

105103

within is a true and correct copy
of the original Order
filed in this matter.

[Signature]
Attorney for U.S. EPA, Region III

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III**

IN THE MATTER OF :

BLOSENSKI LANDFILL SITE, :
WEST CALN TOWNSHIP, :
PENNSYLVANIA :
OPERABLE UNITS 3 & 4 :

ATLANTIC RICHFIELD CO., :
JOSEPH M. BLOSENSKI, Jr., :
THE BUDD COMPANY, :
C & D CHARTER POWER SYSTEMS, INC., :
CHUBB NATIONAL FOAM, INC., :
DELAWARE CONTAINER CO., INC., :
EASTERN WASTE INDUSTRIES, INC., :
ESSCHEM, INC., :
FINNAREN & HALEY, INC., :
ICI AMERICAS, INC., :
MONSANTO COMPANY, :
MORTON INTERNATIONAL, INC., :
OCCIDENTAL CHEMICAL CORP. and :
THE VALSPAR CORPORATION :

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) :

Docket No. III-94-009-DC

ADMINISTRATIVE ORDER

FOR REMEDIAL DESIGN AND REMEDIAL ACTION

AR001702

TABLE OF CONTENTS

- I. JURISDICTION 1
- II. PARTIES BOUND 2
- III. FINDINGS OF FACT 4
 - A. Blosenski Landfill Site Location, History, and Uses 5
 - B. Respondents' Responsibility for Conditions at the Site 6
 - 1. Atlantic Richfield Company, Inc. 6
 - 2. Joseph M. Blosenski, Jr. 7
 - 3. The Budd Company 8
 - 4. C & D Charter Power Systems, Inc. 8
 - 5. CHUBB National Foam, Inc. 9
 - 6. Delaware Container Company, Inc. 10
 - 7. Eastern Waste Industries, Inc. 10
 - 8. Esschem, Inc. 10
 - 9. Finnaren & Haley, Inc. 11
 - 10. ICI Americas Inc. 12
 - 11. Monsanto Company 12
 - 12. Morton International, Inc. 13
 - 13. Occidental Chemical Corporation 13
 - 14. The Valspar Corporation 14
 - C. Response Actions and Investigations Performed at the Site 15
 - D. The Release of Hazardous Substances at the Site and the Resultant Endangerment 18
 - E. The Record of Decision 26
- IV. CONCLUSIONS OF LAW AND DETERMINATIONS 25
- V. SCOPE OF THE RESPONSE ORDERED 27
- VI. DEFINITIONS 28
- VII. WORK TO BE PERFORMED 31
 - A. Requirement to Comply with the ROD and the Law 31
 - B. Notice of Order in Property Records 34
 - C. Assurance of Ability to Complete Work 35
 - D. Selection of Contractor(s) 37
 - E. Respondents Shall Perform the Work as Follows: 41
 - 1. Phase IV 41
 - 2. Phase III 45
 - F. Additional Response Actions 52
 - G. Reporting Requirements 53
 - H. Off-site Shipment of Waste Materials 56

VIII. PLANS AND REPORTS REQUIRING EPA APPROVAL 57

IX. DESIGNATED PROJECT COORDINATORS 60

X. FAILURE TO PERFORM 62

XI. EPA PERIODIC REVIEW 63

XII. ENDANGERMENT AND EMERGENCY RESPONSE 64

XIII. SITE ACCESS 65

XIV. SAMPLING AND DATA/DOCUMENT AVAILABILITY 67

XV. QUALITY ASSURANCE 70

XVI. RECORD PRESERVATION 75

XVII. DELAY IN PERFORMANCE 76

XVIII. ENFORCEMENT AND RESERVATIONS OF RIGHTS 77

XIX. COMMUNITY RELATIONS 79

XX. GENERAL PROVISIONS 79

XXI. EFFECTIVE DATE AND OPPORTUNITY TO CONFER 80

XXII. NOTICE OF INTENT TO COMPLY 81

XXIII. CERTIFICATION OF COMPLETION 82

XXIV. ADMINISTRATIVE RECORD 85

XXV. NON-LIABILITY OF THE UNITED STATES 85

XXVI. MODIFICATIONS 85

RECORD OF DECISION
 U.S. ARMY CORPS OF ENGINEERS
 LANDFILL CAP DESIGN
 PERFORMANCE STANDARDS

EXHIBIT 1
 EXHIBIT 2
 EXHIBIT 3

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III

IN THE MATTER OF :

BLOSENSKI LANDFILL SITE, :
WEST CALN TOWNSHIP, :
PENNSYLVANIA :
OPERABLE UNITS 3 & 4 :

Docket No. III-94-009-DC

ATLANTIC RICHFIELD CO., :
JOSEPH M. BLOSENSKI, Jr., :
THE BUDD COMPANY, :
C & D CHARTER POWER SYSTEMS, INC., :
CHUBB NATIONAL FOAM, INC., :
DELAWARE CONTAINER CO., INC., :
EASTERN WASTE INDUSTRIES, INC., :
ESSCHEM, INC., :
FINNAREN & HALEY, INC., :
ICI AMERICAS, INC., :
MONSANTO COMPANY, :
MORTON INTERNATIONAL, INC., :
OCCIDENTAL CHEMICAL CORP. and :
THE VALSPAR CORPORATION :

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) :

ADMINISTRATIVE ORDER

FOR REMEDIAL DESIGN AND REMEDIAL ACTION

I. JURISDICTION

A. This Administrative Order ("Order") is issued to the
above Respondents by the Environmental Protection Agency ("EPA")

AR001705

under the authority vested in the President of the United States by Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, ("CERCLA"), 42 U.S.C. § 9606(a). This authority was delegated to the Administrator of EPA on January 23, 1987, by Executive Order 12580 (52 Fed. Reg. 2923, January 29, 1987), and was further delegated to EPA Regional Administrators on September 13, 1987, by EPA Delegation No. 14-14-B.

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 Atlantic Richfield Company (ARCO), Joseph M. Blosenski, Jr., The Budd Company, C & D Charter Power Systems, Inc., CHUBB National Foam, Inc., Delaware Container Company, Inc., Eastern Waste Industries, Inc., Esschem, Inc., Finnaren & Haley, Inc., ICI Americas Inc., Monsanto Company, Morton International, Inc., Occidental Chemical Corporation, and The Valspar Corporation (collectively "Respondents").

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

C. 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

AR001706

of this Order shall not in any way excuse or justify noncompliance by any other Respondent.

D. Neither a change in ownership of any property covered by this Order, nor a change in the ownership or corporate or partnership status of any Respondent, shall in any way alter, diminish, or otherwise affect Respondents' obligations and responsibilities under this Order.

E. In the event of any change in ownership or control of any of the property covered by this Order that is owned or controlled by any Respondent, that Respondent shall notify EPA, in writing, at least thirty (30) days in advance of the effective date of such change, of the name, address, and telephone number of the grantee or transferee-in-interest of such property. In addition, that Respondent shall provide EPA with copies of all agreement(s), including but not limited to indemnification agreements, executed in connection with the transfer or change within five (5) days of the effective date of such agreement(s), and shall provide a copy of this Order to all grantees or transferees-in-interest prior to execution of any agreement for transfer.

F. In the event of any change in majority ownership or control of any Respondent, that 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 the prospective owner(s) or successor(s) of the Respondent before any change of ownership or

AR001707

control becomes irrevocable.

G. Respondents shall provide a copy of this Order to all contractors, subcontractors, laboratories, consultants, and other persons retained to conduct or monitor any portion of the Work (as hereinafter defined) performed pursuant to this Order prior to execution of any agreement or contract with such persons. If the Respondents are under contract or agreement with any contractor, subcontractor, laboratory, consultant or other person retained to conduct or monitor any portion of the Work required pursuant to this Order at the time this Order is issued, Respondents shall provide a copy of this Order to all such persons within five (5) days of receipt of this Order. Respondents shall condition all contracts and agreements with such persons on compliance with the terms of this Order. Notwithstanding the terms of such contracts or agreements, Respondents remain responsible for complying with the terms of this Order and for ensuring that their contractors, subcontractors, laboratories, consultants, and other persons retained to conduct or monitor any portion of the Work required by this Order perform the Work in accordance with the terms of this Order.

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

AR001708

fully set forth herein:

A. Blosenski Landfill Site Location, History, and Uses

1. The Blosenski Landfill ("Site"), which occupies approximately 13.6 acres, is located in West Caln Township, Chester County, Pennsylvania. The landfill lies approximately 100 feet north of State Route 340 (Kings Highway) and Cambridge Road. The Site is located approximately 50 miles west and slightly north of Philadelphia, and 2 miles east of the Lancaster-Chester County border. A Record of Decision ("ROD") for the Site, signed by EPA on September 29, 1986 and appended to this Order as "Exhibit 1", describes the Site in detail.

2. Beginning in the late 1940's, the Site was reportedly operated by Perry Phillips as a landfill for the disposal of municipal and industrial wastes, although aerial photography for that period indicates that visible landfill activity began between 1951 and 1957. The Site was purchased in 1971 by Joseph M. Blosenski, Jr. From that time until the late 1970s, the Site was used for the dumping of both industrial and municipal wastes. Wastes dumped included drummed industrial wastes, tank truck loads of industrial liquids and sludges, and municipal and commercial refuse. Materials reported to have been disposed of on-site include organic and inorganic solvents, industrial strength acids (such as battery acids) and bases, paints, inks, automotive anti-freeze fluids, undercoating materials, wastewater treatment sludges, cans of joint

AR001709

cement/sealer, demolition and construction wastes, wallboard and plaster, concrete block, waste from land clearing operations, paper, wooden pallets, waste plastics, cans, open and leaking drums, old vehicles and leaking tank trucks. The landfill was unlined with no provision for collecting surface or subsurface run-off.

3. The landfill is currently inactive and is mostly covered with grass and primary wild vegetation. The entire Site was fenced-in during drum removal activities that were performed by certain Responsible Parties pursuant to an Administrative Order issued by EPA in 1990 (Docket No. III-91-22-DC), thereby restricting access to the Site. There is one tenant living near the landfill, outside of the fenced area, who rents a mobile home from Mr. Blosenski. There is also an active radio tower on the Site. Over twenty monitoring wells, installed by EPA, are located both on and near the Site for the purpose of measuring the extent and concentration of toxic substances in the groundwater. Currently, there is a considerable amount of residential development in the area surrounding the Site.

B. Respondents' Responsibility for Conditions at the Site

1. Atlantic Richfield Company, Inc.

Atlantic Richfield Company, Inc. ("ARCO") is incorporated in the State of Delaware. ARCO contracted with Delaware Container Co., Inc. ("DCC") for transport for disposal of laboratory and other industrial wastes from at least 1976 to 1978. During this period, wastes from ARCO's Glenolden, Pennsylvania facility were

AR001710

disposed of by DCC at the Site. ARCO's waste hauled by DCC during the relevant time period consisted of "slop chemicals" which were composed in whole or in part of waste solvents, benzene, toluene, xylene, acetone, sodium hydroxide, and/or other chemicals used at the facility.

Benzene, toluene, xylene and acetone 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. Part 302, Table 302.4.

