WORK PLAN
INTERIM REMEDIAL MEASURES COMPLETION
VOLUME I - TEXT

Pfohl Brothers Landfill
Cheektowaga, New York

WORK PLAN
INTERIM REMEDIAL MEASURES COMPLETION
VOLUME I - TEXT

Pfohl Brothers Landfill
Cheektowaga, New York

JANUARY 1994

REF. NO. 1979 (6)
This report printed on recycled paper

CONESTOGA-ROVERS & ASSOCIATES

TABLE OF CONTENTS

TABLE OF CONTENTS

Page

LIST OF FIGURES

LIST OF PLANS

LIST OF TABLES

LIST OF APPENDICES

1.0 INTRODUCTION

The Pfohl Brothers Landfill (NYSDEC Site No. 9-15-043) (hereinafter "the Site") is located in Cheektowaga, New York in a commercial/residential area northeast of the Buffalo International Airport. The location of the Site is shown in Figure 1.1. The Site is approximately 120 acres in area and is bounded to the east by Transit Road, to the west by New York State Electric and Gas (NYSEG) utility lines, to the north by land adjacent to the New York State (NYS) Thruway (Route 90), and to the south by Pfohl Road. The Site accepted municipal and industrial waste from surrounding townships and companies from 1932 to 1971 and is now inactive. Some of the industrial waste dumped on Site has been identified as waste paint and thinners, pine tar pitch, oils and phenol tar.

In accordance with its Record of Decision (ROD) issued in February, 1992, the New York State Department of Environmental Conservation (NYSDEC) initiated Interim Remedial Measures (IRM) at the Site in the summer of 1992. The NYSDEC completed the IRM to the extent of its current contract and discontinued further IRM activities due to the Pfohl Brothers Site Potentially Responsible Parties (PRPs) offer to complete the IRM. Conestoga-Rovers & Associates (CRA) has been retained by the PRPs to prepare this Work Plan for possible completion of the IRM at the Site by the PRPs (hereinafter the "IRM Completion"). Any modifications or deviations to the Work Plan, once approved by the NYSDEC, will be submitted to the NYSDEC for review and approval prior to implementation.

The landfill has been divided into three (3) areas designated as Areas A, B and C (see Figure 1.2). Work to be performed for the IRM Completion will be performed in Area B, situated between Transit Road and Aero Drive, and Area C, situated south of Aero Drive and west of Transit Road.

2.0 SCOPE OF WORK

The objectives of the IRM Completion are to investigate suspected drum/tar areas, remove, appropriately store and dispose of surface and sub-surface drums, drum contents, spilled contents from those drums, if any, (hereinafter "spilled drums contents"), materials immediately contiguous to the drums if they have been visibly impacted by the spilled drum contents (hereinafter "soils visibly impacted"), and surface radioactive materials in Areas B and C. The ROD states that no drums were observed in Area A. Therefore, Area A and the areas where the NYSDEC have completed the IRM will not be part of this IRM. In addition, tar-like materials from Area C and any other areas identified during investigative activities will be excavated and disposed off-Site. Within the 100-year floodplain, surface drums, drum contents, spilled drum contents, visibly impacted soils and surface radioactive materials will be removed and disposed off-Site. Drum contents, spilled drum contents, visibly impacted soils and tar-like materials will hereinafter collectively be referred to as "Waste". Waste materials with radioactive readings at levels exceeding three times the maximum background levels will hereinafter be referred to as "Radioactive Materials". Based on available Site data, three times the background level is approximately 28 microroentgens.

The ROD states that the "IRMs are intended to remediate the "hot spots" which have been discovered at the Site. The "hot spots" generally consist of drums, drum remnants and identifiable concentrations of phenolic tars." Consequently, it is not the intent of this IRM Completion to search for isolated drums but rather for hot spots of drums.

This Work Plan describes the activities and the procedures which will be used to achieve the above objectives.

The work required for the IRM Completion may include:

- Mobilization and Site preparation, including:
  - Construction of the support zone
  - Construction of the decontamination pads

- Construction of the temporary waste storage pads
- Installation of the truck scale
- Construction of the access roads
- Installation of the meteorological station
- Installation of the storm water management controls.

- Consolidation and solidification, if required, of currently staged drums and visibly impacted soils for off-Site disposal.

- Crushing or shredding and on-Site placement of RCRA empty drums.

- Test trenching along the existing berm between test pit TP-19 and TP-23 (completed) and other areas as per the PRPs' on-Site representative's (Engineer's) direction.

- Excavation, removal, staging, and segregation of drums and visibly impacted soil around TP-19 in the Area C marsh (completed except for removal of visibly impacted soil from a small area in southwest corner of the marsh).

- Investigation (completed) and excavation of tars in Area C and subsequent off-Site disposal.

- Excavation, consolidation and solidification, if required, of remaining drums and visibly impacted soil in Areas B and C for off-Site disposal.

- Retrieval, sampling, staging and characterization of drums found within the 100-year flood plain.

- Sampling and analysis of drums and visibly impacted soil.

- Transportation and disposal of Waste and Radioactive Material to approved off-Site disposal facility(ies).

- Removal and disposal of drums from the bottom of Aero Creek (completed).

- Excavation and off-Site disposal of the white granular radioactive material on the ground surface within the 100-year floodplain.

- Perform air monitoring during all hazardous Site activities.

General areas, identified to date, at which the above activities are to be performed are shown on Plan 1. A Site map, provided to the PRP's by the NYSDEC, was used to refine the scope of IRM Completion activities. It is possible that investigative activities, removal and disposal of Waste may be required on portions of the Site other than those shown on Plan 1.

Specific areas within the identified general areas at which IRM Completion activities will be performed will be selected based upon:

i) the presence of drums/tar at the ground surface; or
ii) other information (e.g. aerial photographs) which indicate the potential presence of subsurface drums/tar.

Three representative samples of solid/sludge drum contents from Area B and preliminary waste profiles have been submitted to each of two potential receiving TSDFs along with analytical results from the 1990 RI. Conditional Waste acceptance approval has been received. Based on this characterization data and NYSDEC IRM analytical results, it is believed that consolidation of the waste can be performed based on visual observations which include the color, texture and physical state and compatibility testing. Consolidation and solidification, if required, of Waste which is to be excavated will be performed at a central drum/soil handling area.

Additional samples of Waste and of the tar-like materials from Area C have been collected and will be analyzed to determine if these materials conform with the Area B waste profile. The analytical results show that the wastes from Area B are similar to the waste from Area C. Based on the analytical results to date, it is anticipated that three waste profiles will be required. These are: i) RCRA non-hazardous; ii) RCRA Hazardous; and

iii) TSCA. If Waste is encountered which does not conform to one of the three the waste profiles, these wastes will be appropriately staged and characterized prior to off-Site disposal.

The locations of the areas to be addressed in this Work Plan are shown on Figure 2.1 and Plan 1. An expanded description of the work items included in each of the above activities is presented in the following sections of this report. In addition to detailing the IRM Completion activities, this Work Plan also includes the Sampling and Analysis Plan (Section 5.0). The Health and Safety Plan (HSP) is attached as Appendix A. A schedule for the IRM Completion activities is also included.

In the event that significant unexpected conditions, are discovered during performance of the above activities, the IRM Completion activities will be reevaluated by the PRPs in consultation with the NYSDEC. No modifications, including modifications to methods and schedule, will be made without the approval of the NYSDEC.

3.0 TECHNICAL APPROACH

3.1 MOBILIZATION AND SITE PREPARATION

Initially the Site management team, equipment operators, and field personnel with the necessary equipment and supplies will mobilize to the Site to prepare the Site for the IRM Completion activities. The following discussion describes the proposed Site layout and performance of the work.

3.1.1 Site Access Agreements and Hazardous Waste Generator Number

Access agreements with identified property owners on and adjacent to the Site will be required. A plan and listing of reported property owners from whom access may be required are presented on Plan 2 and Table 3.1, respectively. The access agreements will be required for the purpose of performing the IRM Completion activities. If such access agreements can not be obtained within a reasonable time period, NYSDEC shall use its authority to secure access to the Site for performance of the activities.

Prior to shipment of wastes off Site, a hazardous waste generator number will be obtained. It is noted that the NYSDEC has obtained U. S. EPA generator number NYD986875979 for this Site.

3.1.2 Clearing and Grubbing

All areas necessary to construct access roads, decontamination pads, staging areas, support zone, ditches, dikes, utilities and other construction facilities, and for the excavation and retrieval of drums, visibly impacted soils and tars will be cleared and grubbed.

Clearing is defined as the removal of trees, brush, down timber, rotten wood, rubbish, and other vegetation, concrete, pipe and objectionable material from areas within five feet of the limits of the completed work.

Grubbing is defined as the removal of stumps, roots, brush, organic materials and debris to a depth of 0.5 feet below the planned subgrade or slope surface, or as directed by the Engineer.

Those areas necessary to construct the support area, access roads, decontamination pads, truck scale, and staging areas will be cleared and grubbed initially. The removal of trees and brush will be performed with chain saws and brush hogs, respectively. All cleared material will be sent through a chipper and spread across unused portions of the Site. The maximum thickness of the spread material will be one foot. Grubbing will only take place in areas which require excavation for drum removal, visibly impacted soil removal, or construction.

Additional clearing and grubbing will be performed as necessary during removal activities.

3.1.3 Construct Support Zone and Access Roads

The support zone area and access roads, as required, will be cleared and graded with a dozer. A layer of geotextile fabric will be placed on the cleared ground. A six-inch base of 1 3/4-inch stone followed by a 6-inch layer of 3/4-inch stone will be placed and compacted with the weight of the machinery.

For Area B, it is anticipated that access roads leading to the support zone, staging pads (soil and drums), and the large drum cluster area may be required. In Area C, access roads along the perimeter of the tar burial area and for test trenching may be required. Figure 3.1 is a map of the proposed Site layout.

3.1.4 Staging of Support Trailers

The following trailers will be mobilized to the Site and staged, blocked and secured for the project duration:

- Engineer/NYSDEC Office Trailer
- Contractor's Office Trailer
- Security and Communication Trailer
- Personnel Decontamination/Shower Trailer
- First Aid/Break Trailer

3.1.5 Utilities

All utilities necessary for the proper execution of the IRM Completion will be provided. This includes furnishing, operating and maintaining the following utilities and their removal on completion of the project:

- Electricity
- Telephone service
- Potable water supply
- Sanitary facilities
- Non potable water supply

Electricity will be installed and connected to all on-Site trailers, the two (2) decontamination pads and the truck scale. Electricity and lighting will be in accordance with Federal, State and local regulations as well as local utility company requirements. All work shall be in accordance with the National Electric Code.

All temporary electric service for the project Site will be provided where required. Electric service installation will be coordinated with the local utility company and the Contractor will be responsible for installation, service and shut-off charges.

Site electric service will originate at a source adjacent to the project Site; on-Site generators will not be used as a primary source of electric supply. If on-Site generators are used to supplement or for emergency backup, they will be designed to eliminate any explosive hazard.

Telephone service will be provided to the Engineer/NYSDEC office trailer, Contractor's office trailer, and to the security trailer. Arrangements will be made to provide separate telephone and facsimile machine lines. Separate telephone lines will be provided, one for use by the Engineer, and one for use by the NYSDEC. Separate facsimile lines shall be provided for the use of the Engineer and the NYSDEC. The Contractor will have three phone lines and one facsimile line to the Contractor's trailer and one phone line will be installed at the security trailer.

Potable water will be obtained by connection to the watermain on Pfohl Road or by the use of water tankers. Water for dust control and the decontamination pads will be obtained from this source also. Temporary covered pools will be utilized to store water for dust control and decontamination activities.

Portable sanitary facilities will be utilized during the duration of the project. They will be placed in the support zone and other strategic clean areas around the Site.

3.1.6 Decontamination Pads

Separate concrete decontamination pads have been constructed in Area B and in Area C adjacent to Aero Drive (Figure 3.1). Each decon pad has been equipped with a drain system and holding tank.

The decontamination pads have been constructed to dimensions adequate to contain wash water and debris from the largest sized vehicles expected to be utilized in the IRM. Based upon the condition of the

decontamination pads upon commencement of the IRM Completion by the PRPs, the following may be required:

- Splash walls to contain over spray.
- An above ground holding tank with secondary containment to temporarily store spent wash water.
- A 3,000 psi pressure cleaner to clean the wheels and undercarriage of each truck or piece of equipment.

The decontamination pad will be cleaned after daily use. No visible contamination shall be left behind. The decontamination pad will remain on Site following completion of the project.

Washwater from the equipment decontamination pad will drain into the sump adjacent to the concrete wash pad. The water shall be pumped from the sump through the on-Site treatment system, consisting of a sand filter followed by two 55-gallon canisters of activated carbon connected in series, prior to discharge to a temporary holding tank and disposed at the Contractor's expense in accordance with Federal and State regulations.

Washwater from the personnel decontamination facility, floor drains, and laundry (to be provided on Site) will be piped to a temporary holding tank and disposed of at the Contractor's expense and in accordance with Federal and State regulations.

3.1.7 Weigh Station

A calibrated truck scale will be provided with ticket printer and digital weight indicator for weighing trucks prior to and after each load is loaded onto the truck. The scale will be installed according to all specifications and certified monthly by a licensed firm. The facility will meet all applicable requirements.

Tl e scale will be placed in a location adjacent to the support zone and sha'l have sufficient capacity to measure all quantities for payment (see Figure 3.1).

3.1.8 Meteorological Station

A portable meteorological station will be supplied and maintained for the continuous observation and recording of wind speed, wind direction, ambient air temperature, atmospheric pressure, atmospheric humidity, incoming radiation, and atmospheric precipitation. The equipment and its placement shall be in conformance with USEPA Ambient Monitoring guidelines for Prevention of Significant Deterioration (PSD) standards for horizontal wind speed and direction as specified on PSD regulations promulgated by USEPA under the Clean Air Act Amendments of 1977. The station shall also include a continuous readout temperature gauge and a rainfall gauge. The station shall also be capable of continuously indicating and recording relative humidity and barometric pressure.

The meteorological station will be positioned by the Safety Officer and provide representative data on the overall atmospheric diffusion conditions at the Site. Visual wind direction indicators will be established in a central location at each active work area.

The calibration, audit, data reduction and document control of meteorological equipment and meteorological data shall be performed by the Contractor. Hourly averages of all meteorological parameters during the entire air monitoring program will be tabulated, verified and archived.

