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**PHASE II RCRA FACILITY  
INVESTIGATION AND INTERIM  
CORRECTIVE MEASURES WORK PLAN**

**FORMER AL TECH SPECIALTY STEEL  
CORPORATION  
DUNKIRK, NEW YORK**

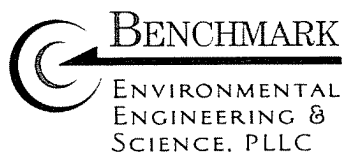
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**PHASE II RCRA FACILITY INVESTIGATION & ICM WORK PLAN  
FORMER AL TECH SPECIALTY STEEL CORPORATION**

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## 1.0 INTRODUCTION

This document presents the proposed scope of work for the Phase II Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) and Interim Corrective Measures (ICMs) to be implemented at the former AL Tech Specialty Steel Corporation facility in Dunkirk, New York (Figure 1). The RFI is being performed in partial fulfillment of Appendix B of the Order on Consent (Order) issued by the New York State Department of Environmental Conservation (NYSDEC) (Order No. R4-1467-93-02) (NYSDEC 1995) under the RCRA Corrective Action Program as implemented by New York State.

### 1.1 Background

The Corrective Action Program at the site began in 1990. A RCRA Facility Assessment (RFA) was performed to identify inactive and active solid waste management units (SWMUs) and areas of concern (AOCs). Based on process knowledge and historical and current practices, these units were those that could, or could have, potentially released hazardous waste or hazardous constituents to the environment resulting in an unacceptable risk to human health or the environment. The findings of the RFA (McLaren/Hart 1992) formed the basis for the development of the corrective action requirements specified for the site in Appendix B of the Order.

Appendix B, Section A.2 of the Order identifies the site's 24 SWMUs and 11 AOCs. Five areas that RealCo refers to as Pickle Facility Areas have been identified at the site. These Pickle Facility Areas encompass several of the AOCs or SWMUs or a combination. The individual units were combined and classified as general areas due to their proximity and typically integrated nature of their processes, for the purpose of investigation and potential evaluation of remedial actions, if any. The units, unit numbers, and descriptions are presented in Tables 1-1 and 1-2; the locations are identified in Figure 2.

The evaluation of results from the Phase I RFI, performed in 1996 and 1997, indicated that additional investigation activities were required at several of the SMWUs, AOCs, and Pickle Facility Areas (ESC 1998). The evaluation of the Phase I results also

indicated that several units did not require additional investigation because either no further action (NFA) was necessary or because there was sufficient information available to make an analysis of the need for an ICM or corrective measures study (CMS). Table 1-3 presents a list and description of the units and identifies their current status based on the Phase I RFI and comments on the documents provided by the NYSDEC (NYSDEC 2000). The status categories include:

- additional investigation (Phase II RFI)
- ICM
- CMS

The scope of work for each unit requiring additional investigation or an ICM is presented in this work plan.

## 1.2 Project Objectives

The objectives of Phase II of the RFI are to collect the additional data needed to determine appropriate future actions, if any, for the units that have not already been characterized as NFA specifically:

- to delineate the presence and extent of constituents of concern, if necessary
- to determine if the concentrations of constituents of concern pose potential unacceptable risks to human health and the environment
- to evaluate the potential for offsite migration of constituents of concern
- to provide the data needed to evaluate potential corrective measures
- to determine appropriate subsequent action based on potential risk, i.e., no further action, additional investigation, ICM, or CMS
- to address potential offsite migration of constituents of concern or potential worker contact through ICMs.

### 1.3 Scope of Work and Work Plan Format

The Phase II RFI will include additional physical and chemical characterization of several environmental media, implementation of ICMs, and additional assessment of the unnamed tributary to Crooked Brook. In addition, RealCo will attempt to identify stormwater discharge points to Crooked Brook from site drawings and visual investigations of the stream. If discharge points are identified, RealCo will collect sediment samples upstream and downstream from the identified discharge location. Scopes of work for the individual units are based on those proposed in the Phase I RFI Report, perceived data gaps associated with issues raised by the NYSDEC (NYSDEC 2000), and additional data needed to produce a comprehensive CMS.

The Phase II RFI scope of work is presented in Section 2.0. In general, the scope of work includes:

- the completion of 20 soil borings via hollow stem auger, 55 Geoprobe® direct push and a minimum of three test pits ← ? *Geoprobe 9/10/02 letter*
- the collection and analysis of surface and subsurface soil samples from the soil borings, test pit, shallow soil sample locations, and well borings
- the installation of 17 two-inch groundwater monitoring wells, 2 four-inch observation wells and 1 four-inch recovery well
- the collection and analysis of groundwater samples from select wells during two monitoring events
- the measurement of groundwater levels before implementing sampling activities
- the collection and analysis of wipe samples from three transformer pads
- the collection and analysis of surface water and sediment samples from Crooked Brook
- evaluate the development of risk-based site-specific cleanup standards for soil

Section 3.0 describes the ICMs proposed for AOCs, Pickle Facility Areas, and areas of interest determined to be necessary based on the Phase I RFI.

Section 4.0 describes the reporting requirements associated with Phase II of the RFI.

## 1.4 Supporting Documents

The Phase I RFI Work Plan (ESC 1996), approved by the NYSDEC, provided protocols for various investigation activities, e.g., soil, surface water, sediment, and groundwater sampling, water-level monitoring, field documentation, and site surveying. The Phase I RFI Work Plan also included protocols and methods to support these activities. A Quality Assurance Project Plan (QAPP) has been prepared as a stand-alone document for the Phase II RFI Investigation activities and will be utilized to implement the RFI and ICM tasks delineated in this Work Plan. A Sampling and Analysis Plan (SAP) for the Phase II RFI is provided as Section 4.0 to the QAPP. The project management methods, organizational structure and schedule are also included in the QAPP.

A Health and Safety Plan (Attachment 1) has been prepared and included with this Work Plan to support the implementation of the Phase II RFI.

## 2.0 PHASE II RFI SCOPE OF WORK

Individual scopes of work, developed for areas to be addressed during the Phase II RFI, are presented in the following sections. The proposed locations of the Phase II RFI activities are presented on Figure 3. A summary of the Phase II RFI sampling and analytical program is presented as Table 2-1.

As indicated in the individual sections below, all newly installed monitoring wells will be sampled during the first groundwater sampling event of the Phase II RFI for analysis of:

- target compound list (TCL) volatile organic compounds (VOCs) and VOC tentatively identified compounds (TICs)
- TCL semi-volatile organic compounds (SVOCs) and SVOC TICs
- RCRA and facility-related metals

The groundwater analyses will be modified for the second sampling event based on the results of the first to eliminate parameter groups not detected or detected at concentrations below Class GA water quality standards during the first sampling event.

In addition, analysis of metals in toxicity characteristic leaching procedure (TCLP) extract will be performed on approximately five percent of the soil samples based on an evaluation of total metals results. The analytical laboratory will be notified to archive the soil samples and maintain sufficient sample volume after total metals analyses to potentially perform TCLP extraction and analysis. Soil samples with the highest total metals concentrations or in sensitive areas will be selected for TCLP analysis in coordination with the NYSDEC.

### 2.1 SWMUs

The Phase II RFI will consist of additional investigation activities associated with the following SWMUs:

- SWMU 11 - Shark Pit Residual Material Loading Area



- SWMU 13A and 14A - Crucible Disposal Area and Waste Disposal Facility
- SWMU 13B and 14B - Crucible Disposal Area and Waste Disposal Facility
- SWMUs 13C, 17, and 22- Closed Surface Impoundment and WWTP
- SWMU 14C - Waste Disposal Facility
- SWMU 15 - Former Waste Acid Surface Impoundments
- SWMU 16 - Willowbrook Pond Area
- SWMU 18 - Grinding Dust Transfer Pile
- SWMU 21 - Grinding Swarf Storage Area

### 2.1.1 SWMU 11 - Shark Pit Residual Material Loading Area

Additional investigation activities at SWMU 11 include the installation of one Geoprobe® soil boring (RB-08) immediately north of the unit. One surface and two subsurface soil samples will be collected from this boring. The surface sample will be collected from a depth of 0-2 feet below ground surface (ft-bgs); the subsurface samples will be collected from approximately 4-6 ft-bgs and immediately above the first saturated zone. The samples will be analyzed for TCL SVOCs and SVOC TICs, and TCL polychlorinated biphenyls (PCBs), and RCRA and facility-related metals (Table 2-2).

Potential impact to groundwater from this unit will be evaluated using an existing downgradient monitoring well, RFI-10 (see Section 2.1.4 for the groundwater analytical program).

### 2.1.2 SWMUs 13A and 14A - Crucible Disposal Area and Waste Disposal Facility

A test pit, TP-07, was excavated in this area during the Phase I RFI. The location was not as close to SWMUs 13A and 14A as originally intended due to facility construction activities. Test pits/trenches (e.g., TP-12) will be excavated immediately north of these units during the Phase II RFI. Location(s) will be determined in consultation with the Department. Soil samples will be collected from

various locations and depths along the trench to evaluate potential impact on site soils from these (and other) units. The soil samples will be analyzed for TCL SVOCs and SVOC TICs, and RCRA and facility-related metals; if discolored soil is encountered, soil pH will be determined. In addition, at least one soil sample will be collected for analysis of TCL VOCs and VOC TICs based on organic vapor screening results using a photoionization detector (PID). If VOCs are not indicated based on screening, the soil sample collected from above the first saturated zone will be submitted for analysis of TCL VOCs and VOC TICs.

### 2.1.3 SWMUs 13B and 14B - Crucible Disposal Area and Waste Disposal Facility

A test pit/trench (TP-13) will be excavated in this SWMU at a location to be determined by the NYSDEC. A minimum of four soil samples will be collected and analyzed for TCL SVOCs and SVOC TICs and RCRA/facility-related metals. One sample will also be analyzed for TCL VOCs and VOC TICs. Additional soil trenches may be excavated and samples collected for analysis, if necessary to further delineate impacts in this area.

### 2.1.4 SWMUs 13C, 17, and 22 - Waste Management Area

As requested by the NYSDEC (NYSDEC 2000), SWMUs 13C, 17, and 22, will be treated as a single unit for groundwater purposes during the Phase II RFI. Investigation activities associated with this unit will concentrate on the northern and western portions of the property to evaluate the potential for offsite migration of constituents from these units and complete the delineation of constituents of concern detected in samples previously collected from these units. Additional investigation activities will include the installation of approximately four Geoprobe® soil borings (WMA-I through WMA-4) north of SWMU 17. In addition, three soil borings (RFI-18, RFI-19, and RFI-29) will be installed with an auger rig in the northern and western

portions of SWMU 13C and completed as groundwater monitoring wells to allow sampling and testing of downgradient groundwater quality.

A minimum of 8 soil samples will be collected from the Geoprobe® borings. A minimum of 6 soil samples will be collected from the three well borings. The soil samples will be collected from 0-2 ft-bgs, 4-6 ft-bgs and immediately above the first saturated zone. The sample depths and the number of samples may be modified based on field observations and organic vapor screening results. The rationale for the selection of all samples for analysis will be clearly documented in the field log book. The soil samples will be analyzed for TCL VOCs and VOC TICs. In addition, soil samples collected from the three monitoring well borings will be analyzed for TCL SVOCs and SVOC TICs, and RCRA and facility-related metals. One soil sample will also be submitted for TCLP extraction and analysis of the extract for TCLP metals. The sample will be selected based on the total metals results and will be selected in coordination with the NYSDEC.

The proposed Geoprobe® locations (WMA-1 through WMA-4) are shown on Figure 3. Additional Geoprobe® borings may be completed if field screening measurements and observations indicate they are necessary to delineate the extent of VOCs.

Two rounds of groundwater samples will be collected from the new wells (RFI-18, RFI-19, and RFI-29) and six existing wells (RFI-09, RFI-10, RFI-11, WT-1B, WT-2, and WT-3). The groundwater samples will be analyzed for TCL VOCs and VOC TICs, molybdenum, fluoride, chloride, sulfate, nitrate, and pH. In addition, samples from the new wells will be analyzed for TCL SVOCs and SVOC TICs, and RCRA and facility-related metals (including molybdenum). The second groundwater sampling event will be implemented approximately three months after the first. The parameter list for the second event may be modified based on the results of the first event and as approved by the NYSDEC.

### 2.1.5 SWMU 14C - Crucible Disposal Area and Waste Disposal Facility

Additional investigation activities at SWMU 14C will include the installation of three soil borings (RFI-20, RFI-21 and RFI-30) that will be completed as groundwater monitoring wells. One surface and two subsurface soil samples will be collected from each boring. The surface sample will be collected from 0-2 ft-bgs; the subsurface samples will be collected from approximately 4-6 ft-bgs and immediately above the first saturated zone. The soil samples will be analyzed for TCL VOCs and VOC TICs, TCL SVOCs and SVOC TICs, TCL pCBs, and RCRA and facility-related metals.

Two rounds of groundwater samples will be collected from the new wells. The samples will be analyzed for TCL VOCs and VOC TICs, TCL SVOCs and SVOC TICs, TCL PCBs and RCRA and facility-related metals. The parameter list for the second event may be modified based on the results of the first event and as approved by the NYSDEC.

A third downgradient groundwater monitoring well may be installed downgradient (off-site) of SWMU 14C if the two rounds of groundwater samples collected from RFI 21 and RFI-30 show contamination. <sup>fourth?</sup> / OK.

### 2.1.6 SWMU 15 - Former Waste Acid Surface Impoundments

Additional investigation activities at SWMU 15 include the installation of one groundwater monitoring well (RFI-22) downgradient of the unit and two additional soil borings (RB-17 and RB-18) installed at locations to be determined by the Department. Two subsurface soil samples will be collected from RFI-22, RB-17 and RB-18 and submitted for laboratory analysis of RCRA and facility related metals. The samples will be collected from 4-6 ft-bgs and from immediately above the first saturated zone in each boring.

Two rounds of groundwater samples will be collected from the new well (RFI-22) and existing well (RFI-02). The groundwater samples collected during the first event will be analyzed for RCRA and facility-related metals, chloride, fluoride, nitrate,

and sulfate; pH will be measured in the field. In addition, groundwater collected from RFI-22 will also be analyzed for TCL VOCs and VOC TICs. The parameter list for the second event may be modified based on the results of the first event and as approved by the NYSDEC.

### 2.1.7 SWMU 16 - Willowbrook Pond Area

Additional investigation activities at SWMU 16 include the installation of five Geoprobe® soil borings (RB-9, RB-10, RB-11, RB-12 and RB-19) and two soil borings installed with an auger rig that will be completed as groundwater monitoring wells (RFI-23 and RFI-24). Approximately 13 soil samples will be collected from the Geoprobe® and soil borings and submitted for laboratory analysis for TCL PCBs and RCRA and facility-related metals. The two samples collected from RB-19 will be analyzed for TCL VOCs and VOC TICs only.

Two rounds of groundwater samples will be collected from the new wells (RFI-23 and RFI-24) and existing wells (WP-5, WP-6, WP-7, and WP-8). The groundwater samples collected from the new wells during the first event will be analyzed for TCL VOCs and VOC TICs, TCL SVOCs and SVOC TICs, TCL PCBs, and RCRA and facility-related metals; the samples collected from the existing wells will be analyzed for TCL VOCs and VOC TICs only. The parameter list for the second event may be modified based on the results of the first event and as approved by the NYSDEC.

*to be 7PM?  
see 85C  
pg 2-4  
why was it  
removed last  
time?*

### 2.1.8 SWMU 18 - Grinding Dust Transfer Pile

Additional investigation activities at SWMU 18 include the installation of one groundwater monitoring well (RFI-25) in the immediate vicinity of the unit. One surface soil sample (0-2 ft-bgs) and two subsurface soil samples (4-6 ft-bgs and one immediately above the first saturated zone) will be collected from the RFI-25 borehole and analyzed for RCRA/facility-related metals. The surface sample will also be analyzed for TCLP chromium. Two rounds of groundwater samples will be

collected from the new well. The groundwater sample collected during the first event will be analyzed for TCL VOCs and VOC TICs, TCL SVOCs and SVOC TICs, and RCRA and facility-related metals. The parameter list for the second event may be modified based on the results of the first event and as approved by the NYSDEC.

### 2.1.9 SWMU 21 - Grinding Swarf Storage Area

Additional investigation activities at SWMU 21 include the collection of one surface soil sample (0-0.5 ft-bgs) from RB-13. The soil sample will be analyzed for TCL VOCs and VOCs TICs, and TCL SVOCs and SVOC TICs.

## 2.2 AOCs

The Phase II RFI will include additional investigation activities at the following AOCs:

- AOC 1 - Transformer T3 Area
- AOC 1 - Transformers T4, T5, and T6 Areas
- AOC 3A - Rust Furnace Cooling Tower
- AOC 3B - HAP Cooling Tower
- AOC 5A/5B - Lucas Avenue Oil Tanks
- AOC 7B - BFS East Scrap Metal Steel Storage Area
- AOC 7C - BFS West Scrap Metal Steel Storage Area
- AOC 9 - Unnamed Tributary to Crooked Brook

### 2.2.1 AOC 1 - Transformer T3 Area

Additional investigation activities at AOC 1 will consist of delineating the extent of PCBs above 1 mg/kg from 0 - 1 ft-bgs and 10 milligrams per kilogram (mg/kg) in soils below 1 foot deep. This will be accomplished by collecting sixteen soil samples (T3-05 through T3-12), i.e., eight samples from 0.5-1 ft-bgs and eight samples from 1-2 ft-bgs. The eight samples collected closest to T3-1 and T3-2 will be analyzed first. If PCBs are present above the respective criteria, the appropriate

0.5  
to  
(0-1)  
surface

samples collected at distances farther from the unit will be analyzed. If all samples are above the 1 mg/kg and 10 mg/kg thresholds, additional sampling and analysis will be performed until delineation is complete. The locations of the soil samples will be determined in the field based on a visual inspection of the unit and accessibility.

Soils in which PCBs are present above 1 mg/kg from 0-1 ft-bgs and 10 mg/kg from 1-2 ft-bgs will be addressed as an ICM (Section 3.0).

### 2.2.2 AOC 1 - Transformer T4, T5, and T6 Areas

Because wipe sample results from transformer pads T4, T5, and T6 exceeded the cleanup level of 10 micrograms per 100-square centimeters (10  $\mu\text{g}/100 \text{ cm}^2$ ), RealCo proposes to collect four additional wipe samples from the three pads. Although Empire Specialty Steel Corporation personnel indicated that the pads at transformers T5 and T6 were cleaned in October 1998, no confirmation wipe samples were collected. The results of the wipe samples will be used to determine if additional cleaning is required to meet the cleanup standard.

*NO mention of soil sampling in the 1/4 excavated. 5/26/00*

### 2.2.3 AOC 3A - Rust Cooling Tower

Additional investigation activities at AOC 3A will consist of delineating the extent of PCBs above 1 mg/kg for 0-1 ft bgs and 10 mg/kg in soil from 1-2 ft-bgs) in the same manner as AOC 1. A total of sixteen soil samples will be collected (3A-01 through 3A-08). Soils in which PCBs are present above 1 mg/kg from 0-1 ft-bgs and 10 mg/kg from 1-2 ft-bgs will be addressed as an ICM (Section 3.0).

### 2.2.4 AOC 3B - HAP Cooling Tower

Additional investigation activities at AOC 3B include the installation of one soil boring (RB-14) in the vicinity of the unit. One surface and two subsurface soil samples will be collected from this boring. The surface sample will be collected from 0.5-1 ft-bgs and the subsurface samples will be collected from approximately 1-2 ft-

bgs and 2-3 ft-bgs. The soil samples will be analyzed for TCL PCBs and RCRA and facility-related metals.

If necessary, the extent of PCBs above 1 mg/kg (0-1 ft-bgs) and 10 mg/kg (greater than 1 ft-bgs) in soil will be delineated in the same manner as AOC 1. Additional sampling and analysis will be conducted as required to delineate the horizontal and vertical extent of impact. Soils in which PCBs are present above 1 mg/kg or 10 mg/kg (at the respective depths) will be addressed through an ICM (Section 3.0).

