

New York State Department of Environmental Conservation
Division of Environmental Remediation
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June 9, 2004

James Colter
Dept. Of the Navy, Northern Division
Naval Facilities Engineering Command
10 Industrial Highway, Mail Stop No. 82
Lester, PA 19113-2090

RE: Naval Weapons Industrial Research Plant (NWIRP)-
Bethpage, Nassau County Site No. 1-30-003B.

Dear Mr. Colter:

The Department of the Navy (the Navy) has submitted a report entitled "Closed Loop Bio-reactor Pilot Study Implementation Plan" and received by this office on May 19 2004. This pilot test work plan covers the NWIRP Area of Concern (AOC) 22, former underground storage tanks, tank numbers 03-01-1, -2 and -3. The New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation Bureaus of Remedial Action A and the NYSDEC Region 1 Spill Response unit. These tanks were formally operated by the Northrop Grumman Corporation. The Closed Loop Bio-reactor Pilot Study Implementation Plan was prepared by Locus technologies on behalf of the Department of the Navy.

This work plan has been reviewed by the NYSDEC Bureau of Remedial Action A (BURA), the NYSDEC Region 1 Spill Response Unit and the New York State Department of Health (NYSDOH). Though this Implementation Plan is listed as a pilot study, the goal is to complete the site remediation depending on how successful the implementation of this program is. The NYSDEC offers the following comments on this pilot test work plan:

1. Page 8, Section 1.6: The Closed Loop Bio-reactor (CLB) remedial construction and subsequent operation, maintenance and monitoring will require a community air monitoring program. Please see the enclosed "NYSDOH Generic Community Air Monitoring Plan (CAMP)" and utilize applicable sections when preparing this plan for the remedial construction and the ongoing operation of the CLB system.

2. Page 8, Section 1.6, Third Paragraph: The consultant must ensure that the "patented" nutrients, and/or their breakdown products, added to accelerate biological growth, do not add an unacceptable loading of contaminants to the groundwater.

3. Page 16-17, Section 4.2.2 and - Page 20, Section 5.4.1: As with groundwater, any soil samples taken must also be analyzed utilizing EPA Method 8021.

4. Page 19, Section 5.3:

a. The air sparging and soil vapor extraction (AS/SVE) system will require a confirmatory network of soil vapor monitoring wells. This to ensure that any soil gas vapors potentially generated as an intermediate product, or due to the generation of soil vapors due to the heat of reaction remain within the capture zone of the AS/SVE system.

b. The intermediate products of CLB process need to be identified in the CLB plan. These intermediate products then need to be included in the groundwater and soil samples to ensure that the CLB system is not creating a new source of soil and/or groundwater contamination.

5. Page 20, Section 5.4.2: Additional monitoring wells need to be added to the groundwater program to monitor the groundwater during the ongoing AOC 22 site remediation. This is especially important since the remediation wells will be used for air sparging. These additional sentinel wells are needed around the active remediation, particularly down gradient of the AOC study area are needed to verify any mobilized product (floating and/or dissolved) or anything else this bioremediation process may introduce, is not moving off site.

6. Appendix C, Section 4.4:

a. A summary of the quality control procedures for the analytical methods specified for this pilot test need to be listed here. The procedures for the USEPA test methods can be accessed at the following website: <http://www.epa.gov/epaoswer/hazwaste/test/main.htm>

b. A chart listing the analytical methods specified for this project, the matrices to be analyzed (ie soil, groundwater, etc) and the categories to be analyzed for (ie VOA, semi-VOA, etc) needs to be included here.

c. The data validation reports, as appropriate, need to be included with the routine project submittals.

d. Some of the constituents in No. 6 fuel, for example tri-methyl benzene, are not on the target list of the analytical methods proposed. This needs to be accounted for in the CLB plan.

7. Figure 1-2:

a. It appears that a pilot study well is proposed in the center of the GAC building.

b. It is not clear which wells will be used for air sparging/soil vapor extraction versus strictly monitoring for groundwater conditions. Please clarify this on the figure.

In the meantime, if you have any questions or comments regarding this matter, please contact me at (518)402-9620.

Sincerely,



Steven M. Scharf, P.E.
Project Engineer
Division of Environmental Remediation
Bureau of Remedial Action A

Enclosure

cc:w/enc: J. Cofman, Nothrop Grumman (Via e-mail)
I Ushe, NYSDOH (Via e-mail)
N. Acampora, Region 1 NYSDEC (Via e-mail)

ENCLOSURE

New York State Department of Health Generic Community Air Monitoring Plan

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical-specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for volatile organic compounds (VOCs) and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate NYSDEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.
2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.
3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

All 15-minute readings must be recorded and be available for State (DEC and DOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed $150 \text{ mcg}/\text{m}^3$ above the upwind level and provided that no visible dust is migrating from the work area.
4. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than $150 \text{ mcg}/\text{m}^3$ above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within $150 \text{ mcg}/\text{m}^3$ of the upwind level and in preventing visible dust migration.

All readings must be recorded and be available for State personnel to review.

Last Updated: June 20, 2000