STATEMENT OF BASIS

FACILITY: CECOS International Inc.
5600 Niagara Falls Boulevard
Niagara Falls, New York 14304

USEPA ID No.: NYD 080336241

Introduction

The purpose of this Statement of Basis (SB) is to provide an opportunity for the public to be informed of and to participate in the selection of a remedy that addresses the soil and groundwater contamination which has been observed at the CECOS International, Inc. (CECOS), Niagara Falls, New York facility.

This document:

- Provides a brief overview of the site history and site investigations which were conducted by CECOS;
- Identifies the proposed remedy for corrective actions at the facility and the rationale for selection of the remedy;
- Describes other remedies that were considered in detail in the Corrective Measures Study **(CMS)**;
- Solicits public review and comment on the proposed remedy and other plausible remedies;
- Provides information on how the public can be involved in the remedy selection process.

It should be noted that the New York State Department of Environmental Conservation (Department) has only selected a proposed remedy. Changes to the proposed remedy, or the selection of an alternative remedy may be made if public comments or additional data indicate that such changes would result in a more appropriate solution. The Department will select a final remedy for the facility only after the public comment period has ended and the comments have been reviewed and considered.

This document summarizes information that can be found in greater detail in the administrative record for the facility, which includes the CECOS RCRA Facility Investigation **(RFI)** Report and Corrective Measures Study. The Department encourages the public to review the administrative record in order to gain a more comprehensive

understanding of the nature and extent of soil and groundwater contamination which have occurred at the CECOS facility, and the possible remedies to address that contamination.

Background

CECOS owns and operates a treatment storage and disposal facility in Niagara County, New York. The facility covers an area of approximately 385 acres and contains a number of different types of waste handling, treatment and disposal units. The majority of the facility is located within the Town of Niagara; however, a portion of the facility extends into the city of Niagara Falls. The property is bordered to the northeast and east by the Niagara Expressway (I-190), to the south and west by industrial properties and to the northwest by Packard road. (See Figure 1)

In 1897, Union Carbide purchased a portion of the current facility area and sequentially purchased the remaining parcels of the property between 1897 and 1948. The primary waste disposal activities that occurred during that time period involved deposition of lime slurry and slag waste generated as by-products of acetylene production and the manufacture of alloy metals by Union Carbide. Miscellaneous construction and industrial debris and sludge may also have been disposed of on site during this period.

In 1972, Niagara Recycling, Inc. purchased the property and obtained a permit to construct and operate a solid waste management facility. In the mid 1970s, CECOS' predecessor, Newco Chemical Waste Systems Inc., and affiliated companies, Niagara Recycling, Inc., and Newco Waste Systems, Inc. submitted an application for the construction and operation of chemical waste facilities and additional sanitary landfills on the property. The Department issued a permit to construct Secure Chemical Management Facility (SCMF) #1 in 1977. Since that time, various waste units have been sequentially developed, including four additional hazardous waste disposal units (SCMFs) and seven sanitary landfills. Facilities to handle wastewater and drummed waste have also been permitted and constructed.

At this time the only active commercial operations at the facility are the sanitary (non-hazardous waste) landfills and the wastewater treatment system. Hazardous waste disposal activities ceased in the late-1980s.

RCRA Facility Investigation

As required by NYSDEC 6 NYCRR part 373-2 and USEPA Hazardous and Solid Waste Amendments of 1984 permits dated October 31, 1988, CECOS has investigated forty seven (47) Solid Waste Management Units **(SWMU)** and Site-wide Areas of Concern **(AOC)** at the Pine Avenue facility. Based upon the investigations, it has been determined that hazardous waste constituents have been released to the fill/soil and groundwater beneath the facility. Detailed descriptions of the investigations can be obtained by referring to the RCRA Facility Investigation (RFI) reports which are listed in Appendix A of this document.

The most significant area of contamination attributable to CECOS' operations is located in the central area of the facility. Evaluation of possible sources indicated that the former Phase I Wastewater Treatment Impoundments were the principle source of the contamination. Other inactive sources in the central area have also released hazardous waste constituents to the groundwater. **It is noteworthy that none of the observed contamination has been attributed to releases from any of CECOS' five hazardous waste landfills which were formerly operated at the site.**

The Permittee and the Department have worked together to implement Interim Corrective Measures at site locations where significant soil or groundwater contamination has been observed. The purpose of the Interim Measures has been to minimize the spread of the contamination and, ultimately, to improve groundwater quality in the affected areas. Under the Interim Measures programs, contaminated soils have been excavated and the Phase I impoundments were closed, graded and capped. Since 1991 CECOS has recovered and treated more than 26,000,000 gallons of contaminated groundwater from more than 20 wells at the site. As a result of these measures, there has been a dramatic decrease in the concentration of hazardous waste constituents in the groundwater at the site.

