PARSONS

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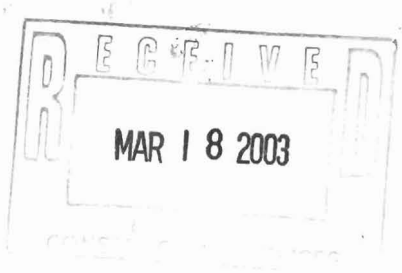
March 17, 2003

Ms. Young S. Chang – Remedial Project Manager
Central New York Remediation Section
New York Remediation Branch
Emergency and Remedial Response Branch
U.S. Environmental Protection Agency (USEPA), Region II
290 Broadway, 20th Floor
New York, NY 10007-1866



RE: Richardson Hill Road Landfill
Earthwork Remedial Action Work Plan

Dear Ms. Chang:

On behalf of Amphenol Corporation (Amphenol) and Honeywell Incorporated (Honeywell), Parsons submits (4) copies of the attached Earthwork Remedial Action Work Plan (RAWP) for the Richardson Hill Road Landfill (RHRL) Site. As you are aware, the RHRL Remedial Action was divided into two phases: Phase 1 includes the Groundwater Treatment Plant (GWTP) activities; Phase 2 includes the Earthwork activities. This RAWP describes the Earthwork tasks and the means and methods to accomplish those tasks. The Earthwork RAWP is in accordance with the Final (100%) Design Report approved by the USEPA in November 2002.

With USEPA's approval, Amphenol and Honeywell have selected Shaw Environmental, Inc. (Shaw) as their Earthwork Remedial Action Contractor. Shaw and Parsons worked together to prepare the attached Earthwork RAWP. Also, Shaw's Site Specific Health and Safety Plan (HASP) has been attached as a separate document. Shaw's HASP follows closely with the previously reviewed and accepted HASP from Appendix I of the Final (100%) Design Report.

It is understood that the RAWP must be approved by the Agencies prior to commencement of work. It is also clear that to obtain substantial completion of the Earthwork tasks within the 2003 construction season, mobilization (April 8, 2003 is proposed) in early spring is critical. To fully utilize the construction season and to allow the agencies ample review time of the RAWP, Amphenol and Honeywell propose to divide the Earthwork tasks into two stages: This two stage approach is predicated on an expedited approval of Stage 1 Earthwork tasks (i.e., mobilization, site preparation, surveying, clearing and grubbing, erosion control, etc.) and a longer review and approval period for Stage 2 Earthwork Tasks (i.e., extraction trench, sediment excavation/stabilization, landfill/TSCA cell capping, wetland restoration, etc.). The RAWP details the Stage 1 and 2 Earthwork tasks and provides a construction schedule associated with each task. Please let us know if the Agencies are amenable to this two stage approach with separate approval dates.

Amphenol, Honeywell, Shaw, and Parsons look forward to working with you and the other Agencies to successfully complete this important project. Please contact me at 315-451-9560 (Syracuse Office) or 607-369-4522 (RHRL field office) if you have any questions.

Sincerely,

PARSONS

Matthew D. Millias

Matthew D. Millias, P.E.
Construction Manager

cc: Gerard Burke – NYSDEC (1 copy)
Christina Dowd – NYSDEC (1 copy)
Daniel Geraghty – NYSDOH-BEEI (1 copy)
Alan Belensz – NYS OAG (1 copy)
Joe Damrath – NYCDEP (1 copy)
Martin Derby – Earth Tech (2 copies)
John Mojka – Honeywell (1 copy)
Sam Waldo – Amphenol (1copy)
Joe Bianchi – Amphenol (1 copy)
Sid Archinal – Shaw (1 copy)
Bill Long – Parsons (1 copy)

REMEDIAL ACTION WORK PLAN FOR CONSTRUCTION OF EARTHWORK AT THE RICHARDSON HILL ROAD LANDFILL
Sidney, New York

Prepared For:

AMPHENOL CORPORATION

40-60 Delaware Avenue
Sidney, NY 13838

and

HONEYWELL

101 Columbia Road
P.O. Box 2105
Morristown, NJ 07962

Prepared By:

Parsons **290 Elwood Davis Road, Suite 312** **Liverpool, New York 13088** **Phone: (315) 451-9560** **Fax: (315) 451-9570**	**Shaw Environmental, Inc.** **200 Horizon Center Boulevard** **Trenton, NJ 08691-1904** **Phone: (609) 584-8900** **Fax: (609) 588-6300**

REVIEWED AND APPROVED BY:

Shaw Project Manager: _____ 3/17/03
Date

Parsons Construction Manager: Matthew D. Millias 3/14/03
Date

MARCH 2003

REMEDIAL ACTION WORK PLAN FOR CONSTRUCTION OF THE EARTHWORK AT THE RICHARDSON HILL ROAD LANDFILL
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PREPARED FOR:

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MARCH 2002

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Acronyms Used in this Report

CM	Construction Manager
GWTP	Groundwater Treatment Plant
HASP	Health and Safety Plan
NYSDEC	New York State Department of Environmental Conservation
NYSEG	New York State Electric and Gas
RAC	Remedial Action Contractor
RAWP	Remedial Action Work Plan
RHRL	Richardson Hill Road Landfill
ROD	Record of Decision
SMP	Site Management Plan
USEPA	United States Environmental Protection Agency

1 Introduction

1.1 Purpose and Scope

This Remedial Action Work Plan (RAWP) identifies and describes the tasks necessary to construct the Earthwork portion of the Richardson Hill Road Landfill (RHRL), United States Environmental Protection Agency (USEPA) site #NYD980507735. The Earthwork portion is second phase of the overall remedial action at RHRL. Shaw Environmental, Inc. (Shaw) has been selected to perform this work. The first phase, as described in the Ground Water Treatment Plant (GWTP) RAWP (Parsons, October 2002), included the GWTP construction and start-up activities. The first phase began in September 2002 and is expected to be completed May 2003. The second phase is expected to commence April 2003 and be substantially completed December 2003.

This RAWP has been prepared in accordance with the requirements of the Consent Decree entered into by Honeywell, formerly known as AlliedSignal, Inc., and Amphenol Corporation, effective February 16, 1999 (USEPA, 1999). This RAWP has been developed as part of the approved Final Remedial Design (Parsons, 2002) and includes specific work procedures, organization, and sequencing from the Earthwork Remedial Action Contractor (RAC).

This document is organized as follows:

- Section 1.0 is an overview of site background, site history, selected remedy, project objectives, and expected construction tasks for the Earthwork portion of the RHRL remedial action. This section proposes to split the work tasks into "Early Earthwork Tasks" and "Remaining Earthwork Tasks" and requests separate agency approvals in order to utilize the entire construction season.
- Section 2.0 discusses modifications to the approved Final (100%) Design Report.
- Section 3.0 serves as the Site Management Plan (SMP) for the Earthwork portion of the remedial action. The remedial action project team, schedule, and means/methods for completing the construction activities are part of the SMP.
- Section 4.0 discusses the Health and Safety Plan (HASP) and issues related to the Earthwork portion of the remedial construction.
- Section 5.0 provides applicable references.
- Appendix A provides a site Traffic Plan.
- Appendix B provides example construction forms such as the Daily Field Report and Request for Information.
- Appendix C provides the health and safety adaptation letter from Shaw.

1.2 Site Background

1.2.1 Site Description

The RHRL site is located in the Towns of Sidney and Masonville, Delaware County, New York. The site is located in a rural residential area on Richardson Hill Road, approximately 3.3 miles

south-southwest of Sidney Center (Figure 1.1). The RHRL site consists of the main landfill, South Pond, Herrick Hollow Creek, and the North Area. Figure 1.2A and Figure 1.2B present the site areas.

The main landfill is approximately eight acres in size and is situated along a hillside above a marsh and the South Pond. The landfill was used primarily for the disposal of municipal refuse. Located within the landfill is a waste oil pit, approximately 25 feet wide by 105 feet long by 14 feet deep, which was formerly used for disposal of waste oils. Some of the disposed oils allegedly contained volatile organic compounds (VOCs) and polychlorinated biphenyls (PCBs).

Surface water from the landfill drains into the marsh and South Pond. Water from the South Pond drains through a sediment trap weir system and a beaver dam into Herrick Hollow Creek, which eventually flows into Cannonsville Reservoir on the west branch of the Delaware River. Cannonsville Reservoir is part of the Delaware Watershed System, supplying water to the New York City metropolitan area (USEPA, 1997).

The North Area is located approximately 1,000 feet northeast of the main landfill and is comprised of two suspected waste disposal areas, each approximately 70 feet by 70 feet in size, and the North Pond. The North Area is located on a drainage divide between the Susquehanna and Delaware River basins, with the primary surface water drainage towards the Susquehanna basin. Water from the North Pond drains northwards through a series of beaver dams and into Carr's Creek, which is a tributary of the Susquehanna River (USEPA, 1997).

1.2.2 Site History

The land on which the RHRL is located was purchased by Mr. Devere Rosa, Jr. in 1964 for the purpose of operating a refuse disposal area. Mr. Rosa received a permit from the New York State Department of Health (NYSDOH) in June 1964 to operate a landfill on Richardson Hill Road. He operated the landfill from approximately July 1964 until October 1968. In October 1968, Mr. Rosa signed an order issued against him by the NYSDOH to close the landfill (USEPA, 1997).

Waste materials deposited in the landfill consisted primarily of garbage and municipal refuse from the Town of Sidney. In addition to municipal waste, spent oils from the Scintilla Division of the Bendix Corporation, a predecessor to Honeywell and Amphenol, were disposed in the landfill from approximately July 1964 until July 1966. The spent oils were reportedly disposed as free liquids in the waste oil disposal pit. No records were found indicating the quantities of spent oil collected or disposed in the waste oil disposal pit.

Based on the results of a USEPA site investigation and a New York State Department of Environmental Conservation (NYSDEC) Phase II investigation, the RHRL site was listed on the National Priorities List (NPL) on July 1, 1987. On July 22, 1987, Amphenol Corporation and Honeywell entered into an Administrative Order on Consent (AOC), Index Number II CERCLA-70-205 with the USEPA to perform a remedial investigation and feasibility study (RI/FS) at the site.

On September 30, 1993 the USEPA issued a Unilateral Administrative Order (UAO), Index Number II CERCLA-93-0217, to Amphenol Corporation and Honeywell in response to a reported fish kill in the South Pond. The UAO ordered that a response action be performed to remove an actual or threatened release of hazardous substances from the site to the South Pond.

Response actions conducted included excavation of approximately 2,200 cubic yards (cy) of sediment from the South Pond, installation of seep interceptor collection basins upgradient of the South Pond, installation of a sediment trap weir system at the outlet of the South Pond, and installation and maintenance of two whole-house supply water treatment systems (USEPA, 1997).

Upon completion of the RI/FS, a Record of Decision (ROD) documenting USEPA's selection of a remedial action for the site was signed on September 30, 1997.

On February 16, 1999, a Consent Decree between USEPA, Honeywell and Amphenol Corporation was lodged with the United States District Court. The Consent Decree requires Honeywell and Amphenol Corp. to implement the remedial action (RA) specified in the ROD for the RHRL.

The Remedial Design Work Plan for the RHRL [Parsons, August 1999] was submitted to and approved by USEPA. The Work Plan primarily discussed two major components: (1) the Pre-Design Investigation; and (2) the Remedial Design. The pre-design investigation was conducted between October 1999 and January 2000 to supplement information presented in previous reports and to refine the basis of the Remedial Design. The pre-design activities included the following tasks:

- Perimeter security fence installation;
- Topographic survey;
- Sediment trap weir system installation;
- Preparation of a Wetland/Floodplain Mitigation Plan;
- Preparation of a revised Stage 1B Cultural Resources Survey Report;
- Preparation of a Farmland Protection Survey;
- Sediment sampling and analysis;
- Surface and subsurface soil sampling and analysis;
- Hydrological investigation and groundwater modeling;
- Groundwater treatability studies; and
- Site access arrangements.

A comprehensive description of the activities and findings from the pre-design investigation is presented in the Pre-Design Investigation Technical Memorandum(Parsons, April 2000).

The Preliminary (50%) Design Report was submitted to USEPA in May 2000 (Parsons, May 2000). Agency review comments received for the Preliminary Design have been incorporated into the Final (100%) Design Report (Parsons, February 2002, Revised July 2002). The Final Design Report was approved by USEPA in November 2002 contingent upon the design approval of Herrick Hollow Creek Segments 13-9 sediment excavation and restoration. This additional work will become part of remedial action.