2. Joseph M. Blosenski, Jr.

Joseph M. Blosenski, Jr. ("Blosenski") purchased the Site in 1971 and remains the current owner. Numerous hazardous substances have been detected in Site soils, sediments and groundwater. Blosenski operated a waste transportation business as a sole proprietorship under the fictitious name of Blosenski Disposal Service during the 1970's and early 1980's. As a sole proprietor, Blosenski hauled hazardous substances to the Site under various fictitious names, and selected the Site for disposal or treatment until it closed in 1980. Specifically, under the name Blosenski Disposal Company ("BDC"), Blosenski hauled hazardous substances to the Site from the Budd Co., C & D Charter Power Systems, Inc. (previously "C & D Battery"), Chubb National Foam, Inc., Esschem, Inc. (previously "The Sartomer Company") and Occidental Chemical Corp. (previously "Diamond Shamrock Chemical Co."). Under the name Suburban Sanitation Corp. ("SSC"), Blosenski hauled hazardous substances to the Site from

AR001711

ICI Americas, Inc.

The substances hauled by BDC and SSC included paint, solvents and other liquid and solid hazardous wastes containing, among other things, lead, toluene and xylene. Lead, toluene and xylene 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. Part 302, Table 302.4.

3. The Budd Company

The Budd Company ("Budd") is incorporated in the State of Michigan. Budd began using the waste transportation and disposal services of Blosenski or BDC as early as October 20, 1971, continuing through 1984. Budd contracted with Blosenski for transport and disposal of, among other things, drums of scrap paint, reject oil and liquid wastes containing hazardous substances. Budd drums, containing paints and solvents, were found at the Site. These drums contained, among other things, methylene chloride, toluene and xylene.

Methylene chloride, toluene and xylene 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. Part 302, Table 302.4.

4. C & D Charter Power Systems, Inc.

C & D Charter Power Systems, Inc. ("C & D") is incorporated in the State of Delaware and is a successor to the CERCLA liabilities of C & D Battery (an unincorporated division of

AR001712

Allied-Signal Inc. at the time of disposal). C & D was formed as a subsidiary of Charter Power Systems, Inc. as the result of the sale of C & D Battery by Allied-Signal to Charter Power Systems, Inc. Wastewater from C & D Battery was disposed of at the Site by Inland Pumping and Dredging Corp. ("IPD") an average of 3 to 4 times per week beginning in 1975 and continuing through 1978. This wastewater had an average pH of less than 2, and contained lead.

Lead was detected at the Site and is a hazardous substance within the meaning of Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), because it is listed at 40 C.F.R. Part 302, Table 302.4. Wastewater with a pH of less than 2 is a hazardous substance within the meaning of Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), because it is a characteristic hazardous waste under RCRA § 1004, 42 U.S.C. § 6903, and 40 C.F.R. § 261.22.

5. CHUBB National Foam, Inc.

CHUBB National Foam, Inc. ("CHUBB") is incorporated in the Commonwealth of Pennsylvania. CHUBB contracted with Blosenski Disposal Service to dispose of its waste filter cake beginning as early as 1971. The same waste was disposed of at the Site at least as early as 1972.

The waste filter cake contained phenol, lead, zinc and mercury, among other substances. Phenol, lead, zinc and mercury were all detected at the Site and are hazardous substances within the meaning of Section 101(14) of CERCLA, 42 U.S.C. § 9601(14)

AR001713

because they are listed at 40 C.F.R. Part 302, Table 302.4.

6. Delaware Container Company, Inc.

Delaware Container Company, Inc. ("DCC") transported, among other things, drums containing spent solvents, phenolic resins and organic solids to the Site, and selected the Site for disposal or treatment. Acetone, benzene, benzoic acid, phenol, toluene and/or xylene were present in the drums. Acetone, benzene, benzoic acid, phenol, toluene and xylene 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. Part 302, Table 302.4.

7. Eastern Waste Industries, Inc.

Eastern Waste Industries, Inc. ("EWI"), a Maryland corporation, is a successor to the CERCLA liabilities of Blosenski Disposal Company, Inc., Suburban Sanitation Corporation and Blosenski Trucking Corporation, all Pennsylvania corporations. EWI is a person who, through its predecessors, accepted hazardous substances for transport to the Site, and selected the Site for disposal or treatment.

8. Esschem, Inc.

Esschem, Inc. is incorporated in the State of Delaware. From 1967 to 1981, Esschem was a wholly-owned subsidiary of Leksi, Inc. From 1967 to 1981, an unincorporated division of Leksi, Inc., named The Sartomer Company, operated a facility in West Chester, Pennsylvania, at which multifunctional acrylate and

AR001714

methacrylate monomers were produced.

During the period of operation of the Site, DCC transported drummed waste from the Sartomer facility to the Site. Sartomer generated and drummed for off-site disposal hazardous waste streams containing acetone, allyl alcohol, benzene, lead, phenol and toluene. 55-gallon drums labelled "Sartomer Company" were photographed at the Site in 1975 and Sartomer drums were excavated during the Phase II drum removal operation in 1992. On September 28, 1991, Leksi, Inc. merged with its subsidiary, Esschem, Inc. Leksi, Inc. was subsequently dissolved, leaving Esschem, Inc. as the surviving corporation and successor to the CERCLA liabilities of the former Leksi, Inc.

Acetone, allyl alcohol, benzene, lead, phenol and toluene 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. Part 302, Table 302.4

9. Finnaren & Haley, Inc.

Finnaren & Haley, Inc. is incorporated in the Commonwealth of Pennsylvania. DCC transported drummed waste from Finnaren & Haley's Conshohocken, Pennsylvania facility to the Site. This waste included, among other things, solvents and waste water containing toluene, xylene and possibly ethylbenzene.

Toluene and xylene 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. Part 302, Table 302.4.

AR001715

10. ICI Americas Inc.

ICI Americas Inc. ("ICI") is incorporated in the State of Delaware. During at least the 1970's, ICI manufactured powdered tetrafluoroethylene (PTFE) which is composed of several solvents, including toluene. ICI contracted with Suburban Sanitation for transport and disposal of waste PTFE in five gallon pails and drums from approximately 1976 to 1978. During the period 1976 to 1978, Suburban Sanitation hauled wastes to the Site. In 1978 full and leaking five gallon pails with ICI labels were found at the Site.

Toluene was detected at the Site and is a hazardous substance within the meaning of Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), because it is listed at 40 C.F.R. Part 302, Table 302.4.

11. Monsanto Company

Monsanto Company ("Monsanto") is incorporated in the State of Delaware. From at least 1975 through 1977, Monsanto contracted with Marvin Jonas, Inc. ("Jonas") for the disposal of phthalic anhydride heads, a solid material contained in drums. Jonas then subcontracted the disposal of this material to DCC. On at least one occasion, DCC disposed of the drums at the Site. The wastes in these drums consisted primarily of phthalic anhydride and acid, with smaller amounts of benzoic acid and maleic anhydride. Benzoic acid was detected at the Site and is a hazardous substance within the meaning of Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), because it is listed at 40 C.F.R.

AR001716

Part 302, Table 302.4.

12. Morton International, Inc.

Morton International, Inc. ("Morton"), a Delaware corporation, is a successor to the CERCLA liabilities of Thiokol Chemical Corporation. Several drums with identifiable "Thiokol" insignias on the side were removed from the Site during the Phase II drum removal remedial operation. Thiokol Chemical Corporation used the waste transportation services of Marvin Jonas, Inc. which disposed of drums at the Site.

Hazardous wastes of the type transported for disposal for Thiokol Chemical Corporation through Marvin Jonas, Inc. were uncovered during the Phase II drum excavation at the Blosenski Site. Morton International's own sample analysis of two of these drums indicates that the contents contained methyl ethyl ketone, 1,2 dichlorobenzene and chlorobenzene. Methyl ethyl ketone, 1,2 dichlorobenzene and chlorobenzene were all detected at the Site. Methyl ethyl ketone, 1,2 dichlorobenzene and chlorobenzene are all hazardous substances within the meaning of Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), because they are listed at 40 CFR Part 302, Table 302.4.

13. Occidental Chemical Corporation

Occidental Chemical Corporation is incorporated in the State of California and is the successor to Diamond Shamrock Chemicals Company ("DSCC") as the result of a merger of Occidental Chemical Corporation with Occidental Electrochemicals Corporation (formerly named Diamond Shamrock Chemical Company). Blosenski

AR001717

Disposal Co., as the subcontractor of IPD, transported sludge to the Site from DSCC's polyvinyl chloride waste treatment plant in Delaware City, Delaware.

The sludge transported by Blosenski to the Site from DSCC contained vinyl chloride monomer. Vinyl chloride was detected at the Site and is a hazardous substance within the meaning of Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), because it is listed at 40 C.F.R. Part 302, Table 302.4.

14. The Valspar Corporation

As the result of a merger of The Valspar Corporation with the McCloskey Corporation (formerly named McCloskey Varnish Company), the Valspar Corporation ("Valspar"), a Delaware corporation, is the successor to the liabilities of McCloskey Varnish Company ("McCloskey"), a Pennsylvania corporation. McCloskey manufactured industrial resin materials, consumer stains and wood finishes. McCloskey contracted with DCC to dispose of wastes during the 1970's. On at least one occasion, wastes from McCloskey were disposed of by DCC at the Site. McCloskey's waste hauled by DCC during the period of operation of the Site contained, among other things, xylene and toluene. Xylene and toluene 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. Part 302, Table 302.4.

AR001718

C. Response Actions and Investigations Performed at the Site

1. A Site Investigation ("SI"), including sampling, was begun at the Site on April 20, 1982. This investigation revealed high levels of trichloroethylene (TCE) in domestic wells. Mercury (Hg) was also found in domestic wells and a surface stream. The SI was completed on May 1, 1984. The Site Investigation report recommended, in addition to further monitoring, supplying some of the residents with an in-line potable water treatment system.

2. During the SI, the Site was proposed for listing on the National Priorities List ("NPL"). On September 1, 1983, pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, EPA placed the Blosenski Landfill Site on the NPL, set forth at 40 C.F.R. Part 300, Appendix B.

3. A preliminary assessment by EPA of the Blosenski Landfill Site was completed on March 1, 1982. The report of that assessment, dated September 28, 1984, concluded that, while a number of residential home wells were contaminated, an immediate removal (emergency) action was not necessary; however an alternative water supply was provided to affected residences.

4. EPA performed the remedial investigation ("RI") and Feasibility Study ("FS") of the Site from September 27, 1983 to September 30, 1986. The purpose of the RI/FS was to characterize the type and extent of contamination at the Site, to quantify any existing or potential human health risks, to evaluate potential

AR001719

environmental risks, and to develop alternatives to remediate the contamination. The final RI/FS Report was issued by EPA on September 30, 1986. These documents are contained in the Administrative Record for the Site. The RI consisted of several activities: surface investigation, geologic characterization, hydrogeologic study, and subsurface excavation (test pits). These four categories of field activities were performed between the fall of 1984 through the spring of 1985. Data from these activities was used in the FS for assessing the nature and extent of site-related contamination and the associated risks to the public health and the environment. The RI confirmed the presence of high levels of hazardous substances on the Site with the primary contaminant problem caused by volatile organic compounds ("VOCs") in the groundwater.

5. On July 1, 1992, EPA sent notice of impending remedial design/remedial action ("RD/RA") for Phases 3 and 4 to the Department of Interior ("DOI") and the National Oceanic and Atmospheric Administration ("NOAA").

