



**OHM Remediation  
Services Corp.**

A Subsidiary of OHM Corporation

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NSB NEW LONDON

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April 16, 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 to Permit for Naval Submarine Base - New London  
Dolphin Mart; 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 petroleum hydrocarbon contamination at the Dolphin Mart, a retail facility for naval personnel. OHM, on behalf of the Navy, the permittee, has requested issuance of a permit to discharge into the publically owned treatment works (POTW) of the City of Groton. The Town of Groton has issued a preliminary Industrial Discharge Authorization (attached) for review and written approval from OHM and the CTDEP. Following your review and approval of the abovementioned document, OHM requests the required CTDEP emergency discharge permit for this site. The remediation system to be utilized will discharge water into the POTW, with subsequent discharge into the Thames River.

### Site Description

The contamination found at the Dolphin Mart is due to leaks associated with former underground storage tanks and product dispensers that were used for the retail sale of gasoline. Records indicate that the site operated as a gasoline service station until October 1985. In October 1985, a release of gasoline/diesel fuel was reported to the Connecticut Department of Environmental Protection. Tank tightness tests revealed that all four 10,000 gallon underground storage tanks (USTs) had leaked. The USTs and surrounding contaminated soil were removed between 1985 and 1987. A groundwater contaminant plume was also detected in the area.

To remediate the subsurface soil and groundwater contamination, a sparge and vent system (AS/SVE), consisting of 15 sparge points and 16 vent laterals, has been installed. 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 into 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. Water flow will be intermittent, based on how rapidly the knockout vessel fills, and will be automatically pumped through the water treatment system and discharged. It is proposed that the treated water be discharged into the Groton sanitary sewer with subsequent discharge into the Thames River. The treatment system is designed to handle a 10 gallon per minute (gpm) flow. 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 require a system shut down, an increase in treatment capacity and subsequent CTDEP notification. Treatment system upgrades will be added following CTDEP approval. It is estimated that this sparge and vent system will require less than two years of operation to remediate the site.

### **Groundwater Analyses**

The most recent groundwater analyses for the Dolphin Mart were collected by OHM in March 1995. The twelve on-site monitoring wells were sampled and analyzed for halogenated volatile organics (Method 8010), aromatic volatile organics (Method 8020), total petroleum hydrocarbons (TPH) in the gasoline range (Method 8015), and methyl tertiary butyl ether (MTBE). Half of the wells were non-detect for all analyzed compounds, with the remaining wells having detectable levels of aromatic volatile organics, TPH and MTBE. Well HRP-10 had the highest total concentration of the aromatics benzene, toluene, ethylbenzene and xylenes (BTEX) at 1,736 mg/l, and the highest TPH concentrations at 6,080 mg/l. Well WE-2S had the highest detectable concentration of MTBE at 2.43 mg/l. Analytical data confirms that the site is impacted with only residual gasoline contamination. Copies of the groundwater analytical data are attached.

### **Laboratory Submittal Discharge Analysis**

Four weekly sampling events will be conducted during the system startup period to evaluate influent and effluent quality. Samples will be submitted to a Connecticut DEP certified laboratory for volatile organics (Method 8020), total metals (Method 6010), total petroleum hydrocarbons (Method 8015), cyanide (Method 335.2), total suspended solids (Method 160.2), pH (Method 9040) and fluoride analysis, as outlined in the Groton POTW preliminary discharge authorization.

Following the 30 day monitoring period, effluent sampling will be conducted at a minimum of once per month for the same parameters listed above.

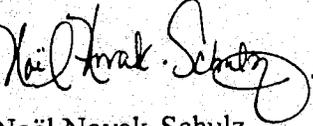
### **Field Screening**

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 volatile organic compounds, pH measurements, and appearance verification to assure the discharge water does not contain a visible oil sheen or visible discoloration.

System startup is scheduled for May 6, 1996. 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 greatly appreciate your cooperation on this project and hope this information meets your approval. Please contact me at (609) 588-6446, should you need additional information.

Sincerely,



Noël Novak-Schulz  
OHM Remediation Services

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