WORK PLAN

Feasibility Study

Richardson Hill Road Municipal Landfill Site

March 1995

O'BRIEN & GERE
ENGINEERS, INC.

3729.036

Work Plan

Feasibility Study

Richardson Hill Road Municipal Landfill Site

March 1995

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A General Feasibility Study Report Outline

1. Introduction

This work plan was prepared by O'Brien & Gere Engineers, Inc. (O'Brien & Gere) for Amphenol Corporation and AlliedSignal Inc. (the "Respondents"). This work plan was prepared in accordance with the provisions established in paragraph 28 of the Administrative Order on Consent (AOC) pursuant to Sections 104 and 122 Index No.II-CERCLA-70-205 to perform a Feasibility Study (FS) for the Richardson Hill Road Municipal Landfill Site (RHRMLS). The purpose of the FS is to develop, evaluate, and recommend remedial alternatives for the site. This FS Work Plan has been developed to be consistent with the FS scope of work outlined in the adjacent Sidney Center Landfill Work Plan prepared by Malcolm Pirnie, Inc. (dated February, 1990).

The FS will be prepared in accordance with USEPA's *Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA* (USEPA, October 1988); the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended by the Superfund Amendments and Reauthorization Act (SARA); and the National Oil and Hazardous Substances Contingency Plan (NCP; 40 CFR 300).

The FS will address areas of buried waste materials and contaminants of concern (COCs) identified in the site Risk Assessment including volatile organic, polychlorinated biphenyls, semi volatile and inorganic constituents in sediments, surface soils, subsurface soils, ground waters, and surface water.

1.1. Site background

The Richardson Hill Road Municipal Landfill Site (RHRMLS) has been identified by the United States Environmental Protection Agency (USEPA) as an abandoned disposal site. The RHRMLS is located in northwestern Delaware County in south central New York State. The landfill is located on the west side of Richardson Hill

Road approximately 2.5 miles south-southwest of Sidney Center, New York (Figure 1).

The site is comprised of a former municipal landfill section, a waste oil pit located down-slope and adjacent to the landfill, and a parcel north of the landfill referred to as the north area (Figure 2). The landfill section was used primarily for disposal of municipal refuse. The waste oil pit was used by an independent contractor to dispose of waste oils, some of which contained polychlorinated biphenols (PCBs) and chlorinated solvents.

On July 27, 1987, the United States Environmental Protection Agency (USEPA) issued an Administrative Order on Consent (AOC) Index No. II-CERCLA-70-205 to Amphenol Corporation and AlliedSignal Inc. (the "Respondents") to perform a Remedial Investigation/Feasibility Study (RI/FS) for the RHRMLS.

The Remedial Investigation (RI), including supplemental RI activities, is nearing completion. A summary of Risk Assessment activities scheduled to begin in the spring of 1995 will be incorporated into the RI Report and the revised report will be submitted for final USEPA approval in December 1995. Activities conducted as part of the RI have indicated the presence of dissolved chlorinated solvents in overburden and bedrock ground water. In addition, light non-aqueous phase liquids (LNAPLs) or free-phase liquids have been observed in the overburden aquifer at monitoring well MW-5S located between the waste pit area and the South Pond (Figure 2). Visual observation of stained soils along the western shore of South Pond indicates that seeps are occurring into the pond. In the Spring of 1993, the USEPA conducted a site investigation in response to a reported fish kill in the South Pond (USEPA Preliminary Report: Wildlife Kill Investigations, June 1993).

On September 22, 1993 the USEPA issued an AOC Index Number II CERCLA-93-0214 to Amphenol Corporation and AlliedSignal Inc. (the Respondents) to establish baseline ground water chemistry and install treatment systems for water supply springs designated as #1, #2, and #3 that supply domestic water to part-time residences located adjacent to RHRMLS.

Baseline ground water chemistry was established and whole house treatment system units were installed at two residences in June 1994.

Treatment system effectiveness is monitored annually, in the spring, at systems' startup.

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

Investigations and removal actions performed as a component of the response action were completed in September 1994. The investigations indicated that the waste oil pit and other identified "hot spots" do not act as a reservoir of free-phase oil and do not constitute a continuing source of LNAPL. Furthermore, any LNAPL observed at the site did not exist in recoverable quantities that would warrant a continuing emergency removal action.

