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NSB NEW LONDON
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April 15, 1996

Mr. Don Gonyea
Bureau of Water Management, PERD
CT Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

Re: OHM Emergency Discharge Permit for Naval Submarine Base - New London
Naval Exchange (NEX) Service Station; OHM Project No. 16232

Dear Mr. Gonyea:

OHM Remediation Services Corp. (OHM) has been contracted by the United States Navy to construct and operate a remediation system to address soil and groundwater contamination at the NEX Service Station, an on-base retail store and gas station, located on the Naval Submarine Base, Groton, Connecticut. OHM, on behalf of the Navy, the permittee, requests issuance of an Emergency Discharge to Surface Water Permit for system operation. The proposed receiving water body is the Thames River.

Site Description

The contamination found at the NEX Service Station is due to leaks associated with gasoline and diesel underground storage tanks. The tanks were taken out service in the mid 1960's; they were removed from the ground in November 1993. Soil and groundwater data indicate historical releases of petroleum product into the subsurface.

The remediation system installed at this site is a sparge and vent system (AS/SVE), consisting of 64 sparge points and 35 vent wells, designed to address residual soil and groundwater contamination. Sparge and vent systems incorporate air injection wells screened below the contaminated soil and groundwater, thereby transferring contaminants from the liquid and adsorbed phases to the vapor phase via volatilization. A vacuum is applied to extract the off-gas as it exits the water table and direct it to a granular activated treatment unit prior to discharge to the atmosphere. Moisture typically found in the soil vapor is removed via a knockout vessel prior to vapor phase carbon treatment.

Water from the knockout vessel will be treated using two suspended solids filters equipped with 50 and 5 micron oil sorbent bags, piped in series. Final water treatment will consist of two 55 gallon aqueous phase granular activated carbon vessels, also piped in series. It is proposed that the treated water be discharged into the base storm sewer system with subsequent discharge into the Thames

River, with outfall adjacent to the Nautilus Memorial. The water treatment system is designed with an initial flow capacity of 10 gpm. However, a 20 gpm discharge permit is required should future site conditions warrant an increase in water treatment. Encountering a flow greater than 10 gpm will necessitate a system shut down, an increase in treatment capacity and subsequent CTDEP notification. Treatment system upgrades, such as additional carbon vessels and suspended solids filters, will be added following CTDEP approval. It is estimated that the AS/SVE system will require less than two years of operation to remediate the site.

Groundwater Analyses

The most recent groundwater analyses for the NEX Service Station were conducted in March 1995. Samples were collected from area wells (14 total) and analyzed for halogenated volatile organics (Method 8010), aromatic volatile organics (Method 8020), methyl tert-butyl ether (MTBE), total petroleum hydrocarbons (Method 418.1) and hydrocarbons as gasoline and diesel fuel (Method 8015). Results from this sampling event are attached. Total values for the volatiles benzene, toluene and ethylbenzene (BTEX) ranged from .294 mg/l to 50.4 mg/l. Total hydrocarbons ranged from .622 mg/l to 245 mg/l. The highest values were detected in monitoring well OBG-1, which is located near the center of the contaminant plume.

Influent water to the water treatment system at this site is expected to have very low levels of residual contamination, due to air stripping effects from the venting.

Laboratory Submittal Discharge Analysis

Water treatment system influent and effluent samples will be collected 24 hours and 72 hours into system operation, weekly for three weeks and monthly thereafter. Samples will be submitted to a Connecticut DEP certified laboratory for volatile organics (Method 8020) plus methyl tert-butyl ether (MTBE) and xylenes, base neutral organics (Method 601/602) and total petroleum hydrocarbons (Method 8015) analysis, as shown in the following table.

Sample Frequency	Analyses	Process Stream
24 Hour	Method 601/602, 625, 8015	Influent/Effluent
72 Hour	Method 601/602, 8015	Influent/Effluent
Week 1, 2, 3	Method 601/602, 8015	Influent/Effluent
Week 4	Method 601/602, 625, 8015	Influent/Effluent
Monthly	Method 601/602, 8015	Effluent

The presence of semi-volatile organics is not anticipated; however, semi-volatiles will be analyzed for twice for quality assurance purposes. Whole effluent toxicity screening will be conducted semiannually. Details of the toxicity screening are to be determined.