#### **2.2.5 AOC 5A/5B - Lucas Avenue Oil Tanks**

Additional investigation activities at AOC 5A/5B include the installation of two downgradient soil borings (RFI-26 and RFI-27) north of the Lucas Avenue Plant which will be completed as groundwater monitoring wells. One surface and two subsurface soil samples will be collected from each of these borings. The surface sample will be collected from 0-2 ft-bgs and the subsurface samples will be collected from approximately 4-6 ft-bgs and immediately above the first saturated zone. The soil samples will be analyzed for TCL VOCs and VOC TICs, TCL SVOCs and SVOC TICs, and RCRA and facility-related metals. In addition, select soil samples may be submitted for TCLP extraction and analysis of the extract for TCLP metals. RealCo will coordinate selection of these samples with the NYSDEC.

Two rounds of groundwater samples will be collected from the new wells. The groundwater samples collected during the first event will be analyzed for TCL VOCs and VOC TICs, TCL SVOCs and SVOC TICs, and RCRA and facility-related metals. The parameter list for the second event may be modified based on the results of the first event and as approved by the NYSDEC.

#### **2.2.6 AOC 7B - BFS East Scrap Steel Storage Area**

Additional investigation activities at AOC 7B include the implementation of the ICM approved for Bar Finishing and Storage (BFS) (Section 3.2.3). In addition,



groundwater samples collected from the ICM recovery well (RW-1) will be analyzed during both sampling events for TCL SVOCs and SVOC TICs, and RCRA and facility-related metals.

### **2.2.7 AOC 7C - BFS West Scrap Steel Storage Area**

Additional investigation activities at AOC 7C include the installation of two soil borings (RB-15 and RB-16) at locations to be determined in consultation with the Department. One surface and two subsurface (0.5 to 2 ft-bgs) soil samples will be collected and analyzed for RCRA/facility-related metals.

### **2.2.8 AOC 9 - Unnamed Tributary to Crooked Brook**

Additional investigation activities at AOC 9 include the collection and laboratory analysis of surface water samples (SW-1, SW-2, SW-3, SW-4 and SW-5) and sediment samples (SD-4, SD-5, SD-6, SD-7 and SD-8) for TCL SVOCs (including polynuclear hydrocarbons [PAHs]) and SVOC TICs, TCL PCBs, and RCRA and facility-related metals. Samples will be collected from two locations upstream of the facility (south of Willowbrook Avenue), one location at the point of discharge from the culvert immediately west of Brigham Road (near Phase I RFI location S-02), and two locations downstream of Phase I RFI location S-03. The final locations of the surface water and sediment samples will be selected based on site conditions, accessibility and the presence of sufficient fine-grained sediment for sample collection.

∩ In addition, a storm discharge inspection will be performed to identify all discharge locations from the site. RealCo will notify the NYSDEC of the discharge inspection results and propose additional sediment/surface water sample locations accordingly.

## 2.3 Pickle Facility Areas

The Phase II RFI will include additional investigation activities at the following Pickle Area Facilities:

- Pickle Facility Area B - Former BRP Pickling Facility
- Pickle Facility Area D - Former LAP East Pickling Facility

### 2.3.1 Pickle Facility Area B - Former BRP Pickling Facility

Additional investigation activities at Pickle Facility Area B include the installation of three soil borings to be completed as groundwater monitoring wells (RFI-20, RFI-21 and RFI-30) south of the Brigham Road Plant (BRP) as presented in Section 2.1.5, SWMU 14C, Crucible Disposal Areas and Waste Disposal Facilities. In addition, two rounds of groundwater samples will be collected from the three new wells and three existing wells (MW-I, RFI-13, and RFI-14). The soil and groundwater samples will be analyzed for TCL VOCs and VOCs TICs, SVOCs and SVOC TICs, PCBs and RCRA/facility-related metals. The results will provide data to evaluate the potential offsite migration of facility-related constituents from both Pickle Facility Area B and SWMU 14C.

### 2.3.2 Pickle Facility Area D - LAP East

Additional investigation activities at Pickle Facility Area D include the installation of seven Geoprobe® soil borings (LEB-04 through LEB-10) inside and outside of the Lucas Avenue Plant (LAP). The borings will be installed to delineate the extent of VOCs detected in soil samples from the LEB-series borings installed during the Phase I RFI. At least 14 subsurface soil samples will be collected from the soil borings and analyzed for TCL VOCs and VOC TICs. In addition, a minimum of four soil samples will be collected for RCRA metals analysis. Two of the soil samples will be collected from surface soils outside the facility (LEB-07 and LEB-08) and a minimum of two soil samples will be collected at depths immediately above the first saturated zone from soil borings advanced inside LAP East (LEB-05 and LEB-06).

The soils collected for VOC analysis will be selected based on organic vapor screening results using a PID. The depths from which the samples are collected will vary from boring to boring to allow for vertical delineation.

Three new groundwater-monitoring wells (RFI-31, RFI-32 and RFI-33) will also be installed adjacent to Pickle Facility Area D. RFI-31 will be located in the southeast corner of the parking lot adjacent to LAP East. RFI-32 and RFI-33 will be installed as a cluster in the northeast corner of the same parking lot. RFI-32 will be installed to monitor the uppermost water-bearing zone and RFI-33 will be installed to monitor the next deepest zone.

Two rounds of groundwater samples will be collected from the new wells (RFI-26, RFI-27, RFI-31, RFI-32 and RFI-33) and the two existing wells (RFI-05 and LAE-4). During the first event, the groundwater samples collected from the new wells will be analyzed for TCL VOCs and VOC TICs, TCL SVOCs and SVOC TICs, RCRA and facility-related metals and hexavalent chromium; the groundwater samples collected from the existing wells will be analyzed for TCL VOCs and VOC TICs and hexavalent chromium. The parameter list for the second event may be modified based on the results of the first event and as approved by the NYSDEC.

### **2.3.3 Pickle Facility Area A - LAP West**

Additional investigation activities at Pickle Facility Area A include the installation of one additional groundwater monitoring well (TW-15) and the completion of eight soil borings north of LAP West. TW-15 will be installed approximately 50 feet northwest of TW-7. Two rounds of groundwater samples will be collected and analyzed for RCRA/facility-related metals, hexavalent chromium, fluoride, chloride, sulfate and nitrate.

Eight additional soil borings will be installed north of the LAP West outside the building at locations to be determined by the Department. One surface (0-2 ft-bgs) and two subsurface (4-6 ft-bgs and one immediately above the saturated zone) will be collected from

each borehole. The samples will be analyzed for RCRA/facility-related metals and hexavalent chromium.

## **2.4 Groundwater**

The groundwater investigation and monitoring activities Phase II of the RFI include the installation of 17 monitoring wells, including a new background well (Section 2.4.1) and 2 rounds of groundwater sampling and analysis for select wells. All wells will be evaluated for potential inclusion in a site wide monitoring program (Section 2.4.2) that is not part of the Phase II RFI scope of work. The Phase II activities will not include a potable well survey for areas downgradient of perimeter locations that exhibit exceedance of groundwater standards (Section 2.4.3).

### **2.4.1 Background Monitoring Well**

RFI-01 was installed during the Phase I RFI to collect background groundwater quality data. However, the potentiometric surface at the site generated from groundwater elevation data indicated that the well is located downgradient of some operational areas of the site. Therefore, the Phase II RFI includes the installation of another potential background monitoring well (RFI-28) near the eastern property boundary.

Two rounds of groundwater samples will be collected from the well to evaluate background groundwater quality. The well will be sampled for TCL VOCs and VOC TICs, TCL SVOCs and SVOC TICs, TCL PCBs, RCRA and facility-related metals, pH, fluoride, chloride, sulfate, and nitrate.

### **2.4.2 Quarterly Groundwater Monitoring**

The NYSDEC has requested that RealCo begin a quarterly sampling program at the site (NYSDEC 2000). RealCo provided a scope of work for the quarterly groundwater monitoring program to the NYSDEC in January 2001; implementation of the program will begin following approval of the work scope by the Department.

RealCo anticipates that a portion of the wells not specifically included in the Phase II RFI work scope may be included in the quarterly program.

### 2.4.3 Potable Well Survey

The City of Dunkirk and Chautauqua County were contacted before the Phase I RFI regarding the location of any potable water wells in the vicinity of the Dunkirk facility. The well information obtained from this search is included on Figure 2-4 of the Phase I RFI Report (ESC 1998). The closest well was located more than 0.5 miles from the site. Additionally, the City of Dunkirk has an ordinance prohibiting potable water wells. Finally, shallow groundwater in the vicinity of the site is not used for potable purposes due to low production. As a result, RealCo does not believe there is a need for such a survey at this time.

## 2.5 Risk-Based Site Specific Clean Up Standards

Risk-based corrective action cleanup objectives for select metals and PAHs in soil at the site will be developed using a methodology consistent with the U.S. EPA's "Risk Assessment Guidance for Superfund: Volume I - Human Health Evaluation Manual (Part B, Development of Risk-based Preliminary Remediation Goals)" (U.S. EPA 1991). The protocols will be consistent with those used for the Watervliet, New York site, and as suggested by the NYSDEC (NYSDEC 1997a).

*ESC - would not  
look @ met.  
very low conc.  
of soil*

*C. L. L.  
w/ many  
may be fine  
if so.*

### 3.0 ICM SCOPES OF WORK

A review of historical plant operations and Phase I RFI data resulted in recommendations for ICMs for the following:

- Pickle Facility Area A - LAP West Pickling Facility
- AOC 1 - Transformers T3, T4, T5, and T6
- AOC 3A - Rust Furnace Cooling Tower
- RFI-08 Vicinity
- Pickle Facility Area C - BFS Pickling Facility

The NYSDEC previously approved (NYSDEC 1997b) an ICM scope of work for Pickle Facility Area A (ESC 1999a and 1999b). The ICM for Lucas Avenue Plant West was initiated in 1997. A summary of ICM activities is presented in Section 3.1. Proposed ICMs for the remaining areas are presented in Section 3.2

#### 3.1 Pickle Facility Area A ICM

The initial phase of the Pickle Facility Area A ICM included advancement of exploratory borings, installation of monitoring wells, and excavation of test pits to determine the source of hexavalent chromium detected in groundwater samples collected from LAW-5 and LAW-6. Immediately, sources of seepage from the LAP Pickle House were identified and eliminated. The sewer piping and surrounding backfill were investigated to verify that they were not migration pathways for impacted groundwater. The results of the initial phase of the ICM indicated that groundwater was affected by hexavalent chromium and other constituents, the sewer line was not acting as a preferential migration pathway, and the lateral extent of the plume was not defined (ESC 1999a).

The Phase II Interim Measures Work Plan was approved by the NYSDEC in April 1999 (NYSDEC 1999) and was implemented in March and April 2000.

This supplemental phase included the advance of four soil borings and the installation and sampling of four groundwater monitoring wells.

*check it out*

The results of the Phase II ICM indicated that eight metals were detected at concentrations above the Groundwater Quality Standards presented in the NYSDEC's Part 703 Groundwater Quality Standards. Based on frequency and magnitude of detection and toxicity, chromium and hexavalent chromium were identified as the primary constituents of concern associated with the LAP. Both chromium and hexavalent chromium were detected at concentrations above the groundwater standards in one well located downgradient of the property boundary. As a result, a Phase III ICM was proposed for the site (ESC 2000a).

The Phase III ICM was approved by the NYSDEC in May 2000 (NYSDEC 2000a) and implemented between July 31 and August 3, 2000. The Phase III ICM included the installation of two additional temporary wells and four temporary sampling points, and collection of groundwater samples for analyses of pH, nitrate, specific conductance, chromium, and hexavalent chromium.

The results of the Phase III ICM indicated that total chromium and hexavalent chromium were detected above the Groundwater Quality Standards in two wells (including one well installed during the Phase II ICM) installed downgradient of the property boundary. A summary of the Phase ~~D~~<sup>II</sup> and Phase III ICM activities ~~letter~~ was submitted to the NYSDEC in October 2000 (ESC 2000b).

The NYSDEC submitted a response letter requesting three additional temporary wells on the downgradient property (NYSDEC 2000b). Three additional monitoring wells were installed in May 2001. Groundwater samples were collected from the new and existing wells and analyzed for total chromium, hexavalent chromium, nitrate, specific conductance and pH. Total chromium and hexavalent chromium were detected above the Groundwater Quality Standards in three on-site wells and one off-site well. A summary of the Phase IV ICM activities was submitted to the NYSDEC in November 2001 (RealCo 2001).

Additional ICM activities performed at the LAP included the removal of water in the former Kolene tank pit and Kolene quench tank pit, removal of pit linings and concrete bases (where damaged), excavation of visually impacted soil, and backfilling the pits with gravel in December 2000. A completion report summarizing all of these activities was

submitted to the NYSDEC in January 2001 (ESC 2001). [RealCo is currently evaluating additional remedial measures at the LAP.

Replaces Form 3-2  
3-2

### 3.2 Proposed ICMs

#### 3.2.1 AOC 1 and AOC 3A

Delineation of PCBs to ~~to~~ 1mg/kg from 0-1 ft-bgs and 10 mg/kg below 1 foot deep in soils will be performed for AOC 1, Transformer T3 (Section 2.2.1) and AOC 3A (Section 2.2.3). Following delineation, RealCo anticipates that limited ICMs may be necessary (e.g., excavation, cover, access limitations).

In addition, wipe samples will be collected at AOC 1 transformer pads T4, T5, and T6 (Section 2.2.2) to evaluate PCB impact. Should PCBs be detected above the cleanup standard of 10 micrograms per 100-square centimeters (10  $\mu\text{g}/100\text{ cm}^2$ ) on any of the pads, the pad will be cleaned and re-sampled until wipe samples indicate residual PCBs are less than 10  $\mu\text{g}/100\text{ cm}^2$ .

What about soils surrounding the X pad?

#### 3.2.2 RFI - 08 Vicinity

Eight soil borings will be installed around RFI-08. One surface (0-2 ft-bgs) and two subsurface (4-6 ft-bgs and one immediately above the saturated zone) will be collected from each borehole. The samples will be analyzed for TCLP lead. Surface soil samples will also be analyzed for PAHs.

Why TCLP?

RealCo will delineate the extent of lead in TCLP extract at concentrations above the TC limit in shallow soils at RFI-08 in a similar manner to that proposed for the other units in Section 2.2. Subsequently, excavation or an appropriate engineering control will be recommended to the NYSDEC.

In addition, two rounds of groundwater samples will be collected from RFI-08 during the Phase II RFI and analyzed for RCRA/facility-related metals and hexavalent chromium to evaluate the potential for offsite migration.

↓  
Moly  
Mn



### 3.2.3 Pickle Facility Area C

The NYSDEC also approved (NYSDEC 1997b) an ICM scope of work for Pickle Facility Area C. Due to financial constraints in 1997, the ICM activities at the BFS plant were not implemented with the LAP West activities. The approved ICM activities for Pickle Facility Area C will now be implemented concurrent with the Phase II RFI. As specified in the approved scope of work, a 4-inch recovery well (RW-1) will be installed adjacent to MW-3 (Figure 3). A diaphragm pump will be installed in the well to pump groundwater to the BFS Pickle House sump. The existing piping system will be used to convey recovered groundwater to Dunkirk Specialty Steel's wastewater treatment plant (WWTP) for treatment and discharge through a permitted outfall. Two monitoring wells will also be installed (BFS-1 and BFS-2).

→ is this possible?

### 3.2.4 Facility Pits

ICMs have been requested at the following facility pits (NYSDEC 2000):

- Shank Pit (BRP)
- Olson Pump Pit (BRP)
- Mill Pits (HAP)
- HAP Pump Pits
- Clarifier Pit (WWTP)

Dunkirk Specialty Steel is currently using all five pits and does not have any immediate plans to close any of the pits. RealCo is not aware of any maintenance or repairs performed on the pits by either Empire Specialty Steel or Dunkirk Specialty Steel.

## 4.0 PROJECT REPORTING

Project reports will be provided consistent with the requirements of the Order.

### 4.1 Project Status Reports

During implementation of the field investigation and preparation of the RFI Report and documentation of the ICM, RealCo will prepare monthly Project Status Reports. These reports will include:

- a description of work completed during the reporting period
- a summary of all significant findings made during the reporting period
- a summary of encountered problems and implemented solutions
- a summary of scope of work changes
- a description of proposed work to be completed during the next reporting period
- a description of personnel changes
- a summary of significant contacts with NYSDEC
- a summary of contacts made with representatives of the local community and public interest groups

The reports will be submitted within the first two weeks of each month for the previous month's work. Submission for the monthly Project Status Reports will commence on receipt of written approval of the Phase II RFI Work Plan from the NYSDEC and will continue until submittal of the draft RFI Report.

### 4.2 RFI Report

All relevant data and information generated during implementation of the Phase I and Phase II RFIs, the ICMs, and pre-existing data, will be compiled and evaluated in the RFI Report pursuant to the requirements of the Permit and Order. The report will contain adequate information to support further corrective action decisions at the facility, should they be necessary. On the basis of this comparison and an evaluation of other site- and unit-

specific information, the RFI Report will identify one of three subsequent actions for each unit: NFA, ICM, or CMS.

The report shall describe the procedures, methods, and results of all investigations, including the characterization of impacts, sources, migration pathways, and the identification of potential receptors.

The RFI Report will be submitted to the NYSDEC by RealCo within 60 calendar days after receipt of all validated analytical data generated under the approved Phase II RFI and ICM Work Plan. Within 45 calendar days of receipt of comments on the draft report by NYSDEC or within 45 days of a meeting to discuss these comments, RealCo will submit a revised RFI Report.

#### **4.3 Summary Report**

A summary report will be prepared which describes the procedures, methods, and results of the RCRA Corrective Action Program implemented at the facility. The report will summarize the findings of the Phase I and II RFI activities and the corrective measures implemented. The Summary Report is to be submitted to the appropriate parties identified in the Permit and Order within 30 days of receipt of approval of the RFI Report by the NYSDEC. The intent of this report is to provide a document for public use, therefore, it will not be as technical in nature as reports prepared for the NYSDEC.

## 5.0 REFERENCES

Environmental Strategies Corporation (ESC). 2001. "Completion Report - Phase III Interim Corrective Measures at Lucas Avenue Plant." January 18, 2001.

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# TABLES

TABLE 1-1

SOLID WASTE MANAGEMENT UNITS

Revised Phase II RFI Work Plan  
Former AL Tech Specialty Steel Corporation Facility  
Dunkirk, New York

SWMU Category <sup>1</sup>	Unit No. <sup>2</sup>	Unit Description
Tank Systems	1	Former Lucas Avenue Plant West ickle Facility (Pickle Facility Area A)
	2	Former Brigham Road Plant Pickle Facility (Pickle Facility Area B)
	3	Bar Finishing and Storage Pickle Facility (Pickle Facility Area C)
	4	Former Lucas Avenue Plant East Pickle Facility (Pickle Facility Area D)
	5	Former Grinding Room Pickling Process
	6	Former Barium Chloride Bath (Pickle Facility Area A)
	7	Former Plating Operations
	7A	(Pickle Facility Area D - Continuous Lead Coating)
	7B	(Pickle Facility Area A - Continuous Lead Coating)
	7C	(Pickle Facility Area A - Batch Lead Coating)
	7D	(Pickle Facility Area D - Cooper Coating)
	7E <sup>3</sup>	(Pickle Facility Area A - Non-Electolytic Copper Coating)
	8 <sup>4</sup>	Former Lucas Avenue Plant Neutralization Plant (Pickle Facility Area A)
Container Storage Units	9	Former Trichloroethane Container Storage Area
	10	Waste Container Accumulation Areas
	10A <sup>4</sup>	(near Bar Finishing and Storage)
	10B <sup>4</sup>	(in Old Hot Top Building/Howard Avenue Plant)
	10C <sup>4</sup>	(in Warehouse/Howard Avenue Plant)
	11	Shark Pit Residual Material Loading Area
Waste Disposal Units	12	Former Lime Disposal Area
	13	Crucible Disposal Areas
	13A	(near Bar Finishing and Storage)
	13B	(near Howard Avenue Plant Parking Lot)
	13C	(near Brigham Road Plant)
	14	Waste Disposal Facilities
	14A	(near Bar Finishing and Storage)
	14B	(near Howard Avenue Plant Parking Lot)
	14C	(near Brigham Road Plant)
Surface Impoundments	15 (15A and 15B)	Former Waste Acid Surface Impoundments
	16	Willowbrook Pond
	17	Closed Surface Impoundment
Waste Piles	18	Grinding Dust Transfer Pile
	19	Former Waste Pile
	20	Waste Asbestos Accumulaiton Area
	21	Grinding Swarf Storage Area
Wastewater Treatment Units	22	Wastewater Treatment Plant
Waste Oil Handling Units	23	API Oil/Water Separator
Sewers handling hazardous waste or hazardous constituents	24	Process Sewers

Notes:

1. SWMU = solid waste management unit.
2. Unit numbers are as defined in the Order on Consent, not necessarily as defined in the RCRA Facility Assessment (RFA).
3. As discussed in the Phase I RFI Work Plan, the non-electrolytic copper-coating unit identified in the Order on Consent as SWMU 7E was never constructed.
4. The Order on Consent, Appendix B, C.1, indicates that no further action is required for these units, based on information provided in the RFA.

