

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III

IN THE MATTER OF: :

MILLCREEK DUMP SITE :
 OPERABLE UNIT NO. 2 :
 MILLCREEK TOWNSHIP, PENNSYLVANIA :

RALPH RHEL, JR.; :
 GILBERT SITTER; JAMES G. SITTER; :
 RONALD SITTER; MAX SILVER & SONS; :
 A. ARTHUR SILVER; LARRY SILVER; :
 EUGENE DAVIS; FRIEDA DAVIS; :
 PENN IRON & METAL COMPANY, INC. :
 d/b/a AMSOURCE; :
 LINCOLN METAL PROCESSING COMPANY, :
 INC.; :
 LIBERTY IRON & METAL COMPANY, :
 INC.; :
 UNION IRON & METAL COMPANY., INC.; :
 WASTE MANAGEMENT OF PENNSYLVANIA, :
 INC.; :
 ALCO INDUSTRIES, INC.; :
 THE SINGER COMPANY; :
 AMERICAN METER COMPANY; :
 RUHRGAS CARBON CONVERSION, INC.; :
 AMERICAN STERILIZER COMPANY; :
 BETHLEHEM STEEL CORPORATION; :
 BUCYRUS-ERIE COMPANY; :
 BUFFALO MOLDED PLASTICS, INC.; :
 EMERSON ELECTRIC COMPANY; :
 EMI COMPANY; :
 ERIE BRONZE & ALUMINUM COMPANY; :
 HAMMERMILL PAPER COMPANY; :
 KONDU CORPORATION; :
 THE MARLEY COMPANY; :
 NATIONAL FORGE COMPANY; :
 PARKER WHITE METAL COMPANY; :
 PENNSYLVANIA ELECTRIC COMPANY; :
 SPECIALTY PACKAGING PRODUCTS, INC.; :
 TELEDYNE, INC.; :
 TIMES PUBLISHING COMPANY; :
 TRANS PLASTICS, INC.; :
 UNITED BRASS WORKS, INC.; :
 ZURN INDUSTRIES, INC. :

Docket No. III-92-13-DC

ADMINISTRATIVE ORDER
FOR REMEDIAL ACTION
OPERABLE UNIT NO. 2

Respondents

Proceeding Under Section 106(a)
 of the Comprehensive Environmental
 Response, Compensation, and
 Liability Act of 1980, as amended,
 42 U.S.C. § 9606(a).

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ADMINISTRATIVE ORDER

Having determined the necessity for implementation of remedial response activities at the Millcreek Dump Site (Site), the United States Environmental Protection Agency (EPA) hereby Orders as follows:

I. JURISDICTION

A. This Administrative Order (Order) is issued pursuant to the authority vested in the President of the United States by section 106 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. § 9606, as amended (CERCLA), and delegated to the Administrator of EPA by Executive Order No. 12580 (52 Fed. Reg. 2923 [January 29, 1987]), and further delegated to the Regional Administrators by EPA Delegation No. 14-14-B (September 13, 1987).

B. Prior notice of issuance of this Order has been given to the Commonwealth of Pennsylvania pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

II. PARTIES BOUND

A. This Order is issued to Ralph Rhiel, Jr.; Gilbert Sitter; James Sitter; Ronald Sitter; Max Silver & Sons; A. Arthur Silver; Larry Silver; Eugene Davis; Frieda Davis; Penn Iron & Metal Company, Inc. d/b/a Amsource; Lincoln Metal Processing Company, Inc.; Liberty Iron & Metal Company, Inc.; Union Iron & Metal Company, Inc.; Waste Management of Pennsylvania, Inc.; Alco Industries, Inc.; The Singer Company; Ruhrgas Carbon Conversion,

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Inc.; American Meter Company; American Sterilizer Company; Bethlehem Steel Corporation; Bucyrus-Erie Company; Buffalo Molded Plastics, Inc.; Emerson Electric Company; EMI Company; Erie Bronze & Aluminum Company; Hammermill Paper Company; Kondu Corporation; The Marley Company; National Forge Company; Parker White Metal Company; Pennsylvania Electric Company; Specialty Packaging Products, Inc.; Teledyne, Inc.; Times Publishing Company; Trans Plastics, Inc.; United Brass Works, Inc.; and Zurn Industries, Inc. (Respondents).

B. This Order shall apply to and be binding upon the Respondents and their agents, successors, and assigns.

C. No change in ownership of any property covered by this Order, or in corporate or partnership status of any Respondent, shall in any way alter, diminish, or otherwise affect Respondents' obligations and responsibilities under this Order.

D. In the event of any change in ownership or control of any Respondent, such Respondent shall notify EPA, in writing no later than thirty (30) days after such change, of the nature and effective date of such change. Such Respondent shall provide a copy of this Order to its successor(s) before any change becomes irrevocable.

E. Respondents shall provide a copy of this Order to each contractor hired to perform the Work (as defined below) required by this Order and to each person representing Respondents with respect to the Site or the Work, and shall condition all contracts regarding Work under this Order upon performance of the

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Work in conformity with the terms of this Order. Respondents shall provide written notice of this Order to all subcontractors hired to perform any portion of the Work required by this Order. Respondents shall remain responsible for ensuring that their contractors and subcontractors perform the Work contemplated herein in accordance with this Order. Lack of performance by Respondents' contractors or subcontractors shall not excuse Respondents from any obligations of this Order. With regard to the activities undertaken pursuant to this Order, each contractor and subcontractor shall be deemed to be in a contractual relationship with the Respondents within the meaning of Section 107(b)(3) of CERCLA, 42 U.S.C. § 9607(b)(3).

F. Respondents are jointly and severally responsible for implementing all of the requirements of this Order. The failure by one or more of the Respondents to comply with all or any part of this Order shall not in any way excuse or justify noncompliance by the other Respondents.

III. FINDINGS OF FACT

The following facts are a synopsis of information contained in the Administrative Record supporting issuance of this Order. That Administrative Record is incorporated by reference as if fully set forth herein:

A. Millcreek Dump Site Location, History, and Uses

1. The Site is an 84.5 acre tract of land near the Presque Isle Peninsula, approximately two miles southwest of the City of Erie, Pennsylvania.

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2. The Site once was primarily a freshwater wetland. During the past 40 years, all but four acres were filled in. The remaining four acres lie in the southern portion of the Site.

3. The Site is bordered to the northeast, north, and northwest by residential areas. At least 2000 people work or reside within one-half mile of the Site. Erie International Airport is located about 2000 feet west of the Site. A baseball field is located adjacent to the west side of the Site.

4. A stream, Marshalls Run, is aligned along the east side of the Site and discharges into Lake Erie 1.2 miles downstream from the Site. Shallow groundwater on the Site discharges to Marshalls Run during high water table conditions, generally in the spring and summer.

5. The Site is located within a 100-year and 500-year flood zone. In addition, flooding of a residential area east of the Site occurs frequently during heavy rains.

6. The Site consists of four parcels presently owned by Ralph Rhiel, Jr.--57 acres (Rhiel parcel); Joseph and Evelyn Halmi--13.5 acres (Halmi parcel); James G. Sitter, Gilbert L. Sitter, and Ronald N. Sitter doing business as Sitter Trucking Company--10 acres (Sitter parcel); and Millcreek Township--4 acres (Township parcel).

7. Foundry sand, among other things, was used as fill material on all four of the parcels which are included in the Site. In addition, from approximately 1941 to 1981, a landfill was operated on the Rhiel parcel and Township parcel, known as

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Harper Drive Landfill, Fuchs Dump, or the Millcreek Dump (the Dump). The Dump was never licensed as a landfill. Albert Fuchs (Fuchs) most recently operated the Dump. Fuchs leased the Rhiel parcel as a "dumping ground."

8. For several decades drums containing, among other things, solvents, degreasers, oils, polyester resins, caustics, paint sludges, paint wastes, bulk ink wastes, and other industrial waste were dumped into foundry sand/fill materials; were poured into pits, on the ground, or in the wetlands; were buried, or were otherwise disposed of at the Dump. In addition, electrical transformers were either buried at the Dump, or the oils from the transformers dumped onto the ground at the Dump. Furthermore, drums containing liquid wastes were disposed of on the Halmi and Sitter parcels, and/or hazardous substances were either poured onto the ground or leaked from containers on the Halmi and Sitter parcels.

B. Respondents' Responsibility for Conditions at the Site

1. Ralph Rhiel, Jr. owns a portion of the Site, and owned a portion of the Site when hazardous substances or waste containing hazardous substances were disposed of at the Site.

2. James G. Sitter, Gilbert L. Sitter, and Ronald N. Sitter, as tenants in co-partnership and doing business as Sitter Trucking Company, each own an undivided portion of the Site, and were the owners of such undivided portion of the Site when hazardous substances or waste containing hazardous substances were disposed of at the Site.

3. **Max Silver & Sons** is, and during the period of time relevant to this action was, a general partnership doing business in Erie, Pennsylvania, having as general partners A. Arthur Silver, Larry Silver, Eugene Davis, and Frieda Davis. Max Silver & Sons selected the Site for disposal of hazardous substances or waste containing hazardous substances, accepted hazardous substances or waste containing hazardous substances for transport to the Site, and disposed of such hazardous substances or waste containing hazardous substances at the Site.

4. **Penn Iron & Metal Company, Inc. (Penn Iron)** is a corporation organized under the laws of the Commonwealth of Pennsylvania, and also does business under the trade name AmSource. Penn Iron selected the Site for disposal of hazardous substances or waste containing hazardous substances, accepted hazardous substances or waste containing hazardous substances for transport to the Site, and disposed of such hazardous substances or waste containing hazardous substances at the Site.

5. **Lincoln Metal Processing Company, Inc. (Lincoln Metal)** is a corporation organized under the laws of the Commonwealth of Pennsylvania. Lincoln Metal selected the Site for disposal of hazardous substances or waste containing hazardous substances, accepted hazardous substances or waste containing hazardous substances for transport to the Site, and disposed of such hazardous substances or waste containing hazardous substances at the Site.

6. **Liberty Iron & Metal Company, Inc. (Liberty Iron)**

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is a corporation organized under the laws of the Commonwealth of Pennsylvania. Liberty Iron selected the Site for disposal of hazardous substances or waste containing hazardous substances, accepted hazardous substances or waste containing hazardous substances for transport to the Site, and disposed of such hazardous substances or waste containing hazardous substances at the Site.

