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UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY

PROPOSED PLAN
FOR THE

INDUSTRIAL EXCESS LANDFILL SITE
UNIONTOWN, OHIO

December 21, 1988

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I. INTRODUCTION

The United States Environmental Protection Agency (U.S. EPA) has identified a preferred alternative for remedial action at the Industrial Excess Landfill (IEL) site in Uniontown, Ohio. This document is the Proposed Plan for the final remedy for the IEL site. The plan summarizes remedial alternatives U.S. EPA has considered for the site, and presents and evaluates the preferred alternative. The array of alternatives summarized here are described in full detail in the Feasibility Study (FS) Report, November 1988. The FS report, as well as the Remedial Investigation (RI) Report, July 1988, should be consulted for a full description of the site investigation and of all alternatives analyzed.

Section 117(a) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) requires that notice be published and a brief analysis of the Proposed Plan for site remediation be made available to the public. The RI/FS reports and the Proposed Plan are available for review in the local information repository, located at the Lake Township Trustees office in Hartville, Ohio.

U.S. EPA encourages public comment on the Proposed Plan and the remedial alternatives outlined in the FS report. Comments received during the public comment period will be considered when selecting the final remedial action for this site. The final remedial action selected will be presented in the Record of Decision (ROD) document.

II. OPPORTUNITIES FOR PUBLIC INVOLVEMENT

U.S. EPA, with the Ohio Environmental Protection Agency's (OEPA) participation, will hold a public comment period from December 21, 1988 to April 19, 1989, to encourage public participation in the selection process. The comment period includes public availability sessions allowing residents to discuss their questions and concerns with U.S. EPA and OEPA representatives on a one to one basis, and a public hearing at which U.S. EPA will present the FS report and Proposed Plan and formally receive comments. Site related information is available in the local information repository, which is located at the following:

LAKE TOWNSHIP TRUSTEES OFFICE
12360 Market North
Hartville, Ohio 44632
Hours: 8:00 a.m. - 5:00 p.m. Monday - Friday

The public can send written comments to or obtain further information from:

Art Gasior
Community Relations Coordinator
Office of Public Affairs 5PA-14
(312) 886-6128

Julie Mathiesen
Remedial Project Manager
Remedial and Enforcement
Response Branch 5HS-11
(312) 353-6756

U.S. Environmental Protection Agency
230 S. Dearborn
Chicago, Illinois 60604

Toll Free: 1-800-621-8431
(8:30 a.m. - 4:30 p.m. Central Time)

U.S. EPA encourages comment on any of the remedial technologies and alternatives presented in the FS, as well as on the Proposed Plan. Written comments must be postmarked no later than April 19, 1989.

Public Hearing on the Feasibility Study and Proposed Plan

A public hearing will be held by U.S. EPA and OEPA in order to present the Proposed Plan and FS, and formally receive public comment.

Date: March 29, 1989
Time: 7:00 p.m.
Location: Community Park Hall
Uniontown, Ohio