3.1.9 Staging Areas

Two (2) separate staging areas have been constructed in each of Areas B and C. Each Area has a staging area for drums and one for visibly impacted soil. All material placed on the staging pads has been

covered and secured with a 10-mil thick liner. See Figure 3.1 for the locations of the staging areas.

An additional work area for drum shredding/waste consolidation will be constructed, one in each of Areas B and C.

3.1.10 Site Security

The access to the Site will be controlled by the existing chain-link fence. The fence gates will be kept locked at all times when the Site is unattended. During performance of IRM field activities, 24-hour security will be provided. A Site security plan will be submitted by the Contractor.

During implementation of Waste handling activities, security shall be provided by the Contractor. The Contractor's duties shall include:

i) Limit vehicular access to the Site to authorized vehicles and personnel only.

ii) Provide initial screening of all Site personnel and visitors. A list of authorized personnel and the name of their employer will be available at the Site.

iii) Maintain a security log in which documentation is provided of all Site personnel, visitors and deliveries and any security incidents. This log will include the date, name, address, company, time in and time out for each employee and visitor. If unauthorized personnel are observed on Site and refuse to vacate the premises, appropriate law enforcement officials will be contacted for appropriate legal actions.

iv) Maintain a visitor log at the Site. Visitors will not be allowed to enter without the knowledge of the excavation contractor and approval of the Engineer. All visitors will be required to complete training in

accordance with the HSP prior to gaining access to the secured areas of the Site (e.g. excavation, staging, decon area).

3.1.11 Crushed/Shredded Drum Placement Area

Area B will be investigated for a suitable location for the placement of crushed/shredded RCRA empty drum carcasses (≤1-inch of solidified residue). Approximately 1619 empty drums were stockpiled by the NYSDEC. Figure 3.1 shows the proposed location for the crushed drum placement area. The final location of the crushed drum placement area will be selected with the concurrence of the NYSDEC. No preparation of the crushed drum placement area is expected to be required, other than limited clearing, grubbing and access road construction to allow access to the area. After completion of crushed/shredded drum placement, the area will be covered with 12 inches of either on-Site or imported fill. Since the crushed drum placement area is included in the area designated for remedial design/remedial action (RD/RA) activities, no further restoration activities (e.g. topsoil and seed) are required for the crushed drum placement area.

3.1.12 Relocation

An evaluation of temporary relocation of area residents has been performed and is addressed in Section 3.5.1.

3.1.13 Site Communications

Site communications will be implemented using walkie-talkie radios or equivalent communication device. The NYSDEC Field Representative will be supplied with the appropriate communication device.

3.2 INITIAL SITE INSPECTION

An initial Site inspection was performed by the NYSDEC prior to initiation of IRM excavation and drum removal activities in 1992. During the inspection, the following were performed:

- A Site map was used to indicate all known drum cluster locations on Site.
- Major surface drums areas were located and marked in the field with stakes and survey tape.
- The Site was surveyed and all surface drums discovered within the 100-year floodplain were staked for future removal activities. These drums were noted on the Site map for tracking purposes.
- Initial on-Site and perimeter air monitoring and radiation survey were performed.

A Site map was provided to the PRPs by the NYSDEC and used to refine the scope of IRM Completion activities.

3.3 HANDLING OF EXISTING STAGED DRUMS AND VISIBLY IMPACTED SOIL

There are currently approximately 2,892 overpack drums staged on Site. Based on the currently available characterization data and waste acceptance approval, it is believed that the drum contents and visibly impacted soils can be consolidated based on visual observations and the existing NYSDEC compatibility testing results. The drums will either be shipped as is to an off-Site disposal facility or the drum contents will be consolidated on Site (see Section 3.5.7) into roll-offs or other appropriate containers for off-Site disposal. Based on the NYSDEC TCLP analytical results, the following twelve drums (170, 184, 187, 191, 195, 200, 209, 220, 223, 225, 1737 and 1792) will be removed and solidified prior to off-Site disposal. Prior to solidification, the contents of these drums will be sampled and analyzed for the Halogenated Organic Compounds (HOCs) (Appendix III).

If the drum contents are consolidated, the original drums, which are RCRA empty when emptied, will be crushed/shredded at the drum staging area and either stored in a separate roll-off for future placement in the on-Site crushed drum placement area or placed directly onto the placement area. If it is found to be not reasonably possible to empty and segregate a drum from its contents, the drum, together with its contents, will either be shredded and consolidated with other appropriate wastes or placed into a roll-off for off-site disposal intact. The empty overpack drums generated after consolidation will be:

i) reused on Site when required (i.e. drums with liquids);
ii) cleaned and salvaged; or
iii) crushed/shredded and placed in the placement area (RCRA empty drums only).

The overpacked drums whose contents cannot be consolidated will be shipped to the off-Site facilities as overpacks.

The visibly impacted soil currently staged on Site will be characterized based on visual observations and compatibility analyses and will be consolidated with the appropriate consolidated drum contents.

3.4 TEST TRENCHING

Prior to excavation of any additional drums, tars, or soils, backblading/test trenching will be performed to determine the horizontal and vertical extent of the tar materials and the extent of drum presence. Backblading will be performed by a bulldozer to a maximum depth of 1± feet at the locations determined by the Engineer with the concurrence of the NYSDEC Field Representative. Test trenching of the TP-19 ridge area and the tar pit area has been completed by the NYSDEC. Additional trenches may be required as directed by the Engineer. A trackhoe will excavate a 2-foot wide trench at the locations to a depth determined by the Engineer with the concurrence of the NYSDEC Field Representative.

Composite samples of visibly impacted soils and drum contents have been collected from Area C and from the tar pit area to characterize the materials for disposal requirements. Visibly impacted soils encountered during trenching will be placed directly into the appropriate roll-off containers or placed in the soil staging area for use during waste consolidation. Soils not visibly impacted will be staged on 10-mil plastic for use as backfill. Drums encountered during trenching will be handled following the procedures in Section 3.5.1. Since personnel will not be entering trenches, shoring and dewatering of the trenches will not be required.

Upon approval of the Engineer, with NYSDEC Field Representative concurrence, the excavation will be backfilled using excavated fill, Site fill, or imported fill. When the trenches are left open overnight, a clearly identified orange snow fence (safety fence) will be installed around the perimeter of the excavation. The work area will be isolated by berms constructed to direct surface water away from the trenches. The air monitoring program will be implemented as per the requirements in the HSP.

3.5 DRUM REMOVAL OPERATION

The following describes the procedures to remove additional surface and subsurface drums during implementation of the IRM Completion.

3.5.1 Drum Search and Location

During the initial Site inspection performed by the NYSDEC, the NYSDEC marked exposed drums with paint and/or flags for inventory and removal operations. All of the locations were noted on a Site map. Drum excavation activities will take place in these locations. Additional drums to be excavated may be located during backblading/test trenching.

3.5.1.1 Drum Excavation - Areas B and C

Excavations for drum removal will continue until one of the following conditions is observed:

i) if the presence of drums and visibly impacted soils ceases prior to the groundwater table, excavation will be halted; or

ii) if the presence of drums and visibly impacted soils ceases at the groundwater table, excavation will be halted; or

iii) if the presence of drums and visibly impacted soils continues deeper than the groundwater table, the area with such presence will be dewatered, using the procedures outlined in Section 3.5.7, to the extent required to assist in the removal of the observed drums and visibly impacted soils below the initial groundwater table. Thereafter excavation and removal will be halted.

In wetland areas, care will be taken to minimize disturbance of the wetlands and prevent runoff to the wetlands during excavation activities. Surface water control and erosion control measures are described in Section 6.0.

The handling, moving and transporting of drums will be performed with mechanical equipment whenever possible. Drums shall be moved by grappler, non-metallic slings, within a backhoe bucket or front-end loader, or by other means that will minimize damage to the drums and release of contents therefrom. Movement or handling of drums directly by personnel may be required in the event that mechanical means cannot be properly or safely employed due to actual or potential drum breakage or leakage.

Those portions of equipment that contact drums or containers will preferably be constructed of non-ferrous metals. Should steel

equipment be used, contact portions will be coated or lined to preclude spark generation in accordance with 29 CFR § 1910.120(j)(l)(xii). Portable pumps, if used, will be intrinsically safe.

Handling and transport equipment will be equipped with Class ABC fire extinguishers complying with 29 CFR § 1910.157 and with SCBA if deemed necessary by the Engineer.

All equipment used for the handling and transport of drums or containers will be regularly maintained. In particular, the ignition, manifold and exhaust components will be maintained to prevent backfiring or generation of sparks within the exhaust gases.

Prior to removal from the Site, equipment will be decontaminated within the equipment decontamination facility.

3.5.1.2 Waste Handling Procedures

Overview of Procedures

Excavated Waste will be visually characterized based on color, texture and physical state, screened with an explosimeter, photoionization monitor and radiation survey meter, and tested for compatibility. Based on the above characterization, wastes conforming with one of the waste profiles will be consolidated into the appropriate bulk containers. Consolidation will consist of approximately a 1:1 ratio of drum contents and visibly impacted soils/tar materials. The consolidated wastes will be further handled as described in Section 3.5.7. Waste which does not conform with the waste profile(s) and drummed liquids will be segregated, appropriately staged and characterized for disposal purposes. Visual characterization will be performed in the immediate area of the excavation whenever possible.

Equipment Located ir Immediate Vicinity of Excavation

A containment pan will be located immediately adjacent to the excavation. The pan will be constructed of 1/4-inch carbon steel plate measuring 6 feet by 6 feet with 1-foot deep sides and elevated floor. It will comfortably fit four drums or overpacks (see Figure 3.2). The containment pan will be used to temporarily stage the excavated drums. There the drums will be screened with an explosimeter and with a photoionization monitor for organic vapors, and with a radiation survey meter for radioactivity. The drums will be logged, recording any marking, identification or other information on each drum, approximate volume of contents, condition of drum, visual appearance of contents and physical state. Photographic logging of each drum may be performed by the PRP's. The NYSDEC Field Representative will be given the opportunity to photograph each drum. Drums which are neither open nor leaking will be transported to a central handling area where the drum will be opened to characterize the waste for consolidation.

Polyethylene lined roll-offs, or equivalent, will be staged in the immediate vicinity of the excavation. The roll-offs will be used for the transportation of the visibly impacted soils/tar materials to the soil staging area for use in waste consolidation. Separate roll-offs will be used for each waste stream, and RCRA empty drums. Drums containing less than one inch of solidified residue will be considered RCRA empty.

The Site where the roll-off containers are placed adjacent to the excavation area(s) will be prepared with a granular base, as required, to support the roll-off container and heavy equipment operation. Whenever the roll-off containers are transferred or temporarily staged, the roll-off containers will be equipped with a water-proof cover (plastic sheeting or tarp) to reduce volatilization and protect against precipitation.

Handling of Structurally Sound Drums

If a structurally sound drum or container is open and is identified to contain solids, the drum or container will be carefully removed

from the excavation to the containment pan adjacent to the excavation. If the container is neither open nor leaking, the container will be immediately removed to the containment pan. The drums or containers will be transported to the drum staging area and screened, logged, opened if necessary and characterized for consolidation.

Drums which contain solids and liquids will be handled by first removing the liquid into a new 55-gallon drum. The remaining solid material and the contents of drums which contain solids/sludges only, will be staged and characterized to determine conformance with the TSDF approved waste profiles. Conforming waste will be consolidated into roll-offs or other appropriate containers based on the characterization using approximately a 1:1 ratio of drums and drum contents to visibly impacted soils/tar materials. If the drum contents are not conforming, the drum will be overpacked and staged for subsequent sampling and characterization for disposal. Emptied drums which are RCRA empty will be crushed/shredded and placed into polyethylene-lined roll-offs pending placement onto the crushed drum placement area, or will be placed directly onto the placement area. Drums with solid/sludge contents which are not RCRA empty, and contents thereof, will be shredded and consolidated with the other appropriate consolidated wastes which conform to one of the approved waste profiles.

Drums which contain liquids will be transferred to the appropriate staging pad for sampling and characterization.

Handling of Structurally Unsound Drums

The contents of drums with solid/sludge contents and without structural integrity will be immediately removed to the containment pan. The drum and drum contents will be overpacked prior to transport to the drum staging area if it is not practical to transport the drum and contents to the staging area without overpacking. The drum contents will be characterized for consolidation at the drum staging area.

If an open or leaking container is observed to contain liquids, the liquids will be pumped or bailed into a new 55-gallon drum prior

to removing the open or leaking drum or container from the excavation to the containment pan. Free liquids from leaking drums will be collected using an absorbent material, placed into a new DOT approved 55-gallon drum and staged pending characterization of the liquid samples.

Drums with liquid contents that cannot be moved without rupture, leakage or spillage will either be:

i) placed directly into a DOT approved 85-gallon salvage drum; or
ii) the drum contents will be transferred to a new DOT approved 55-gallon drum using a portable hand pump.

The method employed will be determined with the concurrence of the NYSDEC Field Representative.

Drums which are RCRA empty after liquids removal will be crushed/shredded and consolidated with the other wastes. The contents of drums which are not RCRA empty after liquids removal will be characterized to determine conformance with the TSDF approved waste profiles. Conforming waste will be consolidated into roll-offs. The emptied drum will be crushed/shredded and consolidated with the appropriate consolidated waste. If such characterization is not possible, the drum will be overpacked and staged for subsequent sampling and characterization for disposal.

Empty Drums, Drums Parts and Lids

Excavated RCRA empty drums with or without structural integrity and the capability to contain Waste and drum parts with Waste attached will be transported to the drum staging area for crushing/shredding and consolidation in the roll-off with the other crushed/shredded RCRA empty drums for on-Site placement. Excavated empty drums without the capability to contain Waste, and drum parts and lids will either be consolidated with the crushed/shredded RCRA empty drums or placed back into the excavation from which they were removed.

Odor Control

Odor control measures will consist of:

i) covering of bulk containers with polyethylene and/or tarps; and
ii) covering of open excavations at which odors are present with polyethylene sheeting or soils at the direction of the PRP's Field Representative.

In the event that the foregoing measures are not sufficient to prevent nuisance odor, then the following contingency plan shall be implemented. A "nuisance odor condition" will be deemed to exist at any time the field representatives of the PRPs and NYSDEC jointly determine that objectionable odors originating from the Pfohl Brothers Site are occurring at and are likely to persist for a working day at any of 75, 77, 79, 81, 83, 130, 136, 138, 140, 144 or 232 Pfohl Road properties which are still then occupied by eligible persons. If the PRP and NYSDEC field representatives differ, the DEC Regional Hazardous Waste Engineer shall be called to the Site to make the definitive determination of whether a "nuisance odor condition" exists.