7. Union Iron & Metal Company, Inc. (Union Iron) is a corporation organized under the laws of the Commonwealth of Pennsylvania. Union Iron selected the Site for disposal of hazardous substances or waste containing hazardous substances, accepted hazardous substances or waste containing hazardous substances for transport to the Site, and disposed of such hazardous substances or waste containing hazardous substances at the Site.

8. Waste Management of Pennsylvania, Inc. (Waste Management) is a corporation organized under the laws of the Commonwealth of Pennsylvania. Waste Management formerly did business as Erie Disposal Co. and/or Penn Disposal, Inc. Waste Management selected the Site for disposal of hazardous substances or waste containing hazardous substances, accepted hazardous substances or waste containing hazardous substances for transport to the Site, and disposed of such hazardous substances or waste containing hazardous substances at the Site.

9. Alco Industries, Inc. (Alco) is a corporation organized under the laws of of the State of Delaware and does

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business in Pennsylvania. Alco is the successor to the liabilities of Synthane-Taylor Corporation (Synthane-Taylor) including, in particular, those liabilities of Synthane-Taylor arising out of operations of Haysite Reinforced Plastics (Haysite), a former unincorporated division of Synthane-Taylor, which is or was an unincorporated division of Alco. Synthane-Taylor, through the operations of Haysite, is a person who by contract, agreement or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by Synthane-Taylor, at the Site.

10. The Singer Company (Singer) is a corporation organized under the laws of the State of New Jersey. During the period of time that hazardous substances were disposed of at the Site, Singer operated a plant in Erie, Pennsylvania, through an unincorporated division known as American Meter. Singer is a person who by contract, agreement or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by Singer, at the Site.

11. American Meter Company (American Meter) is a corporation organized under the laws of the State of Delaware, and does business in Erie, Pennsylvania. American Meter was incorporated in 1981. Prior to its incorporation, American Meter was an unincorporated division of Singer. American Meter succeeded to the liabilities of Singer arising out of operation

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of Singer's former American Meter division.

12. **Ruhrigas Carbon Conversion, Inc. (Ruhrigas)** is a corporation organized under the laws of the State of Delaware, and does business in Philadelphia, Pennsylvania. In 1988, Ruhrigas purchased all of the shares of issued and outstanding stock of American Meter from Singer. Pursuant to a June 30, 1988 Agreement of Purchase and Sale between Ruhrigas and Singer, Ruhrigas expressly assumed the liabilities of American Meter related to the Millcreek Site.

13. **American Sterilizer Company (AMSCO)** is a corporation organized under the laws of the Commonwealth of Pennsylvania. AMSCO is a person who by contract, agreement or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by AMSCO, at the Site.

14. **Bethlehem Steel Corporation (Bethlehem Steel)** is a corporation organized under the laws of the State of Delaware, and does business in Bethlehem, Pennsylvania. Bethlehem Steel is a person who by contract, agreement or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by Bethlehem Steel, at the Site.

15. **Bucyrus-Erie Company (Bucyrus-Erie)** is a corporation organized under the laws of the State of Delaware. Bucyrus-Erie is a person who by contract, agreement or otherwise arranged for disposal or treatment, or arranged with a

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transporter for transport for disposal or treatment, of hazardous substances owned or possessed by Bucyrus-Erie, at the Site.

16. Emerson Electric Company (Emerson Electric) is a corporation organized under the laws of the State of Missouri, and does business through a division known as Urick Foundry in Erie, Pennsylvania. Urick Foundry Company (Urick) was previously a corporation organized under the laws of the Commonwealth of Pennsylvania. On or about October 1, 1985, Urick merged with Emerson Electric. Emerson Electric, through Urick, is a person who by contract, agreement or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by Urick, at the Site.

17. EMI Company (EMI) is a corporation organized under the laws of the Commonwealth of Pennsylvania. EMI was incorporated on or about September 28, 1988 under its prior name EMI Acquisition Corp. On or about November 21, 1988, EMI Acquisition Corp. merged with EMI Co., which formerly did business as Erie Malleable Iron Co., to form EMI. EMI is a person who by contract, agreement or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by Erie Malleable Iron Co., at the Site.

18. Erie Bronze & Aluminum Company (Erie Bronze) is a corporation organized under the laws of the Commonwealth of Pennsylvania. Erie Bronze is a person who by contract, agreement

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or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by Erie Bronze, at the Site.

19. **Hammermill Paper Company (Hammermill)** is a corporation organized under the laws of the State of Delaware. Hammermill is a person who by contract, agreement or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by Hammermill, at the Site.

20. **Kondu Corporation (Kondu)** is a corporation organized under the laws of the State of Illinois. Kondu is a person who by contract, agreement or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by Kondu, at the Site.

21. **The Marley Company (Marley)** is a corporation organized under the laws of the State of Delaware. During the period of time that hazardous substances were disposed of at the Site, Marley operated a foundry in Erie, Pennsylvania, under the name **Casting Services Company (Casting Services)**. Casting Services was an unincorporated division of the Weil-McLain division of Marley. Marley is a person who by contract, agreement or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by Marley,

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at the Site.

22. National Forge Company (National Forge) is a corporation organized under the laws of the State of Delaware. National Forge is a person who by contract, agreement or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by National Forge, at the Site.

23. Parker White Metal Company (Parker White) is a corporation organized under the laws of the Commonwealth of Pennsylvania. Parker White is a person who by contract, agreement or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by Parker White, at the Site.

24. Pennsylvania Electric Company (Penelec) is a corporation organized under the laws of the Commonwealth of Pennsylvania. Penelec is a person who by contract, agreement or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by Penelec, at the Site.

25. Specialty Packaging Products, Inc. (Specialty Packaging) is a corporation organized under the laws of the Commonwealth of Virginia. Specialty Packaging is a person who by contract, agreement or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed

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by Specialty Packing, at the Site.

26. Teledyne, Inc. (Teledyne) is a corporation organized under the laws of the State of Delaware. Teledyne is a person who by contract, agreement or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by Teledyne, at the Site.

27. Times Publishing Company (Times) is a corporation organized under the laws of the Commonwealth of Pennsylvania. Times is a person who by contract, agreement or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by Times, at the Site.

28. Trans Plastics, Inc. (Trans Plastics) is a corporation organized under the laws of the State of Ohio. Trans Plastics is a person who by contract, agreement or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by Trans Plastics, at the Site.

29. United Brass Works, Inc. (United Brass) is a corporation organized under the laws of the State of North Carolina. United Brass is a person who by contract, agreement or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by United Brass, at the Site.

30. Zurn Industries, Inc. (Zurn) is a corporation

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organized under the laws of the Commonwealth of Pennsylvania. Zurn is a person who by contract, agreement or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by Zurn, at the Site.

C. Response Actions and Investigations Performed at the Site

1. On August 8, 1982, EPA dispatched its Technical Assistance Team (TAT) to inspect the Site. During the TAT's site reconnaissance, between 75 and 100 drums were observed to be distributed and unsecured throughout the Site.

2. After the TAT inspection, EPA approved an extent-of-contamination survey of the Site. During November and December, 1982, EPA's Environmental Response Team (ERT) conducted this survey. The final extent-of-contamination study was completed in April, 1983. The ERT concluded that the "liquid filled drums which are still onsite pose a continuing threat of direct contact."

3. On June 1, 1983, EPA approved the funding of a removal action, which was conducted at the Site between November 28, 1983 and December 9, 1983. Removal activities taken at this time consisted generally of restricting access to and securing the Site, removing and disposing of liquid waste, drums, and containers of liquid waste, staging drums for future disposal, excavating and disposing of sludge found spread on the ground, and filling in an open pit contaminated with hazardous materials.

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4. On September 21, 1984 (49 Fed. Reg. 37070), pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, EPA placed the Millcreek Dump Site on the National Priorities List, set forth at 40 C.F.R. Part 300, Appendix B.

5. EPA completed a Remedial Investigation (RI) and Feasibility Study (FS) (collectively "RI/FS") for the Site in August, 1985. The fundamental purpose of the RI/FS was to determine the nature and extent of the threat presented by the release or threatened release of hazardous substances from the Site, and to evaluate proposed remedial alternatives.

6. On May 7, 1986, EPA issued a Record of Decision (ROD) for the Site, selecting a remedy for the Site. The ROD addresses groundwater, sediment, and soil contamination caused by the disposal of hazardous substances at the Site. The main components of the remedy described in the ROD are: pumping and treating groundwater for an initial two-year period to levels consistent with the National Pollutant Discharge Elimination System (NPDES) permit standards (Operable Unit No. 1) and excavation, onsite consolidation and capping of contaminated soils and sediments (Operable Unit No. 2).

7. On March 18, 1987, EPA entered into an Interagency Agreement (IAG) with the United States Army Corps of Engineers (USACE), the IAG obligating USACE to perform the remedial design of Operable Unit Nos. 1 and 2. The final plans and specifications for the design of Operable Unit No. 2 were approved by EPA on November 15, 1991.

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8. Construction of the components of Operable Unit No. 1, the groundwater collection trenches and the groundwater treatment facility, was completed on January 13, 1992.

D. The Release of Hazardous Substances at the Site and the Resultant Endangerment

1. During the RI, extensive soil and sediment contamination was discovered throughout the Site, as well as significant groundwater and surface water contamination both on and off the Site. The following substances were detected at the Site and are "hazardous substances" within the meaning of Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), because they are listed at 40 C.F.R. § 302.4. Some are carcinogenic and all are toxic to humans and animals.

| | |
|-----------------------------|------------------------------|
| Acetone | Fluorene |
| Anthracene | Indeno (1, 2, 3-cd)pyrene |
| Antimony | Lead |
| Arsenic | Mercury |
| Benzene | Methyl Chloride |
| Benzo (a) anthracene | Methylene Chloride |
| Benzo (a) pyrene | N-Nitrosodiphenylamine |
| Benzo (b) fluoranthene | Napthalene |
| Benzo (ghi) perylene | Nickel |
| Benzo (k) fluoranthene | PCB-1254 |
| Beryllium | Phenanthrene |
| Bis (2-ethylhexyl)Phthalate | Phenol |
| Cadmium | Phthalate |
| Calcium Disulfide | Pyrene |
| Chloroform | Selenium |
| Chromium | Silver |
| Chrysene | 1, 1, 2, 2-Tetrachloroethane |
| Copper | Tetrachloroethylene |
| Di-n-Butylphthalate | Toluene |
| Di-n-octyl phthalate | Total Xylenes |
| Dibutylphthalate | 1, 2, 4-Trichlorobenzene |
| 1, 2-Dichlorobenzene | Trans-1, 2-dichloroethylene |
| 1, 3-Dichlorobenzene | 1, 2-trans-Dichloroethene |
| 1, 4-Dichlorobenzene | 1, 1, 1-Trichloroethane |
| 1, 1-Dichloroethane | Trichloroethene |
| 1, 2-Dichloroethane | Trichloroethylene |

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Ethylbenzene
Fluoranthene
K061 (emission control dust
from the primary production
of steel in electric furnaces)

Vinyl Chloride
Zinc

The major classes of contaminants detected in the soil and in the sediments include polychlorinated biphenyls (PCBs), polychlorinated aromatic hydrocarbons (PAHs), phthalates, phenols, volatiles, and metals such as lead and copper. The major classes of contaminants detected in the groundwater include volatile organic compounds (VOCs), phthalates, and metals such as iron and manganese. The major classes of contaminants detected in the surface water include VOCs and metals.