Field Screening

To assure optimum system performance, the water treatment system influent and effluent will be field screened. Screening will be conducted daily for ten days and weekly, thereafter. Field screening methods will consist of head space analysis utilizing a photoionization detector (PID) to screen for the presence of volatile organic compounds, pH measurements, and appearance verification to assure the discharge water does not contain a visible oil sheen or visible discoloration.

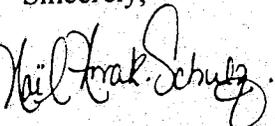
Permit Application Fee

It is understood that a fee of \$500.00 is required for emergency discharge authorization. The Navy, by way of a previous OHM application submittal, has a \$500.00 credit with the CTDEP, Central Processing Unit. This credit was initiated from a tank closure permit application in 1995, specifically Tank OT-5, Naval Submarine Base, Groton (OHM Job No. 16798). Given this information, submittal of a fee with this application for emergency discharge is not required.

OHM will be responsible for operating the AS/SVE system for the initial 30 day startup, after which long term operation and maintenance will be the responsibility of another company under contract with the Navy.

We trust this information will assist you in reviewing our permit application. Please contact us at your earliest convenience to discuss any additional information you may require. I can be reached at (609)588-6446. We greatly appreciate your cooperation in this matter, and look forward to hearing from you.

Sincerely,



Noël Novak-Schulz
OHM Remediation Services

pc: Lt. Mark Weirsmas - NSB, New London
Christi Davis - NORTHDIV, Lester, PA
Frank Pino - OHM
H. Alex Zahl - OHM
OHM Project File 16232

AUTHORIZATION-SITE INFORMATION FORM

FACILITY ID. _____ APPLICATION NO. _____ AUTHORIZATION NO. _____

SITE OWNER United States Navy
 OWNER ADDRESS Naval Submarine Base, New London CT

DISCHARGER NAME United States Navy
 DISCHARGER ADDRESS Naval Submarine Base, New London CT
 & PHONE _____

SITE NAME Naval Exchange (NEX) Service Station
 SITE ADDRESS Tana Avenue, Naval Submarine Base
New London CT

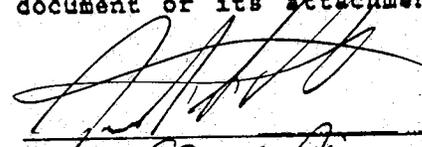
Indicate the point of discharge, either "sanitary sewer" or the name of a surface water body. If discharge is to a storm sewer, the water body to which the storm sewer discharges must be specified. For sanitary sewer discharges the attached "Approval" form must be signed by the Municipality and submitted with this Authorization.

DISCHARGE LOCATION Thames River
 ACTIVITY PRODUCING DISCHARGE Groundwater Remediation System (AS/SVE)
 PROPOSED DISCHARGE RATE 20 GPM _____ GPD
 TYPE OF CONTAMINATION Petroleum Hydrocarbons
 VOLUME OF PRODUCT LOST (groundwater contamination or spills only) _____
 DATE DISCHARGE WILL BEGIN 5-6-96 DATE DISCHARGE WILL END UNKNOWN
 WATER QUALITY CLASSIFICATION (receiving groundwater or surface water body) B