A focused sediment removal program was performed in the South Pond in August 1994 to reduce the potential ecological risks and to control the potential of contaminant migration from the pond associated with site contaminants in the sediments. Approximately 2200 cubic yards of sediment were removed and stored in two on-site bulk materials storage areas which significantly reduced the mass of contaminants in the South Pond.

The UAO activities and findings were summarized in the Final Report which was submitted to the USEPA in November 1994. The UAO Final Report was approved by the USEPA in February 1995.

2. Development and screening of remedial technologies

The development and screening of remedial technologies will begin with the identification of Applicable or Relevant and Appropriate Requirements (ARARs). Chemical-specific, location-specific, and action-specific ARARs will be identified for the RHRMLS.

Chemical-specific ARARs are health or risk-based numerical values or methodologies which are applied to site-specific conditions. These values establish the acceptable amount or concentration of a chemical that may be found in, or discharged to, the ambient environment. Location-specific ARARs set restrictions on activities based on the characteristics of the site or immediate environs. Action-specific ARARs set controls or restrictions on particular types of responses relating to the management of hazardous substances, pollutants, or contaminants. Action-specific ARARs will be identified following the assembly of remedial alternatives. The selected ARARs will pertain to technology process options which comprise the range of remedial alternatives.

Subsequent to identifying site ARARs, remedial action objectives (RAO) will be established. Contaminants and media of concern associated with the RHRMLS will be identified, as well as exposure routes and receptors. Acceptable exposure levels or preliminary remediation goals (PRGs) will also be established based on site investigation data, risk evaluation conclusions, or identified ARARs.

Information generated during the RI indicate that media which have likely been affected by previous disposal activities at the site are soils, ground water, surface water, and sediments. Preliminary RAOs being considered for these media are as follows:

<u>Soil</u>

- Prevent human/ecological receptors from being exposed to soil containing concentrations of site-related constituents above appropriate human

health/ecological risk levels and/or chemical-specific ARARs.

- Limit migration of site-related constituents from the soil to ground water.

Ground Water

- Prevent human receptors from being exposed to ground water containing concentrations of site-related constituents above appropriate human health risk levels and/or chemical-specific ARARs.

- Limit migration of ground water containing site-related constituents.

Surface Water

- Prevent human/ecological receptors from being exposed to surface water containing concentrations of site-related constituents above appropriate human health/ecological risk levels and/or chemical-specific ARARs.

Sediment

- Prevent human/ecological receptors from being exposed to sediments containing concentrations of site-related constituents above appropriate human health/ecological risk levels and/or chemical-specific ARARs.

It should be noted the identification of RAOs is an iterative process, and that final RAOs will be proposed after completion of the human health and ecological risk assessments.

The areas and volumes of media on-site will be calculated in order to develop and screen potential remedial technologies that meet the RAOs. The initial estimation of areas and volumes of media will be based on the site conditions as defined during previous investigations and the level of protectiveness specified in the RAOs.

Following the development of the site RAOs, general response actions (GRAs) will be evaluated. GRAs are categories of remedial

technologies which are identified to correspond with the RAOs for the site. A range of remedial technology types will be identified for each GRA considered. Technologies will be selected based on the known physical and chemical characteristics of the site, and the level of protectiveness specified by the RAOs. Subsequent to selecting the technology types, a broad range of process options for each technology which could potentially be applied to the site will be identified. Each process option will be evaluated based on technical implementability and general applicability, effectiveness, and cost as they relate to site conditions. Process options which will be ineffective in achieving RAOs, will not be implementable, will require unreasonable remedial time frames, or represent incomplete stages of development will be eliminated from further consideration. A preliminary list of GRAs, remedial technologies, and process options have been developed for each affected media. This information is included in the attached Tables 1 and 2.

The effectiveness evaluation will focus on the competency of a process to handle estimated areas and volumes of media and to attain RAOs. Evaluation will include impact to human health and the environment during construction and implementation, and process reliability with respect to contaminants and site conditions. Innovative technologies will be evaluated on the same basis as proven technologies, provided a sufficient amount of information is available. The resources which will be used to evaluate remedial technology effectiveness will include those listed during the identification of remedial technology process options. Technology process options which are assessed to be ineffective based on this evaluation will be excluded from further consideration.

