1477

New York State Department of Environmental Conservation
Division of Environmental Remediation
Bureau of Hazardous Site Control

828075

ADDITIONS/CHANGES TO REGISTRY: SUMMARY OF APPROVALS

SITE NAME: FORMER BURROUGHS - UNISYS DEC I.D. NUMBER 828075

Current Classification 2 Volunteer Yes ___ No ___
Sign (7) below

Activity: ☐ Add as Class ___ ☑ Reclassify to 4 ☐ Delist Category ___ ☐ Modify ___

Approvals:

1. Regional Hazardous Waste Engineer Yes ☑ No ☐ ___
2. BEEI of NYSDOH Yes ☑ No ☐ ___
3. DEE Yes ☑ No ☐ ___
4. BWRA Remediation Action Bureau Director [Class 2] Yes ☑ No ☐ ___
5. BHSC - Investigation Section Yes ☑ No ☐ ___
6. BHSC - O&M Section [Class 4] Yes ☑ No ☐ ___

← ROD RECLASSIFICATION

7. BPM - Brownfield & Voluntary Cleanup Section n/a Date ___
8. Site Control Section Robert W. Marino Date 12/10/98
9. Director [signature] Date 12/24/98

Completion Checklist for Registry Sites

		Completed By: Initials	Date
OWNER NOTIFICATION LETTER?	☑	___	1-8-99
ADJACENT PROPERTY OWNER NOTIFICATION LETTER?	☑	___	1-26-99
ENB/LEGAL NOTICE SENT? (For Deletion Only)	☐	___	___
COMMENTS SUMMARIZED/PLACE IN REPOSITORY	☐	___	___
FINAL NOTIFICATION SENT TO OWNER? (For Deletion Only)			

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION

8/23/94

SITE INVESTIGATION INFORMATION

1. SITE NAME	2. SITE NUMBER	3. TOWN/CITY/VILLAGE	4. COUNTY
Former Burroughs-Unisys	8-28-075	City of Rochester	Monroe

5. REGION	6. CLASSIFICATION		
8	CURRENT 2	PROPOSED 4	MODIFY

7. LOCATION OF SITE (Attach U.S.G.S. Topographic Map showing site location)

a. Quadrangle Rochester

b. Site Latitude 43 ° 11 ' 35 " Site Longitude 77 ° 39 ' 49 '"

c. Tax Map Numbers: 090 - 450 - 0001 - 001

d. Site Street Address 1225 Ridgeway Ave, Rochester New York 14615

8. BRIEFLY DESCRIBE THE SITE (Attach site plan showing disposal/sampling locations)

The site is located in an industrial/commercial section of Rochester. The area is serviced by municipal water and sewer. The site is presently an active manufacturing facility. Unisys operated the site from 1979 - 1986. In 1986, underground storage tanks containing 2-butanone, methanol and isopropyl alcohol were found to be leaking and were removed. Unisys conducted environmental investigations in 1987 -1989 and signed a consent order in 1990. Contaminant levels in on-site groundwater were initially at percent levels for site solvents and included acetone which is reported as a breakdown product of isopropanol. 1990, Unisys conducted a IRM which included construction and operation of a dual phase groundwater/soil vapor extraction system. In 1994, following a RI/FS, a ROD was signed which called for enhancements and modification to the GW/SVE system. The GW/SVE system was operated until 1997. Confirmation sampling indicated that soil in the former underground storage tank area was successfully remediated to below the remedial action objectives (RAOs) established in the ROD. One small area of groundwater contamination (GW-5) remains above the groundwater RAOs (acetone is detected around 0.5 ppm). The groundwater contamination is no longer found off the site or in the deeper wells. A long terms monitoring plan, which includes an evaluation of natural attenuation, has been established to monitor the remaining groundwater contamination.

a. Area 5 acres b. EPA ID Number _____

c. Completed (X)Phase I (X)Phase II ( ) PSA (X)RI/FS ( )PA/SI (X)Other IRM/Remedial Design/Remedial Construction/ Long Term Monitoring Program

9. Hazardous Waste Disposed (Include EPA Hazardous Waste Numbers)

Isopropanol, Methanol, 2-Butanone quantities unknown

10. ANALYTICAL DATA AVAILABLE

a. (X)Air (X)Groundwater (X)Surface Water (storm sewer) (X)Sediment (within storm sewer (X)Soil ( )Waste ( )Leachate ( )EPTox ( )TCLP

b. Contravention of Standards or Guidance Values - Yes

Groundwater was initial contaminated with site solvents at percent levels, including acetone which is reported to be a breakdown product of isopropanol. Remediation has reduced soil levels in the former underground storage tank area to below RAOs. One small area of shallow on-site groundwater contamination persists (GM-5) with detections of acetone above the RAO's (acetone concentration range around 0.5 ppm).

11. CONCLUSION

Site soil has been successfully remediated by the dual phase GW/SVE system. One small area of on-site groundwater contamination persists. A long term monitoring program, which evaluates natural attenuation, has been implemented. It is recommended that the site be reclassified from a class 2 to a class 4.

12. SITE IMPACT DATA

a. Nearest Surface Water: Distance 1 mile	Direction East	Classification class c	
b. Nearest Groundwater: Depth 10 ft.	Flow Direction north east	( )Sole Source ( )Primary ( )Principal	
c. Nearest Water Supply: Distance N/A.	Direction _____	Active ( )Yes ( )No	
d. Nearest Building: Distance 10 ft.	Direction west	Use: manufacturing	
e. In State Economic Development Zone?	( )Y (X)N	i. Controlled Site Access?	( )Y (X)N
f. Crops or livestock on site?	( )Y (X)N	j. Exposed hazardous waste?	( )Y (X)N
g. Documented fish or wildlife mortality?	( )Y (X)N	k. HRS Score _____	
h. Impact on special status fish or wildlife resource?	( )Y (X)N	l. For Class 2: Priority Category	

13. SITE OWNER'S NAME	14. ADDRESS	15. TELEPHONE NUMBER
Unisys Corporation Contact: Keith Rapp	3199 Pilot Knob Road, MS-F1B05, Eagan MN 55121	612-687-3280

16. PREPARER	17. APPROVED
David A. Crosby 11/18/98	x
Signature Date	Signature Date
David A. Crosby, P.E., Environmental Engineer, DER-BCS	
Name, Title, Organization	Name, Title, Organization

~ original ~

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION

8/23/94

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d. Nearest Building: Distance 10 ft.	Direction west		Use: manufacturing		
e. In State Economic Development Zone?	( )Y	(X)N	i. Controlled Site Access?	( )Y	(X)N
f. Crops or livestock on site?	( )Y	(X)N	j. Exposed hazardous waste?	( )Y	(X)N
g. Documented fish or wildlife mortality?	( )Y	(X)N	k. HRS Score _____		
h. Impact on special status fish or wildlife resource?	( )Y	(X)N	l. For Class 2: Priority Category		

13. SITE OWNER'S NAME	14. ADDRESS	15. TELEPHONE NUMBER
Unisys Corporation Contact: Keith Rapp	3199 Pilot Knob Road, MS-F1B05, Eagan MN 55121	612-687-3280

16. PREPARER	17. APPROVED
David A. Crosby 11/18/98	x [signature] 12/10/98
Signature Date	Signature Date
David A. Crosby, P.E., Environmental Engineer, DER-BCS	GEORGE W. HARRIS, EE II DER/BCS
Name, Title, Organization	Name, Title, Organization

original

DOH STATE OF NEW YORK
DEPARTMENT OF HEALTH

II University Place Albany, New York 12203

Barbara A. DeBuono, M.D., M.P.H.
Commissioner of Health

Dennis P. Whalen
Executive Deputy Commissioner

October 14, 1998

OCT 22

Mr. David Crosby
Bureau of Construction Services
Division of Environmental Remediation
NYS Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233

Re: Groundwater Monitoring Plan
Former Burroughs/Unysis Facility
Site #828075
Rochester, Monroe County

Dear Mr. Crosby:

I reviewed the September 24, 1998 Post-Remediation Groundwater Monitoring Plan for the Former Burroughs/Unysis Facility. I have no comments on this proposed groundwater monitoring plan. As always, please contact the Monroe County Health Department for their input.