The GWTP RAWP (Parsons, October 2002) was submitted to USEPA and approved. An addendum for the North Area Recovery Wells (RW1-4) and Monitoring Wells (NMW1-10) was also approved by USEPA.

To date, the following GWTP construction activities have been completed:

- Mobilization, site preparation, and surveying for the GWTP; and
- GWTP building (the system is expected to be substantially complete April 2003; startup activities are expected to be complete May 2003).

1.2.3 Selected Remedy

Based on results of the RI, FS, and public comments, the USEPA issued a Record of Decision (ROD) on September 30, 1997 and a Consent Decree, effective February 16, 1999, which selected a remedy for the RHRL site. The following are remedy components as they pertain to the Earthwork portion:

Remedial Work Element I (the landfill cap and Toxic Substances Control Act (TSCA)--compliant landfill elements):

- Based upon the pre-design sampling of the soil in the area to be capped (primarily in the vicinity of the former waste oil disposal pit), soil with PCB concentrations which equal or exceed 500 mg/kg will be excavated and sent offsite for treatment/disposal at a TSCA-compliant facility.
- Excavation of contaminated waste materials and soil exceeding NYSDEC's Soil Cleanup Objectives in the North Area and South Area (other than the landfill). Clean fill will be used as backfill in the excavated areas.
- Excavation and/or dredging of sediments exceeding 1 mg/kg PCB from South Pond and all areas downstream for approximately 3,800 feet (Segments 9 to 20). Any wetlands impacted by the remedial activities will be fully restored.
- Those waste materials, soils, and sediments which equal or exceed 500 mg/kg will be sent offsite for treatment/ disposal at a TSCA-compliant facility. Those waste materials, soils, and sediments that have PCB concentrations less than 50 mg/kg but greater than 1 mg/kg will be consolidated on the onsite landfill; those with PCB concentrations between 50 and 500 mg/kg will be placed in the TSCA-compliant landfill to be constructed adjacent to or within the existing landfill.
- Following the consolidation of the excavated/dredged waste materials, soils, and sediments with PCB concentrations less than 50 mg/kg onto the existing landfill, a New York State 6NYCRR Part 360 or equivalent closure cap will be constructed.

Remedial Work Element II (the groundwater extraction):

- Extraction of contaminated groundwater from the overburden and shallow bedrock in the South Area utilizing a downgradient vertical barrier/interceptor trench.

1.3 Earthwork Objectives

The objectives associated with the Earthwork portion of the remedial action at the RHRL site, as stated in the Consent Decree, are to:

- Minimize migration of contaminated groundwater from the landfill area to the South Pond and Herrick Hollow Creek.
- Prevent human contact with contaminated soil/sediment/waste.
- Restore wetland areas.

1.4 Earthwork Tasks and Agency Approval of RAWP

An April 8, 2003 mobilization date has been proposed to help meet the rigorous but realistic challenge of completing the Earthwork tasks prior to the 2003 harsh winter months. In accordance with the Consent Decree, USEPA and other agencies' approval of the Earthwork RAWP is required prior to start of work. With the proposed mobilization date quickly arriving, Honeywell and Amphenol propose an approach that will utilize a full construction season and still allow the agencies ample time to review the RAWP. The approach consists of dividing the Earthwork tasks into "Stage 1 Tasks" and "Stage 2 Tasks". Stage 1 tasks are those starting between April 8, 2003 and May 12, 2003. Stage 2 tasks are those starting on or after May 12, 2003. It is our hope that we will receive initial approval on Stage 1 tasks in time to allow us to meet our scheduled mobilization date followed by final approval of Stage 2 work in time to proceed with Stage 2. See Sections 3.4 and 3.5 for descriptions of the scope of work for each stage.

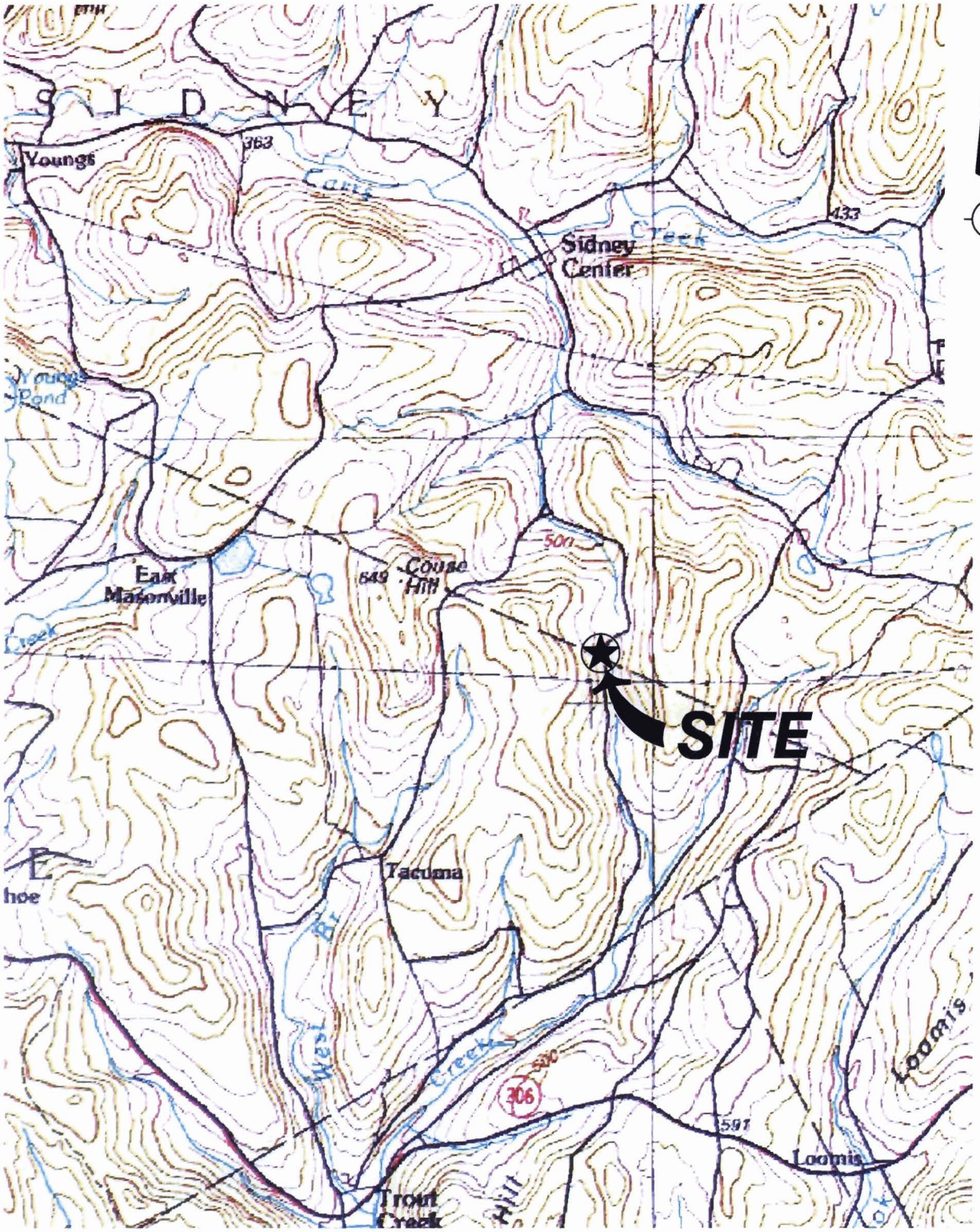
Stage 1 tasks include the following:

- Mobilization
- Site Preparation
- Initial Site Survey
- Clearing and Grubbing
- Erosion Control (including landfill drainage channels)
- Well/Manhole Abandonment
- South Pond Drainage
- Landfill Subgrade Preparation
- TSCA Cell Bottom Layers
- Extraction Trench Work Platform (including sediment removal within platform footprint and existing underground telephone line relocation)
- Biopolymer Slurry Batch Plant Setup

Stage 2 tasks include the following:

- Extraction Trench
- Biopolymer Slurry QA/QC
- Trench Excavation
- HDPE Vertical Barrier Installation
- Backfill Operation
- Delivery System (including piping to North Area GWTP)
- Trench Development and Restoration
- Satellite Excavation Areas
- South Pond Sediment Excavation and Handling
- Herrick Hollow Creek Segments 9-20 Sediment Excavation and Handling
- Sediment Solidification and Placement

- Final Landfill and TSCA Cell Capping
- Restoration
- Asphalt Paving
- Demobilization



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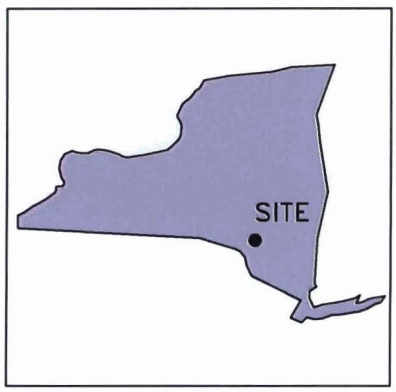


REFERENCE:

U.S.G.S. 7.5 MIN TOPOGRAPHIC MAP

SCALE

0 1 2 MILES

Shaw™
Shaw E & I, Inc.

FIGURE 1.1

HONEYWELL
AMPHENOL CORPORATION

SITE LOCATION MAP

RICHARDSON HILL ROAD
LANDFILL SITE

SIDNEY CENTER, NEW YORK

2 Request For Modification of Approved Final Remedial Design Report

This section describes the rationale for a modification request of the approved Final Remedial Design Report.

2.1 Downstream Sediment Removal Design

On January 16, 2003, Parsons submitted to USEPA for approval the downstream Sediment Removal Design. This design detailed the proposed sediment excavation and wetland restoration activities for Herrick Hollow Creek Segments 9-13. This Earthwork RAWP includes the design. With the RAWP approval, the downstream sediment removal design will become part of the Final Remedial Design Report.

2.2 Cultural Resource Survey

Phase 1 cultural resources surveys were conducted for the RHRL Site in 1991, 1992, and 2001. The surveys were submitted to the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP) for review. The Phase 1 cultural resources survey found seven prehistoric sites along Herrick Hollow Creek (HH1-HH7) with findings including flakes from tool making, pottery, charcoal from potential fire sites, and a projectile point. The agencies determined that Phase 2 cultural resources surveys were necessary to avoid sediment excavation areas and to determine whether the sites are eligible for inclusion on the National Register of Historic Places. A Memorandum of Agreement (MOA) between USEPA/NYSOPRHP and Amphenol/Honeywell detailed the Phase 2 surveys.

The Public Archeological Facility (PAF), which had conducted the Phase 1 surveys, conducted the Phase 2 cultural resources surveys of HH1-HH7 from December 2001 to December 2002. Findings of the Phase 2 survey include numerous artifacts. For HH1, PAF prepared a field report advising the site be eligible for the National Register of Historic Places and recommended Phase 3 data recovery. Due to its close proximity to the South Pond, the Phase 3 data recovery for HH1 was expedited. The fieldwork was completed by Fall 2002 and an End-of-Field letter submitted to the agencies allowed the area to be disturbed during construction activities.

For HH2-HH7, PAF submitted its Phase 2 report in March 2003 and recommended Phase 3 data recovery at all six sites. The MOA has been updated and approved by USEPA and NYSOPRHP at all six sites. The Phase 3 data recovery fieldwork for HH2-HH7 will likely begin in April 2003 and continue to early Summer 2003. Sediment excavation areas within Herrick Hollow Creek are located adjacent to or within the archeological areas. These areas will not be disturbed by the RAC until the fieldwork and an End-of-Field letter is submitted to the agencies. The archaeological work will proceed from upstream to downstream (HH2-HH7) to coincide with the direction of the remediation. Agencies, PAF, RAC, and Parsons will work closely to avoid potential construction conflicts.

3 Site Management Plan

3.1 Remedial Action Project Team

To assist in completing the Earthwork elements, Honeywell and Amphenol have procured a Construction Manager (CM) and a RAC. Parsons has been selected as the CM. Shaw has been selected as the RAC. An organizational chart of the Earthwork Remedial Action Project Team is presented as Figure 3.1. Roles and responsibilities of the team members as well as involved agencies are described below. Key contact information is presented as Table 3.1.

3.1.1 Honeywell and Amphenol

Honeywell and Amphenol are ultimately responsible for implementing the Earthwork portion of the Remedial Action in accordance with the Consent Degree. Mr. John Mojka will serve as Honeywell's Project Manager. Mr. Joseph Bianchi will serve as Amphenol's Project Manager. Mr. Bianchi is the lead engineer at the Amphenol Plant in Sidney, NY and will be the point of contact for the long-term operation and maintenance of the GWTP. Mr. Mojka and Mr. Bianchi will attend public meetings, review the RAWP and Construction Certification Report prior to submission to the agencies, and approve invoice payments to the CM and Shaw.

