

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
EPA NEW ENGLAND

Centredale Manor  
10.7  
9306

In the Matter of: )  
Centredale Manor Restoration Project )  
Superfund Site )  
Brook Village Associates Limited Partnership; )  
Centerdale Manor Associates Limited Partnership; )  
Crown Metro, Inc.; Emhart Industries, Inc., )  
and; New England Container Company, Inc. )  
Respondents, )  
Proceeding under Section 106(a) of the )  
Comprehensive Environmental Response, )  
Compensation and Liability Act, as )  
as amended, 42 U.S.C. § 9606(a) )

U.S. EPA Region I  
CERCLA Docket No.  
CERCLA1-2000-0026

UNILATERAL  
ADMINISTRATIVE  
ORDER FOR REMOVAL  
ACTION

JURISDICTION

1. This Administrative Order ("Order") is issued pursuant to the authority vested in the President of the United States by Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended ("CERCLA"), 42 U.S.C. § 9606(a). This authority was delegated to the Administrator of the United States Environmental Protection Agency ("EPA") on January 23, 1987, by Executive Order 12580, 52 Fed. Reg. 2926 (January 29, 1987), and further delegated to the Regional Administrators by EPA Delegation Nos. 14-14-A (April 15, 1994) and 14-14-B (May 11, 1994)) and further delegated to the Director, Office of Site Remediation and Restoration by Region I Delegations 14-14-A (September 29, 1995) and 14-14-B (September 3, 1996).

STATE COORDINATION

2. Pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a), the State of Rhode Island has been notified in writing of the issuance of this Order.

9306

### PURPOSE

3. The purpose of this Order is to compel the Respondents to perform certain removal activities at the Centredale Manor Restoration Project Superfund Site in North Providence, Rhode Island, as set forth in the Action Memoranda signed by Director of the Office of Site Remediation and Restoration on May 4, 1999, and September 13, 1999, and the Scope of Work appended to this Order as Appendix A.

### FINDINGS OF FACT

4. Numerous hazardous substances have been found at the Centredale Manor Restoration Project Superfund Site ("Site"), including 2,3,7,8 -Tetrachlorodibenzo-*p*-Dioxin, PCBs, volatile organic compounds, semi-volatile organic compounds, and metals.

5. These hazardous substances have been found in surface and subsurface soil, sediment and at the groundwater/surface water interface in the Woonasquatucket River at the Site. Surface soil locations include areas within 50 feet of the senior highrise housing complexes located on the main portion of the Site, and areas on residential parcels along the River.

6. Hazardous substances were disposed of at the Site as part of former operations of several chemical companies (the Atlantic Chemical Company, Metro-Atlantic Inc., and Crown Metro, Inc.) and a drum recycler (New England Container Co., Inc.).

7. The current owners at the Site include Brook Village Associates Limited Partnership and Centerdale Manor Associates Limited Partnership, both of which conducted extensive construction activities at the Site.

### SITE DESCRIPTION

8. The Centredale Manor Restoration Project Superfund Site ("Site") is located in North Providence, Rhode Island. The main portion of the Site is known as 2072 and 2074 Smith Street (or, plat 14, lots 200 and 250). The Site extends on the flood plain of the Woonasquatucket River from the main portion of the Site south to the Allendale Dam.

9. Currently, two high rise buildings (Centredale Manor and Brook Village) are located on the Site. In addition to the buildings, the Site is covered by roadway and parking lots. On the eastern portion of the Site is a drainage swale that begins near the northern portion of the Site and extends south, then curves to the west and discharges into a wooded wetland south of the Site and eventually into the Woonasquatucket River. The Site consists of all contaminated areas within this area as well as any other location to which contamination from that area has come to be located, or from which that contamination originated.

10. Pursuant to Section 105(8)(B) of CERCLA, 42 U.S.C. § 9605(8)(B), the Site is listed on the National Priorities List, 40 C.F.R. Part 300, Appendix B (1990).

