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Commissioner

Carborundum Global Facility
Hyde Park Boulevard
Town of Niagara
Site #932036

Interim Remedial Measure Decision Document

BP America, responsible party for the Carborundum Global site, has proposed an Interim Remedial Measure to address contaminated soils found at the site during the Remedial Investigation. The RI/FS Order on Consent executed between the Department and BP America allows for undertaking IRMs of this nature. The Department supports the proposed IRM and anticipates approval of the IRM work plan that will allow the project to be implemented. In accordance with Division of Environmental Remediation policy, this document is prepared to outline the proposed IRM and present information leading to the Departments decision to support this project.

I. Site Location & Description

The Carborundum Company's former Electric Products facility is located at 3245 Hyde Park Boulevard in the Town of Niagara, Niagara County. In addition to Hyde Park Boulevard to the west, the site is bordered by Rhode Island Avenue to the south. See Figure 1 Location Map on page 2 of this document. The areas immediately to the north and west of the Carborundum Company facility are used for light and heavy industry, while the areas immediately to the east and south are residential.

The west half of the Carborundum site is occupied by plant buildings presently utilized for manufacturing. Refer page 3 for Figure 2 Site Map. The east half of the site consists of a paved parking lot and a gravel area that was formerly used as a staging area to store excess materials (sand, silicon carbide, scrap graphite and steel, and empty drums) and obsolete equipment. Prior to 1962 the gravel area was also used to burn cardboard, paper and scarp wood, (INTERA, 1993).