In the event of a nuisance odor condition, the eligible persons of each Affected Premises shall be entitled to apply to be paid by the PRPs' duly constituted agent a temporary relocation allowance:

per day relocation	$120.00
each additional family member who regularly resides in the Affected Premises acceptably documented to the PRPs per day	30.00

No more than one relocation allowance shall be payable per Affected Premises per day.

3.5.2 Handling of Visibly Impacted Soils During Drum Removal Activity

Visibly impacted soils encountered during the drum removal activity will be transferred directly to the appropriate roll-off container or placed in the soil staging area for use during waste consolidation based on visual characterization. Any visibly impacted soil left near the excavation overnight will be covered with 10-mil plastic. With the Engineer's approval and NYSDEC Field Representative concurrence, the drum removal excavation will be backfilled as quickly as possible to reduce the potential of surface water and/or precipitation inflow to the excavation. Any excavation left open overnight will be covered with 10-mil plastic. An orange safety fence will be maintained around the excavation and bermed perimeter.

3.5.3 Drum Sampling

All sampling will be carried out using Level B protection. Drum sampling will only take place within the containment pan or at the drum staging area. Drums will be numbered sequentially, all drum markings, labels, size, condition, type of drum, and overpacking will be documented in the drum inventory log. When the drum is ready to be sampled, the drum contents, color, state of content(s) and volume will be recorded in the drum inventory log.

3.5.3.1 Drums Containing Solids and/or Sludges

Drums which contain solids and/or sludges will be observed visually to determine if the Waste corresponds to the TSDF approved waste profile. If the material is in conformance with the waste profile, no additional sampling or analysis will be performed. Waste material that is determined not to be in conformance with the waste profile will be overpacked and staged on the drum pad. Compatibility of drum waste will be determined by RCRA Waste Characterization (see Section 3.5.4.3) analysis

(on-site) and radiation screen. Drums containing compatible waste will be sampled and the samples composited (maximum of 10 drum samples per composite) and the composite analyzed for waste characterization parameters required by the receiving TSDF for disposal (see Section 3.5.4.3).

3.5.3.2 Drums Containing Solids and/or Sludges and Liquid(s)

Drums which contain solids and liquids, must be handled by first removing the liquid material into a 55 gallon drum. The remaining solid material will be observed to determine conformance to the TSDF approved waste profile. If the material is deemed to be in conformance with the waste profile no additional sampling or analysis will be performed.

Solid waste material that is determined to not be in conformance with the waste profile will be overpacked and staged on the drum pad. Compatibility of drum waste will be determined by RCRA Waste Characterization (see Section 3.5.4.3) analysis (on-site) and radiation screen. Drums containing compatible waste will be sampled, the samples composited (maximum of 10 drum samples per composite) and the composite analyzed for waste characterization parameters to determine disposal options, required by the receiving TSDF for disposal (see Section 3.5.4.3).

The liquid material, which has been transferred to a 55 gallon drum, will be transferred to the drum storage pad where the liquid will be sampled and analyzed for RCRA Waste Characterization (see Section 3.5.4.3) and radiation screen. Drums containing compatible liquids will be staged according to compatibility, sampled, composited (composites of a maximum of 10 drums) and the composite samples characterized in accordance with the receiving TSDF's requirements (see Section 3.5.4.3).

3.5.3.3 Drums Containing Liquids

Drums which contain liquid will be moved to the drum storage pad, sampled and analyzed for compatibility (ignitability, reactive, and

corrosivity) and radiation screen. The drums containing liquids will be staged according to compatibility, sampled, composited (composites of a maximum of 10 drums) and the composite samples characterized in accordance with the receiving TSDF's requirements (see Section 3.5.4.3).

3.5.4 Compatibility and Disposal Analysis

Compatibility screening will be performed on-site using SW-846 methodology for ignitability (Method 1010), reactivity (Method Chapter 7), and corrosivity (Method 9045).

Disposal analysis will be performed at off-Site laboratory facilities using SW-846 methodologies. The results will be available in CLP deliverable format.

3.5.4.1 Drums Containing Solids and/or Sludges

Drum material which does not conform to the approved waste profiles will be moved to the drum staging pad. Each drum will be sampled and analyzed for compatibility (ignitability, corrosivity and reactivity) and radiation screen. Like drums will be sampled, the samples composited and analyzed for characterization parameters for disposal. Composite samples will include up to 10 individual drum samples. The composite sample(s) will be analyzed for TCL/TAL; TCLP; ignitability; corrosivity; and reactivity. Additional parameters may be required by the receiving TSDF. All analytical results obtained will be available in CLP deliverable format (see Section 3.5.4.3).

3.5.4.2 Drums Containing Solids and/or Sludges and Liquid(s)

Drums containing solids and/or sludges will be staged, sampled and characterized according to Section 3.5.4.1. The liquids from

drums containing solids and/or sludges and liquids will be transferred to new 55-gallon drums as per Section 3.5.1.

Drums containing liquid material will be moved to the drum storage pad, sampled and analyzed for compatibility (ignitability, reactivity and corrosivity) and radiation screen. The drums containing liquids will be staged according to compatibility, sampled, the samples composited (composites of a maximum of 10 drums) and the composite samples characterized in accordance with the receiving TSDF's requirements (see Section 3.5.4.3). Additional analyses for dioxin and furan isomers, using Method 8280, SW-846 may also be performed as required by the receiving TSDF.

3.5.4.3 Analytical Methods and Reporting Formats

All analytical methods shall be in accordance with EPA/SW-846, 3rd ed. Each report shall contain a summary of the contents, results, and all relevant circumstances of the work. All analytical results obtained will be available in CLP-SOW (3/90) deliverable format.

Waste Compatibility for Solids and Liquids

- RCRA Waste Characterization
  - Ignitability — Method 1010
  - Reactivity — Chapter 7
  - Corrosivity — Method 9045

- Radiation Screen

Waste Characterization for Disposal

- TCL/TAL
  - Volatiles — Method 8240
  - Semi-volatiles — Method 8270
  - Pesticide/PCB — Method 8080
  - Metals — Methods 6010/7000

- TCLP — Method 1311

- RCRA Waste Characterization
  - Ignitability — Method 1010
  - Reactivity — Chapter 7
  - Corrosivity — Method 9045

- Radiation Screen

- Tetra-octa dioxin/furan — Method 8280

Analytical Results and Available CLP Report Deliverables

- Parameter requested and methodology chosen
- Dates collected, extracted/digested, analyzed
- Chain-of-Custody
- Sample Results
- Duplicate Results
- Blank Results
- Spike and Spike Duplicate Results
- Surrogate Recoveries
- Method Detection and Reporting/Quantitation Limits
- Clean-up Procedures
- Range of Standards and Correlation Coefficient

The laboratory shall make every effort to minimize matrix interferences.

3.5.5 Liquids Characterization for Disposal

Composite samples from drums which contain liquids will be analyzed, at a minimum, for the following:

- TCL/TAL;
- TCLP;
- Ignitability;
- Corrosivity; and
- Reactivity.

Additional analyses for dioxin and furan isomers, using Method 8280, SW-846 may also be performed as required by the receiving TSDF.

3.5.6 Solid, Sludge and/or Solid/Sludge Materials Characterization for Disposal

Composite samples from solid/sludge materials which do not conform to the waste profile(s) will be analyzed, at a minimum, for the following:

- TCL/TAL;
- TCLP;
- Ignitability;
- Corrosivity; and
- Reactivity.

Additional analyses for dioxin and furan isomers, using Method 8280, SW-846 may also be performed as required by the receiving TSDF.

3.5.7 Disposal

All wastes will be disposed at an appropriate off-Site facility. Low-level radioactive and liquid wastes will be segregated from all other wastes prior to off-Site disposal.

Three representative samples from Area B have been submitted to two RCRA permitted TSDFs. The Waste has been conditionally approved for disposal at both landfills. The waste profile includes a mixture of the following: tar material, visibly impacted soil, construction debris, and drum fragments (crushed and/or shredded). All Waste conforming to the Waste composition in one of the approved waste profiles will be sent to the TSDF after passing the paint filter test. Wastes not passing the paint filter test will be stabilized further by mixing with on-site soils and portland cement, if necessary.

Based on the analytical results to date, three waste profiles are anticipated to be required. The three profiles are:

i) RCRA Non-Hazardous;
ii) RCRA Hazardous; and
iii) TSCA.

A summary of the waste handling options are shown on Figure 3.3. As shown on Figure 3.3, individual drums with PID readings above 40 ppm will be considered non-conforming and will be segregated from the conforming waste.

Conforming compatible drummed wastes will be consolidated with the appropriate visibly impacted soils/tar materials using approximately a 1:1 ratio of drums/drum contents to visibly impacted soil/tar material. Each load of consolidated waste will be sampled using a 5-point composite sampling scheme (4 corners and center grab) using a trier. The composite will be analyzed for total lead (3050/7420) and PCBs (8080).

The total lead and PCB results will be obtained by rapid turnaround (1± day) and will be reviewed by the Committee's and NYSDEC's Field Representatives to determine the appropriate disposal option for the prepared load of waste.

As shown on Figure 3.3, if the total lead concentration is less than 100 mg/kg and the PCB concentration is less than 40 mg/kg, the load is RCRA non-hazardous (Option 1). If the total lead concentration is less than 100 mg/kg and the PCB concentration is greater than 40 mg/kg, the lead is a TSCA waste (Option 2). If the total lead concentration is greater than 100 mg/kg, then TCLP for lead will be performed. If the TCLP lead concentration is below 5 mg/L and the PCB concentration is less than 40 mg/kg, the load is RCRA non-hazardous (Option 3). If the TCLP lead concentration is below 5 mg/L and the PCB concentration is greater than 40 mg/kg, the load is a TSCA waste (Option 4).

If the TCLP lead concentration is greater than 5 mg/L, then the HOC (Appendix III) parameters will be analyzed. If the HOC concentration is less than 1,000 mg/kg and the PCB concentration is less than 40 mg/kg, the load will then be solidified on-Site using 10±% portland cement and disposed as a RCRA Non-Hazardous waste. Prior to off-Site disposal TCLP for lead on the solidified load will be performed. The manifest for the load will be accompanied with a RCRA treatment certification (Option 5). If the HOC concentration is greater than 1,000 mg/kg and the PCB concentration is greater than 40 mg/kg, the lead will be solidified using the above procedure, tested by TCLP for lead, and disposed as a TSCA waste with an accompanying RCRA treatment certification (Option 6).

If the TCLP lead concentration is greater than 5 mg/L, the PCB concentrations are less than 40 mg/kg and HOC concentrations are greater than 1,000 mg/kg (Option 7), the load can not be landfilled and other appropriate treatment/disposal will be evaluated.

If the materials do not conform to the approved waste profiles, new waste profile(s) will be completed and submitted for TSDF and NYSDEC approval. Upon receipt of the complete analytical data from the

outside approved laboratory, the Waste will be characterized as per 40 CFR and any applicable state regulations. Once the classifications have been approved by NYSDEC, preparations for removal will take place. The chemical content and classifications will be used to determine the proper treatment/disposal technology for each waste stream. Once the treatment/disposal method is specified, profiles will be generated by NYSDEC approved TSDF's and submitted to the NYSDEC for approval. Each profile will be accompanied by a representative sample and sent to the proper facility(s). After review and approval by the TSDF, arrangements for shipment will be made. A full disclosure of the waste materials to be disposed will be given to the receptor facility and a copy of that correspondence given to the NYSDEC.

All excavated drums and bulk transport units designated for off-Site disposal will be labelled and manifested (if hazardous) prior to leaving the Site for off-Site disposal facilities. The analytical results obtained during the characterization process will be used for manifesting purposes and for determining the necessary placarding of vehicles. The manifest forms and records will be consistent with 40 CFR Part 262 "Standards Applicable to Generators of Hazardous Waste", 40 CFR Part 263 "Standards Applicable to Transporters of Hazardous Waste", and the State of New York. Transportation may be performed by motorized vehicle or by rail.

A hazardous waste generator number, obtained prior to shipping wastes off Site, will be used on all manifests.

Only transporters which are licensed by USEPA, DOT and the State of New York will be used for the transport of hazardous materials if any wastes are found to be hazardous. Transporters will be in compliance with applicable state and federal hazardous waste transportation requirements (i.e. 40 CFR Part 263 and 6 NYCRR 364). If drums or bulk wastes are scheduled for facilities outside of the State of New York, transporters will be required to be licensed in the appropriate State(s) as well as comply with other applicable Federal laws including DOT requirements.

If wastes are deemed to be non-hazardous (based upon receipt and review of supporting analytical data) transporters will be licensed as stated above and the material will be disposed in a Subtitle C facility. The shipment of materials off-Site will be documented using a transporter's bill of lading or non-hazardous waste manifest which will identify the Dioxin concentration range of the Waste based on the available data. Shipment of Special Waste will be in accordance with New York and Federal transport laws.

All applicable DOT requirements will be complied with during transportation for hazardous and non-hazardous waste shipments. The County Emergency Response Coordinator will be notified of waste shipment prior to transport.

Disposal options available are described in the following sections.

Drummed Solids/Sludges

All drums currently staged on Site will be shipped to a properly permitted off-Site disposal facility either in drums, or drums with compatible solids and sludges (see Section 3.5.4) will be consolidated with visibly impacted soils/tar materials. The consolidated wastes will be loaded into roll-offs or box trailers for transportation to a properly permitted disposal facility. The roll-offs or box trailers will be sampled and analyzed as previously discussed and the emptied drums will be handled pursuant to the procedure in Section 3.3.

Drums, containing solids and sludges, which will be excavated during completion of the IRM, will be handled pursuant to the procedures in Section 3.5.1.

Drummed Liquids

Drummed liquids will either be shipped to a licensed disposal facility in drums or compatible liquids (see Section 3.5.4) will be

bulked prior to shipment. If bulking is performed, the compatible liquids will either be pumped into a storage tank located within the drum storage area or will be removed directly from the drums by a vacuum truck. If bulking of liquids into a storage tank is performed, vacuum trucks will remove the material. The bulked liquids will be transported it to a licensed disposal facility.

Radioactive Materials

All drums and visibly impacted soils will be screened upon excavation with a Radiation Survey Meter (Model 3007A, Dosimeter Corp. or equivalent). The meter utilizes a probe (Model 3011, Dosimeter Corp. or equivalent) for alpha-, beta-, and gamma-ray detection, with a window of 1.5-2.0 mg/cm^3; the meter has scales of 0-300, 0-3000 cpm and 0-0.5,0-5.0, 0-50 mR/hr.