### **RESPONDENTS**

11. Respondent Brook Village Associates Limited Partnership ("BVALP") is a Massachusetts limited partnership with its principal place of business in Boston, Massachusetts.

12. Respondent Centerdale Manor Associates Limited Partnership ("CMALP") is a Rhode Island limited partnership with its principal place of business in East Providence, Rhode Island.

13. Respondent Crown Metro, Inc. ("Crown Metro") is a South Carolina corporation with its principal place of business in Greenville, South Carolina.

14. Respondent Emhart Industries, Inc. ("Emhart") is a Connecticut corporation with its principal place of business in Towson, Maryland.

15. Respondent New England Container Co., Inc. ("NECC") is a Rhode Island corporation with its principal place of business in Smithfield, Rhode Island.

16. By letters dated September 15, 1999 and February 28, 2000, EPA notified the Respondents of their status as potentially responsible parties at the Site and afforded them the opportunity to perform or finance necessary removal activities. Attempts by EPA to reach settlement with the Respondents have been unsuccessful.

### **SITE HISTORY**

17. Respondent Crown Metro is a successor to liability of several chemical companies which operated at the Site from approximately 1943 to approximately 1971. The chemicals manufactured by these companies included hexachlorophene. The chemical companies also buried drums and other containers at the Site.

18. Respondent Emhart is also a successor to liability of several chemical companies which operated at the Site from approximately 1943 to approximately 1971. The chemicals manufactured by these companies included hexachlorophene. The chemical companies also buried drums and other containers at the Site.

19. Respondent NECC operated at the Site from approximately 1952 to approximately 1969. NECC's operations included obtaining 55-gallon drums containing residual chemicals,

disposing of certain drum residuals in the soil at the Site and incinerating other drum residuals at the Site.

20. Respondent BVALP acquired a portion of the Site by two deeds dated October 19, 1976 and October 20, 1976. BVALP constructed a high-rise on the main portion of the Site (2072 Smith Street) in approximately 1976-77.

21. Respondent CMALP acquired a portion of the Site by a deed dated March 18, 1982. CMALP constructed a high-rise on the main portion of the Site (2074 Smith Street) in approximately 1982-83.

### **ENDANGERMENT**

22. With regard to actual or potential exposure to nearby human populations, EPA has documented elevated levels of contaminants including dioxin and PCBs in numerous areas at the Site which could result in human exposure. First, elevated levels of dioxin have been found in surface soils at primarily residential parcels along the floodplain of the Woonasquatucket River. Elevated levels of dioxin in surface soil include levels above the Agency-recommended 1 ppb (TEQs, or toxicity equivalent) to be used as a starting point for residential soil cleanup level for CERCLA non-time critical removal sites and as a preliminary remediation goal for remedial sites (Approach for Addressing Dioxin on Soil at CERCLA and RCRA Sites, OSWER Directive 9200.4-26, April 13, 1998). Levels as high as 140 ppb have been found in soil located near the highrises at the Site. Second, elevated levels of numerous hazardous substances have been found in surface soils at 2072 and 2074 Smith Street—including areas as close as 50 feet from the apartment complexes located on these parcels. Because the contaminants are found at the surface of the soil, they are readily accessible to residents of and visitors to the apartment complexes at 2072 and 2074 Smith Street, as well as neighborhood children who have been known to play in the southern portion of this area. Third, contamination was found in Woonasquatucket River sediments between Route 44 and a point just below the Allendale Dam. The Woonasquatucket River becomes relatively shallow approximately 2,000 feet south of Route 44, in an area known as the Allendale Pond. Due to a 1991 breach of the Allendale Dam, the sediments in this portion of the river are readily accessible to neighborhood children who have been known to play in the area. Finally, there are elevated levels of contaminants entering the Woonasquatucket River itself. The river is occasionally used by fishermen and recreational boaters. It is possible that these people could come in contact with sediment/surface water contamination while in the Site area.

