



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203-0001

Superfund Records Center
SITE: Centredale Manor
BREAK: 2.9
OTHER: 18420

Enforcement Confidential Materials Attached

MEMORANDUM

DATE: May 4, 1999

SUBJ: Request for a Removal Action at the Centredale Manor Site, North Providence, Rhode Island - **Action Memorandum**

FROM: Ted Bazen, OSC 
Site Evaluation and Response Section II

THRU: Steven R. Novick, Section Chief 
Site Evaluation and Response Section II

TO: Patricia L. Meaney, Director
Office of Site Remediation and Restoration

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval for funds to initiate a removal action at the Centredale Manor Site in North Providence, Rhode Island.

This Action Memorandum Addendum proposes to address the threat to public health presented by exposure to dioxin contaminated surface soils and exposed swale sediments and other associated contamination found at the site, and to further investigate the source of this contamination. The total ceiling for this Action Memorandum will be \$1,602,000. This action is necessary to prevent, minimize, and mitigate potential damage to the public health or welfare, and the environment posed by a release of hazardous substances to the environment.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS Identifier: RID981203755
SITE Identifier: 016P
Category of Removal: Time Critical

Nationally Significant/
Precedent Setting: Yes

A. Site Description

1. Background

The Centredale Manor Site encompasses the following:

- the Brook Village Apartment property (Brook Village), located at 2072 Smith Street, North Providence, Providence County, Rhode Island
- the Centredale Manor Apartment property (Centredale Manor), located at 2074 Smith Street, North Providence, Providence County, Rhode Island
- and the flood plain of the Woonasquatucket River, as defined in the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map of the 100 year flood plain, from Route 44 southerly, up to and inclusive of the Allendale Dam and its associated structures, including the tailrace of the Allendale Dam, in North Providence, Providence County, Rhode Island

The Brook Village and Centredale Manor are zoned for residential and encompass a total of 9.7 acres of land. Centredale Manor is an eight-story apartment building for elderly residents which was completed in 1983. There are two paved parking lots located to the north and west of the building. Brook Village is an eleven story apartment building for elderly residents which was completed in 1977. A series of three parking lots extend to the south of the building. The area around both building is landscaped with grass ground cover.

Prior to 1936, the properties were occupied by Centredale Worsted Mills, a woolens manufacturing plant. Atlantic Chemical began operating on these properties in the late 1930s. Atlantic Chemical Company changed name in 1953 to Metro-Atlantic, Inc. and continued to operate until the late 1970s. New England Container Company, Inc. operated a drum reconditioning facility on a portion of the Site from 1952 until 1969. A major fire in 1972 destroyed most of the structures at the Site.

The flood plain is visually defined in the FEMA Flood Insurance map for North Providence, Providence County, Rhode Island (1993). This is the area where sediment deposition is likely to have occurred and therefore merits further investigation. The flood plain covers approximately 36 acres and includes private

properties, open fields, low-lying woodlands, and exposed sediments.

2. Removal Site Evaluation

EPA has conducted numerous investigations including a Preliminary Assessment of Centredale Manor and Brook Village in August of 1986, a Screening Site Inspection in October of 1990, and Site Inspection Prioritization in May of 1997. These previous investigations led to an Expanded Site Inspection (ESI) in September of 1998. A total of 45 sediment and surface soil samples from Centredale Manor, Brook Village and the Woonasquatucket River were collected and analyzed for the ESI. Dioxin was found in surface soils and exposed swale sediments at Centredale Manor at elevated levels up to 15.8 parts per billion (ppb). The data were evaluated for public health implications by the Agency for Toxic Substances and Disease Registry (ATSDR). In a Draft Health Consultation and a Record of Activity (March 19, 1999), 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. ATSDR made several recommendations, including that public access be restricted to surface soils which exceed 1 part per billion (ppb) of dioxin. Occasional contact with sediment from the river is not expected to pose a public health problem. During annual periods of low water, shallow areas of the flood plain may dry out and emerge as the water levels fluctuate. Exposures in these areas will be evaluated as intermittent and short term, but access restrictions may be required.

