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Formerly Utilized Sites Remedial  
Action Program (FUSRAP)

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## **Maywood Chemical Company Superfund Site**

### **ADMINISTRATIVE RECORD**

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#### **Document Number**

**MISS - 129.**

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**US Army Corps  
of Engineers®**



DEPARTMENT OF THE ARMY  
U.S. Army Corps of Engineers  
WASHINGTON, D.C. 20314-1000

MISS - 129

REPLY TO  
ATTENTION OF:

CEMP-R/CECW-B (200-1c)

06 DEC 1999

MEMORANDUM FOR COMMANDER, U.S. ARMY ENGINEER DIVISION,  
NORTH ATLANTIC

SUBJECT: Formerly Utilized Site Remedial Action Program (FUSRAP), Time Critical Action  
Memorandum for the Maywood Site, Maywood, New Jersey

1. Reference CENAN-PP memorandum, thru CENAD-PM, dated 15 November 1999, subject:  
FUSRAP, Request for Approval of an Action Memorandum on the Maywood FUSRAP Site  
Time Critical Removal Action.
2. The subject time critical action memorandum (enclosed) for removal of contaminated  
sediments from a drainage swale and culvert has been approved.
3. The Headquarters point of contact for this action is Ms. Tomiann McDaniel, 202-761-4363.

FOR THE COMMANDER:

HANS A. VAN WINKLE  
Major General, USA  
Deputy Commander for  
Civil Works

Encl

CF: w/o encl  
CECC-T (Simpson)  
CECW-BA (Moennig)  
CERE-A (Cribbin)  
CENAN-PP (Roos)  
CENAD-PM-M (Orgel)  
CENWO-HX (Roth)

**ACTION MEMORANDUM  
TIME-CRITICAL REMOVAL ACTION  
REMOVAL OF CONTAMINATED SEDIMENTS AT VICINITY PROPERTIES  
OF THE MAYWOOD INTERIM STORAGE SITE (MISS)  
CERCLIS<sup>1</sup> # NJD980529762**

**I. PURPOSE**

The purpose of this Action Memorandum is to document the approval of a time-critical removal action to remove contaminated sediments from a drainage swale in the vicinity of the Maywood Interim Storage Site (MISS), which is part of the Maywood Chemical Company site, located in and near Maywood, New Jersey. The U.S. Congress assigned the radiological portion of the site to the U.S. Department of Energy (DOE) in 1983 for cleanup as a decontamination research and development project for radioactive contamination. The DOE assigned this site to the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1984. The MISS and the vicinity properties containing FUSRAP wastes comprise the USACE area of responsibility ("The Site"). The 1998 Energy and Water Development Appropriations Act assigned FUSRAP, including the Maywood FUSRAP site, to the U.S. Army Corps of Engineers (USACE) for remediation under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, as amended, and the National Oil and Hazardous Substances Pollution Contingency Plan (or National Contingency Plan, "NCP", 40 CFR Part 300). This time-critical removal action is selected pursuant to the requirements of CERCLA and the NCP.

**II. SITE CONDITIONS AND BACKGROUND**

**A. SITE DESCRIPTION**

**1. PHYSICAL LOCATION/SITE CHARACTERISTICS/BACKGROUND**

The Site is located in a highly developed area of northeastern New Jersey in the Boroughs of Maywood and Lodi and the Township of Rochelle Park. It is about 12 miles north/northwest of New York City and about 13 miles northeast of Newark, New Jersey. Land uses near the site include residential, commercial, industrial, governmental and other (recreational, schools, etc.).

FUSRAP wastes are defined in the DOE-EPA 1990 Federal Facilities Agreement for the Maywood Interim Storage Site (MISS). The FUSRAP Site is defined as the MISS (which DOE acquired in 1985 to serve as an interim storage facility) and 87 vicinity properties containing FUSRAP waste. FUSRAP waste is defined as:

"all contamination, both radiological and chemical, whether commingled or not, on the MISS and all radiological contamination above DOE's action levels related to past thorium processing at the Maywood Chemical Works (MCW) site occurring on any Vicinity Properties. Also included are any chemical or non-radiological contamination on Vicinity Properties that would satisfy either of the following requirements:

- (1) The chemical or non-radiological contaminants are mixed or commingled with radiological contamination above DOE's action levels; or
- (2) The chemical or non-radiological contaminants originated in the MISS or were associated with the specific thorium manufacturing or processing activities at the Maywood Chemical Works site which resulted in the radiological contamination."