2. The following is a catalog of the health effects of certain hazardous substances found at the Site. Carcinogens are classified by the EPA according to the following weight-of-evidence categories: a Class A Human Carcinogen means there is sufficient evidence from epidemiological studies to support a causal association between exposure and cancer; a Class B1 Probable Human Carcinogen means there is limited evidence of carcinogenicity from human epidemiological studies; and a Class B2 Possible Human Carcinogen means there is sufficient evidence of carcinogenicity in animals to support an inference that the substance is a probable human carcinogen.

a. **Acetone.** Inhalation of acetone may produce headache, fatigue, excitement, bronchial irritation, and in large amounts, narcosis.

b. **Arsenic.** Arsenic is a Class A carcinogen; it

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causes skin tumors when it is ingested and lung tumors when it is inhaled. Arsenic compounds cause chromosome damage in animals, and humans exposed to arsenic compounds reportedly experience an elevated incidence of chromosome aberrations. Arsenic compounds also cause noncancerous, possibly precancerous, skin changes in exposed individuals. Arsenic is acutely toxic to some early life stages of aquatic organisms at levels as low as 40 parts per billion.

c. **Benzo (a) pyrene.** Benzo (a) pyrene is a Class B2 carcinogen.

d. **Bis(2-Ethylhexyl)phthalate.** Bis(2-ethylhexyl)phthalate is a Class B2 carcinogen.

e. **Cadmium.** Cadmium is a Class B1 carcinogen. Ingestion of the metal and soluble cadmium compounds causes increased salivation, choking, vomiting, abdominal pain, anemia, renal dysfunction, diarrhea and tenesmus. Inhalation of dust and fumes causes cough, headache, vomiting, chest pain, extreme restlessness and irritability, pneumonitis, and possibly bronchopneumonia.

f. **Chromium.** Chromium is a Class A carcinogen. Workers occupationally exposed to chromium experience an increased incidence of lung cancer. Chromium is also a skin irritant and inhalation may lead to ulceration of respiratory passages. Oral ingestion may lead to severe irritation of the gastrointestinal tract, circulatory shock and renal damage.

g. **Copper.** Copper is one of the most mobile

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metals in the environment. Copper is acutely toxic to aquatic organisms and tends to concentrate in the tissues of fresh water aquatic species.

h. **1,2-Dichloroethane.** 1,2-dichloroethane is a Class B2 carcinogen. Vapors produce irritation of the respiratory tract and conjunctiva, corneal clouding, equilibrium disturbances, narcosis and abdominal cramps.

i. **Ethylbenzene.** Ethylbenzene is a colorless, flammable liquid which can cause irritation to the eyes, skin, and mucous membranes.

j. **Emission control dust/sludge from the primary production of steel in electric arc furnaces (K061).** K061 is a RCRA "listed" hazardous waste (40 C.F.R. § 261.32). It contains hexavalent chromium, lead, and cadmium.

k. **Lead.** Lead is a Class B2 carcinogen. Exposure of pregnant women to lead results in the transfer of lead to the fetus and may cause pre-term birth, reduced birth weight, abortion and decreased IQ in the infant. Lead exposure also may cause measurable cognitive retardation, lower IQ scores, and reduced growth in young children. Adults exposed to high levels of lead can suffer anemia and severe damage to the brain, central nervous system, and kidneys. Low level lead exposure may increase blood pressure in middle-aged men. In addition, lead may cause damage to the male reproductive system.

l. **Mercury.** Mercury is readily absorbed by the respiratory tract, intact skin and gastrointestinal tract.

Soluble salts of mercury have violent corrosive effects on skin, and mucous membranes. Mercury may also cause severe nausea, vomiting, abdominal pain, kidney damage, central nervous system damage and death.

m. **Methylene chloride.** Methylene chloride is a colorless liquid that is a narcotic in high concentrations.

n. **Phenol.** Ingestion of small amounts of phenol may cause nausea, vomiting, circulatory collapse, paralysis, convulsions, coma and death from respiratory failure. Fatal poisoning may also occur from skin absorption following application to large areas.

o. **Silver.** Prolonged exposure to silver compounds can lead to skin disorders. Inhalation of dust should be avoided.

p. **Tetrachloroethene.** Tetrachloroethene is a Class B2 carcinogen. Non-cancer effects caused by PCE in animals include neurological depression, increased liver weight/body weight ratios, decreased body weight, increased liver triglycerides, decreased DNA content of cells, and altered liver enzyme activity.

q. **Trichloroethene (TCE).** TCE is a Class B2 carcinogen. TCE also affects bone marrow, the central nervous system, the liver and the kidneys in animals and humans. Non-cancer effects include narcosis, enlargement of the liver and the kidneys with accompanying enzyme changes, depressed hemoglobin

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synthesis, and immunosuppression. Under certain conditions, TCE degrades to 1,2-dichloroethene and vinyl chloride.

r. **Vinyl Chloride.** Vinyl chloride is a Class A carcinogen.

s. **Xylene.** Xylene vapor may cause irritation of the eyes, nose and throat. Repeated or prolonged skin contact with xylene may cause drying and defatting of skin, which may lead to dermatitis. Acute exposure to vapors may cause central nervous system depression and minor reversible effects upon liver and kidneys.

t. **Zinc.** Ingestion by humans of excessive amounts of zinc can cause fever, vomiting and stomach cramps. Zinc oxide fumes can cause metal fume fever. Inhalation of mists or fumes of zinc may irritate eyes or skin. High levels of zinc in the human diet have been shown to retard growth and produce defective mineralization of bone. Zinc is acutely toxic to fresh water organisms.

3. The Site presents a risk to humans because of possible exposure to hazardous substances at concentrations that may adversely affect health. Human exposure to contaminants from the Site could result from ingestion, inhalation, or direct dermal contact with contaminated groundwater, surface water or soil. The aquifer upgradient of the Site is a current source of drinking water. Groundwater contamination has migrated off-site. This contamination will continue to migrate, and could contaminate any wells downgradient of the Site.

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4. Another potential human exposure pathway at the Site is the inhalation of fugitive dust contaminated with inorganic hazardous substances. Dust may be generated whenever surface soils are disturbed.

5. Wild game, including waterfowl, is hunted at the Site. Game animals could bioaccumulate hazardous substances at the Site, and these hazardous substances could then be ingested by humans.

6. Local contaminant migration from the waste area is primarily downward until the water table is intercepted. Then the controlling factors for flow within the water table dictate the horizontal and vertical distribution of hazardous substances migrating from the Site area.

7. Hazardous substances emanating from the Site are transported in the groundwater in a northeasterly direction.

8. The RI detected elevated levels of organic and inorganic compounds in soil throughout the Site.

IV. CONCLUSIONS OF LAW AND DETERMINATIONS

A. The Site is a "facility" as defined in section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

B. "Hazardous substances," as defined in section 101(14) of CERCLA, 42 U.S.C. § 9601(14), have been disposed of, deposited, stored, placed, or otherwise located on and remain at the Site.

C. There may be an imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of hazardous substances from the

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Site.

D. Each Respondent is a "person" within the meaning of Section 101(21) of CERCLA, 42 U.S.C. § 9601(21), and is liable under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

E. EPA has determined that the actions described in this Order are necessary to protect public health and welfare and the environment.

V. DEFINITIONS

Unless otherwise expressly provided herein, terms used in this Order which are defined in CERCLA or in regulations promulgated under CERCLA shall have the meanings assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Order or in the appendices attached hereto and incorporated hereunder, the following definitions shall apply:

1. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601 et seq.

2. "Order" shall mean this Order and all appendices attached hereto. In the event of conflict between the Order and any appendix, the Order shall control.

3. "DQOs" (Data Quality Objectives) are qualitative and quantitative statements which specify the quality of the data required to support EPA decisions during remedial response actions. EPA determines DQOs based on the end uses of the data to be collected.

4. "Day" shall mean a calendar day unless expressly stated

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to be a working day. "Working day" shall mean a day other than a Saturday, Sunday, or Federal holiday. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday, or Federal holiday, the period shall run until the close of business of the next working day.

5. "Duly Authorized Representative" shall mean a person designated in accordance with the procedures set forth in 40 C.F.R. § 270.11(b).

6. "EPA" shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

7. "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, including any amendments thereto.

8. "OU2" or "Operable Unit No. 2" means those remedial activities associated with construction of a cap and flood retention basin at the Site as described more fully in the ROD and Remedial Design.

9. "Performance Standards" shall mean those cleanup standards, standards of control, and other substantive requirements, criteria or limitations set forth in Appendix C.

10. "Record of Decision" or "ROD" shall mean the EPA Record of Decision relating to the Millcreek Dump Superfund Site, signed by the Regional Administrator of EPA Region III on May 7, 1986 and set forth in Appendix A hereto.

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11. "Remedial Action" shall mean all activities, as defined by section 101(24) of CERCLA, 42 U.S.C. § 9601(24), to be undertaken by Respondents to implement the ROD and the Remedial Design pursuant to the requirements of this Order.

12. "Remedial Action Work Plan" shall mean a plan for Remedial Action, including a schedule for implementation of Remedial Action, that shall be submitted by Respondents and approved by EPA pursuant to Section XIII (Plans and Reports Requiring EPA Approval) of this Order.

13. "Remedial Design" shall mean those Final Design Drawings, Plans and Specifications for construction of OU2 titled FINAL DESIGN ANALYSIS REPORT; FINAL SITE SPECIFIC QUALITY MANAGEMENT PLAN; FINAL HEALTH AND SAFETY DESIGN ANALYSIS; FINAL CONSTRUCTION SPECIFICATIONS; FINAL CONSTRUCTION PLANS (2 volumes, 1 set of drawings) incorporated into this Order as Appendix B.