The most significant source of groundwater contamination at CECOS is a 24-acre unlined dumpsite known as NECCO Park. The Superfund dumpsite is located in the southwest quadrant of the CECOS facility and is bordered on three sides by CECOS. Necco Park is owned and operated by E.I. DuPont de Nemours and Company, Inc. (DuPont) and was previously used for the disposal of thousands of tons of industrial and hazardous wastes. Studies of the NECCO Park site indicate that the vast majority of the contamination which has been observed in the vicinity of CECOS is attributable to releases from the Necco Park dumpsite. DuPont has voluntarily implemented an interim groundwater remedial program to partially mitigate the environmental impacts associated with Necco Park. Additional remedial activities are planned for the facility.

Corrective Measures Study

Subsequent to the Department's approval of CECOS' Site-Wide RFI report, the Permittee submitted the "Site-wide Corrective Measures Study"**(CMS)**. The purpose of the CMS was to evaluate both the risks associated with the site contamination and the viability of various remedial alternatives which could be used to address it.

Summary of Facility Risks

As part of the CMS, a baseline risk assessment was conducted to evaluate the exposure pathways and to estimate the human health and environmental impacts associated with the observed contamination at the CECOS facility. In conducting this assessment, the focus was on oral and dermal exposure to contaminated soils and groundwater, inhalation of volatile organics and airborne semivolatile organics and inorganics released as particulates. The risk assessment evaluated both carcinogenic (cancer causing) and non-carcinogenic effects of exposure by these pathways. CECOS also evaluated the environmental impacts associated with the potential discharge of groundwater contamination to the Niagara River. (For a detailed analysis of the risks, the reader should refer to the CMS.)

Samples of soil and groundwater at the facility have contamination at levels exceeding federal and state standards. As stated previously, the highest levels of contaminants are located in the interior portions of the CECOS facility. At the observed levels, the contaminants may pose a potential risk to site workers who come into direct contact with the contaminated media.

Groundwater contaminant levels at the facility boundary are much lower than in the central part of the site; however, some compounds are present at concentrations slightly in excess of the groundwater protection standards which have been established for the site. Given the relatively low concentrations (<100 parts per billion of volatile organic compounds) of groundwater contaminants at the facility boundary, and given the fact that there are no known users of groundwater downgradient of the facility, CECOS concluded that under current and reasonably foreseeable future conditions, the chemical flux in the groundwater leaving the site poses little potential risk to human health or the environment. Nevertheless, from the Department's perspective, if no remedial actions are taken to restore the aquifer beneath the site, the groundwater contamination may pose an unacceptable long-term risk to human health and the environment.

Proposed Remedy

The Department has determined that a remedy based on cleaning-up

the contaminated groundwater to the groundwater protection standards, maintaining existing caps and pavement over areas of contaminated soil, restricting site access and developing restrictions on future site development, will be protective of human health and the environment. Those activities form the basis of the proposed remedial program.

The Department is proposing the following remedy to address the contaminated media at the CECOS facility:

Remedial Goals

Groundwater Control/Aquifer Restoration
Develop a groundwater recovery system to collect and treat contaminated groundwater from the Top of Clay, Top of Rock and Bedrock Aquifers. The goals of the groundwater recovery system shall be to :

- Restrict the plume of Top of Clay contamination to prevent its migration off-site of the facility.

- Remediate of the Top of Clay Zone contamination and restore the Top of Clay zone aquifer through the development and operation of a groundwater extraction system.

- Restrict the plume of Top of Rock contamination to prevent its migration off-site of the facility.

- Remediate of the Top of Rock Zone contamination and restore the Top of Rock Zone aquifer through the development and operation of a groundwater extraction system.

- Restrict the plume of Bedrock contamination to prevent its migration off-site of the facility.

- Remediate of the Bedrock Zone contamination and restore the Bedrock Zone aquifer through the development and operation of a groundwater extraction system.