To establish the radioactivity of the material, a radiation survey of the Site and surrounding area was performed by the NYSDEC to establish the background radiation levels in the local environment. Background readings were found to typically range between 8,000 and 10,000 cpm.

Any waste materials that are found to contain radiation at levels exceeding three times the maximum background reading will be repackaged into DOT-approved 90 ft^3 metal containers for shipment to a low-level radiation waste, or mixed-waste disposal facility. Based on readings obtained by the NYSDEC, three times the maximum background reading is equivalent to 28 microroentgens (28,000 cpm).

Empty Drums

RCRA empty drums currently staged on Site and RCRA empty drums generated after consolidation of the drums currently staged on Site will be crushed, shredded and staged in roll off boxes pending placement into the on-Site placement area or will be placed directly into the placement area. Drums not RCRA empty after consolidation, will be shredded and

consolidated with other appropriate wastes. Handling of drums to be excavated during implementation of the IRM Completion will follow the procedures presented in Section 3.5.1.

Groundwater

Groundwater encountered during excavation will be removed using a skid mounted vac unit capable of handling 1,500± gallons of liquid and/or diaphragm pumps. Collected groundwater will treated on-Site using a system consisting as a minimum of a sand filter and two 55-gallon activated carbon canisters connected in series. After treatment, the treated waters will then be transferred to a holding pool pending final disposition. Should dewatering prove to be ineffective in emptying the excavation of groundwater within 4 hours after initiation of pumping, a field decision will be made in consultation with the NYSDEC Field Representative regarding the method and extent of additional dewatering.

Holding pools will be constructed of 1/2 aluminum stock and fabricated into panels which bolt together or equivalent. Panels can be placed to form a circular configuration which allows various holding capacities. Pools will be double lined with 20-mil vinyl liners. Multiple pools will be used as needed. Representative samples will be collected and analyzed for proper disposal to satisfy the requirements of the receiving TSDF.

3.6 SOILS EXCAVATION

Visibly impacted soils from the test trenches, the drum removal activities and the tars from one specific area will be excavated and handled as follows.

3.6.1 Materials from Tar Pit Area

The extent of the tars from the burial area in the vicinity of the J & J Electric and Diesel property has been delineated by the NYSDEC

and is shown on Plan 1. Samples for waste disposal characterization have been submitted by the PRP's. The visual observations made during trenching will be used to determine the extent of excavation required. The tars will be excavated with a backhoe and loaded directly into a licensed hazardous waste roll-off or dump trailer or transported to the soil staging area for waste consolidation. If the tar requires stabilization, it will be mixed with surrounding soils prior to loading. The amount of stabilizing material to be used will be determined by the Engineer. The roll-off/dump trailer will be decontaminated at the decon pad and will be used to transport the tars directly to the off-Site disposal facility. The limit of excavation will be confined to the tar and immediately contiguous visibly impacted soil. The area will be backfilled upon approval of the Engineer with the concurrence of the NYSDEC Field Representative that excavation has been completed.

3.6.2 Visibly Impacted Soils

Visibly impacted soils excavated during test trench operations and drum removal operations will be visually characterized and, if possible, transferred directly into a roll-off container or into other approved bulk container (e.g. licensed dump trailer) or transported to the soil staging area for waste consolidation based on the visual characterizations. Prior to placement in the container, a Geiger counter will be used to screen the soils. Soils found to contain radiation at levels exceeding 3 times the maximum background reading as measured using an instrument capable of measuring alpha, beta and gamma radiation at this level, will be placed into DOT-approved 90 ft^3 metal containers for shipment to a low-level radiation waste or mixed waste disposal facility. Based on readings obtained by the NYSDEC, three times the maximum background reading is equivalent to 28 microroentgens.

Soils which do not conform to the waste profile(s) will be placed in a separate roll-off and staged from subsequent sampling and characterization for disposal requirements (see Section 3.6.3).

3.6.3 Soil Sampling

The materials from Area B have been profiled. Should visual observations indicate a change in composition of the material to be excavated, additional composite samples from each 500 to 800 cubic yards of material may be obtained and analyzed for the disposal parameters. Based on the results, a waste profile form may require modification. The waste profile form and a composite sample of the soil will be sent to the TSDF for approval.

3.6.4 Waste Loadout

It is anticipated that four different waste streams will be generated. The four distinct waste streams are RCRA non-hazardous (landfill without treatment, other than on-Site stabilization when required), RCRA hazardous, TSCA and Radioactive Material. The wastes for landfilling will be shipped off Site in bulk or in drums. Radioactive Material with radiation at levels exceeding 3 times the maximum background reading will be packaged in 90 ft^3 metal shipping containers and shipped to the disposal facility on flat bed trailers.

Treatment/disposal options for materials which do not conform with the waste profiles will be evaluated when and if such materials are identified.

3.7 SITE RESTORATION

At the completion of all removal activities and after all Waste and Radioactive Material have been properly disposed of off Site, demobilization activities will begin. All equipment contacting contaminated materials will be completely decontaminated and removed off Site. All open excavations will be backfilled with on-Site fill or imported fill.

Select disturbed areas (e.g. highly sloped or adjacent to public roadways and wetlands) will be seeded. Topsoil, if required, will be

obtained from the on-Site borrow area previously used by the NYSDEC. The staging pads and the decon pads will be decontaminated. The truck scale and all trailers will be demobilized. All utilities will be disconnected from the poles located on the streets. The improved access roads, support zone parking lot, two (2) staging areas, and the two (2) decontamination pads will remain on Site for future use.

3.8 COMMUNITY RELATIONS PLAN

The NYSDEC will prepare and implement the Community Relations Plan. As requested by the NYSDEC, the PRP's will provide information supporting NYSDEC's community relations program to the extent that such requests are consistent with the scope of work being performed under the IRM Order on Consent. All public inquiries and complaints received by the PRP's will be forwarded to the NYSDEC.

4.0 IRM COMPLETION - PROJECT MANAGEMENT

In addition to the remedial Contractor qualifications, which will be submitted upon Contractor selection, a team of management and field oversight personnel will be assembled by the PRPs with the experience and capabilities required to effectively implement all aspects of the IRM Completion. The project organization and management structure is shown on Figure 4.1. Brief descriptions of all required roles and qualifications are listed below.

Project Coordinator

The project coordinator will provide overall project management and coordination, will be responsible for maintaining budgets and schedules and will participate in technical discussions and negotiations, as requested, with the agencies. In addition, the project coordinator will be the Steering Committee's primary representative of the Project with the Steering Committee and regulatory agencies.

Project Director

The project director's role is to direct the project team's efforts and focus them on the IRM with due regard for budget and schedule. The project director will also participate in the definition of amendments to the scope of work that may be appropriate and the resolution of problems that may develop as the project proceeds. The project director shall have had many management roles on similar projects and be experienced in project representation to the Steering Committee, regulatory agencies and the general public.

Project Manager

The project manager will oversee all aspects of the project, represent the Steering Committee at technical meetings where required and will be actively involved in the successful completion of the project. The project manager will coordinate activities to ensure that all day-to-day

activities are conducted in a professional and timely manner. The project manager will keep the Project Director up-to-date on the status of project activities.

Engineer

The engineer will be the PRP's full-time on-Site Representative and will ensure that the selected Contractor adheres to the procedures and protocols in this Work Plan and the HSP. The engineer will be the liaison for the NYSDEC on-Site Representative.

Health and Safety Manager

The health and safety manager will provide technical expertise in all aspects of health and safety in regards to the IRM activities and will oversee staff safety training including OSHA 40-hour and 8-hour courses.

QA/QC Manager

The QA/QC manager will provide technical expertise in all aspects of quality assurance and quality control associated with the IRM and will provide assistance during the development of the QAPP and associated work plans

5.0 SAMPLING AND ANALYSIS PLAN

Samples will be analyzed by either an on-Site contract laboratory by an off-Site contract laboratory. The off-Site contract laboratory will be a participant in a CLP program. All laboratory analyses, and in particular, all reference to analytical chemistry, shall be in accordance with the SW846, 3rd Ed. The analytical laboratories are responsible for compliance with the requirements of the SW846 methodologies and CLP protocols. All analytical results will be reported using CLP deliverables. Split samples will be provided to the NYSDEC.

5.1 SAMPLING PERSONNEL

Sampling personnel will be trained individuals instructed on the use of sampling equipment, decontamination procedures, and field instrumentation calibration procedures necessary to assure a total quality management process from the initial sampling endeavor to the final classification of the waste stream.

5.2 DRUM SAMPLING

Drum sampling procedures include those pertaining to Site preparation, initial Site survey, primary staging, radiological survey, drum opening, open drum survey, actual drum sampling, drum inventory log instructions, and drum sampling supplies.

The drum sampling procedures are described in additional detail below.

5.2.1 Staging of Drums and Other Preliminary Steps

The Initial Site Survey for organic vapors, explosivity, and radiation entails a search of the drums prior to excavation to determine if any

require special handling. Examples of drums which require special handling include those lab packed, shock sensitive and explosive, air and water reactive, radioactive materials, biological waste, and nickel or stainless steel drums. These drums will be segregated and treated separately.

Primary Staging involves the accurate numbering and layout of those drums which are not consolidated upon excavation to allow easy access for samplers and chemists to work. Staging usually involves the drums being placed on polyethylene-lined skids which are organized into rows for easy access when sampling and/or maintenance activities. Drums are transported within the Site using a grappler attachment to a front-end loader on other appropriate equipment. Empty drums are noted and staged separately. Any leaking drums will be handled using the procedures presented in Section 3.5.1.2.

Radiological survey involves the detection of alpha, beta, and gamma radiation with a Geiger counter, or other radiological survey instrument. The Site Supervisor and Site Health and Safety Officer shall be contacted immediately when radiation above background is detected.

Drum opening is usually performed with a grappler using a brass-tipped punch. Drum opening will occur at the containment pan adjacent to the excavation. The area will be clear of all unnecessary personnel. Drum opening may be performed by hand only upon consultation with the Health and Safety Officer.

The open drum survey involves re-checking for radiation, especially gamma radiation, not previously detected.

Each drum exhumed from the Site will be visually examined to determine drum contents. Drums will be segregated based upon the contents of each drum; like or compatible material based on visual observations will be consolidated in roll-off containers adjacent to the excavation for subsequent off-Site disposal. Material which does not visually conform to the waste profile(s) will be staged in separate locations on the drum staging area.

5.2.2 The Sampling Event

Drum samples of solids, semi-solids, sludges, and/or liquids are collected in appropriate sample containers. Samples are either scooped (solid) or piped into the designated sample containers. The drum sample will be representative of the drum contents. Extreme care will be taken to avoid sample contamination, and a drum inspection log will be completed by the sampler immediately before sampling the next drum. All expendables, e.g. sample gloves, paper towels, etc. will be placed in a separate designated drum. The sampling pipette will be placed in a drum designated for glass waste.

The drum inventory log will be filled out upon the initiation of the excavation through the completion of the sampling event. Information necessary for the drum log include: the drum number, project number, date, time, drum contents (or, as indicated on drum label), drum size, material color, pH, estimate of content quantity and number of layers, sample method used, drum markings, and any additional comments. The drum log will be checked on the day of sampling and upon completion of the sampling event. Any inconsistencies or omissions will be resolved immediately.

5.3 SOIL SAMPLING

Visibly impacted soils and tars have been sampled from Area C and the tar pit area. Additional samples may be collected if materials observed during drum and visibly impacted soil removal do not conform to the waste profile. Samples shall be collected from materials within the bucket of the backhoe so that personnel will not be required to enter the excavation. The most common type of soil sample is the grab sample. The following procedures for soil grab sampling will be used.

5.3.1 Tar Material/Visibly Impacted Soils Grab Sampling Procedures

1. Determine the number of desired samples, including duplicates. Locations will be field selected.

2. Don clean sample gloves, then scrape the side of the material in the bucket with a clean trowel or tongue depressor to expose a fresh surface.

3. Using another clean trowel or new tongue depressor, scrap material from the freshly exposed surface and transfer it to the sample container. Chip the sample with a screwdriver above the sample container if the sample is too hard.

4. Seal and label the container. Record pertinent information in the field log.

5. Place used expendables in a trash bag. Decontaminate any tools with soap, water, and, where appropriate, pesticide grade hexane or methanol solvent rinses.

6. Repeat steps 2 to 5 for each additional sample.

5.3.2 Sample Collection Procedure - Prepared Loads

After consolidation of the drum contents and visibly impacted soils/tar materials, a 5-point composite sample (four corners and center grab) will be collected from each prepared load using a trier. The sample volume will be one quart. The sample will be submitted for the analyses presented in Section 3.5.7. The remainder of the sample will be retained for one month after receipt of the last load of conforming waste by the receiving facility.

5.3.3 Soil Sampling Considerations

It is important to maintain a detailed, accurate record throughout the entire sampling operation, which notes the location, depth, and characteristics such as grain size, color, odor, and any readings obtained from field monitoring equipment.

Subsurface conditions are often stable on a daily basis and may demonstrate only a slight seasonal variation, especially with respect to temperature, available oxygen, and light penetration. Changes in any of these conditions can radically alter the rate of chemical reaction or activity of associated microbiological communities within the soil matrix. Therefore, soil samples will be maintained at, or less than, their at-depth temperature, protected from direct sunlight, sealed tightly in glass bottles, and analyzed as soon as possible.

The physical properties of soil: its grain size, cohesiveness, associated moisture, depths to bedrock and the water table, and other factors, will act to limit the depth from which samples can be collected and the method used to collect them. Information on soil properties can be acquired from published soil surveys which are available from the U.S. Geological Survey (USGS), other Federal, State, and local agencies, and agricultural associations. A comprehensive list of these offices and currently available soil surveys are included in the "NEIC Manual for Groundwater/Subsurface Investigations at Hazardous Waste Sites".

5.4 LIQUID SAMPLING

Composite samples from the water storage pools or liquids from drums will be collected to analyze for wastewater treatment parameters required by the off-Site disposal facilities.

The composite sample will be obtained using a an appropriate sampler (e.g. Coliwasa, drum thief, bacon bomb) to collect

representative samples from the various depths of the pools. The sampler will be fully decontaminated between samples.

5.5 AIR MONITORING SAMPLES

Section 7.0 of the HSP presents the air monitoring requirements for the IRM Completion program.