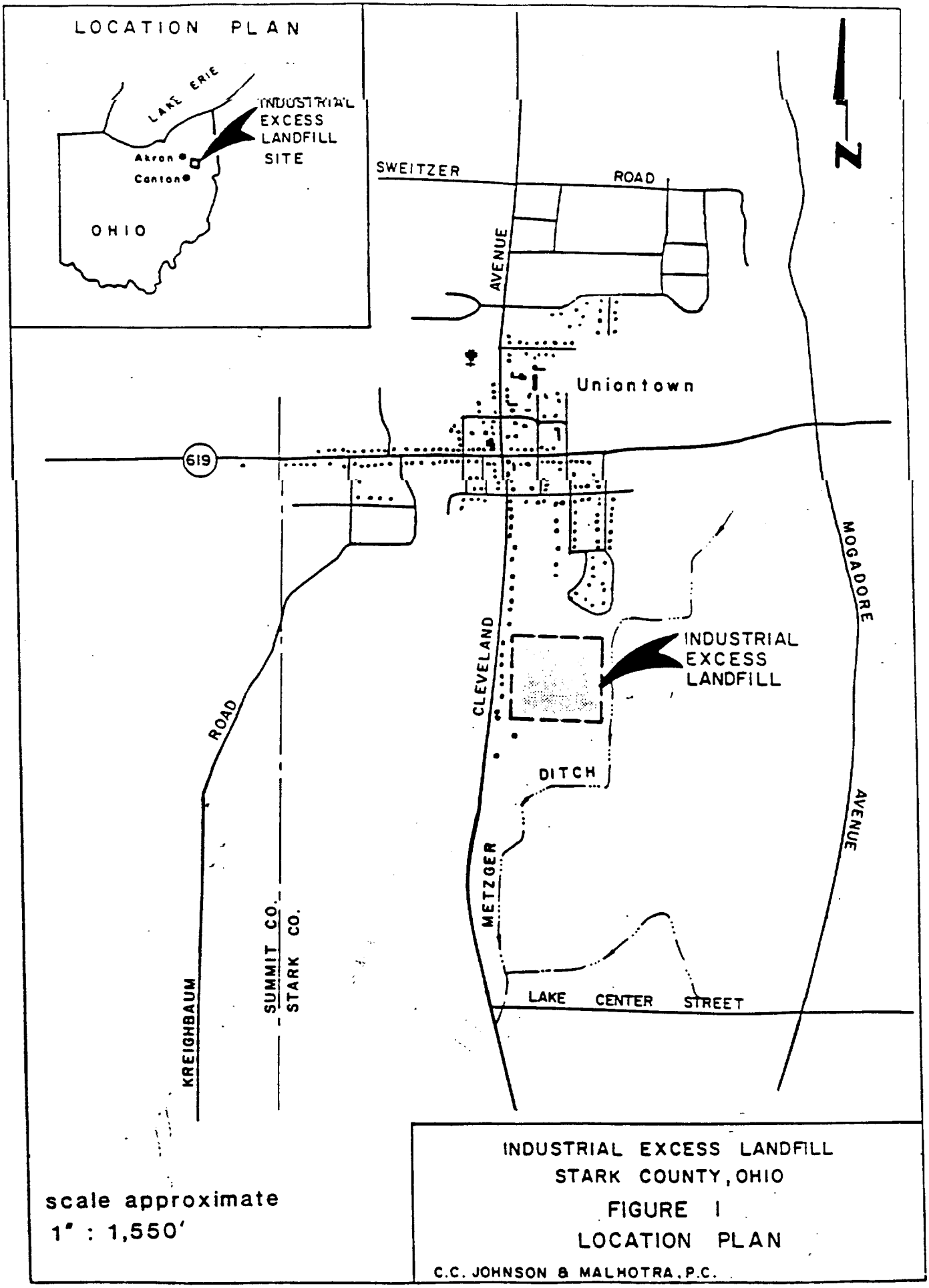
III. SITE BACKGROUND

The Industrial Excess Landfill (IEL) site is located in the unincorporated community of Uniontown, Ohio. Uniontown is located in Lake Township of Stark County, approximately 10 miles southeast of Akron. The site is about four-tenths of a mile south of the intersection of Cleveland Avenue and State Route 619, at 12646 Cleveland Avenue (See Figure 1).

Located on a 30 acre tract of land east of Cleveland Avenue, the site is set back from the road by a strip of land approximately 250 feet wide. This strip is occupied by 2 businesses and 6 single-family homes, one of which had been converted into a real estate office. Presently, five of the homes are occupied; the real estate office is vacant.

An additional 6 homes are present at the northern edge of the site along Hilltop Avenue and the southern curve of Amber Circle. The eastern border of the site is formed by Metzger Ditch, which drains the peat soils east and southeast of the site. A sod farm is located on the east side of Metzger Ditch. The tract of land south of the site is occupied by a seldom used sand-blasting and paint shop.

Several hundred residences are located within a half mile of the site, mainly to the north, west and southwest. All residences and businesses in the Uniontown area rely on groundwater obtained from individual or private well supplies.


LOCATION PLAN
LAKE ERIE
INDUSTRIAL EXCESS LANDFILL SITE
Akron
Canton
OHIO
N
SWEITZER
ROAD
AVENUE
Uniontown
619
CLEVELAND
MOGADORE
INDUSTRIAL EXCESS LANDFILL
ROAD
DITCH
METZGER
AVENUE
SUMMIT CO.
STARK CO.
KREIGHBAUM
LAKE CENTER STREET
scale approximate
1" : 1,550'
INDUSTRIAL EXCESS LANDFILL
STARK COUNTY, OHIO
FIGURE 1
LOCATION PLAN
C.C. JOHNSON & MALHOTRA, P.C.

Covered with grasses, small trees and shrubs, the site itself is gently rolling, with the highest elevation located at the northwest corner. The property slopes to the east and south, directing surface run-off to Metzger Ditch. The difference in elevation between the highest point and the lowest point, located at the southeast corner, is approximately 60 feet (Figure 2). There are four small ponds on the site located adjacent to Metzger Ditch.

