



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

November 7, 1997

Gregory S. Kowalczyk, Ph.D.
Senior Environmental Analyst
United Illuminating
157 Church Street - P.O. Box 1564
New Haven, CT 06506-0901

Dear Mr. Kowalczyk:

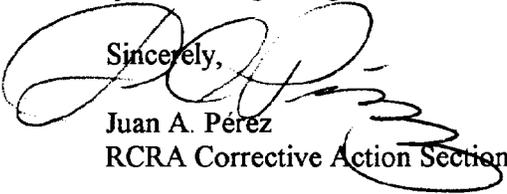
The purpose of this letter is to convey the findings of an evaluation to determine if your facility is stabilized under **current** site conditions. In general terms a stabilized facility is one where migration of releases and human exposure pathways have been controlled so that the facility poses no unacceptable risk to human health under current site conditions.

The measures of success used in this task are two environmental indicators: **Human Exposures Controlled** and **Groundwater Releases Controlled**. These two indicators are described in a July 29, 1994 memorandum from Michael Shapiro, EPA Director of Solid Waste. A copy of this memorandum is enclosed for your use.

The evaluation of existing information about the facility has led to the determination that the **Human Exposures Controlled** and **Groundwater Releases Controlled** indicators have been met. EPA's Environmental Indicator Findings and Supporting Arguments are enclosed. Please understand that this determination will stand only so long as the data, conditions and assumptions supporting it, as outlined in the enclosed memorandum, are maintained.

Meeting both environmental indicators and thereby achieving stabilization of the facility under current site conditions is a significant milestone for United Illuminating. Should you have any questions regarding this determination, please contact me at (617) 573-9683.

Sincerely,



Juan A. Pérez
RCRA Corrective Action Section

Enclosures

cc: Marina Crawford, CT DEP



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New Haven Harbor Station Facility
EPA ID No.CTD000844381
1 Waterfront Street, New Haven, CT

I. Site Description

A. Facility Operations

The New Haven Harbor Station is located at 1 Waterfront Street, New Haven, CT. It is owned and operated by United Illuminating, Inc. The station has been in commercial operation as an electric generating station since August 1975, and employs about 67 people. The property was purchased by UI and Northeast Utilities in 1957 and was previously owned by the Connecticut Coke Company from 1918. UI purchased the property from NU in 1973. Other industries located in the area include: New Haven Terminal, Northeast Petroleum Corporation, Yankee Gas, and the City of New Haven Sewer Treatment Plant.

The station encompasses about 57 acres of land on the eastern edge of New Haven Harbor, approximately ½ mile below the outlets of the Mill and Quinnipiac Rivers. The land use of the site is designated industrial while the surrounding area land use is primarily industrial/municipal. The geographic location is shown in Figure 1.

Electricity is generated at the station through a 464 megawatt boiler. This boiler has the dual capacity to burn oil and natural gas. The station also contains an auxiliary boiler for steam production that can burn #6 and #2 oil, and a turbine generator that burns #2 oil.

B. Facility Setting

Geology

The site is located in the physiographic province referred to as the Central lowlands of Connecticut. Bedrock at the site is mapped as New Haven Arkose, a Triassic age, reddish-brown, poorly-sorted sandstone. Depth to bedrock at the site ranges from 20-30 feet. The surficial geology at the site is artificial fill underlain by New Haven Outwash sediments consisting of sand and gravel. Soils in the northern sector of the site have been mapped as Ur (Urban Land), and as UD (Udorthents, smoothed) in the southern sector.

Groundwater

Groundwater at the site flows from east to west and discharges into New Haven Harbor. The groundwater north, south and east of the facility is classified as "GB", not suitable for human consumption without treatment, by the Connecticut Department of Environmental Protection (CT DEP). There are no public or private water supply wells located on the site or within a 1,000 foot radius of the facility.

Surface Water

New Haven Harbor is immediately west of the facility and is classified as “SD/SB”, indicating that it does not meet water quality criteria for one or more of designated uses due to severe pollution. Surface water in the vicinity of New Haven Harbor is classified as SC\SB by the CT DEP. The surface water pathway drainage flows in a southwest direction toward New Haven Harbor. The most probable point of entry of contaminants to surface water from the property is at the southwestern property boundary where the barges unload the fuel oil.

Surface water systems serve the population within 4 miles, though there are no surface water systems located within 4 miles of the site. There are no surface water drinking intakes downstream of the property. The New Haven Harbor Station is located within a Coastal Boundary. The west half of the site is located within the Coastal Flood Hazard Area (a 100-year coastal flood hazard). UI is currently permitted under NPDES No. CT0003760 to discharge wastewater into New Haven Harbor.

Potential Receptors

The nearest known residence which depends on private well use is located 5,000 feet from the northeast of the site boundary; access to the facility is controlled by a chain link fence with a gate guarded 24 hours a day (the gatehouse is located on Waterfront Street). Many private well users were not registered with the towns or the state, therefore some information regarding private well use within a 4-mile radius may not be included. There are no schools or day care centers located within 200 feet of the site.