3.1.2 Parsons

As the CM for the Earthwork, Parsons will serve as Honeywell and Amphenol's full-time, on-site representative. Parsons will manage the construction by interfacing directly with Honeywell, Amphenol, the Shaw, agency representatives, local highway departments, utility companies, and other site-related subcontractors. Mr. Matthew Millias, P.E. will serve as the Construction Manager and be the point of contact for Earthwork construction activities. He will be responsible for orchestrating and participating in progress meetings, reviewing construction-related submittals, conducting quality control, documenting the construction activities, and certifying the construction. Mr. Millias is the engineer of record for the approved Final Remedial Design; therefore, design changes and material/equipment substitutions must be approved by Mr. Millias. Mr. Millias will also serve as the point of contact between Shaw and the agencies. Construction related issues between the Shaw and the agencies will go through Mr. Millias.

Mr. Ed Rudy will serve as the full-time on-site construction inspector. He will communicate directly with Shaw's Site Superintendent on a day-to-day basis. Mr. Rudy will report to Mr. Millias and be responsible for construction inspections and daily documentation.

Parsons plans to subcontract with CME Associates for field QA/QC testing and O'Brien & Gere Laboratories for laboratory QA/QC analytical services.

3.1.3 Shaw

As the Earthwork RAC, Shaw will be responsible for the Earthwork construction activities as described in this RAWP. Mr. Sid Archinal will serve as the Project Manager duties.

As Project Manager, Mr. Archinal will be responsible for the overall Earthwork construction activities. He will be responsible for managing the project's daily activities and will communicate directly with Mr. Millias. Mr. Archinal's specific responsibilities will include:

- Providing centralized leadership for Shaw's project activities
- Interpreting and planning Shaw's overall work effort
- Approving Shaw's work products, plans, and deliverables
- Defining personnel and equipment requirements and securing resource commitments
- Preparing for, and attending, meetings as required
- Maintaining daily contact with the off-site support personnel, alerting them of potential problems, changed conditions, etc.

To carry out these functions, Mr. Archinal will have the authority to:

- Assign work for staff and subcontractors
- Allocate additional personnel as needed
- Establish work budgets and schedules with milestones
- Approve subcontractor work and invoices
- Maintain Shaw's quality and safety standards

Mr. Scott Sutton is Shaw's Site Superintendent in charge of the day-to-day operations of the project. Mr. Sutton, as Site Superintendent, will be responsible for the implementation of on-site activities. In this capacity, he will direct the crew on daily operations. Mr. Sutton will manage all the issues encountered and solutions developed throughout the day. He will also make assignments. At the end of each day, Mr. Sutton will review the work completed and establish the following day's objectives. Mr. Sutton will report to Mr. Archinal on all matters affecting project.

Mr. Green will serve as the full time Site Safety Officer responsible for implementation of the Site- Specific Health and Safety Plan (HASP). His specific responsibilities will include:

- Ensuring that site personnel possess necessary training and medical surveillance
- Conducting weekly safety meetings with the workers
- Establishing work zones and relocating zones as necessary
- Determining personnel protective equipment requirements for specific work tasks and ordering any changes based on work area monitoring data
- Ensuring work is performed in compliance with the HASP and applicable regulations
- Implementing air monitoring program and report data
- Performing routine safety inspections
- Reporting and investigating any accidents or incidents

3.1.4 Agencies

USEPA

The USEPA is the lead agency on this project. Ms. Young Chang has been the USEPA's Project Manager for RHRL throughout the investigation and design phases and will continue in that role. Ms. Chang will orchestrate and participate in public meetings, as necessary, and be the point of contract for public questions and concerns. Ms. Chang will also handle media issues that may arise, participate in progress meetings, and approve major design changes.

Earth Tech (formerly TAMS) will serve as the USEPA's representative and provide full-time on-site construction oversight. Mr. Amit Haryani is currently serving as the Earth Tech field representative for the GWTP phase. Mr. Martin Derby is currently serving as the Earth Tech Project Manager. USEPA and Earth Tech will make a decision as to who the Earth Tech field representative for the Earthwork phase will be prior to mobilization.

NYSDEC

The NYSDEC will support USEPA with this project and take an active role by reviewing submittals, participating in meetings, and discussing important issues. Mr. Jeff McCullough has served as NYSDEC's representative for the RHRL project to this point but will pass along the construction oversight duties to Mr. Gerard Burke.

Other Agencies

Other state and federal agencies that will support USEPA with this project include the following: New York State Office of Attorney General, Environmental Protection Bureau; U.S. Department of Justice, Environmental Enforcement Section, Environment and Natural Resources Division; and New York City Department of Environmental Protection, Bureau of Water Supply, Quality & Protection.

The Town of Sidney Highway Department and Town of Masonville Highway Department will be involved in traffic safety measures and truck traffic issues. The Town of Sidney building inspector will issue the building permit.

3.2 Project Management

3.2.1 Project Schedule

A project schedule has been developed for the Earthwork portion of the remedial action. Figure 3.2 presents the project schedule. The project schedule is predicated on the USEPA approval of the Early Earthwork Tasks by April 4, 2003. Public meeting sessions have been set for April 2-3, 2003 to provide the public information regarding the project. A construction kickoff meeting has been set for April 7, 2003 at the site. Mobilization is scheduled for April 8, 2003. Final completion is expected by November 2003.

Shaw is responsible for updating the project schedule on a monthly basis and distributing copies to the project team.

3.2.2 Meetings

Public meeting sessions for the RHRL Earthwork portion are scheduled for April 2-3, 2003. Parsons will distribute details to the public and the project team. A notice in the local paper will be part of the public distribution. The USEPA will lead the meeting sessions. Representatives from Honeywell, Amphenol, Parsons, and Shaw will be present at the meeting sessions and be available for questions.

A detailed project fact sheet including a site traffic plan prepared by Shaw/Parsons and approved by USEPA will also be distributed to the public (residences located on Richardson Hill Road) and the entire project team prior to mobilization.

The Earthwork kickoff meeting is scheduled for Monday, April 7, 2003 10:00AMEST at the site. Representatives from all applicable agencies will be invited to attend.

Currently, monthly meetings for the GWTP portion are being conducted at the site on the 3rd Thursday of each month at 11:00AMEST. Following Earthwork mobilization, monthly meetings will be conducted the 3rd Thursday of each month at 10:00AMEST to incorporate both the Earthwork and GWTP activities.

Currently, weekly meetings for the GWTP portion are being conducted at the site every Thursday (with the monthly meeting replacing the 3rd weekly meeting of each month) at 11:00AMEST. Following Earthwork mobilization, weekly meetings will be conducted every Thursday (with the monthly meeting replacing the 3rd weekly meeting of each month) at 10:00AMEST to incorporate both the Earthwork and GWTP activities.

3.2.3 Communication

Young Chang of the USEPA will be the point of contact for public and media inquiries. Personnel from Honeywell, Amphenol, Parsons, and Shaw will politely direct public and media related inquiries to Ms. Chang.

Given the number of agencies involved in the project, the aggressive, complex project schedule, and the potential for multiple issues, it is critical to establish an agency point of contact and a consistent procedure for addressing agency issues. Young Chang and/or her representative of the USEPA will be the point of contact. Issues from the USEPA, NYSDEC, NYCDEP, the Attorney General Office, PAF, and all other agencies will be channeled through Ms. Chang and/or her representative. Ms. Chang and/or her representative will communicate agency issues directly to Matt Millias (Construction Manager – Parsons). For Earthwork related issues, Matt Millias will communicate directly with Sid Archinal (Project Manager – Shaw) or Scott Sutton (Site Superintendent – Shaw) as appropriate. For GWTP related issues, Matt Millias will communicate directly with Tom Davide (Project Manager – SAMCO). For non construction related issues, Matt Millias will communicate directly with John Mojka (Project Manager – Honeywell) and Joe Bianchi (Project Manager – Amphenol). If agency representatives raise issues with site workers, they will politely direct them to Ms. Chang and/or her representative. This consistent procedure will minimize confusion and maintain site productivity.

To better communicate between the North Area, landfill area, South Pond area, and HHC area, Shaw and Parsons will utilize 2-way radios.

3.3 Permitting and Access Agreements

Recently, Honeywell and Amphenol purchased the Spizziri property that includes the North Area. Honeywell and Amphenol have completed access agreements with all other applicable landowners. A notification of the Earthwork Tasks will be provided to applicable landowners as a courtesy.

Utility companies will be contacted prior to intrusive work for utility mark-out and line relocation.

3.4 Stage 1 Earthwork Tasks – Means and Methods

3.4.1 Mobilization

Shaw will mobilize a labor force, materials, and equipment necessary to complete the work. Shaw will have a core project team that consists of a Project Manager, Site Superintendent, Field QA/QC Engineer, Site Safety Officer, a Foreman, and a Field Accountant/Buyer. Shaw will have multiple work crews made up of Shaw employees, subcontractors, and local union operators and laborers. The crews, equipment, and materials will be mobilized at the appropriate time to complete each specific task.

At a minimum, Shaw intends to mobilize the following equipment during the course of the project:

Equipment	Task
(2) CAT D5 Dozers	Sediment Removal Landfill/TSCA Cell Construction
320 Excavator	Sediment/Soil/Waste Removal
CAT 365 Long Reach Excavator	Extraction Trench
All Terrain Dumps	Sediment/Soil Handling
Drum Roller	Landfill/TSCA Cell, Backfill
Crane	HDPE Vertical Barrier Placement
Loaders	Sediment Handling Excavation Trench Spoils Handling/Backfill Landfill/TSCA Cell Construction
On-Road Dumps (as needed)	Material Delivery Off-site Disposal
Water Truck	Decontamination/Road-Washing/Dust Suppression
Pickup Trucks	Multi Use
Backup Generators (as needed)	Multi – Use
Biopolymer Slurry Batch Mix Unit	Extraction Trench
Tub Grinder	Grubbing
Air Rotary Drill Rig	Abandonment of Wells/Piezometers/Manholes Installation of Piezometers at Extraction Trench

Shaw will deliver backfill materials (i.e., gravel, sand, topsoil), liner materials (i.e., HDPE Vertical Barrier, Landfill/TSCA cell liners, geotextiles, erosion control matting, geocomposites, etc.), piping, sumps, controls as specified by design.

3.4.2 Site Preparation

Shaw intends to utilize the existing field trailers located within the North Area. SAMCO Technologies (current GWTP contractor) will transfer field trailers and associated office equipment over to Shaw on or about April 1, 2003. Shaw's core project team will then occupy the southernmost existing field trailer. The USEPA and representative Earth Tech will continue to occupy the northernmost existing field trailer. Honeywell, Amphenol, and Parsons will continue to occupy the field office (former Spizziri house). Note that from April 1, 2003 through May 23, 2003, SAMCO personnel will utilize the GWTP office and Parsons' field office.

Temporary utilities such as electrical, phone, and sanitary will be also be transferred from SAMCO to Shaw on or about April 1, 2003.

The storage barn located within the North Area will used by Parsons and Shaw as a worker break room and storage of equipment. The existing storage shed located within the landfill area will be utilized by Shaw for equipment and material storage. The shed currently has phone and electrical service and contains numerous 55 gallon drums containing investigation-derived soils.

Temporary decontamination pads and tire scrubbers will be installed as necessary.

Existing driveways, parking areas, and access roads to be utilized during the work will be improved as necessary.

A turbidity meter will be installed downstream of HHC Segment 9 to collect background turbidity measurements. Background turbidity will be established for sediment excavation work and construction water management requirements.

3.4.3 Initial Site Survey

A New York State Certified Surveyor under the supervision of Shaw will conduct the initial site survey. Utilizing known baseline points, the surveyor will markout excavation areas including L1, L2, L3, N1, N2, Waste Oil Pit, South Pond, and HHC Segments 9-20. Wood stakes and bright colored flagging will be used to designate areas. The extraction trench, force main, landfill/TSCA Cell perimeters, storm water channels, etc. will also be located. For the landfill/TSCA cell, grade stakes will be installed to control cuts and fills.

Throughout the project, the surveyor will be utilized for grade control, pay lines, specific location markouts, etc. A final survey will be conducted following substantial completion of each portion of the project.

3.4.4 Clearing and Grubbing

Shaw will clear trees and other vegetation within the work limits. A tree value survey has been conducted for the site, but minimal hardwood value exists. Trees and vegetation will be transported to the landfill area. Stumps will remain in place until excavation activities commence; this will minimize soil erosion. Once stumps are excavated, they will be placed with the trees and vegetation and ground utilizing a tub grinder. The ground material will be placed in thin layers within the landfill area.