14. "Respondents" shall mean Ralph Rhiel, Jr.; Gilbert Sitter; James Sitter; Ronald Sitter; Max Silver & Sons; A. Arthur Silver; Larry Silver; Eugene Davis; Frieda Davis; Penn Iron & Metal Company, Inc. d/b/a Amsource; Lincoln Metal Processing Company, Inc.; Liberty Iron & Metal Company, Inc.; Union Iron & Metal Company, Inc.; Waste Management of Pennsylvania, Inc.; Alco Industries, Inc.; The Singer Company; Ruhrgas Carbon Conversion, Inc.; American Meter Company; American Sterilizer Company; Bethlehem Steel Corporation; Bucyrus-Erie Company; Buffalo Molded Plastics, Inc.; Emerson Electric Company; EMI Company; Erie Bronze & Aluminum Company; Hammermill Paper Company; Kondu

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Corporation; The Marley Company; National Forge Company; Parker White Metal Company; Pennsylvania Electric Company; Specialty Packaging Products, Inc.; Teledyne, Inc.; Times Publishing Company; Trans Plastics, Inc.; United Brass Works, Inc.; and Zurn Industries, Inc.

15. "Section" shall mean a portion of this Order identified by a Roman numeral.

16. "Site" shall mean the facility, as defined in section 101(9) of CERCLA, 42 U.S.C. § 9601(9), encompassing 84.5 acres south of 12th Street and east of Harper's Drive in Millcreek Township, Erie County, Pennsylvania, and further described in the ROD.

17. "State" or "Commonwealth" shall mean the Commonwealth of Pennsylvania.

18. "Waste Material" shall mean any "hazardous substance" under section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

19. "Work" shall mean all activities Respondents are required to perform under this Order.

VI. WORK TO BE PERFORMED

A. General Statement of Requirements/Permits

1. Based on the foregoing, and the Administrative Record supporting this Order, it is hereby Ordered that Respondents implement the Remedial Design (attached hereto as Appendix B) in accordance with the designs and specifications therein; the ROD (attached hereto as Appendix A); CERCLA; the NCP; and the requirements and schedules specified in this Order

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including, but not limited to, the Performance Standards (Appendix C). Nothing in this Order, the Remedial Design, or Remedial Action Work Plan constitutes a warranty or representation of any kind by EPA that compliance with this Order will achieve the Performance Standards or that such compliance shall foreclose EPA from seeking compliance with all terms and conditions of this Order including, but not limited to, the Performance Standards.

2. All actions and activities carried out by Respondents pursuant to this Order shall be performed in accordance with all applicable Federal and state laws and with applicable EPA regulations, requirements, and guidance documents (and any applicable amendments to such laws, regulations, requirements, and guidance documents which take effect during the pendency of this Order).

3. In the event EPA determines that Respondents have failed to implement any provision(s) of the Work in an adequate or timely manner, or have otherwise violated this Order, EPA may exercise any and all rights it may have including, but not limited to, those rights expressly reserved in Section XIV (Reservation of Rights) of this Order.

4. Respondents shall obtain all permits and authorizations necessary for off-site Work and shall timely submit complete applications and requests for any such permits or authorizations. This Order is not, and shall not be construed to be, a permit issued pursuant to any Federal, State, or local

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statute or regulation.

B. Notice of Obligations to Successors-in-Title

1. Within fifteen (15) days after the effective date of this Order, the Respondents shall record a certified copy of this Order with the Registry of Deeds, or other office where land ownership and transfer records are maintained, in such manner as shall be effective to bring this Order to the attention of any person examining or researching the state and/or quality of the title to the real property constituting the Site or searching for any encumbrances, covenants, easements, liens, restrictions, or other limitations relating to said property. Thereafter, each deed, title, or other instrument of conveyance for property included in the Site shall contain a notice stating: (a) that the property is subject to this Order and any lien held by the United States pursuant to section 107(1) of CERCLA, 42 U.S.C. § 9607(1); (b) the recorded location of the Order; and (c) that further restrictions applicable to the property shall be subsequently recorded as required by the ROD.

2. The obligations of any Respondents that currently own or control any property included in the Site ("Owner Respondents") with respect to the provision of access under Section IX (Site Access) shall be binding upon any and all such Owner Respondents and any and all persons who subsequently acquire any such interest (hereinafter "Successors-in-Title"). Within 15 days after the entry of this Order, each Owner Respondent shall record at the Recorder's Office (or Registry of

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Deeds, or other appropriate office where land ownership and transfer records are maintained for the property) a notice of obligation to provide access under Section IX (Site Access) and related covenants. Each subsequent instrument conveying an interest to any such property included in the Site shall reference the recorded location of such notice and covenants applicable to the property.

3. Any Owner Respondent and any Successor-in-Title shall, at least thirty days prior to the conveyance of any such interest, give written notice of this Order to the grantee and written notice to EPA of the proposed conveyance, including the name and address of the grantee, and the date on which notice of the Order was given to the grantee. In the event of any such conveyance, the Respondents' obligations under this Order, including their obligations to provide or secure access pursuant to Section IX, shall continue to be met by the Respondents. In addition, if the United States approves, the grantee may perform some or all of the Work under this Order. In no event shall the conveyance of an interest in property that includes, or is a portion of, the Site release or otherwise affect the obligation of the Respondents to comply with this Order.

C. Assurance of Ability to Complete Work/Insurance.

1. Respondents shall demonstrate their ability to complete the Work required by this Order and to pay all claims which may arise from performance of the Work required by this Order by obtaining, and presenting to EPA for approval within

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twenty (20) days of the effective date of this Order, the following:

a. One or more of the following sufficient to demonstrate ability to complete the Work:

- (1) a performance bond;
- (2) a letter of credit;
- (3) a guarantee by a third party; or
- (4) yearly internal financial information sufficient to demonstrate to EPA's satisfaction that Respondents have the financial capacity to complete the Work required by this Order; and

b. Copies of insurance policies or, in the alternative, one of the above-described financial assurances sufficient to cover the following in addition to the amounts sufficient for purposes of Section VI.C.1.a:

- (1) Workmen's Compensation and Employer's Liability Insurance in accordance with the laws of State;
- (2) Comprehensive General Liability Insurance, including --
 - (a) Contractual Liability-- \$1 million each contract;
 - (b) Bodily Injury Liability-- \$1 million each person; \$1 million each accident;
 - (c) Property Damage-- \$1 million each accident;

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(3) Bodily Injury Liability-- \$500,000 each person; \$1 million each accident; and

(4) Umbrella Policy in the amount of \$3 million which shall provide coverage in excess of the underlying coverage described above.

For each year Respondents seek to satisfy the requirements of this Paragraph by submitting internal financial information, Respondents shall submit sworn statements containing such information on the anniversary of the effective date of this Order until EPA determines in accordance with Section XVII of this Order that all Work required pursuant to this Order has been fully performed.

D. Selection of Contractor(s).

1. All aspects of the Work to be performed by Respondents pursuant to this Order shall be under the direction and supervision of qualified personnel, the selection of which shall be subject to acceptance or disapproval by EPA.

2. Remedial Action Contractor(s). (a) Within thirty (30) days after receipt of EPA approval of the Remedial Action Work Plan, Respondents shall notify EPA in writing of the name, title, and qualifications of any contractor, including subcontractor, proposed to be used in carrying out the Work pursuant to this Order. If at any time thereafter, Respondents propose to change any such contractor, Respondents shall give written notification to EPA and the State and shall obtain acceptance from EPA before the new contractor performs, directs,

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or supervises any Work under this Order.

(b) EPA will notify Respondents in writing of its acceptance or disapproval of any proposed contractor, or subcontractor. If EPA disapproves of the selection of any proposed contractors, Respondents shall submit to EPA and the State the names and qualifications of at least three (3) contractors that would be acceptable to Respondents within fourteen (14) days of receipt of EPA's disapproval of the contractor previously proposed. Except as provided below, EPA will provide written notice of the name of the contractor that EPA accepts. Respondents may select any accepted contractor from that list and shall notify EPA and the State of the name of the contractor selected within fourteen (14) days of EPA's designation of accepted contractors. Within fourteen (14) days of receipt of EPA acceptance of the Respondents' contractor, Respondents shall enter into an agreement with such contractor selected by Respondents to perform the Work for which such contractor were approved by EPA. In the event EPA does not accept any of the contractors proposed in Respondents' list, Respondents shall be in violation of this Order. EPA may in such event direct Respondents to submit to EPA and the State the names and qualifications of at least three (3) additional contractors that would be acceptable to Respondents within fourteen (14) days of receipt of EPA's disapproval of any contractor proposed by Respondents.

3. EPA retains the right to disapprove at any time the

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contractors, including subcontractors, supervisory personnel, or other persons retained to conduct any of the Work required by this Order. In such event, Respondents shall propose replacements in accordance with the requirements of this Section.

4. Neither the United States nor EPA shall be considered a party to any contract between or among Respondents and any contractors, including subcontractors, or other persons retained to conduct Work required by this Order.

E. Remedial Action.

1. Remedial Action Work Plan. (a) Within thirty (30) days after receipt of EPA approval of Respondents' Project Coordinator as provided in Section VIII.A, below, Respondents shall submit three (3) copies of a Remedial Action Work Plan to EPA for review and approval. The Remedial Action Work Plan shall describe the Respondents' plan for implementation of the Remedial Action within the terms and conditions of this Order and as set forth in the Remedial Design. The Remedial Action Work Plan shall include the following:

(a) Description and schedule for implementation of the Work and field operations;

(b) Identification of the Remedial Action Team for construction management, including key personnel, descriptions of duties, and lines of authority;

(c) Identification of the Remedial Action construction team if the construction is to be accomplished by the Respondents' "in-house" resources; or a plan for procurement and a description of qualifications of a remedial action contractor if the contractor is to be obtained through a construction contract;

- (d) A description of the roles and relationships of the Respondents, the Respondents' Project Coordinator, Resident Engineer, Independent Quality Assurance Team and the Remedial Action Contractor;
- (e) A plan for the administration of construction changes to include EPA review changes that may impact the implementation of the ROD in accordance with the Order and the Remedial Design;
- (f) A plan for removal, transport, and disposal of drums and contaminated soil (Section 02212 of the Final Construction Specifications);
- (g) A plan for implementing any permitting requirements;
- (h) A plan for protection of the environment (Section 01300 of the Final Construction Specifications);
- (i) Submission of a safety, health and emergency response plan (SHERP) (Section 01460 of the Final Construction Specifications);
- (j) Requirements for project closeout;
- (k) Site Inspection and Maintenance Plan (Section 01800 of the Final Construction Specifications); and
- (l) Security Plan (Section 01430 of the Final Construction Specifications).