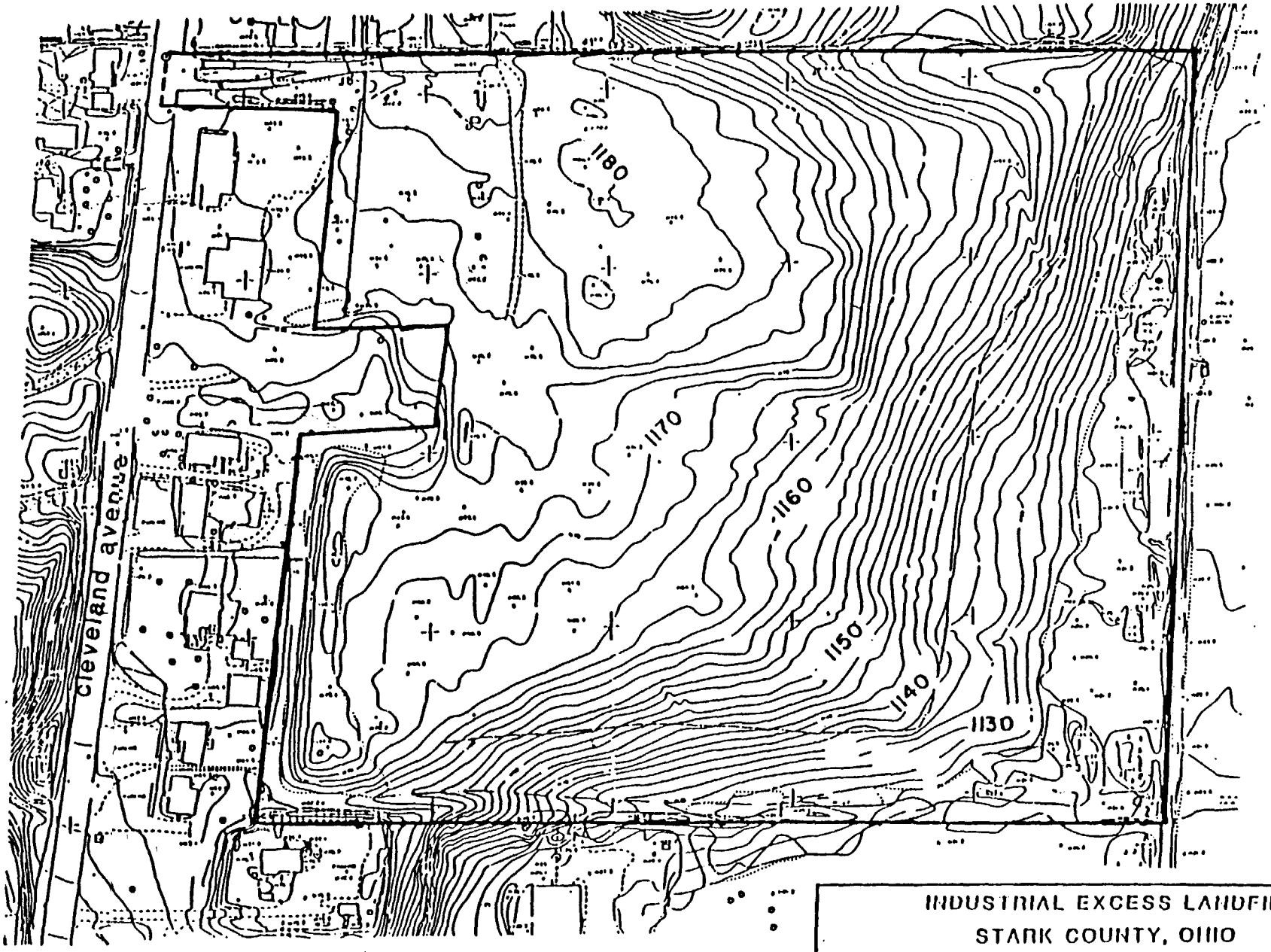
Formerly the site of a sand and gravel mining operation, IEL was operated as a mixed industrial and refuse landfill from 1966 to 1980, when it was ordered closed. During operation, the landfill accepted an assortment of household, commercial, industrial (sludges, liquids, and solids) and chemical wastes. Large amounts of flyash were accepted at IEL from 1966 until at least 1972. Most of the liquid industrial wastes, including latex from the rubber industry, were dumped between 1968 and 1972. The method of disposing of these liquids was direct dumping on the ground, either in a lagoon or mixed with other waste. In 1972, the Stark County Board of Health ordered the cessation of liquids disposal. However, community residents indicate that some liquids were disposed of after that date. General organic material, including waste from the general public, was disposed of at IEL throughout its operation.

Due to public concern, and because the site was approaching its volumetric limit, the landfill was ordered closed in 1980. Approximately 80 to 85 percent of the site is underlain with waste. Depths of landfilling ranged from 60 feet at the northwest corner, to only several feet along the east and south portions of the site. Subsequent to closure, the site was covered with a sandy, gravelly soil and seeded. The site does not have an impermeable cap or liner.

In October 1984, the IEL site was proposed for inclusion on U.S. EPA's National Priorities List (NPL) of abandoned or uncontrolled hazardous waste sites eligible for investigation and cleanup under the Superfund Program. A Work Assignment was issued on December 26, 1984, for a comprehensive remedial investigation/feasibility study at the site.

In early 1986, an active methane extraction system was installed on the site by U.S. EPA's Emergency Response Team, in order to prevent the offsite migration of explosive levels of methane gas to adjacent homes. The methane venting system (MVS) consists of a series of extraction wells which collect landfill gas from depths of about 40 feet, and direct it toward a central point where the gas is then flared. The MVS has effectively prevented offsite migration of landfill gases since its installation.

During April 1987, U.S. EPA's Emergency Response Team also installed air-strippers in 8 residences and 2 businesses, in response to the presence of low levels of vinyl chloride and other volatile organics in their groundwater. The levels of vinyl chloride observed in 3 wells equal or exceed the Maximum Contaminant Level (MCL) for vinyl chloride of 2 parts per billion (ppb).



INDUSTRIAL EXCESS LANDFILL
STARK COUNTY, OHIO

FIGURE 2
TOPOGRAPHIC SITE MAP
CONTOUR INTERVAL = 2'

G.C. JOHNSON & MALHOTRA, P.C.

On September 30, 1987, U.S. EPA signed a Record of Decision to provide alternate water to 100 homes located west (downgradient) of the IEL site. This area includes those homes and businesses whose groundwater is currently contaminated by the site, and those who may be affected prior to the implementation of the final site remedy. The decision is considered to be one part, or an operable unit, of the overall site remedy. The Potentially Responsible Parties (PRPs) for the IEL site were ordered to design and construct the alternate water system. Design has begun and the system is expected to be on line by summer of 1990.

IV. SCOPE OF THE REMEDIAL INVESTIGATION/FEASIBILITY STUDY

Data gathered during the remedial investigation at the IEL site indicate the following:

- The most extensive body of contaminated materials consists of the wastes and waste/soil mixtures which constitute the landfilled portions of the site, approximately 2 million cubic yards. Excepting a small area located behind the tire shop, this material is contained entirely on the site. Landfill gases associated with the waste contain volatile organic compounds. The gases, however, are prevented from moving offsite by the MVS.

- The extent of surface soil contamination on the site appears to be limited to two relatively small leachate seep areas. Any contaminated surface soils present on the site were likely covered during the site's closure in 1980. Furthermore, clean soil materials were placed on the site surface by U.S. EPA's Emergency Response Team following installation of the MVS.

- Offsite migration of contaminants posing a threat to public health and the environment has only been associated with the groundwater in the shallow aquifer. This contamination extends approximately 600 - 1,000 feet west of the site.