Sincerely,

Mark E. VanValkenburg
Public Health Specialist IV
Bureau of Environmental Exposure
Investigation

cc: G.A. Carlson, Ph.D.
Mr. D. Napier - RFO
Mr. R. Elliott - MCHD
Mr. G. Harris - DEC
Ms. M.J. Peachey - DEC Region 8

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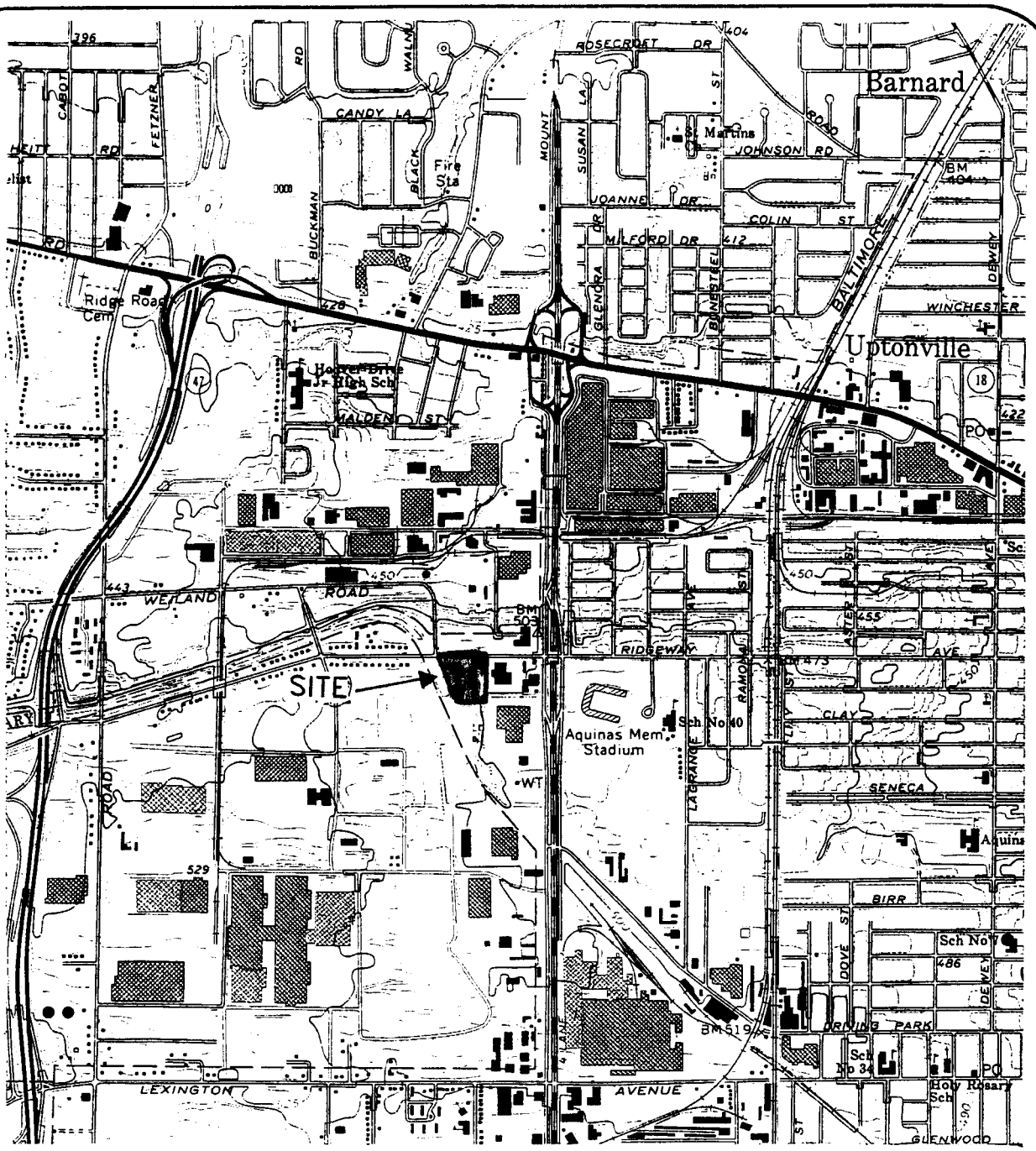

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1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

ROCHESTER WEST QUADRANGLE
NEW YORK–MONROE CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

QUADRANGLE LOCATION

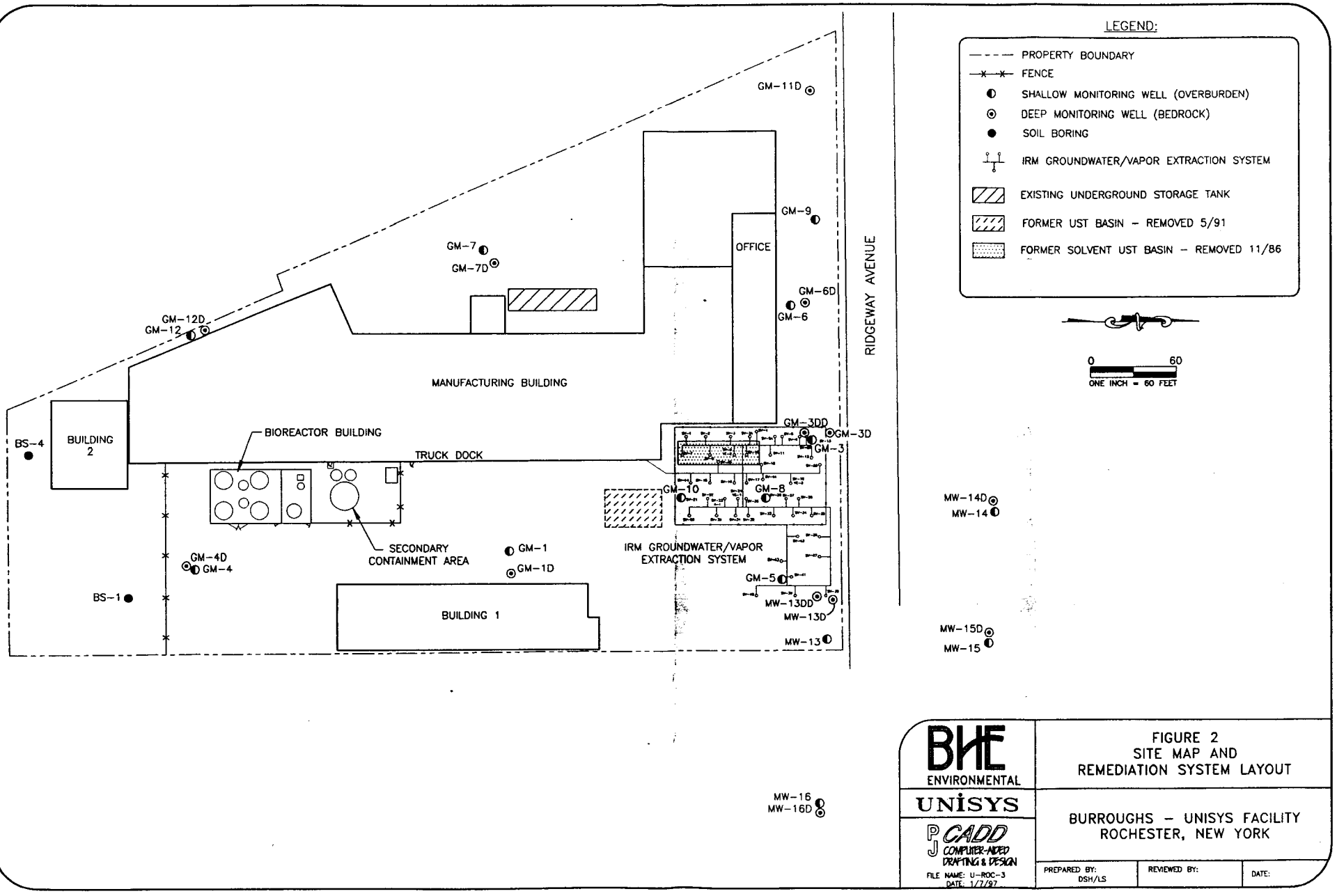
PJ CADD
COMPUTER-AIDED DRAFTING & DESIGN
(612) 487-5558