3.4.5 Erosion Control

Two existing sediment traps (one immediately down stream of South Pond; one immediately down stream of HHC Segment 9) as well as numerous beaver dams will provide temporary soil erosion and sediment control during work activities. Supplemental temporary erosion control measures such as silt fence, straw bales, and diversion berms will be constructed as necessary to minimize erosion on the site. Permanent storm water channels will be constructed upgradient of and within the landfill area.

Parsons and Shaw will work closely with NYCDEP and other agencies to provide practical erosion control measures throughout the project.

3.4.6 Well/Manhole Development

As detailed in the technical specifications, a drilling crew under the supervision of Shaw will abandon numerous monitoring wells, piezometers, and manholes. Case pulling procedures will be followed for wells. If case pulling procedures are unsuccessful, overdrilling methods will be used. The abandoned materials will be placed within the landfill area. The remaining holes will be grouted. Manholes (installed during the 1996 IRM) located between RHR and South Pond will be removed with an excavator and placed within the landfill area.

3.4.7 South Pond and HHC Drainage

Shaw will setup and operate a Turbidity Meter within HHC Segment 8 throughout the project. A second mobile Turbidity Meter will be setup and operated within HHC 100 feet downstream of the work. Turbidity background measurements will be documented at the Segment 8 Turbidity meter prior to the sediment excavation work to establish the construction water discharge turbidity criteria. Both meters will be monitored during the work to enforce the discharge turbidity requirements (less than 25 NTUs above background at the Segment 8 meter; less than 50 NTUs above background at the work meter).

Shaw will slowly lower the water level in the South Pond by removing boards from the sediment trap weir immediately downstream of South Pond. Timbers and sediment that were placed by beavers along the sediment trap will be removed. Further modifications (i.e., cutting the steel sheeting) to the sediment trap and/or pumping may be necessary to drain the South Pond and HHC.

A trench will be excavated parallel to the South Pond along the eastern edge to redirect runoff around South Pond and the sediment trap.

3.4.8 Landfill Subgrade Preparation

Based on the subgrade drawings and surveyed grade stakes, Shaw will utilize bulldozers, excavators, and drum rollers to conduct cuts and fills to meet the Landfill and TSCA Cell required subgrade. As part of the this preparation, stumps will be excavated, ground, and spread, 55 gallon drums from the existing shed area will be emptied and crushed, abandoned wells/manhole material will be placed, timbers and sediment from the Sediment Trap will be ground/placed.

Two sediment storage areas exist within the Landfill area as a result of the 1996 IRM. Approximately 2,200 cy of sediment are covered with HDPE liner and sandbags. This sediment will be temporarily relocated within the landfill area to make room for the TSCA Cell construction. The relocated material will be placed on 20 mil plastic and covered. Once the TSCA Cell Bottom Layers are completed, the sediment will be placed within the TSCA Cell area.

During the grading of the landfill area, temporary berms and small basins will be constructed to allow for the placement and solidification of wet material.

3.4.9 TSCA Cell Bottom Layers

As shown on the design drawings, the TSCA Cell bottom layers will be placed over the required subgrade. Geotextile, geomembrane, geocomposite layers, and the drainage piping/sumps will be installed.

3.4.10 Work Platform

The appropriate work platform configuration is important to the successful construction of the groundwater extraction trench. The work platform is designed to provide a stable operating base for heavy equipment so that the groundwater extraction trench can be constructed to the proper vertical alignment. Other considerations in the work platform construction include the allowance for drainage, the provision for adequate space to maneuver the crane and long-reach excavator, and the required access for dozing excavated material and backfill.

Following South Pond drainage, a temporary water barrier will be constructed within the South Pond to isolate the Work Platform footprint. Excess water within the Work Platform footprint will be pumped to create a dry working area. Contaminated sediment within the Work Platform footprint will be excavated, stabilized, and placed within the landfill area.

Approximately 1,200 feet of work platform will be constructed. The work platform construction will consist of re-grading, cutting and filling, embankment dressing, shaping, compacting, and finishing as necessary for the construction and completion of the work platform. Shaw will compact the fill material as required to provide a stable, uniform surface. Clean backfill will be used to build the specified Work Platform.

The existing underground cable line will be relocated from south to north of RHR. Shaw will install the new conduit and the cable company will disconnect the old line and install a new line.

3.4.11 Biopolymer Slurry Batch Plant Setup

Mixing of biopolymer slurry will occur in a centrally located area (between to the South Pond sediment trap and RHR) so that material-handling distances will be minimized. The slurry mixing operation will use the following tanks: One 20,000-gallon holding tank to store sufficient water needed for the daily mixing operation, a flash biopolymer slurry mixing tank (6,000-gallon) to produce initially mixed slurry (slurry mixing plant), and one 20,000-gallon Frac tank for storage and continuous hydration of slurry. These tanks provide the needed flexibility for slurry mixing operations, allowing adequate time for hydration, placement, and storage. Portable water will be trucked from a nearby pond or from the Town of Sidney. Appropriate tests will be performed on the water source to demonstrate compatibility. Approximately 6 pounds of soda ash per 1,000 gallons of water may be needed as water pH buffer. The soda ash will be added directly to a 20,000-gallon water storage tank and will be mixed, circulated, and agitated by the pump.

The slurry mixing plant will include two 3,000- gallon cone-bottom flash mixing tanks that will be used in conjunction with a high-head centrifugal pump for mixing powdered polymer and water. This is an efficient method of producing biopolymer slurry. Polymer will be delivered in bags (Super bag or equal) and fed into the mixer manually. The partially hydrated polymer slurry from the mixer will be pumped to and temporarily held in the 20,000- gallon Frac tank using a

pump located between the mixing plant and the tanks. Slurry will be allowed to hydrate to meet the specification requirements prior to placing in the trench.

A set of agitator and circulation pumps will be installed in the Frac tank to maintain consistent quality and to supply fully hydrated slurry to the trench and backfill mixing operation. The purpose of this agitation is to allow hydration to occur and to maximize the contact of the raw polymer product and water. The slurry will be pumped to the excavation through a high-density polyethylene pipe that can be relocated in conjunction with the advancement of the excavator.

3.5 Stage 2 Earthwork Tasks – Means and Methods

3.5.1 Extraction Trench

3.5.1.1 Biopolymer Slurry QA/QC

Daily, the QC Inspector will sample the fresh slurry from the storage and test the sampled slurry. Initially, the mixing plant. pump and piping, and Frac tanks will be cleaned with a bleach solution to prevent microbial growth, which may cause the slurry not to meet the specification.

Shaw will maintain the in-trench slurry properties within the specified limits. Trench slurry with excess fines will be pumped out and used for backfill preparation. The QC Inspector will collect the trench slurry sample from near the excavation toe. Bottom samples of trench slurry are collected just above the trench bottom.

The test results will be submitted to demonstrate compliance with the specified requirements. If the slurry fails to meet the specified requirements, Shaw will investigate and correct slurry deficiencies immediately upon discovery. The required tests listed in the specification will be performed to demonstrate the specified requirements.

3.5.1.2 Trench Excavation

The slurry extraction trench will be constructed using biopolymer slurry trenching techniques. The trench will be excavated in sections. Fresh make-up biopolymer slurry will be introduced at the backfill panel to displaced and aged slurry toward the excavation end. This procedure allows fresh slurry to replace used slurry in a controlled manner. The slurry property can be controlled and meet the requirements as specified so that trench stability can be achieved. Shaw has selected a CAT 365 excavator with a reach that can excavate 50 feet deep.

Excavated materials will be placed at the designated areas and be organized to minimize precipitation uptake and storm water containment. The two critical excavation considerations are trench continuity and key integrity. The continuity of the trench will be demonstrated by passing the excavation equipment vertically and horizontally along the trench to ensure that the entire trench is fully excavated. All loose material will be removed from the bottom of the trench to ensure that the wall is excavated to the specified depth and/or keyed onto the weathered rock. The cuttings removed from the trench bottom will be observed and inspected by the QA/QC Engineer, and will be compared to direct trench depth measurements to anticipate depths based on soil borings.

The QA/QC Engineer will also verify the following:

- The trench depth.
- The trench alignment.
- Check for evidence of trench wall instability (i.e., sloughing of surface adjacent to trench, tension cracks).
- The specified requirement tests are performed and met.
- The biopolymer slurry is introduced into the trench at the time excavation begins.
- The level of the slurry in the trench.
- The slurry is maintained in a condition in which Shaw meets the mixing and operation requirements.

The in-trench slurry will be agitated by the backhoe excavation to ensure the slurry maintains the specified properties.

The QC Inspector will use appropriate tools and equipment to measure the trench excavation to ensure that it is within the specified tolerances.

Shaw will adjust equipment and revise procedures to prevent trench from out-of-vertical, misalignment, and enlargement. Alignment changes necessary to accomplish turns or to bypass obstructions will be made only with the approval of the Engineer, and will be documented by survey.

The QC Inspector and QC staff will also perform trench bottom measurement and sampling.

3.5.1.3 HDPE Vertical Barrier Installation

HDPE vertical barrier will be installed at the downgradient side of the trench, through the biopolymer slurry using a custom-made steel frame and crane. The HDPE panel with hydrophilic joint seal will first be mounted onto the frame and then inserted into the trench using the crane. The panel joints will be matched up at the top before the panel is lowered to the bottom per the manufacturer's installation procedure. When the panel has been verified to be continuing from top to bottom, drainage material will be backfilled partially to hold the panel in place. The panel will then be released from the steel frame and the frame will be pulled from the trench.

Storm water culvert penetrations will be installed to convey landfill storm water to the South Pond area.

3.5.1.4 Backfill Operation

After the installation of the HDPE vertical barrier, backfill will be tremied and/or placed into the trench using a front-end loader, conveyor, and/or tremie pipe. Backfill will progress one panel at a time. Shaw will monitor the backfill process to ensure proper backfill operations are followed. The 2-foot groundwater extraction trench cap will then be installed after the trench development.

3.5.1.5 Delivery System

Shaw will install a groundwater extraction system to maintain a specified groundwater elevation. The system will collect and convey extracted groundwater to the GWTP.

Shaw will provide three collection sumps and pumps (S-l, S-2, and S-3) at specified locations. Electric submersible pumps and associated controls will be provided and installed in each sump.

The required electrical conduit/lines, instrumentation conduit/lines, groundwater pipe, and dilute acid piping/lines will be installed from the sumps to Pull Boxes 1A and 1B. Shaw will coordinate with SAMCO to make the necessary connections to the GWTP. Note that Shaw will install the 6-inch HDPE GWTP effluent pipe from Pull Box 1 to the marsh area just south of RHR across from the North Area.

A drilling crew under the supervision of Shaw will install four pairs of piezometers up gradient and down gradient of the extraction trench to measure water levels.

3.5.1.6 Trench Development and Restoration

After construction of the groundwater extraction trench, the trench filled with biopolymer slurry will be hydraulically flushed and developed to restore it to its original hydraulic condition. The trench development procedure consists of introducing a breaking agent into the trench and flushing the groundwater extraction system using the pumps and pipe/hose. The trench development will continue until it demonstrates that the in-trench slurry has been broken and the groundwater extraction system has been adequately developed.

The QA/QC Engineer will perform the following inspections:

- Verify that the slurry trench backfill is cleaned and free for drainage.
- Verify that the sump pumps are operational.
- Verify that in-trench slurry is reverted to water.

Wet spoils, excess soil, or waste soil will be solidified as required and placed in the landfill. The work platform and adjacent areas will be cleaned to original conditions. The slurry mixing plant and storage tanks will be disassembled, pressure-washed, and removed from the site. The area used for mixing and storage will be graded as part of the cap rough grade.

3.5.2 Satellite Excavation Areas

The satellite excavation areas consist of the Waste Oil Pit, Areas Ll, L2, and L3, North Area N1 and N2.

The soil within the waste oil pit will be excavated using a 320 excavator to the limits specified. The material will be staged in 100 cy piles. Parsons will characterize the material: soil contaminated with PCBs less then 50 parts per million (ppm) will be placed in the landfill area; soil contaminated with PCBs greater than 50 ppm but less than 500 ppm will be placed within the TSCA cell; soil contaminated with PCBs greater than 500 ppm will be disposed of off-site at a permitted facility. Honeywell/Amphenol will be responsible for transporting and disposing of off-site material. Shaw will load the trucks. The waste oil pit will then be backfilled with soil/sediment/waste contaminated with PCBs less than 50 ppm.