All Chemical contamination falling outside the boundaries of the FUSRAP Waste definition at the Maywood Chemical Company Site is being addressed outside the scope of FUSRAP by the U.S. Environmental Protection Agency (EPA) and other parties.

The MISS is approximately 11.7 acres in size, and is currently fenced. Collectively, all of the properties in the Site cover approximately 180 acres. Although generally flat, some of the Site has some gently sloping

terrain. Much of the surface water runoff in the area comes from parking lots and streets in the area. Most of the surface water runoff in the area flows into storm sewers with discharges into Westerly Brook or Lodi Brook, which in turn flow into the Saddle River. In areas directly fronting these brooks, surface water runoff flows directly into the brooks.

The proposed removal action is being requested on a drainage swale located on the southern portions of the former Maywood Chemical Works. The swale currently is located on properties occupied by the DeSaussure Equipment Corp., FedEx, Architectural Window Manufacturing Corp., Uniform Fashions Shops, and the Sears Distribution Center. All of these properties have been identified as having FUSRAP wastes in USACE's Feasibility Study which is currently under development for the site. The swale receives surface runoff from the aforementioned properties and storm sewer discharges from the residential areas east of Maywood Ave. The swale discharges to Lodi Brook on the property located on the Uniform Fashions Shop. Lodi Brook subsequently discharges to the Saddle River.

## 2. REMOVAL SITE EVALUATION

Extremely heavy rainfall associated with Hurricane Floyd on September 16-17, 1999, and additional heavy rains over the following two weeks created regional and localized flooding. The extremely heavy rainfall caused a culvert and drainage swale, which drains surface water runoff from the Site, to backup and become silted in. Some of the sediments settling in the swale and culvert contain elevated levels of radium-226 (Ra-226), thorium-232 (Th-232) and uranium-238 (U-238). Sampling of the sediments revealed that concentrations of Ra-226 and Th-232 (combined) exceed 130 pCi/g at the most contaminated areas and generally average 30 pCi/g. The ratio of radionuclides is consistent with the ratio of known thorium processing wastes and the swale is located on the former property of the Maywood Chemical Works. Therefore, USACE has determined that the sediments are FUSRAP wastes and it is within USACE's authority to conduct a response action in the swale. Unless sediments are removed from the drainage swale and culvert, additional rainfall has the potential to cause the migration of, and continued release of hazardous substances or pollutants or contaminants onto adjacent and nearby properties.

Section 300.415(b)(2) of the NCP provides eight criteria, any one of which can justify the need for a removal action, to be considered in determining whether a removal action is warranted for a release of a hazardous substance, pollutant or contaminant. The threat of release of hazardous substances addressed in this Action Memorandum, and the circumstances related to such threat of releases at the Site, satisfy at least one of the eight criteria: "weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released." The sedimentation in the culverts and drainage swales resulted from flooding and surface runoff. Additional flooding or rainfall in the area could result in additional sedimentation of these drainage pathways, and the obstructed flow of surface water may cause additional releases of these hazardous substances from the Site.

## 3. RELEASE OR THREATENED RELEASE OF A HAZARDOUS SUBSTANCE, OR A POLLUTANT OR CONTAMINANT, INTO THE ENVIRONMENT

The above noted presence of Ra-226, Th-232 and U-238 in swale sediments in concentrations above background constitute releases of hazardous substances and poses a threat for further migration. Each of these contaminants has been listed by the EPA as a hazardous substance in 40 CFR Part 302.4. The Baseline Risk Assessment developed for the site in 1993 shows that these contaminants pose a risk that exceeds the  $10^{-4}$  lifetime cancer risk threshold of CERCLA and the NCP. The potential that additional rainfall on the site may cause these contaminants to be released onto nearby properties constitutes a threatened release of these hazardous substances.

