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June 24, 2005

Mr. Steve Beyers, P.E.
Cornell University
Environmental Compliance Office
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361 Pine Tree Road
Ithaca, NY 14850

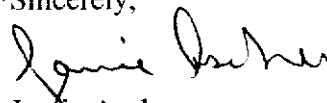
Re: Long Island Horticulture Research and Extension Center #V00234-1
Post Remediation Work Plan, Revised June 2005

Dear Mr. Beyers,

The New York State Department of Environmental Conservation hereby approves the referenced plan. At the conclusion of remedial and monitoring activities please submit to the Department a Remediation Report. This report will contain "as built" drawings, photos, groundwater monitoring data, disposal manifests and any other documentation relevant to the remedial activities conducted at the site. The report should also contain a certification statement signed and sealed by a New York State licensed professional engineer which would include the following language, "I certify that the Remediation Work Plan was implemented and that all construction activities were completed substantially in accordance with the Department approved Remediation Work Plan and were personally witnessed by me (or "by a person under my direct supervision.

If you should have any questions, please feel free to contact me at (631) 444-0246.

Sincerely,



Jamie Ascher
Engineering Geologist 2

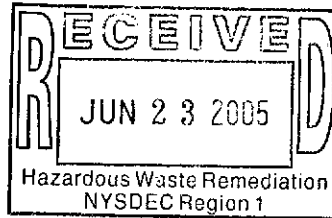
cc: W. Parish
J. Nealon



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June 22, 2005

Jamie Ascher
Division of Environmental Remediation
New York State Department of Environmental Conservation
Region 1 Headquarters
Building 40 - SUNY
Stony Brook, New York 11790-2356

Re: **Long Island Horticulture Research and Extension Center (Site #V-00234-1)**
Voluntary Clean-Up Agreement (Index #D1-0002-01-03)

Dear Mr. Ascher:

Attached are four copies of the Post-Remediation Work Plan for the Soil and Groundwater Monitoring Actions at the Cornell University Long Island Horticulture Research & Extension Center. Originally dated June 2004, these copies were revised in June 2005 to include the language requested in your March 25, 2005 conditional approval letter as well as other revisions to the schedule and text to reflect the current status of the site.

Thank you for your continued assistance regarding work on this site. If you have any questions, please feel free to give me a call.

Sincerely yours,
CORNELL UNIVERSITY

Steve Beyers, P.E.
Services Team Leader
Environmental Compliance Office

Enclosures: 4

Post-Remediation Work Plan

Soil Cap and Groundwater Monitoring Actions

Cornell University

Long Island Horticulture Research & Extension Center

Riverhead, New York

Prepared by:

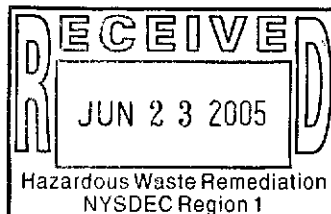
Environmental Compliance Office

Cornell University, Ithaca NY

Steve Beyers, P.E.

Originally Drafted: June 2004

Revised: June 2005



Draft: June 2004

Revised: June 2005

Post-Remediation Work Plan
Soil Cap and Groundwater Monitoring Actions
Cornell University – Long Island Horticulture Research & Extension Center
Riverhead, New York

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Section I: Overview

1.1 Introduction and Purpose

This Post-Remedial Work Plan describes remedial work (the "Project") completed, or to be completed, at the Long Island Horticulture Research and Extension Center in Riverside, New York. This work plan is entitled "post-remedial" to differentiate it from the prior Remedial Work Plan (ref 1) generated, approved, and implemented at the site.

This June 2005 Revision to the Plan prepared originally in June 2004 has been updated to reflect the work already done, and that not yet complete as of this revision date.

This Project is an extension of a Voluntary Clean-Up Program (VCP) Agreement between Cornell University, representing the Center, and the New York State Department of Environmental Conservation, representing the State's public environmental interest. The review and approval authority for this work is the NYSDEC. While Post-Remediation Work Plans are not specifically indicated as components of the VCP process as described in that Agreement, this Project is an outgrowth of the Remedial Work Plan described therein.

The scope of work included in this Work Plan is as negotiated between the New York Department of Environmental Conservation (NYSDEC), represented by their Region 1, Division of Environmental Remediation Bureau of Hazardous Waste Office (Jamie Ascher, Engineering Geologist 2, Project Manager) and Cornell University, represented by the Cornell's Environmental Compliance office (Steve Beyers, P.E., Project Manager) located in Ithaca New York, Cornell's main campus location. This additional work was requested by the NYSDEC based on their review of the Final Report (ref 2) prepared for the remedial work included in the implemented Work Plan (ref 1).