UNISYS

FILE NAME: TOPO
DATE: 11/7/94

FIGURE 1
SITE LOCATION MAP

BURROUGHS – UNISYS FACILITY
ROCHESTER, NEW YORK



BHE ENVIRONMENTAL

UNISYS

PJ CADD COMPUTER-AIDED DRAFTING & DESIGN

FILE NAME: U-ROC-3
DATE: 1/7/97

FIGURE 2
SITE MAP AND
REMEDIATION SYSTEM LAYOUT

BURROUGHS - UNISYS FACILITY
ROCHESTER, NEW YORK

PREPARED BY:	REVIEWED BY:	DATE:
DSH/LS		

CORPORATE
FACILITIES & ASSET MANAGEMENT

UNISYS CORPORATE ENVIRONMENTAL AFFAIRS
3199 PILOT KNOB ROAD - MS F1B05
EAGAN, MN 55121

TELEPHONE
612 687 3280

UNISYS

October 30, 1998

Mr. David A. Crosby
New York State Department of Environmental Conservation
Bureau of Western Remedial Action
Division of Hazardous Waste Remediation
50 Wolf Road, Remedial Section C
Albany, New York 12233-7010

Subject: Post-Remediation Groundwater Monitoring Plan
Former Burroughs\Unisys Facility
NYSDEC Site #8-28-075
Rochester, Monroe County, New York

Dear Mr. Crosby:

The purpose of this correspondence is to provide the New York State Department of Environmental Conservation (NYSDEC) with the information requested in your October 30, 1998 letter to me concerning isopropyl alcohol (IPA) degradation at the former Burroughs facility located at 1227 Ridgeway Avenue, Rochester, New York.

The essential disappearance of IPA and corresponding occurrence of acetone at the Ridgeway Avenue site as biodegradation is evidenced by the persistence of acetone concentrations in the soil and groundwater environment. Acetone concentrations have increased at the site with a parallel and corresponding decrease in IPA concentrations. Acetone is less easily oxidized by microorganisms; however, inorganic compounds found in the environment such as nitrates, sulfates, ferric iron, and carbon dioxide can serve as electron acceptors to facilitate oxidation. Acetone was not store or used at the facility, and the appearance of acetone is attributed to the intrinsic biodegradation of IPA. IPA will be degraded by intrinsic microorganisms in groundwater to acetone as demonstrated by the following oxidation equation:

$$\underset{\textit{IPA}}{C_3H_8O} + 1/2\ O_2 \rightarrow H_2O + \underset{\textit{Acetone}}{C_3H_6O}$$

Once the acetone is reduced to acetic acid, it is readily degraded by microorganisms and the end products are water and carbon dioxide.

$$C_3H_6O + 2\,O_2 \rightarrow CO_2 + H_2O + CH_3COOH$$

Acetone ***Acetic Acid***

We hope this clarifies your concern about isopropyl alcohol degradation. Additionally, the enclosed fact sheet on isopropyl alcohol documents the breakdown of IPA to acetone (page 1, paragraph 3) and is published by EMBBS (the Emergency Medicine Bulletin Board System) and is available on the World Wide Web as a resource at - www.embbs.com/cr/alc/alc5.html.

I have also attached a copy of the certification that the Remedial Action was conducted in accordance with the approved remedial design and the Record of Decision. I believe this documentation has already been provided to NYSDEC.

If you have any questions please feel free to contact me at (651) 687-3279.

Sincerely,

Keith B. Rapp
UNISYS
Corporate Environmental Affairs
Program Manager

Enclosures: - Isopropyl Alcohol Summary
- PE Certification

cc: Tom Roszak -Day Environmental\Rochester
Todd Caffoe -NYSDEC\Avon

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Isopropyl Alcohol

Isopropyl alcohol ingestion is common among children and adults as both accidental and suicidal ingestions because it is an easily available product. It is best known as the main ingredient in rubbing alcohol, but is also present in window cleaners, toiletries, disinfectants, antifreeze, and paint remover. To complicate matters some products that contain isopropyl alcohol also contain methanol, ethanol, or ethylene glycol.

Pharmacology: Isopropyl alcohol is a clear, colorless liquid with a somewhat bitter taste and a smell of acetone. Unless the ingested dose is large, absorption occurs in as little as 30 minutes. This agent is well absorbed through the lungs and rectal mucosa. The alcohol can also penetrate the skin, but with less success than via a pulmonary or GI exposure. Isopropyl alcohol is metabolized to acetone in the liver by alcohol dehydrogenase. Eighty percent of the absorbed dose is then excreted by the kidneys as acetone with 20% being excreted unchanged. The acetone is also excreted in the lungs, saliva, and gastric juices.

Animal studies have suggested that isopropyl alcohol is two-three times more potent than ethanol as a CNS depressant. The breakdown product, acetone, is also a CNS depressant.

Clinical Presentation: The symptoms of ingestion occur within 30 minutes, with GI complaints of pain, vomiting, and hematemesis being predominant. Central nervous system effects include headache, muscular incoordination, ataxia, confusion, and coma. The initial excitatory phase that is well recognized with ethanol intoxication does not seem to be present with isopropanol ingestion. Pupil size may vary, but it is not uncommon to have miotic pupils. Should the eyes have direct exposure to isopropyl alcohol corneal de-epithelialization has been reported. The patient may have a distinct odor of acetone. With very large doses cardiovascular effects include myocardial depression and severe hypotension. Less common presentations include renal tubular necrosis, hemolytic anemia, acute myopathy, and hypothermia.

Diagnosis: The patient presenting in coma who has a suspected exposure to some type of alcohol, the diagnosis can be challenging. The patient will be unresponsive to narcan and glucose, and usually entities such as DKA, hepatic coma (in an older patient), carbon monoxide, trauma, etc. can usually be quickly ruled out by a careful exam and a few simple tests. Once the diagnosis of a toxic alcohol (or a toxic amount of a usually nontoxic alcohol) is suspected the difficulty comes in making the diagnosis. The onset of the central nervous system effects of all the alcohols is rapid. The more severe consequences of ethylene glycol and methanol (the blindness, renal failure, and severe metabolic acidosis may be slightly delayed. All of the major alcohols have a distinct odor except ethylene glycol. In the case of isopropyl alcohol the odor is a sweet ketotic scent due to the release of acetone in the breath. Isopropyl alcohol tends to produce only a mild elevation of the anion gap and only a mild acidosis if any. It is alsounique in producing a very large amount of ketones (the acetone that is being excreted from the kidneys) in the urine.

Serum osmolality may be greater than calculated with all four alcohols, thus isopropanol is similar to ethanol in that it produces little to no anion gap metabolic acidosis (unless the patient has other problems such as hypotension, hypoxia, etc.), but does have an elevated osmolol gap. Isopropyl alcohol also tends to have significant hypoglycemia.

Treatment: The treatment of isopropyl alcohol exposure is recognition and support of the complications. If exposure was through the skin then decontamination is appropriate while trying to maintain body temperature. If the exposure was respiratory the patient should be removed from the environment. Hemorrhagic trachoebronchitis is a complication of inhaled isopropanol. If the exposure was a large, recent dose of isopropanol, gastric lavage and charcoal may be appropriate. Isopropanol does undergo gastric re-excretion and continuous gastric emptying has been recommended, but this is usually not required. Should the patient be stable after the initial evaluation it is reasonable to observe the patient and use simple supportive measures until the patient recovers. Suspicion should always be present about other ingestions and the labs previously discussed should be ordered.

Isopropanol is an ideal substance for dialysis because of its low molecular weight, low volume of distribution, and low protein plasma binding. The question then, is who requires dialysis? Those patients with isopropyl levels above 400-500 mg/dl are usually the ones that have significant hypotension and coma. Thus, patients with coma and hypotension with or without a level of 400-500 mg/dl should probably receive hemodialysis.