3. Physical Location

The Site encompasses the flood plain of the Woonasquatucket River from the bridge at Route 44 downstream to the Allendale Dam, and the Brook Village and Centredale Manor apartment properties which are located at 2072 and 2074 Smith Street in North Providence, Providence County, Rhode Island. The geographic coordinates for the Site are 41° 51' 29.5" north latitude and 71° 30' 28.5" west longitude.

The 5.24-acre Centredale Manor property is registered as Plat 14, Lot 250 and in Book 117, page 414 in the North Providence Town Clerk's Office. The property is bordered by Brook Village Apartments to the north, a small wooded area and a drainage swale to the east, a wooded area to the south, and the Woonasquatucket River to the west. George Waterman Road and a residential area are located approximately 100 feet west of the river, up a steep bank.

The Brook Village Apartments property is registered as Plat 14, Lot 200, and in Book 95, pages 817 and 818 at the North Providence Town Clerk's office. The property is bordered to the north by Rt. 44, to the east by a drainage swale and

retail/commercial property, to the south by the Centredale Manor property and to the west by the Woonasquatucket River.

The flood plain of the Woonasquatucket River occupies the river banks and low-lying areas from the bridge at Route 44 to the Allendale Dam that are topographically below the 100 year flood elevation for the area. The flood plain is defined in FEMA Flood Insurance Rate Map for North Providence, Rhode Island, Community-Panel Number 440020 0002 B (map revised September 30, 1993).

4. Site Characteristics

Located on the site are two multi-story apartment buildings for elderly and handicapped residents. There are several paved parking lots associated with the buildings. Other areas around the parking lots and the buildings are landscaped with a grass ground cover. Elevation of the property is approximately 100 feet above mean sea level. The property slopes slightly to the west.

Partially buried, deteriorated empty 55-gallon drums were observed during on-site reconnaissance of the property which was conducted as a component of a SIP investigation of the property. The observed drums were located along the Woonasquatucket River and in the southern wooded area within 200 feet of the building. Stressed vegetation was also observed during the SIP on-site reconnaissance near empty drums located in the wooded area on the southern portion of the property. Another area of stressed vegetation (approximately 450 square feet) is located on the west side of the property between the Centredale Manor and Brook Village parking lots.

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

2,3,7,8-tetrachlorodibenzo-p-dioxin (dioxin) is a hazardous substance as defined in Section 101(14) of CERCLA and is listed at 40 C.F.R. 302.4. Analytical data from samples collected during the ESI indicates dioxin concentrations up to 15.8 ppb in surficial soils or exposed swale sediments. Dioxin has also been identified in samples collected from surface soils in wetlands and flood plain areas downstream of the Site.

The past use of the Site as a chemical manufacturing company and a barrel reclamation facility is not inconsistent with the presence of dioxin; however, the specific source of dioxin has not yet been identified.

Other contaminants including polychlorinated biphenyls (PCBs), inorganic metals, volatile organic chemicals (VOCs), and semi-volatile organic compounds

(SVOCs) were identified in soils and sediments at levels below removal criteria.

6. NPL Status

The Site is not currently listed on the National Priority List (NPL), but is likely to be proposed in the future. A Hazardous Ranking System rating is in progress for the Site. Region I removal, remedial and site assessment personnel have closely coordinated their activities to date. The removal actions proposed in this document will be consistent with listing the Site on the NPL, and with any remedial actions.

B. Other Actions to Date

1. State Actions

From 1970 to 1986 the Rhode Island Department of Environmental Management (RI DEM) conducted or supervised several investigations at the Centredale Manor property. Over 800 drums were eventually inventoried at the property. Approximately 400 drums contained hazardous chemicals which required disposal; the remaining empty drums were crushed and disposed of as non-hazardous. Legible drum labels and visual inspection of residual materials indicated that caustics, halogenated solvents, polychlorinated biphenyls (PCBs), and ink wastes (potentially containing heavy metals) may have been contained in the drums.

