantial endangerment); *see also Hannah v. Larche*, 363 U.S. 420, 442 (1960) (noting that when agencies adjudicate, "it is imperative that those agencies use the procedures which have traditionally been associated with the judicial process").⁵

The lack of factual findings also violates EPA's own guidance on UAOs, which provides that UAOs "should also state factual information to support the elements of liability alleged. If a PRP is to be included in the order under a 'successor,'⁶ 'alter ego,' or other complex liability theory, the *finding of fact section should explain the factual basis to support those theories.*" EPA, *Guidance on CERCLA Section 106(a) Unilateral Administrative Orders for Remedial Designs and Remedial Actions* (Mar. 1990), at 17 (emphasis added). Note that the Guidance requires

⁵ The UAOs, which carry the threat of severe monetary damages, do not resemble informal agency adjudication. *Cf. Pension Ben. Guar. Corp. v. LTV Corp.*, 496 U.S. 633, 655 (1990).

⁶ While the 1990 Guidance mentions a "successor" theory of liability, EPA's theory at the time that purchasers of assets automatically succeeded to CERCLA liabilities related to the assets they purchase was specifically rejected by the Supreme Court in *United States v. Bestfoods*, 524 U.S. 51 (1998). *See discussion infra.*

COVINGTON

Mueller's Written Comments
December 29, 2017
Page 6

"findings of fact," not mere assertions of legal conclusions or notice pleading.⁷ This EPA Guidance is binding on the agency, unless and until it is changed, and cannot be ignored on an *ad hoc* basis without explanation.⁸

The lack of such factual findings deprives Mueller of any meaningful right to comment on these UAOs, as the Government has failed to provide any factual basis for its conclusory assertions of liability. See *United States v. Nova Scotia Food Prod. Corp.*, 568 F.2d 240, 252 (2d Cir. 1977) ("To suppress meaningful comment by failure to disclose the basic data relied upon is akin to rejecting comment altogether."); *Whitman*, 336 F.3d at 1258-59 (stating that EPA administrative order imposing severe civil penalties would be unconstitutional if regulated party did not have opportunity to present evidence rebutting agency's theory of liability).⁹ For these reasons as well as the others indicated in this letter, it is improper to name Mueller as a respondent to the UAOs.

3. No Assumption by Contract of UV Industries' After-Arising CERCLA Liability.

As to the claimed status of Mueller as a "successor" to UV Industries, we have previously explained why the Government's successorship by contract theory is wrong as a matter of clear New York law, and we now attach and incorporate that previous correspondence (including the exhibits) by reference. See E. Donald Elliott December 29, 2016 and November 6, 2017 Letters. To summarize briefly, Sharon Steel purchased certain assets, including the stock of USS Lead, from UV Industries on November 26, 1979. However, it did not assume by contract or otherwise any liabilities of UV Industries other than debts existing as of the purchase date, which under governing New York law do not include CERCLA response costs, as the statute had not even been enacted yet. See *Grant-Howard Assocs. v. General Housewares Corp.*, 472 N.E.2d 1, 3-4 (N.Y. 1984); *Georgia-Pacific Consumer Prods., LP v. Int'l Paper Co.*, 566 F. Supp. 2d 246, 251 (S.D.N.Y. 2008) ("Courts . . . have regularly held that where a pre-CERCLA contract for sale of assets required a buyer to assume only those liabilities in existence on the date of the sale, the

⁷ Moreover, the bare legal conclusions contained in the UAOs would not even satisfy the pleading requirements set forth by *Ashcroft v. Iqbal*, 556 U.S. 662 (2009), which are far less stringent than the factual findings that need to be made to justify agency action here.

⁸ *Allentown Mack Sales & Service, Inc. v. NLRB*, 522 U.S. 359 (1998) ("It is hard to imagine a more violent breach of [the requirement of reasoned decision-making] than applying a rule of primary conduct . . . which is in fact different than the rule or standard formally announced."); see also Peter Strauss, *The Rulemaking Continuum*, 41 DUKE L.J. 1463 (1992).

⁹ While the Government did provide prior drafts of the UAOs for comment, they did not name Mueller as a respondent and so lacked even the conclusory factual assertions contained in the final UAOs; Mueller therefore has had no meaningful opportunity to comment on the expansive and unsupported theories of liability ascribed to Mueller in the UAOs.