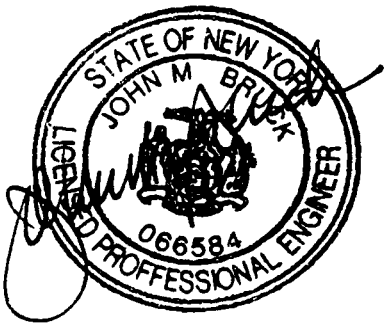
Pediatric Considerations: Young children may accidentally ingest isopropyl alcohol just as they can with any other available substance. However, children may develop a serious intoxication following topical application of isopropyl alcohol for the relief of fever. This exposure may actually be more of an inhalation injury than a dermal exposure, but the end result in the same. Isopropyl alcohol can come in concentrations of 70%. At this concentration as little as 2-2.5 ml/kg may lead to toxicity. The children may present with altered mental status or coma. The key to diagnosis is the same as with adults. The child should have acetonuria, coma, little to no acidosis and anion gap, with a wide osmolol gap. Treatment is the same as for adults.

Continue with Discussion

Return to EMBBS Home Page

FOCUSED EVALUATION OF REMEDIAL ALTERNATIVES REPORT
FORMER BURROUGHS-UNISYS FACILITY
ROCHESTER, NEW YORK - NYSDEC SITE #82-8-075

Unisys Corporation, and BHE Environmental, Inc., (BHE) are submitting this final report to New York State Department of Environmental Conservation (NYSDEC) for work performed at the former Burroughs Facility located at 1227 Ridgeway Avenue, Rochester, New York. This report revises the draft copy of the *FOCUSED EVALUATION OF REMEDIAL ALTERNATIVES REPORT*, submitted to NYSDEC on January 15, 1997. This report was prepared in conformance with the strict quality assurance/quality control procedures of BHE and Unisys to ensure the report meets the highest standards in terms of methods used, data evaluated, and information presented.



Respectfully submitted,

John M. Bruck, P.E.
President, BHE Environmental

James C. Albertz, P.E.
Director of Engineering and Remediation
BHE Environmental

Keith B. Rapp
Program Manager
Unisys Corporate Environmental Affairs

[redacted]
Senior Hydrogeologist
Unisys Corporate Environmental Affairs

Kristin S. Yahnke
Project Engineer
Unisys Corporate Environmental Affairs

The Remedial Action has been completed in accordance with the approved Remedial Design and Record of Decision.

D. Crosby

New York State Department of Environmental Conservation
Division of Environmental Remediation
Bureau of Construction Services, Room 267
50 Wolf Road, Albany, New York 12233-7010
Phone: (518) 457-9280 FAX: (518) 457-7743

John P. Cahill
Commissioner

FAX

OCT 30 1998

Mr. Keith Rapp
Project Manager
Unisys Corporate Environmental Affairs
3199 Pilot knob Road - MS F1B05
Eagan, Minnesota 55121

Dear Mr. Rapp:

RE: Burroughs/Unisys, Site # 8-28-075
Monroe County
Post-Remediation Groundwater Monitoring Plan

The Department has completed the review of the Post-Remediation Groundwater Monitoring Plan, dated September 24, 1998. The Department requests that you provide a literature reference which supports biodegradation of isopropyl alcohol to acetone. With regards to the sampling frequency and analysis plan the Monitoring Plan is acceptable to the Department.

As requested in my September 16, 1998 letter to David Hume, and as required by the Consent Order, the Department requires a certification that the Remedial Action was conducted in accordance with the approved remedial design and the Record of Decision. The certification must be stamped and signed by a professional engineer registered in New York. When an acceptable certification is received, I will process the reclassification package.

Please be advised that when the site is reclassified the project lead will be turned over to Mr. Todd Caffoe, P.E., of our Region 8 Office in Avon. Therefore, until the site is reclassified, please copy Mr. Caffoe on site correspondence. Further, please remove Mr. Amar Nagi from the cc lists.

The Department appreciates Unisys' continued efforts to complete the remedial program at the Former Burroughs/Unisys site. If you have any questions, please feel free to contact me at (518) 457-9285.

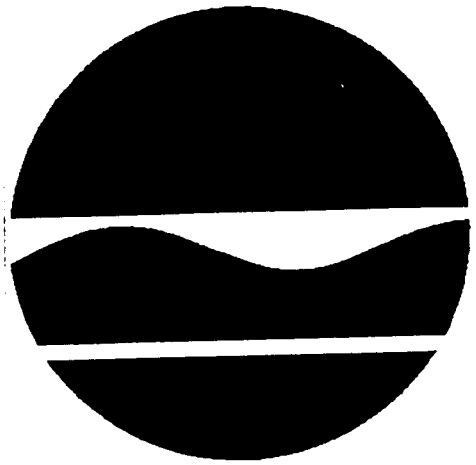
Sincerely,

David A. Crosby

David A. Crosby, P.E.
Environmental Engineer
Central Field Services Section
Bureau of Construction Services
Division of Environmental Remediation

cc: M. VanValkenburg - NYSDOH, Albany
R. Elliot - Monroe County DOH
T. Caffoe/M. J. Peachey - NYSDEC, Region 8

DAC/ts
bcc: G. Harris
G. Rider - BHSC
D. Crosby
Dayfile
A:/longtermbu.wpd



NEW YORK STATE
DEPARTMENT OF

ENVIRONMENTAL
CONSERVATION

DIVISION OF HAZARDOUS
WASTE REMEDIATION

RECORD OF DECISION

BURROUGHS-UNISYS

SITE #8-28-075

CITY OF ROCHESTER, MONROE COUNTY

March 1994

DECLARATION STATEMENT - RECORD OF DECISION

Burroughs-Unisys Inactive Hazardous Waste Site
City of Rochester, Monroe County, New York
Site No. 8-28-075

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedial action for the Burroughs-Unisys Inactive Hazardous Waste Disposal Site which was chosen in accordance with the New York State Environmental Conservation Law (ECL). The remedial program selected is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300).

This decision is based upon the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the Burrough-Unisys Inactive Hazardous Waste Site and upon public input to the Proposed Remedial Action Plan (PRAP) presented by the NYSDEC. A bibliography of the documents included as a part of the Administrative Record is included in Appendix B of the ROD.

Assessment of the Site

Actual or threatened release of hazardous waste constituents from this site, if not addressed by implementing the response action selected in this ROD, presents a current or potential threat to public health and the environment.

Description of Selected Remedy

Based upon the results of the Remedial Investigation/Feasibility Study (RI/FS) for the Burroughs-Unisys Site and the criteria identified for evaluation of alternatives the NYSDEC has selected enhancements/modifications of the existing groundwater/vapor extraction system. The components of the remedy are as follows:

- Continued operation of the existing IRM system with enhancement and modifications to the groundwater/vapor extraction system. These enhancement and modifications include system cycling, evaluation of pulsing of the existing system and an evaluation of either passive air or active water injection to assist mitigation.

These modifications will be evaluated in the design phase of the project.

- Temporary GW/SVE connection to existing monitoring wells.

- Installation of three (3) additional extraction wells located at identified pockets of contamination. These wells will be designed to mitigate contamination in the saturated/top-of-rock zone.

- It is recognized by the Department that in light of the low permeability of site subsurface soils, that Groundwater Vapor Extraction is an innovative technology that has the potential with modifications and enhancements to achieve the site Remedial Action Objectives (RAOs). Further, it is recognized that the groundwater unit under the site is not presently utilized for either industrial or potable purposes and because of the low site permeability and further use of the groundwater appears unlikely.

  As such the Groundwater Vapor Extraction (GW/VE) system implemented during the Interim Remedial Measure and conceptually modified in the Detailed Analysis of the Feasibility Study will be designed and operated to remediate source area soils and groundwater to the extent technically practicable. The GW/VE system will be modified and/or enhanced and operated for a minimum of one year. After one year a determination will be made if the system has reached asymptotic conditions with regards to both contaminated vapor and groundwater extractions rates. If the system has reached asymptotic conditions, sampling of both the surface soils and groundwater will be conducted to determine if RAOs have been achieved. If either soil or groundwater RAOs are not achieved the system will continue operation and a focused evaluation of further remedial actions will be conducted. The focused study will include an evaluation of no further action.