23. With regard to actual or potential exposure to animals or the food chain, in the fall of 1999 the Rhode Island Department of Health (DOH) documented elevated levels of dioxin in fish tissue from fish collected in the portion of the Woonasquatucket River which flows through the Site. Although other animal/food chain studies have not been conducted, the potential for

exposure of animals or the food chain to hazardous substances or pollutants or contaminants is great. As explained above, elevated levels of hazardous substances have been found in surface soils, sediment, surface water and wetland areas. All of these areas are natural habitat for numerous species of plants and animals (ecological receptors).

24. The Woonasquatucket River and its associated wetlands and floodplain represent a sensitive ecosystem at the Site. Numerous media in this ecosystem have been affected by contamination: sediment, surface water, soil, and wetland areas. Although an ecological risk assessment has not yet been conducted at the Site, numerous birds, fish and animals have been observed at the Site by EPA employees and EPA contractors, including but not limited to: great blue herons; black crown night herons; black ducks; mallard ducks; Canada geese; spotted sandpipers; muskrat; mink; squirrels; snapping turtles; small mouth bass; large mouth bass; sucker fish; and sunfish. These ecological receptors would likely be damaged by exposure to the types of hazardous substances found at the Site.

25. There is evidence that drums and other waste material may be buried at the property. Drum carcasses were found by EPA in certain areas of the Site. Buried drums and waste material may be leaching contaminants into the Woonasquatucket River.

26. High levels of hazardous substances have been found in soils largely at or near the surface of the Site. These soils are in areas subject to erosion by the Woonasquatucket River as well as periodic flooding. Erosion and flooding appear to have caused the contaminated soil to migrate, since elevated levels of hazardous substances have been found in Woonasquatucket River sediments located in the downstream portion of the Site, including below the Allendale Dam. In addition, high levels of chlorinated solvents (TCE and PCE) found at the groundwater/surface water interface in the river indicate migration of contaminants from suspected buried waste near the riverbanks and likelihood of a non-aqueous phase liquid source of contamination that may continue to impact surface water and sediment.

27. The land portions of the Site are located in the floodplain and have been frequently flooded during high river stage. These weather conditions have caused and will continue to cause the migration of contaminated soil at the Site (particularly from those areas which are not covered by an interim cap) into the Woonasquatucket River and the migration of contaminated sediments further downstream. Allendale Dam, the first flood control structure downstream from 2072 and 2074 Smith Street, was breached in 1991 and its condition is continuing to deteriorate. This is causing the release of contaminated sediment into downstream reaches of the river, particularly during flood events.

28. The time critical removal activities already completed by EPA include sampling and analysis as well as placing fences and interim caps (one of which is completed, a second which is partially completed and a third which was determined to be beyond the scope of a time-critical

removal action) in the areas of surface soil contamination. EPA is also conducting two Engineering Evaluation/Cost Analysis studies and a Remedial Investigation at the Site.

29. The following table identifies the highest concentrations of some of the chemical compounds detected by EPA in soil samples collected at the Site:

CHEMICAL COMPOUND	HIGHEST CONCENTRATION (in parts per billion - ppb)
2,3,7,8 -Tetrachlorodibenzo- <i>p</i> -Dioxin	140
PCBs	1,300,000
1,2-dichlorobenzene	2,800,000
benzene	480,000
chlorobenzene	1,000,000
tetrachloroethene	1,7000,000
trichloroethene	2,400,000
cadmuim	180,000
lead	3,160,000
manganese	6,420,000
aluminum	16,100,000
antimony	27,800
arsenic	49,300
cadmium	180,000
chromium	472,000
copper	934,000
mercury	7,400
silver	35,500
vanadium	72,500

30. The following table represents some of the dangers to human health associated with each of the hazardous substances found on-site, as well as the potential routes of human exposure to these wastes:

HAZARDOUS SUBSTANCE	ROUTE(S) OF EXPOSURE	POTENTIAL HUMAN HEALTH EFFECTS
2,3,7,8 - Tetrachlorodi benzo- <i>p</i> -Dioxin	inhalation; skin absorption; ingestion; skin and/or eye contact	irritated eyes, skin, and mucous membranes; chloroacne; porphyria; gastrointestinal disturbances; possible reproductive problems; teratogenic effects  The World Health Organization has classified dioxin as a human carcinogen
PCBs	inhalation; skin absorption	irritated eyes; chloroacne; liver damage; reproductive problems
1,2-dichloro-benzene	inhalation; skin absorption; ingestion; skin and/or eye contact	irritated eyes and nose; liver and kidney damage; skin blisters
benzene	inhalation; skin absorption; ingestion; skin and/or eye contact	irritated eyes, skin, nose and respiratory system; giddiness; headache, nausea, staggered gait; fatigue, anorexia, lassitude; dermatitis; bone marrow depression  The U.S. Department of Health and Human Services has designated benzene as a known human carcinogen
chloro-benzene	inhalation; ingestion; skin and/or eye contact	irritated eyes, skin, nose; drowsiness, incoordination; central nervous system depression.
tetrachloro-ethene	inhalation; skin absorption; ingestion; skin and/or eye contact	irritated eyes, nose, throat, nausea; flushed face and neck; vertigo, dizziness, incoordination; headache, somnolence; skin erythema; liver damage
trichloro-ethene	inhalation ;skin absorption; ingestion; skin and/or eye contact	irritates eyes and skin; headache, vertigo; visual disturbance; fatigue, giddiness, tremors, somnolence, nausea, vomiting; dermatitis; cardiac arrhythmia, paresthesia, liver injury
cadmuim	inhalation; ingestion	pulmonary edema, dyspnea, cough, chest tightness, substernal pain; headache, chills, muscle aches; nausea, vomiting, diarrhea; anosmia, emphysema, proteinuria, mild anemia

lead	inhalation; ingestion; skin and/or eye contact	[NOTE: THESE SYMPTOMS ARE MORE PRONOUNCED IN CHILDREN] weakness, lassitude, insomnia; facial pallor, anorexia, weight loss; constipation, abdominal pain, colic, anemia; gingival lead line; tremors, paralysis of the wrist and ankles; encephalopathy; kidney disease, irritated eyes; hypotension.
manganese	inhalation; ingestion	Parkinson's; asthenia, insomnia, mental confusion, metal fume fever: dry throat, cough, chest tightness, dyspnea, rales, flu-like fever; lower back pain; vomiting; malaise; fatigue; kidney damage
aluminum	inhalation; skin and/or eye contact	irritated eyes, skin and respiratory system
antimony	inhalation; ingestion; skin and/or eye contact	irritated eyes, skin, nose, throat, mouth; cough; dizziness; headache; nausea, vomiting, diarrhea; stomach cramps; insomnia; anorexia; unable to smell properly
arsenic	inhalation; skin absorption; ingestion; skin and/or eye contact	ulceration of nasal septum, dermatitis, gastrointestinal disturbances, peripheral neuropathy, respiratory irritation, hyperpigmentation of skin  The U.S. Department of Health and Human Services has designated arsenic as a known carcinogen
cadmium	inhalation; ingestion	pulmonary edema, dyspnea, cough, chest tightness, substernal pain; headache; chills, muscle aches; nausea, vomiting, diarrhea; anosmia, emphysema, proteinuria, mild anemia
chromium	inhalation; ingestion; skin and/or eye contact	irritated eyes and skin; lung fibrosis
copper	inhalation; ingestion; skin and/or eye contact	irritated eyes, nose, pharynx; nasal perforation; metallic taste; dermatitis
mercury	inhalation; skin absorption; ingestion; skin and/or eye contact	irritated eyes and skin; cough, chest pain, dyspnea, bronchial pneumonia; tremors, insomnia, irritability, indecision, headache, fatigue, weakness; stomatitis, salivation, gastrointestinal disturbance, anorexia, weight loss, proteinuria
silver	inhalation; ingestion; skin and/or eye contact	blue-gray eyes, nasal septum, throat and skin irritation, ulceration skin; gastrointestinal disturbance