The purpose of the Feasibility Study (FS) is to identify and evaluate remedial alternatives which will address the nature and extent of site contamination as determined during the remedial investigation. The FS consists of several phases:

- Determination of remedial action goals for the contaminated media at the site. The primary objective of a remedial action is to protect human health and the environment. Establishing remedial goals for contaminated media will achieve this protection.

- Identify potential treatment technologies for contaminated media and determine whether or not they are applicable to site and waste characteristics.

- Evaluate technologies clearing the previous screening on effectiveness, implementability, and cost. Technologies that pass this screening are then assembled into alternatives for the entire site.

- Perform detailed analysis, which evaluates and compares the site-wide alternatives.

V. SCREENING OF TECHNOLOGIES

Based on information gathered during the remedial investigation, it was determined that the remedial alternatives considered should address two major areas of concern: 1) the landfill waste/soil mixtures, coupled with the resulting landfill gas production; and 2) the contaminated groundwater.

Table 2-14 of the FS summarizes media-specific technologies that were screened for the IEL site. Table 2-15 of the FS summarizes the results of the screening. Based on site and waste characteristics, applicable technologies for groundwater remediation are: 1) groundwater recovery using extraction wells; 2) treatment such as filtration, air-stripping, activated carbon adsorption, precipitation/flocculation/sedimentation, and ion exchange/sorptive resins; and 3) discharge of water to either Metzger Ditch or to a Publicly Owned Treatment Works (POTW). Passive or active gas collection and flaring are applicable technologies for landfill gas remediation. Technologies applicable to remediation of the soil/waste mixture at the site include capping, vegetative cover, incineration, and excavation/offsite disposal.

The surviving technologies were then evaluated on effectiveness, implementability, and cost. Table 2-16 of the FS provides a summary of this evaluation. The groundwater technologies which survive these screenings include extraction, air stripping, precipitation/flocculation/sedimentation, filtration, activated carbon adsorption, and discharge to Metzger Ditch. The surviving technology for addressing the landfill gas is active collection and flaring. The remaining technology for addressing the soil/waste mixture at the site is capping.

The IEL site is comprised of approximately 2 million cubic yards of a heterogenous soil/waste mixture. Results of the remedial investigation indicate that there are no "hot spots", or areas where contamination is concentrated. Many technologies were screened out due to implementability and cost considerations resulting from the large volume and assortment of wastes at the IEL site.

The incineration of 2 million cubic yards of waste and soil would require continual operation of a large incineration facility for as much as 15 years. The wide variety of landfilled wastes would prevent continual operation of incinerators, as different compounds burn at varying temperatures and rates, which would require constant modifications during operation. As a result, the incinerator would be inoperational for a good deal of time, thus lengthening the overall time needed to incinerate. The landfill material

would need to be excavated and sorted prior to incineration. The excavation of a heterogenous and largely unknown waste material that has been undisturbed for as much as 20 years poses a substantial risk of increasing release of and exposure to contaminants. The sorting of 2 million cubic yards of waste material would be an unwieldy process. The wide variety of wastes would also require constant monitoring to ensure the effectiveness of equipment controlling emissions from the incinerator. The approximate cost for the incineration of 2 million cubic yards is in excess of $500 million. Implementability and cost considerations render incineration impractical within the realm of the Superfund program..

Risk, implementability and cost considerations combine to eliminate complete excavation/offsite disposal as a feasible remedy for the IEL site. As stated above, excavation of the waste material at IEL would be a hazardous process. The excavation of 2 million cubic yards would require approximately 7 years of continual activity, and the resulting increase in heavy construction traffic would pose some risk and inconvenience to the community. Current regulations under the Resource Conversation and Recovery Act (RCRA), which ban the land disposal of hazardous materials, would restrict offsite disposal of excavated material. The estimated cost for excavation/offsite disposal is $300 million. As with incineration, risk, implementability and cost considerations render this technology impracticable for the IEL site.

The remaining technologies were arrayed into site-wide alternatives which underwent detailed analysis based on the criteria described below.

VI. FEASIBILITY STUDY SUMMARY

The U.S. EPA has identified and evaluated an array of remedial alternatives that could be used to remedy the IEL site. The alternatives presented here are those that survived preliminary screenings to undergo detailed analysis. In evaluating these alternatives, U.S. EPA considered the following nine criteria:

1. Overall Protection of Human Health and the Environment addresses whether or not a remedy adequately eliminates existing or potential risks, and describes how risks are eliminated, reduced through treatment, engineering controls, or institutional controls.

2. Compliance with ARARs addresses whether or not a remedy will meet all of the applicable or relevant and appropriate requirements (ARARs) of other environmental statutes and/or provide grounds for invoking a waiver.

3. Long-term effectiveness and permanence refers to the ability of a remedy to maintain reliable protection of human health and the environment over time, once the remedial goals have been met.

4. Reduction of toxicity, mobility, or volume evaluates the anticipated performance of the treatment technologies a remedy may employ.

5. Short-term effectiveness involves the period of time needed to achieve protection and any adverse impacts on human health and the environment that may be posed during the construction and implementation period until remedial goals are achieved.

6. Implementability is the technical and administrative feasibility of a remedy, including the availability of goods and services needed to implement the chosen solution.

7. Cost includes capital and operation and maintenance (O&M) costs.

8. Support Agency Acceptance indicates whether, based on its review of the RI/FS and Proposed Plan, the support agency (OEPA) concurs, opposes, or has no comment on the preferred alternative.

9. Community Acceptance will be assessed in the Record of Decision following a review of the public comments received on the FS report and the Proposed Plan.