5.6 DOCUMENTATION PROCEDURES

Accurate documentation of all sample procedures is critical to the sampling process. Types of documents which are considered essential and must be accounted for are notes, maps, drawings, photographs, safety plans, QA plans, log books, data sheets, reports, etc. These link the sample with the project, sampler, time, location, procedures, changes to the work plan, sample history, transfer to the laboratory, and insures tamper-free transit.

Data, calibration, and maintenance records, samples, and documents, must be accounted for and be retrievable at any time during an investigation. Chain-of-custody records are necessary to document the sample identity, handling, and shipping procedures.

Chain of custody procedures will be instituted and followed throughout the study. These procedures include field custody, laboratory custody, and evidence files. Samples are physical evidence and will be handled according to strict chain of custody protocol. Documentation will be kept that traces the samples from the field to the laboratory and through the analyses. The National Enforcement Center of the USEPA has defined custody of evidence as follows:

i) in actual physical possession;
ii) in view after being in physical possession;
iii) in a locked laboratory; and

iv) in a secure, restricted area.

Chain-of-custody records will be kept starting in the field when sample collection has been completed.

The sampler will complete the custody form, package the samples including the custody form, and seal the package with evidence tape. Shipment may be made by commercial vendors, and their policy will be to document the transfer of the package within their organization. When the samples arrive at the laboratory, the sample custodian will sign the vendor's air bill or bill of lading. The sample custodian's duties and responsibilities upon sample receipt will be to:

i) document receipt of samples;
ii) inspect sample shipping containers for the presence or absence of custody seals, locks, and evidence tape, and for container integrity;
iii) record condition of the shipping and sample containers in the log books;
iv) sign the appropriate forms or documents;
v) verify and record the agreement or disagreement of information on sample documents and if there are discrepancies, record the problem and notify the QAO;
vi) label sample with laboratory sample number; and
vii) place samples in secure storage.

The hand-to-hand custody of samples in the laboratory will be maintained through preparation, extraction, and analysis. The analyst will be required to log samples into and from storage as the analysis proceeds. Samples will be returned to secure storage at the close of business. Log sheets will incorporate options for multiple entries, so that several people can handle the samples throughout the analytical scheme. Written records will be kept of each and every time the sample changes hands. The laboratory records may also be used as evidence in enforcement proceedings. Care must be exercised, therefore, to properly complete, date, and sign the items needed to generate data. Copies of the following items will be stored:

i) documentation of the preparation and analysis of samples, including copies of the analyst's notebooks;
ii) bench sheets, graphs, computer printouts, chromatograms, and mass spectra;
iii) copies of QA/QC data;
iv) instrument logs showing the date, time, and identity of the analyst; and
v) analytical tracking forms that record the date, time, and the identity of the analyst for each step of the sample preparation, extraction, and analysis.

The sample custodian will log in samples on a log-in form and note the appropriate information, including sample identification and the condition of the samples. Any inconsistencies in paperwork or comments on the condition of the samples will be duly noted on the form and filled with the case.

To further document the custody of each sample, the analyst will complete the Sample Preparation and Extraction Log and instrument log books. The chemist or technician will sign and date the appropriate forms when handling the samples. During the analyses, these forms will be maintained in a secure file. Following the completion of the analysis of a group of samples, appropriate forms and data sheets will be collected and stored in the files.

Upon completion of the analysis, the QAO or his assignee will begin assimilating the field and laboratory data reports. In this way, the evidence file for the project will be generated. The file will be chronologically arranged for ease of review. When the information has been gathered, the file will be inventoried, numbered, and stored for future reference.

5.7 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

The two major concerns of the QA/QC plan are QA samples and document control/chain-of-custody. QA samples required include:

- Trip Blanks are used to verify proper sample handling procedures are followed. One trip blank is required for each group of water samples for volatile analysis.

- Equipment (Field) Blanks are used to verify the cleanliness of the sampling equipment. After decontamination, and prior to investigative sample collection, the equipment is contacted with an appropriate amount of distilled or DI water. The water is collected and submitted for analysis. One analysis per day or one per 20 investigative samples, whichever is more, will be collected. Dedicated field sampling equipment will be used where functional.

- Duplicates are essentially identical samples collected at the same time, in the same way, and contained, preserved, and transported in the same manner. Field duplicates are used to verify the reproducibility of the sampling procedure. Ten percent of the samples will be duplicates.

- Matrix Spike/Matrix Spike Duplicates (MS/MSD) samples will be collected every 10 investigative samples. The triplicate volume will be submitted to the laboratory, composited, split, spiked and analyzed.

- Split Samples are samples that are split with the client or a regulatory agency for independent analysis by another laboratory. Care must be taken to assure accurate splitting. Because the integrity of samples for volatiles may be compromised by the handling involved in physically splitting them, duplicates should be used instead of splitting these samples.

- Document Control/Chain-of-Custody As previously mentioned, strict adherence to document- and data-control procedures are essential components of a quality QA/QC plan.

5.8 SAMPLE CONTAINERS AND PRESERVATION

All sample containers shall be pre-cleaned according to SW846-3rd Ed. The bottles must contain a bottle lot number to insure traceability. The container size, the preservation procedure, and time required for laboratory analyses, depend on the parameter that the sample is to be analyzed for.

All sample containers are to be properly labelled. Information included on each label are: the name of the project, the field sample number, the date and time of sampling, and the name(s) of sampling personnel. All information is to be written in indelible ink; the labels are to be affixed as to ensure that they do not become separated from their respective containers.

Properly labelled sample containers are to be placed in a cooler with appropriate protective packing materials (e.g. bubble wrap). Samples are to be shipped to the appropriate laboratories at the end of each sampling day. The samples will be maintained at 4° C.

5.9 SAMPLE SHIPMENT PROCEDURES

Chain-of-Custody procedures will be adhered to at all times. All samples are to be appropriately documented, packaged, marked, labeled, and shipped, in accordance with 49 CFR 100-179 and the International Air Transport Association Dangerous Goods Regulations for Domestic Air Transport.

All sample coolers, containing samples for analysis, are to be labeled "Environmental Sample". The sample cooler(s) shall arrive at the laboratory on the next working morning.

5.10 QA/QC REQUIREMENTS

Waste samples are required to be analyzed for volatiles, semi-volatiles, pesticides/PCBs, and dioxin/furan isomers using current SW846 methodologies. Water samples will be analyzed using current EPA methodologies. All QA/QC requirements for each specific method will be followed. To the extent possible, analytical results for all non-conforming wastes will be reported using CLP deliverables.

5.11 SOIL ANALYSIS

Excavated visibly impacted soil may be analyzed for the following TCL parameters classes:

• Volatile Organics	SW846, 3rd Ed.	Method 8240
• Semi-Volatile Organics	SW846, 3rd Ed.	Method 8270
• Pesticides/PCBs	SW846, 3rd Ed.	Method 8080
• Inorganics (Metals)	SW846, 3rd Ed.	Methods 6010/7000
• Inorganics (Cyanide)	SW846, 3rd Ed.	Method 9012
• Dioxin/Furan	SW846, 3rd Ed.	Method 8280

Full CLP reporting and deliverable packages will accompany each set of non-conforming samples and will include:

- Parameter requested and methodology chosen
- Dates collected, extracted/digested, and analyzed
- Chain of custody
- Sample results
- Duplicate results
- Blank results
- Spike and spike duplicates
- Surrogate recoveries
- Method detection and reporting/quantitation limits
- Cleanup procedures
- Range of standards and correlation coefficient.

5.12 WATER ANALYSIS

All waters, collected on Site for decontamination purposes or due to the dewatering of the pit during excavation, shall be collected on Site for subsequent disposal as part of the scope of work for this project.

All water samples shall be analyzed to meet the requirements of the receiving facility. Analysis may include the following:

- Volatile organics — EPA 624
- Semi-volatile organics — EPA 625
- Pesticides/PCBs — EPA 625
- Metals — 200 Series
- Cyanide — 335 Series

Water samples collected from the dewatering of the tar excavation area shall be analyzed for dioxins/furans using SW 846/Method 8280.

5.13 AIR MONITORING SAMPLES

Section 7.0 of the HSP presents the air monitoring requirements for the IRM Completion program.

5.14 GENERAL QA/QC REQUIREMENTS

The selected laboratories will be approved by the NYS Department of Health for solid waste and wastewater testing. The QA/QC plan for each proposed laboratory is provided in Appendix B.

6.0 SURFACE WATER MANAGEMENT PLAN

6.1 INTRODUCTION

The following sections contain the Surface Water Management Plan. This plan details the measures to be taken to prevent hazardous water runoff from the work zone. Techniques for water diverting, retaining and preventing soil erosion are also discussed.

6.2 CONTAMINATED RUNOFF PREVENTIVE MEASURES

Preventative measures to minimize the quantity of runoff from Areas B and C to the adjacent creek or wetlands will be implemented. Measures will also be implemented to minimize surface water from running through any open excavation in all areas and then reentering a non-hazardous environment. Any time water comes in contact with an open excavation area, it will be considered potentially hazardous and will be contained for proper disposal (see Section 6.4).

6.2.1 Dikes in Area C

A temporary retention dike will be constructed between the open excavation in Area C and Ellicott Creek in the approximate locations shown on Figure 6.1. The dike will be constructed of compacted clay having a maximum permeability of 1×10^{-7} cm/sec. On-Site heavy construction equipment will be used in the construction of this temporary dike. In addition, a diversion dike will be placed on the upgrade side of the excavation zone in Area C. This dike will reroute most of the water that would generally run through the area, thereby reducing the volume of hazardous runoff.

The dikes and all excavation activity will be isolated to the north side of Pfohl Road, and the length of the dikes will be dependent on the extent of the excavation zone.

The height of the dikes will be determined by the Site topography. An effective elevation will be decided upon which will be sufficient to handle the peak discharge flow of a four inch rainfall in a twenty-four (24) hour period. This method will produce a dike with varying height, being tallest at the point of lowest elevation.

Figure 6.1 contains the proposed limits of Area C diversion and retention dikes. Figure 6.2 contains a detailed cross-section of a commonly constructed dike.

6.2.2 Dikes in Excavation Areas

There are three areas on the Site other than Area C where diking will be imposed. High concentrations of drums in the western section of Area B will require surface water diversion in that area. Surface water diversion will also be necessary around the dioxin and test trench zone in Area C. These areas will be diked off from the rest of the Site as discussed for Area C; however, on-Site soils will be used as construction material for these dikes. The determining factor for the height of these dikes will again be a 4-inch, 24-hour rainfall. Proposed diking limits for these areas are also addressed on Figure 6.1.

Depending on the number of drums encountered in any particular area and the estimated time that pit will be open, there may be other temporary dikes constructed on the Site. These again will be constructed of on-Site soils as discussed above.

6.2.3 Diversion Trenches

Diversion trenches will be installed on Site to assist in rerouting large volumes of sheet flow in high sloping areas. These ditches will reduce the volume the dikes will actually have to divert. The dikes will then only have to handle the volume generated downgradient of the trench and up grade of the berm. One place that this will be important is just west of

the Transit Road, which is built up twenty feet higher than the landfill. Other places for trenches may be determined based on observed field conditions.

Proposed trenching boundaries are indicated on Figure 6.1. A cross section of a diversion trench is detailed on Figure 6.2.

6.3 EROSION CONTROL

Erosion control measures will be enforced in areas where surface water runoff is jeopardizing the existing soil stability. This may be at intermittent sections of the diversion trenches or where diversion dikes are creating a flow which would not occur naturally. Hay bales or silt fences will be placed in such areas to slow and spread the flow of water, reducing its impact on soil stability. The hay bales will be placed in a double row and anchored properly with a minimum of two 36-inch stakes per bale. Details of erosion control sections are included on Figure 6.3.

Where applicable, temporary erosion and sediment control measures will be installed prior to the start of excavation and appropriately maintained. Select disturbed areas (e.g. highly sloped or adjacent to public roadways and wetlands) will be seeded as soon as practical after backfilling. The temporary control measures in these areas will be maintained until vegetation has been established.

Sediments collected on the controls from waste areas will be removed and consolidated with the excavated waste. Sediments collected from non-waste areas will be returned to the eroded areas or spread on the Site. Should sediments from waste and non-waste areas commingle, such sediments will be consolidated with the excavated waste.

After seeding, a monthly inspection of the reseeded areas will be performed until the vegetation has been reasonably established. Eroded areas will be regraded and reseeded.

6.4 DISPOSAL OF HAZARDOUS RUNOFF

Any liquid which passes through an open excavation zone or comes in contact with the drums or excavation area will be considered potentially hazardous. The liquid will be retained in the excavation or retention zone until one of the mobile vacuum units is free to pump it into a 50,000-gallon storage pool reserved for hazardous liquids. The liquid will be treated in the on-Site treatment unit and will be stored in the pool until transported by one of the mobile vacuum units to a permitted RCRA facility for disposal. The transportation and disposal of the hazardous liquid will be full accordance with all applicable federal, state and local regulations.

7.0 REPORTING AND INSPECTIONS

7.1 REPORTING

7.1.1 Monthly Progress Reports

Monthly progress reports will be submitted to the NYSDEC by the tenth day of every month following the effective date of the IRM Order on Consent until completion of the IRM activities. The reports will:

i) describe the actions which have been taken toward achieving compliance with the IRM Order on Consent during the previous month;

ii) include validated results of sampling and tests and other data received or generated by the PRP's during the previous month in the implementation of the IRM;

iii) identify all reports and other deliverables required by the IRM Order on Consent that were submitted the previous month;

iv) describe all actions, data collection and plans which are projected to be commenced or completed during the next month and provide other information relating to the progress of the IRM;

v) include information regarding percentage of completion, all delays encountered or anticipated that may affect the future schedule for completion of the IRM, and a description of all efforts made to mitigate those delays or anticipated delays; and

vi) reference any modification to the Work Plan that PRP's have proposed to the NYSDEC or that have been approved by the NYSDEC.

7.1.2 IRM Completion Report

An IRM Completion Report will be prepared and submitted to the NYSDEC within 60 days of completion of IRM field activities. The report will provide complete documentation of the activities undertaken and will include:

i) a chronology and description of all activities performed;
ii) identification of any variances from the Work Plan;
iii) identification of problems encountered and how they were resolved;
iv) an inventory of quantities and types of materials removed and their ultimate disposal;
v) a compilation of all analytical data collected;
vi) a summary of air monitoring records and air sampling results; and
vii) drawings showing post-construction Site conditions.