6. On December 31, 1992, the Respondents were notified by EPA that the Special Notice procedures in CERCLA § 122(e) were being waived, but that EPA would enter into limited negotiations for implementation of Phases 3 and 4 of the ROD. EPA and Respondents have not been able to reach agreement for implementation of the ROD and reimbursement of the United States' costs by Respondents.

7. On July 21, 1993, the United States filed an

AR001720

action against sixteen Defendants, including all of the Respondents, in U. S. District Court for the Eastern District of Pennsylvania for reimbursement of the United States' costs expended and to be expended by EPA at the Site.

8. Hazardous substances detected at the Site during the RI include those described below:

a. Groundwater

Numerous volatile, semi-volatile and inorganic compounds were detected in groundwater samples at the Site. Among the hazardous substances found in the groundwater are VOCs, including those listed in Table 1, below.

**Table 1: Contaminants Found In Monitoring
And Residential Wells**

<u>Chemical</u>	<u>Concentration (ppb)</u>
benzene	11,000
toluene	600
chlorobenzene	34
vinyl chloride	450
chloroform	270
1,2-dichloroethene	890
acetone	43,000
xylene	78

ppb - parts per billion

b. Surface Soil

Analysis of soil samples at the Site showed the presence of numerous hazardous compounds. Organic compounds detected included phthalate esters, naphthalene, benzoic acid, phenols, di-benzofuran, 1,4 dichlorobenzene, diethylphtalate, 1,3

AR001721

dichlorobenzene, 3,3 dichlorobenzidine, di-n-butyl phthalate, 2,4 dinitrotoluene, and 1,2,4 trichlorobenzene. Several polychlorinated biphenyls ("PCBs") were also detected at an on-site sampling location. Inorganic compounds detected included lead, mercury, cadmium, chromium and arsenic. Some of these substances were present at concentrations in the percent level (over 10,000 parts per million or over 10 percent).

c. Surface Water and Sediment

Analysis of Site surface water and sediment samples showed the presence of volatile organics, including toluene, 2-butanone and methylene chloride.

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

Certain substances that have been found in the soil, surface water and groundwater at the Site 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. Section 302.4. Carcinogens are classified by the EPA according to the following weight-of-evidence categories: a Group A Human Carcinogen means there is sufficient evidence from epidemiological studies to support a causal association between exposure and cancer; a Group B1 Probable Human Carcinogen means there is limited evidence of carcinogenicity in humans from epidemiological studies; a Group B2 Probable Human Carcinogen means there is limited evidence of carcinogenicity in animals; and a Group C Possible Human Carcinogen means there is limited

AR001722

evidence of carcinogenicity in animals with inadequate or lack of evidence in humans.

1. **Arsenic.** Arsenic is a ubiquitous metalloid element. Acute ingestion of arsenic can be associated with damage to mucous membranes including irritation, vesicle formation, and sloughing. Arsenic can also be associated with sensory loss in the peripheral nervous system and anemia. Liver injury is characteristic of chronic exposure. Effects of arsenic on the skin can include hyperpigmentation, hyperkeratosis, and skin cancer. EPA classifies arsenic in drinking water as a Group A known oral human carcinogen.

2. **Benzene.** Benzene is an aromatic hydrocarbon with a characteristic odor. Acute inhalation of large amounts of benzene has led to Central Nervous System ("CNS") depression with symptoms including headache, dizziness and respiratory irritation. Extremely high doses have been known to cause death from ventricular fibrillation. Chronic inhalation of lower levels has resulted in similar symptoms as well as aplastic anemia and immunotoxic effects (monocytosis and absolute lymphocytosis). Long-term exposure to benzene may lead to blood changes such as anemia. Ingestion of benzene has caused gastrointestinal irritation and CNS effects. Higher concentrations have resulted in coma and death. Benzene is poorly absorbed by the skin; however, it is an irritant which can

AR001723

produce defatting dermatitis. It has also been known to cause sensitization. Target organs include the blood, CNS, skin, bone marrow, eyes and respiratory system. Benzene is not readily soluble in body fluids, but it is readily deposited in fatty tissues or absorbed into membranes due to its high lipid solubility. EPA has classified benzene as a Group A known human carcinogen. This is based on an increased incidence of leukemia in exposed workers and neoplasia in rats.

3. **Beryllium.** Adverse effects of exposure to beryllium can include respiratory effects (after inhalation exposure) or contact dermatitis. Other target organs include the liver, spleen and heart. Beryllium is classified by EPA as a Group B2 probable human carcinogen via the oral and inhalation routes.

4. **Phthalates.** The phthalate esters include butylbenzyl phthalate, di-n-butyl phthalate, diethyl phthalate, dimethyl phthalate, di-n-octyl phthalate, bis(2-ethylhexyl) phthalate (also known as di-2-ethylhexyl phthalate) and di-n-octyl phthalate. They are noted for their low acute and low chronic toxicity. However, bis(2-ethylhexyl) phthalate has been classified by EPA as a Group B2 probable human carcinogen via the oral exposure route.

5. **Cadmium.** Acute cadmium toxicity can be associated with gastrointestinal distress. Inhalation of cadmium can produce

AR001724

chemical pneumonitis and pulmonary edema. The principal effects of chronic exposure include kidney disease and effects on the cardiovascular and skeletal systems. EPA classifies cadmium compounds as Group B1 probable human carcinogens via inhalation exposure.

6. **Chromium.** Two forms of chromium, the hexavalent (Cr^{6+}) and trivalent (Cr^{3+}) forms, are considered to have the greatest biological significance. Hexavalent chromium is more toxic and mobile than trivalent chromium. Effects of chromium exposure include dermatitis and acute renal tubular necrosis skin irritation and dermatitis. Trivalent compounds are considerably less toxic and are neither irritating nor corrosive. Inhalation exposure to chromium has been associated with respiratory carcinomas. EPA has classified hexavalent chromium as a Group A known human carcinogen by inhalation.

7. **1,3-dichlorobenzene.** 1,3-dichlorobenzene is reported to be irritating to the skin and respiratory tracts. The liver and kidney are also reported to be target organs. Ingestion of this compound has produced gastrointestinal irritation and nausea. In the environment, 1,3-dichlorobenzene tends to adsorb onto soil and sediments, but may volatilize from the water column.

8. **3,3'-dichlorobenzidine.** 3,3'-dichlorobenzidine is reported to be mildly toxic by the ingestion route.

AR001725

3,3'-dichlorobenzidine is an eye irritant. There are suspected associations between 3,3'-dichlorobenzidine exposure and bladder tumors. EPA has classified 3,3'-dichlorobenzidine as a Group B2 probable human carcinogen.

9. **1,2-dichloroethane.** Prolonged dermal contact with 1,2-dichloroethane (1,2-DCA) can cause irritation and dermatitis. Symptoms of inhalation exposure can include CNS effects such as dizziness and depression of respiration, as well as nausea. EPA has classified 1,2-DCA as a Group B2 probable human carcinogen. 1,2-DCA has also been shown to alkylate DNA.

10. **Lead.** The target organs for lead exposure include the nervous system, hematopoietic system, kidneys and reproductive system. Symptoms of severe toxicity may include anemia, encephalopathy and peripheral neuropathy. Recently, an association between low-level lead exposure and impaired neurological development in children has been suggested. EPA considers lead to be a Group B2 probable human carcinogen via the oral route.

11. **Mercury.** Inhalation of mercury vapor can cause excitability, tremors and gingivitis; upon acute exposure, corrosive bronchitis may occur. Ingestion of inorganic mercury compounds has resulted in corrosion of the gastrointestinal tract and renal failure (severe acute exposure, often seen with

AR001726

accidental or suicidal ingestion of mercuric salts). Vasodilation and rashes have been associated with exposure to mercurous compounds. The major clinical features of organic mercury poisoning are paresthesia, ataxia, dysarthria, and deafness, resulting from neurologic damage. EPA classifies mercury and its compounds as Group D which includes compounds not classifiable as to carcinogenicity.

12. **Polycyclic Aromatic Hydrocarbons.** Polycyclic aromatic hydrocarbons ("PAHs"), also called polynuclear aromatic hydrocarbons, are compounds that consist of annelated aromatic rings. This group of compounds includes phenanthrene, fluoranthene, pyrene, benz[a]anthracene, chrysene, benzo[b]fluoranthene, benzo[a]pyrene (q.v.), indeno[1,2,3-c,d]pyrene, dibenz[a,h]anthracene, benzo[g,h,i]perylene, naphthalene, acenaphthylene, acenaphthene, dibenzofuran, fluorene, anthracene, benzo[k]fluoranthene and carbazole. Naphthalene is an irritant that can cause dermatitis, toxic effects on the red blood cells, liver, kidneys and CNS. Damage to the lenses of the eyes has also been reported. Benzo[a]pyrene, benz[a]anthracene, benzo[b]fluoranthene, indeno[1,2,3-c,d]pyrene, dibenz[a,h]anthracene, benzo[g,h,i]perylene, benzo[k]fluoranthene and carbazole have been classified by EPA as Group B2 probable human carcinogens.

13. **Phenol.** Phenol is a severe irritant and caustic

AR001727

compound. It can be absorbed through the skin and can cause dermatitis and burns upon direct contact. Target organs from chronic exposure include the kidney, liver, and pancreas. Ingestion of 15 grams has been fatal. Effects from high-level ingestion include corrosion of the gastrointestinal tract.

14. **Trichloroethene.** Trichloroethene ("TCE") toxicity can include dermatitis, CNS depression, anesthesia, and effects on the liver, kidneys and heart. TCE is a volatile compound, and inhalation exposure may be significant. The carcinogenicity of TCE is currently under review.

15. **Vinyl Chloride.** Vinyl chloride can be found environmentally as a breakdown product of tetrachloroethene, trichloroethene, 1,1-dichloroethene and 1,2-dichloroethene. Vinyl chloride can cause skin irritation and CNS depression. Chronic exposure may cause hepatic damage. Vinyl chloride is classified by EPA as a Group A known human carcinogen, and has been specifically associated with hemangiosarcoma of the liver.

16. **Xylenes.** Exposure to xylenes can result in skin irritation and CNS depression. Effects on the bone marrow have been reported for chronic high-level exposure. Acute high-concentration respiratory exposure can result in pulmonary edema. Xylenes are not classified as carcinogens by EPA.

AR001728

17. **Zinc.** Zinc is a common element and an essential metal not usually noted for toxicity. Intake occurs mainly from the diet, and the average American daily intake is reported to be approximately 12 to 15 grams. About 20 to 30 percent of ingested zinc is absorbed. Some zinc salts can be irritants. Gastrointestinal symptoms have sometimes been reported after ingestion of high zinc concentrations. Metal fume fever can result from inhalation of zinc fumes. Zinc is not classified as a carcinogen by EPA.

E. Record of Decision

The decision by EPA on the remedial action to be implemented at the Site is embodied in a final Record of Decision ("ROD"), executed on September 29, 1986. EPA divided the Site remediation into four phases. Phase 1 called for supplying public water to private residences in the vicinity of the Site with contaminated water and was completed by the Coatesville Water Authority under an agreement with EPA in 1990. Phase 2 involved the removal of surface and subsurface drums and surrounding soils and was completed pursuant to a December 1990 Unilateral Administrative Order in March 1993. This Order addresses Phases 3 and 4, the design and construction of a "pump and treat" system for the removal of hazardous compounds from the Site groundwater and the installation of a low permeability landfill cover over the Site in accordance with the requirements of RCRA, respectively, as well as the operation and maintenance of these remedies.