TABLE 1-2

AREAS OF CONCERN

Revised Phase II RFI Work Plan  
Former AL Tech Specialty Steel Corporation Facility  
Dunkirk, New York

AOC Category <sup>1</sup>	Unit No. <sup>2</sup>	Unit Description
Electrical Equipment	1	Transformers
	2 <sup>3</sup>	Battery Storage Areas
	2A	(Brigham Road Plant - northwest)
	2B	(Lucas Avenue Plant - south central)
	2C	(Bar Finishing and Storage)
	2D	(Howard Avenue Plant - southwest)
	2E	(Howard Avenue Plant - north central)
	2F	(Howard Avenue Plant - northeast)
	2G	(near Lucas Avenue Plant West Pickle Facility) (Pickle Facility Area A)
Tank Systems	3	Cooling Towers and Process Pits
	3A	(Rust Furnace Cooling Tower)
	3B	(Howard Avenue Plant Cooling Tower)
	4 <sup>3</sup>	Former Heat Treating Facility
	5 <sup>4</sup>	Lucas Avenue Oil Tanks
	5A	(Lucas Avenue West Oil Tanks)
	5B	(Lucas Avenue East Oil Tanks)
	6	Former Aboveground Fuel Oil Tank
Raw Materials Piles	7	Scrap Steel Storage Areas
	7A	(Howard Avenue Plant)
	7B	(Bar Finishing and Storage - east)
	7C	(Bar Finishing and Storage - west)
	8	Former Coal Storage Area
Surface Water	9	Unnamed Tributary to Crooked Brook
Dust Control Areas	10	Oiled Roads
Process Waste Disposal Area	11	Former Coal Gasification Plant

Notes:

1. AOC = area of concern
2. Unit numbers are as defined in the Order on Consent, not necessarily as defined in the RCRA Facility Assessment (RFA)
3. The Order on Consent, Appendix B, C.1, indicates that no further action is required for these units, based on information provided in the RFA.
4. During preparation of the Phase I RFI Work Plan, AL Tech identified a series of oil tanks at the Lucas Avenue Plant. These tanks, which were not identified in the Order on Consent, are subsequently referenced as the Lucas Avenue East Oil Tanks (AOC 5B). The tanks identified in the Order on Consent as AOC 5 are subsequently referenced as Lucas Avenue West Oil Tanks (AOC 5A).



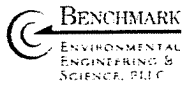


TABLE 1-3

RCRA CORRECTIVE ACTION PROGRAM SUMMARY

Revised Phase II RFI Work Plan  
Former AL Tech Specialty Steel Corporation Facility  
Dunkirk, New York

Unit No. <sup>2</sup>	Unit Description <sup>3</sup>	Regulatory Status <sup>1</sup>			
		Current Status		Anticipated Status	
		Order	Phase I RFI	Phase II RFI	ICM
<b>Solid Waste Management Units (SWMUs)</b>					
SWMU 1 <sup>4</sup>	Former LAP West Pickle Facility	-	-	-	-
SWMU 2 <sup>4</sup>	Former BRP Pickle Facility	-	-	-	-
SWMU 3 <sup>4</sup>	BFS Pickle Facility	-	-	-	-
SWMU 4 <sup>4</sup>	Former LAP East Pickle Facility	-	-	-	-
SWMU 5	Former Grinding Room Pickling Process	RFI	NFA	-	-
SWMU 9	Former TCA Container Storage Area	RFI	NFA	-	-
SWMU 10 <sup>5</sup>	Waste Container Accumulation Areas	NFA	-	-	-
SWMU 10A	- near BFS				
SWMU 10B	- in Old Hot Top Building/HAP				
SWMU 10C	- in Warehouse/HAP				
SWMU 11	Shark Pit Residual Material Loading Area	RFI	Phase II RFI <sup>6</sup>	NFA	-
SWMU 12	Former Lime Disposal Area	RFI	NFA	-	-
SWMU 13	Crucible Disposal Area	-	-	-	-
SWMU 13A	- near BFS	RFI	Phase II RFI <sup>6</sup>	NFA	-
SWMU 13B	- near HAP Parking Lot	RFI	NFA	-	-
SWMU 13C <sup>7</sup>	- near BRP	RFI	(Note 7)	-	-
SWMU 14	Waste Disposal Facilities			-	-
SWMU 14A	- near BFS	RFI	Phase II RFI <sup>6</sup>	NFA	-
SWMU 14B	- near HAP Parking Lot	RFI	NFA	-	-
SWMU 14C	- near BRP	RFI	Phase II RFI <sup>6</sup>	NFA	-
SWMU 15	Former Waste Acid Surface Impoundments (15A and 15B)	RFI	Phase II RFI <sup>6</sup>	NFA	-
SWMU 16 <sup>8</sup>	Willowbrook Pond	-	-	-	-
	- investigation	RFI	Phase II RFI <sup>9</sup>	CMS	-
	- closure <sup>10</sup>	-	-	-	-
SWMU 17 <sup>7</sup>	Closed Surface Impoundment	RFI	(Note 7)	-	-
SWMU 18	Grinding Dust Transfer Pile	RFI	Phase II RFI <sup>6</sup>	NFA	-
SWMU 19	Former Waste Pile	RFI	NFA	-	-
SWMU 20	Waste Asbestos Accumulation Area	RFI	NFA	-	-
SWMU 21	Grinding Swarf Storage Area	RFI	Phase II RFI <sup>6</sup>	NFA	-
SWMU 22 <sup>7</sup>	Wastewater Treatment Plant	RFI	(Note 7)	-	-
SWMU 23	API Oil/Separator	RFI	NFA	-	-
SWMU 24	Process Sewers	RFI	NFA <sup>11</sup>	-	-

TABLE 1-3

RCRA CORRECTIVE ACTION PROGRAM SUMMARY

Revised Phase II RFI Work Plan  
Former AL Tech Specialty Steel Corporation Facility  
Dunkirk, New York

Unit No. <sup>2</sup>	Unit Description <sup>3</sup>	Regulatory Status <sup>1</sup>			
		Current Status		Anticipated Status	
		Order	Phase I RFI	Phase II RFI	ICM
<b>Areas of Concern (AOC's)</b>					
AOC 1	Transformers				
	- Tranformer T1	RFI	NFA	-	-
	- Tranformer T2	RFI	NFA	-	-
	- Tranformer T3	RFI	Phase II RFI/ICM	ICM	CMS
	- Tranformer T4 <sup>12</sup>	RFI	NFA	-	-
	- Tranformer T5 <sup>12</sup>	RFI	NFA	-	-
	- Tranformer T6 <sup>12</sup>	RFI	NFA	-	-
AOC 2 <sup>5</sup>	Battery Storage Areas	NFA	-	-	-
AOC 3	Cooling Towers and Process Pits				
AOC 3A	- Rust Furnance Cooling Tower	RFI	Phase II RFI	ICM	CMS
AOC 3B	- HAP Cooling Tower	RFI	Phase II RFI <sup>6</sup>	NFA	-
Process Pits		RFI	NFA <sup>13</sup>	-	-
AOC 4 <sup>5</sup>	Former Heat Treating Facility	NFA	-	-	-
AOC 5	Lucas Avenue Oil Tanks		NFA	-	-
AOC 5A	- LAP West Oil Tanks	RFI	Phase II RFI	NFA	-
AOC 5A	- LAP East Oil Tanks	RFI	Phase II RFI	NFA	-
AOC 6	Former Aboveground Fuel Oil Tank	RFI	NFA	-	-
AOC 7	Scrap Steel Storage Areas				
AOC 7A	- HAP	RFI	NFA	-	-
AOC 7B	- BFS east	RFI	Phase II RFI	NFA	-
AOC 7C	- BFS west	RFI	NFA	-	-
AOC 8	Former Coal Storage Area	RFI	NFA	-	-
AOC 9	Unnamed Tributary to Crooked Brook	RFI	Phase II RFI	NFA	-
AOC 10 <sup>5</sup>	Oiled Roads	NFA	-	-	-
AOC 11	Former Coal Gasificaiton Plant	RFI	NFA	-	-
<b>Pickle Facility Areas</b>					
Pickle Facility Area A	Former LAP West Pickling Facility	RFI	ICM	-	CMS
SWMU 1 <sup>14</sup>	Former LAP West Pickling Facility				
SWMU 6	Former Barium Chloride Bath				
SWMU 7B	Continuous Lead Coating				
SWMU 7C	Batch Lead Coating				
SWMU 7E <sup>15</sup>	Non-Eletrolytic Copper Coating				
SWMU 8 <sup>5</sup>	Former LAP West Neutralization Plant				
Pickle Facility Area B	Former BRP Pickling Facility	RFI	Phase II RFI <sup>6</sup>	CMS	-
SWMU 2 <sup>16</sup>	Former BRP Pickle Facility				
Pickle Facility Area C	BFS Pickling Facility	RFI	ICM	-	CMS
SWMU 3	BFS Pickle Facility				

TABLE 1-3

RCRA CORRECTIVE ACTION PROGRAM SUMMARY

Revised Phase II RFI Work Plan  
Former AL Tech Specialty Steel Corporation Facility  
Dunkirk, New York

Unit No. <sup>2</sup>	Unit Description <sup>3</sup>	Regulatory Status <sup>1</sup>			
		Current Status		Anticipated Status	
		Order	Phase I RFI	Phase II RFI	ICM
Pickle Facility Area D	Former LAP East Pickling Facility	RFI	Phase II RFI	ICM	CMS
SWMU 4	Former LAP East Pickle Facility				
SWMU 7A	Continuous Lead Coating				
SWMU 7D	Copper Coating				
<b>Other Areas</b>					
Other	Waste Management Area <sup>7</sup>	RFI	Phase II RFI	CMS	-
Other	Site Soils <sup>17</sup>	RFI	Phase II RFI	CMS	-
Other	RFI-08 <sup>18</sup>	RFI	Phase II RFI/ICM	NFA	CMS

not on map

Notes:

1. "Current Status" indicates those actions required under the Order and as identified based on the findings of the Phase I RFI. "Anticipated Status" indicates the anticipated action following completion of the Phase II RFI or ICM. "RFI" indicates the area to be addressed through implementation of the RFI (Phase I) "NFA" indicates no further action "ICM" indicates the area is to be (or is anticipated to be) addressed through implementation of an ICM "CM" indicates that a corrective measure is anticipated "CMS" indicates that the area will be (or is anticipated to be) evaluated within the Corrective Measures Study.
2. Unit numbers are as listed in the Order, not necessarily as defined in the RCRA Facility Assessment (RFA); SWMU = solid waste management unit; AOC = area of concern.
3. TCA = 1,1,1-Trichloroethane; LAP = Lucas Avenue Plant; BRP = Brigham Road Plant; BFS = Bar Finishing & Storage; HAP = Howard Avenue Plant.
4. This SWMU has been incorporated into the Pickle Facility Area; refer to the status of the four Pickle Facility Areas noted below.
5. Appendix B, Section C, of the Order requires no further action for these SWMUs and AOCs.
6. Investigation during the Phase II RFI is only necessary to address data gaps from the Phase I RFI that resulted from inaccurate location of monitoring wells or soil samples, not due to the presence of constituents of concern.
7. In accordance with the NYSDEC request (NYSDEC 2000), SWMUs 13C, 17, and 22, will be treated as one unit in the future. This unit was referred to as Pickle Facility Area E in the Phase I RFI; at the request of NYSDEC it will subsequently be referred to as the Waste Management Area. (Refer to information presented below, under "Other Areas").
8. The Order required the investigation of this area as part of the RFI and closure of the impoundment (Appendix B, Prioritization Schedule, Tier II).
9. At present, it is not believed that the source of chlorinated volatile organic compounds at concentrations above the potentially applicable criteria (detected in groundwater samples collected from WP-4, RFI-15, and RFI-16) is Willowbrook Pond. The SWMU has been used as a reference point for the general area of interest.
10. A conceptual plan for closure of the impoundment was previously developed. It is likely that RealCo will wish to re-evaluate the existing plan as part of the CMS.
11. The existing process sewers are the responsibility of Empire Steel Corporation. RealCo has no further responsibility. No further action is believed to be warranted under the RCRA Corrective Action Program.
12. Following submittal of the Phase I RFI Report, additional cleaning and wipe tests were performed in these areas. The results of the wipe tests completed in late 1998 indicated that additional cleaning and testing was necessary for Transformer T6. Empire Steel Corporation is now responsible for this transformer, RealCo has no further responsibility.
13. No further investigation of the pits located in areas owned by RealCo is necessary. Process pits located in areas owned by Empire Steel Corporation are its responsibility. RealCo or the NYSDEC can only request that Empire address these pits as necessary.
14. The Order requires both the investigation of this area as part of the RFI and demolition of the Former LAP West Pickling Facility (Appendix C, Prioritization Schedule, Tier II).
15. During the Phase I RFI, it was determined that the non-electrolytic copper coating system was never constructed.
16. The Order requires both the investigation of this area as part of the RFI and closure of the waste acid pit (Appendix B, Prioritization Schedule, Tier II).
17. Surface and subsurface soil samples were collected throughout the facility during the Phase I RFI, including general sample locations. No further investigation is warranted until such time as the site-specific cleanup criteria are established for metals and PAHs.
18. Surface soil conditions at RFI-08 will be addressed through the ICM. Groundwater quality at RFI-08 will be re-evaluated as part of the Phase II RFI.

TABLE 2-1

SUMMARY OF SAMPLING & ANALYTICAL PROGRAMS

Revised Phase II RFI Work Plan  
 Former AL Tech Specialty Steel Corporation Facility  
 Dunkirk, New York  
 SOIL & SEDIMENT SAMPLES

Applicable Units	Sample Location	Sample I.D.	TCL VOCs+TICs	TCL SVOCs+TICs	TCL PCBs	RCRA/Fac. Metals	pH	Others
SWMU 11	RB-08	SB-RB08-0002		1	1	1		
		SB-RB08-XXXX		1	1	1		
		SB-RB08-XXXX		1	1	1		
SWMUs 13A & 14A	TP-12	TP-TP12-XXXX	1	1		1		
		TP-TP12-XXXX		1		1		
		TP-TP12-XXXX		1		1		
		TP-TP12-XXXX		1		1		
SWMUs 13B & 14B	TP-13	TP-TP13-XXXX	1	1		1		
		TP-TP13-XXXX		1		1		
		TP-TP13-XXXX		1		1		
		TP-TP13-XXXX		1		1		
SWMUs 13C, 17 & 22	WMA-1	SB-WMA1-XXXX	1					
		SB-WMA1-XXXX	1					
	WMA-2	SB-WMA2-XXXX	1					
		SB-WMA2-XXXX	1					
	WMA-3	SB-WMA3-XXXX	1					
		SB-WMA3-XXXX	1					
	WMA-4	SB-WMA4-XXXX	1					
		SB-WMA4-XXXX	1					
	RFI-18	SB-RFI18-XXXX	1	1			1	TCLP metals
		SB-RFI18-XXXX	1	1			1	
	RFI-19	SB-RFI19-XXXX	1	1			1	
		SB-RFI19-XXXX	1	1			1	
	RFI-29	SB-RFI29-XXXX	1	1			1	
SB-RFI29-XXXX		1	1			1		
SWMU 14C & Pickle Facility Area B	RFI-20	SB-RFI20-0002	1	1	1	1		
		SB-RFI20-XXXX	1	1	1	1		
		SB-RFI20-XXXX	1	1	1	1		
	RFI-21	SB-RFI21-0002	1	1	1	1		
		SB-RFI21-XXXX	1	1	1	1		
		SB-RFI21-XXXX	1	1	1	1		
	RFI-30	SB-RFI30-0002	1	1	1	1		
		SB-RFI30-XXXX	1	1	1	1		
		SB-RFI30-XXXX	1	1	1	1		

TABLE 2-1

SUMMARY OF SAMPLING & ANALYTICAL PROGRAMS

Revised Phase II RFI Work Plan  
Former AL Tech Specialty Steel Corporation Facility  
Dunkirk, New York  
SOIL & SEDIMENT SAMPLES

Applicable Units	Sample Location	Sample I.D.	TCL VOCs+TICs	TCL SVOCs+TICs	TCL PCBs	RCRA/Fac. Metals	pH	Others
SWMU 15	RFI-22	SB-RFI22-XXXX				1	1	
		SB-RFI22-XXXX				1	1	
	RB-17	SB-RB17-XXXX				1	1	
		SB-RB17-XXXX				1	1	
	RB-18	SB-RB18-XXXX				1	1	
		SB-RB18-XXXX				1	1	
SWMU 16	RB-09	SB-RB09-XXXX			1	1		
		SB-RB09-XXXX			1	1		
	RB-10	SB-RB10-XXXX				1	1	
		SB-RB10-XXXX				1	1	
		SB-RB10-XXXX				1	1	
	RB-11	SB-RB11-XXXX				1	1	
		SB-RB11-XXXX				1	1	
	RB-12	SB-RB12-XXXX				1	1	
		SB-RB12-XXXX				1	1	
	RB-19	SB-RB19-XXXX		1				
		SB-RB19-XXXX		1				
	RFI-23	SB-RFI23-XXXX				1	1	
		SB-RFI23-XXXX				1	1	
	RFI-24	SB-RFI24-XXXX				1	1	
SB-RFI24-XXXX					1	1		
SWMU 18	RFI-25	SB-RFI25-0002				1		TCLP Cr
		SB-RFI25-XXXX				1		
		SB-RFI25-XXXX				1		
SWMU 21	RB-13	SB-RB13-0002	1	1				
AOC 1 (Transformer T3)	SS-T3	SS-T3-05-0005			1			
		SS-T3-05-0115			1			
		SS-T3-06-0005			1			
		SS-T3-06-0115			1			
		SS-T3-07-0005			1			
		SS-T3-07-0115			1			
		SS-T3-08-0005			1			
		SS-T3-08-0115			1			
		SS-T3-09-0005			1			
		SS-T3-09-0115			1			
		SS-T3-10-0005			1			
		SS-T3-10-0115			1			
		SS-T3-11-0005			1			
		SS-T3-11-0115			1			
		SS-T3-12-0005			1			
SS-T3-12-0115			1					

TABLE 2-1

SUMMARY OF SAMPLING & ANALYTICAL PROGRAMS

Revised Phase II RFI Work Plan  
 Former AL Tech Specialty Steel Corporation Facility  
 Dunkirk, New York  
 SOIL & SEDIMENT SAMPLES

Applicable Units	Sample Location	Sample I.D.	TCL VOCs+TICs	TCL SVOCs+TICs	TCL PCBs	RCRA/Fac. Metals	pH	Others
AOC 3A	SS-3A	SS-3A-01-0005			1			
		SS-3A-01-0115			1			
		SS-3A-02-0005			1			
		SS-3A-02-0115			1			
		SS-3A-03-0005			1			
		SS-3A-03-0115			1			
		SS-3A-04-0005			1			
		SS-3A-04-0115			1			
		SS-3A-05-0005			1			
		SS-3A-05-0115			1			
		SS-3A-06-0005			1			
		SS-3A-06-0115			1			
		SS-3A-07-0005			1			
		SS-3A-07-0115			1			
		SS-3A-08-0005			1			
SS-3A-08-0115			1					
AOC 3B	RB-14	SB-RB14-0002			1	1		
		SB-RB14-XXXX			1	1		
		SB-RB14-XXXX			1	1		
AOC 5A/5B	RFI-26	SB-RFI26-0002	1	1		1		TCLP metals
		SB-RFI26-XXXX	1	1		1		
		SB-RFI26-XXXX	1	1		1		
	RFI-27	SB-RFI27-0002	1	1		1		
		SB-RFI27-XXXX	1	1		1		
		SB-RFI27-XXXX	1	1		1		
AOC 7C	RB-15	SB-RB15-0002				1		
		SB-RB15-XXXX				1		
		SB-RB15-XXXX				1		
	RB-16	SB-RB16-0002				1		
		SB-RB16-XXXX				1		
		SB-RB16-XXXX				1		
AOC 9	SD-4	SD-SD4-0006		1	1	1		
	SD-5	SD-SD5-0006		1	1	1		
	SD-6	SD-SD6-0006		1	1	1		
	SD-7	SD-SD7-0006		1	1	1		
	SD-8	SD-SD8-0006		1	1	1		