LEGEND

- - Catch Basin
- - Former Drum Storage Area

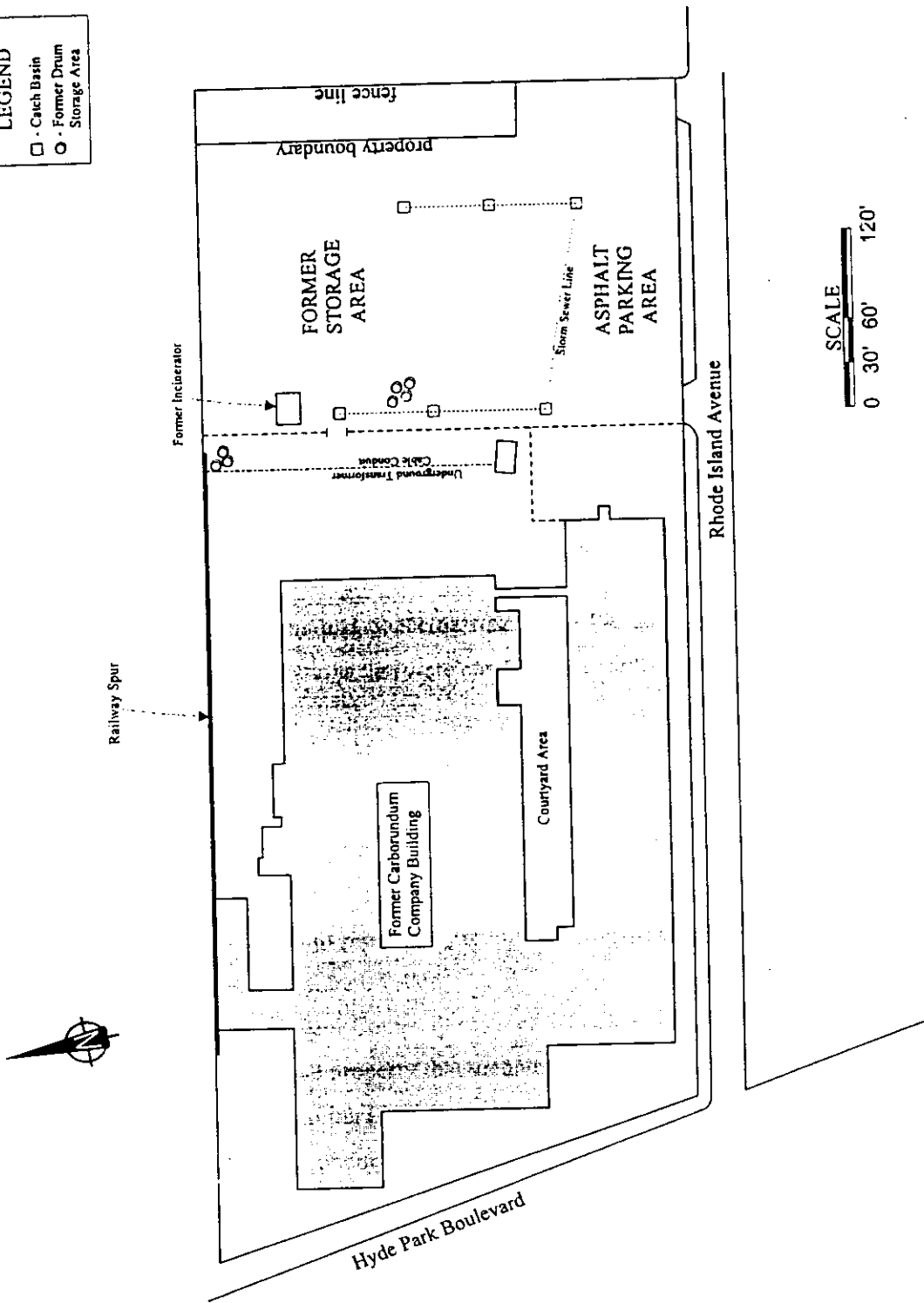


Figure 2 - Site Plan

The topography at the site is flat with a gentle slope across the property to the south. Elevation at the site is approximately 595 feet above mean sea level. The land immediately north of the site is several feet higher in elevation and is occupied by an industrial park. This area was formerly owned and occupied by Union Carbide Corporation.

General geology in the area consists of Glaciolacustrine sediments and glacial till 17-32 feet in thickness overlying Middle Silurian Dolostone bedrock of the Lockport Dolomite. Groundwater is present in both the glacial till (overburden) and underlying rock (bedrock) at the site. The water table in the vicinity of the site occurs at depths ranging from 3 to 7 feet below ground surface with perched conditions reported at the northeast edge of the site (INTERA, 1993). Flow directions are southwesterly across the site for both overburden groundwater and the deeper bedrock groundwater.

II. Site History

The Carborundum Company purchased the plant from the Global Company in 1936 and manufactured heating elements and electronic components from silicon carbide. The Carborundum Company was purchased by BP America and the Global facility was subsequently sold to CESIWID, Inc. in 1993. Cesiwid Inc. continues to produce similar products.

In 1993, the Carborundum Company completed a Preliminary Site Assessment of the facility to determine if hazardous wastes had been disposed at the site. The study found the presence of hazardous waste resulting from past spills and leaks from bulk chemical storage generally located in the gravel area of the plant site. Historical releases in this area of approximately one-acre size have contaminated site soils and underlying groundwater.

As part of their sales agreement with CESIWID, BP America retained the responsibility for pre-existing environmental conditions. In September 1995, BP America and the New York State Department of Environmental Conservation executed an Order on Consent to undertake a detailed site investigation (Remedial Investigation) to assess the nature and extent of contamination at the facility and evaluate remedial alternatives (Feasibility Study) for site cleanup. The Remedial Investigation work began in August 1995 and the Remedial Investigation Report (RI) was issued in January 1997. Subsequently, a supplemental investigation was undertaken, with the findings published in the Phase II Remedial Investigation Report (Phase II RI) dated May 1998. A Feasibility Study (FS) is underway and is expected to be completed by April 1999.

III. Site Contamination

The RI and Phase II RI studies identify two media impacted by site contamination; site soils and area groundwater. Contaminants of concern (COCs) found at the site are summarized as follows:

Soils

COCs in soils at the site were identified as volatile organic compounds (VOCs) and polycyclic aromatic hydrocarbons (PAHs). Figure 3 of this document outlines the general location of contaminated soils discussed here. VOCs are typically, all though not exclusively, associated with such products as degreasers, paint thinners, and other such solvents. VOC contamination above NYSDEC Soil Cleanup Guidance was found in site soils and includes:

1,2-dichloroethene	trichloroethene
vinyl chloride	toluene
acetone	ethyl benzene
xylenes	

Typical sources of PAHs include areas of combustion/burning, coal tars, and asphalt materials. Specific PAHs found include:

naphthalene	acenaphthylene
fluorene	phenanthrene
anthracene	pyrene
benzo(a)anthracene	chrysene
benzo(b)fluoranthene	benzo(k)fluoranthene
benzo(a)pyrene	indeno(1,2,3cd)pyrene

Four areas at the site have been identified that contain VOCs and/or PAHs at levels above the NYSDEC Soil Cleanup Guidance. These four areas are referred to as (1) the VOC main area, (2) the railway spur area, (3) the southeastern acetone area, and (4) the southwestern xylene area.