Technical and administrative aspects of implementability will also be evaluated for each technology process option. Evaluation of technical implementability will be based primarily on physical and chemical site characteristics. Technology process options which are determined not to be implementable will be excluded from further consideration. Administrative implementability addresses the ability to obtain permits for off-site actions; treatment, storage, and disposal (TSD) facility capacity and services availability; equipment availability, and skilled labor availability.

Process option cost evaluation focuses on relative capital and operation and maintenance costs. Process option costs will be

evaluated on a qualitative basis, rather than a detailed basis, using high, medium, and low scale relative to other process options of the same technology type.

A meeting will be scheduled with the USEPA/NYSDEC subsequent to developing and screening remedial technologies. The meeting objectives will be to obtain general concurrence with the progress of the RHRMLS FS to this point.

3. Development and screening of remedial alternatives

Following the development and screening of remedial technologies, remedial alternatives will be developed which will include those technology process options identified to address each site issue. The main objective of this effort is to assemble a range of remedial alternatives such that the most favorable remedial approach for the site can eventually be selected from this range. The number of alternatives developed will be limited to the most effective and implementable approaches.

Typically, an alternative screening step would follow the alternative development process. The objective of this phase of the FS process is to screen and refine the range of alternatives for detailed analysis. If the number of alternatives originally assembled is manageable (typically less than ten), then the screening of alternatives step may not be necessary.

If the screening of alternatives is appropriate, alternatives will be screened on the basis of effectiveness, implementability, and cost. Remedial alternative effectiveness and implementability will be evaluated based on the factors discussed previously for the evaluation of effectiveness and implementability of process options. Cost estimates for remedial alternatives will be developed with relative accuracy, as it is often impracticable at this stage of the process to attain the degree of accuracy required during the detailed analysis of alternatives (+50 to -30 percent). Capital costs, operation and maintenance costs, and present worth costs will be considered and compared for each alternative. Present worth analysis is a method which estimates the initial capital costs and the annual operating costs for each year of the lifetime of the project in terms of current value. The cash flow for each year is discounted to a present worth to furnish an estimate of the present value of the total expenditure required for a remedial action. Present worth analysis is especially useful in comparing an alternative with high capital cost and low operating costs to an alternative with low capital cost and high operating costs.

Based on the results of the screening effort, the range of alternatives will be narrowed. The selection of an alternative for detailed analysis will be based on three criteria: effectiveness, implementability, and cost. The refined range of alternatives will preserve the range of remedial approaches to the extent possible, but include only those alternatives which are the most promising.

A meeting with the USEPA/NYSDEC will be scheduled subsequent to developing and screening remedial alternatives. The objective of this meeting will be to achieve concurrence between all involved parties on the refined range of remedial alternatives selected for detailed evaluation.

4. Detailed evaluation of alternatives

The principal objective of this effort is to generate sufficient information to facilitate the selection of an appropriate site remedy and to satisfy the USEPA remedy selection requirements in the Record of Decision (ROD). The detailed evaluation of alternatives process consists of the evaluation of proposed remedial alternatives to provide sufficient information to select one alternative for implementation. The alternatives will be evaluated based on specific regulatory requirements and technical, cost, and institutional considerations. Attempts will be made to collect an equivalent amount of information for each alternative in order to provide for a fair analysis. Alternatives will be analyzed with respect to the regulatory criteria, while keeping in perspective the overall logic of the alternatives, such as the level of benefits gained versus the level of resources expended.

The products of the detailed evaluation of alternatives, remedial alternative evaluations and advantages and disadvantages of remedial alternative, relative to each other, are the elements used to make decisions concerning remediation. For this reason, it is necessary during the detailed analysis of alternatives, as in the alternatives development process, to lay the foundation for remedial approaches which are reasonable given the site conditions and future site use. The relationship between resources allocated to implement remedial approaches and the associated benefits gained from those approaches will also be evaluated.