The Draft IRM Completion Report will also include the following:

i) A Notice of Completion indicating that the IRM has been completed in compliance with the requirements of the NYSDEC-approved Work Plan, the ROD and the IRM Order on Consent;

ii) Verification that all remedial equipment has been decontaminated, dismantled and removed from the Site;

iii) Documentation that all other terms or specifications contained in the Work Plan have been met in accordance with the Order on Consent;

v) A certification by a qualified professional engineer licensed by the State of New York that the IRM has been completed in conformance with the requirements of the Work Plan.

In addition, one copy of waste disposal manifests or bills of lading, as appropriate will be submitted to the NYSDEC.

7.1.3 Summary Letter Reports

Letter reports will be submitted to the NYSDEC for the following activities:

i) modifications to the IRM Completion Work Plan; and
ii) modifications to approved waste profiles, if required.

7.1.4 Optional Reports

If excavated drums remain on-Site at the end of the IRM, an Operations and Maintenance Plan for those drums will be prepared and submitted to the NYSDEC for review and approval.

7.2 INSPECTIONS/MEETINGS

NYSDEC personnel or their representatives will be provided at least seven days notice and be allowed to attend the following: prebid meetings, progress meetings, Final IRM Completion Inspection and Final Site Inspection.

7.2.1 Final IRM Completion Inspection

After waste removal and prior to demobilization, a Final IRM Completion Inspection will be conducted with NYSDEC personnel or their representatives to determine whether the IRM is complete.

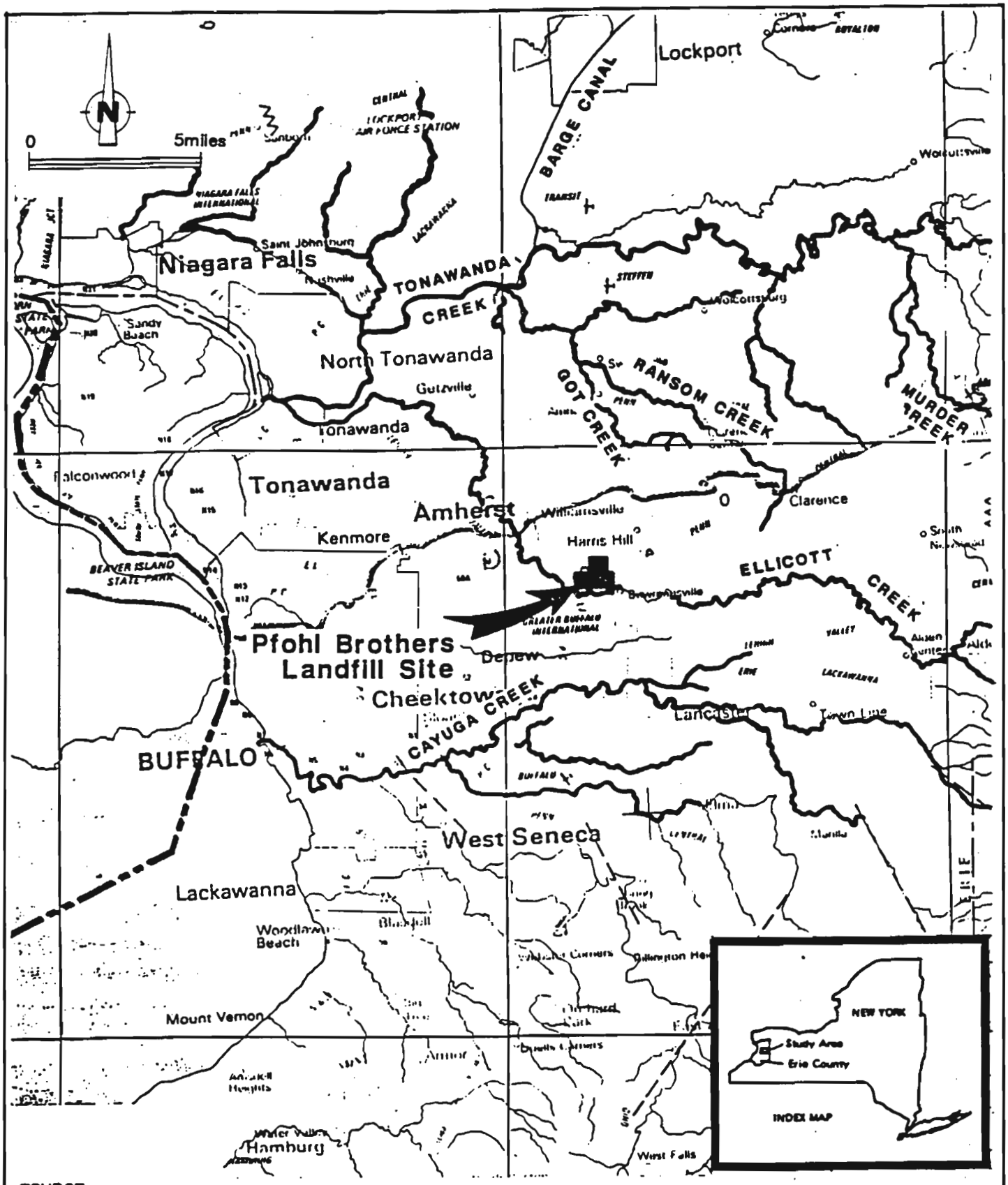
7.2.2 Final Site Inspection

At or near the completion of demobilization, a Final Site Inspection will be conducted with NYSDEC personnel or their representatives

to determine whether Site restoration activities have been appropriately completed.

8.0 PROJECT SCHEDULE

The proposed schedule for the IRM Completion project is presented on Figure 7.1. This schedule is based on a 5-day week with 8-hour days and on the assumption that NYSDEC reviews of submitted documents will require the same time period as that required for document preparation. Should NYSDEC reviews require time periods longer than those shown on Figure 7.1, the starting date for all activities following such review will be adjusted accordingly. It is noted that field activities will continue as long as favorable weather conditions continue. It is not anticipated that extended periods of favorable weather will occur between December 15 and April 15. Therefore, work is not expected to extend into this period.



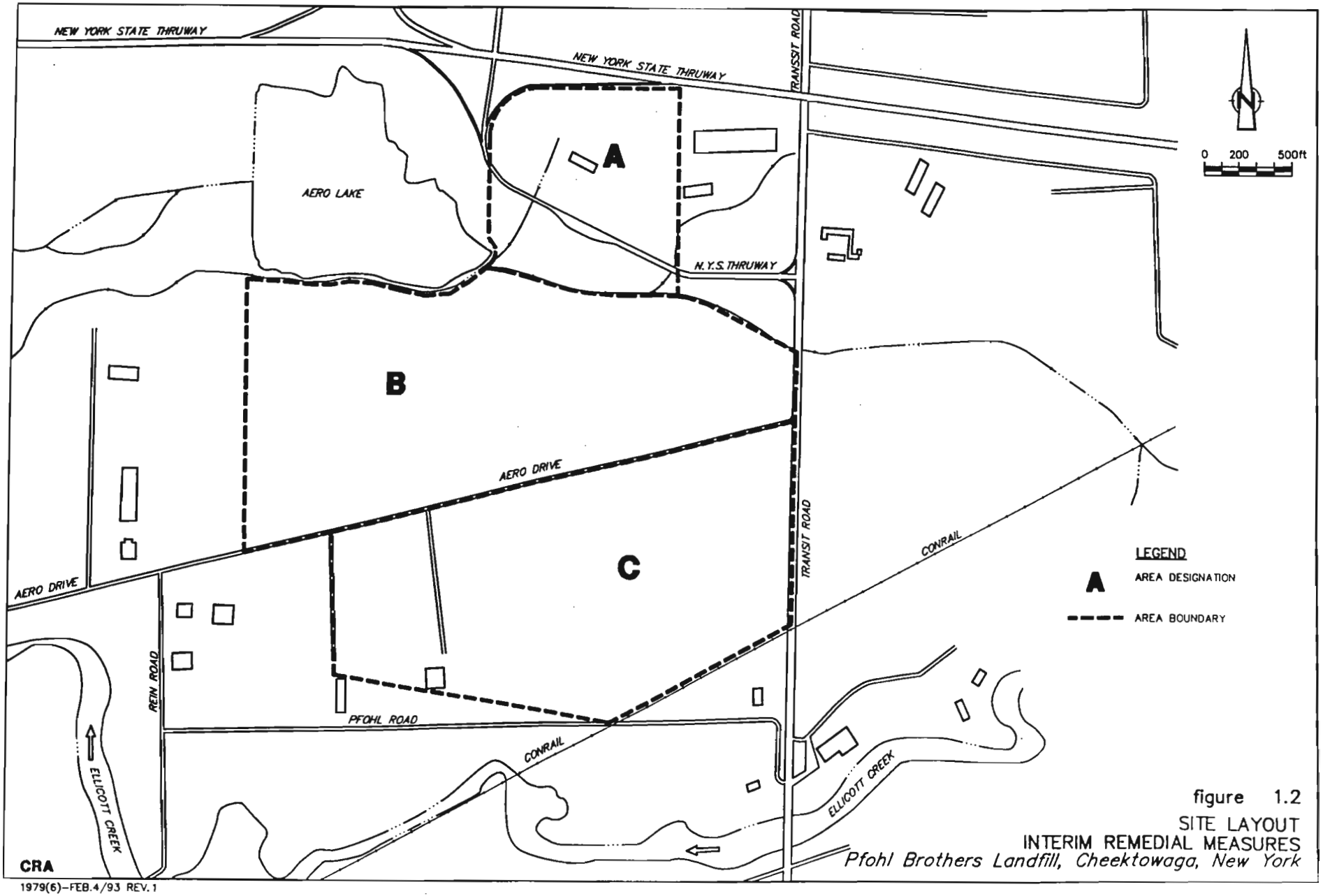
SOURCE:
FEDERAL EMERGENCY MANAGEMENT AGENCY,
1983 (MODIFIED BY CDM, 1990)

figure 1.1

SITE LOCATION
INTERIM REMEDIAL MEASURES
Pfohl Brothers Landfill, Cheektowaga, New York

CRA

1979(6)–JAN.22/93–REV.0



1979(6)-FEB.4/93 REV.1

figure 1.2
SITE LAYOUT
INTERIM REMEDIAL MEASURES
Pfohl Brothers Landfill, Cheektowaga, New York

figure 2.1
AREAS OF CONCERN
INTERIM REMEDIAL MEASURES
Pfohl Brothers Landfill, Cheektowaga, New York

1979(6) APR.12/93 REV.1

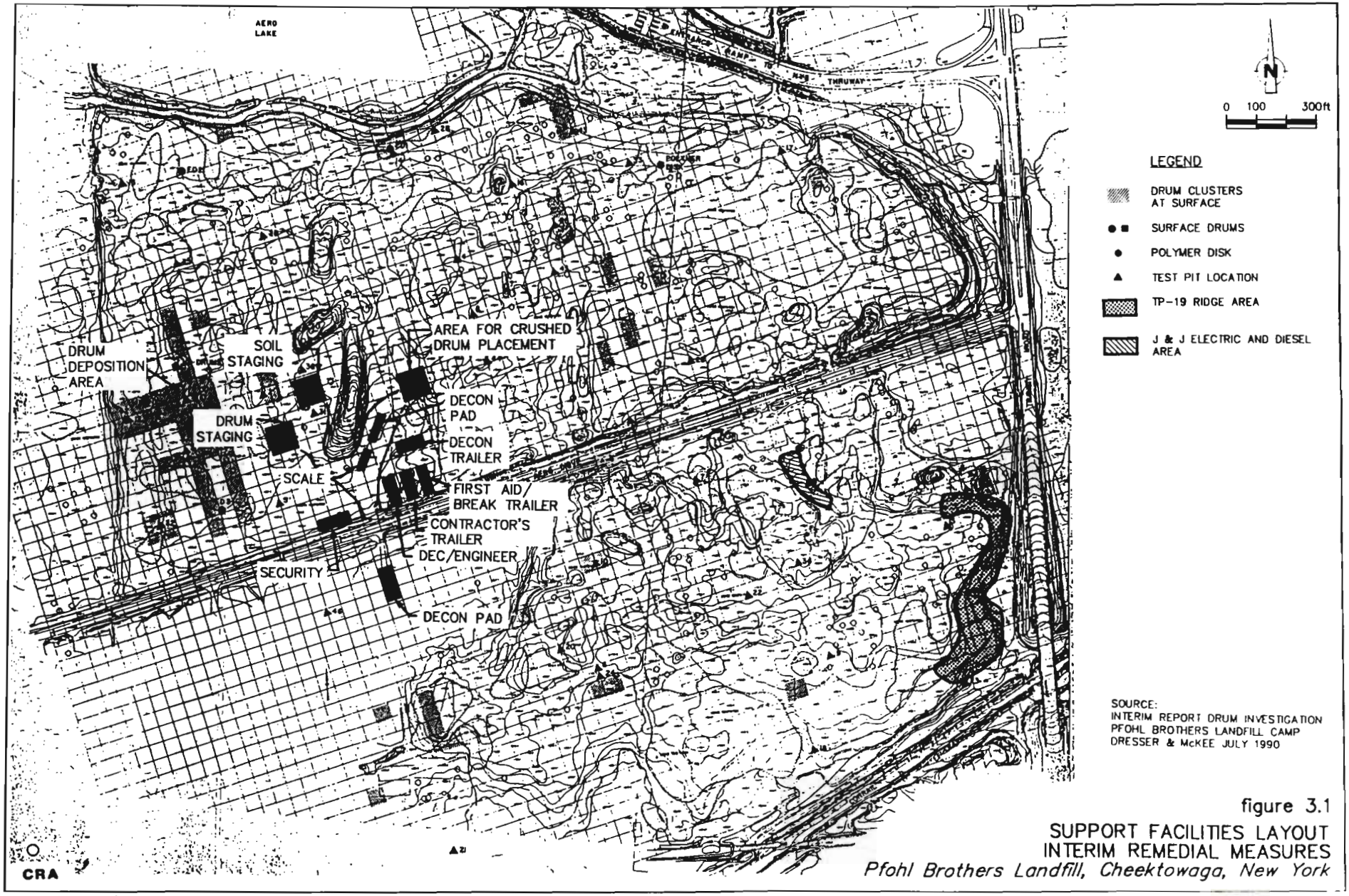
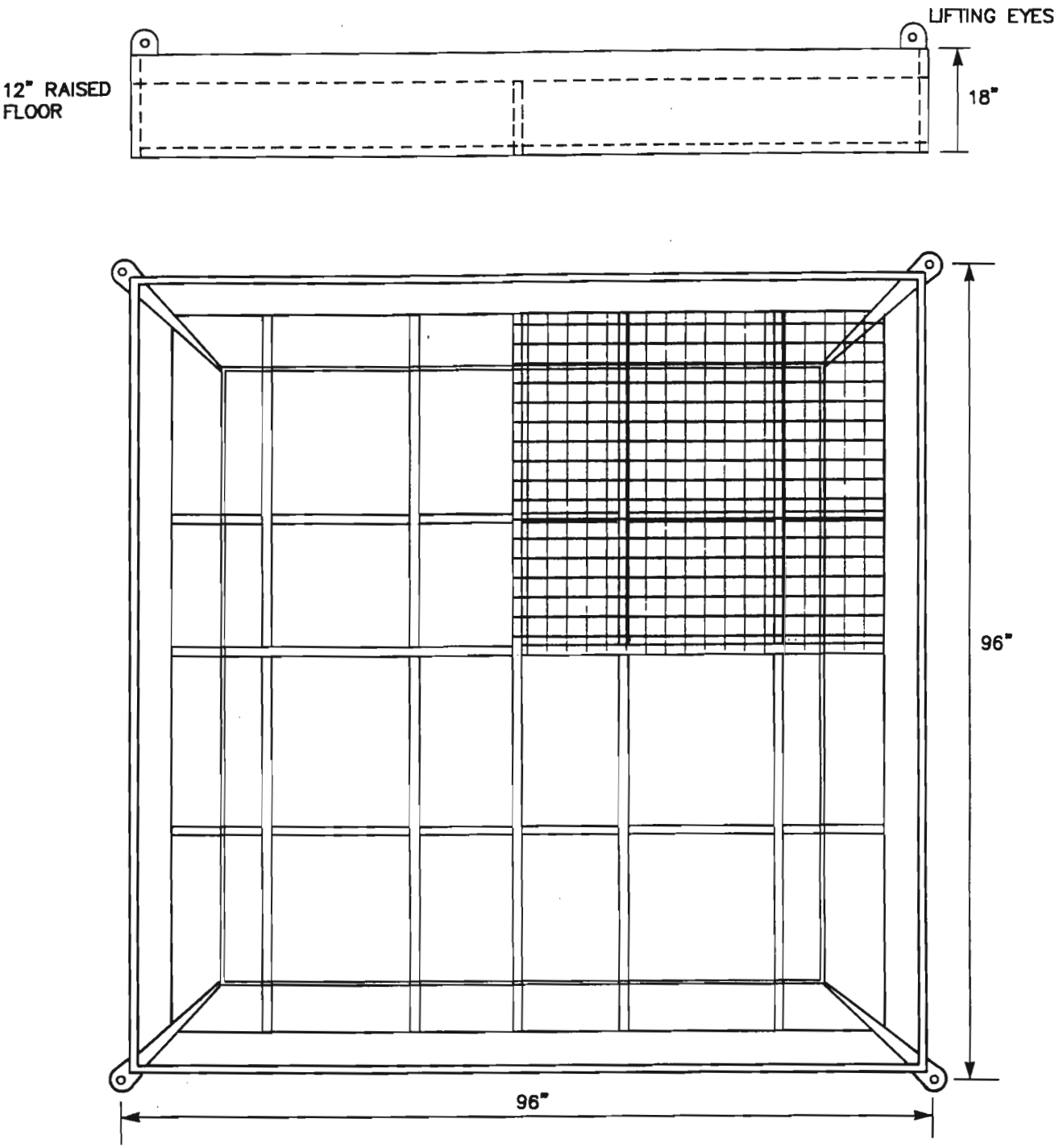