COVINGTON

Mueller's Written Comments

December 29, 2017

Page 7

buyer did not assume later-arising CERCLA liabilities.”) (collecting cases).¹⁰ The Government has provided no response to our November 6, 2017 letter which describes the binding New York case law that compels this conclusion. As a result, the first basis for Mueller's purported liability recited in the UAOs is incorrect as a matter of law.

4. No Standalone Theory of Successor Liability for Parent Corporations. The UAOs' bald assertion that Mueller is liable as a successor to UV Industries and Sharon Steel, without more, does not establish liability under CERCLA. The Supreme Court specifically rejected a standalone theory of successor liability for parent corporations in *United States v. Bestfoods*, holding that a parent will be derivatively liable under CERCLA “when (but only when) the corporate veil may be pierced.” 524 U.S. 51, 63 (1998). *Bestfoods* greatly limited the viability of expansive theories of successor liability, and the Government cannot establish Mueller's liability simply by vaguely referring to Mueller as a successor. See *New York v. Nat'l Serv. Indus., Inc.*, 460 F.3d 201, 207 (2d Cir. 2006) (noting that substantial continuity theory of successor liability “could not stand after *Bestfoods*”); *United States v. General Battery Corp., Inc.*, 423 F.3d 294, 309 (3d Cir. 2005) (noting that courts have rejected more expansive theories of successor liability after *Bestfoods*). Nor do the UAOs even make any attempt to make factual findings that the corporate veil between Mueller and USS Lead can be pierced, which is what would be required for “successor liability” under *Bestfoods*.

5. No Basis for Operator Liability Post-November 1979. The second basis for Mueller's claimed liability asserted in the UAOs is that Sharon Steel operated the site between 1979 and 1985. To begin with, we note that despite repeated requests, the Government has failed to provide any factual basis for this assertion, and the UAOs likewise fail to find any facts that would support this legal conclusion. As noted above, the Government's failure to provide this factual basis has deprived Mueller of any meaningful opportunity to comment on or contest the Government's assertions.

Importantly, the question of whether operator liability may exist is based on “norms of corporate behavior (undisturbed by any CERCLA provision).” *Bestfoods*, 524 U.S. at 71-72. Thus, actions “that involve the facility but are consistent with the parent's investor status, such as monitoring of the subsidiary's performance, supervision of the subsidiary's finance and capital budget decisions, and articulation of general policies and procedures” do not give rise to operator liability. *Id.* Instead, the question is whether the parent had, “in degree and detail,” engaged in actions directing the facility that “are eccentric under accepted norms of parental oversight of a subsidiary's facility.” *Id.*; see also *Yankee Gas Servs. Co. v. UGI Utilities, Inc.*, 616 F. Supp. 2d 228, 233, 246-47, 256 (D. Conn. 2009) (parent not liable as an operator because record did not reveal anything “eccentric or beyond the norms of corporate behavior” in parent's level of oversight over subsidiary, despite that parent “carefully oversaw” operations of subsidiary, was in “constant and close touch” with subsidiary's management, provided advice

¹⁰ Courts regularly reach this result outside of New York as well. See, e.g., *John S. Boyd Co., Inc. v. Boston Gas Co.*, 992 F.2d 401, 406-07 (1st Cir. 1993); *United States v. Vermont Am. Corp.*, 871 F. Supp. 318 (W.D. Mich. 1994).

COVINGTON

Mueller's Written Comments
December 29, 2017
Page 8

and recommendations to subsidiary, set policies and approved subsidiary's budgets, and had overlapping board members and officers), *aff'd*, 428 F. App'x 18 (2d Cir. 2011).

We have found no grounds whatsoever for operator liability during the period of November 26, 1979 to 1985, nor has the Government brought to our attention any such grounds despite our repeated requests that it provide any such information that it may possess. The UAOs are likewise silent in this regard. Hence, Mueller is not a proper PRP to be named on the UAOs.

6. No Disposal by Mueller Itself in Relevant Areas. Additionally, Mueller is not a proper party to be named on the UAOs because it is not a responsible party for the geographic locations covered by the UAOs. *See* 42 U.S.C. § 9607(a). The alleged releases of hazardous substances that are the subject of the UAOs were caused by an act or omission of third parties other than employees or agents of Mueller and with whom Mueller did not have a contractual relationship. *See* 42 U.S.C. § 9607(b).

Very truly yours,



E. Donald Elliott
Thomas Brugato
Jeffrey Huberman*

Attorneys for Mueller
Industries, Inc.

*Member of the Massachusetts Bar, District of Columbia Bar membership pending; supervised by principals of the Firm.