Upon receipt of approval of the Remedial Action Work Plan by EPA, the Remedial Action Work Plan is incorporated into this Order as a requirement of this Order.

2. Construction Quality Assurance and Control Plans

Within twenty-one (21) days of receipt of EPA's acceptance of the Remedial Action Contractor under Section VI.B.2, above, Respondents shall submit to EPA for review and approval a Construction Quality Assurance and Control Plan (CQACP). The Remedial Action Contractor shall be responsible for all

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activities necessary to manage, control, and document the Work so as to ensure compliance with project requirements, i.e., Final Construction Plans and Final Construction Specifications. The CQACP shall be prepared by the Remedial Action Contractor and shall reflect the scope and complexity of the Work as well as the project requirements. The CQACP shall serve as the Remedial Action Contractor's management tool and shall include:

- (a) A description of the entity responsible for quality control, including lines of authority;
- (b) The name, qualifications, duties, responsibilities, and authorities of each person who is assigned a quality control function;
- (c) A copy of a signed letter which describes the responsibilities and delegates the authorities of the quality control manager;
- (d) Methods of performing the quality control inspections, including when inspection should be made and what to look for;
- (e) Control testing procedures for each specific test. This includes information which documents that personnel and laboratories performing the test are qualified, and that the equipment and procedures to be used comply with applicable standards;
- (f) Procedures for scheduling and managing submittals, including those of subcontractors, off-site fabricators, suppliers and purchasing agents; and
- (g) Reporting procedures, including frequency of reports and report formats.

3. Selection of the Independent Quality Assurance Team

Prior to initiation of any construction activities, the Respondents will submit the name and qualifications of the Independent Quality Assurance Team (IQAT) for approval by EPA.

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The IQAT shall implement the Quality Control Plan (Section 01100(15) of the Final Construction Specifications) by selectively testing and inspecting the work of Respondents' Remedial Action contractor(s). The IQAT shall be independent and autonomous from the Respondents' Remedial Action contractor(s), and may come from within the ranks of the Respondents' own staffs or through a separate contractual relationship with a private consulting entity. Acceptance will be based on professional and ethical reputation, previous experience in the type of quality assurance activities to be implemented, and demonstrated capability to perform the required activities. In addition, EPA acceptance will be based on the requirement for independence between the IQAT contractor and the Respondents' Remedial Action contractor(s). The submitted information about the IQAT contractor will include a written statement of qualification in sufficient detail to allow EPA to make a full and timely evaluation of the contractor's qualifications and facilities.

4. Remedial Action Implementation. (a) Upon receipt of approval of the CQACP by EPA, Respondents shall implement and comply with the terms and schedules of the Remedial Action Work Plan. Unless otherwise directed by EPA in writing, Respondents shall not commence onsite construction of the Remedial Action prior to receipt of approval of the Remedial Action Work Plan and the CQACP.

(b) The Work performed by Respondents pursuant to this Order shall, at a minimum, be consistent with the Remedial

Design, the ROD and the Performance Standards.

F. Additional Response Actions

1. In the event that EPA or Respondents determine(s) that additional response actions are necessary to carry out the requirements of the ROD or to achieve the Performance Standards, notification of such additional response actions shall be provided by EPA to Respondents' Project Coordinator or by Respondents to the EPA Project Coordinator.

2. Within thirty (30) days of receipt of notice from EPA pursuant to Paragraph 1 of this Subsection that additional response actions are necessary (or such longer time as may be specified by EPA), Respondents shall submit to EPA and the State, for approval by EPA, a work plan for the additional response actions. Upon approval of the plan by EPA, Respondents shall implement the plan for additional response actions in accordance with the schedule contained therein.

3. Any additional response actions that Respondents determine are necessary to carry out the requirements of the ROD or to achieve the Performance Standards shall be subject to approval by EPA, and, if authorized by EPA, shall be completed by Respondents in accordance with plans, specifications, and schedules approved by EPA.

4. If required by Sections 113(k)(2) or 117 of CERCLA, 42 U.S.C. §§ 9613(k)(2) or 9617, or the NCP, Respondents and the public will be provided with an opportunity to comment on any additional response actions proposed pursuant to this Subsection

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and to submit written comments for the record during the public comment period. After the expiration of any such statutorily prescribed comment period, the Regional Administrator, EPA Region III, or his/her delegate will determine in writing whether additional response actions are appropriate.

G. Reporting Requirements

1. In addition to any other requirement of this Order, Respondents shall submit to EPA five (5) copies, and the State three (3) copies, of a written monthly progress report that: (1) describes the actions which have been taken toward achieving compliance with this Order during the previous month; (2) includes all results of sampling and tests and all other data received or generated by Respondents or their contractors or agents in the previous month; (3) identifies all work plans, plans and other deliverables required by this Order completed and submitted during the previous month; (4) describes all actions, including, but not limited to, data collection and implementation of work plans, which are scheduled for the next month and provide other information relating to the progress of construction, including, but not limited to, critical path diagrams, Gantt charts and Pert charts; (5) includes information regarding percentage of completion, unresolved delays encountered or anticipated that may affect the future schedule for implementation of the Work, and a description of efforts made to mitigate those delays or anticipated delays; and (6) includes any modifications to the work plans or other schedules that

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Respondents have proposed to EPA or that have been approved by EPA. Respondents shall submit these progress reports to EPA and the State by the tenth day of every month immediately following the entry of this Order until EPA notifies the Respondents pursuant to Section XVII.B(2) of this Order that the Work has been fully performed in accordance with this Order. If requested by EPA, Respondents shall also provide briefings for EPA and the State to discuss the progress of the Work.

2. The Respondents shall notify EPA of any change in the schedule described in the monthly progress report for the performance of any activity including, but not limited to, implementation of work plans, no later than fourteen (14) days prior to the performance of the activity. Notwithstanding the foregoing, the Respondents shall notify EPA of any change in the schedule described in the monthly progress report for the performance of data collection no later than thirty (30) days prior to the performance of such activity.

3. In addition to the reporting required by section 103 of CERCLA, 42 U.S.C. § 9603, or section 304 of the Emergency Planning and Community Right-to-Know Act (EPCRA) section 304, 42 U.S.C. § 11004, upon the occurrence of any event during performance of the Work that Respondents are required to report pursuant to section 103 of CERCLA, 42 U.S.C. § 9603, or section 304 of EPCRA, 42 U.S.C. § 11004, Respondents shall, within twenty-four (24) hours of the onset of such event, orally notify the EPA Project Coordinator or the Chief, Eastern Pennsylvania

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Section, Superfund Remedial Branch, Hazardous Waste Management Division, EPA Region III ("Section Chief") (in the event of the unavailability of the EPA Project Coordinator), or, in the event that neither the EPA Project Coordinator nor the Section Chief is available, the EPA Region III Hotline at (215) 597-9898. Within twenty (20) days of the onset of such an event, Respondents shall furnish to EPA and the State a written report, signed by the Respondents' Project Coordinator, setting forth the events which occurred and the measures taken, and to be taken, in response thereto. Within thirty (30) days of the conclusion of such an event, Respondents shall submit a report setting forth all actions taken in response thereto.

4. Respondents shall submit to EPA two (2) copies, and the State two (2) copies, each year within thirty (30) days of the anniversary of the effective date of this Order, a report setting forth the status of the Work, which shall at a minimum include a statement of major milestones accomplished in the preceding year, a statement of tasks remaining to be accomplished, and a schedule for implementation of the remaining Work.

H. EPA Periodic Review

1. Respondents shall conduct any studies and investigations deemed necessary by EPA in order to permit EPA to conduct reviews at least every five (5) years as required by section 121(c) of CERCLA, 42 U.S.C. §9621(c), and any applicable regulations.

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2. If required by sections 113(k)(2) or 117 of CERCLA, 42 U.S.C. §§ 9613(k)(2) or 9617, or the NCP, Respondents and the public will be provided with an opportunity to comment on any additional response actions proposed by EPA as a result of the review conducted pursuant to section 121(c) of CERCLA, 42 U.S.C. § 9621(c), and to submit written comments for the record during the public comment period. After the period for submission of written comments is closed, the Regional Administrator, EPA Region III, or his/her delegate will determine in writing whether additional response actions are appropriate.

3. If the Regional Administrator, EPA Region III, or his/her delegate determines that information received, in whole or in part, during the review conducted pursuant to section 121(c) of CERCLA, 42 U.S.C. § 9621(c), indicates that the Remedial Action is not protective of human health and the environment, the Respondents shall undertake any additional response actions EPA has determined are appropriate.

4. Within thirty (30) days after notice of EPA's determination that additional response actions are necessary (or such longer time as may be specified by EPA), Respondents shall submit to EPA and the State, for approval by EPA, a work plan for the additional response actions. Upon approval of the plan by EPA, Respondents shall implement the plan for the additional response actions in accordance with the schedule contained therein.

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I. Off-Site Shipment of Waste Materials

1. Respondents shall, prior to any off-Site shipment of Waste Material from the Site to an out-of-state waste management facility, provide written notification to the appropriate state environmental official in the receiving facility's state and to the EPA Remedial Project Manager of such shipment of Waste Material. However, this notification requirement shall not apply to any off-Site shipment when the total volume of such shipment will not exceed ten (10) cubic yards.

2. The Respondents shall include in the written notification the following information, where available: (a) the name and location of the facility to which the Waste Materials are to be shipped; (b) the type and quantity of the Waste Materials to be shipped; (c) the expected schedule for the shipment of the Waste Materials; and (d) the method of transportation. The Respondents shall notify the state in which the planned receiving facility is located of major changes in the shipment plan, such as a decision to ship the Waste Materials to another facility within the same state, or to a facility in another state.

3. The identity of the receiving facility and State will be determined by the Respondents following the award of the contract for Remedial Action construction. The Respondents shall provide written notification required by this Section VI.I, including the information required by Paragraph I.1, as soon as

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practicable after the award of the contract, but in no case less than fourteen (14) days before the Waste Materials are actually shipped.