SUMMARY OF SAMPLING & ANALYTICAL PROGRAMS

Revised Phase II RFI Work Plan  
 Former AL Tech Specialty Steel Corporation Facility  
 Dunkirk, New York  
 SOIL & SEDIMENT SAMPLES

Applicable Units	Sample Location	Sample I.D.	TCL VOCs+ TICs	TCL SVOCs+ TICs	TCL PCBs	RCRA/Fac. Metals	pH	Others
Pickle Facility Area A	LWB-05	SB-LWB05-0002				1		Cr+6
		SB-LWB05-XXXX				1		Cr+6
		SB-LWB05-XXXX				1		Cr+6
	LWB-06	SB-LWB06-0002				1		Cr+6
		SB-LWB06-XXXX				1		Cr+6
		SB-LWB06-XXXX				1		Cr+6
	LWB-07	SB-LWB07-0002				1		Cr+6
		SB-LWB07-XXXX				1		Cr+6
		SB-LWB07-XXXX				1		Cr+6
	LWB-08	SB-LWB08-0002				1		Cr+6
		SB-LWB08-XXXX				1		Cr+6
		SB-LWB08-XXXX				1		Cr+6
	LWB-09	SB-LWB09-0002				1		Cr+6
		SB-LWB09-XXXX				1		Cr+6
		SB-LWB09-XXXX				1		Cr+6
	LWB-10	SB-LWB10-0002				1		Cr+6
		SB-LWB10-XXXX				1		Cr+6
		SB-LWB10-XXXX				1		Cr+6
	LWB-11	SB-LWB11-0002				1		Cr+6
		SB-LWB11-XXXX				1		Cr+6
		SB-LWB11-XXXX				1		Cr+6
	LWB-12	SB-LWB12-0002				1		Cr+6
		SB-LWB12-XXXX				1		Cr+6
		SB-LWB12-XXXX				1		Cr+6
Pickle Facility Area D	LEB-4	SB-LEB4-XXXX	1					
		SB-LEB4-XXXX	1					
	LEB-5	SB-LEB5-XXXX	1				1	
		SB-LEB5-XXXX	1					
	LEB-6	SB-LEB6-XXXX	1				1	
		SB-LEB6-XXXX	1					
	LEB-7	SB-LEB7-XXXX	1				1	
		SB-LEB7-XXXX	1					
	LEB-8	SB-LEB8-XXXX	1				1	
		SB-LEB8-XXXX	1					
	LEB-9	SB-LEB9-XXXX	1					
		SB-LEB9-XXXX	1					
	LEB-10	SB-LEB10-XXXX	1					
		SB-LEB10-XXXX	1					





TABLE 2-1

SUMMARY OF SAMPLING & ANALYTICAL PROGRAMS

Revised Phase II RFI Work Plan  
 Former AL Tech Specialty Steel Corporation Facility  
 Dunkirk, New York  
 GROUNDWATER & SURFACE WATER SAMPLES

Applicable Units	Sample Location	Sample I.D.	TCL VOCs+TICs	TCL SVOCs+TICs	TCL PCBs	RCRA/Fac. Metals	pH	FI <sup>-</sup> , CI <sup>-</sup> , SO <sub>4</sub> <sup>-</sup> , NO <sub>3</sub> <sup>-</sup>
SWMUs 13C, 17 & 22	RFI-09	GW-RFI09-XX01	1			1	1	1
		GW-RFI09-XX01						
	RFI-10	GW-RFI10-XX01	1			1	1	1
		GW-RFI10-XX01						
	RFI-11	GW-RFI11-XX01	1			1	1	1
		GW-RFI11-XX01						
RFI-18	GW-RFI18-XX01	1		1		1	1	1
	GW-RFI18-XX01							
RFI-19	GW-RFI19-XX01	1		1		1	1	1
	GW-RFI19-XX01							
RFI-29	GW-RFI29-XX01	1		1		1	1	1
	GW-RFI29-XX01							
SWMUs 13C, 17 & 22	WT-1B	GW-WT1B-XX01	1			1	1	1
		GW-WT1B-XX01						
	WT-2	GW-WT2-XX01	1			1	1	1
	GW-WT2-XX01							
WT-3	GW-WT3-XX01	1				1	1	1
	GW-WT3-XX01							
SWMU 14C & Pickle Facility Area B	MW-1	GW-MW1-XX01	1	1	1	1	1	1
		GW-MW1-XX01						
	RFI-13	GW-RFI13-XX01	1	1	1	1		
		GW-RFI13-XX01						
	RFI-14	GW-RFI14-XX01	1	1	1	1		
		GW-RFI14-XX01						
RFI-20	GW-RFI20-XX01	1		1	1	1		
	GW-RFI20-XX01							
RFI-21	GW-RFI21-XX01	1		1	1	1		
	GW-RFI21-XX01							
RFI-30	GW-RFI30-XX01	1		1	1	1		
	GW-RFI30-XX01							
SWMU 15	RFI-02	GW-RFI02-XX01				1	1	1
		GW-RFI02-XX01						
RFI-22	GW-RF122-XX01	1				1	1	1
	GW-RF122-XX01							

TABLE 2-1

SUMMARY OF SAMPLING & ANALYTICAL PROGRAMS

Revised Phase II RFI Work Plan  
Former AL Tech Specialty Steel Corporation Facility  
Dunkirk, New York  
GROUNDWATER & SURFACE WATER SAMPLES

Applicable Units	Sample Location	Sample I.D.	TCL VOCs+TICs	TCL SVOCs+TICs	TCL PCBs	RCRA/Fac. Metals	pH	FI , CI SO <sub>4</sub> , NO <sub>3</sub>
SWMU 16	RFI-23	GW-RFI23-XX01	1	1	1	1		
		GW-RFI23-XX01						
	RFI-24	GW-RFI24-XX01	1	1	1	1		
		GW-RFI24-XX01						
	WP-5	GW-WP5-XX01	1					
		GW-WP5-XX01	1					
	WP-6	GW-WP6-XX01	1					
		GW-WP6-XX01	1					
WP-7	GW-WP7-XX01	1						
	GW-WP7-XX01	1						
WP-8	GW-WP8-XX01	1						
	GW-WP8-XX01	1						
SWMU 18	RFI-25	GW-RFI25-XX01	1	1		1		
		GW-RFI25-XX01						
Pickle Facility Area A	TW-15	GW-TW15-XX01				1	Cr+6	1
		GW-TW15-XX01				1	Cr+6	1
AOCs 5A/5B & Pickle Facility Area D	RFI-26	GW-RFI26-XX01	1	1		1	Cr+6	
		GW-RFI26-XX01						
	RFI-27	GW-RFI27-XX01	1	1		1	Cr+6	
		GW-RFI27-XX01						
	RFI-31	GW-RFI31-XX01	1	1		1	Cr+6	
		GW-RFI31-XX01						
	RFI-32	GW-RFI32-XX01	1	1		1	Cr+6	
		GW-RFI32-XX01						
RFI-33	GW-RFI33-XX01	1	1		1	Cr+6		
	GW-RFI33-XX01							
RFI-05	GW-RFI05-XX01	1				Cr+6		
	GW-RFI05-XX01							
LAE-04	GW-LAE04-XX01	1				Cr+6		
	GW-LAE04-XX01							
AOC 7B & Pickle Facility Area C	RW-1	GW-RW1-XX01		1		1		
		GW-RW1-XX01						
Background Well	RFI-28	GW-RFI28-XX01	1	1	1	1	1	1
		GW-RFI28-XX01	1	1	1	1	1	1
RFI-08 Vicinity	RFI-08	GW-RFI08-XX01				1	Cr+6	
		GW-RFI08-XX01				1	Cr+6	
AOC 9		SW-SW01-XX01		1	1	1		hardness
		SW-SW02-XX01		1	1	1		hardness
		SW-SW03-XX01		1	1	1		hardness
		SW-SW04-XX01		1	1	1		hardness
		SW-SW05-XX01		1	1	1		hardness

Table 2-1: Summary of Sampling Analytical Programs

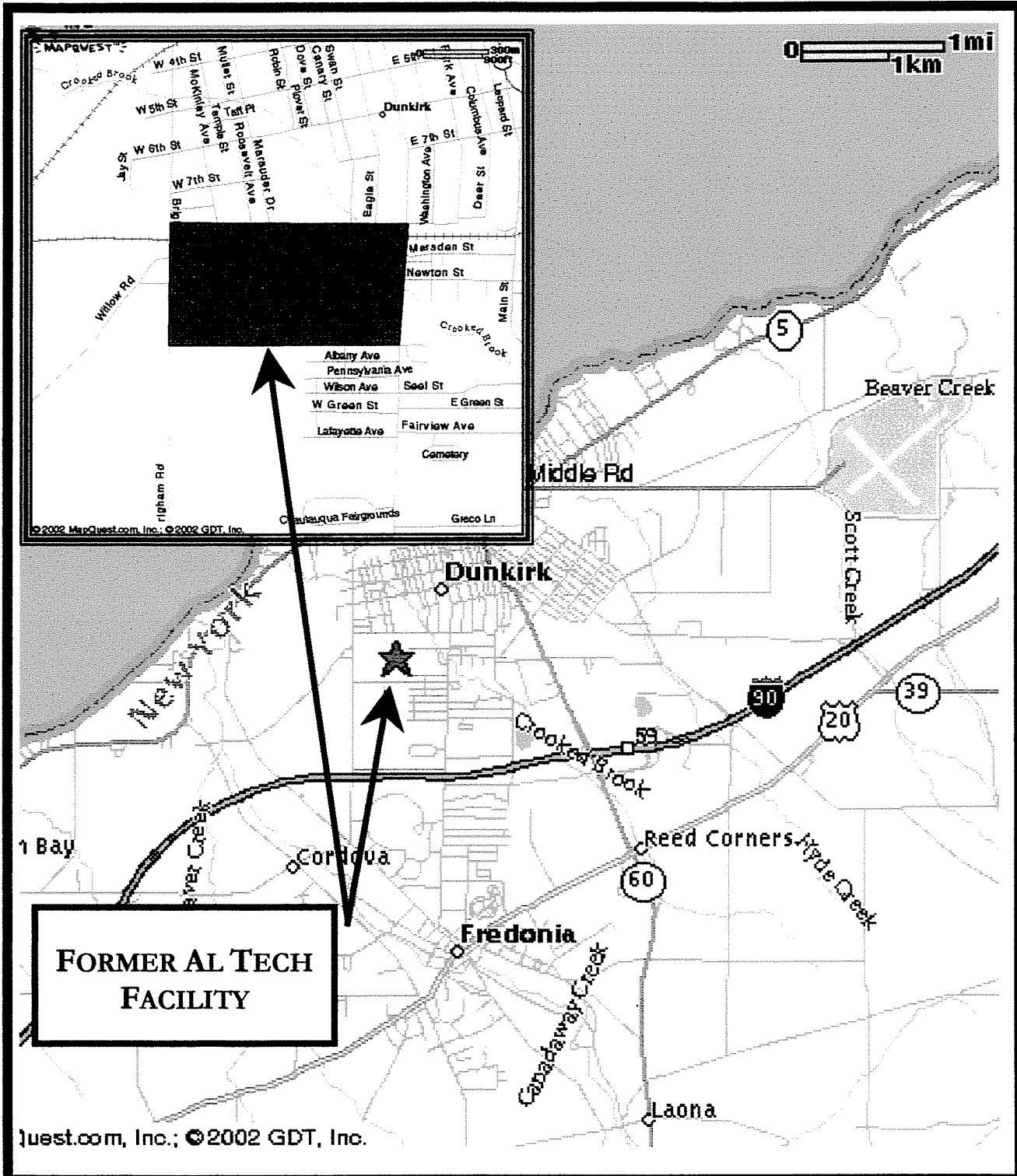
**TABLE 2-2**

**RCRA & FACILITY RELATED METALS**

**Revised Phase II RFI Work Plan  
 Former AL Tech Specialty Steel Corporation Facility  
 Dunkirk, New York**

RCRA METALS	FACILITY-RELATED METALS
<p style="text-align: center;">           Arsenic            Barium            Cadmium            Chromium            Mercury            Lead            Selenium            Silver         </p>	<p style="text-align: center;">           Aluminum            Beryllium            Cobalt            Copper            Iron            Magnesium            Manganese            Molybdenum            Nickel            Vanadium            Zinc         </p>

# FIGURES



**SITE VICINITY AND LOCATION MAP**

**PHASE II RCRA FACILITY INVESTIGATION  
FORMER AL TECH FACILITY**





# ATTACHMENT 1

## HEALTH & SAFETY PLAN

---

**SITE HEALTH AND SAFETY PLAN**  
**for**  
**RFI ACTIVITIES**

**REALCO LAP**  
**DUNKIRK, NY**

---

November 2002

0041-009-100



**RealCo LAP:  
Health and Safety Plan for RFI Activities**

**Plan Reviewed by (initial):**

Corporate Health and Safety Director: Thomas H. Forbes

Project Manager: Patrick T. Martin

Designated Site Safety and Health Officer: Bryan C. Hann

**Acknowledgement:**

I acknowledge that I have reviewed the information contained in this site-specific Health and Safety Plan, and understand the hazards associated with performance of the field activities described herein. I agree to comply with the requirements of this plan.

NAME (PRINT)	SIGNATURE	DATE
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**CONSTRUCTION MONITORING REPORT**  
**CHAFFEE LANDFILL**

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# CONSTRUCTION MONITORING REPORT

## CHAFFEE LANDFILL

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## 1.0 INTRODUCTION

### 1.1 General

In accordance with OSHA requirements contained in 29 CFR 1910.120 and USEPA Standard Operating Safety Guidelines, this Health and Safety Plan (HASP) describes the specific health and safety practices and procedures to be employed by Benchmark Environmental Engineering & Science, PLLC and TurnKey Environmental Restoration, LLC employees (referred to jointly hereafter as Benchmark) during Phase II RCRA Facility Investigation (RFI) activities at the Former Al Tech Specialty Steel Corporation site located in the City of Dunkirk, Chautauqua County, New York. This HASP presents information and procedures for Benchmark employees who will be involved with field activities, including the assignment of responsibilities, personnel protection requirements, work practices and emergency response procedures. It is not intended to cover the activities of other contractors or subcontractors on the Site; these firms will be required to develop and enforce their own HASPs as discussed below. In order to ensure that proper coordination on such key issues as emergency notification and decontamination exists between Benchmark and other contractors or subcontractors, Benchmark will review all HASPs and coordinate procedures where appropriate.

This HASP presents information on known Site health and safety hazards using available historical information for previously investigated areas of the Site, and identifies the equipment, materials and procedures that will be used to eliminate or control these hazards. Environmental monitoring will be performed during the course of field activities to provide real-time data for on-going assessment of potential hazards. This HASP will be updated as new investigation data becomes available.

All Benchmark personnel involved with the field activities associated with the Former Al Tech Phase II RFI will be required to comply with this HASP and any field modifications as directed by the Site Safety and Health Officer.

## 1.2 Site Location and Description

The Former Al Tech site is located in the City of Dunkirk, New York and includes several building improvements sitting within approximately 90 acres of fenced land (see Figure 1-1). The Site is bordered to the north by Lucas Avenue, to the south by the Pennsylvania rail line and the Empire Specialty Steel manufacturing plant, to the west by a parking lot and Brigham Road, and to the east by a parking lot and a garage owned by the City of Dunkirk Highway Department.

## 1.3 Site History

The Corrective Action Program at the site began in 1990. A RCRA Facility Assessment (RFA) was performed to identify inactive and active solid waste management units (SWMUs) and areas of concern (AOCs). Based on process knowledge and historical and current practices, these units were those that could, or could have, potentially released hazardous waste or hazardous constituents to the environment resulting in an unacceptable risk to human health or the environment. The findings of the RFA (McLaren/Hart 1992) formed the basis for the development of the corrective action requirements specified for the site in Appendix B of the Order.

Appendix B, Section A.2 of the Order identifies the site's 24 SWMUs and 11 AOCs. In addition, five areas, referred to by RealCo as Pickle Facility Areas, have been identified at the site. The Pickle Facility Areas encompass several AOCs or SWMUs or a combination of both. The individual units were combined and classified as general areas due to their proximity and typically integrated nature of their processes, for the purpose of investigation and potential evaluation of remedial actions, if any. The units, unit numbers, and descriptions are presented in Tables 1-1 and 1-2; the locations are identified on Figure 1-2 of the Work Plan.

The evaluation of results from the Phase I RFI, performed in 1996 and 1997, indicated that additional investigation activities were required at several of the SWMUs, AOCs and Pickle Facility Areas (ESC 1998). The evaluation of the Phase I results also

indicated that several units did not require additional investigation because either no further action (NFA) was necessary or because there was sufficient information available to make an analysis of the need for an ICM or corrective measures study (CMS). Table 1-3 presents a list and description of the units and identifies their current status based on the Phase I RFI and comments on the documents provided by the NYSDEC (NYSDEC 2000). The status categories include:

- Additional investigation (Phase II RFI)
- ICM
- CMS

The scope of work for each unit requiring additional investigation or an ICM is presented in the Phase II RFI work plan.

#### **1.4 Project Objectives**

The objectives of Phase II of the RFI are to collect the additional data needed to determine appropriate future actions, if any, for the units that have not already been characterized as NFA specifically:

- To delineate the presence and extent of constituents of concern, if necessary.
- To determine if the concentrations of constituents of concern pose potential unacceptable risks to human health and the environment.
- To evaluate the potential for offsite migration of constituents of concern.
- To provide the data needed to evaluate potential corrective measures.
- To determine appropriate subsequent action based on potential risk, i.e., no further action, additional investigation, ICM, or CMS.
- To address potential offsite migration of constituents of concern or potential worker contact through ICMs.

#### **1.5 Investigation Activities**

Benchmark personnel will be on-site to direct subcontractor activities (e.g., drilling,

test pitting and clearing and grubbing) as well as to collect soil/sediment, groundwater, surface water and wipe samples to further characterize each SMWU, AOC and Pickle Facility Area in accordance with the Phase II RFI Work Plan. The investigation and collection of environmental samples and data for the Phase II RFI will include the following activities:

- Advance 55 borings with a direct push drill rig.
- Advance 20 borings and install 17 2-inch groundwater monitoring wells, 2 4-inch observations wells and 1 4-inch recovery well.
- Excavate a minimum of two test pits.
- Collect sediment and surface water samples from an unnamed tributary to Crooked Brook.
- Groundwater monitoring well development.
- Collect two rounds of groundwater samples from all on-site monitoring wells.
- Collect soil samples from all soil borings and monitoring well borings as described in the Phase II Work Plan.
- Collect wipe samples from on-site transformer locations.
- Oversee all subcontractor activities, including but not limited to, drilling, test pitting, clearing and grubbing, decontamination and well installation.
- Field survey of newly installed groundwater monitoring wells and all soil sample locations.



## 2.0 ORGANIZATIONAL STRUCTURE

This chapter of the HASP describes the lines of authority, responsibility and communication as they pertain to health and safety functions at the Site. The purpose of this chapter is to identify the personnel who will impact the development and implementation of the HASP and to describe their roles and responsibilities. This chapter also identifies other contractors and subcontractors involved in work operations and establishes the lines of communication among them for health and safety matters. The organizational structure described in this chapter is consistent with the requirements of 29 CFR 1910.120(b)(2). This section will be reviewed by the Project Manager and updated as necessary to reflect the current organizational structure at this Site.

### 2.1 Roles and Responsibilities

All Benchmark personnel on the Site must comply with the minimum requirements of this HASP. The specific responsibilities and authority of management, safety and health, and other personnel on this Site are detailed in the following paragraphs.

#### 2.1.1 Corporate Health and Safety Director

The Benchmark Corporate Health and Safety Director is **Mr. Thomas H. Forbes**. The Corporate Health and Safety Director is responsible for developing and implementing the Health and Safety program and policies for Benchmark Environmental Engineering & Science PLLC and TurnKey Environmental Restoration, LLC, and consulting with corporate management to ensure adequate resources are available to properly implement these programs and policies. The Corporate Health and Safety Director coordinates the Benchmark Health and Safety training and medical monitoring programs. The Director also assists project management and field staff in developing site-specific health and safety plans.