- If the remedy results in consequential hazardous waste remaining untreated at the site, a long term monitoring program will be instituted. This program will allow the effectiveness of the selected remedy to be monitored. This long term monitoring program will be a component of the operations and maintenance for the site, if appropriate.

New York State Department of Health Acceptance

The New York State Department of Health concurs with the remedy selected for this site as being protective of human health.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

March 22, 1994
Date

Ann Hill DeBarbieri
Deputy Commissioner

TABLE OF CONTENTS

RECORD OF DECISION

BURROUGHS-UNISYS
Rochester, Monroe County, New York
Site No.8-28-075
March 1994

SECTION 1: SITE LOCATION AND DESCRIPTION

The Burroughs- Unisys Site is listed on the New York State Registry of Inactive Hazardous Waste Disposal Sites as a class two site. A class 2 designation indicates that the site poses a significant threat to the environment and/or public health and action is required. The New York State Departments of Environmental Conservation (NYSDEC) and Health (NYSDOH) work together to implement remedial programs for sites listed on the registry.

As shown in Figures 1 and 2, the Burroughs-Unisys Site is located at 1227 Ridgeway Avenue, just west of Mt. Read Boulevard. The four acre site contains an active manufacturing facility which produces typewriter ribbons. The site is in a commercial/industrial area, however, residential properties are located approximately ½ mile west along Ridgeway Avenue. The entire area is serviced by public water and sewers provided by Monroe County.

SECTION 2: SITE HISTORY

2.1: Operational/Disposal History

The Unisys Corporation (formerly Burroughs Corporation) leased the industrial facility from Frank Dimino, Inc. between 1976 and 1987. The facility was utilized to manufacture carbon paper, printer ribbons and other office supply products. In 1987, Unisys sold the manufacturing operation to Nu-Kote International. Presently Nu-Kote conducts similar manufacturing operations at the site. As part of the sale agreement to Nu-Kote, Unisys agreed to conduct an environmental assessment. The assessment indicated that underground storage tanks at the facility had leaked chemicals into the soils beneath the facility's parking lot, contaminating subsurface soils and shallow groundwater. The five underground tanks were removed in 1986. Analytical results of soil samples collected below the tanks indicated the presence of Isopropyl alcohol (IPA), Methyl Ethyl Ketone (MEK), methanol and toluene (see Table 1 for summary of initial soil concentrations).

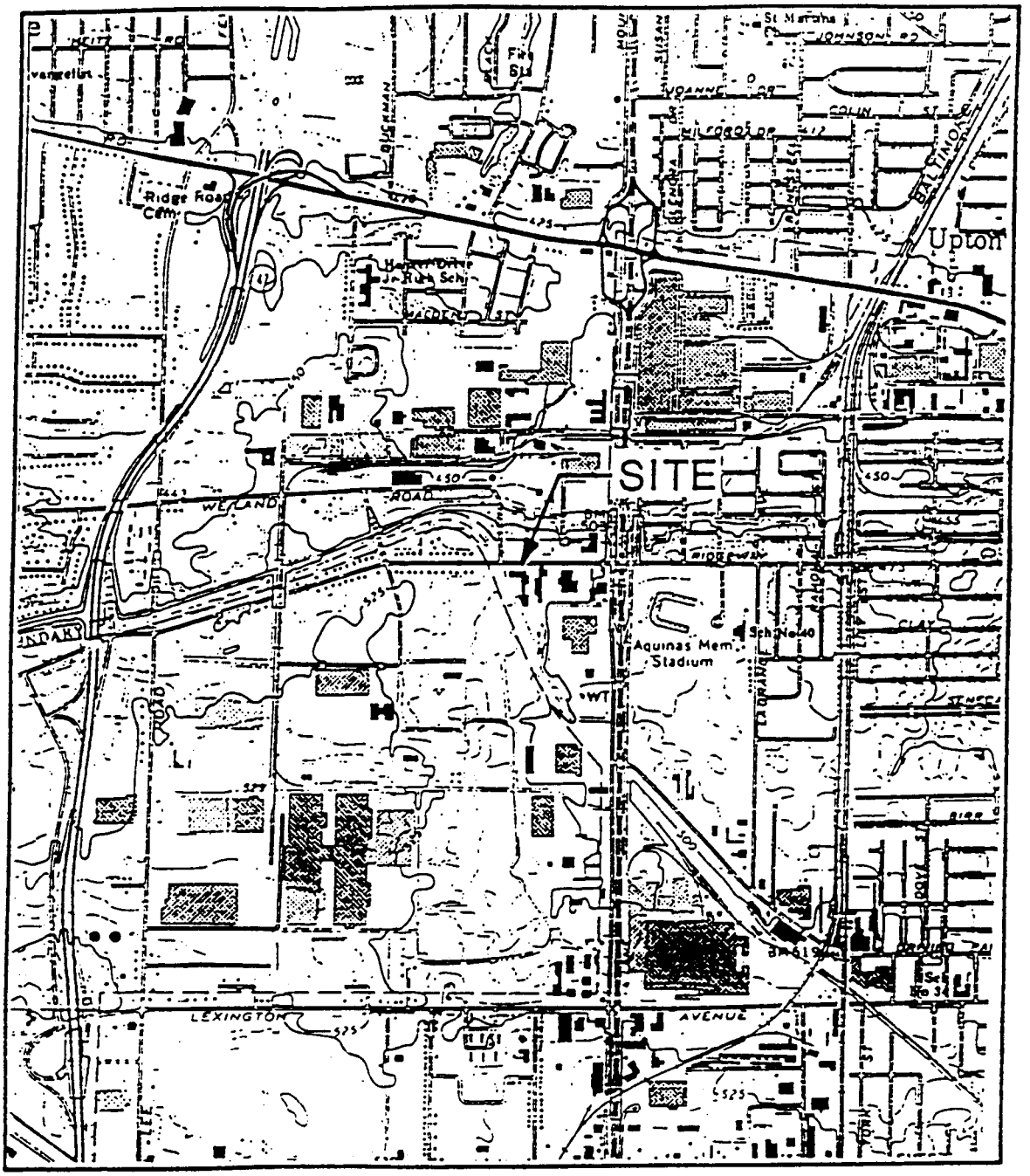
2.2: Remedial History

Because of the findings of the environmental assessment and the tank removal, Unisys conducted a groundwater investigation in 1987. The investigation revealed extensive groundwater contamination near the former tank areas (see Table 2 for a summary of initial concentrations). Based on the information, the NYSDEC listed the site on the Registry of Inactive Hazardous Waste Sites.

In 1988, 1989, and 1990 Unisys conducted additional studies to determine the extent and magnitude of the subsurface soil and groundwater contamination. Table 2 shows a summary of the groundwater data collected during that time period. Of interest is that acetone concentrations in both soil and groundwater were not detected during the initial investigations but increased over time. It is speculated that acetone is either a breakdown product of IPA or was unknowingly stored in one of the former underground storage tanks.

2.3 Interim Remedial Measure

Acting under a Consent Order negotiated with the NYSDEC, Unisys designed and implemented an Interim Remedial Measure (IRM) at the site.