VII. FAILURE TO PERFORM/PERFORMANCE EVENTS

A. In the event of an inability or anticipated inability on the part of Respondents to perform any of the actions required by this Order in the time and manner required herein, the Respondents' Project Coordinator (as defined in Section VIII, below) shall notify EPA orally within twenty-four (24) hours of such event and in writing as soon as possible, but in no event more than ten (10) days after such event. Such notice shall set forth the reason(s) for, and the expected duration of, the inability to perform; the actions taken and to be taken by Respondents to avoid and mitigate the impact of such inability to perform; and the proposed schedule for completing such actions. Such notification shall not relieve Respondents of any obligation of this Order. Respondents shall take all reasonable actions to prevent and minimize any delay.

B. Failure of Respondents to carry out any requirement of this Order in accordance with the terms and conditions specified herein may result in the unilateral performance of the required actions by EPA pursuant to applicable authorities, an action to recover treble damages pursuant to CERCLA, and/or the initiation of an enforcement action against Respondents to require Respondents to perform such actions, in addition to any other relief that may be available to EPA pursuant to applicable law.

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C. Nothing in this Section or any other provision of this Order shall be construed so as to limit any powers EPA may have under CERCLA, the NCP, or any other law or regulation.

VIII. DESIGNATED PROJECT COORDINATORS

A. **Respondents' Project Coordinator.** (1) Within ten (10) days after the effective date of this Order, Respondents shall designate a Project Coordinator and shall submit the name and qualifications of such person, including any support persons and staff, to EPA for review and acceptance. Respondents' Project Coordinator shall be a technical and/or managerial representative of Respondents and may be a contractor and/or consultant, but shall not serve as counsel to any Respondent in matters relating to this Site.

(2) Respondents' designated Project Coordinator shall be subject to acceptance by EPA. In the event EPA does not accept Respondents' designated Project Coordinator, Respondents shall, within thirty (30) days after receipt of EPA's notice not to accept Respondents' Project Coordinator, submit to EPA a list identifying proposed Project Coordinators, including support persons and staff, that would be acceptable to Respondents. EPA shall then provide Respondents with notice identifying each proposed Project Coordinator on the list that is accepted by EPA. Respondents shall, within ten (10) days of receipt of EPA's notice identifying acceptable replacement Project Coordinators, select any accepted Project Coordinator from the list and notify EPA of such selection.

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(3) EPA may at any time disapprove Respondents' Project Coordinator. In such event, Respondents shall follow the procedures set forth in Section VIII.A (2) in selecting a replacement Project Coordinator.

(4) In the event Respondents wish to change their Project Coordinator, Respondents shall designate a new Project Coordinator in accordance with the procedures set forth in Section VIII.A (1), above. Such new Project Coordinator must be accepted by EPA in accordance with the procedures set forth in Section VIII.A (2) prior to the effective date of any such replacement.

B. EPA's Project Coordinator. (1) EPA's Project Coordinator is:

Anthony F. Koller, P.E.
Remedial Project Manager
Hazardous Waste Management Division (3HW22)
U.S. EPA Region III
841 Chestnut Building
Philadelphia, PA 19107
(215) 597-3923

(2) EPA has the right to change its Project Coordinator at any time. In the event EPA makes such a change, EPA will inform Respondents' Project Coordinator of the name, address, and telephone number of the new EPA Project Coordinator.

(3) EPA's Project Coordinator shall have the authority vested in a Remedial Project Manager and an On-Scene Coordinator by the NCP. In addition, EPA's Project Coordinator shall have the authority, consistent with the NCP, to halt, conduct, or

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modify any work required by this Order, and to take any necessary response action when the EPA Project Coordinator or other EPA official determines that conditions at the Site may present a threat to the public health or welfare or to the environment.

C. Unless otherwise directed by the EPA Project Coordinator, all communications, whether written or oral, from Respondents to EPA shall be directed to the EPA Project Coordinator.

D. No informal advice or guidance from the EPA Project Coordinator shall relieve Respondents from any obligations under this Order.

IX. SITE ACCESS

A. As of the effective date of this Order, and pursuant to section 106(a) of CERCLA, 42 U.S.C. § 9606(a), Respondents shall provide access to any property upon which Work shall be performed pursuant to this Order to EPA and its employees, agents, consultants, contractors, and other designated and/or authorized representatives for the purposes of conducting any activity required by or related to this Order. Such access shall permit EPA and its employees, agents, consultants, contractors, and other designated representatives to conduct all activities described in Paragraph C of this Section.

B. To the extent that Work required by this Order must be performed on property not presently owned or controlled by any Respondent, Respondents shall use best efforts to obtain access agreements from the present owners of such property within thirty

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(30) days of the effective date of this Order. At a minimum, best efforts shall include, but shall not be limited to, a certified letter from Respondents to the present owners of such property requesting access agreements fulfilling the requirements of Paragraphs A and C of this Section. In the event that the property owners refuse to provide such access or access agreements are not obtained within thirty (30) days of the effective date of this Order, whichever occurs sooner, the Respondents shall immediately notify EPA, in writing, of all efforts to obtain access and the circumstances of their failure to secure access agreements. EPA may, in its discretion, thereafter assist Respondents in obtaining access.

C. EPA and its employees, agents, consultants, contractors, and other designated representatives shall have the authority to enter and freely move about all property subject to this Order at all reasonable times for the purposes of, inter alia, inspecting records, operating logs, and contracts related to the Site; reviewing the progress of the Respondents in carrying out the terms of this Order; conducting such tests and taking such samples as EPA deems necessary; using a camera, sound recording, or other documentary type equipment; and verifying the data submitted to EPA by the Respondents. In addition, EPA and its employees, agents, consultants, contractors, and other authorized representatives shall have authority to enter, at all reasonable times, all areas in which records related to the performance of the Work required by this Order are retained. Respondents shall

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permit such persons to inspect and copy all records, files, photographs, documents, and other writings, including all sampling and monitoring data, in any way pertaining to Work undertaken pursuant to this Order. Nothing herein shall be interpreted as limiting the inspection or information gathering authorities of EPA under Federal law.

D. Notwithstanding any provision of this Order, EPA retains all access authorities and rights under CERCLA and any other applicable statute and regulation.

X. SAMPLING AND DATA/DOCUMENT AVAILABILITY

A. Respondents shall notify EPA in writing not less than fourteen (14) days in advance of any sample collection activity undertaken pursuant to this Order.

B. (1) Subject to the limitations contained in Section X.B.2 of this Order, EPA and its designated representatives shall have full access to all information maintained or created by, or on behalf of, Respondents in connection with activities conducted pursuant to this Order including, but not limited to, contractual documents, sampling data, and field notes. Except as otherwise provided in this Order, all such information requested by EPA and maintained by Respondents and/or Respondents' contractors, agents, or assigns (and, where appropriate, information required by Section X.B.2 of this Order) shall be made available to EPA or its designated representative within thirty (30) days of receipt of any such request.

(2) Respondents' obligation to disclose information

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required by EPA pursuant to Section X.B.1 of this Order is subject to applicable privileges recognized under Federal law, provided that no sample results or analytical data shall be claimed as privileged. Where a claim of privilege is invoked as to information, Respondents shall identify such information and state the basis of any privilege claimed. In the event Respondents withhold a document as privileged, Respondents shall provide EPA with the date, title, author, and addressee/recipient of the document; a description of the nature of the document; and the identity and basis of each privilege asserted.

C. Upon reasonable notice, Respondents and/or their contractors or subcontractors shall make themselves available for such meetings, conferences, and/or inspections with EPA, or its representatives, as may be necessary for EPA to oversee the performance of Work required by this Order.

D. At the request of EPA, Respondents shall provide EPA or its designated representatives with split or duplicate samples of any material sampled in connection with the implementation of this Order and/or shall permit EPA or its authorized representative to take such split or duplicate samples of any samples taken.

E. **Confidential Business Information.** (1) Respondents may assert a claim of business confidentiality covering part or all of the information or documentation required by or provided under this Order in the manner described in 40 C.F.R. § 2.203(b). Such an assertion shall be substantiated in accordance with 40 C.F.R.

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§ 2.204(e)(4) at the time the assertion is made. Information subject to such a claim will be handled in accordance with the procedures set forth in 40 C.F.R. Part 2, Subpart B. If no claim of business confidentiality accompanies the information or documentation when it is submitted or made available to EPA, it may be made available to the public by EPA without further notice to Respondents.

(2) Respondents shall not assert confidentiality claims with respect to any data related to Site conditions or any sampling, analytical, or monitoring data.

XI. QUALITY ASSURANCE

A. While conducting all sample collection and analysis activities required by this Order, the Respondents shall implement quality assurance, quality control and chain of custody procedures in accordance with "Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA," 1988 (OSWER Directive 9355.3-01); "EPA NEIC Policies and Procedures Manual," May 1978, revised May 1986 (EPA 330/978-001-R); "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans," December 1980 (QAMS 005/80); "A Compendium of Superfund Field Operations Methods," December 1987 (OSWER Directive 9355.0-14); "Data Quality Objectives for Remedial Response Activities," March 1987 (OSWER Directive 9355.0-7B); EPA's "Guidelines and Specifications for Preparing Quality Assurance Program Documentation," June 1, 1987; "Preparing Perfect Project Plans," October 1989 (EPA/600/9-89-087); and

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amendments to these guidelines.

B. The Respondents shall consult with EPA in planning for, and prior to, all sampling and analysis required by this Order, and by any subsequent EPA-approved plans prepared as part of this Order. Further, Respondents shall not commence sampling until EPA approves the Sampling and Analysis Plan ("SAP") and the Remedial Action Work Plan, unless otherwise directed by the EPA Project Coordinator.

C. In order to provide quality assurance and maintain quality control regarding all samples collected pursuant to this Order, the Respondents shall:

1. Use only laboratories that have a documented Quality Assurance Program that complies with EPA guidance document QAMS-005/80.

2. Submit to the EPA Project Coordinator the selected laboratory's(ies') Quality Assurance Program Plan ("QAPP") and their qualifications, which shall include, at a minimum, previous certifications, PE performance results, equipment lists and personnel resumes. The SAP must state that all protocols described therein take precedence over protocols listed in the Laboratory QAPP.

3. Ensure that EPA personnel and/or its authorized representatives are allowed reasonable access to the laboratory(ies), records and personnel utilized by the Respondents in implementing this Order.

4. Prepare a SAP, consisting of a Quality Assurance

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Project Plan ("QAPjP") and a Field Sampling Plan ("FSP"), for sample collection, transportation, analysis, validation and reporting to be conducted pursuant to this Order. The SAP shall be submitted as part of the Remedial Action Work Plan to the EPA Remedial Project Manager for review and approval prior to commencing sampling and analysis. Each plan shall specify, for the phase of activity addressed, the data quality objectives ("DQOs"), sample collection and transportation procedures, data analysis methods, data reduction, data review, and reporting procedures. The FSP shall also include the types, locations, analytical parameters, and frequency of samples. Selection of analytical methods shall be justified in conjunction with the DQOs. The guidelines referenced in Paragraph A, above, shall be followed in the preparation of the SAP; additional guidance may be provided by EPA when applicable and/or requested by the Respondents.