Area 1) The main area of VOC soil contamination occurs within the former materials storage area and occupies an area with approximate dimensions of 210 feet by 150 feet with an additional area extending toward the east. The currently estimated depth of contamination is 12 - 16 feet.

Area 2) The area near the railway spur and northern property boundary contains elevated levels of VOCs and PAHs. This area has approximate dimensions of 100 feet by 40 feet with an additional area extending toward the south. The currently estimated depth of the zone of contamination is 4 - 6 feet.

Area 3) Soils containing acetone at concentrations that exceeds the Soil Cleanup Objectives

exist in the southeast corner of the property. The contaminated area has dimensions of approximately 40 feet by 25 feet by 6 feet in depth.

Area 4) The area of xylene soil contamination is located south of the main building near the southwestern corner of the property. This area is approximately 100 feet by 30 feet by 4 feet in depth.

Groundwater

Chemicals of Concern identified in site groundwater are VOCs. Those detected above State Groundwater Quality Standards or Guidance Values include:

vinyl chloride	trichloroethene	1,1-dichloroethene
1,2-dichloroethene	benzene	

Trichloroethene is a common solvent that was used significantly in industry as a degreasing agent. Vinyl chloride, 1,2-dichloroethene and 1,1-trichloroethene are compounds generated by the natural decomposition of trichloroethene. Although not confirmed, the presence of these materials may suggest the decomposition of trichloroethene at the site.

Several of the VOCs, found in the site soils are also present in groundwater. In particular, trichloroethene and 1,2-dichloroethene were found in several soil samples and monitoring wells at concentrations that exceeded State recommended cleanup objectives and groundwater standards. This condition strongly suggests that the contaminated soils at the site are contributing to contamination of the groundwater.