AR001729

IV. CONCLUSIONS OF LAW AND DETERMINATIONS

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

B. "Hazardous Substances", as that term is defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), have been disposed of, deposited, stored, placed, or otherwise come to be located on and remain at the Site.

C. The hazardous substances at the Site are being released or threaten to be released as "release" is defined in Section 101(22) of CERCLA, 42 U.S.C. § 9601(22), from the Site into the environment, and may present an imminent and substantial endangerment to the public health or welfare or the environment.

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

E. Respondent Joseph M. Blosenski, Jr. is a person who owns the Site, and who owned and operated the Site at the time of disposal of hazardous substances, as the terms "owner" and "operator" are defined at Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and is therefore liable pursuant to Sections 107(a)(1) and (2) of CERCLA, 42 U.S.C. §§ 9607(a)(1) and (2).

F. Respondents Atlantic Richfield Company (ARCO), The Budd Company, C & D Charter Power Systems, Inc., CHUBB National Foam, Inc., Esschem, Inc., Finnaren & Haley, Inc., ICI Americas Inc., Monsanto Company, Morton International, Inc., Occidental Chemical Corporation and The Valspar Corporation are persons "who by contract, agreement, or otherwise arranged for disposal or

AR001730

treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances" at the Site and are therefore liable pursuant to Section 107(a)(3) of CERCLA, 42 U.S.C. § 9607(a)(3).

G. Respondents Joseph M. Blosenski, Jr., Delaware Container Corporation and Eastern Waste Industries, Inc. are persons who accepted hazardous substances for transport to disposal or treatment facilities (including the Site) selected by such persons and are therefore liable pursuant to Section 107(a)(4) of CERCLA, 42 U.S.C. § 9607(a)(4).

H. The contamination at the Site and endangerment to the public health and welfare resulting from this contamination constitute an indivisible harm.

I. EPA has determined that in order to protect against an imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of hazardous substances at or from the Facility, the response action selected by EPA in the ROD for the Site must be implemented.

V. SCOPE OF THE RESPONSE ORDERED

A. Based on the foregoing and the Administrative Record, Respondents are hereby ordered, jointly and severally, to comply with the provisions of this Order, including but not limited to, any attachments to this Order, all documents incorporated by reference into this Order, and all schedules and deadlines in

AR001731

this Order, attached to this Order, or incorporated by reference into this Order. Respondents are further ordered to conduct all Work consistent with CERCLA, the NCP, 40 C.F.R. Part 300, and all applicable federal, state and local laws.

B. Respondents shall undertake all actions required by, and comply with all requirements of, this Order including any future modifications to this Order ("the Work").

C. Each and every Respondent herein remains jointly and severally responsible for compliance with all requirements as set forth herein, and no Respondent shall interfere with the performance of requirements set forth under this Order. If a portion of the Work is undertaken by any one Respondent or group of Respondents, each remaining Respondent is nevertheless not excused from performing under the present Order and remains jointly and severally liable for ensuring that the Work is done in a manner consistent with the NCP, CERCLA and all applicable federal, state and local laws.

VI. DEFINITIONS

Unless otherwise expressly provided herein, terms used in this Order that are defined in CERCLA or in regulations promulgated pursuant to CERCLA shall have the meaning assigned to them in the statute or its implementing regulations. Whenever terms listed below are used in this Order or in the documents attached to this Order or incorporated by reference into this Order, the following definitions shall apply:

AR001732

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

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

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

D. "Day" shall mean a calendar day unless expressly stated 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 end of the next working day.

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

F. "National Contingency Plan" or "NCP" shall mean the National Oil and Hazardous Substances Pollution Contingency Plan, codified at 40 C.F.R. Part 300, including any amendments thereto.

G. "Operation and Maintenance" or "O&M" shall mean all activities that are (1) required under the Operation and Maintenance Plan developed pursuant to this Order and the ROD, and (2) approved by EPA.

AR001733

H. "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.

I. "Performance Standards" shall mean those cleanup standards, standards of control, and other substantive requirements, criteria or limitations, identified in Exhibit 3 hereto, and to be identified in the Phase III Remedial Design, that the Remedial Action and Work required by this Order must attain and maintain. "Performance Standards" shall include the applicable or relevant and appropriate requirements stated in the ROD.

J. "Record of Decision" or "ROD" shall mean, unless otherwise stated, the EPA Record of Decision relating to the Site signed on September 29, 1986 by the Regional Administrator, EPA Region III, and any amendments thereto and all attachments thereto. The ROD is attached hereto as Exhibit 1.

K. "Remedial Action" or "RA" shall mean those activities, except for Operation and Maintenance, to be undertaken by Respondents to implement the final plans and specifications that are submitted by Respondents pursuant to the Remedial Design Work Plans and subsequently approved by EPA, including any additional activities required under Sections VII (Work To Be Performed), VIII (Plans and Reports Requiring EPA Approval), XIV (Sampling and Data/Document Availability), XV (Quality Assurance) and XIX (Community Relations) of this Order.

L. "Remedial Design" or "RD" shall mean those activities to

AR001734

be undertaken by Respondents to develop the final plans and specifications for the Remedial Action pursuant to the Remedial Design Work Plans.

M. "Site," or the "Blosenski Landfill Site," shall mean the facility, as defined in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9), which is located along Kings Highway (Route 340), in West Caln Township, Chester County, Pennsylvania. The Site, which is approximately 13 acres in size, encompasses all the areas where site-related contaminants have migrated, including, but not limited to, groundwater, and all suitable areas in close proximity to the above areas necessary for the implementation of the Remedial Action. The Site is further described in the Record of Decision that was issued by EPA in September 1986. (See attached Exhibit 1).

N. "Work" shall mean all activities Respondents are required to perform under this Order to implement the ROD for the Site, including Remedial Design, Remedial Action and Operation and Maintenance required by this Order for the Site, tasks to be performed in accordance with any Work Plan required by this Order, and any other activities required to be undertaken pursuant to this Order.

VII. WORK TO BE PERFORMED

A. Requirement to Comply with the ROD and the Law

1. Based on the foregoing, and the Administrative Record supporting the Order, it is hereby ordered that

AR001735

Respondents implement Phases III and IV of the ROD in accordance with that document, CERCLA, the NCP and the requirements and schedules specified in this Order including, but not limited to, achieving the Performance Standards listed in attached Exhibit 3, and to be delineated in the Phase III Remedial Design. Nothing in this Order, the Remedial Design Specifications, or Remedial Action Work Plans constitutes a warranty or representation of any kind by EPA that compliance with this Order will achieve the Performance Standards or that such compliance will foreclose EPA from seeking compliance with all terms and conditions of this Order including, but not limited to, the Performance Standards.

a. Phase III - Implement a source reduction program in accordance with the ROD involving the design, construction, operation and maintenance of a system for pumping and treating contaminated groundwater until such time as the Performance Standards listed in Exhibit 3 and to be delineated in the Phase III Remedial Design for the treatment of contaminated groundwater are met.

b. Phase IV - i) Installation, operation and maintenance of a low permeability cover ("cap") on the landfill in accordance with the requirements of RCRA, federal and authorized state regulations implementing RCRA, the ROD, the Performance Standards listed in Exhibit 3 and the approved Workplan for implementing the attached U.S. Army Corps of Engineers cap design (Exhibit 2). The cap construction shall

AR001736

also include a gas venting system and appropriate surface water diversion system(s).

ii) Periodic monitoring of ground water, surface water and air contamination in the area of the Site shall be conducted, including monitoring required by the closure requirements of RCRA and federal and authorized state regulations implementing RCRA. This shall include sampling of selected residential and/or monitoring wells in addition to air and surface water sampling.

2. All actions and activities carried out by Respondents pursuant to this Order shall be performed in accordance with all applicable or relevant and appropriate federal, state, and local laws, regulations, requirements and guidance documents. Respondents shall obtain all permits and authorizations necessary for off-site Work and shall timely submit and complete applications and requests for any such permits or authorizations.

3. This Order is not, and shall not be construed to be, a permit issued pursuant to any Federal or State statute or regulation.

4. In the event EPA determines that Respondents have failed to implement any provision 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 expressly reserved in Section XVIII (Enforcement and Reservation of Rights) of this Order.

AR001737

B. Notice of Order in Property Records

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 for the Site, in accordance with any applicable state and/or local law or requirements and in such manner as shall be effective to bring this Order to the attention of any person examining or researching the status 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.

2. Respondents shall, at least thirty (30) days prior to the effective date of any conveyance of any interest in the Site property, give written notice of this Order to the grantee or transferee-in-interest and written notice to EPA and the Commonwealth of the proposed conveyance, including the name and address of the grantee or transferee-in-interest, and the date on which notice of the Order was given to the grantee or transferee-in-interest. In the event of any such conveyance, the Respondents shall continue to be responsible for complying with the terms and conditions of this Order. In addition, if EPA approves, the grantee or transferee-in-interest 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 liability of

AR001738

the Respondents to comply with this Order.

C. Assurance of Ability to Complete Work

1. Within thirty (30) days of receipt of EPA's notification of acceptance of Respondents' Remedial Design Contractor(s) as provided in Section VII.D.2.a. of this Order, Respondents shall jointly and/or severally 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, presenting to EPA for approval, and thereafter maintaining financial security in the amount of fifteen million dollars (\$15,000,000.00) in one or more of the following forms or combination thereof:

- a. a performance bond;
- b. a letter of credit;
- c. a guarantee by a third party; or
- d. yearly internal financial information.

Such financial security shall be sufficient to demonstrate to EPA's satisfaction that Respondents jointly and/or severally have enough assets to complete the Work required by this Order.

2. Within thirty (30) days of receipt of EPA's notification of acceptance of Respondents' Remedial Design Contractor(s) as provided in Section VII.D.2.a. of this Order, Respondents shall also obtain insurance and provide to EPA copies of insurance policies issued to Respondents or their contractors or, in the alternative, one of the above-described financial

AR001739

assurances sufficient to cover the following:

- a. Workmen's Compensation and Employer's Liability Insurance in accordance with the laws of the Commonwealth of Pennsylvania;
- b. Comprehensive General Liability Insurance, which shall include:
 - (i) Contractual Liability - \$1 million each contract;
 - (ii) Bodily Injury Liability - \$1 million each person; \$1 million each accident; and
 - (iii) Property Damage - \$1 million each accident;
- c. Environmental Impairment or Pollution Liability - insurance in the amount of \$1 million;
- d. Automobile Liability Insurance with limits of \$500,000 each for property damage and bodily injury; and
- e. Umbrella Policy in the amount of \$3 million which shall provide coverage in excess of the underlying coverage described above.

Respondent shall resubmit insurance certificates and copies of policies each year on the anniversary of the effective date of this Order.

3. For each year that any Respondent seeks to satisfy

AR001740

the requirements of Section VII.C.1. or VII.C.2. of this Order by submitting to EPA for approval internal financial information, such Respondent shall submit sworn statements containing such information on the anniversary of the effective date of this Order until EPA determines in accordance with Section XXIII of this Order that all Work required pursuant to this Order has been performed in the time and in the manner required by this Order and all Performance Standards have been met. The failure of any Respondent to demonstrate its financial ability to complete the Work required by this Order, in any given year, shall not alter that Respondent's joint and several liability to comply with all other terms of this Order.