The two excavation areas (Ll and L2) will be excavated immediately after the waste oil pit. Using the same equipment, the soils will be excavated to the specified limits and directly hauled to the landfill. When the areas have been excavated they will be backfilled and compacted using clean imported soil.

L-3, a small area underneath the power lines adjacent to the south edge of the landfill, requires relocation. The existing chain link fence will be temporarily removed to access the soil. A 320

excavator will excavate the soil and place it within the footprint of the landfill where a dozer will push and compact the material into place. At the completion of the excavation the area will be backfilled and the chain link fence re-erected.

Areas NI and N2 are adjacent to the North Pond. A silt curtain will be placed within the pond adjacent to the perimeter of the excavations to contain any suspended solids generated during the excavation. The material will be excavated using a 320 excavator and hauled to the landfill in off-road dumps. Care will be taken to disturb the pond water as little as possible. When the areas have been excavated they will be backfilled and compacted using clean imported soil.

3.5.3 South Pond Sediment Excavation and Handling

After the water level has been lowered as low as possible via drainage, sumps will be created and pumps used to transfer water flowing into the sumps. A filter sock will be placed at the effluent of the pump to collect any disturbed solids. When as much water has been removed as practical the sediment will be consolidated using a dozer and/or excavator. If necessary, a fine layer of solidification reagent will be applied to bind any free water and semi-tighten the sediment for transport. The sediment will be loaded into off-road dump trailers equipped with sealed tailgates and transferred to the landfill for solidification and placement.

3.5.4 Herrick Hollow Creek Sediment Excavation and Handling

When the South Pond is complete the sediment trap will be reconstructed so that the South Pond will act as a holding basin (approximately 8,000,000 gallons capacity) during HHC Segments 9-20 work. The diversion ditches along the south side will be filled in.

Sediment in the creek will be excavated in sections working upstream to downstream. The size of each section will be determined by a number of factors:

- The amount of sediment in each section
- Access issues
- Presence of natural springs
- Upcoming weather forecasts.

The South Pond sediment trap will act as the upstream dam for the first section. A downstream earthen dam will be constructed at the lower end of the first section to be remediated. In turn, this earthen dam will act as the upstream dam for the next section and another earthen dam will be placed downstream of the second section. Damming of sections will continue in this fashion until complete.

After a section has been dammed any freestanding water within the section will be pumped downstream. All discharge will be through a filter sock and onto a dissipation structure to prevent erosion. Any small tributaries or springs entering the section will also be dammed and pumped around the section.

Although the South Pond's hold capacity is significant, a backup pump-around system will be installed. This will consist of an 8-inch dri-prime pump and solid header pipe. The discharge line will be run along the south side of the creek and discharge through a dissipator. As work progresses downstream, the pump and discharge line will be moved downstream. Sediment excavation within a section will be from upstream to downstream. The area will be completely

cleaned before moving downstream. If a rain event occurs where the flow is greater than the South Pond holding capacity and the pump-around capacity, the downstream earthen dam can be removed allowing the water to flow through the section. Cross-contamination will not occur since upstream sections have been remediated. After the event, the dam can be rebuilt and excavation activities continued.

The sediment will be removed using an excavator working off the north side of the creek. The sediment will be pulled up onto the bank and free water will be allowed to flow back into the creek. If necessary, a minimal amount of reagent will be used to fixate the remaining water and tighten up the sediment for transportation. The material will be placed into off-road dumps equipped with sealed tailgates and transported to the landfill where further solidification will take place to prepare the material for landfilling.

Elaborate temporary roads leading to or along the creek will not be constructed. By using off-road dumps, the existing terrain can be traversed. Existing driveways and access roads will be improved as necessary.

Once the HHC excavation work is complete, the South Pond sediment trap will be opened and drained. The South Pond sediment trap will then be removed by pulling the steel sheets with an excavator. The sheets will be loaded onto a flatbed and sent to a scrap yard. The HHC Segment 9 sediment trap will then be removed in the same fashion.

3.5.5 Sediment Solidification and Placement

The landfill will be operated during the excavation of the South Pond and HHC sediment removal tasks. The sediment will be hauled to the landfill in all-terrain dump trucks equipped with sealed tailgates. The material will be solidified using a 10% Portland cement mixture, allowed to cure for 1 day, and then spread in thin layers, graded, and compacted to meet specifications.

3.5.6 Final Landfill and TSCA Cell Capping

After the sediment and soils have been placed in the landfill and the required subgrade is met, a NYS Part 360 cap will be placed on the landfill and TSCA Cell areas. The cap will consist of the following layers: Geocomposite drainage net, 40 mil LLDPE geomembrane, 12-inch drainage layer, 12-inch barrier protection layer, and 6 inches of topsoil. The landfill access road will be completed with gravel. Specified slopes will receive erosion control matting. The entire landfill and TSCA Cell will be seeded.

Landfill drainage piping, fence repairs, and storm water channels will be installed as part of the landfill capping work.

3.5.7 Restoration

The South Pond will be transformed into a marsh area by installing 6 inches of vegetated top soil.

Herrick Hollow Creek will then be restored to the specified condition. The creek channel, including the channel through the existing South Pond, will be restored by backfilling with 1-in. cobbles. Rock cross vanes will be constructed as shown on the drawings. The remaining

disturbed areas along the creek will be restored with 6 inches of topsoil. General fill may be added below the topsoil in certain areas to promote drainage towards the stream channel. A wetland seed mixture, plantings and/or cover crop will be added per the specifications. Erosion matting and/or mulch will be placed as specified. Finally, grading out ruts and reseeding will be performed to restore areas disturbed by the excavator and off-road dumps.

Temporary erosion control measures will be removed after adequate vegetated growth has taken place. This may result in a remobilization in Spring 2004 to perform minor repairs, reseed certain areas, and remove the features.

3.5.8 Asphalt Paving

The North Area access roads/parking lot will be paved with 4 inches of base course and 2 inches of top course. Asphalt will be sloped appropriately to direct storm water away from the GWTP and pull boxes.

During the project, RHR asphalt will be cut to install storm water culverts and other piping. Following backfilling around the culvert/piping, the asphalt will be replaced.

3.5.9 Demobilization

Upon completion of Earthwork tasks, Shaw will demobilize. Equipment will be decontaminated prior to shipping off-site. Unused materials will be shipped off-site. The office complex consisting of two field trailers and associated office equipment will be disassembled and demobilized. Temporary utilities (i.e., phone, electrical, sanitary) will be discontinued as appropriate.

3.6 Construction Quality Control

Construction quality control measures will be implemented throughout the Earthwork portion of remedial action to ensure the work is performed in accordance with the Consent Decree, approved Final Remedial Design, and the Construction Quality Assurance Project Plan (included within the Final Design Report as Appendix J).

3.6.1 Inspections

Inspections will be conducted by members of the project team at various points of the project to ensure consistent quality is maintained. Shaw, Parsons and EarthTech will be on-site full time to conduct inspections of the work. USEPA, NYSDEC, NYCDEP, and other agencies will be on-site periodically to conduct inspections.

3.6.1.1 Routine Work Inspections

Items included in routine inspections are the access roads, soil erosion and sediment control measures, security fence/gate(s), and survey markings.

Inspections of each facet of the work will be conducted to ensure that the quality is in accordance with the design documents and Construction Quality Assurance Project Plan.

3.6.1.2 PreFinal and Final Inspections

The USEPA will conduct a prefinal inspection at the substantial completion of the Earthwork. Shaw will notify the USEPA of substantial completion. A work punchlist created by USEPA and other agencies will be established. Once the punchlist items have been addressed by Shaw, the USEPA will be contacted, and a final inspection will be conducted. If USEPA is satisfied that the work is complete, Shaw and Parsons will be notified in writing.

3.6.2 Testing

3.6.2.1 Materials Testing

In accordance with the design specifications, Shaw is responsible for quality control testing of materials (i.e., soils, asphalt, liner materials, biopolymer slurry, etc.).

Parsons is responsible for quality assurance testing (i.e., compaction, permeability, etc.). An independent, Honeywell/Amphenol approved testing firm will be subcontracted by Parsons to conduct the quality assurance testing.

Characterization and confirmation testing of soil/sediment is the responsibility of Parsons. A combination of PCB field test kits and laboratory analysis in accordance with the Sampling and Analysis Plan will be utilized.

Parsons is responsible for monitoring turbidity within HHC.

SAMCO is responsible for GWTP discharge sampling.

Testing results will be made available for agency review.

3.6.3 Submittal Review

Shaw is required to prepare a schedule of submittals and meet the submittal requirements as stated in the design specifications. Construction submittals will be reviewed by Parsons. Submittals required by the Consent Decree such as the RAWP, O&M Plan, Certification Report will be reviewed by the agencies. Table 3.2 presents a preliminary schedule of submittals based on the design specifications.

3.6.4 Documentation

3.6.4.1 Field Logbook

Shaw, Parsons, and EarthTech will maintain daily field logbooks for the project. Construction activities will be documented with the following details at a minimum: dates, times, weather conditions, personnel on-site, equipment used, materials used, visitors, health and safety issues, and other construction related issues.

3.6.4.2 Daily Field Reports

Parsons will prepare a daily field report that summarizes construction activities from the field book. The daily field report will include site photos and sketches of work completed as necessary. The report will be submitted to Honeywell, Amphenol, and the agencies via email on

a daily basis and become part of the Construction Certification Report. Refer to Appendix B for an example of the Daily Field Report.

Shaw will also prepare daily field reports of construction activities for their own management purposes. These reports will not be submitted to the project team but may be requested by Parsons or the agency as needed.

3.6.4.3 Monthly Progress Report

Per the Consent Decree, Honeywell and Amphenol will prepare and submit to the USEPA a Monthly Progress Report by the 10th day of each month. The first Monthly Progress Report will be submitted following the first full month past the mobilization date. The final Monthly Progress Report will include the final inspection.

3.6.4.4 Construction Certification Report

Per the Consent Decree, a Construction Certification Report will be prepared and submitted to the USEPA 60 days following the final inspection. A NYS licensed Professional Engineer will certify that the construction was performed in accordance with the Consent Decree, the approved Final Design Report, design specifications and drawings, this RAWP, and approved field changes.

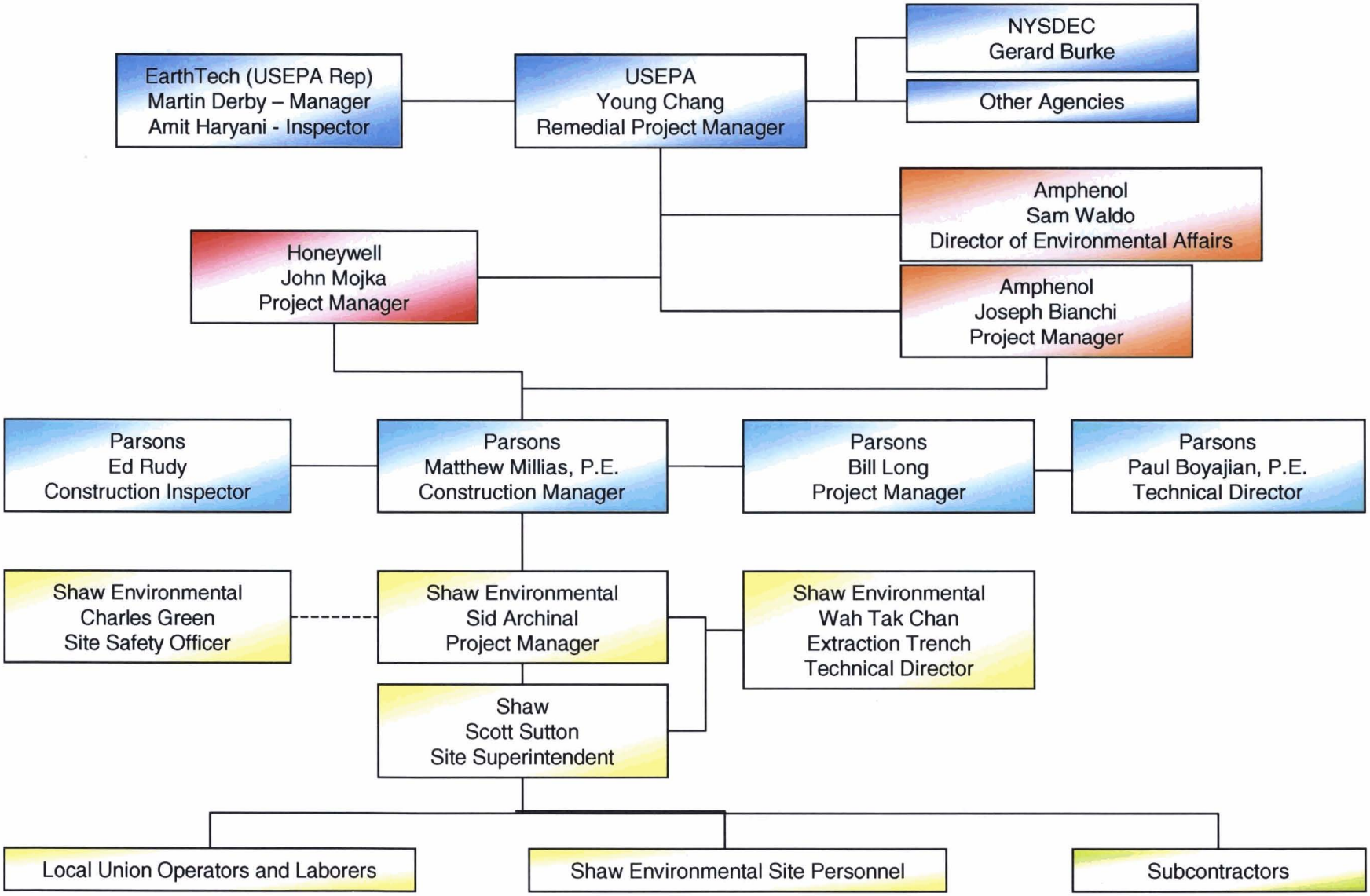
3.6.4.5 Field Change Form

Changes to the approved Final Design and/or this RAWP will require approval by Parsons and the USEPA. Appendix B presents an example Field Change Form that includes a description and reason for the field change, date, and signatures of Shaw, Parsons, and USEPA. Material substitutions (i.e., "or equals") are not considered a field change and will be approved by Parsons only.