On 23 November 1981, a Notice of Violation and Order was issued by RI DEM to the property owners for violations of the State Hazardous Waste Management Act. The Order documented specific violations and required the property owners to comply immediately by identifying all hazardous materials on site by sampling and chemical analysis; then disposing of all hazardous wastes off-site.

In 1982, RI DEM required that soil samples be collected prior to construction of Centredale Manor, in the area of the building footprint. Analysis indicated the presence of chloroform, toluene, trichloroethylene, bis(2-ethylhexyl)phthalate, and barium at concentrations below RI DEM regulatory levels. As a result, approximately 6,000 cubic yards of excavated soil were removed and disposed of as non-hazardous solid waste.

In March 1986, RI DEM conducted a ground-penetrating radar survey to locate alleged buried underground storage tanks (USTs). The survey concluded there were no buried USTs on site; however, other metallic debris, possibly buried drums, were potentially present along the western edge of the property.

In October of 1996, an advisory against consumption of fish and eels caught in the Woonasquatucket River was jointly issued by the Rhode Island Department of Public Health (RI DOH) and EPA. The advisory was the result of analysis of fish and eels tissue samples collected from the Woonasquatucket River in May of 1996 under the EPA Providence Urban Initiative program and analyzed by the EPA Narragansett Laboratory. Signs were posted along the Woonasquatucket River advocating a catch and release policy, and warning against consumption of fish and eels.

2. Federal Involvement

EPA involvement in the Site began when EPA contractors conducted a Preliminary Assessment (PA) of the Centredale Manor property in August of 1986. The PA recommended a Screening Site Inspection (SSI), which was completed in October 1990. Soil sample analysis detected several VOCs and SVOCs, pesticides, and two PCB congeners (Aroclors 1242 and 1254). Analysis for dioxin was not performed.

On 27 March 1996, nine sediment samples, including three reference samples, were collected from eight locations associated with the property as a component of an Site Investigation Prioritization (SIP). The SIP report was completed in May of 1997. Analytical results of sediment samples revealed several VOCs, SVOCs, and inorganic elements at concentrations greater than or equal to three times the reference sample concentrations. No pesticides or PCBs were detected in sediment samples collected at the Centredale Manor property. Analysis for dioxin was not performed.

In January 1997, the EPA Office of Ecosystem Protection and the Rhode Island State Program requested assistance from the EPA Office of Environmental Measurement and Evaluation (OEME) to examine and evaluate ambient sediment quality in the Woonasquatucket River.

In October 1997, OEME personnel conducted water and sediment sampling. Sediment samples and water column measurements were collected at seven dam locations along the Woonasquatucket River, from the Esmond Dam area of North Providence, just south of the Smithfield, Rhode Island line, to the lower basin upstream from Valley Street Bridge in Providence, Rhode Island. Dioxin contamination was detectable at all seven sampling locations. Dioxin levels at two dams, Allendale Dam and Lymansville Dam, were significantly higher than at the other sediment sampling locations. Numerous PAHs, chlorinated pesticides, PCBs, and inorganic elements were also detectable at all seven locations. OEME reported that the contaminants occurred at concentrations that may pose a chronic risk to the benthic community as well as upper food chain receptors.

In June 1998, EPA initiated an Expanded Site Inspection (ESI) of the Centredale Manor property. The ESI assessed the extent of contamination in areas of potential human exposure, the potential for source areas to be located up-river from the Centredale Manor property, and the presence of dioxin/furan and hexachloroxanthene (HCX) contamination on the Centredale Manor property. No prior analysis for the presence of dioxin and HCX had been performed on the property.

On 9 September 1998, START members conducted sampling activities on the Centredale Manor property and along various properties bordering the Woonasquatucket River. Six soil samples were collected from the Centredale Manor property and 39 sediment samples were collected on the Centredale Manor property and along the Woonasquatucket River.

When preliminary results of the September 1998 sampling were released in January of 1999, EPA placed temporary fencing around areas of Centredale Manor and Brook Village that were tentatively identified as having soil dioxin levels in excess of 1ppb.