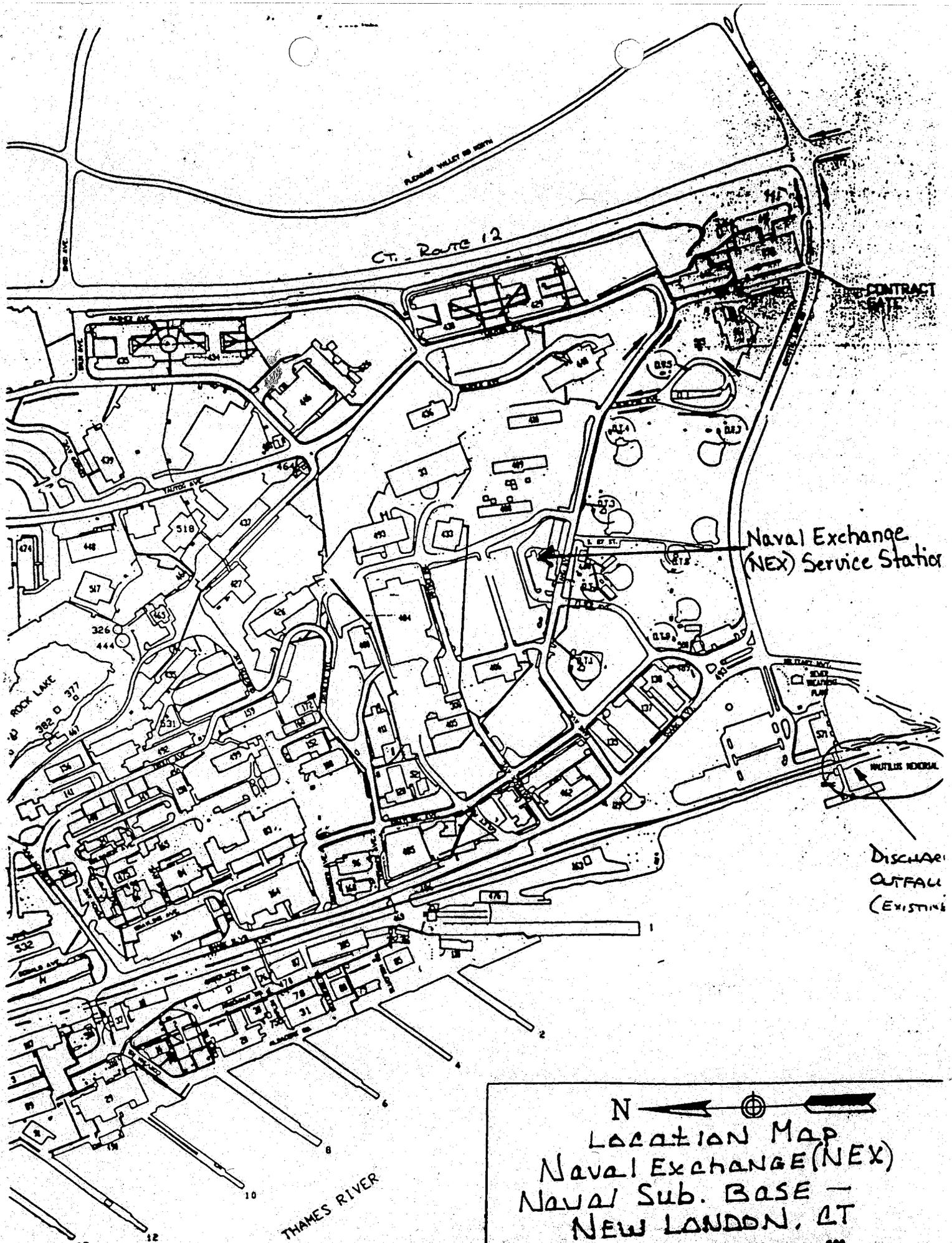
Are there any public or private drinking water supply wells located within a 1/4 mile radius of the contaminated area? (Groundwater contamination only)
 _____ (If "yes" mail a copy of this form to the groundwater section to the same address as indicated below, Attention: Groundwater Section.)

I certify under penalty of law that I have read and understand all conditions of the authorization issued for the discharge described in this site information form. I have personally examined and am familiar with the information submitted in this document and all attachments and certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief, and I understand that any false statement made in this document or its attachments may be punishable as a criminal offense.

Date 4/16/96


 Name: Frank P. No
 Title: Sr Project Mgr

Mail original to: Attention: Authorization Coordinator
 Bureau of Water Management, PERD, Central Processing Unit
 CT Department of Environmental Protection,
 79 Elm Street, Hartford, CT. 06106-5127



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 Location Map
 Naval Exchange (NEX)
 Naval Sub. Base -
 NEW LONDON, CT