## 4. NPL STATUS

The EPA placed the Maywood Chemical Company site on the National Priorities List (NPL) in 1983.

## 5. MAP

The locations of the drainage swale and the culverts in which flow is impeded are shown on the attached site map.

**B. STATE AND LOCAL AUTHORITIES' ROLES**

The Borough of Maywood notified USACE that culverts and drainage swales at and near the Site were blocked with sediment, which caused additional flooding and had the potential to cause contamination to be released from the Site because of the altered patterns of surface water runoff flow.

Representatives of the Borough of Maywood have indicated that they lack the capability to respond to radiologically contaminated releases such as the sediments obstructing the drainage swale. However, the Borough of Maywood does recognize their responsibility for conducting operations and maintenance activities on the drainage channel, including removing obstructions from the storm drainage system such as sedimentation, provided it is not radiologically contaminated.

**III. AUTHORITY FOR REMOVAL ACTION**

Section 104(a)(1)(A) of CERCLA provides that the President may undertake a removal action "whenever any hazardous substance is released or there is a substantial threat of such release into the environment". As noted above in Section II.A.3 of this Action Memorandum, the presence of Ra-226, Th-232 and U-238 in the swale sediments above background is a release of hazardous substances and presents the potential of additional releases and migration of hazardous substances. The removal action is being undertaken to alleviate the threat of release by erosion of contaminants deposited in the drainage swale. The Fiscal Year 1998 Energy and Water Development Appropriations Acts assigned the FUSRAP portion of the Maywood Chemical Company Site to USACE for cleanup. The 1999 Energy and Water Development Appropriations Act mandated that USACE response actions on FUSRAP Sites be performed in accordance with CERCLA and the NCP. The Fiscal Year 2000 Energy and Water Appropriations Act contains the current mandate for USACE to conduct response actions relating to the FUSRAP program at the Maywood Site. USACE has the authority to perform this time-critical removal action on the Maywood Chemical Company Site.

**IV. PROPOSED ACTION AND ESTIMATED COSTS**

**A. DESCRIPTION OF PROPOSED ACTION**

**1. Description of Proposed Removal Action**

The proposed removal action consists of the removal of contaminated sediments currently impeding flow in the drainage swell and culverts. After the removal of sediments, additional measures will be taken to restore the normal hydraulic flow of the channel and prevent future deposition of contaminated sediments. These may consist of installing erosion control devices on the site and in the swale and/or sediment traps in the swale. It is estimated that 700 cubic yards of radiologically contaminated sediments require removal from the culvert and drainage swale. It is anticipated that the removal of contaminated sediments from the swales will be accomplished with conventional earth-moving equipment. These sediments will be transported to the MISS, dewatered, characterized for disposal, and transported to an authorized disposal facility in accordance with 40 CFR 300.440. The approximate locations of these sediments are shown in the attached Site Maps.

**2. Contribution of Removal Action to the Performance of a Remedial Action for the Site**

Removal actions need to be consistent to the extent possible with any likely remedial action which might be selected on the site. This removal action meets that requirement in that these sediments would require removal under any reasonably anticipated remedial action for this site. These sediments are included in the Feasibility Study USACE is presently developing for the site. The proposed removal action only accelerates USACE's plans for a response on these sediments. The effective implementation of this removal action, may actually reduce the final volume of contaminated soil required to be addressed in the remedial action, by preventing the migration of the contaminated sediments to downstream areas.

### **3. Applicable or Relevant and Appropriate Requirements (ARARs)**

Under the NCP, ARARs are those cleanup standards, standards of control and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws that specifically address the hazardous substances at the site (i.e. applicable) or address similar circumstances to the release (i.e. relevant and appropriate). No ARAR has been identified that would require the performance of this action. During the performance of the action, NJAC 7:9B (NJ's CWA regulations) is an ARAR that establishes surface water quality criteria for Lodi Brook. The drainage swale's discharge point into Lodi Brook will be monitored to assure that surface water quality is not further deteriorated during the performance of this action beyond established surface water quality criteria. Certain regulations are likely to be applicable relating to the transportation and treatment or disposal of the sediment removed from the swale and will need to be considered in the implementation of this removal. These types of requirements are not considered to be ARARs under the NCP.