Also in January of 1999, seventeen soil samples were collected downstream from Centredale Manor, at the Lee Romano Little League Ballfield, to assess the soil on the ballfield. Dioxins were not found above background levels at the ballfield.

Validated data from the September 1998 sample collection was received in early March and forwarded to ATSDR for evaluation in a health consultation. Results of sample analysis showed elevated levels of dioxin found in surface soils and exposed swale sediments on and around the Centredale Manor property. The highest dioxin level measured was 15.8 parts per billion (ppb) in a sample collected from the drainage swale to the southeast of the apartment building. Based on historical aerial photographs, this area is associated with the drum salvage operations at the Site. ATSDR released a draft Health Consultation for public comment on March 10, 1999. The draft Health Consultation recommends that EPA characterize the extent and nature of contamination, and prevent access to and/or remediate surface soil concentrations that exceed 1ppb TEQ in residential, recreational, or other areas that could be frequented by the public. A final health Consultation is expected in mid-May.

In February of 1999, EPA collected over 320 soil samples from over 240 sample stations at the Centredale Manor and Brook Village properties. Validated analytical results for dioxin analysis are expected to be available in mid-June of 1999. This data will also be evaluated by ATSDR for public health implications.

EPA has kept the community informed about agency activities in North

Providence through a variety of outreach techniques including: staffing a hotline in North Providence early on in the discovery of dioxin contamination in the community and working with RI DOH to establish a permanent hotline number; attending community and neighborhood meetings; producing and distributing fact sheets to affected audiences; meeting with individual property owners to go over sampling results and outline future actions; and issuing press releases to keep the media and public informed as site related activities unfold.

A particularly significant community effort was the establishment of a Management Action Committee (MAC) to maintain an ongoing dialogue with state and community leaders regarding site activities. Members of the Management Committee include EPA, ATSDR, RI DEM, the RI DPH, the State of Rhode Island Governor Lincoln Almond's Office, U.S. Senator John Chaffee's Office, U.S. Senator Jack Reed's Office, RI State Senator John Celona, North Providence Mayor Ralph Mollis, Johnston Mayor William Macera, the Providence Urban Rivers Team and others. Membership on the committee is voluntary and the membership may be increased as needed.

3. Current Actions

EPA installed temporary fencing around the areas at Centredale Manor where previous sampling results have indicated elevated levels of dioxin in surface soil. EPA has also implemented a community outreach and education program to disseminate information about the Site to the community. A Management Action Committee (MAC) has been established to work with EPA in an advisory role regarding communication with the community and in review of technical documents. Members of the MAC are currently reviewing and providing comments to the ATSDR Draft Health Consultation for samples collected in September, 1998.

C. State and Local Authorities' Roles

1. State and Local Actions to Date

Management Action Committee, which includes federal, state and local government representation, has reviewed fact sheets, several press releases and the plan for the February 1999 sampling event. Through the MAC, EPA has disseminated site specific information such as the ESI report, the Sampling Plan and fact sheets.

2. Potential for Continued State/Local Response

EPA and RI DEM will continue to discuss sample collection for areas that were historically industrial, but are unlikely to be associated with dioxin contamination

from the Centredale Manor Site.

The Management Action Committee will continue to have an active advisory role in the Removal Actions at the Site. Weekly meetings will continue at the North Providence Town Hall.

North Providence Mayor Ralph Mollis has pledged the Town's assistance and cooperation in providing local information and personnel. The Town will continue to provide interim office space, access to meeting rooms, historical documents and other support services.

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

Dioxin occurs as a contaminant in the manufacturing process of certain chlorinated organic compounds, especially chlorinated phenols such as hexachlorophene and herbicides such as 2,4,5-trichlorophenoxyacetic acid (2,4,5-T). Use of hexachlorophene and 2,4,5-T is currently restricted in this country. Other chlorinated compounds, like pentachlorophenol (PCP) used to preserve wood, may also contain dioxins. The use of PCP is also restricted in this country. Currently, dioxins are primarily released to the environment during combustion of fossil fuels (coal, oil, and natural gas) and wood, and during the incineration processes (municipal and medical waste, and hazardous waste incineration). Uncontrolled burning of many materials that contain chlorine, such as plastics, wood treated with PCP, pesticide-treated wastes, other polychlorinated chemicals, and even bleached paper, can produce dioxins.