THIS FIGURE IS BASED ON THE
ROCHESTER WEST, N.Y. QUADRANGLE
U.S.G.S. TOPOGRAPHIC MAP

UNISYS Corporation		
Project No. 10011	SITE LOCATION MAP BURROUGHS - UNISYS FACILITY, ROCHESTER, N.Y.	
Project Manager L.S.S.		
Date ←12-93	INTEGRATED ENVIRONMENTAL SOLUTIONS, INC.	125-C EAST EVANS STREET WEST CHESTER, PA. 19380 TELEPHONE (215) 692-4200 FACSIMILE (215) 692-8449
Scale 1"=2000'		
Drawn by J.F.B.	Drafted by NTH Consultants, Ltd.	FIGURE: 1

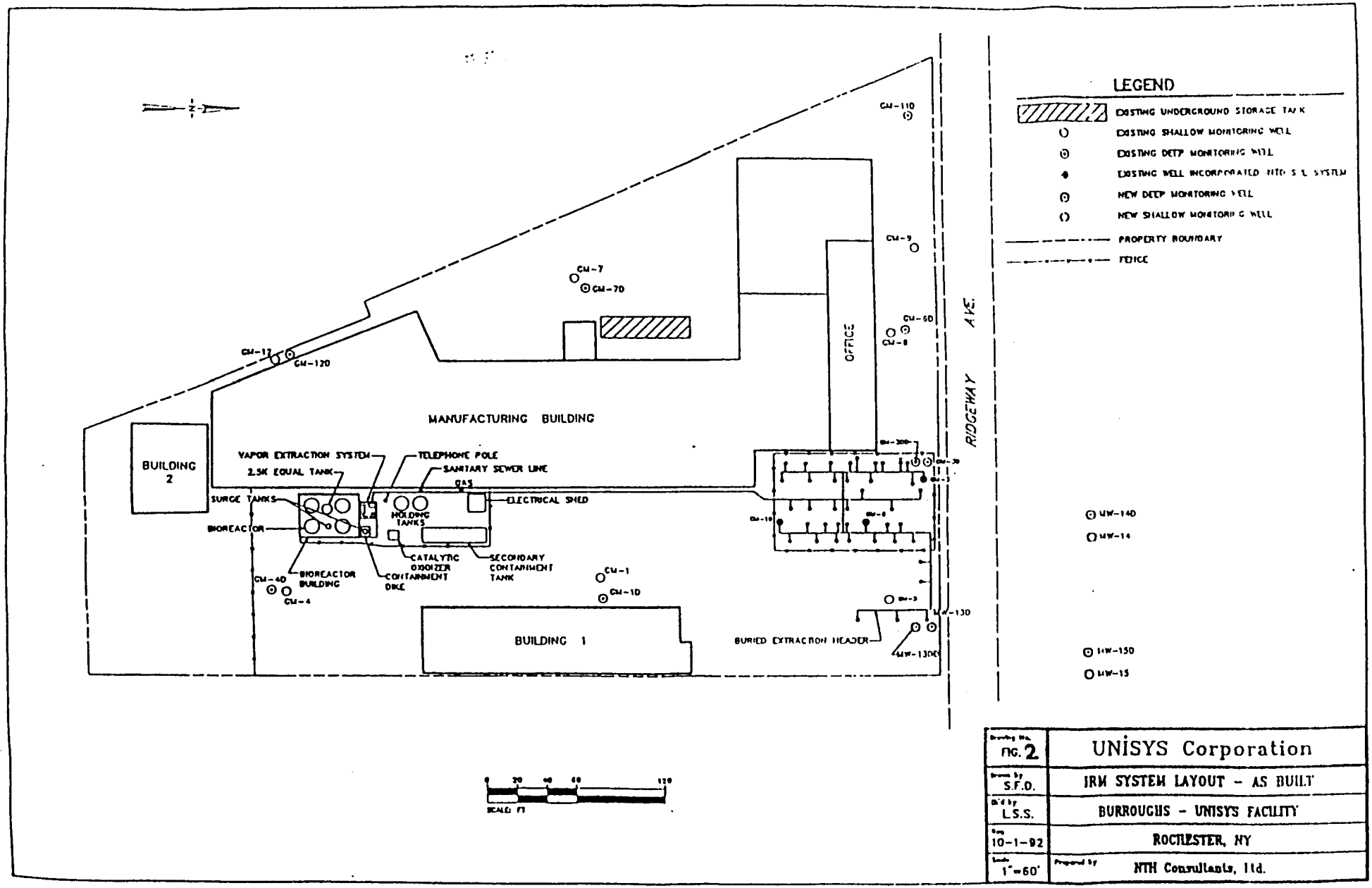


FIG. 2	UNISYS Corporation
S.F.D.	IRM SYSTEM LAYOUT - AS BUILT
L.S.S.	BURROUGHS - UNISYS FACILITY
10-1-92	ROCHESTER, NY
1"=60'	NTH Consultants, Ltd.

An IRM is conducted at a site when a source of contamination and/or exposure pathway can be effectively addressed before completion of an RI/FS. The IRM was implemented to mitigate contamination derived from leaking underground storage tanks.

In November 1990, the IRM was implemented and is presently operational. The IRM consists of a Groundwater/Soil Vapor Extraction (GW/SVE) system (see Figure 2). The GW/SVE system is designed to remove contaminants from both the groundwater and soil by use of a strong vacuum. The contaminants are withdrawn from a series of extraction wells placed in and around the former underground storage tank area. The extracted waters are then treated biologically prior to release to the local sewer authority. The vapor is released without treatment due to the low concentration of contamination in the vapor phase. The IRM system is still operational and over the last 3 years, the system has removed over 5000 pounds of contamination.

SECTION 3: CURRENT STATUS

Unisys Corporation agreed to initiate a Remedial Investigation/ Feasibility Study (RI/FS) in November 1991 to evaluate the effectiveness of the IRM and to address the potential for contaminant migration off-site.

3.1: Summary of the Remedial Investigation

The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site.

The RI was conducted in two phases. The first phase was conducted during the summer of 1992 and the second phase during the spring of 1993. A report entitled Remedial Investigation Report, dated November 1992, Addendum I, dated February 12, 1993 and Addendum II, dated May 3, 1993 has been prepared describing the field activities and findings of the RI in detail. A summary of the RI follows:

The activities performed as part of the RI included background research, a literature review and field investigation activities. The background review included regulatory history and permit status of the site, well inventory records within a 1-mile radius of the site, ecological information, underground storage tank removal information, on- and off-site utility locations and historic chemical use and waste management practices. Field investigative activities conducted under the RI included monitoring well installation, groundwater sampling, soil boring completion and subsurface soil sampling, IRM system operation and subsequent depth to water measurements, topographic surveying, sanitary and storm sewer sampling and laboratory analysis. The mobility and toxicity of identified chemical compounds were also evaluated and a baseline risk assessment was prepared.

The analytical data obtained from the RI was compared to applicable Standards, Criteria, and Guidance (SCGs) in determining remedial alternatives. Groundwater, drinking water and surface water SCGs identified for the Burroughs-Unisys site were based on NYSDEC Ambient Water Quality Standards and Guidance Values and 10 NYCRR Part 5. For the evaluation and interpretation of soil and sediment analytical results, NYSDEC soil cleanup guidelines for the protection of groundwater, background conditions, and risk-based remediation criteria were used to develop remediation goals for soil.

The remedial investigation noted that the IRM has been effective in remediating the site's groundwater and subsurface soils. As noted in Tables 1 and 2, there has been a significant decrease in the site related compounds. However, residual contamination still exists in isolated pockets, "hot spots", in soil at the top of the bedrock zone (10-15 ft. deep) and the groundwater contamination still exists in the overburden unit in the zone surrounding GM-5 (see Figure 2). Based on the results of the RI, it was concluded that the present IRM system is appropriate to remediate the contamination from the former underground storage tank area. Because of some residual contamination, additional work (a focused Feasibility Study) was necessary to determine how to effectively capture the remainder of the site's contamination.

3.2 Summary of Human Exposure Pathways:

The RI included an evaluation of human health risks, both current and probable future scenarios, that are posed by the contamination identified at the site. The health risk assessment evaluates the analytical results from various media (air, soils and groundwater) and identifies how the general public can possibly be exposed to the contamination.

The data from the RI indicated that contaminated soils are present only below the surface. Because the site is paved, little public exposure to these soils would be possible. Contaminated groundwater does exist in the area of GM-5; however, the entire area is serviced by public water supplies from Monroe County and a survey of local property owners indicates no uses of local groundwater. As such, with the implementation of the IRM, there is no present public exposure to site contaminants.

There are some hypothetical future land use scenarios which could cause possible exposure, including subsurface excavation for construction purposes and possible future municipal and industrial uses of groundwater. Although the extent of the residual contamination is limited and the possibility of the use of local groundwater is unlikely, the assessment does indicate the need to complete the remedial action at the site.

3.3 Summary of Environmental Exposure Pathways:

The site is located in a highly industrial/commercial setting, which lacks any significant wildlife habitat. Further, the extent of contamination is confined to the soils and groundwater below the surface. As such, there are no significant environmental exposure pathways at risk from the contamination identified at the site.