vanadium	inhalation; ingestion; skin and/or eye contact	irritated eyes, skin and throat; green tongue, metallic taste, eczema, cough; fine rales, wheezing, bronchitis, dyspnea
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31. Approximately 200 residents live in the two high-rise housing complexes for the elderly located at the Site. Some of the highest levels of dioxin at the Site were found near these high-rises. Additionally, elevated levels of volatile organic compounds and semi-volatile organic compounds were found very close to the high-rises. The remainder of the Site (the drainage swale and the Woonasquatucket River and its floodplain extending south from Route 44 to the Allendale dam) is adjacent to or includes a number of residential yards as well as church grounds used for picnics and other events.

32. The Agency for Toxic Substances and Disease Registry (ATSDR) issued a Health Consultation on June 7, 1999. In that Health Consultation, ATSDR concluded that although current exposures are probably low, significant risks could exist for children or adults who have frequent contact with contaminated soils or sediment at the Site. ATSDR made several recommendations, including that public access be restricted to surface soils which exceed 1 part per billion (ppb) of dioxin.

33. By completing the second interim cap at the Site and implementing certain flood control measures at the Site, the removal action will minimize direct contact threat to humans. This removal action will also address the threat to the environment by minimizing contamination resulting from surface water run-off into the Woonasquatucket River and the drainage swale at the Site.

#### **CONCLUSIONS OF LAW AND DETERMINATIONS**

On the basis of the findings of fact, EPA makes the following Conclusions of Law and Determinations:

34. The Centredale Manor Restoration Project Superfund Site is a "facility" as that term is defined in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

35. Each Respondent is a "person" as that term is defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

36. Each Respondent is a liable party within the meaning of Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

37. Each substance listed in paragraph 29 above is a "hazardous substance" as that term is defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

38. The conditions described above in paragraphs 22 through 33 constitute an actual or threatened "release" into the "environment" within the meaning of Section 101(8), (22) of CERCLA, 42 U.S.C. § 9601(8), (22).

39. The actual or threatened releases of hazardous substances at or from the Site may pose "an imminent and substantial endangerment to the public health or welfare or the environment" within the meaning of Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

40. In order to protect public health and welfare and the environment, and prevent further release or threat of release of hazardous substances at or from the Site, a Removal Action is necessary and appropriate. The Removal Action will consist of implementation of the Scope of Work appended to this Order. The Removal Action is designed to prevent, minimize, and/or mitigate damage to the public health or welfare or the environment which may otherwise result from the release or threat of release of hazardous substances, and was developed in accordance with the criteria set forth at Section 300.415 of the National Contingency Plan ("NCP"), 40 C.F.R. § 300.415.

41. The removal actions specified in this Order will be done promptly and properly by the Respondents, and will be consistent with the NCP, if performed in accordance with the terms of this Order and Scope of Work.

### **ORDER**

42. Based upon EPA's jurisdiction, and the findings of fact and determinations set forth above, the Respondents are **ORDERED** to perform all work required under this Order. The Respondents shall comply with the following provisions and perform all actions required by the terms and conditions of this Order.

### **PARTIES BOUND**

43. This Order shall apply to and be binding upon the Respondents and upon their receivers, trustees, successors, and assigns. No change in ownership or corporate status shall in any way alter the Respondents' responsibilities under this Order. Respondents are jointly and severally responsible for carrying out all activities required of them by this Order. The failure of one or more Respondent to comply with all or any part of this Order shall not in any way excuse or justify noncompliance by any other Respondent, including but not limited to the failure to perform all obligations of any defaulting Respondent.