#### 2.1.2 Project Manager

The Project Manager for this Site is **Mr. Patrick T. Martin**. The Project Manager

has the responsibility and authority to direct all Benchmark work operations at the Site. The Project Manager coordinates safety and health functions with the Site Safety and Health Officer, and bears ultimate responsibility for proper implementation of this HASP. He may delegate authority to expedite and facilitate any application of the program, including modifications to the overall project approach as necessary to circumvent unsafe work conditions. Specific duties of the Project Manager include:

- Prepare and coordinate the Site Work Plan.
- Provide Benchmark field personnel with work assignments and oversee their performance.
- Coordinate health and safety efforts with the Site Safety and Health Officer (SSHO).
- Review the emergency response coordination plan to assure its effectiveness.
- Serve as the primary liaison with Site contractors and the property owner.

### **2.1.3 Site Safety and Health Officer**

The Site Safety and Health Officer (SSHO) for this Site is **Mr. Bryan C. Hann**. The qualified alternate SSHO is **Richard L. Dubisz**. The SSHO reports to the Project Manager. The SSHO is on-site or readily accessible to the Site during all work operations and has the authority to halt work if unsafe conditions are detected. The specific responsibilities of the SSHO are:

- Manage the safety and health functions for on-site Benchmark field personnel.
- Serve as the point of contact for safety and health matters.
- Ensuring that Benchmark field personnel working on the Site have received proper training (per 29 CFR Part 1910.120(e)), that they have obtained medical clearance to wear respiratory protection (per 29 CFR Part 1910.134), and that they are properly trained in the selection, use and maintenance of personal protective equipment, including qualitative respirator fit testing.

### 3.0 HAZARD EVALUATION

The possibility exists that workers will be exposed to hazardous substances during sample collection, decontamination and drilling/test pitting activities. The principal points of exposure would be through direct contact with impacted media and through the inhalation of contaminated particles or vapors during sample collection and handling activities. In addition, the use of large equipment and uneven terrain will also present conditions for potential physical injury to workers. Because the plant has no functional heating or cooling systems, the potential exists for heat/cold stress to impact workers, especially those wearing protective equipment and clothing. Adherence to the medical evaluations, worker training relative to chemical hazards, safe work practices, proper personal protection, environmental monitoring, establishment work zones and site control, appropriate decontamination procedures and contingency planning outlined herein will reduce the potential for chemical exposures and physical injuries.

#### 3.1 Chemical Hazards

Manufacturing processes known to have previously taken place at the Plant Site give an indication as to the types of hazardous substances that may be encountered during investigation activities. Table 3-1 identifies known constituents of potential concern for the Plant Site and ranges of concentrations, by media, observed during previous off-site soil and groundwater investigations. Based on work to be performed during the Phase II RFI, the constituents of potential concern include five inorganic constituents and PCBs. Table 3-2 lists toxicity and exposure data for these constituents of potential concern. As additional data is obtained, Tables 3-1 and 3-2 will be updated accordingly. Brief descriptions of the toxicology of these materials and related health and safety guidance and criteria are provided below.

- **Barium** is a silver white metal, produced by the reduction of barium oxide. Local effects and symptoms of exposure to barium compounds, such as the hydroxide or carbonate, may include irritation of the eyes, throat, nose and skin. Systemic effects

from ingestion include increased muscle contractility, reduction of heart rate/potential arrest, intestinal peristalsis, vascular constriction, and bladder contraction.

- **Chromium** is a natural inorganic element and is usually combined with one or more elements, such as oxygen, chloride or sulfur. The common forms of chromium are hexavalent ( $CR^{+6}$ ) and trivalent ( $CR^{+3}$ ). The hexavalent form is associated with significantly greater potential health impacts than the trivalent form. Hexavalent chromium is an irritant and corrosive to the skin and mucus membranes. Chromium is a potential occupational carcinogen. Acute exposures to dust may cause coughing, wheezing, headaches, pain and fever.
- **Cyanides**, when present in free form, are generally incompatible with strong oxidizers such as chlorides, acids and acid salts. Routes of entry include inhalation, skin absorption, ingestion and eye contact. Harmful effects and symptoms of cyanide exposure include weakness, headache, confusion, nausea, vomiting, eye/skin irritation, and slow, gasping respiration.
- **Lead** can affect almost every organ and system in our bodies. The most sensitive is the central nervous system, particularly in children. Lead also damages kidneys and the immune system. The effects are the same whether it is breathed or swallowed. Lead may decrease reaction time, cause weakness in fingers, wrists or ankles and possibly affect memory. Lead may cause anemia.
- **Polychlorinated biphenyls (PCBs)**, a series of compounds that were commonly used in transformer oil, are suspected carcinogens. PCBs may vary in form from oily liquids to white solids. Exposure may cause nausea, vomiting, weight loss, jaundice, edema and abdominal pain.

With respect to the anticipated activities defined in Section 1.5, possible routes of exposure to the above-mentioned contaminants include direct contact and inhalation of dust or vapors. Table 3-3 summarizes each activity and identifies the potential routes of exposure for each. The use of proper respiratory equipment, as outlined in Section 7.0, will minimize the potential for exposure to airborne contamination. Furthermore, exposure to contaminants through dermal and other routes will also be minimized by using protective clothing (Section 7.0), safe work practices (Section 6.0), and proper decontamination procedures (Section 12.0).

With respect to the anticipated investigation activities defined in Section 1.5, possible

routes of exposure to the above-mentioned contaminants are presented in Table 3-3. The use of proper respiratory equipment, as outlined in Section 7.0, will minimize the potential for exposure to airborne contamination. Further, exposure to contaminants through dermal and other routes will also be minimized through the use of protective clothing (Section 7.0), safe work practices (Section 6.0), and proper decontamination procedures (Section 12.0).

### **3.2 Physical Hazards**

Investigation activities at the Site may present the following physical hazards:

- The potential for physical injury during heavy equipment activity, such as test pitting with a backhoe and borehole advancement with a drill rig.
- The potential for heat/cold stress to field personnel during the summer/winter months (see Section 10.0) as a result of extreme temperatures.
- The potential for physical injury due to slips, trips and falls caused by rough and uneven terrain.

These hazards represent only some of the possible means of injury that may be present during investigation and sampling activities at the Site. Since it is impossible to list all potential sources of injury, it shall be the responsibility of each individual to exercise proper care and caution during all phases of the work.

## 4.0 TRAINING

### 4.1 Field Personnel

All field personnel performing investigation activities at the Site, including but not limited to, Benchmark staff, equipment operators and general laborers who may be exposed to hazardous substances, health hazards, or safety hazards shall receive training in accordance with 29 CFR 1910.120(e) before they are permitted to engage in operations in the exclusion zone or contaminant reduction zone. This training also pertains to supervisors and/or project managers responsible for the Site and project activities. This training includes an initial 40-hour Hazardous Waste Site Worker Protection Course, an 8-hour Annual Refresher Course subsequent to the initial 40-hour training, and 3 days of actual field experience under the direct supervision of a trained, experienced supervisor. Additional site-specific training shall also be provided by the SSHO prior to the start of field activities. A description of topics to be covered by this training is provided below.

#### 4.1.1 Initial and Refresher Training

Initial and refresher training is conducted by a qualified instructor as specified under OSHA 29 CFR 1910.120(e)(5), and is specifically designed to meet the requirements of OSHA 29 CFR 1910.120(e)(3) and 1910.120(e)(8). The training covers, as a minimum, the following topics:

- OSHA HAZWOPER regulations.
- Site safety and hazard recognition, including chemical and physical hazards.
- Medical monitoring requirements.
- Air monitoring, permissible exposure limits, and respiratory protection level classifications.
- Appropriate use of personal protective equipment (PPE), including chemical compatibility and respiratory equipment selection and use.

- Work practices to minimize risk.
- Work zones and Site control.
- Safe use of engineering controls and equipment.
- Decontamination procedures.
- Emergency response and escape.
- Confined space entry procedures.
- Heat and cold stress monitoring.
- Elements of a Health and Safety Plan.
- Spill containment.

Initial training also incorporates workshops for PPE and respiratory equipment use (Levels A, B and C), and respirator fit testing. Records and certification received from the course instructor documenting each employee's successful completion of the training identified above are maintained on file at Benchmark Environmental Engineering and Science, PLLC's Buffalo, NY office. Contractors and Subcontractors are required to provide similar documentation of training for all their personnel who will be involved in on-site work activities.

Any employee who has not been certified as having received health and safety training in conformance with 29 CFR 1910.120(e) is prohibited from working in the exclusion and contamination reduction zones, or to engage in any on-site work activities that may involve exposure to hazardous substances or wastes.

#### **4.1.2 Site Training**

Field personnel are given a copy of the HASP and provided a site-specific briefing prior to the commencement of work to ensure that employees are familiar with the HASP and the information and requirements it contains. A site briefing (i.e., tailgate health and

safety meeting) shall be conducted by the SSHO prior to initiating field activities on a daily basis and shall include:

- Names of personnel and alternates responsible for Site safety and health.
- Safety, health and other hazards present on the Site.
- The Site layout including work zones and places of refuge.
- The emergency communications system and emergency evacuation procedures.
- Use of PPE.
- Work practices by which the employee can minimize risks from hazards.
- Safe use of engineering controls and equipment on the Site.
- Medical surveillance, including recognition of symptoms and signs of over-exposure (see Section 5).
- Decontamination procedures (see Section 12).
- The Emergency Response Plan (see Appendix B).
- Confined space entry procedures, if required (see Section 13).
- The spill containment program (see Section 9).
- Site control (see Section 11).

Supplemental health and safety briefings will also be conducted by the SSHO on an as-needed basis during the course of the work. Supplemental briefings are provided as necessary to notify employees of any changes to this HASP as a result of information gathered during on-going Site characterization and analysis. Conditions for which the SSHO may schedule additional briefings include, but are not limited to: a change in Site conditions (viz., based on monitoring results); changes in the work schedule/plan; newly discovered hazards; and safety incidents occurring during Site work.



## **4.2 Supervisor Training**

On-site safety and health personnel who are directly responsible for or who supervise the safety and health of workers engaged in hazardous waste operations (viz., SSHO) shall receive, in addition to the appropriate level of worker training described in Section 4.1, above, 8 additional hours of specialized supervisory training, in compliance with 29 CFR 1910.120(e)(4).

## **4.3 Emergency Response Training**

Emergency response training is addressed in Appendix B of this HASP, Emergency Response Plan.

## **4.4 Site Visitors**

Benchmark's SSHO will provide a site-specific briefing to all Site visitors and other non-Benchmark personnel who enter the Site beyond the Site entry point. The site-specific briefing will provide information about Site hazards, the Site layout including work zones and places of refuge, the emergency communications system and emergency evacuation procedures, and other pertinent safety and health requirements as appropriate.

Site visitors will not be permitted to enter the exclusion zone or contaminant reduction zones unless they have received the level of training required for Site workers as described in Section 4.1.

## 5.0 MEDICAL MONITORING

Medical monitoring examinations are provided to Benchmark employees as stipulated under 29 CFR Part 1910.120(f). These exams include initial employment and termination physicals for all Benchmark employees involved in hazardous waste Site field operations. Annual exams are provided for those employees who are engaged in hazardous waste site field operations for more than 30 days per year, or who meet other specific criteria listed in 29 CFR 1910.120(f). Post-exposure examinations are also provided for employees who may have been injured, received a health impairment, or developed signs or symptoms of over-exposure to hazardous substances or were accidentally exposed to substances at concentrations above the permissible exposure limits without necessary personal protective equipment. Such exams are performed as soon as possible following development of symptoms or the known exposure event.

**CHECK INFORMATION WITH TOM.** Medical evaluations are performed by Continuum Healthcare, an occupational health care provider under contract with Benchmark. Continuum's local facility is OLV Industrial Medical Center, 4271 Lake Avenue, Blasdell, NY 14219. The facility can be reached at (716) 823-5050 to schedule routine appointments or post-exposure examinations.

Medical evaluations are conducted according to the Benchmark-TurnKey Medical Monitoring Program and include an evaluation of the workers' ability to use respiratory protective equipment. The examinations include:

- Occupational/medical history review.
- Physical exam, including vital sign measurement.
- Spirometry testing.
- Eyesight testing.
- Audio testing (minimum baseline and exit, annual for employees routinely exposed to greater than 85db).

- EKG (for employees >40 yrs age or as medical conditions dictate).
- Chest X-ray (baseline and exit, and every 5 years).
- Blood biochemistry (including blood count, white cell differential count, serum multiplastic screening).
- Medical certification of physical requirements (viz., sight, musculoskeletal, cardiovascular) for safe job performance and to wear respiratory protection equipment.

The purpose of the medical evaluation is to determine an employee's fitness for duty on hazardous waste sites and to establish baseline medical data.

In conformance with OSHA regulations, Benchmark will maintain and preserve medical records for a period of 30 years following termination of employment. Employees are provided a copy of the physician's post-exam report, and have access to their medical records and analyses.

## 6.0 SAFE WORK PRACTICES

All Benchmark employees shall conform to the following safe work practices during all on-site work activities conducted within the exclusion and contamination reduction zones:

- Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand-to-mouth contact is strictly prohibited.
- The hands and face must be thoroughly washed upon leaving the work area and prior to engaging in any activity indicated above.
- Respiratory protective equipment and clothing must be worn by all personnel entering the Site as required by the HASP or as modified by the Site Safety Officer. Excessive facial hair (i.e., beards, long mustaches or sideburns) that interferes with the satisfactory respirator-to-face seal is prohibited.
- Contact with surfaces/materials either suspected or known to be contaminated will be avoided to minimize the potential for transfer to personnel, cross contamination and need for decontamination.
- Due to possible contraindications, use of prescribed drugs should be reviewed with the Benchmark occupational physician.
- Alcoholic beverage and illegal drug intake are strictly forbidden during the workday.
- All personnel shall be familiar with standard operating safety procedures and additional instructions contained in this Health and Safety Plan.
- On-site personnel shall use the “buddy” system. No one may work alone (i.e., out of earshot or visual contact with other workers) in the exclusion zone.
- Personnel and equipment in the contaminated area shall be minimized, consistent with effective Site operations.
- All employees have the obligation to immediately report and if possible, correct unsafe work conditions.
- Use of contact lenses on-site will not be permitted. Spectacle kits for insertion

into full-face respirators will be provided for Benchmark employees, as requested and required.

The recommended specific safety practices for working around the subcontractor's equipment (e.g., backhoes, bulldozers, excavators, etc.) are as follows:

- Although the subcontractors are responsible for their equipment and safe operation of the Site, Benchmark personnel are also responsible for their own safety.
- Subsurface work will not be initiated without first clearing underground utility services.
- Heavy equipment should not be operated within 20 feet of overhead wires. This distance may be increased if windy conditions are anticipated or if lines carry high voltage. The Site should also be sufficiently clear to ensure the project staff can move around the heavy machinery safely.
- Care should be taken to avoid overhead wires when moving heavy-equipment from location to location.
- Hard hats, safety boots and safety glasses should be worn at all times in the vicinity of heavy equipment. Hearing protection is also recommended.
- The work Site should be kept neat. This will prevent personnel from tripping and will allow for fast emergency exit from the Site.
- Proper lighting must be provided when working at night.
- Investigation activities should be discontinued during an electrical storm or severe weather conditions.
- The presence of combustible gases should be checked before igniting any open flame.
- Personnel shall stand upwind of any investigation activity when not immediately involved in sampling/logging/observing activities.
- Personnel will not approach the edge of an unsecured trench/excavation closer than 2 feet.

## 7.0 PERSONAL PROTECTIVE EQUIPMENT

### 7.1 Equipment Selection

Personal protective equipment (PPE) will be donned when work activities may result in exposure to physical or chemical hazards beyond acceptable limits, and when such exposure can be mitigated through appropriate PPE. The selection of PPE will be based on an evaluation of the performance characteristics of the PPE relative to the requirements and limitations of the Site, the task-specific conditions and duration, and the hazards and potential hazards identified at the Site.

Equipment designed to protect the body against contact with known or suspect chemical hazards are grouped into four categories according to the degree of protection afforded. These categories, designated A through D consistent with United States Environmental Protection Agency (USEPA) Level of Protection designation, are:

- **Level A:** Should be selected when the highest level of respiratory, skin and eye protection is needed.
- **Level B:** Should be selected when the highest level of respiratory protection is needed, but a lesser level of skin protection is required. Level B (or Level A) is also necessary for oxygen-deficient atmospheres.
- **Level C:** Should be selected when the types of airborne substances are known, the concentrations have been measured and the criteria for using air-purifying respirators are met. In atmospheres where no airborne contaminants are present, Level C provides dermal protection only.
- **Level D:** Should not be worn on any site with elevated respiratory or skin hazards. This is generally a work uniform providing minimal protection.

OSHA requires the use of certain PPE under conditions where an immediate danger to life and health (IDLH) may be present. Specifically, OSHA 29 CFR 1910.120(g)(3)(iii) requires use of a positive pressure self-contained breathing apparatus, or positive pressure air-line respirator equipped with an escape air supply when chemical exposure levels present

a substantial possibility of immediate serious injury, illness or death, or impair the ability to escape. Similarly, OSHA 29 CFR 1910.120(g)(3)(iv) requires donning totally-encapsulating chemical protective suits (with a protection level equivalent to Level A protection) in conditions where skin absorption of a hazardous substance may result in a substantial possibility of immediate serious illness, injury or death, or impair the ability to escape.

In situations where the types of chemicals, concentrations, and possibilities of contact are unknown, the appropriate level of protection must be selected based on professional experience and judgment until the hazards can be further characterized. The individual components of clothing and equipment must be assembled into a full protective ensemble to protect the worker from site-specific hazards, while at the same time minimizing hazards and drawbacks of the personal protective gear itself. Ensemble components are detailed below for levels A/B, C, and D protection.

## **7.2 Protection Ensembles**

### **7.2.1 Level A/B Protection Ensemble**

Level A/B ensembles include similar respiratory protection, however Level A provides a higher degree of dermal protection than Level B. Use of Level A instead of Level B is determined by: comparing the concentrations of identified substances in the air with skin toxicity data, and assessing the effect of the substance (by its measured air concentrations or splash potential) on the small area of the head and neck unprotected by Level B clothing.

The recommended PPE for level A/B is:

- Pressure-demand, full-face piece self-contained breathing apparatus (MSHA/-NIOSH approved) or pressure-demand supplied-air respirator with escape self-contained breathing apparatus (SCBA).
- Chemical-resistant clothing. For Level A, clothing consists of fully encapsulating chemical resistant suit. Level B incorporates hooded one-or two-piece chemical splash suit.

- Inner and outer chemical resistant gloves.
- Chemical-resistant safety boots/shoes.
- Hardhat.

### **7.2.2 Level C Protection Ensemble**

Level C protection is distinguished from Level B by the equipment used to protect the respiratory system, assuming the same type of chemical-resistant clothing is used. The main selection criterion for Level C is that conditions permit wearing an air-purifying device. The device (when required) must be an air-purifying respirator (MSHA/NIOSH approved) equipped with filter cartridges. Cartridges must be able to remove the substances encountered. Respiratory protection will be used only with proper fitting, training and the approval of a qualified individual. In addition, an air-purifying respirator can be used only if: oxygen content of the atmosphere is at least 19.5% in volume; substances are identified and concentrations measured; substances have adequate warning properties; the individual passes a qualitative fit-test for the mask; and an appropriate cartridge/canister is used, and its service limit concentration is not exceeded.

Recommended PPE for Level C conditions includes:

- Full-face piece, air-purifying respirator equipped with MSHA and NIOSH approved organic vapor/acid gas/dust/mist combination cartridges or as designated by the SSHO.
- Chemical-resistant clothing (hooded, one or two-piece chemical splash suit or disposable chemical-resistant one-piece suit).
- Inner and outer chemical-resistant gloves.
- Chemical-resistant safety boots/shoes.
- Hardhat.

An air-monitoring program is part of all response operations when atmospheric



contamination is known or suspected. It is particularly important that the air be monitored thoroughly when personnel are wearing air-purifying respirators. Continual surveillance using direct-reading instruments is needed to detect any changes in air quality necessitating a higher level of respiratory protection.