1.2 Summary of Work Completed

Prior to the implemented Work Plan (ref 1), initial work including cleaning and removal of a pesticide-contaminated sump, removal of visually-impacted soils, and development and testing of groundwater wells was completed under an Interim Remedial Measure (IRM). This IRM work occurred in 1994.

Following the IRM work, the implemented Work Plan (ref 1) included the following approved scope of work:

1. Collection and analysis of water samples from five wells, four of which existed prior to the work plan approval and one additional well installed and developed as part of the Work Plan scope;
2. Removal and disposal of an overflow drywell (precast structure) and rock drain, as well as contaminated soils beneath the drywell and drain structures, including the following sub-tasks:

- Installation of sheeting and shoring in the two work areas.
- Excavation of pesticide-impacted soils from beneath the Overflow Drywell (to approximately 16' below grade) and from the Rock Drain Area (to approximately 12' below grade).
- Waste characterization sampling and analysis.
- Confirmatory soil sampling at the terminus (bottom and sidewalls) of the excavations to document the level of pesticide residuals that remained in the soil.
- Transportation and disposal of pesticide-impacted media.
- Removal and decontamination of sheeting and shoring.
- Backfilling of the excavated Overflow Drywell and Rock Drain Area.

Removal of impacted soil and structures during the IRM and remedial work eliminated principal areas of contamination at the site and severely reduced the potential of future migration of contaminants from these areas into surrounding soils or groundwater.

1.3 Rationale for Additional Work

The NYSDEC, in discussion with the NYSDOH, requested the additional measures included in this "Post-Remediation Work Plan" to provide further assurances of the protection of the environment and specifically of groundwater below these remedial areas. Specifically, although remediation was successfully completed in the area of the overflow drywell to a depth of approximately 16' below grade, the soils at depths below 16' continue to show concentrations above the standard guidelines for site clean-up. The level of impact at this depth was documented in studies prior to the approval of the Work Plan and also in the results of soil testing at the base of the excavated material following the remediation.

While there has been no evidence that these impacted soils have led to impacts to groundwater or any other aspect of public health, the possibility remains that infiltration into the sandy soils of this site would result in the transport of contaminants into the aquifer. Since these impacted soils continue to a depth of at least 80' and there are no known impacts, removal of these soils by excavation is neither practical (especially in sandy soils) nor reasonable.

Considering all these facts, the NYSDEC concluded, after discussion with the NYSDOH, that a rationale response is the installation of a "cap" vertically above the impacted area and two more rounds of groundwater sampling to confirm the lack of impact on water resources would provide a high level of protection for the environment. The scope of work documented herein represents Cornell's understanding of the specific details of these requirements based on discussions with NYSDEC project staff.

Section II: Work Plan Implementation

2.1 Scope of this Work Plan

This work plan includes the following additional work at the site:

- An impervious cap for the area immediately over the former overflow drywell/sump area. This cap, installed in September and October 2004, included a 20 mil (minimum) polyethylene liner measuring at least 12' in width by 12' centered installed 6' below finish grade, so as to avoid surface activities. The liner was centered directly over the previous 8' diameter drywell, installed so as to prevent direct (vertically downward) water filtration through the area in which the soils were previously removed. The liner was also installed with a slight pitch from a center high point to slightly lower edges to encourage the material to "drain" outward. Because the previous remedial work included removal of contaminated soils down to a depth of 12-16 feet, the impervious cap was constructed in an area of "clean" imported soils and therefore did not subject workers to chemical risks from past contaminants removed during that prior work.
- The "capped" area was backfilled with local material mounded slightly so as not to encourage excessive surface water intrusion into the area above the liner.
- Two additional rounds of groundwater sampling, conducted at approximately 6-month intervals, were completed by the environmental firm H2M using the sampling protocol developed by that firm and approved during the implemented Remedial Work Plan. This sampling program utilized the same wells and sampling compounds as the sampling completed as part of the original Work Plan scope.
- A deed restriction for the site, describing the specific contaminants and contaminant locations, is being prepared to avoid inadvertent development in these areas (at these depths). Conditions of the deed restriction are based on the template specified in the VCA, with appropriate site-specific language as negotiated between a NYSDEC attorney and Cornell's legal staff to ensure that the terms of the restriction of this land, owned by New York State, are appropriate.
- Cornell University will provide an annual certification, prepared and submitted by a professional engineer or environmental professional acceptable to the Department, which would certify that the institutional controls and engineering controls put in place, pursuant to the executed voluntary cleanup agreement, are still in place, have not been altered and are still effective. Annual certification will be provided until the NYSDEC notifies Cornell in writing that this certification is no longer needed.
- Cornell University will submit, for NYSDEC approval, a soil management plan should it be necessary to perform excavation activities at this location at a depth beneath previous remedial activities (below about 12' from ground surface in this

area). The plan will include, but not be limited to, the nature and extent of the excavation activities, an estimate of the volume of soil to be excavated, soil characterization and, where applicable, disposal/reuse in accordance with NYSDEC regulations.