Dioxin has a tendency to persist in the environment. It can bind to soil particles and bioaccumulate in the food chain, especially in foods such as meats, dairy products, and fish. Dioxin can enter the human body through ingestion, inhalation, and dermal absorption. Human exposure to very high levels of dioxin causes a skin condition called chloracne and is suspected of causing immunological problems and liver impairment.

The EPA considers dioxin to be a probable human carcinogen. Dioxin has been shown to cause biochemical alterations; thyroid, reproductive and immune toxicity; and cancer in animals. It is suspected of causing cancer in humans.

Animal studies have shown that dioxin is highly toxic although there are a wide variety of responses among the various species tested. Adverse health effects in animals tested include reproductive and developmental toxicity, hepatotoxicity (liver), immunotoxicity, and carcinogenicity.

A. Threats to the Public Health or Welfare

Section 300.415(b) of the National Contingency Plan (NCP) provides that EPA may conduct a removal action when it determines that there is a **threat to human health** or welfare or the environment based on one or more of the eight factors listed in 300.415(b)(2) of the NCP. The following factors listed below are present at this Site:

- 1. "Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;" [300.415(b)(2)(i)].**

There are dioxin-contaminated surface soils and exposed swale sediments in proximity to residential areas at the Centredale Manor Site. Contaminated soils have been identified within fifty feet of an eight-story residential apartment building for the elderly and in wetlands immediately adjacent to a residential neighborhood. Levels of dioxin up to 15.8ppb have been identified on the Site. In a Draft Health Consultation and a Record of Activity (March 19, 1999), the Agency for Toxic Substances and Disease Registry has recommended that EPA take actions to reduce exposure at the Site.

- 2. "Hazardous substances or pollutants or contaminants in drums, barrels, tanks or other bulk storage containers, that may pose a threat of release;" [300.415(b)(2)(ii)].**

Evidence from historical photographs, state report files, and preliminary geophysical testing results strongly suggest that buried drums may be found in several areas of the Site. Empty drums are visible at the surface in one area and the RI DEM has previously performed drum removals at the Site. Buried drums may be a source of dioxin or other contaminants and will be investigated, identified and remedied as needed.

- 3. "High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate;" [300.415(b)(2)(iii)].**

Analytical data from surface soil, flood plain soil and exposed swale sediment samples collected from the Site indicate dioxin contamination at levels up 15.8 ppb.

- 4. "Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released;" [§300.415(b)(2)(v)].**

Controlling the source of dioxin will minimize the migration of dioxin.

5. "The availability of other appropriate federal or state response mechanisms to respond to the release;" [§300.415(b)(2)(vii)].

The RI DEM has indicated that funding and staffing limitations will restrict their ability to respond to this situation. The Army Corps of Engineers (ACOE) is evaluating the condition of dams on the river in anticipation of dam reconstruction and repair projects in the future. Conditions at the Site support removal actions as described in the NCP.

6. "Other situations or factors that may pose threats to public health or welfare or the environment." [§300.415(b)(2)(viii)].

Public access to the contaminated surface soils is not restricted, and exposure via contact and incidental ingestion will continue to pose a human health threat until addressed by the action proposed in this document.

B. THREATS TO THE ENVIRONMENT

Due to the toxicity and persistence of dioxin in the environment, there may be adverse effects on animal populations. Dioxin accumulates and concentrates in the food chain, especially in food such as meat, dairy products and fish. Adverse health effects in animals tested under laboratory conditions include reproductive and developmental toxicity, hepatotoxicity (liver), immunotoxicity, and carcinogenicity.

Section 300.415(b) of the National Contingency Plan (NCP) provides that EPA may conduct a removal action when it determines that there is a threat to human health or welfare or the environment based on one or more of the eight factors listed in 300.415(b)(2) of the NCP. The following factors listed below are present at this Site:

1. "Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;" [300.415(b)(2)(i)].