### **7.2.3 Level D Protection Ensemble**

As indicated above, Level D protection is primarily a work uniform. It can be worn in areas where only boots can be contaminated, where there are no inhalable toxic substances and where the atmospheric contains at least 19.5% oxygen.

Recommended PPE for Level D includes:

- Coveralls.
- Safety boots/shoes.
- Safety glasses or chemical splash goggles.
- Hardhat.
- Optional gloves; escape mask; face shield.

### **7.2.4 Recommended Level of Protection for Site Tasks**

Based upon current information regarding both the contaminants suspected to be present at the Site and the various tasks that are included in the investigation, the minimum required Levels of Protection for these tasks is presented in Table 7-1.

## **8.0 EXPOSURE MONITORING**

### **8.1 General**

Based on the results of historic sample analysis and the nature of the proposed work activities at the Site, the possibility exists that particulates may be released to the air during intrusive sampling activities. Ambient breathing zone concentrations may at times, exceed the permissible exposure limits (PEL) established by OSHA for the individual compounds (see Table 3-2), in which case respiratory protection will be required. Respiratory and dermal protection may be modified (upgraded or downgraded) by the SSHO based upon real-time field monitoring data.

### **8.2 Work Area Monitoring**

Routine, real-time monitoring of the atmosphere within the work area will be conducted by Benchmark during all intrusive investigation phases such as drilling, test-pitting, well development, etc. The work area will be monitored at regular intervals using a photo-ionization detector (PID), combustible gas meter and a particulate meter. Observed values will be recorded and maintained as part of the permanent field record.

Additional air monitoring measurements may be collected by Benchmark personnel to verify field conditions during subcontractor oversight activities, if applicable. Monitoring instruments will be protected from surface contamination during use. Additional monitoring instruments may be added if the situations or conditions change.

### **8.3 Action Levels and Responses**

The PID or other appropriate instrument(s) will be used by Benchmark to monitor organic vapor concentrations as specified in this plan. In addition, fugitive dust/particulate concentrations will be monitored during major soil intrusion (viz., well/boring installation and test pit excavation) using a real-time particulate monitor as specified in this plan.

Readings obtained in the breathing zone may be interpreted (with regard to other Site conditions) as follows for on-site Benchmark personnel:

- Total atmospheric concentrations of unidentified vapors or gases ranging from **0 to background** on the PID - Continue operations under Level D (see Appendix A).
- Total atmospheric concentrations of unidentified vapors or gases yielding **sustained readings above background to 5 ppm** on the PID (vapors not suspected of containing high levels of chemicals toxic to the skin) - Continue operations under Level C (see Appendix A).
- Total atmospheric concentrations of unidentified vapors or gases yielding **sustained readings of 5 to 50 ppm** above background on the PID - Continue operations under Level B (see Appendix A), re-evaluate and alter (if possible) investigation methods to achieve lower vapor concentrations.
- Total atmospheric concentrations of unidentified vapors or gases **above 50 ppm** on the PID - Discontinue operations and exit the work zone immediately.

The explosimeter will be used to monitor levels of both combustible gases and oxygen in the work zone during investigation activities. Action levels based on the instrument readings shall be as follows:

- **Less than 10% LEL** - Continue engineering operations with caution.
- **10-25% LEL** - Continuous monitoring with extreme caution, determine source/cause of elevated reading.
- **Greater than 25% LEL** - Explosion hazard, evaluate source and leave the Work Zone.
- **19.5% - 21% oxygen** - proceed with extreme caution; attempt to determine potential source of oxygen displacement.
- **Less than 19.5% oxygen** - leave work zone immediately.
- **21-25% oxygen** - Continue engineering operations with caution.

- **Greater than 25% oxygen** - Fire hazard potential, leave Work Zone immediately.

The particulate monitor will be used to monitor respirable dust (PM-10) concentrations in the work zone during significant soil intrusion activities. Action levels based on the instrument readings shall be as follows:

- **Less than 150 mg/m<sup>3</sup>** - Continue field operations.
- **Greater than 150 mg/m<sup>3</sup>** - Don dust/particulate mask or equivalent. Initiate engineering controls to reduce respirable dust concentration (viz., wetting of excavated soils or tools) at discretion of Site Health and Safety Officer and as warranted based on upwind concentrations.

Readings with the combustible gas meter, particulate monitor and organic vapor analyzers will be recorded and documented in the Health and Safety Logbook. All instruments will be calibrated before use and the procedure will be documented in the Health and Safety Logbook.

## 9.0 SPILL RELEASE/RESPONSE

This chapter of the HASP describes the potential for and procedures related to spills or releases of known or suspected petroleum and/or hazardous substances on the Site. The purpose of this Section of the HASP is to plan appropriate response, control, counter-measures and reporting, consistent with OSHA requirements in 29 CFR 1910.120(b)(4)(ii)(J) and (j)(1)(viii). The spill containment program addresses the following elements:

- Potential hazardous material spills and available controls.
- Initial notification and evaluation.
- Spill response.
- Post-spill evaluation.

### 9.1 Potential Spills and Available Controls

An evaluation was conducted to determine the potential for hazardous material and oil/petroleum spills at this Site. For the purpose of this evaluation, hazardous materials posing a significant spill potential are considered to be:

- CERCLA Hazardous Substances as identified in 40 CFR Part 302, where such materials pose the potential for release in excess of their corresponding Reportable Quantity (RQ).
- Extremely Hazardous Substances as identified in 40 CFR Part 355, Appendix A, where such materials pose the potential for release in excess of their corresponding Reportable Quantity (RQ).
- Hazardous Chemicals as defined under Section 311(e) of the Emergency Planning and Community Right-To-Know Act of 1986, where such chemicals are present or will be stored in excess of 10,000 lbs.
- Toxic Chemicals as defined in 40 CFR Part 372, where such chemicals are present or will be stored in excess of 10,000 lbs.
- Chemicals regulated under 6NYCRR Part 597, where such materials pose the

potential for release in excess of their corresponding Reportable Quantity (RQ).

Oil/petroleum products are considered to pose a significant spill potential whenever the following situations occur:

- The potential for a "harmful quantity" of oil (including petroleum and non-petroleum-based fuels and lubricants) to reach navigable waters of the U.S. exists (40 CFR Part 112.4). Harmful quantities are considered by USEPA to be volumes of 1,000 gallons or more, or lesser quantities that either form a visible sheen on the water or violate applicable water quality standards.
- The potential for any amount of petroleum to reach any waters of NY State, including groundwater, exists. Petroleum, as defined by NY State in 6NYCRR Part 612, is a petroleum-based heat source, energy source, or engine lubricant/maintenance fluid.
- The potential for any release, to soil or water, of petroleum from a bulk storage facility regulated under 6NYCRR Part 612. A regulated petroleum storage facility is defined by NY State as a Site having stationary tank(s) and intra-facility piping, fixtures and related equipment with an aggregate storage volume of 1100 gallons or greater.

The evaluation indicates that, based on Site history and decommissioning records, a hazardous material spill is not likely to occur during investigation efforts. However, the procedures identified below will be followed in the event of an unanticipated release.

## **9.2 Initial Spill Notification and Evaluation**

Any worker who discovers a hazardous substance or oil/petroleum release will immediately notify the Project Manager and SSHO. The worker will, to the best of his/her ability, report the material involved, the location of the spill, the estimated quantity of material spilled, the direction/flow of the spill material, related fire/explosion incidents, if any, and any associated injuries. The Emergency Response Plan presented in Appendix B of this HASP will immediately be implemented if an emergency release has occurred.

Following initial report of a spill, the Project Manager will make an evaluation as to whether the release exceeds RQ levels. If an RQ level is exceeded, the Project Manager will

notify the Site owner who will in turn notify NYSDEC at **1-800-457-7362** within 2 hours of spill discovery. The Project Manager will also determine what additional agencies are to be contacted regarding the release, and will follow-up with written reports as required by the applicable regulations.

### **9.3 Spill Response**

For all spill situations, the following general response guidelines will apply:

- Only those personnel involved in overseeing or performing containment operations will be allowed within the spill area. If necessary, the area will be roped, ribboned or otherwise blocked off to prevent unauthorized access.
- Appropriate PPE, as specified by the SSHO, will be donned before entering the spill area.
- Ignition points will be extinguished/removed if fire or explosion hazards exist.
- Surrounding reactive materials will be removed.
- Drains or drainage in the spill area will be blocked to prevent inflow of spilled materials or applied materials.

For minor spills, the Benchmark will maintain a Spill Control and Containment Kit in the Field Office or other readily accessible storage location. The kit will consist of, at a minimum, a 50 lb. bag of “speedy dry” granular absorbent material, absorbent pads, shovels, empty 5-gallon pails and an empty open-top 55-gallon drum. Spilled materials will be absorbed, and shoveled into a 55-gallon drum for proper disposal (USEPA approval will be secured for on-site treatment of the impacted soils/absorbent materials, if applicable). Impacted soils will be hand-excavated to the point that no visible signs of contamination remains, and will be drummed with the absorbent.

In the event of a major release or a release that threatens surface water, a spill response contractor will be called to the Site. The response contractor may use heavy equipment (viz., excavator, backhoe, etc.) to berm the soils surrounding the spill site or

create diversion trenching to mitigate overland migration or release to navigable waters. Where feasible, pumps will be used to transfer free liquid to storage containers. Spill control/cleanup contractors in the Western New York area that may be contacted for assistance (in order of preference) include:

- Zoladz Construction Co., Inc.: (716) 937-6575
- The Environmental Service Group of NY, Inc.: (716) 695-6720
- Op-Tech: (716) 873-7680
- Environmental Products and Services, Inc.: (716) 447-4700

#### **9.4 Post-Spill Evaluation**

If a reportable quantity of hazardous material or oil/petroleum is spilled as determined by the Project Manager, a written report will be prepared as indicated in Section 9.2. The report will identify the root cause of the spill, type and amount of material released, date/time of release, response actions, agencies notified and/or involved in cleanup, and procedures to be implemented to avoid repeat incidents. In addition, all re-useable spill cleanup and containment materials will be decontaminated, and spill kit supplies/disposable items will be replenished.



## 10.0 HEAT/COLD STRESS MONITORING

Since some of the work activities during the Phase II RFI may be scheduled for both the summer and winter months, measures will be taken to minimize heat/cold stress to Benchmark employees. The Site Safety and Health Officer and/or his or her designee will be responsible for monitoring Benchmark field personnel for symptoms of heat/cold stress.

### 10.1 Heat Stress Monitoring

Personal protective equipment (PPE) may place an employee at risk of developing heat stress, a common and potentially serious illness often encountered at construction, landfill, waste disposal, industrial or other unsheltered sites. The potential for heat stress is dependent on a number of factors, including environmental conditions, clothing, workload, physical conditioning and age. PPE may severely reduce the body's normal ability to maintain temperature equilibrium (via evaporation and convection), and require increased energy expenditure due to its bulk and weight.

Proper training and preventive measures will mitigate the potential for serious illness. Heat stress prevention is particularly important because once a person suffers from heat stroke or heat exhaustion, that person may be predisposed to additional heat related illness. To avoid heat stress, the following steps should be taken:

- Adjust work schedules.
- Modify work/rest schedules according to monitoring requirements.
- Mandate work slowdowns as needed.
- Perform work during cooler hours of the day if possible or at night if adequate lighting can be provided.
- Provide shelter (air-conditioned, if possible) or shaded areas to protect personnel during rest periods.
- Maintain worker's body fluids at normal levels. This is necessary to ensure that the cardiovascular system functions adequately. Daily fluid intake must approximately equal the amount of water lost in sweat (i.e., eight fluid ounces

must be ingested for approximately every 1 lb of weight lost). The normal thirst mechanism is not sensitive enough to ensure that enough water will be consumed to replace lost perspiration. When heavy sweating occurs, workers should be encouraged to drink more.

- Train workers to recognize the symptoms of heat related illness.

### Heat-Related Illness - Symptoms:

- Heat rash may result from continuous exposure to heat or humid air.
- Heat cramps are caused by heavy sweating with inadequate electrolyte replacement. Signs and symptoms include: muscle spasms; pain in the hands, feet and abdomen.
- Heat exhaustion occurs from increased stress on various body organs including inadequate blood circulation due to cardiovascular insufficiency or dehydration. Signs and symptoms include: pale, cool, moist skin; heavy sweating; dizziness; nausea; fainting.
- Heat stroke is the most serious form of heat stress. Temperature regulation fails and the body temperature rises to critical levels. Immediate action must be taken to cool the body before serious injury and death occur. Competent medical help must be obtained. Signs and symptoms are: red, hot, usually dry skin; lack of or reduced perspiration; nausea; dizziness and confusion; strong, rapid pulse; coma.

The monitoring of personnel wearing protective clothing should commence when the ambient temperature is 70 degrees Fahrenheit or above. For monitoring the body's recuperative ability to excess heat, one or more of the following techniques should be used as a screening mechanism.

- Heart rate may be measured by the radial pulse for 30 seconds as early as possible in the resting period. The rate at the beginning of the rest period should not exceed 100 beats per minute. If the rate is higher, the next work period should be shortened by 10 minutes (or 33%), while the length of the rest periods stay the same, If the pulse rate is 100 beats per minute at the beginning of the next rest period, the following work cycle should be further shortened by 33%.
- Body temperature may be measured orally with a clinical thermometer as early as possible in the resting period. Oral temperature at the beginning of the rest period should not exceed 99.6 degrees Fahrenheit. If it does, the next work period

should be shortened by 10 minutes (or 33%), while the length of the rest period remains the same. However, if the oral temperature exceeds 99.6 degrees Fahrenheit at the beginning of the next period, the work cycle may be further shortened by 33%. Oral temperature should be measured at the end of the rest period to make sure that it has dropped below 99.6 degrees Fahrenheit. No Benchmark employee will be permitted to continue wearing semi-permeable or impermeable garments when his/her oral temperature exceeds 100.6 degrees Fahrenheit.

## 10.2 Cold Stress Monitoring

Exposure to cold conditions may result in frostbite or hypothermia, each of which progresses in stages as shown below.

- **Frostbite** occurs when body tissue (usually on the extremities) begins to freeze. The three states of frostbite are:
  - 1) **Frost nip** - This is the first stage of the freezing process. It is characterized by a whitened area of skin, along with a slight burning or painful sensation. Treatment consists of removing the victim from the cold conditions, removal of boots and gloves, soaking the injured part in warm water (102 to 108 degrees Fahrenheit) and drinking a warm beverage. Do not rub skin to generate friction/ heat.
  - 2) **Superficial Frostbite** - This is the second stage of the freezing process. It is characterized by a whitish gray area of tissue, which will be firm to the touch but will yield little pain. The treatment is identical for Frost nip.
  - 3) **Deep Frostbite** - In this final stage of the freezing process the affected tissue will be cold, numb and hard and will yield little to no pain. Treatment is identical to that for Frost nip.
- **Hypothermia** is a serious cold stress condition occurring when the body loses heat at a rate faster than it is produced. If untreated, hypothermia may be fatal. The stages of hypothermia may not be clearly defined or visible at first, but generally include:
  - 1) Shivering
  - 2) Apathy (i.e., a change to an indifferent or uncaring mood)
  - 3) Unconsciousness

4) Bodily freezing

Employees exhibiting signs of hypothermia should be treated by medical professionals. Steps that can be taken while awaiting help include:

- 1) Remove the victim from the cold environment and remove wet or frozen clothing. (Do this carefully as frostbite may have started.)
- 2) Perform active re-warming with hot liquids for drinking (Note: do not give the victim any liquid containing alcohol or caffeine) and a warm water bath (102 to 108 degrees Fahrenheit).
- 3) Perform passive re-warming with a blanket or jacket wrapped around the victim.

In any potential cold stress situation, it is the responsibility of the Site Health and Safety Officer to encourage the following:

- Education of workers to recognize the symptoms of frostbite and hypothermia.
- Workers should dress warmly, with more layers of thin clothing as opposed to one thick layer.
- Personnel should remain active and keep moving.
- Personnel should be allowed to take shelter in a heated areas, as necessary.
- Personnel should drink warm liquids (no caffeine or alcohol if hypothermia has set in).
- For monitoring the body's recuperation from excess cold, oral temperature recordings should occur:
  - At the Site Safety Technicians discretion when suspicion is based on changes in a worker's performance or mental status.
  - At a workers request.
  - As a screening measure, two times per shift, under unusually hazardous conditions (e.g., wind chill less than 20 degrees Fahrenheit or wind chill

less than 30 degrees Fahrenheit with precipitation).

- As a screening measure whenever anyone worker on Site develops hypothermia.

Any person developing moderate hypothermia (a core body temperature of 92 degrees Fahrenheit) will not be allowed to return to work for 48 hours without the recommendation of a qualified medical doctor.

## 11.0 WORK ZONES AND SITE CONTROL

Work zones around the areas designated for investigation activities will be established by Benchmark on a daily basis and communicated to all employees and other Site users by the SSHO. It shall be the Site Safety and Health Officer's responsibility to ensure that all Site workers are aware of the work zone boundaries and to enforce proper procedures in each area. The zones will include:

- Exclusion Zone ("Hot Zone") - The area where contaminated materials may be exposed, excavated or handled and all areas where contaminated equipment or personnel may travel. The zone will be delineated by flagging tape. All personnel entering the Exclusion Zone must wear the prescribed level of personal protective equipment identified in Section 7.
- Exclusion Zone ("Hot Zone") - The area where contaminated materials may be exposed, excavated or handled and all areas where contaminated equipment or personnel may travel. The zone will be delineated by flagging tape. All personnel entering the Exclusion Zone must wear the prescribed level of personal protective equipment identified in Section 7.
- Contaminant Reduction Zone - The zone where decontamination of personnel and equipment takes place. Any potentially contaminated clothing, equipment and samples must remain in the Contaminant Reduction Zone until decontaminated.
- Support Zone - The part of the Site that is considered non-contaminated or "clean." Support equipment will be located in this zone, and personnel may wear normal work clothes within this zone.

In the absence of other task-specific work zone boundaries established by the SSHO, the following boundaries will apply to all investigation activities involving disruption or handling of Site soils, sediment or groundwater:

- **Exclusion Zone:** 50 foot radius from the outer limit of the sampling activity.
- **Contaminant Reduction Zone:** 100-foot radius from the outer limit of the sampling activity.
- **Support Zone:** Areas outside the Contaminant Reduction Zone.

Access of non-essential personnel to the Exclusion and Contaminant Reduction Zones will be strictly controlled by Benchmark personnel. Only personnel who are essential to the completion of the task will be allowed access to these areas and only if they are wearing the prescribed level of protection. Entrance of all personnel must be approved by the SSHO.

The Contractor will maintain a Health and Safety Logbook containing the names of workers and their level of protection. The zone boundaries may be changed by the SSHO as environmental conditions warrant, and to respond to the necessary changes in work locations on-site.

## 12.0 DECONTAMINATION

### 12.1 Decontamination For Benchmark Employees

The degree of decontamination required is a function of a particular task and the environment within which it occurs. The following decontamination procedure will remain flexible, thereby allowing the decontamination crew to respond appropriately to the changing environmental conditions that may arise at the Site. All on-site Benchmark personnel shall follow the procedure below.

**Station 1 - Equipment Drop:** Deposit visibly contaminated (if any) re-useable equipment used in the contamination reduction and exclusion zones (tools, containers, monitoring instruments, radios, clipboards, etc.) on plastic sheeting.

**Station 2 - Boots and Gloves Wash and Rinse:** Scrub outer boots and outer gloves. Deposit tape and gloves in waste disposal container.

**Station 3 - Tape, Outer Boot and Glove Removal:** Remove tape, outer boots and gloves. Deposit tape and gloves in waste disposal container.

**Station 4 - Canister or Mask Change:** If worker leaves exclusive zone to change canister (or mask), this is the last step in the decontamination procedure. Worker's canister is exchanged, new outer gloves and boot cover donned, and worker returns to duty.

**Station 5 - Outer Garment/Face Piece Removal:** Protective suit removed and deposited in separate container provided by Contractor. Face piece or goggles are removed if used. Avoid touching face with fingers. Face piece and/or goggles deposited on plastic sheet. Hard hat removed and placed on plastic sheet.

**Station 6 - Inner Glove Removal:** Inner gloves are the last personal protective equipment to be removed. Avoid touching the outside of the gloves with bare fingers. Dispose of these gloves in waste disposal container.