Subsequent to performing the detailed evaluation of remedial alternatives, a meeting will be scheduled with the USEPA/NYSDEC to present the results. The objective of this meeting will be to address the concerns and questions of all involved parties and focus on the contents of the draft FS Report.

Each remedial alternative remaining after the development and screening of alternatives process will be evaluated in detail with respect to nine evaluation criteria. These nine criteria are the same

as those used by the USEPA during the alternative selection process. Threshold criteria which must be met in order for an alternative to be eligible for selection are overall protection of human health and the environment and compliance with ARARs. Primary balancing criteria which serve to balance the tradeoffs among alternatives are long-term effectiveness and permanence; reduction of toxicity, mobility, or volume; short-term effectiveness; implementability; and cost. Modifying criteria which are formally considered following receipt of public comment on the FS Report are state acceptance and community acceptance. The alternative selection process criteria are further defined, as follows:

THRESHOLD CRITERIA

Overall Protection of Human Health and the Environment

The analysis of each alternative with respect to overall protection of human health and the environment will provide an evaluation of whether each alternative achieves and maintains adequate protection of human health and the environment and a description of how site risks are eliminated, reduced, or controlled through treatment, engineering, or institutional controls. Unacceptable short-term or cross media impacts resulting from alternative implementation will also be considered under this criterion.

Compliance With ARARs

Each alternative will be evaluated to assess if it will attain identified ARARs. If an alternative does not attain ARARs, a rationale for invoking one of the waivers provided by SARA will be presented. Remedial alternatives which do not attain all ARARs may be selected under CERCLA, provided that one or more of six waiver conditions are met and protection of human health and the environment remains assured. The six waiver conditions are:

- fund-balancing,
- technical impracticability,
- interim remedy,
- greater risk to human health or the environment,
- inconsistent application of state standards, and
- attainment of equivalent standard of performance.

PRIMARY BALANCING CRITERIA

Long-Term Effectiveness and Permanence

The evaluation of long-term effectiveness and permanence will address the magnitude of residual risk remaining at the site after alternative implementation from untreated material or treatment residuals. The magnitude of residual risks remaining after the implementation of a remedial alternative will be assessed in terms of either cancer risk levels or the amounts and concentrations of the remaining hazardous materials, considering the persistence, toxicity and mobility of the hazardous substances. The adequacy and reliability of controls used to manage untreated materials or treatment residuals will also be evaluated. Long-term management controls include engineering controls (*e.g.* containment technologies), institutional controls, monitoring, and operation and maintenance. The potential need for replacement of the remedy will also be evaluated.

Reduction of Toxicity, Mobility, or Volume

The degree to which the alternatives reduce toxicity, mobility or volume of the hazardous materials at the site will be evaluated. The factors that will be considered include:

1. The treatment technologies utilized and the materials they would treat.
2. The amount of hazardous materials that would be destroyed or treated.
3. The expected degree of reduction in toxicity, mobility or volume of the hazardous materials.
4. The degree to which treatment is irreversible.
5. The type and quantity of residuals that would remain following treatment of hazardous materials. This will include consideration of the persistence, toxicity and mobility of the residuals.
6. Statutory preference for treatment as principal element.

Short-Term Impacts and Effectiveness

The objective of the short-term impacts and effectiveness evaluation is to assess impacts during remedy implementation until remedial objectives are attained. The short-term effectiveness of each alternative will be evaluated with respect to the protection of workers and the community during construction and implementation of the

alternative, environmental effects resulting from implementation of the alternative, and the time required to achieve remedial objectives.

Implementability

The ease or difficulty of implementing each alternative will be evaluated. The following factors will be considered:

1. The degree of difficulty in constructing and operating the technologies associated with the alternative.
2. The expected reliability of the technologies associated with the alternative.
3. The need to coordinate with or obtain permits and approvals from government agencies in order to implement the alternative.
4. The availability of necessary equipment and specialists.
5. The available capacity and location of treatment, storage and disposal services necessary for implementation.
6. The availability of prospective technologies that are under consideration.
7. The ability to monitor the effectiveness of the remedy.
8. The ease of undertaking additional remedial actions, if required.