SECTION 4: ENFORCEMENT STATUS

The NYSDEC and the Unisys Corporation entered into a Consent Order on February 12, 1990. The Order obligates the Unisys Corporation to implement an IRM and a RI/FS remedial program. Upon issuance of the Record of Decision the NYSDEC will approach the responsible parties to implement the selected remedy under an Order on Consent.

Order on Consent

Date February 12, 1990

Subject In the matter of Development and Implementation of an Interim Remedial Measure and a Remedial Investigation, Feasibility Study for an Inactive Hazardous Waste Disposal Site, pursuant to Article 27, Title 13 of the Environmental Conservation Law.

Index B8-0262-89-03, Site No. 8-28-075

SECTION 5: SUMMARY OF THE REMEDIATION GOALS

Goals for the remedial program have been established through the remedy selection process stated in 6NYCRR 375-1.10. These goals are established under the guideline of meeting all Standards, Criteria, and Guidance (SCGs) and protecting human health and the environment.

At a minimum, the remedy selected, through the proper application of scientific and engineering principles, should eliminate or mitigate all significant threats to the public health and to the environment presented by the hazardous waste disposed at the site.

The goals selected for this site are:

- Reduce, control, or eliminate the contamination present within the soils on site.
- Mitigate the impacts of contaminated groundwater to the environment and provide the attainment of SCGs for groundwater to the extent technically practicable.
- Prevent, to the extent practicable, migration of contaminants.

- Provide for attainment of SCGs for soil which is protective of groundwater quality at the limits of the area of concern to the extent technically practicable.

- The Remedial Action Objectives (RAOs) are presented on Table 3.

SECTION 6: SUMMARY OF THE EVALUATION OF ALTERNATIVES

Potential remedial alternatives for the Burroughs-Unisys site were identified, screened and evaluated in a two phase Feasibility Study. This evaluation is presented in the report entitled Feasibility Study, Burroughs-Unisys Facility, dated August 6, 1993.

The results of the first phase Feasibility Study indicated that the present IRM (groundwater/soil vapor extraction) system is more appropriate to mitigate the remaining site than more traditional remedial measures (e.g., excavation and off-site disposal). As such, the second phase of the Feasibility Study was focused on the existing IRM system and what modifications and/or enhancements to the system would remediate the remaining site contaminants to appropriate SCGs.

6.1: Description of Alternatives

The potential remedies are intended to address the contaminated subsurface soils and groundwater.

1. No Action:

The no action alternative is evaluated as a procedural requirement and as a basis for comparison. It requires shutdown of the IRM and the site to remain in a partially remediated state.

This is an unacceptable alternative as the site would remain in its present condition, and human health and the environment would not be adequately protected.

2. Limited Action:

This alternative would include shutdown of the IRM system with long-term periodic monitoring of groundwater.

Present Worth:	$ 105,000
Capital Cost:	$ 0
Annual O&M:	$ 25,000
Time to Implement	5 years

3. Continued Operation of the IRM System:

This alternative would involve continued operation of the existing IRM system until SCGs are achieved. The alternative would include quarterly groundwater and monthly IRM system sampling.

Present Worth:	$ 129,170
Capital Cost:	$ 0
Annual O&M:	$ 140,000
Time to Implement	1 year

4. Cycling of the System and Temporary Hook-Up of Monitoring Wells to the GW/SVE System:

This alternative involves modification to the operation of the present IRM system. It would include continued operation of the IRM with cycling of the various arms of extraction system. The alternative also includes temporary hook-up of existing monitoring wells and more frequent groundwater sampling than Alternative 3.

Present Worth:	$ 190,600
Capital Cost:	$ 2,000
Annual O&M:	$ 200,000
Time to Implement	1 year

5. Continued operation of the existing IRM System with enhancements and modifications:

This alternative is similar to alternative # 4 as it includes system cycling and the temporary hook-up of existing monitoring wells. The alternative also includes the installation of three additional extraction wells to capture "pockets" of the residual contamination. These three wells would be screened to remediate the distinct top-of-rock interval. Further, to possibly assist the remediation, air and/or water injection would be evaluated in the design phase.

Present Worth:	$	199,170
Capital Cost:	$	20,000
Annual O&M:	$	190,000
Time to Implement		1 year

6.2 Evaluation of Remedial Alternatives

The criteria used to compare the potential remedial alternatives are defined in the regulation that directs the remediation of inactive hazardous waste sites in New York State (6NYCRR Part 375). For each of the criteria, a brief description is provided followed by an evaluation of the alternatives against that criterion. A detailed discussion of the evaluation criteria and comparative analysis is contained in the Feasibility Study.

The first two evaluation criteria are termed threshold criteria and must be satisfied in order for an alternative to be considered for selection.

1. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether or not a remedy will meet applicable environmental laws, regulations, standards, and guidance.

The No Action (#1) and Limited Action (#2) alternatives do not meet this criterion because they do not address the site's remaining groundwater contamination. All of the other alternatives meet this criteria.

2. Protection of Human Health and the Environment. This criterion is an overall evaluation of the health and environmental impacts to assess whether each alternative is protective.

The No Action (#1) and Limited Action (#2) alternatives only partially meet this criterion because they do not address the remaining groundwater problems. The remaining alternatives meet this criterion.

The next five "primary balancing criteria" are used to compare the positive and negative aspects of each of the remedial strategies.

3. Short-term Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared with the other alternatives.

The No Action (#1) and the Limited Action (#2) altenatives only partially meet the criterion. All of the other alternatives meet this criterion.

4. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of alternatives after implementation of the response actions. If wastes or treated residuals remain on site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the controls intended to limit the risk, and 3) the reliability of these controls.

Alternative #5, enhancements /modification, meets this criterion because it adequately addresses the remaining residual contamination. The remaining alternatives do not directly address the residual contamination and only partially address this criterion.

5. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

All the alternatives address this criterion.

6. Implementability. The technical and administrative feasibility of implementing each alternative is evaluated. Technically, this includes the difficulties associated with the construction, the reliability of the technology, and the ability to monitor the effectiveness of the remedy. Administratively, the availability of the necessary personal and material is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, etc..

The No Action (#1) and Limited Action (#2) alternatives only partially meet this criterion. The remaining alternatives meet this criterion.

7. Cost. Capital and operation and maintenance costs are estimated for each alternative and compared on a present worth basis. Although cost is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the remaining criterion, cost effectiveness can be used as the basis for the final decision. The costs for each alternative are presented in Table 4.

This final criterion is considered a modifying criterion and is taken into account after evaluating those above. It is focused upon after public comments on the Proposed Remedial Action Plan have been received.

8. Community Acceptance - Concerns of the community regarding the RI/FS reports and the Proposed Remedial Action Plan are evaluated. A " Responsiveness Summary" was prepared that describes public comments received and how the Department addressed the concerns raised. If the final remedy selected had differed significantly from the proposed remedy, notices to the public would have been issued describing the differences and reasons for the changes. It is the position of the Department that comments received during the public comment period do not indicate a need to change the selected remedy (see appendix A).

SECTION 7: SUMMARY OF THE SELECTED REMEDY

Based upon the results of the RI/FS, and the evaluation presented in Section 7, the NYSDEC has selected Alternative 5 as the remedy for this site. Alternative 5 is enhancement and modification of the existing system which includes installation of additional extraction wells.

This selection is based upon the following:

The No Action alternative (#1) and Limited Action (#2) do not meet the threshold criteria because they don't address the residual soil and groundwater contamination. Utilizing the existing IRM system (#3) and alternative #4, system cycling, have concerns with their ability to capture the remaining contamination without the installation of additional extraction wells. Alternative #5, enhancements/ modifications, with its additional extraction wells placed in known "hot spot" areas is the most appropriate choice based on the evaluation criteria.

The estimated present worth cost to implement the preferred remedy is $199,170. The cost to construct the remedy is estimated to be $20,000 and the estimated average annual operation and maintenance cost for 1 year is $190,000.

7.1 Element of the Selected Remedy:

1. Following the signing of the ROD, a remedial design program will be initiated to verify the components of the conceptual design and provide the details necessary for the construction, operation and maintenance, and monitoring of the remedial program. Also any uncertainties identified during the RI/FS will be resolved.