The alternatives that underwent detailed analysis are briefly described below. Detailed descriptions of the analysis are presented in the FS report. In general, U.S. EPA guidance (OSWER Directive no. 9355.0-19) recommends that a range of treatment alternatives be developed, along with a containment option involving little or no treatment, and a no action alternative. However, as noted in the guidance, there are some situations in which alternatives utilizing treatment of the contaminant source as the principal element are not applicable. The IEL site represents such a situation; a large volume of heterogenous waste with no identifiable hot spots of contamination amenable to treatment. Therefore, the alternatives that underwent detailed analysis do not include options that utilize treatment of the principal contaminant source.

Alternative 1 - No Action

The only response actions associated with the No Action alternative are the installation of a fence, to restrict site access, institutional controls and continual monitoring. No further corrective actions would be taken at the site. Operation and maintenance on the existing methane venting system (MVS) would be continued by OEPA. The proposed alternate water system would be implemented as planned, and the in-home air strippers would remain in place until the water system is on line. Operation and maintenance would consist of routine monitoring in order to assess changes in the location and concentration of the contaminant plume.

Construction Cost: $88,000
Annual O & M: $94,000
Total Present Worth: $864,000
Time to implement: 3 months

Alternative 2A - RCRA Cap, Expanded MVS, Groundwater Pump & Treat

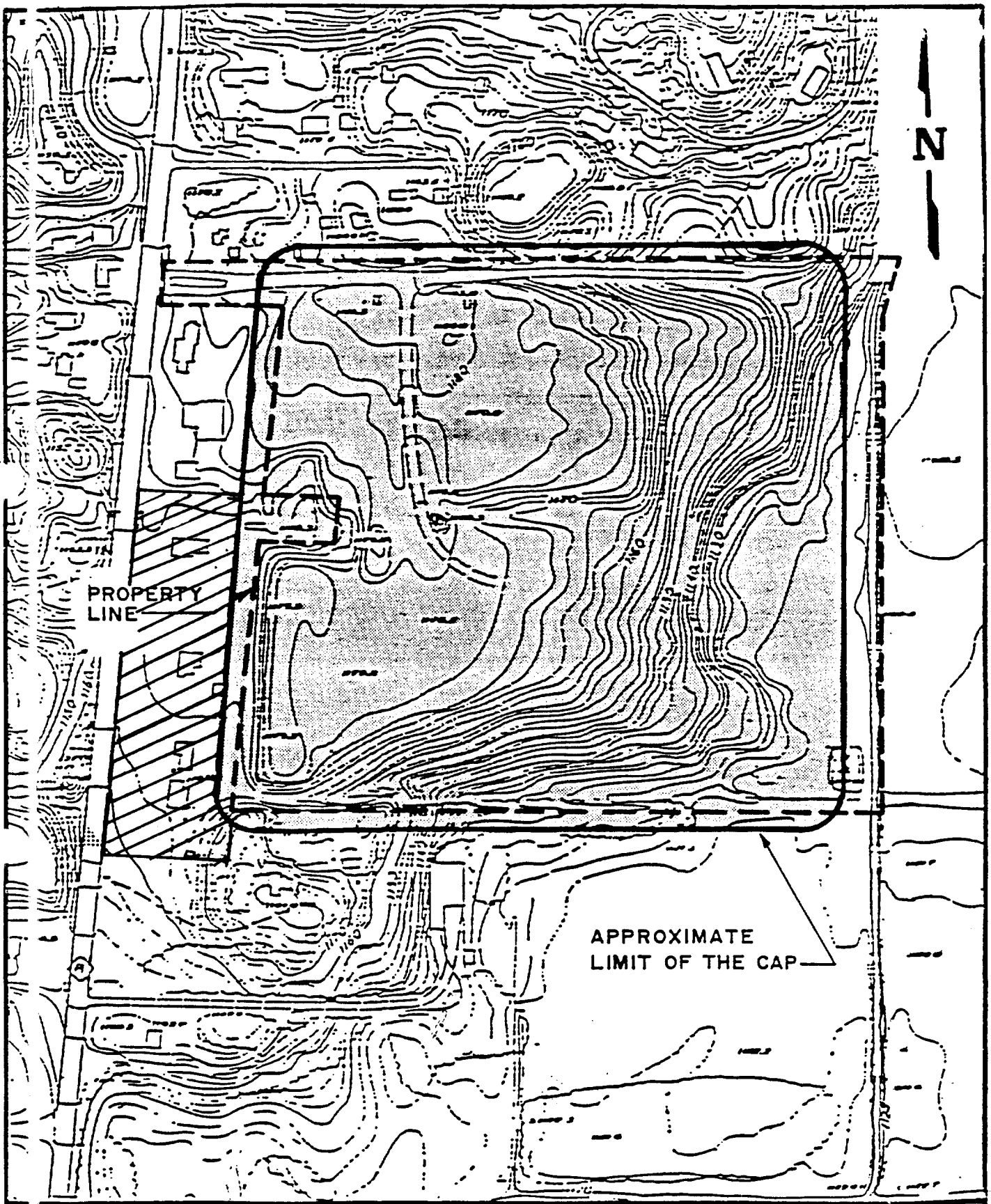
The major components of this alternative are: Fence, institutional controls, monitoring, RCRA cap, expanded MVS, groundwater collection, treatment, and discharge to Metzger Ditch.

A fence would be installed to restrict site access. A multilayer cap would be placed over the site to prevent direct contact with waste materials, and prevent infiltration of surface water into contaminated materials. The cap would be constructed as specified in RCRA regulation and guidance, and seeded following construction. Institutional controls would be imposed to restrict future use of the site property. For example, the site could not be used as a park, nor would any type of construction be allowed. Upon completion of the remedy, the site would essentially appear as it does now, a large grassy field.