Cost

Detailed cost estimates will be developed for each remedial alternative, in accordance with CERCLA guidelines. Capital costs, operation and maintenance costs, and present worth costs will be evaluated for each alternative. Both direct and indirect capital costs will be considered. Examples of direct capital costs include construction, equipment, and land/site development; examples of indirect capital costs include engineering, contingencies, and legal fees. Annual operation and maintenance costs are post-construction costs necessary for proper operation of the remedy. Operation and maintenance costs may include monitoring costs, energy costs, operating labor, and maintenance labor.

MODIFYING CRITERIA

State Acceptance and Community Acceptance

State regulatory acceptance and community acceptance will be officially addressed by USEPA in the Record of Decision (ROD) following the public comment period. It is assumed that these criteria will not require evaluation during the FS.

Following the individual analysis of alternatives, a comparative analysis will be performed to evaluate the relative performance of the alternatives with respect to each criterion. Advantages and disadvantages of each alternative relative to each other will be identified and key trade-offs evaluated. Based on the results of this evaluation, a remedial alternative will be selected for recommendation.

5. Feasibility study report

A FS Report will be prepared to document the remedial alternatives development, screening, and detailed analysis processes. The FS Report will present several tables summarizing the process, as well as text which documents the rationale throughout the process. Finally, one remedial alternative will be recommended for implementation in the FS Report. The recommended alternative will be one which demonstrates the most balanced favorable performance against the evaluation criteria. The proposed FS Report outline is presented in Appendix A.

6. Schedule

A conceptual, accelerated FS schedule was submitted on December 15, 1994. The successful completion of the outlined schedule will rely strongly on positive interaction and mutual cooperation between USEPA and the Respondents.

Tables

TABLE 1
PRELIMINARY LIST OF POTENTIAL SOIL AND SEDIMENT REMEDIAL TECHNOLOGIES AND PROCESS OPTIONS
RICHARDSON HILL ROAD MUNICIPAL LANDFILL SITE
SIDNEY, NEW YORK

General Response Action	Remedial Technology	Process Option	Description
No Action	None	None	No action.
Institutional Actions	Access Restrictions	Deed Restriction	Land use restrictions for the area of contamination.
		Fencing	Installation of a fence surrounding area of contamination.
Containment Actions	Cover	Soil Cover	Vegetated layer of soil covering impacted area.
		Low Permeability Cap	Low permeability cover over impacted area.
Removal Actions	Excavation	Excavation	Removal of impacted material using standard construction equipment such as front-end loaders and backhoes.
Disposal Actions	Landfill Disposal	Commercial Chemical Landfill	Placement of excavated impacted material in an off-site landfill.
		On-site Landfill	Placement of excavated impacted material in a landfill cell constructed on site.
Treatment Actions	Physical Treatment	Soil Washing	Separation of contaminant-bearing particles in soils. The soil washing process involves aqueous based washing solution resulting in separation of fine grained soil, to which organic compounds typically adsorb, from coarser-grained soil.
		Soil Vapor Extraction	Stripping of VOCs from soils.

TABLE 1
PRELIMINARY LIST OF POTENTIAL SOIL AND SEDIMENT REMEDIAL TECHNOLOGIES AND PROCESS OPTIONS
RICHARDSON HILL ROAD MUNICIPAL LANDFILL SITE
SIDNEY, NEW YORK
(continued)

General Response Action	Remedial Technology	Process Option	Description
Treatment Actions (Continued)	Chemical Treatment	Solidification/Stabilization	Addition and mixing of solidifying or stabilizing agents with soil or sediment to immobilize contaminants.
		Dechlorination	Use of chemical reagents to dechlorinate PCBs and produce non-toxic byproducts. Chemical reagents used are typically prepared from polyethylene glycol and potassium hydroxide.
		Solvent Washing/Extraction	Removal of PCBs from excavated contaminated soil or sediment and concentrating them with a solvent stream. The solvent can be recovered.
	Biological Treatment	*Ex situ* bioremediation	Degradation of organic compounds by biological organisms.
		In situ bioremediation	In place degradation of organic compounds by biological organisms.
	Thermal Treatment	Incineration	Combustion of excavated material in an off-site or on-site incinerator.
		Thermal Desorption	Organics are volatilized with low energy heat processes in this technology.
		Thermal Gas-Phase Reduction	Conversion of PCBs to methane gas and hydrochloric acid using heated hydrogen. The products are then recycled within the process.
		In Situ Vitrification	Vitrification involves the transformation of soil into pyrolyzed mass using high power electrical current. A hood is typically placed over the area of application in order to capture off-gases.