Analysis of fish and eel tissue samples collected in the Woonasquatucket River indicate that dioxin is present in these animals and the food chain.

2. "Actual or potential contamination of drinking water supplies or

sensitive ecosystems;" [300.415(b)(2)(ii)].

Dioxin has been identified at elevated levels in wetlands, surface soils and flood plain soil samples. Wetlands, sediments and flood plains are sensitive ecosystems.

3. "Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released;" [§300.415(b)(2)(v)].

Significant flooding of the Woonasquatucket River has occurred in the past on an irregular basis and may have resulted in the migration and deposition of dioxin to the flood plain .

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from this site, if not addressed by implementing the response action selected in this Action Memorandum, may continue to present an imminent and substantial endangerment to public health, or welfare, or the environment. Federal, state and local agencies are recommending that immediate response actions be taken to reduce potential exposure.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

The proposed actions are based on documents and data which will be available to the public in the Administrative Record, to be available for public review within 60 days of the inception of these proposed actions, as described in the National Contingency Plan (40 CFR 300.415(m)(i)). The proposed actions were developed as an initial response action to reduce the potential for direct contact with dioxin-contaminated soils until a subsequent, comprehensive response action is developed. The actions proposed are consistent with CERCLA as amended, and are consistent with the NCP.

EPA/ OSWER Directive 9200.4-26, Memorandum - Approach for Addressing Dioxin in Soil at CERCLA and RCRA Sites, April 13, 1998, was considered in developing interim cleanup goals for dioxin at this Site. OSWER 9200.4-26 recommends a clean-up starting point of 1 ppb dioxin (TEQs) for surface soils that are reasonably expected to be used as residential property, and for sediments

that are considered to be a direct exposure pathway for human receptors.

The actions proposed are consistent with recommendations made to EPA in the Draft ATSDR Health Consultation - Woonasquatucket River, March 10, 1999, and ATSDR Record of Activity, # 99-1185 (March 19, 1999).

Proposed response actions include:

a) establish site security

Security will be provided for EPA and contractor equipment at the Site.

b) temporarily restrict access to contaminated soils

Temporary fencing, such as high visibility snow fence, has been installed in areas where dioxin has been previously identified at levels over 1ppb in surface soil and exposed sediments. As more sample analysis is received, additional areas may require temporary fencing to immediately control access by the public.

c) characterize the extent of contamination

Additional soil sample collection is necessary to characterize the extent of contamination. To date several hundred samples have been collected at the 0-3 inch depth interval; sample collection at greater depth is necessary to characterize the areal extent and volume of soil contamination, and for assessment of risks. This effort will include several hundred more surface and subsurface samples, and may encompass areas of the Woonasquatucket River flood plain from the bridge at Route 44 to the Allendale Dam, an area of approximately 36 acres.

d) locate and control the source of contamination

Preliminary geophysical surveys have tentatively identified subsurface anomalies on the Site. The site history of chemical manufacturing and barrel reclamation, as well as state records, indicate that there may be buried drums or other containers at the Site. Additional subsurface mapping will more clearly identify these areas before exploratory excavation can begin. Any excavation activity will generate contaminated soil and containers, with dioxin likely to be present, which will require storage on-site or off-site disposal.

e) identify and implement technically and financially feasible long term solutions

Options may include the installation of permanent fencing to restrict access and

prevent unknowing contact with contaminated surface soils; capping contaminated surface soil under geotextile fabric, gravel and clean topsoil which will provide a clean cover over contaminated soil; excavation of contaminated soil to remove contaminated soil from high use areas and on-site consolidation in a safe and secure manner until final disposal options are evaluated. OSWER Directive 9200.4-26, "Approach for Addressing Dioxin in Soil at CERCLA and RCRA Sites," recommends using 1 ppb (TEQs) as a starting point for setting cleanup levels for CERCLA removal actions for dioxin in soil involving a residential exposure scenario. Additionally, the draft ATSDR site-specific Health Consultation recommends preventing access to and/or remediating surface soils with concentrations exceeding 1ppb (TEQs) of dioxin. Therefore, for the purpose of implementing this time-critical removal action, 1ppb (TEQ) of dioxin will be the cleanup level for the actions discussed above. The cost of large-scale off-site disposal prohibits its consideration under this document, but not under a subsequent Action Memorandum or Record of Decision.