The existing methane venting system (MVS) would be expanded to accommodate increased potential for lateral landfill gas migration due to the cap.

Groundwater would be collected by a number of extraction wells. The collected water would be treated, as necessary, by air stripping, carbon adsorption and flocculation/sedimentation/filtration to achieve compliance with the Clean Water Act discharge criteria. The groundwater collection system would remove the contaminant plume. Indirect containment would be achieved by lowering the water table, thereby preventing contact between groundwater and landfill waste materials. The hydrogeological characteristics of the site require that the groundwater be extracted in perpetuity to maintain the lowered water table. However, groundwater treatment would continue only as long as necessary to attain discharge criteria as required by the Clean Water Act. The criteria are developed during design and are based on specific site characteristics such as influent concentrations, location of discharge point, volume and flow of water in Metzger Ditch, usage of Metzger Ditch, relationship to other surface water bodies, etc. These criteria may or may not be less stringent than Safe Drinking Water Act criteria, and the possibility exists that the extracted groundwater will not need to be treated or will only be treated for a limited period of time.

As stated above, the purpose of installing a cap over the landfill is to prevent surface water from coming into contact with buried wastes. Because wastes were dumped right up to the edge of IEL's property lines, the proposed cap will have to extend beyond the perimeter of the site in order to be fully effective. At this point, U.S. EPA expects to use some fifty feet of land beyond the northern, western and southern edges of the landfill as part of the cap. U.S. EPA may need additional footage to ensure continued access to the cap over the long term. In addition, U.S. EPA proposes to use land along Cleveland Avenue as a staging area for construction activities and for a water treatment facility. Current projections indicate that the following properties would be needed: the staging area would comprise six properties along Cleveland Avenue - a vacant lot owned by a PRP, four occupied residences, and one vacant real estate office (See Figure 3). Other



SCALE	REM II	FIGURE
1" = 300'	INDUSTRIAL EXCESS LANDFILL STARK COUNTY, OHIO CAP OPTION I	3
DATE OCT. 1988		

C. C. JOHNSON & MALHOTRA, P.C.

properties to be acquired due to construction of the cap and future access include three residences immediately adjacent to the site along Hilltop Avenue, one residence adjacent to the northwest corner of the site, two businesses immediately west of the site, and the home at the southwest corner of the site.

Land aquisition at IEL will be handled by the Federal Emergency Management Agency (FEMA), in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act, 42 U.S.C. 4601 et seq., and corresponding regulations (40 CFR Part 4). The Unfiorm Act is designed (1) to ensure that citizens whose land is needed for a federal project are justly compensated; and (2) to enable those homeowners and businesses who are forced to move to relocate with as little hardship as possible.

Operation and maintenance for this alternative would include regular inspection of the cap for signs of settling, damage due to burrowing animals, deep-rooted plants, etc., and any necessary repairs. Periodic fertilization and mowing will be required. Continual operation and monitoring of the groundwater extraction system will include equipment maintenance, sludge removal, replacement of spent carbon, and sampling and analysis of effluent. The performance of the MVS will be monitored through routine sampling of gas monitoring wells. Regular inspections will be conducted and equipment will be replaced as necessary.

Construction Cost: $14,957,000[1]
Annual O & M: $440,000
Total Present Worth: $18,548,000
Time to implement: 12 - 18 months

Alternative 2B - RCRA Cap with Retaining Wall, Expanded MVS, Groundwater Pump & Treat

The major components of this alternative are: Fence, institutional controls, monitoring, RCRA cap with retaining wall, expanded MVS, groundwater collection, treatment and discharge to Metzger Ditch.

The components of this alternative are identical to those of Alternative 2A, excepting the addition of a retaining wall to the cap design, which would reduce the amount of adjacent land required for implementation. There are no functional differences between the alternatives. The retaining wall would be used to limit the extent of the cap along all of the western and portions of the northern and southern boundaries of the site. The retaining wall would be 6 to 8 feet in height and designed to contain the material comprising the RCRA cap (see Figure 4). This alternative would require the acquisition of approximately 25 feet of the properties adjoining the portion of the site with the retaining wall. Approximately 50 feet would be required of the properties immediately north and south of the site which are not adjacent to