TABLE 2
PRELIMINARY LIST OF POTENTIAL GROUND WATER AND SURFACE WATER TECHNOLOGIES AND PROCESS OPTIONS
RICHARDSON HILL ROAD MUNICIPAL LANDFILL SITE
SIDNEY, NEW YORK

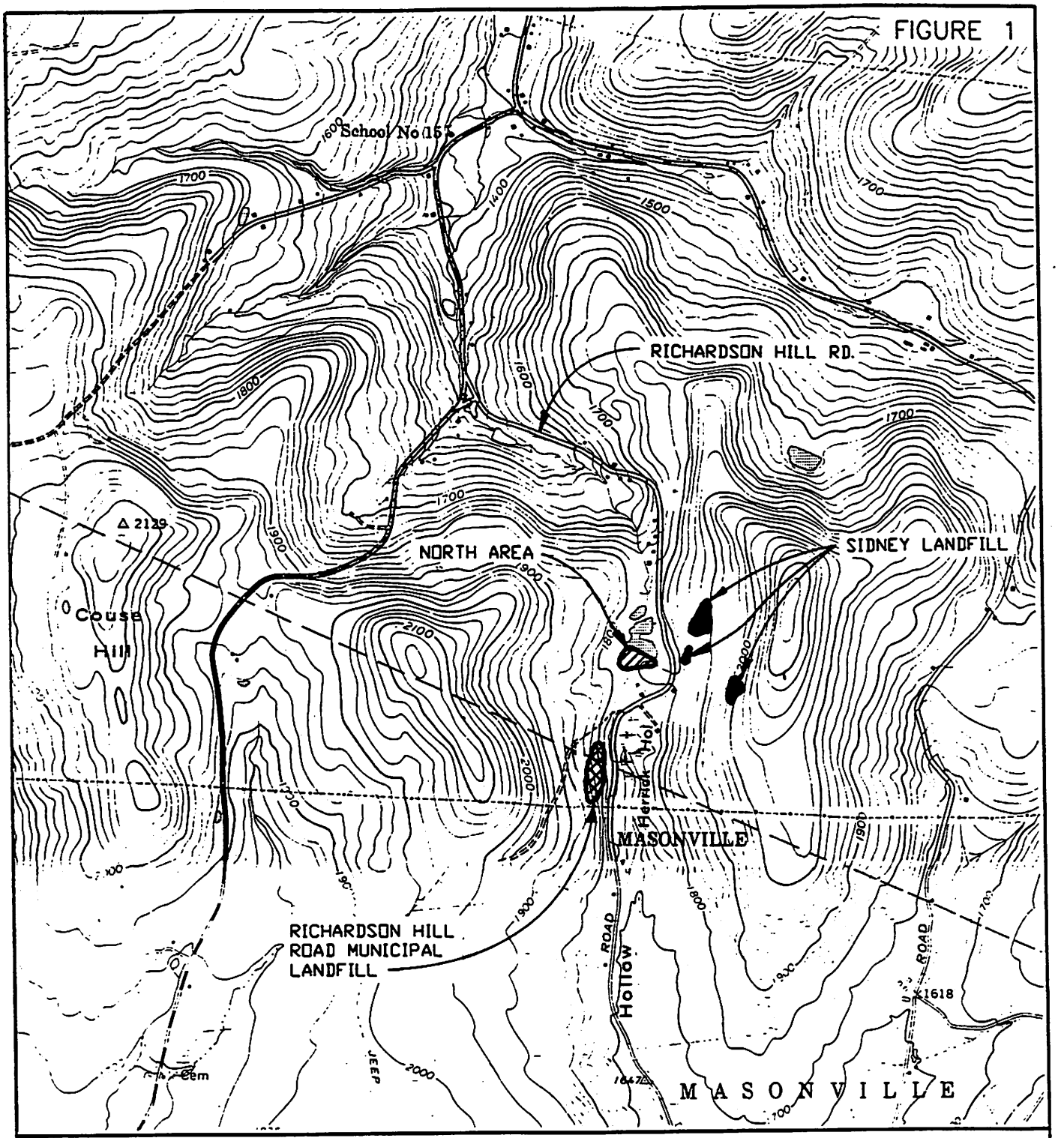
General Response Action	Remedial Technology	Process Option	Description
No Action	None	None	No action.
Institutional Actions	User Restrictions	Deed Restrictions	Restriction of ground water use in impacted area.
	Alternate Water Supply	Alternate Drinking Water Supply	Replacement of ground water supply with drinking water from an unimpacted source.
	Monitoring	Ground Water or Surface Water Monitoring	Periodic collection and analysis of water samples to document and evaluate water quality.
Containment Actions	Subsurface Barriers	Slurry Wall	Soil or cement bentonite slurry trench surrounding impacted ground water
		Grout Curtain	Pressure injection of grout into soil to form a barrier surrounding impacted ground water.
Collection Actions	Single-Phase Extraction	Extraction Wells	Use of ground water extraction wells to pump and collect contaminated ground water.
	Dual-Phase Extraction	Extraction Wells	Use of ground water extraction wells to pump and collect contaminated ground water and vapor.
Treatment Actions	Physical	Settling	Retention of water in a tank to settle or separate heavy components.
		Filtration	Separation of water and solids using a semipermeable filter medium.
		Air Stripping	Contact of air with water in a countercurrent column or bulk reactor to transfer VOCs from water to air.
		Steam Stripping	Contact of steam with water in packed or tray tower to transfer VOCs from water to steam.
		Carbon Adsorption	Adsorption of organic compounds from water to activated carbon.