Following PPE removal, personnel shall wash hands, face and forearms with absorbent wipes. If field activities continue six consecutive months or longer, shower facilities will be provided for worker use in accordance with OSHA 29 CFR 1910.120(n).



## **12.2 Decontamination For Medical Emergencies**

In the event of a minor, non-life threatening injury, personnel should follow the decontamination procedures as defined in Section 12.1 and then administer first-aid. In the event of a major injury or other serious medical concern (e.g., heat stroke), immediate first-aid is to be administered and the victim transported to the hospital in lieu of further decontamination efforts unless exposure to a Site contaminant would be considered "Immediately Dangerous to Life or Health."

## **12.3 Decontamination Of Field Equipment**

Decontamination of heavy equipment will be conducted by the subcontractor in accordance with his approved Health and Safety Plan in the Contamination Reduction Zone or designated decontamination pad, if located in a separate area. At a minimum, this will include manually removing heavy soil clods, followed by high-temperature, high-pressure water and detergent (e.g., steam cleaning).

Decontamination of all non-dedicated tools used for sample collection purposes will be conducted by Benchmark personnel. It is expected that all tools will be dedicated and constructed of nonporous, nonabsorbent materials (i.e., stainless steel), therefore, decontamination of these tools will not be required. Any non-dedicated tool or part of a tool made of porous, absorbent material (i.e., wood) will be placed into suitable containers and prepared for disposal.

### 13.0 CONFINED SPACE ENTRY

OSHA 29 CFR 1910.146 identifies a confined space as a space that is large enough and so configured that an employee can physically enter and do assigned work, has limited or restricted means for entry and exit, and is not intended for continuous employee occupancy. Confined spaces include, but are not limited to, trenches, storage tanks, process vessels, pits, sewers, tunnels, underground utility vaults, pipelines, sumps, wells, and excavations.

Confined space entry by Benchmark personnel is not anticipated to be necessary to complete the investigation activities identified in Section 1.5. In the event that the scope of work changes or confined space entry appears necessary, the Project Manager will be consulted to determine if feasible engineering alternatives to confined space entry can be implemented. If confined space entry by Benchmark personnel cannot be avoided through reasonable engineering measures, task-specific confined space entry procedures will be developed and a confined-space entry permit will be issued through Benchmark's corporate Health and Safety Director. Benchmark employees shall not enter a confined space without these procedures and permits in place.

## **14.0 FIRE PREVENTION AND PROTECTION**

### **14.1 General Approach**

Recommended practices and standards of the National Fire Protection Association (NFPA) and other applicable regulations will be followed in the development and application of Project Fire Protection Programs. When required by regulatory authorities, the project management will prepare and submit a Fire Protection Plan for the approval of the contracting officers, authorized representative or other designated official. Essential considerations for the Fire Protection Plan will include:

- Proper Site preparation and safe storage of combustible and flammable materials.
- Availability of coordination with private and public fire authorities.
- Adequate job-site fire protection and inspections for fire prevention.
- Adequate indoctrination and training of employees.

### **14.2 Equipment And Requirements**

Fire extinguishers will be provided by Benchmark, as necessary, and are required to be provided by the subcontractor on all heavy equipment brought on-site. Fire extinguishers will be inspected, serviced, and maintained in accordance with the manufacturer's instructions. As a minimum, all extinguishers shall be checked monthly and weighed semi-annually, and recharged if necessary. Recharge or replacement shall be mandatory immediately after each use.

### **14.3 Flammable And Combustible Substances**

All storage, handling or use of flammable and combustible substances will be under the supervision of qualified persons. All tanks, containers and pumping equipment, whether portable or stationary used for the storage and handling of flammable and combustible liquids, will meet the recommendations of the National Fire Protection Association.

#### 14.4 Hot Work

If the scope of work necessitates welding or blow torch operation, the hot work permit presented in Appendix A will be completed by the SSHO and reviewed/issued by the Project Manager.

## 15.0 EMERGENCY INFORMATION

In accordance with OSHA 29 CFR Part 1910, an Emergency Response Plan is attached to this HASP as Appendix B.

## 16.0 REFERENCES

1. New York State Department of Environmental Conservation (NYSDEC). 2000. *Phase I RCRA RFI Report, AL Tech Specialty Steel Corporation (d.b.a. RealCo Inc.)*, October 22, 1998; prepared by Environmental Strategies Corporation (ESC); and *Environmental Summary Report and Preliminary Engineering Evaluation; AL Tech Specialty Steel Corporation, Dunkirk, New York Facility*; Prepared by Environmental Strategies Corporation; dated October 28, 1998." February 22, 2000.
2. *Phase I RCRA Facility Investigation Report, Al Tech Specialty Steel Corporation Dunkirk, NY Facility*, Environmental Strategies Corporation (ESC), October 1998.
3. *RCRA Facility Assessment Report, AL Tech Specialty Steel Corporation, Dunkirk, New York*, McLaren/Hart Environmental Engineering Corporation. 1992, December 1992.
4. *Summary of Phase II & III LAP West ICM Activities*, Environmental Strategies Corporation, October 2000.

## TABLES

TABLE 1-1

SOLID WASTE MANAGEMENT UNITS

Phase II RFI Health and Safety Plan  
Former AL Tech Specialty Steel Corporation Facility  
Dunkirk, New York

SWMU Category <sup>1</sup>	Unit No. <sup>2</sup>	Unit Description
Tank Systems	1	Former Lucas Avenue Plant West ickle Facility (Pickle Facility Area A)
	2	Former Brigham Road Plant Pickle Facility (Pickle Facility Area B)
	3	Bar Finishing and Storage Pickle Facility (Pickle Facility Area C)
	4	Former Lucas Avenue Plant East Pickle Facility (Pickle Facility Area D)
	5	Former Grinding Room Pickling Process
	6	Former Barium Chloride Bath (Pickle Facility Area A)
	7	Former Plating Operations
	7A	(Pickle Facility Area D - Continuous Lead Coating)
	7B	(Pickle Facility Area A - Continuous Lead Coating)
	7C	(Pickle Facility Area A - Batch Lead Coating)
	7D	(Pickle Facility Area D - Cooper Coating)
	7E <sup>3</sup>	(Pickle Facility Area A - Non-Electolytic Copper Coating)
Container Storage Units	8 <sup>4</sup>	Former Lucas Avenue Plant Neutralization Plant (Pickle Facility Area A)
	9	Former Trichloroethane Container Storage Area
	10	Waste Container Accumulation Areas
	10A <sup>4</sup>	(near Bar Finishing and Storage)
	10B <sup>4</sup>	(in Old Hot Top Building/Howard Avenue Plant)
Waste Disposal Units	10C <sup>4</sup>	(in Warehouse/Howard Avenue Plant)
	11	Shark Pit Residual Material Loading Area
	12	Former Lime Disposal Area
	13	Crucible Disposal Areas
	13A	(near Bar Finishing and Storage)
	13B	(near Howard Avenue Plant Parking Lot)
	13C	(near Brigham Road Plant)
	14	Waste Disposal Facilities
	14A	(near Bar Finishing and Storage)
14B	(near Howard Avenue Plant Parking Lot)	
Surface Impoundments	14C	(near Brigham Road Plant)
	15 (15A and 15B)	Former Waste Acid Surface Impoundments
	16	Willowbrook Pond
Waste Piles	17	Closed Surface Impoundment
	18	Grinding Dust Transfer Pile
	19	Former Waste Pile
	20	Waste Asbestos Accumulaiton Area
Wastewater Treatment Units	21	Grinding Swarf Storage Area
Waste Oil Handling Units	22	Wastewater Treatment Plant
Sewers handling hazardous waste or hazardous constituents	23	API Oil/Water Separator
	24	Process Sewers

Notes:

1. SWMU = solid waste management unit.
2. Unit numbers are as defined in the Order on Consent, not necessarily as defined in the RCRA Facility Assessment (RFA).
3. As discussed in the Phase I RFI Work Plan, the non-electrolytic copper-coating unit identified in the Order on Consent as SWMU 7E was never constructed.
4. The Order on Consent, Appendix B, C.1, indicates that no further action is required for these units, based on information provided in the RFA.



TABLE 1-2

AREAS OF CONCERN

Phase II RFI Health and Safety Plan  
Former AL Tech Specialty Steel Corporation Facility  
Dunkirk, New York

AOC Category <sup>1</sup>	Unit No. <sup>2</sup>	Unit Description
Electrical Equipment	1	Transformers
	2 <sup>3</sup>	Battery Storage Areas
	2A	(Brigham Road Plant - northwest)
	2B	(Lucas Avenue Plant - south central)
	2C	(Bar Finishing and Storage)
	2D	(Howard Avenue Plant - southwest)
	2E	(Howard Avenue Plant - north central)
	2F	(Howard Avenue Plant - northeast)
	2G	(near Lucas Avenue Plant West Pickle Facility) (Pickle Facility Area A)
Tank Systems	3	Cooling Towers and Process Pits
	3A	(Rust Furnace Cooling Tower)
	3B	(Howard Avenue Plant Cooling Tower)
	4 <sup>3</sup>	Former Heat Treating Facility
	5 <sup>4</sup>	Lucas Avenue Oil Tanks
	5A	(Lucas Avenue West Oil Tanks)
	5B	(Lucas Avenue East Oil Tanks)
	6	Former Aboveground Fuel Oil Tank
Raw Materials Piles	7	Scrap Steel Storage Areas
	7A	(Howard Avenue Plant)
	7B	(Bar Finishing and Storage - east)
	7C	(Bar Finishing and Storage - west)
	8	Former Coal Storage Area
Surface Water	9	Unnamed Tributary to Crooked Brook
Dust Control Areas	10	Oiled Roads
Process Waste Disposal Area	11	Former Coal Gasification Plant

Notes:

1. AOC = area of concern.
2. Unit numbers are as defined in the Order on Consent, not necessarily as defined in the RCRA Facility Assessment (RFA).
3. The Order on Consent, Appendix B, C.1, indicates that no further action is required for these units, based on information provided in the RFA.
4. During preparation of the Phase I RFI Work Plan, AL Tech identified a series of oil tanks at the Lucas Avenue Plant. These tanks, which were not identified in the Order on Consent, are subsequently referenced as the Lucas Avenue East Oil Tanks (AOC 5B). The tanks identified in the Order on Consent as AOC 5 are subsequently referenced as Lucas Avenue West Oil Tanks (AOC 5A).

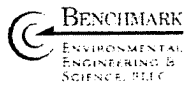


TABLE 1-3

RCRA CORRECTIVE ACTION PROGRAM SUMMARY

Phase II RFI Health and Safety Plan  
Former AL Tech Specialty Steel Corporation Facility  
Dunkirk, New York

Unit No. <sup>2</sup>	Unit Description <sup>3</sup>	Regulatory Status <sup>1</sup>			
		Current Status		Anticipated Status	
		Order	Phase I RFI	Phase II RFI	ICM
<i>Solid Waste Management Units (SWMUs)</i>					
SWMU 1 <sup>4</sup>	Former LAP West Pickle Facility	-	-	-	-
SWMU 2 <sup>4</sup>	Former BRP Pickle Facility	-	-	-	-
SWMU 3 <sup>4</sup>	BFS Pickle Facility	-	-	-	-
SWMU 4 <sup>4</sup>	Former LAP East Pickle Facility	-	-	-	-
SWMU 5	Former Grinding Room Pickling Process	RFI	NFA	-	-
SWMU 9	Former TCA Container Storage Area	RFI	NFA	-	-
SWMU 10 <sup>5</sup>	Waste Container Accumulation Areas	NFA	-	-	-
SWMU 10A	- near BFS				
SWMU 10B	- in Old Hot Top Building/HAP				
SWMU 10C	- in Warehouse/HAP				
SWMU 11	Shark Pit Residual Material Loading Area	RFI	Phase II RFI <sup>6</sup>	NFA	-
SWMU 12	Former Lime Disposal Area	RFI	NFA	-	-
SWMU 13	Crucible Disposal Area	-	-	-	-
SWMU 13A	- near BFS	RFI	Phase II RFI <sup>6</sup>	NFA	
SWMU 13B	- near HAP Parking Lot	RFI	NFA	-	
SWMU 13C <sup>7</sup>	- near BRP	RFI	(Note 7)	-	
SWMU 14	Waste Disposal Facilities			-	-
SWMU 14A	- near BFS	RFI	Phase II RFI <sup>6</sup>	NFA	
SWMU 14B	- near HAP Parking Lot	RFI	NFA	-	
SWMU 14C	- near BRP	RFI	Phase II RFI <sup>6</sup>	NFA	
SWMU 15	Former Waste Acid Surface Impoundments (15A and 15B)	RFI	Phase II RFI <sup>6</sup>	NFA	-
SWMU 16 <sup>8</sup>	Willowbrook Pond	-	-	-	-
	- investigation	RFI	Phase II RFI <sup>9</sup>	CMS	-
	- closure <sup>10</sup>	-	-	-	-
SWMU 17 <sup>7</sup>	Closed Surface Impoundment	RFI	(Note 7)	-	-
SWMU 18	Grinding Dust Transfer Pile	RFI	Phase II RFI <sup>6</sup>	NFA	-
SWMU 19	Former Waste Pile	RFI	NFA	-	-
SWMU 20	Waste Asbestos Accumulation Area	RFI	NFA	-	-
SWMU 21	Grinding Swarf Storage Area	RFI	Phase II RFI <sup>6</sup>	NFA	-
SWMU 22 <sup>7</sup>	Wastewater Treatment Plant	RFI	(Note 7)	-	-
SWMU 23	API Oil/Separator	RFI	NFA	-	-
SWMU 24	Process Sewers	RFI	NFA <sup>11</sup>	-	-

TABLE 1-3

RCRA CORRECTIVE ACTION PROGRAM SUMMARY

Phase II RFI Health and Safety Plan  
Former AL Tech Specialty Steel Corporation Facility  
Dunkirk, New York

Unit No. <sup>2</sup>	Unit Description <sup>3</sup>	Regulatory Status <sup>1</sup>			
		Current Status		Anticipated Status	
		Order	Phase I RFI	Phase II RFI	ICM
<b>Areas of Concern (AOC's)</b>					
AOC 1	Transformers				
	- Transformer T1	RFI	NFA	-	-
	- Transformer T2	RFI	NFA	-	-
	- Transformer T3	RFI	Phase II RFI/ICM	ICM	CMS
	- Transformer T4 <sup>12</sup>	RFI	NFA	-	-
	- Transformer T5 <sup>12</sup>	RFI	NFA	-	-
	- Transformer T6 <sup>12</sup>	RFI	NFA	-	-
AOC 2 <sup>5</sup>	Battery Storage Areas	NFA	-	-	-
AOC 3	Cooling Towers and Process Pits				
AOC 3A	- Rust Furnance Cooling Tower	RFI	Phase II RFI	ICM	CMS
AOC 3B	- HAP Cooling Tower	RFI	Phase II RFI <sup>6</sup>	NFA	-
	Process Pits	RFI	NFA <sup>13</sup>	-	-
AOC 4 <sup>5</sup>	Former Heat Treating Facility	NFA	-	-	-
AOC 5	Lucas Avenue Oil Tanks		NFA	-	-
AOC 5A	- LAP West Oil Tanks	RFI	Phase II RFI	NFA	-
AOC 5A	- LAP East Oil Tanks	RFI	Phase II RFI	NFA	-
AOC 6	Former Aboveground Fuel Oil Tank	RFI	NFA	-	-
AOC 7	Scrap Steel Storage Areas				
AOC 7A	- HAP	RFI	NFA	-	-
AOC 7B	- BFS east	RFI	Phase II RFI	NFA	-
AOC 7C	- BFS west	RFI	NFA	-	-
AOC 8	Former Coal Storage Area	RFI	NFA	-	-
AOC 9	Unnamed Tributary to Crooked Brook	RFI	Phase II RFI	NFA	-
AOC 10 <sup>5</sup>	Oiled Roads	NFA	-	-	-
AOC 11	Former Coal Gasificaiton Plant	RFI	NFA	-	-
<b>Pickle Facility Areas</b>					
Pickle Facility Area A	Former LAP West Pickling Facility	RFI	ICM	-	CMS
SWMU 1 <sup>14</sup>	Former LAP West Pickling Facility				
SWMU 6	Former Barium Chloride Bath				
SWMU 7B	Continuous Lead Coating				
SWMU 7C	Batch Lead Coating				
SWMU 7E <sup>15</sup>	Non-Eletrolytic Copper Coating				
SWMU 8 <sup>5</sup>	Former LAP West Neutralization Plant				
Pickle Facility Area B	Former BRP Pickling Facility	RFI	Phase II RFI <sup>6</sup>	CMS	-
SWMU 2 <sup>16</sup>	Former BRP Pickle Facility				
Pickle Facility Area C	BFS Pickling Facility	RFI	ICM	-	CMS
SWMU 3	BFS Pickle Facility				

TABLE 1-3

RCRA CORRECTIVE ACTION PROGRAM SUMMARY

Phase II RFI Health and Safety Plan  
Former AL Tech Specialty Steel Corporation Facility  
Dunkirk, New York

Unit No. <sup>2</sup>	Unit Description <sup>3</sup>	Regulatory Status <sup>1</sup>			
		Current Status		Anticipated Status	
		Order	Phase I RFI	Phase II RFI	ICM
<b>Pickle Facility Area D</b>	Former LAP East Pickling Facility	RFI	Phase II RFI	ICM	CMS
SWMU 4	Former LAP East Pickle Facility				
SWMU 7A	Continuous Lead Coating				
SWMU 7D	Copper Coating				
<b>Other Areas</b>					
<b>Other</b>	Waste Management Area <sup>7</sup>	RFI	Phase II RFI	CMS	-
<b>Other</b>	Site Soils <sup>17</sup>	RFI	Phase II RFI	CMS	-
<b>Other</b>	RFI-08 <sup>18</sup>	RFI	Phase II RFI/ICM	NFA	CMS

Notes:

- "Current Status" indicates those actions required under the Order and as identified based on the findings of the Phase I RFI.  
"Anticipated Status" indicates the anticipated action following completion of the Phase II RFI or ICM.  
"RFI" indicates the area to be addressed through implementation of the RFI (Phase I)  
"NFA" indicates no further action  
"ICM" indicates the area is to be (or is anticipated to be) addressed through implementation of an ICM  
"CM" indicates that a corrective measure is anticipated  
"CMS" indicates that the area will be (or is anticipated to be) evaluated within the Corrective Measures Study.
- Unit numbers are as listed in the Order, not necessarily as defined in the RCRA Facility Assessment (RFA); SWMU = solid waste management unit; AOC = area of concern.
- TCA = 1,1,1-Trichloroethane; LAP = Lucas Avenue Plant; BRP = Brigham Road Plant; BFS = Bar Finishing & Storage; HAP = Howard Avenue Plant.
- This SWMU has been incorporated into the Pickle Facility Area; refer to the status of the four Pickle Facility Areas noted below.
- Appendix B, Section C, of the Order requires no further action for these SWMUs and AOCs.
- Investigation during the Phase II RFI is only necessary to address data gaps from the Phase I RFI that resulted from inaccurate location of monitoring wells or soil samples, not due to the presence of constituents of concern.
- In accordance with the NYSDEC request (NYSDEC 2000), SWMUs 13C, 17, and 22, will be treated as one unit in the future. This unit was referred to as Pickle Facility Area E in the Phase I RFI; at the request of NYSDEC it will subsequently be referred to as the Waste Management Area. (Refer to information presented below, under "Other Areas").
- The Order required the investigation of this area as part of the RFI and closure of the impoundment (Appendix B, Prioritization Schedule, Tier II).
- At present, it is not believed that the source of chlorinated volatile organic compounds at concentrations above the potentially applicable criteria (detected in groundwater samples collected from WP-4, RFI-15, and RFI-16) is Willowbrook Pond. The SWMU has been used as a reference point for the general area of interest.
- A conceptual plan for closure of the impoundment was previously developed. It is likely that RealCo will wish to re-evaluate the existing plan as part of the CMS.
- The existing process sewers are the responsibility of Empire Steel Corporation. RealCo has no further responsibility. No further action is believed to be warranted under the RCRA Corrective Action Program.
- Following submittal of the Phase I RFI Report, additional cleaning and wipe tests were performed in these areas. The results of the wipe tests completed in late 1998 indicated that additional cleaning and testing was necessary for Transformer T6. Empire Steel Corporation is now responsible for this transformer, RealCo has no further responsibility.
- No further investigation of the pits located in areas owned by RealCo is necessary. Process pits located in areas owned by Empire Steel Corporation are its responsibility. RealCo or the NYSDEC can only request that Empire address these pits as necessary.
- The Order requires both the investigation of this area as part of the RFI and demolition of the Former LAP West Pickling Facility (Appendix C, Prioritization Schedule, Tier II).
- During the Phase I RFI, it was determined that the non-electrolytic copper coating system was never constructed.
- The Order requires both the investigation of this area as part of the RFI and closure of the waste acid pit (Appendix B, Prioritization Schedule, Tier II).
- Surface and subsurface soil samples were collected throughout the facility during the Phase I RFI, including general sample locations. No further investigation is warranted until such time as the site-specific cleanup criteria are established for metals and PAHs.
- Surface soil conditions at RFI-08 will be addressed through the ICM. Groundwater quality at RFI-08 will be re-evaluated as part of the Phase II RFI.