3.6.4.6 Operation and Maintenance Manual

A preliminary Operation and Maintenance (O&M) Manual was included in the Final Design Report (Parsons 2002). As part of the GWTP work, SAMCO is responsible for issuing a draft O&M Manual for USEPA review and issuing a final O&M Manual following GWTP completion. Shaw will revise the GWTP Final O&M Manual 90 days prior to Earthwork final inspection to incorporate appropriate Earthwork O&M activities. The Final O&M Manual will include a description, operational procedure, catalog cut, and owner's manual for each component, an overall description, and record drawings. The manual will provide clear understanding on how to operate and maintain the GWTP, extraction trench, wetlands, and landfill.

Figure 3.1
Remedial Action Organization Chart



Activity ID	Activity Description	Stage	Orig Dur	Early Start	Early Finish
PRE - MOBILIZATION					
200	PREPARE PLANS AND SUBMITTALS	STAGE 1	5	07MAR03*	13MAR03
300	PLAN REVIEW BY OWNER	STAGE 1	2	13MAR03	14MAR03
220	PLANS SUBMITTED TO OWNER	STAGE 1	0		13MAR03
320	SUBMIT PLANS TO AGENCY	STAGE 1	0		18MAR03
340	APPROVAL OF PHASE 1 TASKS	STAGE 1	13	19MAR03	04APR03
360	PROJECT KICKOFF MEETING	STAGE 1	1	07APR03	07APR03
380	APPROVAL OF PHASE 2 TASKS	STAGE 2	1	02MAY03	02MAY03
OBILIZATION & SITE PREP					
400	MOBILIZATION	STAGE 1	5	08APR03	14APR03
500	SETUP SUPPORT AREA	STAGE 1	5	08APR03	14APR03
600	INITIAL SITE SURVEY	STAGE 1	3	08APR03	10APR03
800	CONSTRUCT DIVERSION DITCHES	STAGE 1	6	15APR03	22APR03
700	INSTALL EROSIONS CONTROLS	STAGE 1	5	15APR03	21APR03
900	CLEARING VEGETATION	STAGE 1	4	17APR03	22APR03
1000	ABANDON WELLS	STAGE 1	10	22APR03	06MAY03
LANDFILL CONSTRUCTION					
1100	SUBGRADE PREPARATION	STAGE 1	7	24APR03	02MAY03
1200	CONSTRUCT TSCA CELL	STAGE 1	5	05MAY03	09MAY03
1300	OPERATE LANDFILL	STAGE 2	68*	12MAY03	22AUG03
1400	FINAL GRADING	STAGE 2	5	25AUG03	29AUG03
1500	INSTALL 360 CAP	STAGE 2	10	25AUG03	09SEP03
1600	INSTALLL DRAINAGE SAND	STAGE 2	12	28AUG03	16SEP03
1700	INSTALL BARRIER PROTECTION LAYER	STAGE 2	9	18SEP03	30SEP03
1800	LEACHATE COLLECTION / STORMWATER FEATURES	STAGE 2	10	02OCT03	17OCT03
2000	TOPSOIL & SEED	STAGE 2	7	20OCT03	28OCT03
1900	INSTALL DRAINAGE CULVERTS	STAGE 2	5	20OCT03	24OCT03
MISC. SOIL RELOCATIONS					
2100	WASTE OIL PIT	STAGE 2	3	12MAY03	15MAY03
2200	AREAS L1, L2, AND L3	STAGE 2	2	16MAY03	19MAY03
2300	NORTH AREAS N1 AND N2	STAGE 2	3	20MAY03	22MAY03
XTRACTION TRENCH CONSTRUCTION					
2400	CONSTRUCT WORKING PLATFORM	STAGE 1	6	05MAY03	12MAY03
2500	SETUP SLURRY BATCH PLANT	STAGE 1	5	06MAY03	12MAY03
2600	EXCAVATE TRENCH	STAGE 2	25	13MAY03	19JUN03
2700	INSTALL COLLECTION SYSTEM, HDPE LINER	STAGE 2	20	21MAY03	19JUN03
2900	INSTALL FORCEMAIN TO PLANT	STAGE 2	15	23MAY03	13JUN03
2800	BACKFILL TRENCH	STAGE 2	15	29MAY03	19JUN03
EDIMENT HANDLING					
3000	DRAINING SOUTH POND	STAGE 1	85	08APR03	13AUG03
3100	CONSTRUCT DIVERSION FEATURES	STAGE 1	5	15APR03	21APR03
3200	INSTALL TEMP BERM ALONG TRENCH WP	STAGE 1	5	22APR03	29APR03
3300	REMOVE SEDIMENT WITHIN TRENCH WP	STAGE 1	3	30APR03	02MAY03
3400	BULK SEDIMENT REMOVAL	STAGE 2	12	20JUN03	08JUL03
3500	HERRICK CREEK DIVERSION MEASURES	STAGE 2	2	10JUL03	11JUL03
3600	HERRICK CREEK SEDIMENT REMOVAL	STAGE 2	11	14JUL03	29JUL03
3650	OPTIONAL LOWER CREEK SECTION SEDIMENT REMOVAL	STAGE 2	17	30JUL03	22AUG03
RESTORATION & DEMOBILIZATION					
3800	WETLAND RESTORATION	STAGE 2	6	30JUL03	06AUG03
3900	TOPSOIL & SEED NON-LF DISTURBED AREAS	STAGE 2	4	01AUG03	06AUG03
3850	WETLAND RESTORATION LOWER CREEK SECTION	STAGE 2	6	18AUG03	26AUG03
3700	SEDIMENT TRAP REMOVAL	STAGE 2	5	25AUG03	29AUG03
4000	ASPHALT PAVING	STAGE 2	5	29OCT03	05NOV03
4100	DEMOBILIZATION	STAGE 2	5	31OCT03	07NOV03
4200	2004 FINAL LANDSCAPING	STAGE 2	10	03MAY04*	14MAY04

rt Date 02JAN03
ish Date 14MAY04
Data Date 02JAN03
Run Date 14MAR03 13:11

Early Bar
Progress Bar
Critical Activity

LNDF

Sheet 1 of 1

FIGURE 3.2
RICHARDSON HILL ROAD EARTHWORK PROJECT
PROPOSED PROJECT SCHEDULE
SHAW PROPOSAL # 841824

Date	Revision	Checked	Approved

Table 3.1
Contact List – RHRL - Earthwork

Honeywell Inc.

John Mojka – Construction Manager Honeywell Inc. 101 Columbia Road, MEY-4 Morristown, NJ 07962 phone: 973-455-4252 fax: 973-455-3345 email: John.Mojka@honeywell.com	Rich Galloway, P.E. – Project Manager Honeywell Inc. 101 Columbia Road, MEY-4 Morristown, NJ 07962 phone: 973-455-4640 fax: 973-455-3345 email: Rich.Galloway@honeywell.com

Amphenol Corp.

Sam Waldo – Director of Environmental Affairs Amphenol Corporation World Headquarters 358 Hall Avenue Wallingford, CT 06492 phone: 203-265-8760 fax: 203-265-8746 email: waldo@amphenol.com	Joseph Bianchi – Project Manager/GWTP POC Manager, Environmental Amphenol Corporation 40-60 Delaware Ave. Sidney, NY 13838-1395 phone: 607-563-5940 fax: 607-563-5849 email: jbian@sidney.amphenol-aerospace.com

Agencies

Young Chang USEPA, Region II CNY Remediation Section, NY Branch Emergency and Remedial Response Division 290 Broadway, 20th Floor New York, NY 10007-1866 phone: 212-637-4253 fax: 212-637-3966 email: chang.young@epamail.epa.gov	Gerrard Burke NYSDEC Division of Environmental Remediation 625 Broadway, 12th Floor Albany, NY 12233-7013 phone: (518) 402-9814 fax: (518) 402-9020 email: gwburke@gw.dec.state.ny.us
Earth Tech (formerly TAMS) – USEPA On-Site Rep. site phone: 607-369-5456 site fax: 607-369-5457	Martin Derby – Earth Tech - USEPA Representative Phone: 716-836-4506 Email: martin.derby@earthtech.com
USEPA, Region II New York/Caribbean Superfund Branch Office of Regional Counsel 290 Broadway, 17th Floor New York, NY 10007-1866	Alan Belensz Environmental Protection Bureau NYS Office of Attorney General The Capital Albany, NY 12224-0341
U.S. Department of Justice Environmental Enforcement Section Environment and Natural Resources Division P.O. Box 7611 Ben Franklin Station Washington, DC 20044	New York City Dept of Env Protection Bureau of Water Supply, Quality & Protection PO Box 370 Shokan, NY 12481 Attn: Joe Damrath Phone: (845) 657-6069 Email: damrathj@water.dep.nyc.ny.us

Table 3.1 (continued)
Contact List - RHRL

Christina Dowd NYSDEC Bureau of Habitat 625 Broadway, 5th Floor Albany, NY 12233-4756 Phone: Fax: Email:	Daniel R. Geraghty NYSDOH-BEEI Flanigan Square Room 300 547 River Street Troy, NY 12180-2216 Phone: Fax: Email:

Parsons

Bill Long – Project Manager 290 Elwood Davis Road, Suite 312 Liverpool, NY 13088 Phone: 315-451-9560 Fax: 315-451-9570 Email: William.Long@Parsons.com	Matthew Millias, P.E. – Construction Manager 290 Elwood Davis Road, Suite 312 Liverpool, NY 13088 Phone: 315-451-9560 Fax: 315-451-9570 Email: Matt.Millias@Parsons.com
Ed Rudy – Construction Inspector Site Address: 2211 Richardson Hill Road Sidney Center, NY 13839 On-Site Phone: 607-369-4522 On-Site Fax: 607-369-5459 On-Site Email: ParsonsRHRL@frontiernet.net	

Shaw

Scott Sutton – Site Superintendent Site Address: 2211 Richardson Hill Road Sidney Center, NY 13839 On-Site Phone: 607-369-5453 On-Site Fax: 607-369-5454 On-Site Email: TBD	Sid Archinal – Project Manager 200 Horizon Center Boulevard Trenton, NJ 08691-1904 Phone: 609-584-8900 Fax: 609-588-6399 Email: Sid.Archinal@shawgrp.com

Table 3.2
Richardson Hill Road Landfill Site
Construction Activities
Sidney, New York
Schedule of Submittals