TABLE 2
PRELIMINARY LIST OF POTENTIAL SOIL AND SEDIMENT REMEDIAL TECHNOLOGIES AND PROCESS OPTIONS
RICHARDSON HILL ROAD MUNICIPAL LANDFILL SITE
SIDNEY, NEW YORK
(continued)

General Response Action	Remedial Technology	Process Option	Description
Treatment Actions (continued)	Physical (Continued)	Adsorptive Resins	Adsorption of organic compounds from water to commercial adsorptive resin.
	Chemical	Chemical Oxidation	Addition of oxidation agents such as hydrogen peroxide and ultraviolet light to water to oxidize or destroy organic compounds.
	Biological	PACT	Combination of biological and carbon adsorption treatment to degrade and remove organic contaminants from water.
		Sequencing Batch Reactor	Combination of equalization, aeration, and clarification within the confines of a single basin to biologically degrade organic compounds in water.
		Rotating Biological Reactor	Biological degradation of organic compounds in water through rotation of a shaft holding parallel circular disks which support microbial growth.
		Trickling Filter	Trickling of water over a bed of media which supports microbial film growth to biologically degrade organic compounds.
		In Situ biological treatment	Microbial degradation of organic contaminants *in situ* through injection of necessary nutrients and cometabolites to the aquifer.
Discharge Actions	With Treatment	Surface Water	Discharge of treated water to a nearby surface water body.
		Ground Water	Injection of treated water into ground water.
	Without Treatment	POTW	Discharge of recovered ground water or surface water to a Publically Owned Treatment Works.
		Commercial Facility	Discharge of recovered ground water or surface water to an off-site permitted commercial treatment or disposal facility.