Institutional Controls

In order to minimize the impacts of the soil and groundwater contamination on the surrounding community CECOS must:

(1) Restrict public access to the facility.

(2) Place formal notification on the deed to the facility property, or on some other instrument which is normally examined during title search, that will in perpetuity notify any potential purchaser of the property that:

(i) the land has been used to manage hazardous waste;

(ii) its use is restricted under 6NYCRR Part 373-2.7, as if it were a "hazardous waste disposal facility."

(3) Maintain the infiltration control measures previously installed at SCMF 1-5, Wastewater Treatment Phase I, Wastewater Treatment Phase II, Scrapyard, Sanitary Landfills I-IV, V and VII, and Intermediate Landfill Cells A, B & C.

(4) Continue the post-closure groundwater monitoring programs to insure that any future release from a regulated units (surface impoundment, landfill) will be detected and remediated.

The Department has determined that the proposed corrective measures are sufficiently protective of human health and the environment, and has developed a draft Permit which requires CECOS to design, construct and operate a long-term remedial system at the facility. A more detailed discussion of the proposed remedy is included below.

SCOPE OF CORRECTIVE ACTION

Because of the long-term potential for off-site migration, the contaminated groundwater is the principle threat to human health and the environment at the CECOS facility. The proposed remedy focuses on the recovery of contaminated groundwater in the central area of the CECOS facility, maintenance of existing infiltration controls (caps and pavement) and the monitoring of the facility's perimeter groundwater to assess the impact of off-site migration. The cleanup objectives are to prevent current and future exposure to contaminated groundwater and soils through treatment and/or containment, to reduce the migration of contaminants from soil to groundwater, and to reduce the migration of contaminants through the groundwater.

SUMMARY OF ALTERNATIVES

The CMS includes a preliminary screening of a variety of corrective measures alternatives. Each of the potential corrective measure alternatives was screened based on an evaluation of the technical feasibility, reliability and time requirements for each alternative. Based on the ability of each alternative to meet the screening criteria, the alternative is eliminated or retained for further detailed evaluation. The alternatives chosen for further evaluation for the groundwater remediation are the following:

- Alternative 1: No Action
- Alternative 2: Groundwater withdrawal and treatment at

an existing on-site treatment facility

- Alternative 3: Groundwater withdrawal and off-site treatment at a RCRA-permitted TSDF

CECOS has calculated the following costs associated with each alternative:

Alternative	Annual Cost
1	0
2	$883,000.00
3	$7,051,000.00

The annual cost does not include installation, operation, maintenance and monitoring costs for Alternatives 2 and 3 because the costs will be the same for both alternatives.

Alternative 1: No Action

The No Action alternative is evaluated to establish a baseline for comparison. Under this alternative, the Department would take no further action to prevent exposure to groundwater contamination. However the following institutional controls would be implemented:

1. Continuation of Groundwater Monitoring
2. Maintenance of Existing Site Security
3. Deed Restrictions

Alternative 2: Groundwater withdrawal and treatment at an existing on-site treatment facility.

This alternative involves the extraction of groundwater from the central area of the site via a groundwater extraction system, placement of the groundwater into existing holding tanks, transportation to and treatment of the groundwater at the existing on-site Wastewater Treatment(WWT) Phase II facility. After treatment the water would be discharged to the sanitary sewer, where it is subjected to additional treatment at the Niagara Falls Sewage Treatment Plant(POTW). Treating the groundwater at the existing WWT Phase II facility can be easily and quickly implemented because the facility is currently treating groundwater from the central area of the site for the interim corrective measures program.

Alternative 3: Groundwater withdrawal and off-site treatment at a RCRA-permitted TSDF

This alternative involves the extraction of groundwater from the

central area of the site via a groundwater extraction system, placement of the groundwater into existing holding tanks, and transportation of the groundwater by tanker trucks to an off-site RCRA-permitted treatment storage and disposal facility for treatment. This alternative would be as effective as alternative 2 at reducing contaminant levels in central area groundwater. However, this alternative does pose a greater off-site threat to the environment because of the potential of an accidental release as a result of a spill or traffic accident.