### **4. Project Schedule**

The USACE will direct a contractor to prepare workplans for the implementation of this removal action. It is estimated that the fieldwork related to the removal of sediment, soil and water from the drainage swale and culverts can then begin within 15 days of the Action Memorandum approval. Field activities are estimated to take 10 days to complete. Finalizing the transportation and disposal aspects of the removal action will take several months.

### **B. ESTIMATED COSTS OF REMOVAL ACTION**

1. Estimated Subcontractor Costs	\$120,000.00
2. Estimated Transportation Costs	\$87,500.00
3. Estimated Disposal Costs	\$73,500.00
4. Estimated In-house USACE Costs	\$15,000.00
5. Contingency (25%)	\$74,000.00
Estimated Total Costs	\$370,000.00

### **V. APPROVAL OF ACTION**

This Action Memorandum is a CERCLA decision document, which selects a time-critical removal action to remove sediments which have filled the drainage swale and obstructed a culvert at the Maywood Chemical Company Site, as shown in the attached Site Maps. The removal action will alleviate the imminent threat of release of a hazardous substance which has been determined to be a FUSRAP waste. This Action Memorandum was developed in accordance with CERCLA, and is not inconsistent with the National Contingency Plan (NCP). This Action Memorandum is based upon information contained in documents in the Administrative Record for this action. Pursuant to the requirements of Section 300.415(n)(2) of the NCP, a public notice will be published in a major local newspaper of general circulation within 60 days of the initiation of this removal action, inviting the public to comment on the administrative record.

Approved:

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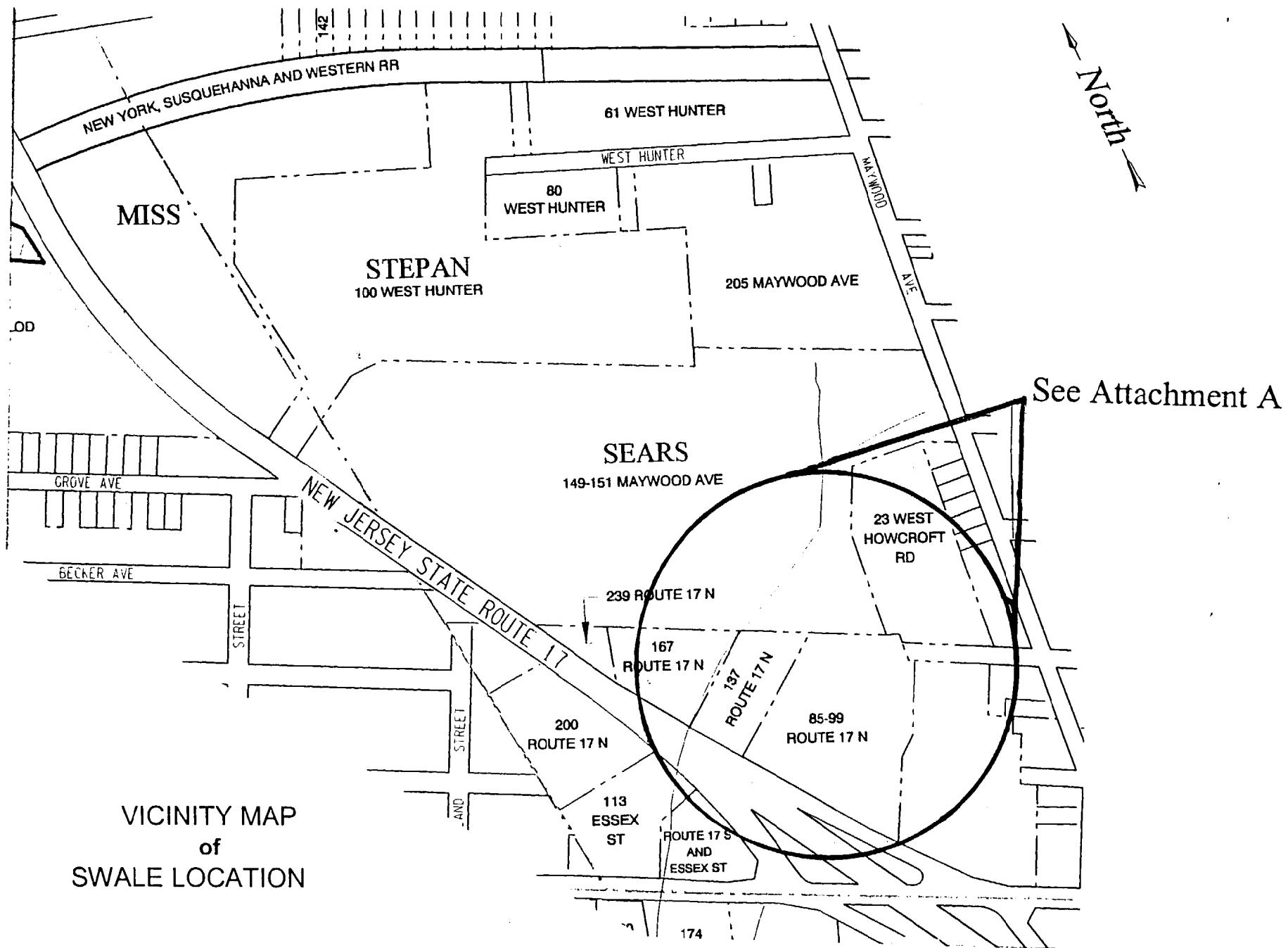
HANS A. VAN WINKLE  
Major General, U.S. Army  
Deputy Commander  
for Civil Works