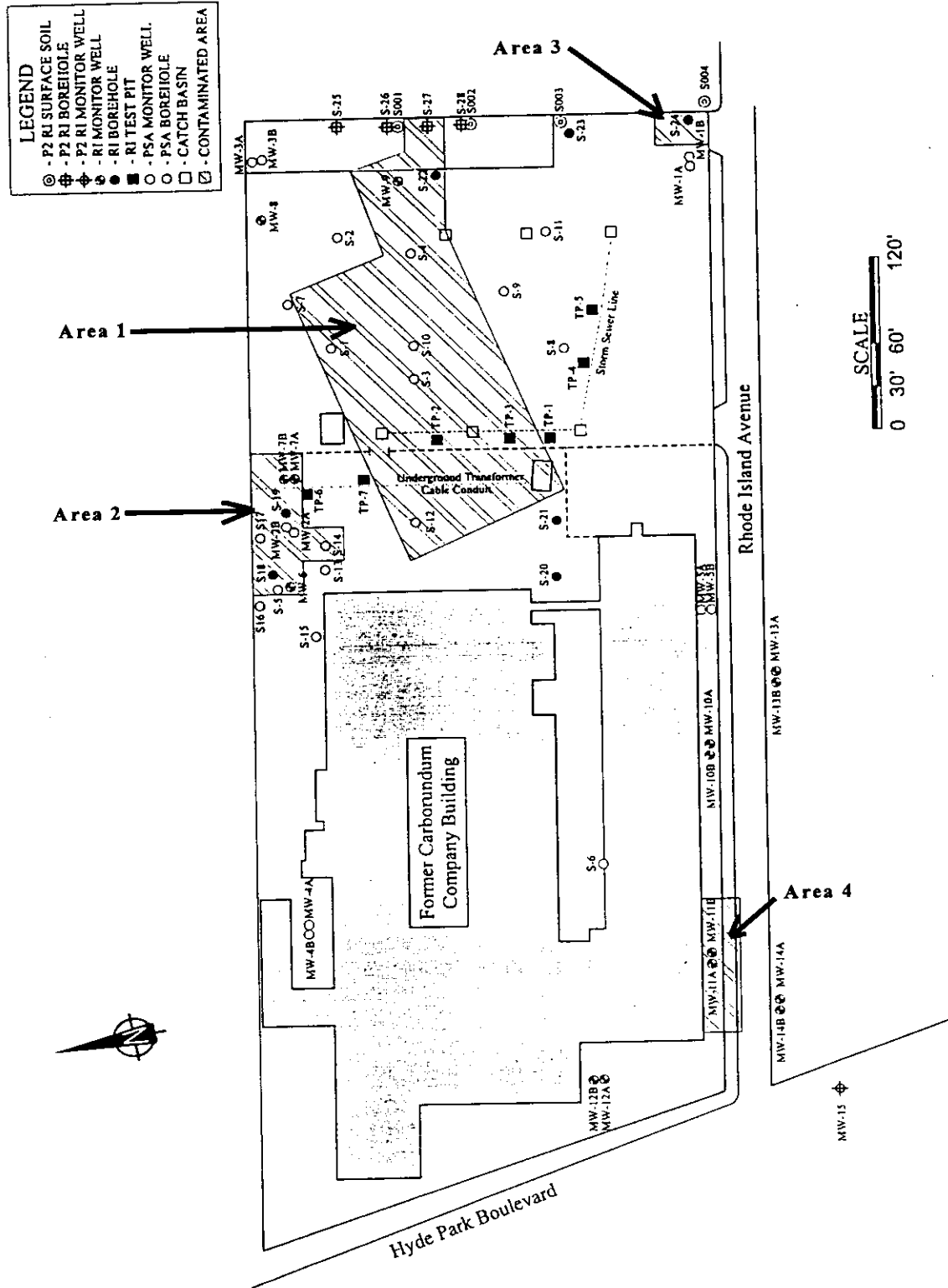


Figure 3 - Soil Removal Areas

II. Proposed IRM

Purpose

An Interim Remedial Measure (IRM) is a planned action that can be conducted without extensive investigation, to prevent, mitigate or remedy environmental damage or the consequences of environmental damage. IRMs may become part of the final remedy for a site. The Remedial Investigations clearly identify a distinct area of soil contamination east of the main plant building. This contamination is most likely the source of groundwater contamination found in area monitoring wells.

The purpose of the IRM proposed in this Decision Document is to eliminate this source of groundwater contamination, and to effectively and timely remediate the areas of soil contamination found at the plant site. The IRM work will consist of excavation and off-site disposal of the contaminated soils found through the investigation phase of this process. If successfully completed, a significant part of the contaminated media identified for the site will be addressed.

Clean-up Goals

The NYSDEC has established specific numerical clean-up guidance for remediation of soils contaminated with hazardous wastes. These guidance values, contained in Technical Administrative Guidance Memorandum (TAGM# 4046), will be the clean-up goals for this IRM.

Soil Disposal

The NYSDEC Division of Solid and Hazardous Materials, Bureau of Technical Support has developed guidance for managing regulated hazardous waste. This guidance is found in TAGM #3028, entitled "Contained-In Criteria for Environmental Media". In part, this guidance applies to soil that is contaminated by regulated hazardous waste and removed pursuant to a corrective action plan such as the IRM proposed for the Global site. The guidance states that soils containing hazardous constituents from regulated hazardous waste can be managed as non-hazardous waste if the soil's hazardous constituent concentrations are at or below levels established in the guidance. Soils excavated as part of the IRM will be disposed following this guidance.

IRM Activities/Actions

The basic actions to be undertaken as part of the of the IRM will include:

- i) Define the exact extent of known soil contamination to allow cost-effective and efficient removal of soils. This will be accomplished through sampling and in-field testing prior to actual excavation activities;

- ii) Excavate contaminated soils and test to determine appropriate disposal options; and
- iii) Dispose of excavated soil at an appropriate off-site facility.

Soils will be excavated using a rubber-tired backhoe and/or tracked excavator. Soils containing trichloroethene or its breakdown products at concentrations in excess of soil action levels will be excavated first. The extent and depth of these soils will be determined during pre-excavation sampling activities. These soils will be excavated directly into trucks and transported off-site for disposal at an approved facility. Other contaminated soils excavated at the site will be trucked to a staging area on-site, tested and subsequently transported for approved off-site disposal.