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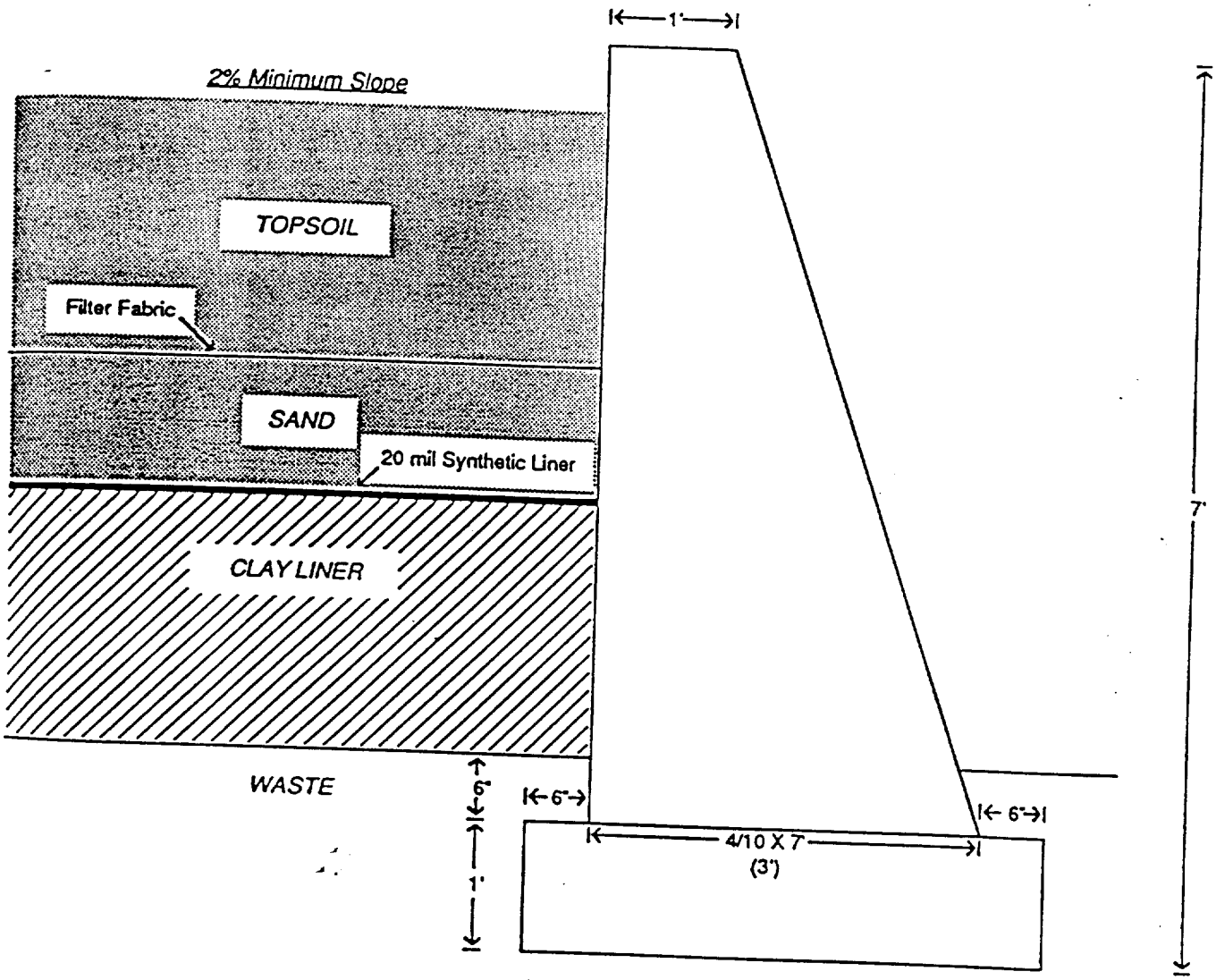
[1]This figure comes from the FS. Current estimates of the amount of land required indicate this figure may need to be increased by about $400,000.



INDUSTRIAL EXCESS LANDFILL,
UNIONTOWN, OHIO

Figure 4

TYPICAL CROSS-SECTION OF A RCRA CAP AND CONSTRUCTION DETAILS OF A CAP RETAINING WALL

C.C. Johnson & Malhotra, P.C.

the retaining wall. The staging area and water treatment facility would be located in the same location and require the same property acquisition as described in Alternative 2A (see Figure 5).

Operation and maintenance for this alternative would be similar to that which was described in Alternative 2A. Additional maintenance would be required for the retaining wall.

Construction Cost: $15,845,000
Annual O & M: $462,000
Total Present Worth: $19,644,000
Time to implement: 12-18 months

VII. U.S. EPA'S PROPOSED PLAN

Based upon the information developed on the IEL site, U.S. EPA's preferred remedy for the site is Alternative 2A - Fence, Institutional Controls, Monitoring, RCRA Cap, Expanded MVS, Groundwater Collection, Treatment and Discharge to Metzger Ditch.

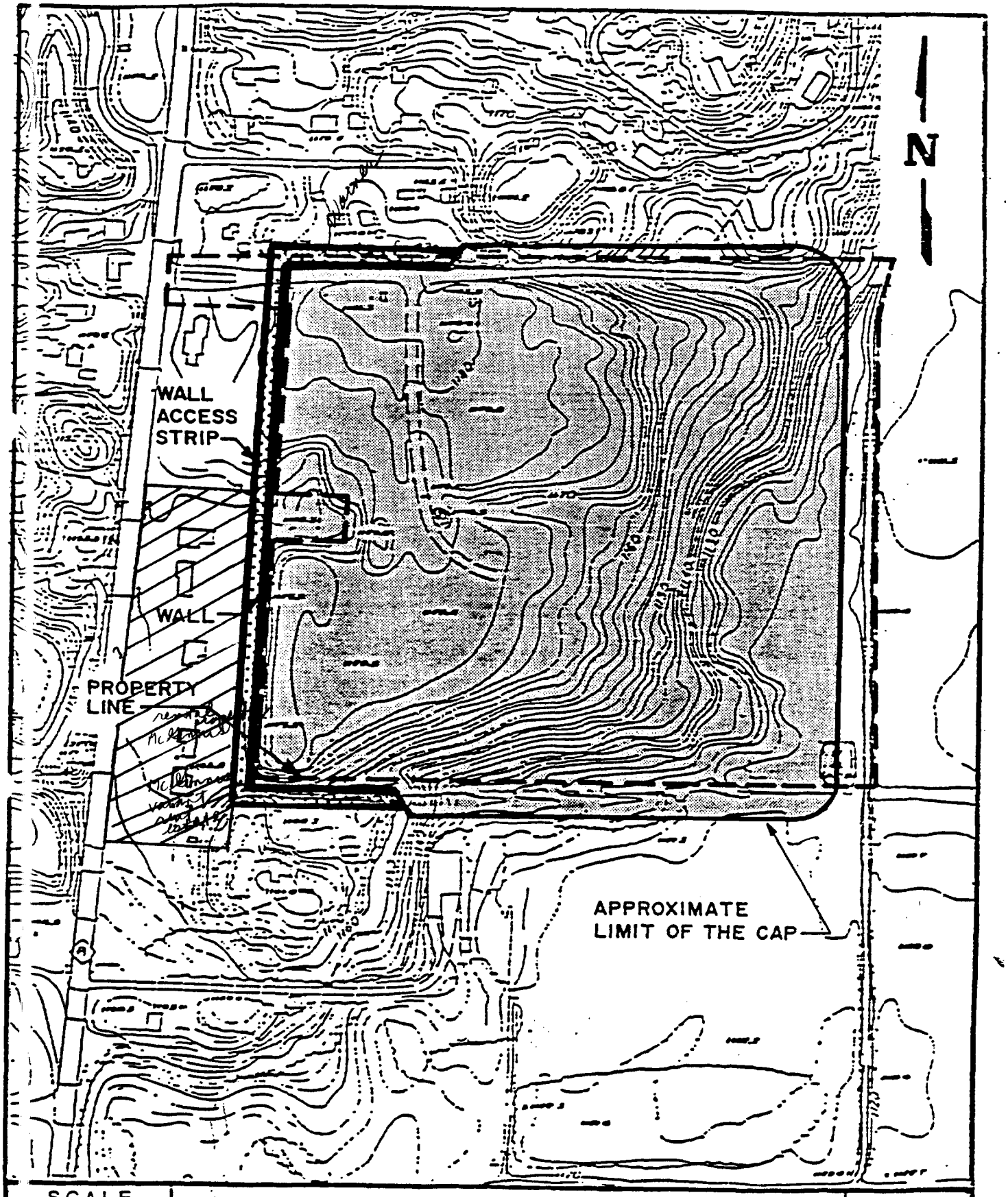
This alternative is protective of human health and the environment by extracting and treating contaminated groundwater and landfill gas, and by providing full containment of the landfill wastes.