figure 3.1
SUPPORT FACILITIES LAYOUT
INTERIM REMEDIAL MEASURES
Pfohl Brothers Landfill, Cheektowaga, New York

1979(6)-JAN.22/93-REV.0



- 1/4" STEEL PLATE
- 2" ANGLE AND BOX STEEL SUPPORTS
- 6"x6"x1/4" STEEL MESH RAISED FLOOR DECK

DWG. SOURCE: OHM REMEDIATION SERVICES CORP. PRINCETON, N.J.

figure 3.2

CONTAINMENT PAN
INTERIM REMEDIAL MEASURES
Pfohl Brothers Landfill, Cheektowaga, New York

CRA

1979(6)–JAN.22/93–REV.0

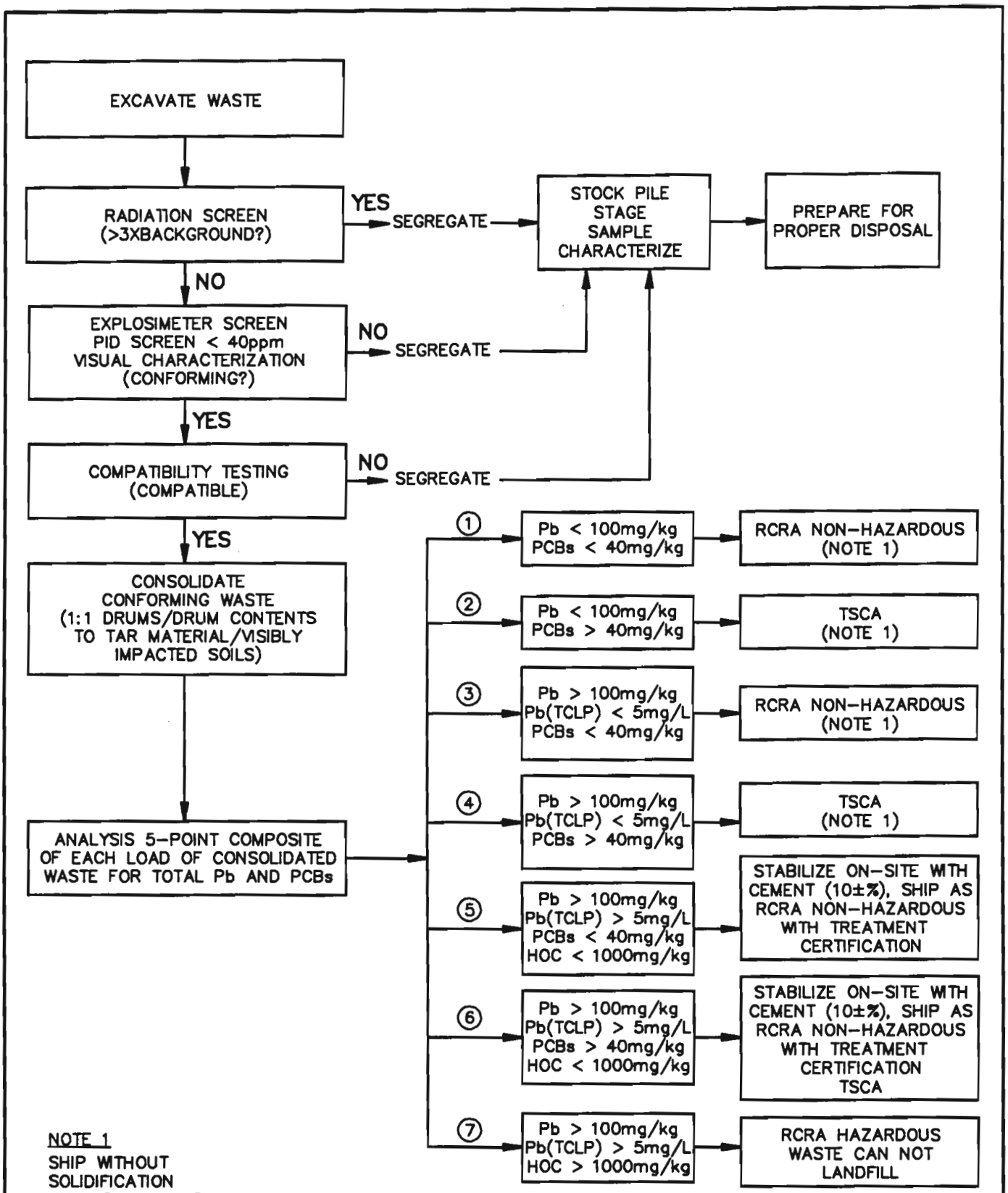


figure 3.3

WASTE HANDLING SCHEMATIC
INTERIM REMEDIAL MEASURES

Pfohl Brothers Landfill, Cheektowaga, New York

CRA

1979 (6) JAN 17/94(W) REV.0 (C-02)

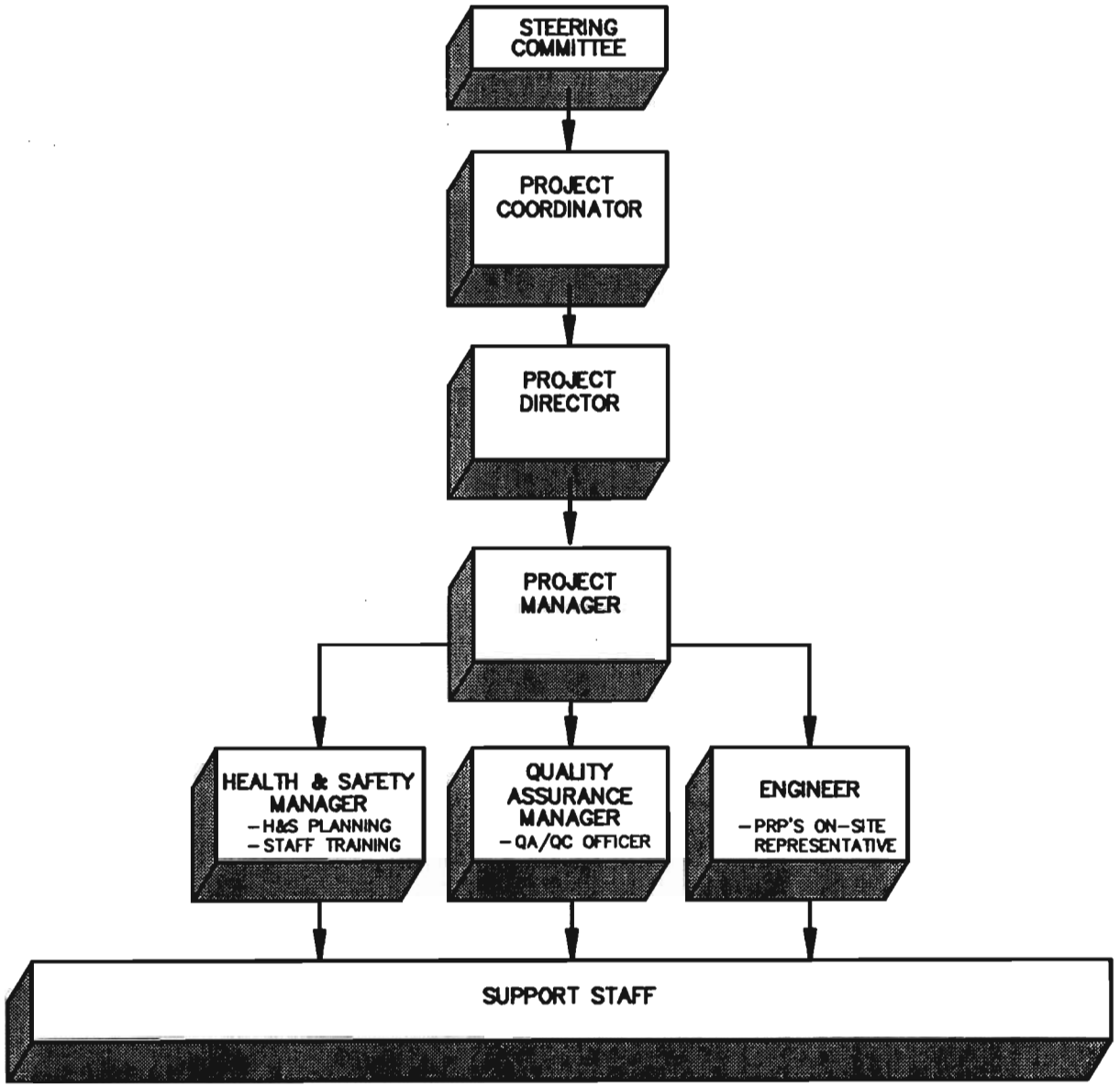


figure 4.1

PROJECT ORGANIZATION AND MANAGEMENT STRUCTURE
REMEDIAL DESIGN MEASURES
Pfohl Brothers Landfill, Cheektowaga, New York