D. Selection of Contractor(s)

1. General

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 by EPA. For purposes of this Section D. "contractors" shall refer to contractor(s) as well as subcontractors.

2. Remedial Design Contractor(s)

a. Within fifteen (15) days after the effective date of this Order, Respondents shall notify EPA and the State in writing of the name, title, and qualifications of the contractor(s), including subcontractor(s), to be used in carrying out all Remedial Design activities required by this Order. If at

AR001741

any time thereafter Respondents propose to change any such Remedial Design Contractor(s), Respondents shall give written notification to EPA and the State and shall obtain acceptance from EPA before the new contractor(s) performs, directs, or supervises any Work pursuant to this Order.

b. EPA will notify Respondents in writing of its acceptance or disapproval of the proposed Remedial Design Contractor(s), including subcontractor(s). If EPA disapproves of the selection of Respondents' proposed contractor(s), 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(s) previously proposed. Except as provided below, EPA will provide written notice of the name of the contractor(s) that EPA accepts. Respondents may select any accepted contractor(s) from that list and shall notify EPA and the State in writing of the name of the contractor(s) selected within fourteen (14) days of receipt of EPA's designation of accepted contractors. Within fourteen (14) days of receipt of EPA acceptance of the Respondents' contractor(s), Respondents shall enter into agreements with such contractor(s) selected by Respondents to perform the Work for which such contractor(s) were accepted 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, in its discretion, may in such event either direct Respondents to submit to EPA and the State

AR001742

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 the contractors proposed by Respondents or take any other action authorized by CERCLA or the NCP.

3. Remedial Action Contractor(s)

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

b. EPA will notify Respondents in writing of its acceptance or disapproval of the proposed Remedial Action contractor(s), including subcontractor(s). If EPA disapproves of the selection of Respondents' proposed contractor(s), Respondents shall submit to EPA and the State the names and qualifications of at least three (3) contractors that would be acceptable to Respondent within fourteen (14) days of receipt of EPA's disapproval of the contractor(s) previously proposed. Except as provided below, EPA will provide written notice of the name of

AR001743

the contractor(s) that EPA accepts. Respondents may select any accepted contractor(s) from that list and shall notify EPA and the State in writing of the name of the contractor(s) selected within fourteen (14) days of receipt of EPA's designation of accepted contractors. Within fourteen (14) days of receipt of EPA acceptance of the Respondents' contractor(s), Respondents shall enter into agreements with such contractor(s) selected by Respondents to perform the Work for which such contractor(s) 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, in its discretion, may in such event either 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 the contractors proposed by Respondents or take any other action authorized by CERCLA or the NCP.

4. EPA retains the right to disapprove at any time the contractor(s), including subcontractor(s), 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.

5. Neither the United States nor EPA shall be held out to be or 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.

AR001744

E. Respondents Shall Perform the Work as Follows:

1. Phase IV

a. Within thirty (30) days after receiving notice of EPA acceptance of the Remedial Design Contractor(s), Respondents shall submit to EPA and the State, for approval by EPA, a work plan for the implementation of the design of Phase IV (see Exhibit 2) of the Remedial Action at the Site ("Phase IV Remedial Design Work Plan"). The Phase IV Remedial Design Work Plan shall provide a step by step plan for implementing the design in Exhibit 2 for Phase IV of the remedy as set forth in the ROD and, upon its approval by EPA, shall be incorporated into and become enforceable under this Order. The Phase IV Remedial Design Work Plan shall include, at a minimum, the following, as well as expeditious schedules and specific methodologies for implementation of these plans: (1) Schedule for Implementing the Final Design Drawings and Specifications; (2) Project delivery strategy; (3) Construction Quality Assurance Plan (CQAP); (4) plan for gathering additional data or information, or performing additional feasibility studies; (5) Phase IV Sampling and Analysis Plan including a Field Sampling Plan to be used as a basis for ascertaining whether performance standards have been met (directed at measuring progress towards meeting Performance Standards); (6) Remedial Action Construction schedule; (7) Phase IV Operation and Maintenance ("O & M") Plan; (8) complete specifications for preparation of a Health and Safety Plan for field activities required by the final design; (9) Remedial

AR001745

Action Contingency Plan; and (10) plan for imposition of deed restrictions which will ensure that the structures, devices, and other components of the Work are not interfered with or disturbed by future use of the property. Respondent shall ensure that the contractor(s) who will be performing field activities shall prepare the Health and Safety Plan in accordance with the specifications required under item (8), above, as accepted by EPA and under item (9), above, as approved by EPA. The Health and Safety Plan shall conform to applicable Occupational Safety and Health Administration and EPA requirements including, but not limited to, the regulations at 29 C.F.R. Part 1910 and guidance document "Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities" dated October 1985, as amended. The Health and Safety Plan for Phase IV remedial action activities shall be submitted for acceptance in accordance with the schedule set forth in the Phase IV Remedial Design Work Plan, and upon acceptance of such Health and Safety Plan by EPA, shall be incorporated in, and become enforceable as part of, this Order. The CQAP, which shall detail the approach to quality assurance during construction activities at the Site, shall specify an Independent Quality Assurance Team ("IQAT") to conduct the quality assurance program during the construction phase of the project. The IQAT shall be responsible for examining and testing various materials, procedures, and equipment during implementation of the construction activities. The IQAT shall perform on-site inspections of the Work to assess compliance with

AR001746

project standards, verify that the CQAP is implemented, and report to the Respondents and EPA the results of all inspections.

b. The Phase IV Remedial Design Work Plan may include a proposal for modification to the landfill cap design in Exhibit 2. Any such modification to the cap design must meet the Performance Standards in Exhibit 3.

c. Respondents shall, within thirty (30) days of receipt of notification from EPA that treatability studies are necessary, submit to EPA and the State, for approval by EPA, work plans and schedules for the design and implementation of such treatability studies. The treatability study work plans shall include Treatability Study Construction Quality Assurance Project Plans applicable to necessary construction.

d. Upon receipt of approval of the Phase IV Remedial Design Work Plan by EPA, Respondents shall implement the Remedial Design Work Plan in accordance with the schedules and methodologies contained therein. Respondents shall submit all plans, submittals, and other deliverables required in the EPA-approved Phase IV Remedial Design Work Plan in accordance with the schedule therein, for review and approval pursuant to Section VIII (Plans and Reports Requiring EPA Approval) of this Order. Unless otherwise directed by EPA, Respondents shall not commence Remedial Design or Remedial Action activities pursuant to this Order prior to approval of the Phase IV Remedial Design Work Plan.

e. The EPA-approved Phase IV Remedial Design Work

AR001747

Plan shall be incorporated into and become enforceable as part of this Order.

f. Not later than thirty (30) days after EPA approves all submissions requiring EPA approval as part of the Phase IV Remedial Design Work Plan, Respondents shall submit a Phase IV Remedial Action Work Plan to EPA and the State, for approval by EPA. The Phase IV Remedial Action Work Plan shall be developed in accordance with the ROD, shall be consistent with the Phase IV Remedial Design Work Plan, as approved by EPA, and shall provide for implementation of the ROD and achievement of the Performance Standards set forth in Exhibit 3. The Phase IV Remedial Action Work Plan shall include, at a minimum, methodologies, plans, and schedules for implementation of the Remedial Design. Upon approval by EPA, the Phase IV Remedial Action Work Plan shall be incorporated into and become enforceable as part of this Order.

g. Upon receipt of EPA approval of the Phase IV Remedial Action Work Plan by EPA, Respondent shall implement the EPA-approved Phase IV Remedial Action Work Plan and the final design according to the schedules and methodologies contained therein. Unless otherwise directed by EPA or required under the Phase IV Remedial Design Work Plan, the Respondents shall not commence physical on-site activities at the Site prior to the date for commencement set forth in the approved schedule in the Phase IV Remedial Action Work Plan.

h. Not later than twenty-one (21) days after receipt of EPA's acceptance of Respondents' Remedial Action Contractor in

AR001748

accordance with Section VII.D.3. of this Order, Respondents shall submit to EPA and the State, for approval by EPA, a Phase IV Construction Management Plan. The Phase IV Construction Management Plan shall identify key personnel, their experience, their qualifications, and their responsibilities for construction activities, and shall include a detailed schedule for completing all construction activities. Upon approval by EPA, the Phase IV Construction Management Plan shall be incorporated into and become enforceable as part of this Order.

i. Within forty-five (45) days after receipt of EPA approval of the Phase IV Construction Management Plan, Respondents shall begin implementation of the Phase IV Remedial Action. Respondents shall implement and comply with the schedules and terms of all requirements relating to the Phase IV Remedial Action including the EPA-approved Phase IV Remedial Action Work Plan and the Phase IV Construction Management Plan.

j. Respondents shall perform the activities during O&M listed in the ROD, and in accordance with the EPA-approved Phase IV O&M Plan to be submitted pursuant to this Order. Notification requirements for off-site shipment of wastes, described above, shall also be met during O&M.

2. Phase III

a. Within one hundred eighty (180) days after the effective date of this Order, Respondents shall submit to EPA and the State, for approval by EPA, a work plan for the design of

AR001749

Phase III of the Remedial Action at the Site ("Phase III Remedial Design Work Plan"). The Phase III Remedial Design Work Plan shall provide a step by step plan for the design of Phase III of the remedy as set forth in the ROD and this Order and, upon its approval by EPA, shall be incorporated into and become enforceable under this Order. The Phase III Remedial Design Work Plan shall include plans, schedules, and methodologies for implementation of all necessary remedial design and pre-design tasks, including, but not limited to: (1) tentative formation of the design team; (2) requirements for additional field data collection, including a Phase III Sampling and Analysis Plan ("SAP"), prepared in accordance with Section XV (Quality Assurance); (3) requirements for treatability studies; (4) design criteria and assumptions; (5) tentative treatment schemes; (6) a Remedial Design Contingency Plan; (7) a schedule for completion of the design, including plans and schedules for the preparation and submission of preliminary, intermediate, pre-final, and final design submittals; and (8) identify any performance standards for the Phase III remedy not previously identified in Exhibit 3. In addition, the Phase III Remedial Design Work Plan shall include an expeditious schedule for completion of all components of Phase III of the Remedial Design.

b. Within one hundred eighty (180) days after the effective date of this Order, Respondents shall submit to EPA and the State a Health and Safety Plan for field design activities which conforms to the applicable Occupational Safety and Health

AR001750

Administration and EPA requirements including, but not limited to, 29 C.F.R. § 1910.120.

c. Upon receipt of approval of the Phase III Remedial Design Work Plan by EPA, Respondents shall implement the Phase III Remedial Design Work Plan in accordance with the schedules and methodologies contained therein. Respondents shall submit all plans, submittals, and other deliverables required in the EPA-approved Phase III Remedial Design Work Plan in accordance with the schedule therein, for review and approval pursuant to Section VIII (Plans and Reports Requiring EPA Approval) of this Order. Unless otherwise directed by EPA, Respondents shall not commence Phase III Remedial Design or Remedial Action activities pursuant to this Order prior to approval of the Phase III Remedial Design Work Plan.

d. Respondents shall, within thirty (30) days of receipt of notification from EPA that treatability studies are necessary, submit to EPA and the State, for approval by EPA, work plans and schedules for the design and implementation of such treatability studies. The treatability study work plans shall include Treatability Study Construction Quality Assurance Project Plans applicable to necessary construction.

e. The preliminary design submittal required under Paragraph E.2.a, above, shall include, at a minimum, the following: (1) design criteria; (2) results of treatability studies (if any); (3) results of additional field sampling; (4) preliminary plans, drawings, and sketches; (5) required

AR001751

specifications in outline form; (6) a preliminary construction schedule; and (7) project delivery strategy.

f. The intermediate design submittal, if required by EPA or if independently submitted by the Respondents, shall be a continuation and expansion of the preliminary design. Any value engineering proposals must be identified and evaluated during this review.

g. The pre-final design shall be submitted at approximately 90% of the design effort. The pre-final and final design submittals required under Paragraph E.2.a, above, shall each include, at a minimum, the following plans, as well as expeditious schedules and specific methodologies for implementation of these plans: (1) final designs and specifications for the Phase III Remedial Action; (2) Phase III Remedial Action Construction schedule; (3) Phase III Operation and Maintenance (O&M) Plan; (4) Phase III Sampling and Analysis Plan including a Field Sampling Plan to be used as a basis for ascertaining whether performance standards have been met (directed at measuring progress towards meeting Performance Standards); (5) Remedial Action Construction Quality Assurance Plan ("CQAP"); (6) complete specifications for preparation of a Health and Safety Plan for field activities required by the final design; (7) a Remedial Action Contingency Plan; and (8) a plan for imposition of deed restrictions which will ensure that the structures, devices, and other components of the Work are not interfered with or disturbed by future use of the property.