Date

### **ATTACHMENT**

Site Maps

VICINITY MAP  
of  
SWALE LOCATION



## ATTACHMENT B

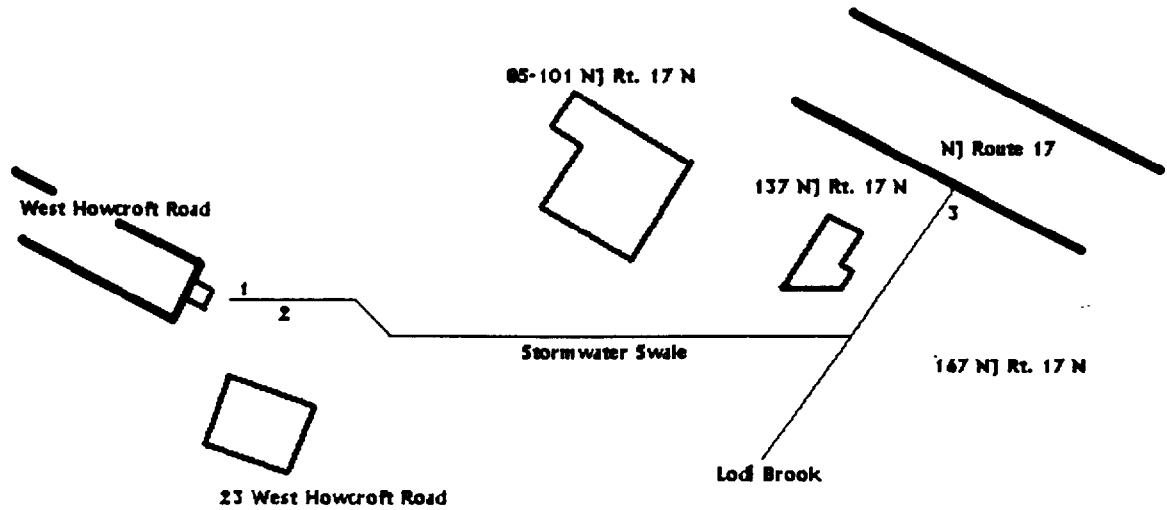


Figure B-1: Photo locations.



Photo 1: View of upstream culvert, 23 West Howcroft Road  
(Observation: Only about the top 8"-10" of the 36" culvert is open. The rest is silted.)

**ATTACHMENT B (Continued)**



Photo 2: View of sediment at upgradient invert, 23 West Howcroft Road.



Photo 3: View of downstream culvert, NJ Route 17 North  
(Observation: This is a .5' wide x 2' deep culvert)