f) community activities

A Community Relation Plan (CRP) will be developed for the Site to identify the target audience for distribution of information regarding the Site. EPA will continue to participate in public meetings with the Management Action Committee; to meet privately with residents to discuss their sampling results, or at any other time at their request; to produce and distribute fact sheets; and to issue press releases to inform the public and the media about site activities.

2. Contribution to Remedial Performance

Performing this removal action will serve to protect public health and the environment by reducing the potential for further release of and exposure to contaminants found at the Site. These proposed actions are the result of an integrated effort of the Removal Program and the Remedial Program via the Centredale Manor Team with the objective of accelerating the agency's response time, while simultaneously fulfilling the needs for a fast track listing of the Site. As such, the implementation of the proposed actions will contribute to and be consistent with the performance of any remedial action that may be undertaken at a later date.

3. Applicable or Relevant and Appropriate Requirements (ARARs)

The federal ARARs determined to be practicable for this Site is the Resource Conservation and Recovery Act (RCRA). State ARARs have been requested from RI DEM and will be included in the site file when received.

B. Estimated Costs and Schedule

The OSC's (independent government) estimate of the additional costs associated with carrying out the proposed actions outlined above are given below. The actions are anticipated to be completed within 25 weeks of its commencement.

Extramural Costs:

ERCS	\$1,000,000
START	\$ 85,000
<u>20% Project Contingency</u>	<u>\$217,000</u>
Extramural Costs	\$1,302,000
Additional Extramural Costs - ERT, Edison, NJ	\$200,000
<u>Total Extramural Costs</u>	<u>\$1,502,000</u>
EPA Regional Personnel	\$ 100,000
TOTAL REMOVAL PROJECT CEILING	\$1,602,000

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

In the absence of the removal action described herein, conditions at the Centredale Manor Site can be expected to remain unaddressed, and threats associated with exposure to hazardous substances will continue.

VII. OUTSTANDING POLICY ISSUES

Until the agency's reassessment of the toxicity of dioxin is complete, EPA/OSWER Directive 9200.4-26, Memorandum - Approach for Addressing Dioxin in Soil at CERCLA and RCRA Sites, April 13, 1998 provides guidance for setting starting points for remediation goals at dioxin sites. The proposed actions are consistent with the guidance document.

VIII. ENFORCEMENT

ATTACHED TO THIS DOCUMENT - FOR INTERNAL DISTRIBUTION ONLY

IX. RECOMMENDATION

This decision document represents the selected removal action for the Centredale Manor Site in North Providence, Rhode Island. It was developed in accordance with CERCLA, as amended, and is consistent with the National Contingency Plan (NCP). The basis for this decision will be documented in the Administrative Record to be established for this Site.

Conditions at the Site meet the criteria set out in the NCP due to the presence of:

"Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;" [300.415(b)(2)(i)].

"Hazardous substances or pollutants or contaminants in drums, barrels, tanks or other bulk storage containers, that may pose a threat of release;" [300.415(b)(2)(ii)].

"High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate;" [300.415(b)(2)(iii)].

"Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released;" [§300.415(b)(2)(v)].

"The availability of other appropriate federal or state response mechanisms to respond to the release;" [§300.415(b)(2)(vii)].

"Other situations or factors that may pose threats to public health or welfare or the environment." [§300.415(b)(2)(viii)].

I recommend you approve \$1,602,000 to continue and complete the removal action proposed above; as much as \$1,502,000 is from the EPA-New England removal allowance. The characterization and control of dioxin contamination at the Site will mitigate the potential negative impacts of exposure to the residents living at and adjacent to the Site.

APPROVAL:  DATE: 5/4/99

DISAPPROVAL: _____ DATE: _____