5. Ensure that the laboratory(ies) analyzing samples pursuant to this Order use the methods described by, and submit deliverables delineated in, the current "Statement of Work of the EPA Contract Lab Program." All constituents and physical parameters to be analyzed for which CLP methods will not be used will be described in the QAPP. This description shall include, at a minimum, the matrix, calibration, Quality Control ("QC") samples (type and frequency), corrective measures, and deliverables. Non-CLP methods shall be approved by the EPA Project Coordinator prior to sampling and analysis.

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6. Ensure that the laboratory(ies) analyzing samples pursuant to this Order agrees to demonstrate its capability to perform the selected analyses by analyzing Performance Evaluation ["PE"] samples, supplied by EPA. Analysis of PE samples may be waived by EPA if the laboratory(ies) satisfactorily analyzed PE samples using the selected methods within the six (6) months prior to analysis conducted pursuant to this Order. Documentation of such PE sample analysis shall be submitted to the EPA Project Coordinator for verification.

7. At the request of EPA, conduct one or more independent audits of the selected laboratory(ies) to verify analytical capability and compliance to the SAP. Auditors shall conduct lab audits at sometime during the time the laboratory(ies) are analyzing samples collected pursuant to this Order. The lab audit shall be conducted according to procedures available from the EPA Environmental Services Division Quality Assurance Branch ["QA Branch"]. Audit reports shall be submitted to the EPA Remedial Project Manager within fifteen (15) days of completion of the audit. The Respondents shall report serious deficiencies, including all those which adversely affect data quality, reliability or accuracy, and take action to correct such deficiencies within twenty-four (24) hours of the time the Respondents know or should have known of the deficiency.

8. Conduct at least one independent field audit (to be described in the QAPjP) during initial sampling activities to verify that field samplers are correctly following sampling

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procedures described in the SAP. A report of the field audit shall be submitted to the EPA Remedial Project Manager within fifteen (15) days of completion of the audit. Respondents shall report the scope of the audit and the deficiencies noted, and take action to correct such deficiencies within twenty-four (24) hours of the time the Respondents know or should have known of the deficiency. EPA shall have the option to audit any stage of the field activities.

9. . Provide data validation of analyses completed by the laboratory(ies), to determine data usability. If the data are derived by CLP methods, the data validation shall be performed in accordance with the most recent National Functional Guidelines for Data Review and Region III Modifications (available from the EPA QA Branch). For non-CLP methods, the data validation shall be performed as described in the SAP and in accordance with the QC data validation criteria set forth in that method. The quality assurance data validation reports shall be prepared using EPA Region III format (available from the QA Branch) and shall be submitted, along with the validated data summary sheets and the laboratory sample results, to the EPA Project Coordinator.

D. At the request of EPA, Respondents shall allow split or duplicate samples to be taken by EPA and/or its authorized representatives, of any samples collected by the Respondents pursuant to this Order. The Respondents shall notify EPA not less than fourteen (14) days in advance of any such sample

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collection activity. EPA shall have the right to take any additional samples that EPA deems necessary.

E. In addition to other obligations contained in this Order requiring Respondents to submit data, Respondents shall, within seven (7) days of Respondents' receipt of a request by EPA, submit to EPA the results of all sampling and/or tests or other data obtained or generated by or on behalf of Respondents with respect to the Site and/or implementation of this Order.

F. Notwithstanding any provision of this Order, the United States hereby retains all of its information gathering and inspection authorities and rights, including enforcement authorities related thereto, under CERCLA, RCRA, and any other applicable statute and regulation.

XII. RECORD PRESERVATION

A. Respondents shall preserve, during the pendency of this Order and for a minimum of six (6) years after its termination, all records and documents in their possession that relate in any way to implementation of this Order, despite any document retention policy to the contrary.

B. Respondents shall use their best efforts to obtain copies of all documents relating in any way to the Site and which are in the possession of their employees, agents, accountants, contractors, or attorneys. After expiration of the six (6) year document retention period, Respondents shall notify EPA at least thirty (30) days prior to the destruction of any documents relating to the Site. Upon request by EPA and subject to

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Sections X.B and X.E of this Order, Respondents shall make available to EPA such records or copies of any such records.

C. Respondents shall ensure that any agreement between Respondents and any agent, contractor, consultant, or other person retained to perform or oversee Work pursuant to this Order shall explicitly require said agent, contractor, consultant, or other person to maintain and preserve, during the pendency of this Order and for a minimum of six (6) years after termination of this Order, all data, records, and documents within their respective possession or control which relate in any way to this Order or to hazardous substance management and disposal at the Site.

D. Respondents shall not destroy any records relating to this Order until notified by EPA, in accordance with this Section, that EPA has waived its right to obtain such records from Respondents.

XIII. PLANS AND REPORTS REQUIRING EPA APPROVAL

A. Unless otherwise specified, three (3) copies of all documents, including plans, reports, and other items required to be submitted to EPA for approval pursuant to this Order, shall be submitted to the EPA Project Coordinator designated pursuant to Section VIII of this Order in accordance with the requirements of this Section. Three (3) copies of each such document shall simultaneously be submitted to the State (to provide the State an opportunity to review and comment to EPA) at the following address:

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Mark Gorman
Pennsylvania Dept. of Environmental Resources
Hazardous Sites Cleanup Program
1012 Water St.
Meadville, PA 16335
(814) 332-6939

The Remedial Action Work Plan required by Section VI.E.1 of this Order, Other Tasks and Deliverables required by Section VI.E.2 of this Order, any work plan submitted pursuant to Section VI.F (Additional Response Actions) of this Order, any written notification of anticipated inability to perform submitted pursuant to Section VII.A (Failure to Perform/Performance Events) of this Order, and the written reports required by Section XVII (Certification of Completion) of the Order shall be signed by a Duly Authorized Representative of Respondents certifying the information contained in the foregoing document as set forth below. The certification statement accompanying the document shall state the following:

"I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified portion(s) of this document for which I cannot personally verify its (their) truth and accuracy, I certify as the company official having supervisory responsibility for the person(s) who, acting under my direct instructions, made the verification, that this information is true, accurate, and complete."

B. Following review of any document submitted to EPA pursuant to Section XIII.A of this Order, EPA may:

- (1) approve the document in full;
- (2) approve portions of the document and
 - (a) modify non-approved portions of the document

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and require Respondents to implement such document as modified by EPA; and/or

- (b) direct Respondents to fully respond to EPA's comments regarding non-approved portions of the document and submit a modified document, or portions thereof, for EPA approval;
- (3) disapprove the document and
 - (a) modify the document and require Respondents to implement such document as modified by EPA; and/or
 - (b) direct Respondents to submit a modified document for EPA approval that fully responds to EPA's comments; or
- (4) disapprove the document and perform all or any part of the response action.

C. Unless otherwise specified by EPA, Respondents shall undertake all actions required by documents, or portions of documents, approved by EPA.

D. Upon receipt of a notice requiring Respondents to modify of all or any portion of any document submitted hereunder, Respondents shall, within twenty-one (21) days or such other time as may be specified by EPA in its notice of disapproval, submit a modified document which is responsive to all directions contained in EPA's notice of disapproval.

E. Modified documents required pursuant to Section XIII.D of this Order shall be submitted, and subject to EPA approval, in

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accordance with this Section.

F. In the event EPA disapproves all or any portion of any document submitted for EPA approval, Respondents shall be deemed to be in violation of this Order.

G. EPA's decisions regarding the sufficiency or acceptability of all documents and of any activities performed pursuant to this Order shall control.

H. No failure by EPA to approve, disapprove, or otherwise respond to a document submitted to EPA for approval shall be construed as an approval of such document.

I. All plans, reports, and other items required to be submitted to EPA under this Order shall, upon modification by EPA and/or approval by EPA, be deemed to be incorporated in and an enforceable part of this Order. In the event EPA approves a portion of a plan, report, or other item required to be submitted to EPA under this Order, the approved portion shall be deemed to be incorporated in and enforceable as part of this Order.

J. To the maximum extent possible, communications from the Respondents to EPA and all documents including, but not limited to, plans, reports, and other correspondence concerning Work performed pursuant to this Order, shall be directed to the EPA Project Coordinator by overnight mail or equivalent delivery.

XIV. RESERVATION OF RIGHTS

A. EPA reserves all rights, claims, interests, and defenses it has under CERCLA or any other law or in equity.

B. Nothing herein shall be construed to prevent EPA from

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seeking legal or equitable relief to enforce the terms of this Order, to seek injunctive relief, and/or to seek the imposition of statutory penalties.

C. EPA reserves the right to disapprove of Work performed by Respondents pursuant to this Order, to require that Respondents correct and/or re-perform any and all Work disapproved by EPA, and to require that Respondents perform response actions in addition to those required by this Order.

D. EPA reserves the right to take enforcement actions, including actions for monetary penalties, for any violation of law, regulation, or of this Order. Failure to comply with this Order subjects Respondents to the assessment of civil penalties of up to \$25,000 per day and/or punitive damages in an amount up to three times the amount of any costs incurred by EPA as a result of such failure pursuant to sections 106(b) & 107(c) of CERCLA, 42 U.S.C. §§ 9606(b) & 9607(c). EPA may also undertake other actions as it may deem necessary or appropriate for any purpose including, but not limited to, actions pursuant to sections 104 and/or 106 of CERCLA, 42 U.S.C. §§ 9604 and 9606.

E. EPA reserves the right to undertake removal and/or remedial actions, including all actions required by this Order, at any time such actions are appropriate under CERCLA and the NCP, and to seek reimbursement from Respondents for any costs incurred. Performance by EPA of any portion of the Work required by this Order shall not release Respondents of their obligation to comply with all other requirements of this Order and shall not

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release Respondents from liability for penalties and/or damages for all violations of this Order.

F. EPA reserves the right to bring an action against Respondents pursuant to section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of all response costs incurred by the United States in connection with this Order and not reimbursed by Respondents, as well as any other costs incurred by the United States in connection with response actions conducted pursuant to CERCLA at the Site.

G. Without limitation of any other provision in this Order, EPA reserves the right to bring actions against, and/or issue orders to, Respondents pursuant to applicable authorities for any purpose including, but not limited to, performance of response actions other than those performed by Respondents pursuant to this Order.