2.2 Parties to the Project

This Project was carried out jointly by the Owner, a Contractor, and the New York State Department of Environmental Conservation (NYSDEC). This Section of the Work Plan specifies the roles and responsibilities assigned to each party.

2.3 Roles and Responsibilities of the Owner

The Owner approved the Project, contracted the work, promoted compliance with this Work Plan and the associated Health and Safety Plan through appropriate contractual terms and oversight, and financing the work.

The Owner also made available to the Contractor relevant information on site hazards (i.e., past test reports and the Final Report of the Site Investigation) so that the Contractor could appropriately protect site personnel during the work. During the work, the Owner provided the Contractor with temporary site access and control of the Work Area.

The Owner also prepared this Work Plan and is responsible for providing documentation of the work in a Final Report to be submitted in letter form for approval to the NYSDEC.

2.4 Roles and Responsibilities of the Contractor

The lining installation contractor was responsible for the actual remedial actions, and provided manpower, equipment, resources as required to implement the work.

The sampling Contractor was responsible for collecting and analyzing water samples, and for reporting the results of the water sampling analysis as specified in their agreement with the Owner.

Each Contractor is responsible for the health and safety of their personnel.

2.5 Role of the Regulatory Authorities

The NYSDEC is responsible for providing appropriate public oversight of the project in order to protect the environment. To accomplish this mission, the NYSDEC is responsible for review and approval of this Work Plan and of the final documentation as provided in the Final Report letter. Where elements of the Plan or Report are unacceptable, the NYSDEC is responsible to communicate those areas of unacceptable work so that the Owner can determine an appropriate response. The NYSDEC has also filed a Notice of the Intent in the Environmental News Bulletin to allow public review and comment.

Section III: Health and Safety

The work included in this Work Plan is unlike past remedial work at the site. In this project, there was no expectation that workers or the public would come into contact with hazardous or toxic substances, since all excavation occurred at depths in which formerly impacted soils were replaced with clean soils. Water sampling also did not require any unusual health and safety precautions, as past groundwater sampling revealed only trace levels of contaminants (other samples found no detectable contaminants). Rather, the significant health and safety risks for the site were the same as construction or field project at any open field site. For example, the installation of a liner involved typical risks associated with excavation activities, including injury from heavy machinery, unstable slopes, and slips and falls.

For contracted work, responsibility for health and safety was by the Contractor, as documented in applicable agreements. For work completed by Cornell employees, the requirements will include the comprehensive safety program at Cornell University, as administered through the office of Environmental Health and Safety. In either case, site workers will be required to follow all applicable OSHA worker safety regulations throughout the project.

Section IV: Schedule

The following schedule has been revised to reflect those tasks completed prior to formal approval of this Work Plan:

<u>Task</u>	<u>Schedule/Goal</u>
Work Plan Prepared	June 2004
Capping Plan Verbal Approval	July 2004
Construction Documents Complete (capping work)	August 2004
Capping Work Completed	October 2004
First Round of Groundwater Sampling	January 2005
Second Groundwater Sampling Event	June 2005
Event #2 Analysis Results Complete & Checked	August 2005
Deed Restriction in Place	August 2005
Final Report/Letter Requesting Closure	August 2005

The first groundwater sampling event was completed on January 11, 2005. No contaminants were detected in any of the samples in this round. The second sample event was completed on June 17, 2005. Results should be available about four weeks after that date. All results will be provided in the Final Report.

Section V: Reporting and VCA Close-Out

5.1 Reporting Protocol

The Owner will provide timely reports to NYSDEC as the work progresses.

A Final Report, in the form of a letter, will be prepared. The Final Report will document the work performed and include copies of the Engineer's Certification and all sampling results. The Final Report will also include a statement regarding whether the work was completed in accordance with this Work Plan and describing any deviations from the approved Plan, and will provide recommendations on future requirements, if appropriate.

5.2 Completion of Work

Cornell University understands that, following the collection and analysis of the water samples at each of the two intervals discussed, if the samples continue to show no impacts above groundwater standards attributable to the work area, there will be no further requirements for sampling or analysis associated with this Voluntary Clean-Up Agreement (VCA). We understand that upon successful completion of these activities, Cornell will receive from the NYSDEC the site release documentation referenced in the VCA.

SECTION VI: References

Applicable portions of the following referenced documents shall pertain to this work:

1. *Groundwater Investigation and Soil Remediation Work Plan*, prepared for Cornell by Holzmacher, McLendon, & Murrell, P.C., April 2002 ("Remedial Work Plan")
2. *Groundwater Investigation and Soil Remediation Summary Report*, prepared for Cornell by Holzmacher, McLendon, & Murrell, P.C., January 2003 ("Final Report").