EVALUATION OF THE PROPOSED REMEDY AND ALTERNATIVES

The proposed remedy selected for remediating the groundwater at the CECOS facility is Alternative 2: Groundwater withdrawal and treatment at an existing on-site treatment facility. A conceptual depiction of the implementation of Alternative 2 is shown on Figures 8, 9 and 10 of Module III of the Draft Permit. The proposed approach to groundwater remediation is to develop groundwater "capture zones" in the contaminated aquifers beneath the central area of the facility. These capture zones will prevent the further spread of the contaminant plumes from the central area and should ultimately result in restoration of the aquifers at the facility. (The reduction in contaminant concentrations which have taken place as a result of the implementation of interim corrective measures support that premise.)

The following section profiles the performance of the proposed remedy against the four general standards and five remedial decision factors which the Department used to evaluate the efficacy of the remedy. It also compares the proposed remedy to the other remedial options under consideration.

1. Overall Protection. All of the alternatives, with the exception of the "no action" alternative, would provide adequate protection of human health and the environment by elimination, reducing or controlling risk through treatment, engineering controls, or institutional controls. The proposed remedy would extract central area groundwater and treat it to remove contaminants to reduce the risks of direct contact and minimize the migration of contaminants from the central area.

   Because the "no action" alternative is not adequately protective of human health and the environment, it is not considered further in this analysis as an option for this facility.

2. Attainment of Media Cleanup Standards. Alternatives 2 and 3 would meet their respective media cleanup standards for Federal and State environmental laws. Because the proposed

remedy would involve treatment of collected groundwater, discharge of the treated water must be in compliance with applicable regulations and/or permits.

3. Controlling the Sources of Releases. Alternatives 2 and 3 would be effective in reducing, to the maximum extent practicable, further migration of contaminants in groundwater. The proposed remedy would remove contaminated groundwater prior to reaching the facility boundary.

4. Compliance with Waste Management Standards. Alternatives 2 and 3 which involve the removal of groundwater and treatment would comply with the applicable requirements for the management of generated wastes. This would assure that the management of wastes is conducted in a protective manner.

5. Long-term Reliability and Effectiveness. Alternatives 2 and 3 should improve on-site environmental conditions due to the anticipated decrease in concentrations of constituents in central area groundwater. As a result, the contribution of constituents in the central area to the site groundwater should decrease and, therefore, further reduce off-site risks associated with the flux of constituents in groundwater at the site boundary.

6. Reduction of Toxicity, Mobility, or Volume of Wastes. Both Alternatives 2 and 3 should reduce the mobility, volume and, hence, the toxicity of the constituents via the removal of impacted groundwater from the central area of the site.

7. Short-term Effectiveness. Alternatives 2 and 3 should improve on-site environmental conditions due to the anticipated decrease in concentrations of constituents in central area groundwater.

8. Implementability. Both Alternatives 2 and 3 will require design and construction activities related to the installation of additional or replacement groundwater extraction systems. Treatment of groundwater at the existing Wastewater Treatment Phase II facility in Alternative 2 can be easily and quickly implemented because the facility is currently treating groundwater from the central area of the site as part of the ICM program. Alternative 3 requires finding an off-site facility which can treat the collected groundwater and contracting transportation for delivery.

9. Cost. The annual cost of the proposed remedy is $883,000. The annual cost of Alternative 3 is $7,051,000.

PUBLIC PARTICIPATION

The Department encourages input from the community on the remedial method proposed under each of the previous alternatives. The public is also invited to provide comments on remedial alternatives not addressed in the CMS. The Department has set a public comment period from December 28, 1994 to February 17, 1995, to solicit public participation in the selection process. The comment period includes a public meeting at which the Department will present the SB and Draft permit modification, answer questions and accept oral and written comments.

A public information meeting is scheduled for January 10, 1995 at 7:00 PM at the Niagara Falls Public Library, Earl Brydges building, 1425 Main Street Niagara Falls, New York 14305

The administrative record is available at the following locations:

Niagara Falls Public Library, Earl Brydges Branch
1425 Main Street
Niagara Falls, NY 14305

New York State Department of Environmental Conservation
270 Michigan Avenue
Buffalo, NY 14203
(716) 851-7220

and

New York State Department of Environmental Conservation
Division of Hazardous Substances Regulation
50 Wolf Road, Room 422
Albany, NY 12233-7251
(518) 457-9253

Comments will be summarized and responses provided in the Response to Comments. The Response to Comments will be drafted at the conclusion of the public comment period and incorporated into the administrative record. To send written comments or obtain further information, Contact:

Mr. Jeffery Dietz
New York State Department of Environmental Conservation
270 Michigan Avenue
Buffalo, NY 14203-2999
(716) 851-7165