Respondent shall ensure that the contractor(s) who will be performing field activities shall prepare the Health and Safety Plan in accordance with the specifications required under item (6), above, as accepted by EPA and under item (7), above, as approved by EPA. The Health and Safety Plan shall conform to applicable Occupational Safety and Health Administration and EPA requirements including, but not limited to, the regulations at 29 C.F.R. Part 1910 and guidance document "Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities" dated October 1985, as amended. The Health and Safety Plan for Phase III remedial action activities shall be submitted for acceptance, along with the pre-final and final design submittals in accordance with the schedule set forth in the Phase III Remedial Design Work Plan, and upon acceptance of such Health and Safety Plan by EPA, shall be incorporated into and become enforceable as part of this Order. The CQAP, which shall detail the approach to quality assurance during construction activities at the Site, shall specify an Independent Quality Assurance Team ("IQAT") to conduct the quality assurance program during the construction phase of the project. The IQAT shall be responsible for examining and testing various materials, procedures, and equipment during implementation of the construction activities. The IQAT shall perform on-site inspections of the Work to assess compliance with project standards, verify that the CQAP is implemented, and report to the Respondent and EPA the results of all inspections.

AR001753

h. The EPA-approved final design submittal shall be incorporated into and become enforceable as part of this Order.

i. Not later than thirty (30) days after EPA approves all submissions requiring EPA approval required as part of the Phase III Remedial Design, Respondents shall submit a Phase III Remedial Action Work Plan to EPA and the State, for approval by EPA. The Phase III Remedial Action Work Plan shall be developed in accordance with the ROD, shall be consistent with the Phase III Remedial Design, as approved by EPA, and shall provide for implementation of the ROD and achievement of the Performance Standards set forth in Exhibit 3 and to be delineated in the Phase III Remedial Design. The Phase III Remedial Action Work Plan shall include, at a minimum, methodologies, plans and schedules for implementation of the Phase III Remedial Design. Upon approval by EPA, the Phase III Remedial Action Work Plan shall be incorporated into and become enforceable as part of this Order.

j. Upon receipt of EPA approval of the Phase III Remedial Action Work Plan by EPA, Respondent shall implement the EPA-approved Phase III Remedial Action Work Plan and the final design according to the schedules and methodologies contained therein. Unless otherwise directed by EPA or required under the Phase III Remedial Design Work Plan, the Respondents shall not commence physical on-site activities at the Site prior to the date for commencement set forth in the approved schedule in the Phase III Remedial Action Work Plan.

AR001754

k. Not later than twenty-one (21) days after receipt of EPA's acceptance of Respondents' Remedial Action Contractor in accordance with Section VII.D.3. of this Order, Respondents shall submit to EPA and the State, for approval by EPA, a Phase III Construction Management Plan. The Phase III Construction Management Plan shall identify key personnel, their experience, their qualifications, and their responsibilities for construction activities, and shall include a detailed schedule for completing all construction activities. Upon approval by EPA, the Phase III Construction Management Plan shall be incorporated into and become enforceable as part of this Order.

1. Within forty-five (45) days after receipt of EPA approval of the Phase III Construction Management Plan, Respondents shall begin implementation of the Phase III Remedial Action. Respondents shall implement and comply with the schedules and terms of all requirements relating to the Phase III Remedial Action including the EPA-approved Phase III Remedial Action Work Plan and the Phase III Construction Management Plan.

m. Respondents shall perform the activities during O&M listed in the ROD, and in accordance with the EPA-approved Phase III O&M Plan to be submitted pursuant to this Order. Notification requirements for off-site shipment of wastes, described above, shall also be met during O&M.

3. The Work performed by Respondent pursuant to this Order shall, at a minimum, be consistent with the ROD, CERCLA, and the NCP and shall attain the Performance Standards set forth

AR001755

in Exhibit 3 and to be delineated in the Phase III Remedial Design.

F. Additional Response Actions

1. In the event that EPA or Respondents determine that additional response actions are necessary to carry out the remedy selected in the ROD or to achieve the Performance Standards set forth in Exhibit 3 and to be delineated in the Phase III Remedial Design, notification of such additional response actions shall be provided by EPA to Respondents' Project Coordinator or by Respondents to EPA's Project Coordinator.

2. Within thirty (30) days (or such longer time as may be specified by EPA) of receipt of notice from EPA that additional response actions are necessary, Respondents shall submit to EPA and the State, for approval by EPA, a work plan for the additional response actions. The plan shall conform to the applicable requirements of Section VII (Work To Be Performed). Upon Respondents' receipt of approval of the plan by EPA, Respondents shall implement the plan for additional response actions in accordance with the requirements and schedule contained therein.

3. Any additional response actions that Respondents propose 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

AR001756

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 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, Respondent shall submit to EPA two (2) copies, and to the State two (2) copies, of a written monthly progress report that: (a) describes the actions which have been taken toward achieving compliance with this Order during the previous month; (b) upon request of the EPA Project Coordinator, 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; (c) identifies all work plans, plans, and other deliverables required by this Order which were completed and submitted during the previous month; (d) describes all actions, including, but not limited to, data collection and implementation of work plans, which are scheduled for the next month and provides other information relating to the progress of construction, including, but not limited to, critical path diagrams, Gantt charts, and

AR001757

Pert charts; (e) includes information regarding percentage of completion of the Work, 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; (f) describes any modifications to the work plans or other schedules that Respondent has proposed to EPA or that have been approved by EPA; and (g) describes all activities approved by EPA under Section XIX (Community Relations) undertaken in support of the Community Relations Plan during the previous month and those to be undertaken in the next month. Respondents shall submit such progress reports to EPA and the State by the tenth (10th) day of every month commencing the first month following the effective date of this Order until EPA notifies the Respondents pursuant to Section XXIII (Certification of Completion) 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. Except as otherwise provided in this Section VII.G.2., Respondents shall notify EPA of any anticipated change to the EPA-approved schedule for performance of any Work including, but not limited to, implementation of work plans, no later than fourteen (14) days prior to the scheduled performance of the activity. Notwithstanding the foregoing, Respondents shall notify EPA of any anticipated change to the EPA-approved schedule for the performance of data collection no later than

AR001758

thirty (30) days prior to the performance of such activity, unless otherwise directed by EPA. All modifications to the EPA-approved schedule must be approved by EPA.

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"), 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 Remedial Section, 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 to EPA and the State setting forth all actions taken in response thereto.

4. Respondents shall submit to EPA two (2) copies, and to the State two (2) copies, of a report each year within thirty (30) days of the anniversary of the effective date of this

AR001759

Order, 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.

5. Failure to submit written reports in accordance with the requirements of this Order shall constitute a violation of this Order.

H. Off-Site Shipment of Waste Materials

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

2. The Respondents shall include in the written notification the following information: (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

AR001760

state, or to a facility in another state.

3. The identity of the receiving facility 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.H, including the information required by Paragraph VI.H.1, as soon as practicable after the award of the contract, but in no case less than fourteen (14) days before the Waste Materials are actually shipped.

4. All materials removed from the Site shall be disposed of or treated at a facility in accordance with Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3), the EPA "Revised Procedures for Planning and Implementing Off-site Response Actions", September 22, 1993, 58 FR 49200 (to be codified at 40 CFR § 300.440) and all other applicable or relevant and appropriate Federal, State and local laws and regulations.

VIII. PLANS AND REPORTS REQUIRING EPA APPROVAL

A. 1. All deliverables, reports or other items required by this Order shall be submitted to EPA for approval or acceptance as specified herein.

2. Communications from the Respondents to EPA and any documents, including reports, approvals and other correspondence, concerning the activities performed pursuant to this Order, must be directed to the EPA Project Coordinator by overnight mail or equivalent delivery.

AR001761

B. Unless otherwise specified in this Order or by the EPA Project Coordinator either verbally or in writing, three (3) copies of all documents, including reports, approvals and other correspondence submitted to EPA pursuant to this Order, shall be directed to the EPA Project Coordinator identified pursuant to Section IX (Designated Project Coordinators) of this Order, in accordance with the requirements of that Section. Three (3) copies of all such documents shall simultaneously be submitted to the Commonwealth of Pennsylvania at the following address:

George Danyliw
Commonwealth of Pennsylvania
Department of Environmental Resources
Southeast Region
Suite 6010 Lee Park
555 North Lane
Conshohocken, Pennsylvania 19428
(215) 832-6212

C. After review of any deliverable, plan, report or other item that is required to be submitted for review and approval pursuant to this Order, EPA may: (1) approve the submission; (2) approve the submission with required modifications; (3) disapprove the submission and direct Respondents to re-submit the document after incorporating EPA's comments; or (4) disapprove the submission and perform all or any part of the Work. As used in this Order, the terms "approval by EPA," "EPA approval," or a similar term mean the action described in items (1) or (2) of this paragraph.

D. Upon receipt of approval by EPA, Respondents shall proceed to take any action required by the plan, report, or other

AR001762

item, as approved or modified by EPA.

E. Upon receipt of a notice of disapproval or a requirement for a modification, Respondents shall, within twenty-one (21) days or such other time as specified by EPA in this Order, in its notice of disapproval or requirement for modification, correct the deficiencies and resubmit the plan, report, or other item for approval. Notwithstanding the notice of disapproval, or approval with modifications, Respondents shall proceed, at the direction of EPA, to take any action required by any non-deficient portion of the submission.