**TABLE 3-1**

**CONSTITUENTS OF POTENTIAL CONCERN & OBSERVED  
CONCENTRATIONS BY MEDIA**

**Phase II RFI Health and Safety Plan  
Former AL Tech Specialty Steel Corporation Facility  
Dunkirk, New York**

<b>Parameter</b>	<b>Groundwater (mg/L)</b>	<b>Subsurface Soil (mg/kg)</b>
Barium	0.009-0.59	32-490
Chromium (Total)	ND-170	14-25,000
Hexavalent Chromium	ND-54.5	ND-1900
Cyanide	ND-0.14	ND-7.1
Lead	ND-0.02	9-24000
PCBs	ND	ND

Notes:

1. Concentration ranges based on Phase I RCRA Facility Investigation (1998), and Phase II & III LAP West ICM Investigation (2000), both prepared by Environmental Strategies Corporation.
2. ND=Non detect

**TABLE 3-2**

**TOXICITY AND EXPOSURE DATA FOR CONSTITUENTS  
OF POTENTIAL CONCERN**

**Phase II RFI Health and Safety Plan  
Former AL Tech Specialty Steel Corporation Facility  
Dunkirk, New York**

Constituents of Potential Concern (mg/m <sup>3</sup> )	Inhalation Hazard		IDLH
	PEL	TLV	
Barium	0.5	0.5	50
Chromium (trivalent)	0.5	0.5	25
Chromium (hexavalent)	NA	0.01	NA
Cyanide	5.0	NA	25
Lead	0.05	0.05	100

Notes:

1. PEL = Permissible Exposure Limit, established by OSHA, equals the maximum exposure concentration allowable for 8 hours per day @ 40 hours per week.
2. TLV = Threshold Limit Value, established by ACGIH, equals the maximum exposure concentration allowable for 8 hours per day @ 40 hours per week.
3. IDLH = Immediately Dangerous to Life or Health.
4. NA = Not Applicable, no value has been established.

TABLE 3-3

**POTENTIAL ROUTES OF EXPOSURE TO CONSTITUENTS  
OF POTENTIAL CONCERN**

**Phase II RFI Health and Safety Plan  
Former AL Tech Specialty Steel Corporation Facility  
Dunkirk, New York**

Activity	Inhalation of Vapors or Dust	Direct Contact with Groundwater	Direct Contact with Surface Water	Direct Contact with Tributary Sediment
Soil Boring and Well Installation w/ Drill Rig or Geoprobe	X	X		
Surface Soil Sampling	X			
Monitoring Well Development & Groundwater Sampling		X		
Water Level Monitoring		X		
Tributary Sediment/Surface Water Sampling			X	X
Wipe Sampling	X			
Test Pit Program	X	X		



TABLE 7-1

**REQUIRED PERSONAL PROTECTIVE EQUIPMENT (PPE) LEVELS PER TASK**

Phase II RFI Health and Safety Plan  
Former AL Tech Specialty Steel Corporation Facility  
Dunkirk, New York

Activity	Respiratory Protection <sup>1</sup>	Clothing	Gloves	Boots	Other Required PPD/ Modifications
Soil Boring and Well Installation w/ Drill Rig or Geoprobe	Level D; upgrade to Level C as necessary	Tyvek	L/N	Steel-toe safety shoe	Hardhat, Safety Glasses w/ sideshields
Surface Soil Sampling	Level D; upgrade to Level C as necessary	Tyvek	L/N	Steel-toe safety shoe	Hardhat, Safety Glasses w/ sideshields
Monitoring Well Development & Groundwater Sampling	Level D; upgrade to Level C as necessary	Tyvek	L/N	Steel-toe safety shoe	Hardhat, Safety Glasses w/ sideshields
Water Level Monitoring	Level D; upgrade to Level C as necessary	Tyvek	L/N	Steel-toe safety shoe	Hardhat, Safety Glasses w/ sideshields
Tributary Sediment/Surface Water Sampling	Level D; upgrade to Level C as necessary	Tyvek	L/N	Steel-toe safety shoe	Hardhat, Safety Glasses w/ sideshields
Wipe Sampling	Level D; upgrade to Level C as necessary	Tyvek	L/N	Steel-toe safety shoe	Hardhat, Safety Glasses w/ sideshields
Test Pit Program	Level D; upgrade to Level C as necessary	Tyvek	L/N	Steel-toe safety shoe	Hardhat, Safety Glasses w/ sideshields

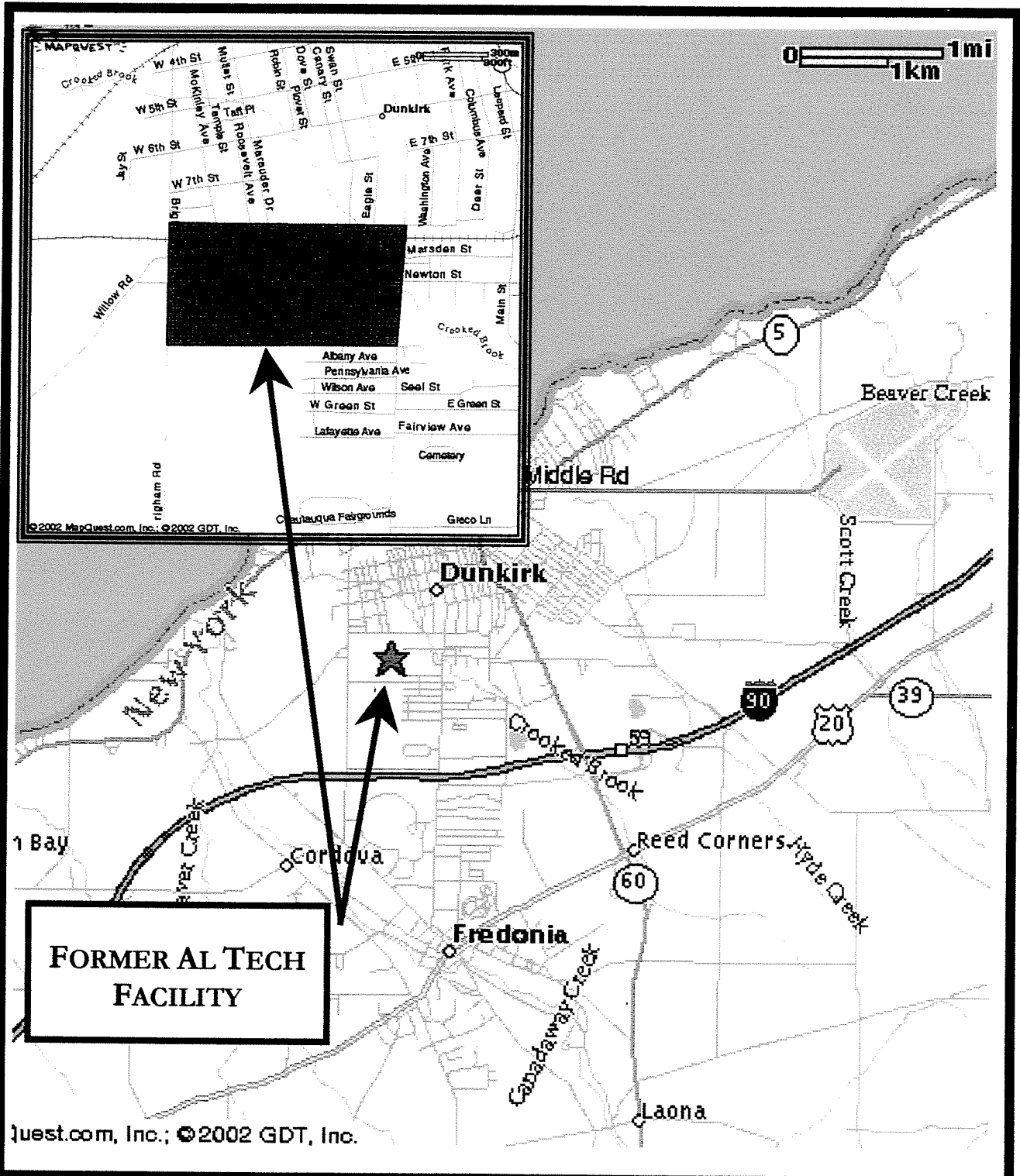
Notes:

- Respiratory equipment shall conform to guidelines presented in Section 8 of the HASP. The Level C requirement is an air-purifying respirator equipped with organic compound/acid gas/dust cartridge.
- Dust masks shall be donned as directed by the SS10 whenever potentially contaminated airborne particulates (i.e., dust) are present in significant amounts in the breathing zone. Goggles may be substituted for safety glasses w/ side shields whenever contact with contaminated liquids is anticipated.
- T = Tyvek; L = Latex; N = Nitrile; S = Saranex; L/N = Latex inner, Nitrile outer.



## FIGURES

FIGURE 1-1

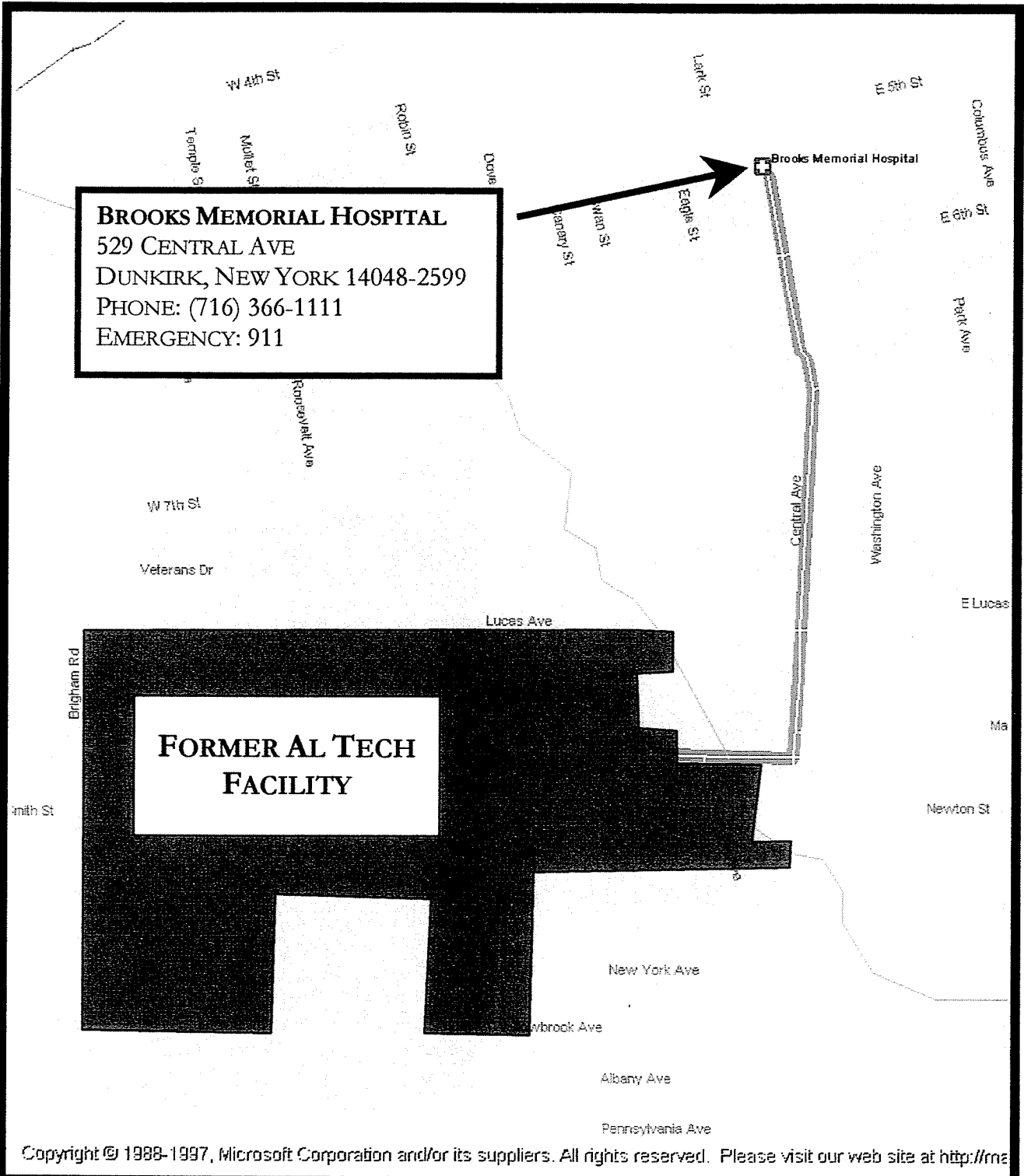


## SITE VICINITY AND LOCATION MAP

### PHASE II RCRA FACILITY INVESTIGATION FORMER AL TECH FACILITY

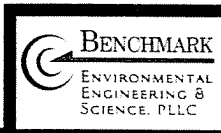


**FIGURE B-1**



**HOSPITAL ROUTE MAP**

**PHASE II RCRA FACILITY INVESTIGATION  
FORMER AL TECH FACILITY**



**APPENDIX A**  
**HOT WORK PERMIT FORM**

<b>PART 1 - INFORMATION</b>	
Issue Date:	
Date Work to be Performed: Start:	Finish (permit terminated):
Performed By:	
Work Area:	
Object to be Worked On:	
<b>PART 2 - APPROVAL</b>	
(for 1, 2 or 3: mark Yes, No or NA)*	
Will working be on or in:	Finish (permit terminated):
1. Metal partition, wall, ceiling covered by combustible material?	yes no
2. Pipes, in contact with combustible material?	yes no
3. Explosive area?	yes no
* = If any of these conditions exist (marked "yes"), a permit will not be issued without being reviewed and approved by Thomas H. Forbes (Corporate Health and Safety Director). Required Signature below.	
<b>PART 3 - REQUIRED CONDITIONS**</b>	
(Check all conditions that must be met)	
PROTECTIVE ACTION	PROTECTIVE EQUIPMENT
Specific Risk Assessment Required	Goggles/visor/welding screen
Fire or spark barrier	Apron/fireproof clothing
Cover hot surfaces	Welding gloves/gauntlets/other:
Move movable fire hazards, specifically	Wellintons/Knee pads
Erect screen on barrier	Ear protection: Ear muffs/Ear plugs
Restrict Access	B.A.: SCBA/Long Breather
Wet the ground	Respirator: Type:
Ensure adequate ventilation	Cartridge:
Provide adequate supports	Local Exhaust Ventilation
Cover exposed drain/floor or wall cracks	Extinguisher/Fire blanket
Fire watch (must remain on duty during duration of permit)	Personal flammable gas monitor
Issue additional permit(s):	
Other precautions:	
** Permit will not be issued until these conditions are met.	
<b>SIGNATURES</b>	
Originating Employee:	Date:
Project Manager:	Date:
Part 2 Approval:	Date:

**APPENDIX B**

**EMERGENCY RESPONSE PLAN**

## APPENDIX B

### EMERGENCY RESPONSE PLAN

#### Personnel Exposure

- Skin contact: Use copious amounts of soap and water. Wash/rinse affected area for at least 15 minutes. Decontaminate and provide medical attention. Eyewash stations will be provided on site. If necessary, transport to Brooks Memorial Hospital.
- Inhalation: Move to fresh air and, if necessary, transport to Brooks Memorial Hospital.
- Ingestion: Decontaminate and transport to Brooks Memorial Hospital.

#### Personal Injury

Minor first-aid will be applied on-site as deemed necessary. In the event of a life threatening injury, the individual should be transported to Brooks Memorial Hospital via ambulance. The construction contractor's Site Health and Safety Officer will supply available chemical specific information to appropriate medical personnel as requested.

First aid kits will conform to Red Cross and other applicable good health standards, and shall consist of a weatherproof container with individually sealed packages for each type of item. First aid kits will be fully equipped before being sent out on each job and will be checked weekly by the Site Health and Safety Officer to ensure that the expended items are replaced.

#### Communications

Internal emergency communication systems are used to alert workers to danger, convey safety information, and maintain site control. Any effective system can be employed. Two-way radio headsets or field telephones are often used when work teams are far from the command post. Hand signals and air-horn blasts are also

## APPENDIX B

### EMERGENCY RESPONSE PLAN

commonly used. Every system must have a backup. It shall be the responsibility of the construction contractor's Site Health and Safety Officer to ensure that an adequate method of internal communication is understood by all personnel entering the site. Unless all personnel are otherwise informed, the following signals shall be used.

- 1) Emergency signals by portable air horn, siren, or whistle: two short blasts, personal injury; continuous blast, emergency requiring site excavation.
- 2) Visual signals: hand gripping throat, out of air/cannot breathe; hands on top of head, need assistance; thumbs up, affirmative/ everything is OK; thumbs down, no/negative; grip partner's wrist or waist, leave area immediately.

#### Evacuation

In the event that an area must be evacuated due to an emergency, such as a chemical spill or a fire, workers shall exit upwind, if possible. Since work conditions and work zones within the site may be changing on daily basis, it shall be the responsibility of the construction contractor's Site Health and Safety Officer to review evacuation routes and procedures as necessary and to inform all site workers of any changes.

#### Adverse Weather Conditions

In the event of adverse weather conditions, the Site Health and Safety Officer in conjunction with the construction contractor's Health and Safety Officer will determine if engineering operations can continue without sacrificing the health and safety of site personnel. Some of the items to be considered prior to determining if work should continue are:



## APPENDIX B

### EMERGENCY RESPONSE PLAN

- Potential for heat/cold stress;
- Inclement weather—related working conditions;
- Limited visibility; and
- Potential for electrical storms.

#### Emergency Telephone Numbers

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE PROJECT &  
CORPORATE HEALTH AND SAFETY MANAGER: **Thomas Forbes**

(716)856-0599 (Work)  
(716) 685-0062 (Home)

BENCHMARK SITE HEALTH AND SAFETY OFFICER: **Bryan Hann**

(716) 870-1165 (Mobile)  
(716) 856-0599 (Work)  
(716) 823-8005 (Home)

BROOKS MEMORIAL HOSPITAL	(716) 366-1111
FIRE	911
AMBULANCE	911
DUNKIRK POLICE	911
STATE EMERGENCY RESPONSE HOTLINE	(800) 457-7362
NATIONAL RESPONSE HOTLINE	(800) 424-8802

NEW YORK STATE DEPARTMENT OF HEALTH:

Mr. David Napier, P.E.  
South FitzHugh Street  
Rochester, New York 14692

Mr. Michael Kadlec  
2 University Place  
Albany, New York 12203

**The site location is:**

RealCo Lucas Avenue Plant  
Lucas Avenue  
Dunkirk, New York 14048

## APPENDIX B

### EMERGENCY RESPONSE PLAN

#### Directions to Hospital

The following directions describe the best route to Brooks Memorial Hospital and Figure B-1 identifies the hospital route:

*From the Site turn right onto Lucas Avenue, head east to Central Avenue and turn left. Continue north on Central Avenue, past East 6<sup>th</sup> St. Brooks Memorial Hospital will be on the left side of Central Avenue before East 5<sup>th</sup> St. Follow signs to ER.*

#### Records and Reporting

It shall be the responsibility of each employer to establish and assure adequate records of all:

- Occupational injuries and illnesses;
- Accident investigations;
- Reports to insurance carrier or State compensation agencies;
- Reports required by client;
- Records and reports required by local, state, federal and/or international agencies;
- Property or equipment damage;
- Third party injury or damage claims;
- Environmental testing logs;
- Explosive and hazardous substances inventories and records;
- Records of inspections and citations;
- Related correspondence; and
- Safety training.