### **DESIGNATION OF SUPERVISING CONTRACTOR AND PROJECT COORDINATOR**

44. Within seven (7) days after the effective date of this Order, the Respondents shall retain the services of a qualified and experienced Supervising Contractor for the purpose of performing the work required by this Order in accordance with the terms and conditions of the Scope of Work. Within the same seven (7) day period, the Respondents shall notify EPA in writing of the name, address, and qualifications of the proposed supervising contractor and the name and telephone number of the supervising contractor's primary contact person. The Respondents shall also notify EPA of the identity and qualifications of any other contractor(s) or subcontractor(s) to be used at the Site at least seven (7) days in advance of their performing any work under this Order.

45. The supervising contractor shall be a qualified and certified professional engineer with substantial expertise and experience in the cleanup of hazardous waste sites. EPA reserves the right to disapprove, based on professional qualifications, conflicts of interest, and/or deficiencies in previous similar work, any contractor or subcontractor or other person engaged directly or indirectly by the Respondents to conduct work activities under this Order. If EPA disapproves the selection of any proposed contractor, the Respondents shall notify EPA in writing of the name, address, and qualifications of another contractor within seven (7) days after receipt of the notice of disapproval.

46. The Respondents shall provide a copy of this Order to all contractors, subcontractors, laboratories, and consultants retained in connection with this Order within seven (7) days after the Order's effective date or of such retention, whichever is later. The Respondents shall ensure that all such contractors, subcontractors, laboratories and consultants will perform all work in conformity with CERCLA, the NCP, and the terms and conditions of this Order and Scope of Work.

47. Within seven (7) days after the effective date of this Order, the Respondents shall designate a single Project Coordinator who shall be responsible for administration of all of the Respondents' actions called for by this Order, and shall submit the designated coordinator's name, address, and telephone number to EPA. EPA will deem the project coordinator's receipt of any notice or communication from EPA relating to this Order as receipt by the Respondents.

### **COMMUNICATION AND COOPERATION AMONG THE RESPONDENTS**

48. Within three (3) days after the effective date of this Order, the Respondents shall submit to EPA for approval a Communication and Coordination Plan (CCP) that specifies the requirements and procedures by which the Respondents will communicate and coordinate

with one another in carrying out the requirements of this Order. The CCP shall include at a minimum the following:

A. **Communication Strategy.** The Respondents shall specify how the designated coordinator and the individual Respondents will communicate and disseminate information relative to this Order. The name, title, address and telephone number of the primary contact person for each Respondent shall be included in the communication strategy.

B. **Coordination of Efforts.** The Respondents shall describe with specificity how the technical, financial, and administrative requirements of this Order are to be coordinated and distributed among and performed by the Respondents. The CCP shall describe the obligations of each and every Respondent in full.

Each Respondent shall sign the CCP (by a duly authorized representative if the Respondent is other than a natural person) prior to its submission to EPA. Failure of any Respondent to sign the CCP will constitute a violation of this Order by that individual Respondent. The Respondents shall submit all proposed changes or amendments to the CCP to EPA for approval. The CCP as approved by EPA shall be incorporated into and enforceable under this Order.

#### **EPA ON-SCENE COORDINATOR**

49. The EPA On-Scene Coordinator ("OSC") will administer EPA's responsibilities and receive all written notices, reports, plans and other documents required by this Order. All submissions required by this Order shall be sent to EPA's OSC at the following address:

Ted Bzenas  
Office of Site Remediation and Restoration  
U.S. Environmental Protection Agency - New England  
1 Congress Street, Suite 1100 (HBR)  
Boston, MA 02114-2023  
(617) 918-1230  
FAX (617) 918-1291

50. EPA's OSC shall have the authority vested in her/him by the NCP, including but not limited to the authority to stop work being performed pursuant to this Order and the authority to modify the Scope of Work. Absence of the OSC from the Site shall not be cause for stoppage of work by the Respondents unless specifically directed by the OSC.