F. If any submission is disapproved by EPA, Respondents shall be deemed to be in violation of this Order and EPA may take any action authorized by CERCLA and the NCP, including performing all or any part of the Work. Such EPA performance shall not release Respondents from their obligation to comply with the requirements 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. Notwithstanding any action by EPA, Respondents remain fully responsible for implementing the ROD and achievement of the Performance Standards in Exhibit 3 and to be delineated in the Phase III Remedial Design. Nothing in this Order, or in EPA's approval of either the Phase III or IV RD Work Plans or final Design Submittals, or approval of any other submission, shall be deemed to constitute a warranty or representation of any kind by

AR001763

EPA that full performance of the Phase III or IV Remedial Designs or Remedial Actions will achieve the Performance Standards set forth in Exhibit 3 and to be delineated in the Phase III Remedial Design. Respondents' compliance with such approved documents does not foreclose EPA from seeking additional work to achieve the requirements set forth in the ROD or the applicable Performance Standards.

IX. DESIGNATED PROJECT COORDINATORS

A. The EPA's Project Coordinator shall be the EPA Remedial Project Manager ("RPM"). Unless otherwise directed by the EPA RPM, all communications, whether written or oral, from Respondents to EPA shall be directed to EPA's RPM. EPA's RPM is:

James P. Harper
U.S. Environmental Protection Agency
Region III
841 Chestnut Building (3HW22)
Philadelphia, PA 19107
(215) 597-6906

B. EPA has the non-reviewable right to change its RPM. If EPA changes its RPM, EPA will inform Respondents in writing of the name, address and telephone number of the new RPM.

C. EPA's RPM shall have the authority lawfully vested in an RPM by the NCP. In addition, EPA's RPM shall have authority, consistent with the NCP, to halt any work required by this Order, and to take any necessary response action authorized by CERCLA and the NCP.

D. Within ten (10) days after the effective date of this

AR001764

Order, Respondents shall designate a Project Coordinator and shall submit the name and qualifications of their Project Coordinator, including any support entities and staff, to EPA for review and acceptance. Respondents' Project Coordinator shall be responsible for overseeing the Respondents' implementation of this Order. If Respondents wish to change their Project Coordinator, Respondents shall provide written notice to EPA, five (5) days prior to changing their Project Coordinator, of the name and qualifications of the new Project Coordinator.

E. Respondents' selection of a Project Coordinator shall be subject to EPA acceptance. If EPA does not accept the selection of the Respondents' Project Coordinator, Respondents shall submit to EPA a list of proposed Project Coordinators, including primary support entities and staff, that would be acceptable to them, within thirty (30) days after receipt of EPA's notice not to accept the Project Coordinator previously selected. EPA will provide written notice to Respondents, and the Respondents may select any accepted Project Coordinator from EPA's list and shall notify EPA of the name of the Project Coordinator selected within twenty-one (21) days of EPA's designation of accepted Project Coordinators.

F. Each Project Coordinator will be responsible for overseeing the implementation of this Order.

G. No informal advice or guidance from the EPA RPM shall relieve Respondents of any obligations under this Order.

AR001765

X. FAILURE TO PERFORM

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/or manner required herein, the Respondents' Project Coordinator, as defined in Section IX (Designated Project Coordinators) shall notify EPA orally within forty-eight (48) 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.

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

AR001766

XI. EPA PERIODIC REVIEW

A. Under Section 121(c) of CERCLA, 42 U.S.C. § 9621(c), and applicable regulations, EPA must review the Remedial Action ("RA") at least every five (5) years after initiation of the RA if hazardous substances remain on the Site to assure that the work performed pursuant to this Order adequately protects human health and the environment. Until such time as EPA certifies completion of the Work, Respondents shall conduct the requisite studies, investigations, or other response actions as determined necessary by EPA in order to permit EPA to conduct the reviews under Section 121(c) of CERCLA, 42 U.S.C. § 9621(c). As a result of any reviews performed under this Section, Respondents may be required to perform additional work or to modify work previously performed in accordance with paragraph C. of this Section XI (EPA Periodic Review).

B. 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.

C. If the Regional Administrator, EPA Region III, or

AR001767

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 in accordance with Paragraph VII.F. of this Order, any additional response actions EPA has determined are appropriate.

XII. ENDANGERMENT AND EMERGENCY RESPONSE

A. In the event of any action, occurrence or situation during the performance of the Work that causes or threatens to cause a release of a hazardous substance or that may present an immediate threat to public health or welfare or the environment, Respondents shall immediately take all appropriate action to prevent, abate, or minimize such release or endangerment, and shall immediately notify EPA's RPM. If this person is not available, Respondents shall notify the Section Chief of the Eastern Pennsylvania Remedial Section, EPA Region III, or, in the event that neither the RPM nor the Section Chief is available, Respondents shall notify the Region III Hotline at (215) 597-9898. Respondents shall take such action in consultation with EPA's RPM and in accordance with all applicable provisions of this Order, including but not limited to the Health and Safety Plans and the Contingency Plans developed pursuant to this Order.

B. Nothing in the preceding paragraph, XII.A., shall be deemed to limit any authority of the United States to take,

AR001768

direct, or order all appropriate action to protect human health and the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances on, at, or from the Site.

XIII. SITE ACCESS

A. Commencing on the effective date of this Order and thereafter, each Respondent leasing, owning, or otherwise controlling property at the Site shall provide access to EPA, the Commonwealth of Pennsylvania, and their authorized representatives, employees, agents, consultants, or contractors 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 authorized representatives to conduct all activities described in Section XIII.C. The actions undertaken by this Order are necessary to mitigate a potential imminent and substantial endangerment to the public health or welfare or environment. The burden imposed on the property is the minimum necessary to respond to the release and/or threat of release of hazardous substances on the Site and the threat to the public health and safety and the environment posed by the Site as a result of such actual and/or threatened contaminant releases thereon.

B. To the extent that Work required by this Order must be performed on property not presently owned or controlled by Respondents, the Respondents shall use best efforts to obtain

AR001769

access agreements from the present owners of such property within thirty (30) days of the effective date of this Order. At a minimum, best efforts shall include, but shall not be limited to:

1. a certified letter from Respondents to the present owners of such property requesting access agreements which provide that Respondents are authorized to perform all Work required by this Order which must be performed on such property and which fulfill the requirements of Section XIII.A. and C. of this Order;
2. agreement to reasonable conditions for access; and/or
3. the payment of reasonable fees. 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

AR001770

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. The Respondents shall 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 statutes and regulations.

XIV. SAMPLING AND DATA/DOCUMENT AVAILABILITY

A. Respondents shall notify EPA in writing not less than thirty (30) days in advance of any sample collection activity to be undertaken pursuant to this Order.

B. 1. Subject to the provisions contained in Section XIV.B.2 of this Order, EPA and its authorized 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. All such information requested by EPA and maintained by Respondents and/or

AR001771

Respondents' contractors, agents, or assigns (and, where appropriate, information required by Section XIV.B.2 of this Order), shall be made available to EPA or its authorized representatives within ten (10) days of receipt of any such request.

2. Respondents' obligation to disclose information requested by EPA pursuant to Section XIV.B.1 of this Order is subject to the applicable privileges recognized by Federal courts 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 contents 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 authorized 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 authorized 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

AR001772

representatives to take such split or duplicate samples of any samples taken. Unless otherwise directed by EPA, Respondents shall notify EPA not less than thirty (30) days in advance of any sample collection activity. In addition, EPA or its authorized representatives shall have the right to take any additional samples that EPA deems necessary.

E. Confidential Business Information

1. The Respondents may assert a claim of business confidentiality covering part or all of the information or documentation requested 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. § 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 including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical and engineering data, and any other documents and other information disclosing conditions at or around the Site.

F. Respondents shall maintain for the period during which this Order is in effect, an index of documents that Respondents

AR001773

claim as confidential business information. The index shall contain, for each document, the date, author, addressee and subject of the document. Respondents shall submit a copy of the index to EPA within five (5) days of receipt of a written request from EPA.

G. Respondents shall cooperate with EPA to ensure that all data generated as part of Work performed under this Order is maintained in a computerized system that is compatible with EPA's Personal Computer Data Management System. The means of storing and manipulating data generated as part of Work to be performed under this Order shall be described in a Data Management Plan as a component of the Sampling and Analysis Plan. Within five (5) days of receipt of a request from EPA, Respondents' computerized data bases pertaining to the Work shall be provided to EPA.

XV. 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

AR001774

Directive 9355-0-14); "Data Quality Objectives for Remedial Response Activities", March 1987 (OSWER Directive 9355.0-7B); "Preparing Perfect Project Plans," October 1989 (EPA/600/9-89-087); and amendments to these guidances and/or guidelines.

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

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 Remedial Project Manager the selected laboratory's(ies') Quality Assurance Program Plan ("QAPP") and their qualifications, which shall include, at a minimum, previous certifications, Performance Evaluation ("PE") 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 EPA's authorized representatives are allowed reasonable access to the

AR001775

laboratory(ies), records and personnel utilized by the Respondent in implementing this Order.

4. Prepare SAPs, consisting of a Quality Assurance 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 SAPs shall be submitted as part of the Remedial Design Work Plans 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 SAPs; 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 uses appropriate methods. If EPA Contract Lab Program ("CLP") methods are selected, the laboratory(ies) shall use these methods and submit deliverables delineated in the current "Statement of Work of the EPA Contract Lab Program." If non-CLP methods are selected, all constituents and physical parameters shall be analyzed using methods that are specified

AR001776

(method and reference) and justified in the SAPs. Non-CLP methods shall be fully described in the QAPjP and approved by the EPA Remedial Project Manager prior to conducting any sampling and analysis. This description shall include, at a minimum, the matrix, calibration, Quality Control ("QC") samples (type and frequency), corrective measures, and deliverables.

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 Remedial Project Manager for verification.

7. Conduct, in accordance with the QAPjP, an appropriate number of audits of the selected laboratory(ies) to verify analytical capability and compliance with the SAP. Auditors shall conduct lab audits at sometime during the time the laboratory(ies) is 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

AR001777

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 procedures described in the SAPs. 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 EPA's QA Branch). For non-CLP methods, the data validation shall be performed as described in the SAPs 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

AR001778

Remedial Project Manager.

D. In addition to other obligations contained in this Order requiring Respondents to submit data, Respondents shall, within ten (10) 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.

E. 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.

XVI. RECORD PRESERVATION

A. Respondents shall preserve, during the pendency of this Order and for a minimum of ten (10) years after its termination, all records and documents in their possession, custody, or control 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 ten (10) year document retention period, Respondents shall notify EPA at least thirty (30) days prior to the destruction of any documents relating to this Order. Upon request by EPA and subject to

AR001779

Sections XIV.B. and XIV.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 ten (10) 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 substances 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.

XVII. DELAY IN PERFORMANCE

A. Any delay in performance of this Order that, in EPA's judgment, is not properly justified by Respondents under the terms of this Section XVII (Delay in Performance) shall be considered a violation of this Order. Any delay in performance of this Order shall not affect Respondents' obligations to perform fully all obligations under the terms and conditions of this Order.

B. Respondents shall notify EPA of any delay or anticipated

AR001780

delay in performing any requirement of this Order. Such notification shall be made orally to EPA's RPM within forty-eight (48) hours after Respondents first know or should have known that a delay might occur. Respondents shall adopt all reasonable measures to avoid or minimize any such delay. Within five (5) business days after orally notifying EPA, Respondents shall provide written notification that fully describes the nature of the delay, the measures taken and those planned to minimize the delay, and a schedule for implementing the measures that will be taken to mitigate the effect of the delay. Increased costs or expenses associated with implementation of the activities called for in this Order are not justification for any delay in performance.