CRA

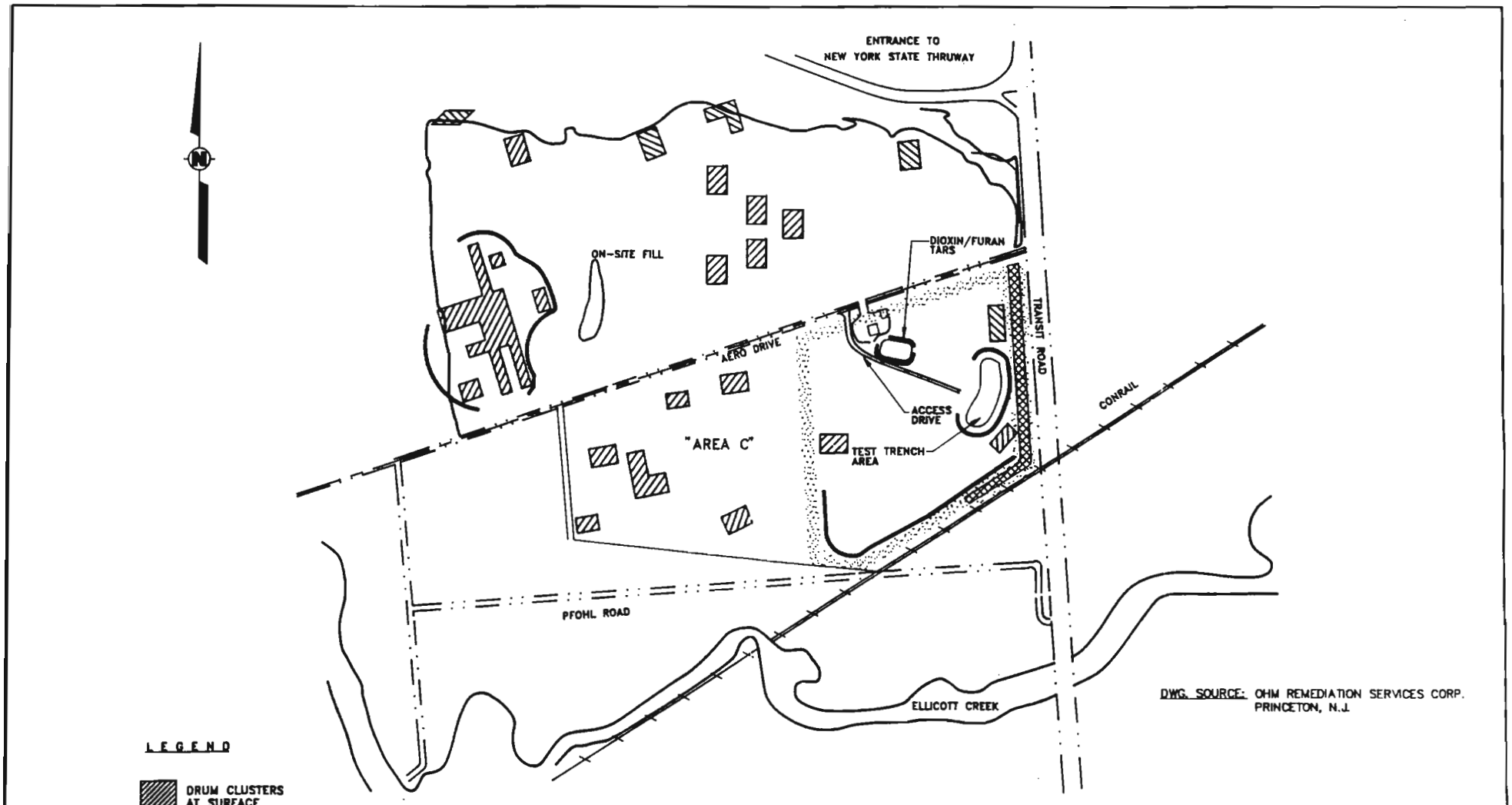
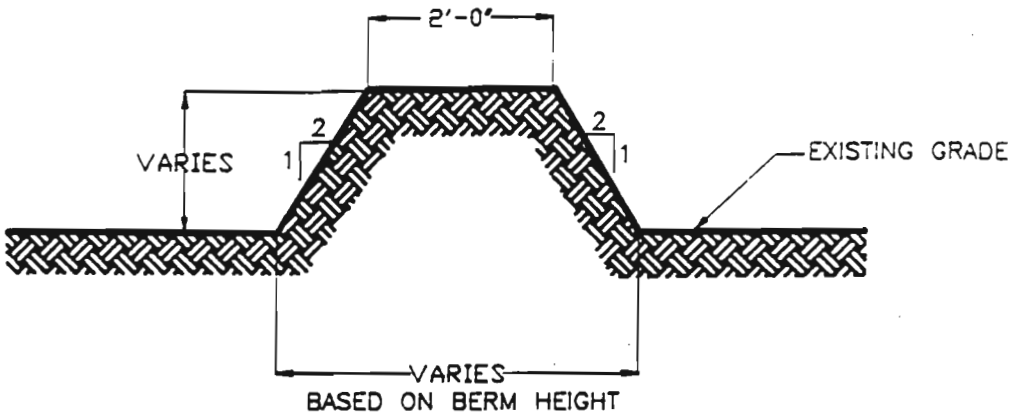


figure 6.1
CONTAMINATED RUNOFF PREVENTION
INTERIM REMEDIAL MEASURES
Pfohl Brothers Landfill, Cheektowaga, New York

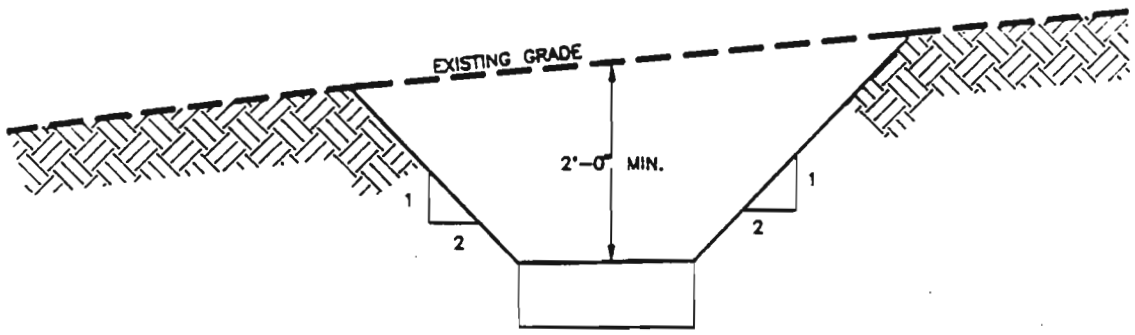
CRA

1979(6)-JAN.22/93-REV.0



TEMPORARY BERM SECTION (TYPICAL)

NOT TO SCALE



TEMPORARY DRAINAGE DITCH SECTION (TYPICAL)

NOT TO SCALE

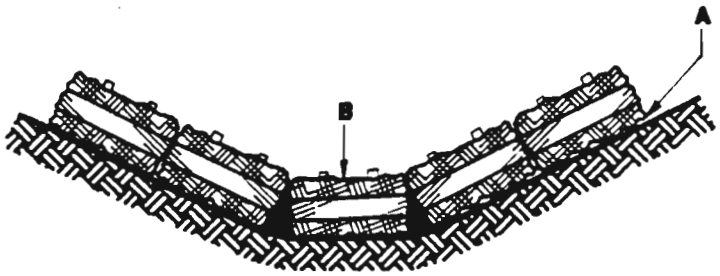
DWG. SOURCE: OHM REMEDIATION SERVICES CORP. PRINCETON, N.J.

figure 6.2

SURFACE WATER CONTROL DETAILS
INTERIM REMEDIAL MEASURES
Pfohl Brothers Landfill, Cheektowaga, New York

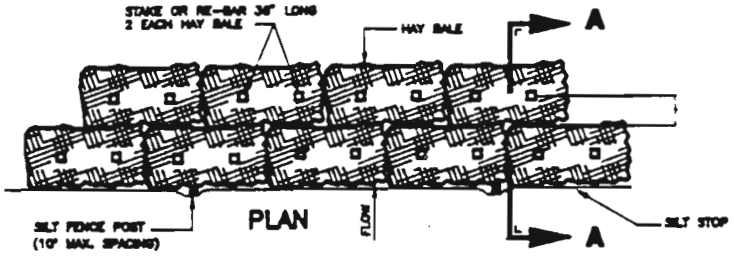
CRA

1979(6)–JAN.22/93–REV.0



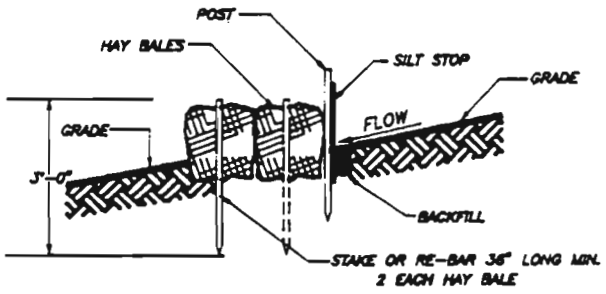
POINT A SHOULD BE HIGHER THEN POINT B

DOUBLE ROW HAY BALE AND SILT STOP IN DRAINAGE WAY EROSION CHECK



DOUBLE ROW HAY BALE AND SILT FENCE

NOT TO SCALE



HAY BALE SECTION A-A

NOT TO SCALE

DWG. SOURCE: OHM REMEDIATION SERVICES CORP.
PRINCETON, N.J.

figure 6.3

EROSION CONTROL DETAILS
INTERIM REMEDIAL MEASURES
Pfohl Brothers Landfill, Cheektowaga, New York

CRA

1979(6)–JAN.22/93–REV.0

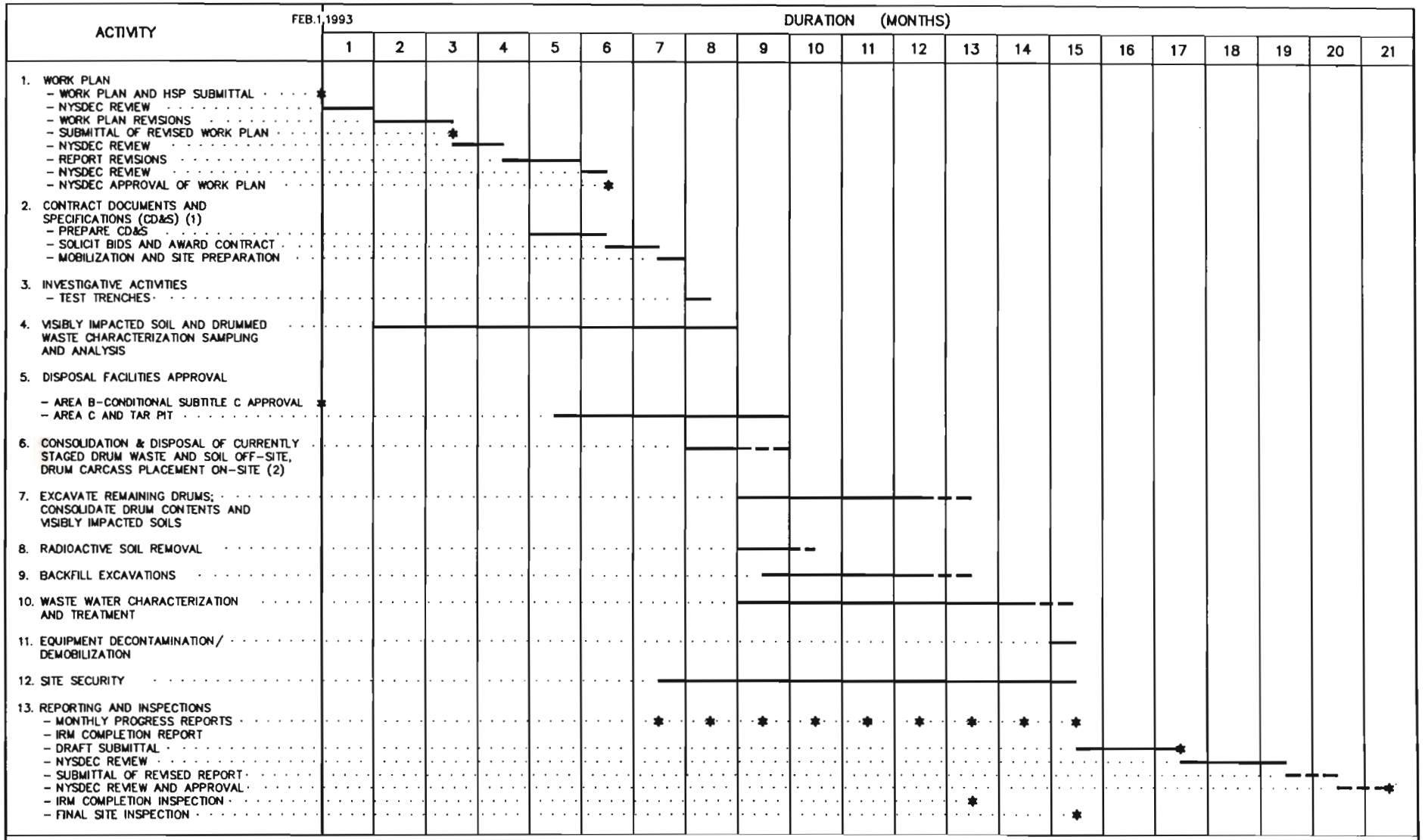


figure 8.1

PROPOSED SCHEDULE
INTERIM REMEDIAL MEASURES
Pfohl Brothers Landfill, Cheektowaga, New York

1979 (6) AUG 04/93(W) REV.1 (S-05)

TABLES

TABLE 3.1

**LIST OF REPORTED OWNERS
FROM WHOM ACCESS MAY BE REQUIRED
PFOHL BROTHERS LANDFILL**

Tax Records Designation	*Lot Number*	*Description*
82.03-4	9.12	Aero Drive Stuart Jenkins 42 Willowbrook Williamsville, N.Y. 14221
	9.2	1101 Aero Road Hirsch, Jerome F. 215 California Drive Williamsville, N.Y. 14221
	10	Pfohl Road McBride, Elizabeth L. Hilltop Drive Goshen, N.Y. 10924
	11	232 Pfohl Road Mac Peek, Robina Cheektowaga, N.Y. 14225
	12 & 13	E. NY State Elec. & Gas c/o Bob Malicki P.O. Box 287 Ithaca, N.Y. 14851
	14	Con Rail Corp. Property Tax Dept. P.O. Box 8433 Philadelphia, PA 13101
81.04-1	25	Niagara Mohawk Power Corp. Real Estate Tax Dept. 300 Erie Blvd. W. Syracuse, N.Y. 13208
81.04-1	26	Aero Drive Pfohl William A. & I.

TABLE 3.1

LIST OF REPORTED OWNERS
FROM WHOM ACCESS MAY BE REQUIRED
PFOHL BROTHERS LANDFILL

Tax Records Designation	*Lot Number*	*Description*
		83 Pfohl Road Cheektowaga, N.Y. 14225
	27	Aero Drive Pfohl Enterprises c/o Joseph Di Matteo Fiddler & Company One Towne Center W Amherst, N.Y. 14228
	28.1	Aero Drive Pfohl Enterprises c/o Joseph Di Matteo Fiddler & Company One Towne Center W Amherst, N.Y. 14228
81.04-2	9.1	Aero Drive Pfohl Enterprises c/o Joseph Di Matteo Fiddler & Company One Towne Center W Amherst, N.Y. 14228
	9.211*	Pfohl Road Pfohl, Robert W. Phillips, Marlene A. 559 Harris Hill Road Lancaster, N.Y. 14086
	9.22*	136-144 Pfohl Road Zelasko, Fred P. & Etal 121 Foisset Avenue Cheektowaga, N.Y. 14225
81.04-2	9.212*	130 Pfohl Road Zelasko, Fred P. & Etal

TABLE 3.1

LIST OF REPORTED OWNERS
FROM WHOM ACCESS MAY BE REQUIRED
PFOHL BROTHERS LANDFILL

Tax Records Designation	*Lot Number*	*Description*
		121 Foisset Avenue Cheektowaga, N.Y. 14225
	10.1	Pfohl Road Pfohl Enterprises c/o Joseph Di Matteo Fiddler & Company One Towne Center W Amherst, N.Y. 14228
	11	Pfohl Road Pfohl Enterprises c/o Joseph Di Matteo Fiddler & Company One Towne Center W Amherst, N.Y. 14228
Various Rights of Way (e.g. Transit Road, Aero Drive Pfohl Road)		Town of Cheektowaga Mr. Chester Bryan Town Engineer 275 Alexander Avenue Cheektowaga, N.Y. 14211

Notes:

* Residents addressed by Real Estate Plan. May require access if residents do not respond favorably to Real Estate Plan.