XV. GENERAL PROVISIONS

A. Nothing in this Order shall constitute or be construed as a release from any claim, cause of action, or demand in law or equity against any person, firm, partnership, or corporation not bound by this Order for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release, or disposal of any Waste Materials found at, taken to, or taken from the Site.

B. This Order does not constitute any decision on preauthorization of funds under Section 111(a)(2) of CERCLA, 42 U.S.C. § 9611(a)(2).

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C. Nothing herein shall constitute or be construed as a satisfaction or release from liability of Respondents or any other person.

D. Neither EPA nor the United States, by issuance of this Order, assumes any liability for any acts or omissions by Respondents, or Respondents' employees, agents, contractors or consultants engaged to carry out any action or activity pursuant to this Order, nor shall EPA or the United States be held as a party to any contract entered into by Respondents or Respondents' employees, agents, contractors or consultants engaged to carry out the requirements of this Order.

**XVI. EFFECTIVE DATE, OPPORTUNITY TO CONFER, AND
NOTICE OF INTENT TO COMPLY**

A. Not later than twenty-five (25) days from the date of issuance of this Order, Respondents may confer with EPA to discuss the scope and applicability of this Order, the findings upon which this Order are based, the appropriateness of any action or activity required to be undertaken hereby, or other issues directly relevant to issuance of this Order. Such a conference is not, and shall not be deemed to be, an adversarial hearing or part of a proceeding to challenge this Order, and no official stenographic record of such proceeding shall be kept. Any request for a conference within the prescribed timeframe shall be made to:

Clay Monroe
Office of Regional Counsel (3RC32)
U.S. EPA Region III
841 Chestnut Building

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Philadelphia, PA 19107
(215) 597-6780

B. This Order is deemed "issued" on the date it is signed by the Regional Administrator of EPA Region III. This Order shall become effective thirty (30) days following the date on which it is issued.

C. No later than five (5) days after the effective date of this Order, each Respondent shall provide notice in writing to the individual identified in Section XVI.A of this Order stating whether such Respondent intends to comply with the terms of this Order. In the event any Respondent elects not to comply with this Order, such Respondent shall describe in detail the reasons supporting such decision and how such reasons constitute "sufficient cause" within the meaning of section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Failure by any Respondent to provide such notice shall be a violation of this Order and deemed to be a decision by such Respondent not to comply with the terms of this Order.

XVII. CERTIFICATION OF COMPLETION AND TERMINATION

A. Completion of the Remedial Action

1. Within ninety (90) days after Respondents conclude that the Remedial Action has been fully performed, Respondents shall so certify to EPA and the State and shall schedule and conduct a pre-certification inspection to be attended by Respondents, EPA, and the State. If, after the pre-certification inspection, the Respondents still believe that the Remedial

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Action has been fully performed, Respondents shall submit a written report to EPA and the State, for approval by EPA, within thirty (30) days of the inspection. In the report, a registered professional engineer ("RPE") and a Duly Authorized Representative of the Respondents shall certify, pursuant to Section Section XIII (Plans and Reports Requiring EPA Approval) of this Order, that the Remedial Action has been completed in full satisfaction of the requirements of this Order. The written report shall include as-built drawings signed and stamped by an RPE and certified as required by Section XIII (Plans and Reports Requiring EPA Approval) of this Order. If, after completion of the pre-certification inspection and receipt and review of the written report as described above, EPA determines that the Remedial Action or any portion thereof has not been completed in accordance with this Order, EPA will notify Respondents in writing of the activities that must be undertaken to complete the Remedial Action. EPA will set forth in the notice a schedule for performance of such activities consistent with the Order or require the Respondents to submit a schedule for approval by EPA. Respondents shall perform all activities described in the notice in accordance with the specifications and schedules established pursuant to this Paragraph.

2. If EPA concludes, based on the initial or any subsequent Certification of Completion by Respondents, that the Remedial Action has been fully performed in accordance with this Order, EPA will so certify in writing to Respondents. This

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certification shall constitute the Certification of Completion of the Remedial Action for purposes of this Order. Certification of Completion of the Remedial Action shall not affect Respondents' obligations under this Order that continue beyond the Certification of Completion, including, but not limited to, access, operation and maintenance, record retention, insurance, and any work to be conducted under Section VI.H (U.S. EPA Periodic Review) of this Order.

B. Completion of the Work

1. Within ninety (90) days after Respondents conclude that all phases of the Work, including O & M, have been fully performed, Respondents shall so certify to the United States and the State by submitting a written report by an RPE certifying that the Work has been completed in full satisfaction of the requirements of this Order. The report shall also contain the certification required by Section XIII (Plans and Reports Requiring EPA Approval) of this Order. If, after review of the written report, EPA determines that any portion of the Work has not been completed in accordance with this Order, EPA will notify Respondents in writing of the activities that must be undertaken to complete the Work. EPA will set forth in the notice a schedule for performance of such activities consistent with the Order or require the Respondents to submit a schedule for approval by EPA. Respondents shall perform all activities described in the notice in accordance with the specifications and schedules established therein.

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2. If EPA concludes, based on the initial or any subsequent Certification of Completion by Respondents, that the Work has been fully performed in accordance with this Order, EPA will so notify the Respondents in writing.

C. Termination

1. This Order shall terminate upon Respondents' receipt of written notice from EPA pursuant to Section XVII.B.2 that the Work has been fully performed in accordance with this Order.

2. EPA reserves all rights under applicable laws and regulations and termination of this Order shall not alter or in any way affect such rights.

XVIII. ADMINISTRATIVE RECORD

The Administrative Record compiled in support of this Order may be reviewed at the EPA Region III offices by contacting the EPA Project Coordinator.

XIX. LIABILITY OF THE UNITED STATES

Neither EPA nor the United States, by issuance of this Order, assumes any liability for any acts or omissions by Respondents or by Respondents' employees, agents, contractors, or consultants in carrying out any action or activity pursuant to this Order, nor shall EPA or the United States be held as a party to any contract entered into by Respondents, Respondents' employees, agents, contractors, or consultants in carrying out activities pursuant to this Order.

XX. COMMUNITY RELATIONS

As requested by EPA, Respondents shall participate in the preparation of all appropriate information to be disseminated to the public and in public meetings which may be held or sponsored by EPA to explain activities at or concerning the Site.

XXI. MODIFICATIONS

This Order may be modified at any time, in writing, by the EPA Region III Regional Administrator.

IT IS SO ORDERED.

Edwin B. Erickson

EDWIN B. ERICKSON
Regional Administrator
U.S. Environmental Protection Agency
Region III

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DATE

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**APPENDIX B
MODIFICATIONS**

The following modifications/deletions are to be incorporated into the Final Construction Specifications included with Appendix B to the Order:

1. Delete the term "Contracting Officer" and substitute therefore "U.S. Environmental Protection Agency."
2. The term "Contractor" shall mean the Respondents and/or their contractor(s).
3. Delete all references to the "Chemical Quality Control Plan." A "Quality Control Plan" shall be developed and submitted in accordance with the Order.
4. Section 01100 (Special Clauses) - delete entire section except for the following Clauses:
 1. Commencement, Prosecution, and Completion of Work.
 5. Physical Data.
 7. Availability of Utility Services.
 18. Daily Work Schedules.
 20. As Built Drawings.
 25. Accommodations for Government.
5. Section 01110 (Measurement and Payment) - delete in its entirety.
6. Section 01150 (Special Project Procedures) - delete Clause 3.6 (Submittal Register) and Clause 3.7 (Contractor Quality Control).
7. Section 01200 (Construction General) - delete the following Clauses:
 16. Purchase Orders.
 17. Progress Charts.
 18. Project Sign.
 23. Submittals.
 24. Payment.

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8. Section 01350 (Chemical Quality Management) - delete in its entirety.
9. Section 01600 (Project Record Documents) - delete Clause 5 Reference Library.
10. The following paragraphs of Section 02212 (Excavation, Handling and Disposal of Drummed and Contaminated Materials) are MODIFIED and now read:

2.3. Any material determined, in accordance with paragraph 6.4. (Hazardous Waste Determination), to be hazardous waste as defined at 40 C.F.R. § 260.10.

6.4. HAZARDOUS WASTE DETERMINATION.

6.4.1. Except for hazardous waste determination, the referenced drum handling procedures list all necessary parameters to be tested to achieve the above objectives. The Contractor shall characterize and determine whether the waste is a hazardous waste, as defined at 40 C.F.R. § 260.10, or a non-hazardous waste.

6.4.2. The Contractor shall perform a determination in accordance with 40 C.F.R. Part 268 on all wastes shown to be hazardous under Section 6.4.1.

6.4.3. A copy of the characterization results, along with the Contractor's Hazardous/Non-Hazardous waste determination shall be submitted to the Contracting Officer prior to removing the material from the site.

11. If the event of conflict between the terms of the Order and the terms of Appendix B, then the terms in the Order shall govern.

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APPENDIX C
 PERFORMANCE STANDARDS

TOPSOIL CAP

A compacted layer of topsoil shall be placed in accordance with Section 02245 of the Final Construction Specifications ("Topsoil Cap") and to the lines and grades as shown on the plans. This topsoil cap shall provide dermal protection from the contaminated soil and be capable of supporting the germination and propagation of vegetative cover in accordance with Section 02480 of the Final Construction Specifications ("Seeding").

FLOOD RETENTION BASIN

The Flood Retention Basin (FRB) shall meet the following performance criteria:

| FRB PERFORMANCE CRITERIA | | | |
|---|-------------|-------------|--------------|
| Description | 10-yr Storm | 50-yr Storm | 100-yr Storm |
| Peak influent flows (from Marshall's Run and Site runoff) | 887 cfs | 1534 cfs | 1736 cfs |
| Peak outlet flow | 157 cfs | 327 cfs | 390 cfs |
| Flow-through culvert (max.) | 157 cfs | 173 cfs | 176 cfs |
| Flow-over emergency spillway (max.) | 0 | 154 cfs | 214 cfs |
| Area impounded by FRB | 19.4 acres | 25.9 acres | 26.6 acres |
| Water level in FRB (max.) | 717.4 ft. | 718.9 ft. | 719.2 |
| Water level in downstream Marshall's Run | 712.8 ft. | 714.9 ft. | 715.5 |
| Head loss generated by FRB (side discharge weir, culvert, emergency overflow, and bar screen) | 4.6 ft. | 4.0 ft. | 3.7 |

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