XVIII. ENFORCEMENT AND RESERVATIONS 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 seeking legal or equitable relief to enforce the terms of this Order, to seek injunctive relief, or to seek the imposition of statutory penalties or punitive damages.

C. This Order concerns implementation of the remedy selected by EPA in the September 29, 1986 ROD. EPA reserves all rights, including the right to institute legal action against the Respondents, in connection with the performance of any response action not addressed by this Order.

AR001781

D. 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.

E. 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 the United States as a result of such failure pursuant to Sections 106(b) and 107(c) of CERCLA, 42 U.S.C. §§ 9606(b) and 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/or 9606.

F. 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.

G. 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

AR001782

which are recoverable under CERCLA, as well as any other costs incurred by the United States in connection with response actions conducted at the Site.

XIX. COMMUNITY RELATIONS

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

XX. 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 hazardous substances, hazardous wastes, pollutants, or contaminants found at, taken to, or taken from the Site.

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

C. 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

AR001783

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 engaged to carry out the requirements of this Order.

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

E. Invalidation of any provision or requirement of this Order shall not affect the validity of any other provision or requirement of this Order.

XXI. EFFECTIVE DATE AND OPPORTUNITY TO CONFER

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 is 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 time frame shall be made to:

Beth A.M. Termini
Assistant Regional Counsel
U.S. Environmental Protection Agency
841 Chestnut Building (3RC32)
Philadelphia, Pennsylvania 19107
(215) 597-8626

AR001784

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.

XXII. NOTICE OF INTENT TO COMPLY

A. Respondents shall provide, not later than five (5) days after the effective date of this Order, written notice to EPA's RPM stating whether they will comply with the terms of this Order. If Respondents do not unequivocally and unqualifiedly commit to perform the RD and RA as provided by this Order, they shall be deemed to have violated this Order and to have failed or refused to comply with this Order. Respondents shall describe, using facts that exist on or prior to the effective date of this Order, any "sufficient cause" defenses asserted by Respondents under Sections 106(b) and 107(c)(3) of CERCLA, 42 U.S.C. §§ 9606(b) and 9607(c)(3). The absence of a response by EPA to the notice required by this Section shall not be deemed to be acceptance of Respondents' assertions nor as a position taken by the Agency with regard to those assertions.

B. 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. Said failure to comply may result in an agency decision to file a judicial action or to initiate a response action at the Site.

AR001785

XXIII. CERTIFICATION OF COMPLETION

A. Completion of the Remedial Action

1. Within sixty (60) days after Respondents conclude that the Remedial Action required by this Order has been performed and completed as required by this Order and the Performance Standards set forth in Exhibit 3 and to be delineated in the Phase III Remedial Design, have been attained, they shall so notify EPA in writing. Respondents shall conduct a pre-certification inspection to be attended by the EPA RPM, a Registered Professional Engineer ("RPE") and Respondents' Project Coordinator, to be followed by a written report submitted by the Respondents to EPA, within thirty (30) days of the pre-certification inspection. The written report shall include as-built drawings signed and stamped by a RPE. This report shall certify that the Remedial Action has been completed in full satisfaction of the requirements of this Order. If, after completion of the pre-certification inspection and receipt and review of the written report, EPA determines that the Remedial Action, or any portion thereof has not been completed in accordance with this Order or that the Performance Standards have not been achieved, EPA shall notify Respondents in writing of the activities that must be undertaken to complete the Remedial Action and/or achieve the Performance Standards. EPA will set forth in the notice a schedule for performance of such activities. Respondents shall then perform all activities described in the notice in accordance with the specifications and

AR001786

schedules established therein.

2. If EPA concludes, following the initial or any subsequent notification of completion by Respondents that the Remedial Action has been fully performed in accordance with this Order and that the Performance Standards have been achieved, EPA shall so certify in writing to Respondents. This 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, indemnification, insurance, and penalties, and any work to be conducted under Section VII.F (Additional Response Actions), Section XI (EPA Periodic Review), Section VII.G (Reporting Requirements) and Section XIV (Sampling and Data/Document Availability). This certification shall not limit EPA's right to perform periodic reviews pursuant to Section 121(c) of CERCLA, 42 U.S.C. § 9621(c).

B. Completion of the Work

1. Within ninety (90) days after Respondents conclude that all phases of the Work have been fully performed, and the Performance Standards set forth in Exhibit 3 and to be delineated in the Phase III Remedial Design have been attained, and that O&M activities have been completed, Respondents shall so notify EPA's RPM by submitting a written report by a Registered Professional Engineer certifying that the Work, including O & M, has been

AR001787

completed in full satisfaction of the requirements 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 or that the Performance Standards have not been achieved, 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 to EPA for approval. Respondents shall perform all activities described in the notice in accordance with the specifications and schedules established therein.

2. Any written reports provided to EPA pursuant to Section XXIII of this Order shall be accompanied by a sworn certification from the President, Vice President, Secretary, or Treasurer of each Respondent, which certification shall be in the following form:

Except as provided below, I certify that the information contained in or accompanying this [type of submission] is true, accurate, and complete.

As to (the/those) portion(s) of this [type of submission] for which I cannot personally verify [its/their] accuracy, I certify under the penalty of law that this [type of submission] and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

AR001788

Signature: _____
Name: _____
Title: _____

XXIV. ADMINISTRATIVE RECORD

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

XXV. NON-LIABILITY OF THE UNITED STATES

The United States, by issuance of this Order, assumes no liability for any injuries or damages to persons or property resulting from acts or omissions by Respondents, or their directors, officers, employees, agents, representatives, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Order. Neither EPA nor the United States may be deemed to be a party to any contract entered into by Respondents or their directors, officers, employees, agents, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Order.

XXVI. MODIFICATIONS

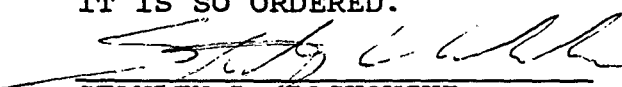
A. Except as otherwise provided in Section XXVI.B. of this Order, the provisions of this Order may be modified at any time,

AR001789

in writing, solely by the EPA Region III Regional Administrator.

B. Modification to any document submitted to, and approved or accepted by EPA pursuant to this Order may be made in writing by EPA. The effective date of such modification shall be the date on which the Respondents receive notice of such modification.

IT IS SO ORDERED.


STANLEY L. LASKOWSKI
Acting Regional Administrator
U.S. Environmental Protection Agency
Region III

12/22/93
DATE

AR001790

PERFORMANCE STANDARDS

Phase 3: Remedial Design and Action - Groundwater Pumping and Treatment

(1) Groundwater shall be extracted from one or more of the existing extraction wells (as appropriate). The exact location and number of any additional extraction well locations and compliance points shall be determined during the design of the groundwater recovery system. Recovered groundwater shall be treated using an on-site treatment system which must be designed, constructed and operated to handle all of the groundwater recovered from the Site. Treatment technologies such as filtration, clarification and/or air stripping shall be employed, as appropriate, to ensure that the resultant surface water discharge (to the designated nearby stream) complies with applicable National Pollutant Discharge Elimination System ("NPDES") limitations as specified in 40 CFR Part 122, Subpart C and PA Clean Streams Law, as specified in 25 PA Code Chapters 92, 93, 94 and 96. All treatment residues must be tested, treated and/or disposed of at an approved treatment or disposal facility according to the requirements of RCRA.

(2) Groundwater Remediation Standards - Groundwater extraction and treatment shall continue until the concentration level for each contaminant listed in Subpart G of 40 C.F.R. Part 141 does not exceed the specified Maximum Contaminant Level (MCL) for public drinking water supplies. These include, but are not limited to:

<u>Contaminant</u>	<u>MCL (mg/l)</u>
benzene	0.005
toluene	1.0
chlorobenzene	0.100
vinyl chloride	0.002
chloroform	0.0
1,2 dichloroethane	0.005
acetone	0.1
xylene	10.0
cadmium	0.005
chromium (total)	0.1

Levels which do not exceed the MCLs must be maintained for four consecutive quarters, as demonstrated by quarterly groundwater monitoring results.

Phase 4: Remedial Action - Landfill Cap

(1) Installation of Landfill Cap

A landfill cap shall be constructed on the top and the sides of



AR001791

the landfill portion of the Site in accordance with the attached cap design prepared by the Corps of Engineers, dated September 1993, and the performance specifications therein (Exhibit 2).

(2) Vegetation of the Landfill Cap

Vegetation shall be established on the new soil cover (*i.e.*, the entire extent of the cap) in accordance with the requirements of Exhibit 2. Vegetation of the cap shall be performed to provide for an effective and permanent vegetative cover capable of stabilizing the soil surface from erosion.

(3) Installation of Landfill Gas Venting and Monitoring Systems

A landfill gas venting system shall be installed on the surface of the cap, in accordance with the requirements of Exhibit 2, to minimize the potential for off-Site migration of landfill gases.

Periodic ambient air monitoring shall be conducted to evaluate the landfill gas emissions, pursuant to Exhibit 2. If the monitoring shows that landfill gas emissions exceed the Standards for Contaminants set forth in 25 PA Code § 123, a vent gas treatment system shall be installed to address this problem. At the present time, the health effects estimated from current data do not appear to warrant active gas treatment.

To monitor the potential occurrence of landfill gas migration off of the landfill perimeter, gas monitoring stations shall be installed at the same time the landfill cap is installed. The number and placement of these monitoring stations shall be determined in accordance with the requirements of Exhibit 2. These gas monitoring stations shall be monitored quarterly for a period of 4 years and then semi-annually for the next 26 years, or until EPA determines that gas monitoring is no longer necessary because there are no longer any possible emissions.

Operation and Maintenance

Operation and maintenance ("O & M") of Phases 3 & 4 of the remedy shall be conducted for thirty years. This will include O & M of the landfill cap, the vegetative cover on the landfill cap, existing security fence, the landfill gas venting system and the aquifer pumping and treatment systems.

Monitoring of the groundwater will be conducted quarterly for a period of two years with the sample locations to be determined during the Remedial Design of Phase 3. The monitoring will be reduced to semiannually for the next four years, and then annually for the remaining 24 years. The system may be modified

AR001792

(with EPA approval), as warranted based upon the performance data collected during the operation. These modifications may include, for example, alternate pumping of extraction wells or the addition or elimination of certain wells, or, with EPA approval, modification of the treatment system.

It may become apparent during implementation or operation of the groundwater extraction system, as modified, that contaminant levels over some portion of the contaminated plume have ceased to decline and are remaining constant at levels higher than the Performance Standards. If EPA determines that implementation of the selected remedy demonstrates, corroborated by hydrogeological and chemical evidence, that it will be technically impracticable to achieve and maintain the Performance Standards throughout the entire area of groundwater contamination, EPA may require that any or all of the following measures be taken, for an indefinite period of time. Any such measure would be considered a modification of the existing system:

- 1) long-term gradient control may be provided by low level pumping, as a containment measure;
- 2) institutional controls may be imposed to restrict access to those portions of the aquifer where contaminants remain above the Performance Standards; and
- 3) remedial technologies for groundwater restoration may be re-evaluated.

The decision to invoke any or all of these measures may be made prior to or during the Five-year reviews of the Remedial Action and shall be made in accordance with the requirements of CERCLA and the NCP.