Shaw Environmental Project #

Submittal No.	Spec Section	Section Title	Part	Description	Date Needed For Construction	Date Submitted	Date of Reply	Date of Resubmission	Approval Date	Comments
	01300	Submittals	1.01 D	Schedule of Values	5 days after contract					
	01300	Submittals	1.01 E	Schedule of Submittals	5 days after contract					
	01300	Submittals	1.02B	Draft Letter of Transmittal	5 days after contract					
	01310	Progress Schedule	1.02 A	Initial Project Schedule	5 days after contract					
	01310	Progress Schedule	1.02 B	Monthly Schedule Update with Application For Payment						
	01500	Temporary Facilities and Field Office	2.01 A	Field Office Area Layout	5 days after contract					
	01564	Erosion Control	1.04 B	Erosion Control Implementation Method						
	01564	Erosion Control	2.01 A	Straw Bales - Product Data						
	01564	Erosion Control	2.01 B	Silt Fence - Product Data						
	01564	Erosion Control	2.01 C	Stakes and Fasteners - Product Data						
	01564	Erosion Control	2.01 D	Erosion Control Fabric - Temporary - Product Data						
	01564	Erosion Control	2.01 D	Erosion Control Fabric - Permanent - Product Data						
	01564	Erosion Control	2.01 E	Oil Sorbents - Booms - Product Data						
	01564	Erosion Control	2.01 E	Oil Sorbents - Socks - Product Data						
	01564	Erosion Control	2.01 F	Silt Curtain - Product Data						
	01620	General Requirements - Safety, Health, and Emergency Response	1.6	Safety and Health Program						
	01620	General Requirements - Safety, Health, and Emergency Response	1.6	Site Specific Health and Safety Plan	5 days after contract					
	01620	General Requirements - Safety, Health, and Emergency Response	1.6	Certification of Employee Fitness						
	01620	General Requirements - Safety, Health, and Emergency Response	1.6	CD-13-1 - Safety & Occupational Health Compliance						
	01620	General Requirements - Safety, Health, and Emergency Response	1.6	CD-13-2 - Contractor's Safety Declaration						
	01620	General Requirements - Safety, Health, and Emergency Response	1.6	CD-13-3 - Contractor's Employee Safety Declaration						
	01620	General Requirements - Safety, Health, and Emergency Response	1.6	Daily Safety Reports						
	01620	General Requirements - Safety, Health, and Emergency Response	1.6	Safety Incident Reports (Environmental Excursion, Vehicle, and Worker Forms						
	01620	General Requirements - Safety, Health, and Emergency Response	1.6	Employee/Visitor Register						
	01620	General Requirements - Safety, Health, and Emergency Response	1.6	Monitoring/Sampling Results						
	01620	General Requirements - Safety, Health, and Emergency Response	1.6	Training Logs						
	01620	General Requirements - Safety, Health, and Emergency Response	1.6	Monthly Man-Hours						
	01620	General Requirements - Safety, Health, and Emergency Response	1.6	Phase-Out Report						

Submittal No.	Spec Section	Section Title	Part	Description	Date Needed For Construction	Date Submitted	Date of Reply	Date of Resubmission	Approval Date	Comments
	01700	Project Closeout	1.03	Project Close Out Information						
	01720	Project Record Drawings	1.02 A	Redline Drawings						
	01720	Project Record Drawings	1.02 B	Final Survey						
	01730	Operations and Maintenance Data	1.01 C	Operations and Maintenance Data	90 Days After					
	02015	Overburden Groundwater	1.02 A	Product Data						
	02015	Overburden Groundwater	1.02 B	Installer - Name and Address w/ 5 Completed Projects						
	02085	Groundwater Monitoring Well Abandonment	1.03 A	Methods						
	02085	Groundwater Monitoring Well Abandonment	1.03 B	Mixes - Grout and Bentonite						
	02085	Groundwater Monitoring Well Abandonment	1.03 C	Equipment						
	02085	Groundwater Monitoring Well Abandonment	1.03 D	Drilling Contractor - Name and Address w/ 5 Completed Projects						
	02219	Waste Excavation, Consolidation, and Disposal	1.02 A	Name, Location, and Permit of any Offsite Disposal Facility						
	02220	Waste Excavation, Consolidation, and Disposal	1.02 A	Statement of Waste Acceptability						
	02220	Waste Excavation, Consolidation, and Disposal	1.02 B	Work Plan	Include with RAWP					
	02220	Waste Excavation, Consolidation, and Disposal	1.02 C	Contingency Plan	Include with HASP					
	02220	Waste Excavation, Consolidation, and Disposal	1.02 D	Test Results						
	02223	Backfilling	1.02 A	Subbase/Structural Backfill/Crushed Aggregate - Name and Owner of Borrow Source & Testing						
	02223	Backfilling	1.02 A	Unclassified Fill or Backfill - Name and Owner of Borrow Source & Testing						
	02223	Backfilling	1.02 A	Pra Gravel - Name and Owner of Borrow Source & Testing						
	02223	Backfilling	1.02 A	Pipe Bedding Material - Name and Owner of Borrow Source & Testing						
	02228	Compaction	1.02 A	Means and Methods Including Equipment Proposed	Included with RAWP					
	02228	Compaction	1.03 B	Samples of Materials to be Compacted						
	02228	Compaction	1.03 C	Test Results						
	02250	Groundwater Extraction Trench	1.05 A	Site Operations Plan						
	02250	Groundwater Extraction Trench	1.05 A	Construction Quality Assurance/Construction Quality Control Plan						
	02250	Groundwater Extraction Trench	1.05 A	Name of Proposed Testing Laboratory						
	02250	Groundwater Extraction Trench	1.05 A	Information on Proposed type of Biopolymer and Additives						
	02250	Groundwater Extraction Trench	1.05 A	Proposed Breaking Agent						
	02250	Groundwater Extraction Trench	1.05 A	Revisions to Equipment Schedule						
	02250	Groundwater Extraction Trench	1.05 A	Location of Portable Water						
	02250	Groundwater Extraction Trench	1.05 A	Proposed Location of Equipment and Operations						
	02250	Groundwater Extraction Trench	1.05 A	Proposed Materials of Construction for HDPE Vertical Barrier, HDPE Vertical Sump, Horizontal Collection Pipe, and Concrete Vaults						
	02250	Groundwater Extraction Trench	1.05 A	Contractors Qualifications per 1.03 of This Section						
	02250	Groundwater Extraction Trench	1.05 A	Results of Quality Control Testing						
	02250	Groundwater Extraction Trench	1.05 A	Final Survey of Trench Alignment						

Submittal No.	Spec Section	Section Title	Part	Description	Date Needed For Construction	Date Submitted	Date of Reply	Date of Resubmission	Approval Date	Comments
	02250	Groundwater Extraction Trench	1.05 A	Depth to Top of the Key Material and Bottom of the Trench in 10' Intervals						
	02250	Groundwater Extraction Trench	1.05 A	Weekly Records of Groundwater Elevation Monitoring						
	02260	Soil Cover Layers	1.02 A	Drainage Sand - Borrow Source Testing Report						
	02260	Soil Cover Layers	1.02 A	Barrier Protection Soil - Borrow Source Testing Report						
	02275	Riprap	1.02 A	Name and Location of Source						
	02275	Riprap	1.02 B	Test Reports and Proof of NYSDOT Approval						
	02405	Geomembranes	1.04 A 1	Information to be Submitted Prior to Construction						
	02405	Geomembranes	1.04 A 2	Manufacturer's Quality Control Submittals						
	02405	Geomembranes	1.04 A 3	Proof of Manufacturer's Experience						
	02405	Geomembranes	1.04 A 4	Installer Information						
	02405	Geomembranes	1.04 A 5	Shop Drawings						
	02405	Geomembranes	1.04 A 6	Quality Control Requirements						
	02405	Geomembranes	1.04 A 7	Third Party CQA Geosynthetic Testing Laboratory Information						
	02405	Geomembranes	1.04 A 8	Third Party Direct Shear Testing Laboratory Information						
	02405	Geomembranes	1.04 A 9	Certified Interface Strength and Friction Test Results						
	02405	Geomembranes	1.04 B	Information Required During Construction						
	02405	Geomembranes	1.04 C 1	Information Required After Completion of Construction - Record Drawings						
	02405	Geomembranes	1.04 C 2	Information Required After Completion of Construction - QA/QC and Other Installation Documentation						
	02405	Geomembranes	1.04 C 3	Information Required After Completion of Construction - Certificate Stating That the geomembrane was Installed in Accordance With the Contract Documents						
	02405	Geomembranes	1.04 C 4	Information Required After Completion of Construction - Material and Installation Warranties						
	02606	HDPE Vertical Barrier	1.04 A 1	Manufacturer Information						
	02606	HDPE Vertical Barrier	1.04 A 2	Manufacturer's Quality Control Submittals						
	02606	HDPE Vertical Barrier	1.04 A 3	Installer Information						
	02606	HDPE Vertical Barrier	1.04 A 4	Shop Drawings						
	02606	HDPE Vertical Barrier	1.04 A 5	Quality Control Requirements						
	02606	HDPE Vertical Barrier	1.04 A 6	Proposed method of Installation						
	02606	HDPE Vertical Barrier	1.04 A 7	Information on Third Party CQA Geosynthic Testing Laboratory						
	02606	HDPE Vertical Barrier	1.04 B	Information During Installation						
	02606	HDPE Vertical Barrier	1.04 C 1	Information Required After Completion of Construction - Record Drawings						
	02606	HDPE Vertical Barrier	1.04 C 2	Information Required After Completion of Construction - QA/QC and Other Installation Documentation						
	02606	HDPE Vertical Barrier	1.04 C 3	Information Required After Completion of Construction - Certificate Stating That the Vertical Barrier System was Installed in Accordance With the Contract Documents						
	02606	HDPE Vertical Barrier	1.04 C 4	Information Required After Completion of Construction - Material and Installation Warranties						
	02421	Geotextiles	1.03 A	Samples of the Geotextile Material						
	02421	Geotextiles	1.03 B	Manufacturer's Technical Data						
	02421	Geotextiles	1.03 C	Certified Test Results						
	02551	Asphalt Pavement	1.02 A	Material Certificates						
	02621	Geoomposite	1.03 A 1	Sample of geocomposite to be used						
	02621	Geoomposite	1.03 A 2	Manufacturer's Technical Data						

Submittal No.	Spec Section	Section Title	Part	Description	Date Needed For Construction	Date Submitted	Date of Reply	Date of Resubmission	Approval Date	Comments
	02621	Geoomposite	1.03 A 3	Copies of QC Certificates Issued by the Raw Material Suppliers						
	02621	Geoomposite	1.03 A 4	Results of Resin Tests						
	02621	Geoomposite	1.03 A 5	Certificate That No Reclaimed Polymer is Added to the Resin During Manufacturing						
	02621	Geoomposite	1.03 A 6	Manufacturer's Installation Requirements						
	02621	Geoomposite	1.03 A 7	Certified Test Results Per Table 02621-1						
	02621	Geoomposite	1.03 A 8	Certified Test Results Per Part 2.02 of This Section						
	02621	Geoomposite	1.03 A 9	Warranty						
	02621	Geoomposite	1.03 A 10	Qualification Information						
	02621	Geoomposite	1.03 A 11	Manufacturer's Quality Control Plan						
	02621	Geoomposite	1.03 A 12	Certification of Production Capacity and Schedule Availability to Meet This Contract						
	02621	Geoomposite	1.03 A 13	Certified Interface Friction Test Results Per Section 02405						
	02727	Drainage Piping	1.04 B	Shop Drawings						
	02727	Drainage Piping	1.04 C	Manufacturer's Certification						
	02727	Drainage Piping	1.04 D	Proposed Application for Pipe						
	02727	Drainage Piping	1.04 E	Manufacturer's Installation Instructions						
	02727	Drainage Piping	1.04 F	Specify Joining Methods						
	02727	Drainage Piping	1.04 G	Test Procedures						
	02727	Drainage Piping	1.04 H	Certified Test Results						
	02910	Wetland Restoration	1.02 B	Wetland Seed Vendor's Certificate						
	02990	Finish Grading, Topsoil, And Seeding	1.02 A 1	Topsoil Source and Test Results						
	02990	Finish Grading, Topsoil, And Seeding	1.02 A 2	Grass Seed Vendors Certificate						
	02990	Finish Grading, Topsoil, And Seeding	1.02 A 4	Hydroseeding Equipment - If Proposed						
	02990	Finish Grading, Topsoil, And Seeding	1.02 A 5	Fertilizer Information						
	02990	Finish Grading, Topsoil, And Seeding	1.02 A 6	Mulch Source						
	02990	Finish Grading, Topsoil, And Seeding	1.02 B	Installer Information						
	02990	Finish Grading, Topsoil, And Seeding	1.02 C	Manufacturer's Certification						
	02990	Finish Grading, Topsoil, And Seeding	1.02 D	Borrow Source and Quality Control Testing Results Per Part 3.02D						
	13420	Instruments	1.02 A 1	Cut Sheet For Instrument						
	13420	Instruments	1.02 A 2	Cut Sheet for All Accessories, Connectors, and Required Items for Complete Installation						
	13420	Instruments	1.02 A 3	Tag Number as Indicated on the P&Ids						
	13420	Instruments	1.02 A 4	List of Recommended Spare Parts						
	13420	Instruments	1.02 A 5	Detailed Wiring Diagrams						
	13420	Instruments	1.02 A 6	Manufacturer's Installation Instructions						
	13420	Instruments	1.02 A 7	Operations and Maintenance Manuals						
	015060	Piping And Pipe Fittings	1.03 B	Shop Drawings						
	015060	Piping And Pipe Fittings	1.03 C	Erection Drawings						
	015060	Piping And Pipe Fittings	1.03 D	Testing Procedures						