The alternative will meet all applicable or relevant and appropriate requirements (ARARs) of environmental laws.

Long term effectiveness is gained through continual operation and maintenance of the containment system. Continual extraction of groundwater will maintain the lowered water table and prevent recontamination of groundwater through contact with the landfill wastes. The cap will prevent direct contact with waste material and the infiltration of surface water which would otherwise percolate down through the waste material and generate contaminated water or leachate that may migrate to the groundwater. The expansion and continued operation of the MVS would aid in maintaining the integrity of the cap by reducing the pressure of landfill gases. Continual monitoring will assess the effectiveness of the containment system. The site will be revisited every 5 years to assess the effectiveness of the remedial action.

The principal component of this alternative is containment, with elements of treatment. Although containment will reduce mobility, this alternative provides no treatment to reduce the toxicity, mobility or volume of contaminants associated with the landfill waste material. The alternative utilizes treatment to reduce the toxicity, mobility and volume of contaminants in the landfill gas through the continual operation of the MVS, which effectively destroys gaseous contaminants via combustion. The mobility of contaminants in groundwater is reduced by extraction and treatment. Volume and toxicity of contaminants are reduced, to a lesser degree, through the regeneration of spent carbon used in the treatment of groundwater.

The time to implement this alternative is 12 - 18 months. Increased volume of construction traffic will present some short term risks to the community,



SCALE	REM II	FIGURE
1" = 300'	INDUSTRIAL EXCESS LANDFILL	
DATE	STARK COUNTY, OHIO	5
OCT. 1988	CAP OPTION 2	

as will the excavation of landfill material necessary to expand the existing MVS. Construction of the containment system and water treatment facility will present little risk to the community.

All components of this alternative are proven technologies which are widely used and easily implementable. Delays due to technical difficulties are not likely. However, administrative delays are possible, with regard to the acquisition of privately owned property.

The construction costs for this alternative are $14,957,000. Annual O & M costs are estimated to be $440,000. Total present worth of this alternative is $18,548,000. The cost associated with the property to be acquired in addition to that which is needed for the staging area and water treatment plant, is approximately $400,000.

The State of Ohio has been consulted and concurs with the proposed remedy.

Community acceptance will be assessed following a review of public comments received.

VIII. POST FEASIBILITY STUDY/PROPOSED PLAN ACTIVITIES

The remedy for the IEL site presented here is U.S. EPA's proposed remedy. The final remedy will not be selected until the public comment period has closed and all comments received during that time have been considered. U.S. EPA selects its final remedy in the Record of Decision (ROD) document.

After the ROD has been signed, the project enters the design phase. During this phase, additional information needed to actually design and implement the remedy is gathered. Monitoring wells will be installed to precisely define the contaminant plume, particularly in areas south, north and east of the site. Pump tests will be performed to further define groundwater flow rates and develop extraction systems that will remove the contaminant plume.

Tests will be conducted to determine the volume and pressure of gases within the landfill, and the effect that a cap would produce. This information will be used to determine the size of the system needed to collect these gases. Representative samples of landfill gas will be collected and sampled to determine the components of the gas. Modifications to the collection system will be made to ensure proper treatment and control of the gas. The placement of landfill gas monitoring wells, used to monitor the effectiveness of the system, will also be determined during this phase.

The design documents for the remedy are not finalized until all the necessary information has been gathered. The design phase lasts approximately 12 - 15 months. Upon completion of the design, implementation of the remedy will begin. Data is also gathered during implementation of the remedy, although not as extensively as during the RI or design phase. Alterations in design can be made during implementation of the remedy, if field information indicates the need to do so. After the remedy is in place, regular

monitoring and inspections will be conducted. The remedy will be reevaluated every five years.