Once it is believed that soils containing concentrations of COC above NYSDEC Soil Cleanup Guidelines have been removed from the excavation, verification sampling of the bottom and sides of the excavation(s) will be performed.

Should the results of the verification sampling indicate that cleanup goals have been met, the excavation will be backfilled with clean fill material. If sample results do not indicate attainment of cleanup goals, additional excavation to remove any remaining soils that contain COCs above the Soil Cleanup Objectives will be undertaken; in which case verification sampling of the newly excavated area will be repeated.

Work area and community air monitoring will be conducted during excavation activities. The health and safety plan used during the RI will be modified to reflect the additional air monitoring activities. The health and safety plan will be in compliance with the NYSDOH Community Air Monitoring Plan and the NYSDEC TAGM #4031 for dust control. Fixed community air monitoring stations will be installed at the perimeter of the property. One station will be installed upwind and at least two downwind of each open excavation area to monitor dust and VOC concentrations in ambient air leaving the property. If VOC concentrations at downwind stations exceed those at the upwind station by more than 5 ppm, a vapor abatement program will be implemented. Air monitoring stations will collect readings during active excavation work. The excavation will be managed and conducted to reduce the downwind VOC concentrations in ambient air leaving the property as much as possible.

Work area air monitoring will be performed by monitoring the breathing zone of excavation and work zone personnel with an Hnu/PID or equivalent.

Prior to initiating the IRM activities generally described above, Department approval of the IRM work plan developed by BP America for the project will be required.

III. IRM Evaluation

BP America has proposed this IRM project as a method to remove the source of the ground water contamination associated with the Carborundum Global facility. The program is technically feasible as it employs standard excavation techniques. The disposal of the contaminated soil will be off-site at approved waste disposal facilities. It is expected that utilization of the "contained-in" guidance discussed above will allow most of the contaminated soil to be disposed of in an approved Part 360 landfill.

The anticipated problems with this project are the control of vapor emissions, control of fugitive dust and proper handling and disposal of groundwater from the excavation. These issues are addressed in the work plan developed for the project.

As part of development of this IRM project, other remediation technologies were evaluated to address the soil contamination. These technologies included thermal desorption, SVE, bio-remediation, and solidification. BP America proposed contaminated soil removal and off-site disposal for the following reasons:

- ▶ Permanence - Contaminated soils and source of groundwater contamination will be permanently removed from the site. Long term involvement through such activities as extended operation and maintenance will be avoided.
- ▶ Implementation - The remedy can be readily implemented and completed in a relatively short time period. Soil removal and off-site disposal will attain remedial goals set for the project. Given the relatively small size of the site and soil conditions found there, the effectiveness of the other technologies was found to be questionable.
- ▶ Community Acceptance - Complete removal of the soil contamination from the site will be more acceptable to the local community as these hazardous wastes will no longer be present. Truck traffic in the area will be significant but will occur in the late winter months when outdoor activity by the residents is reduced. Other technologies such as thermal desorption may cause concern among the community due to the processing of soil on site in the vicinity of the residential neighborhood.

IV. PRAP/ROD Process

The RI/FS process is continuing. The RI and Phase II RI have been completed and the Feasibility Study is scheduled for completion by April 1999. The PRAP/ROD is anticipated to be completed by June 1999. With the successful completion of the IRM, it is anticipated that no further remedial activities for site soils will be necessary. However, the PRAP/ROD process will determine if additional soil remediation is needed and will address ground water contamination.

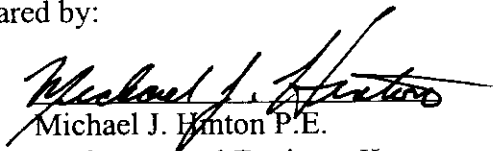
V. Public Meeting/Availability Session

A public meeting/availability session will be held in February 1999 to explain the upcoming IRM and answer any questions that the residents of the area may have.

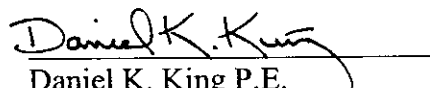
VI. Decision

The IRM project outlined above is an efficient and effective means of eliminating both contaminated soils at the Globar site and a source of contamination to the area groundwater system. As such, the Department has determined that it is appropriate to implement the project. This decision is conditioned upon approval of the IRM work plan for the project and concurrence of the New York State Department of Health.


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