Submittal No.	Spec Section	Section Title	Part	Description	Date Needed For Construction	Date Submitted	Date of Reply	Date of Resubmission	Approval Date	Comments
	015060	Piping And Pipe Fittings	1.03 E	Pipe Cleaning Procedures						
	015100	Process Piping	1.03 A	Shop Drawings						
	015100	Process Piping	1.03 B	Valve Specific Information —						
	015100	Process Piping	1.03 C	Motor Driven Actuator Specific Information						
	015100	Process Piping	1.03 D	Erection Drawings						
	015100	Process Piping	1.03 E	Certificates						

4 Construction Health & Safety Plan

A Construction HASP was prepared as Appendix I of the approved Final Design Report. As required by the design specifications, a Certified Industrial Hygienist (CIH) representing Shaw must prepare a Construction HASP or adapt the existing HASP with or without exceptions/additions. Due to the need to incorporate Shaw specific information regarding our corporate health and safety programs into the HASP we have elected to submit a separately bound document. Shaw's CIH has reviewed the existing HASP and has incorporated it in it's entirety into our own HASP (included under separate cover) with the following exceptions:

- Shaw will use a 11.7 PID probe to be able to pick up 1,1,1-trichloroethane that has an ionization potential of 11.0
- Shaw will perform initial personal air sampling for PCBs during the excavation of the waste oil pit
- Level C Protection will be used during the excavation of the waste oil pit

In addition Shaw intends to perform the following activities:

- Shaw will provide a full-time Site Safety Officer to enforce the HASP.
- Daily safety "tailgate" meeting will be conducted to inform workers of general and task specific issues.
- Shaw will conduct air monitoring as appropriate.
- Unless site specific action levels are exceeded, workers will be in Level D personal protective equipment (i.e., hard hat, steel toe boots).

5 References

O'Brien & Gere, 1994. Unilateral Administrative Order Report for the Richardson Hill Road Municipal Landfill. Prepared for Amphenol Corporation by O'Brien & Gere Engineers, Inc. November 1994.

O'Brien & Gere, 1995. Remedial Investigation Report for the Richardson Hill Road Municipal Landfill. Prepared for Amphenol Corporation by O'Brien & Gere Engineers, Inc. August 1995.

O'Brien & Gere, 1996. Feasibility Study Report for the Richardson Hill Road Municipal Landfill. Prepared for Amphenol Corporation by O'Brien & Gere Engineers, Inc. July 1996.

O'Brien & Gere, 1996. Downstream Characterization Efforts for the Richardson Hill Road Municipal Landfill. Prepared for Amphenol Corporation by O'Brien & Gere Engineers, Inc. June 1996.

USEPA, 1997. Record of Decision for the Richardson Hill Road Landfill Site. United States Environmental Protection Agency, Region II. September 30, 1997.

USEPA, 1999. Consent Decree for the Richardson Hill Road Landfill Site. United States Environmental Protection Agency, Region II.

Parsons, 1999. Remedial Design Work Plan for the Richardson Hill Road Landfill. Prepared for Amphenol/Honeywell by Parsons ES, Inc., August 1999.

Parsons, 2000. Pre-Design Investigation Report for the Richardson Hill Road Landfill. Prepared for Amphenol/Honeywell by Parsons ES, Inc., March 2000.

Parsons, 2000. Preliminary (50%) Design Report for the Richardson Hill Road Landfill. Prepared for Amphenol/Honeywell by Parsons, May 2000.

Parsons, 2002. Final (100%) Design Report for the Richardson Hill Road Landfill. Prepared for Amphenol/Honeywell by Parsons, February 2002 (revised July 2002).

Parsons, 2002. GWTP RAWP for the Richardson Hill Road Landfill. Prepared for Amphenol/Honeywell by Parsons, October 2002.

Parsons, 2003. Downstream Sediment Removal Design for the Richardson Hill Road Landfill. Prepared for Amphenol/Honeywell by Parsons, January 2003.

Public Archaeology Facility October, 2001. Cultural Resource Management Survey Stage 1B Archaeological Reconnaissance Addendum for the Richardson Hill Road Landfill.

Public Archaeology Facility Report, August 15, 2002. Cultural Resource Management Report – Phase 1 Archaeological Addendum Survey for the Richardson Hill Road Landfill Superfund Site Project, Spizziri Property, Town of Sidney, Delaware County, NY.

APPENDIX A Traffic Plan

TRAFFIC PLAN

Introduction

Shaw and Parsons have prepared this Traffic Plan for the Earthwork activities of the Richardson Hill Road Landfill (RHRL) Site. This plan describes the traffic safety measures designed to protect the public and site workers during work activities.

Richardson Hill Road is a narrow, two-lane rural road (approximately 18 feet wide) that serves multiple residences of the Town of Sidney and the Town of Masonville. Local highway department crews of their respective towns currently maintain the road.

Due to the project's Earthwork activities, normal traffic patterns along Richardson Hill Road will be impacted. During certain portions of the work, particularly construction of the groundwater extraction trench, it may be necessary to temporarily close the northbound lane of traffic adjacent to the South Pond. For pipe culvert installation across Richardson Hill Road, it will be necessary to temporarily close (approximately 2 hours per pipe culvert) both lanes of traffic. Shaw and Parsons will work closely with local highway department officials to coordinate temporary lane closures. It is understood that to the extent practical, at least one lane of traffic must be kept open to provide emergency vehicle access on Richardson Hill Road. With exception of the pipe culvert installations, this requirement will be met throughout the Earthwork activities.

The following Earthwork activities will likely impact traffic patterns along Richardson Hill Road:

- Extraction Trench Construction – Given the location adjacent to the road, heavy equipment (i.e., crane, long-stick backhoe, dump trucks) will impede the eastern lane of Richardson Hill Road. Material removed from the trench will be transported across the road to the Landfill Area. Imported material will be transported to the trench via triaxle dump trucks.
- Sediment Excavation/Handling/Stabilization – Watertight dump trucks will transport South Pond and Herrick Hollow Creek sediment across the road to the Landfill Area.
- North Area Excavation – Watertight dump trucks will transport North Pond sediment/soil/waste from the North Pond to the Landfill Area.
- Landfill Construction – Off-site borrow material will be transported via triaxle dump trucks to the Landfill Area.

Access Roads and Signage

A permanent access road has been constructed at the North Area to service the Groundwater Treatment Plant (GWTP). The access road connects with Richardson Hill Road at two locations on each side of the former Spizziri residence. During the Earthwork activities, site workers and authorized personnel will utilize the North Area for field office space and parking. The GWTP will be operated continuously throughout the Earthwork activities and into the foreseeable future. Delivery trucks (i.e., propane, bulk chemicals for GWTP operation, etc.) and waste disposal trucks (i.e., sludge removal) will utilize the permanent access roads on an as needed basis.

A permanent access road will be constructed within the Landfill Area. The access road will connect with Richardson Hill Road at two location, both along the western side.

Temporary access roads will be constructed during the Earthwork phase. It is likely that up to eight temporary access roads will be constructed from Richardson Hill Road to the South Pond and Herrick Hollow Creek. In some cases, existing resident driveways will be utilized rather than creating new roads. These access points to the South Pond and Herrick Hollow Creek are necessary to conduct sediment removal and wetland restoration. Once temporary access road will be constructed within the North Area to conduct sediment/soil/waste removal along the North Pond. Following completion of activities in these areas, the temporary access road materials (i.e., geotextile, gravel) will be removed and the areas restored.

Shaw will install, at a minimum, the following temporary construction signage along Richardson Hill Road:

- "Caution – Men Working"
- "Flagmen – One Lane Temporarily Closed"
- "Trucks Entering Roadway"

Traffic Control

To control traffic during Earthwork activities, the following measures will be implemented:

Shaw will issue a notice to local residences regarding the site work. The notice will provide pertinent facts concerning the site as well as focus on potential traffic concerns.

- Shaw has evaluated the local roads and bridges to determine the most appropriate delivery routes. The truck route as well as speed restrictions will be issued to site-related truck drivers. As representative of Amphenol/Honeywell, Parsons will enforce a zero tolerance policy in terms of speeding and reckless driving.
- A speed limit of 10 mph will be established for the site and along Richardson Hill Road where there is temporary lane modification.
- Shaw will provide flagman, orange cones, barriers, and/or temporary traffic lights during Earthwork activities as needed.

Road Repair

Prior to the start of construction, Parsons and Shaw will videotape the anticipated truck routes in order to document a baseline physical condition. During and at the end of the GWTP portion of the RHRL project, additional videotaping will be conducted for comparison to the baseline.

Honeywell/Amphenol have made an agreement with the appropriate Highway Departments to assist financially with Richardson Hill Road repaving once the Earthwork activities are completed. The local highway department crews will perform the repaving. The local highway departments will repair Richardson Hill Road during construction activities only if necessary to maintain safe roads.

Shaw will repair Richardson Hill Road following culvert installation and/or removal.

Truck Routes to the Site

The following directions have been established for commercial truck traffic entering and leaving the Richardson Hill Road Landfill Site. The following instructions will be provided to transporters involved with delivering materials and supplies to the site. This route has been established to provide the safest and most direct route, while ensuring compliance with weight restrictions that may apply. This truck route is also avoids traffic through the Town of Sidney.

- Traveling east or west on I-88, take Exit #10 (Unadilla)
- Turn at the first left onto River Road,
- Turn at the next left onto Rt-23 (toward Sidney Center),
- Follow Rt-23 through Sidney Center,
- Turn right onto Rt-27, Trout Creek Road,
- Turn at the first left onto Richardson Hill Road (use caution – Blind Child Area)
- Turn right at the truck entrance at 2211 Richardson Hill Road.

Notes to truck drivers:

- Use extreme caution when entering and exiting the site due to traffic on Richardson Hill Road and within the job site.
- Vehicles are required to follow all highway and site speed limits.
- A blind child caution area exists along Richardson Hill Road.

APPENDIX B Daily Field Report and Field Change Form

Parsons
Liverpool, New York

DAILY FIELD REPORT

JOB NAME	Earthwork	DATE	
PROJECT	Richardson Hill Road Landfill	REPORT NO.	
JOB NO.	742577	SHEET	1 OF
LOCATION	Sidney, New York	WEATHER	
CLIENT	Amphenol Corp. / Honeywell Inc.	TEMPERATURE	

WORK IN PROGRESS OR COMPLETE (INCLUDING SUBCONTRACTORS):

CONTRACTOR EQUIPMENT	QUANTITY	CONTRACTOR WORK FORCE	QUANTITY

WORK HOURS:

VERBAL DISCUSSIONS/INSTRUCTIONS

REQUEST FOR PROJECT ACTION

VISITORS

SAFETY
ACCIDENTS REPORTED TODAY
ACCIDENTS REPORTED TO DATE

PARSONS REPRESENTATIVE

Dailyrpt

Parsons
Liverpool, New York

DAILY FIELD REPORT

JOB NAME	Earthwork	DATE	
PROJECT	Richardson Hill Road Landfill	REPORT NO.	
JOB NO.	742577	SHEET	2 OF
LOCATION	Sidney, New York		
CLIENT	Amphenol Corp. / Honeywell Inc.		

Photo No.:
Date Taken:
Photo Description:

EARTHWORK REMEDIAL ACTION
RICHARDSON HILL ROAD LANDFILL SUPERFUND SITE
SIDNEY, NEW YORK

FIELD CHANGE FORM # ___

Project Number: Date:

Construction Manager: Parsons

Remedial Action Contractor: Shaw

You are hereby authorized and instructed to complete the following modifications to the approved Final Design:

APPROVALS:

Parsons Representative

Name:
Signature:
Date:

Shaw Representative

Name:
Signature:
Date:

USEPA

Name:
Signature:
Date:

cc: Joe Bianchi - Amphenol
John Mojka - Honeywell