RESIDENTS LIVING NEAR NHHS SITE

<u>Distance from Property</u>	<u>Estimated Population</u>
0.00-0.25 miles	50
0.25-0.50 miles	250
0.50-1.00 miles	7,960
1.00-2.00 miles	32,401
2.00-3.00 miles	50,190
<u>3.00-4.00 miles</u>	<u>51,119</u>
TOTAL:	141,970

Sensitive environments along the 15 mile surface water pathway includes Sandy Point, which is inhabited by the Piping Plover (an endangered species).

C. Release Summary

Date of Release	Description of Release
1974-1983	An unlined lagoon was used as part of an onsite hazardous waste treatment plant.
December 21, 1991	Two gallons of gasoline were released to New Haven Harbor when a contractor's boat sank. The gasoline dissipated in the rough waters.

No other observed or documented hazardous releases from AOCs 1-16 (Figure 2 of Final Preliminary Assessment Plus Report) have resulted in materials (100 gallons or more) being released to soils. There are appropriate release controls (i.e., berms, no floor drains) for most of the AOCs at the site.

II. Environmental Indicator Findings and Supporting Arguments

Human Exposure Controlled (CA725)

Based upon the information contained in the references reviewed including environmental sampling results, the site operations, and environmental setting (physical and demographic), it is determined that NHHS can be classified as a site where human exposures are controlled (YE determination). Based upon guidance specified in the July 29, 1994 U.S. EPA "RCRIS Corrective Action Environmental Indicator Event Codes" memorandum (Guidance), one of the following two criteria must be met for a YE determination. These are:

1. Remedial measures have been implemented with the result that all maximum contaminants detected or reasonably suspected are less than or equal to their respective action levels (e.g., MCLs for groundwater, a 10^{-6} risk level for other contaminants, or any other number designated as the action level) or do not exceed an Agency specified cleanup standard for the facility, and/or
2. There is no unacceptable human exposure to any contaminant concentration above action levels that had been detected or is reasonably suspected based on current contaminant concentrations and the current site conditions. Although there may be contamination at the facility that requires further remediation, action has been taken or site conditions are otherwise such that unacceptable threats to human health from actual exposure to the contamination are not plausible based on current uses of the site. Such actions may include the use of physical barriers or institutional controls (e.g., deed restrictions or alternative water supply).

NHHS meets the requirements of the second criteria. There is no unacceptable human exposure to any contaminant concentration above action levels. Exposure of trespassers, on-site workers

or visitors to possibly contaminated soils is implausible due to access control and pavement. Unacceptable off-site human exposures are not plausible due to the lack of public use of the harbor due to its Class "SD/SB" rating by the CT DEP and the significant dilution of low level ground water contamination in the receiving surface water.

There are no municipal supply wells located within a 4-mile radius of the site and there are no public or private wells located within 1,000 feet of the site.

Groundwater Releases Controlled (CA750)

Based upon the information contained in the references reviewed including site operations and environmental setting (physical), it is suggested that NHHS can be classified as a site where no groundwater releases have occurred (NR determination). Based upon the Guidance of July 29, 1994, for all known or reasonably suspected groundwater contamination at the facility in excess of action levels, or in excess of an Agency specified clean-up level, one of the following criteria must be met:

1. An engineered system has been installed that is designed and operating (including performance monitoring) to effectively control further migration beyond a designated boundary such as the engineered system, the facility boundary, a line upgradient of receptors, or the leading edge of the plume as defined by levels above the Agency established action levels or clean-up standards, and/or
2. The Agency has determined that the groundwater clean-up objectives can be met without the use of an engineered system through the remedial measures selected including facilities where the contamination will naturally attenuate.

In this case, there is no known or reasonably suspected groundwater contamination at the facility in excess of action levels, or in excess of an Agency specified clean-up level. Therefore, an engineering system to control groundwater migration is not presently needed at the site.

III. Recommended Actions

The groundwater data provided is adequate for the purposes of this report, but in order to reach a final remedy decision, the limitations and assumptions associated with the groundwater data need to be further examined. It is possible that contamination exists below the surface that has not yet been detected (on and off-site) due to past uses of the site (i.e., the use of a percolation lagoon (AOC #6) and the high release potential of the catch basin (AOC #15)). Therefore, some groundwater monitoring/sampling is recommended for this site.

IV. References

- A. Demonstration of Compliance with Environmental Indicators at New Haven Harbor Station, January 1997, by United Illuminating - for EPA.

- B. NHHS Preliminary Assessment-Plus Final Report, September 1992, by Roy Weston, Inc. - for EPA.
- C. Code of Federal Regulations: Protection of Environment CFR 40 Parts 260-299, July 1996, by the Office of the Federal Register National Archives and Records Administration.
- D. Site Visit to NHHS, by EPA staff July 10, 1997
- E. UST Matrix submitted by NHHS to EPA, June 1997

Sign Off

Prepared by



Date 9/11/97

Juan A. Pérez, Environmental Scientist
Lauren Walker, Engineering Intern

Approved by



Date 10-16-97

Matthew R. Hoagland, Chief
RCRA Corrective Action Section

EW
9-11-97