Figures

FIGURE 1



RICHARDSON HILL ROAD
MUNICIPAL LANDFILL SITE

SITE LOCATION MAP

0 2000 4000

SCALE IN FEET

ADAPTED FROM U.S.G.S. TROUT CREEK N.Y., WALTON WEST N.Y., UNADILLA N.Y., AND FRANKLIN N.Y. 7.5 MIN.QUADRANGLES

7/24/92

3729 015.876

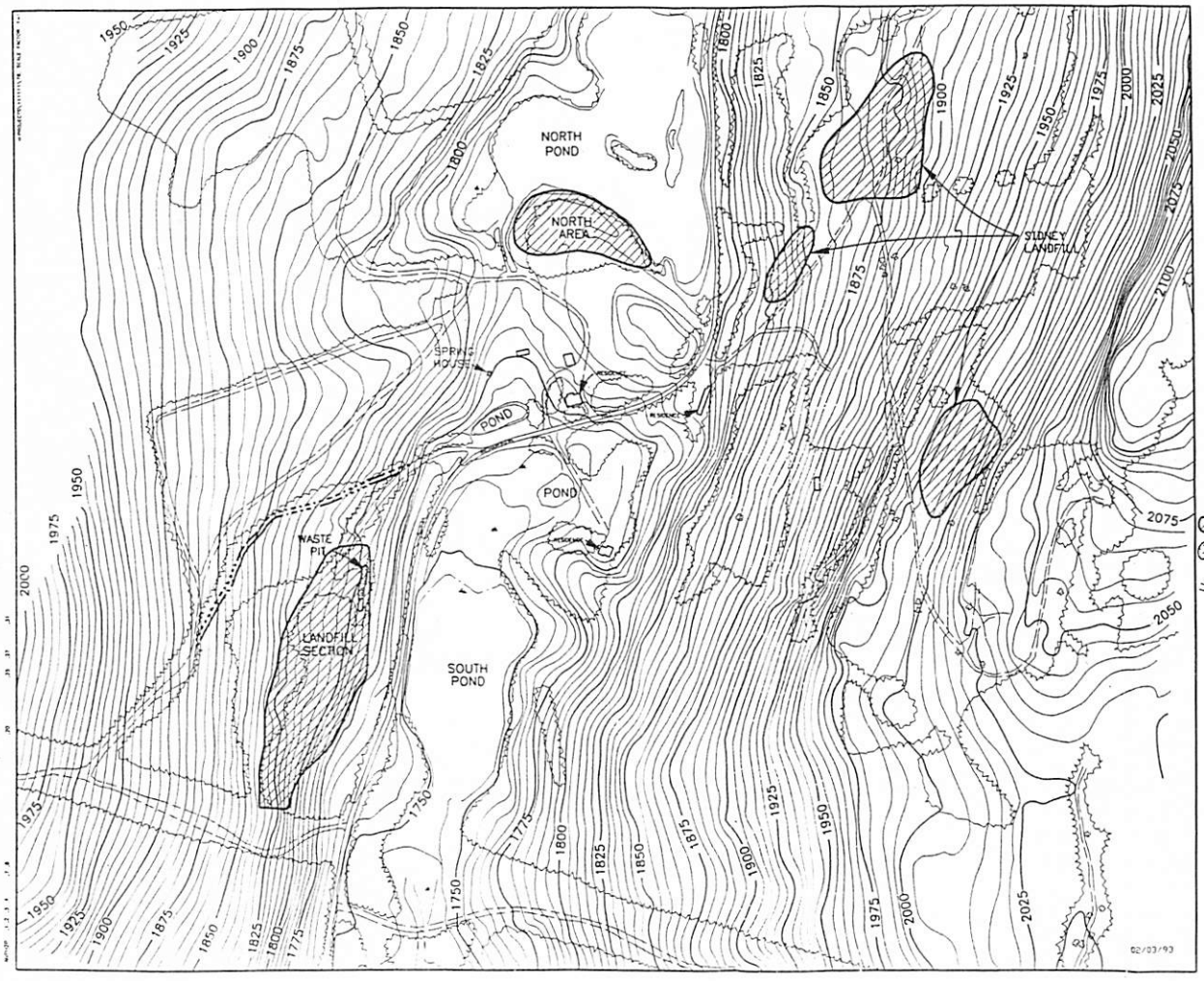
8.5X11

O'BRIEN & GERE ENGINEERS, INC.

FIGURE 2

RICHARDSON HILL ROAD
MUNICIPAL LANDFILL SITE

SITE MAP



LEGEND

- LANDFILL SECTION
- WASTE PIT AREA
- TREE LINE
- ROADWAY
- ROAD ADJACENT STONE WALL

0 300 600

SCALE IN FEET

3729.015.876

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ENGINEERS, INC.

Appendices

APPENDIX A

GENERAL FEASIBILITY STUDY REPORT OUTLINE

GENERAL FEASIBILITY STUDY REPORT OUTLINE

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