2. The proposed remedial action includes the following:

- Continued operation of the existing IRM system with enhancement and modifications to the groundwater/vapor extraction system. These enhancement and modifications include system cycling, evaluation of pulsing of the existing system and an evaluation of either passive air or active water injection to assist mitigation. These modifications will be evaluated in the design phase of the project.

- Temporary GW/SVE connection to existing monitoring wells.

- Installation of three (3) additional extraction wells located at identified pockets of contamination. These wells will be designed to mitigate contamination in the saturated/top-of-rock zone.

- It is recognized by the Department that in light of the low permeability of site subsurface soils, that Groundwater Vapor Extraction is an innovative technology that has the potential with modifications and enhancements to achieve the site RAOs. Further, it is recognized that the groundwater unit under the site is not presently utilized for either industrial or potable purposes and because of the low site permeability any future use of the groundwater appears unlikely.

  As such, the Groundwater Vapor Extraction (GW/VE) system implemented during the Interim Remedial Measure and conceptually modified in the Detailed Analysis of the Feasibility Study will be designed and operated to remediate source area soils and groundwater to the extent technically practicable. The GW/VE system will be modified and/or enhanced and operated for a minimum of one year. After one year, a determination will be made if the system has reached asymptotic conditions with regards to both contaminated vapor and groundwater extractions rates. If the system has reached asymptotic conditions sampling of both the surface soils and groundwater will be conducted to determine if RAOs have been achieved. If either soil or groundwater RAOs are not achieved the system will continue operation and a focused evaluation of further remedial actions will be conducted. The focused study will include an evaluation of no further action.

- If the remedy results in consequential hazardous waste remaining untreated at the site, a long term monitoring program will be instituted. This program will allow the effectiveness of the selected remedy to be monitored. This long term monitoring program will be a component of the operations and maintenance for the site, if appropriate.

TABLE 1
Burroughs-Unisys, Site #828075
Summary of Soil Results
(results mg/kg)

(Source Area (Former UGST Area))

Site Contaminants	Sampling Date		
	11/86	6/92	11/92
Acetone	ND	93	440
IPA	63,080	ND	2,000
MEK	260	18	ND
Toluene	5,100	1	3.3
Methanol	13	2.1	ND

ND - Not Detected
IPA - Isopropyl Alcohol
MEK - Methyl Ethyl Ketone

TABLE 2
Burroughs-Unisys, Site #828075
Summary of Groundwater Results
(results in ppm)

(Source Area Wells (former UGST))

Site Contaminants	Sampling Date			
	2/87	6/90	6/91	12/92
Acetone	1,700	1,000	33.4	0.17
IPA	20,000	1,000	36.6	ND
MEK	2,200	120	ND	ND
Toluene	4.2	5.6	ND	0.072
Methanol	NA	NA	ND	ND
Total VOCs	21,720	2,000	70	0.17

DOWNGRADIENT (GM - 5)

Site Contaminants	Sampling Data			
	11/87	6/90	6/91	12/92
Acetone	0.43	420	54.6	25
IPA	ND	NA	35.2	ND
MEK	ND	8.5	1.5	ND
Toluene	0.27	2.3	0.72	1.2
Methanol	NA	NA	NA	ND
Total VOCs	0.70	431	92.1	26.2

IPA - Isopropyl Alcohol
MEK - Methy Ethyl Ketone
VOCs - Volatile Organic Compounds

NA - Not Analyzed
ND - Not Detected

TABLE 3
Remedial Action Objectives
Burroughs-Unisys, Site #828075

SSICs	SOIL[1] (mg/kg)	Groundwater[2] (ppb)
Acetone	0.11	50
IPA	0.11	50
Methanol	0.11	50
MEK	0.23	50
Toluene	1.5	5

SSICs - Site Specific Indicator Compounds
IPA - Isopropyl Alcohol
MEK - Methyl Ethyl Ketone

note: [1]Soil RAOs reflect NYSDEC-TAGM-4046," Determination of Soil Clean Up Objectives and Clean Up levels.
[2]Groundwater RAOs reflect SCGs, 10NYCRR Part 5 & 6NYCRR Part 700.

TABLE 4
BURROUGHS-UNISYS, SITE NO. 8-28-075
SUMMARY OF COST

Remedial Alternative	Capital Cost $	Annual O & M $	Present Worth $
1 (no action)	0	0	0
2 (limited action)	0	25,000	105,300
3 (existing IRM)	0	140,000	179,170
4 (system cycling)	2,000	200,000	190,600
5 (enhancements)	20,000	190,000	199,170

O & M - Operation and Maintenance

APPENDIX A

Burroughs-Unisys
Site #8-28-075
Monroe County
Responsiveness Summary
for
Record of Decision
Public Meeting
February 9, 1994
Marshall High School, Rochester, NY

This Responsiveness Summary responds to oral comments received during the February 9, 1994 public meeting. The public comment period opened on January 25, 1994 and closed on February 28, 1994. Written comments were received and a formal response was forwarded. A summary of this response is also included in the responsiveness summary.

Q: Are all of the extraction wells pumping from the top-of-rock zone?

A: The extraction wells installed for the Interim Remedial Measure were placed to the top-of-rock or between 15-20 feet below the surface. The additional extraction wells proposed will be designed to specifically target the top-of-rock zone in areas of remaining residual contamination.

Q: What are the depths of the proposed additional extraction wells?

A: The top-of-rock zone is approximately 15-20 feet below the surface. The additional extraction wells will be placed to this approximate depth.

Q: Is the contaminant plume in the groundwater spreading quickly.

A: The quick actions of the PRPs to implement an IRM have prevented extensive contaminant migration from the former underground storage tank area. The present Groundwater/Vapor Extraction System (GW/VES) creates a draw down in the groundwater table which prevents contaminant migration. As such, the remaining isolated pockets of contamination are not migrating and because of the continued operation of the GW/VES system. In the Remedial Investigation, downgradient monitoring wells were installed and no significant site related contamination was found. This is an indication of limited contaminant migration.

Q: This is an exceptional situation because the site is flat and an extensive ridge is just north of the site. Has the prominent ridge north of Ridgeway Avenue affected the plume movement and have you looked for contamination below the ridge.

A: There is a significant drop in elevation of almost 200 ft just north of the site. This ridge is reported to be the location of a glacial period lake shore line. The ridge does influence the hydrology of the site most noticeable by the drop in the site's bedrock water table from south to north. However, the bedrock monitoring wells both on-site and downgradient show no significant site related contamination. We do not expect an impact on groundwater quality below the ridge.

Q: What are the concentrations for the Remedial Action Objectives?

A: Two types of Remedial Action objective were developed for the site. The soil and groundwater goals are in the Proposed Remedial Action Plan as Table 3. They are as follows:

TABLE 3
Remedial Action Objectives
Burroughs-Unisys, Site #828075

SSICs	SOIL[1] (mg/kg)	Groundwater[2] (ppb)
Acetone	0.11	50
IPA	0.11	50
Methanol	0.11	50
MEK	0.23	50
Toluene	1.5	5

SSICs - Site Specific Indicator Compounds
IPA - Isopropyl Alcohol
MEK - Methyl Ethyl Ketone

note: [1]Soil RAOs reflect NYSDEC-TAGM-4046," Determination of Soil Clean Up Objectives and Clean Up levels
[2]Groundwater RAOs reflect SCGs, 10NYCRR Part 5 & 6NYCRR Part 700.

The following concern was received in writing during the public comment period:

Q: As the current occupants of the site we are concerned with the progress of the remedial action.

A: Thank you for your comments on the Proposed Remedial Action Plan for the above referenced site. We understand your concerns for a swift remedial program. The Remedial program outlined in the PRAP will be implemented this summer and is expect to take one year to complete. At the end of one year the site's soils and groundwater will be compared to the clean up objectives. If clean up objectives are met the remediation can be concluded. If the goals are not met additional work may be required.

We have placed your name and address on our site mailing list and will provide you updates of the remedial program through fact sheets and other site mailings. Site related information is also available at the document repository located at Rochester Public Library Ridgeway Avenue.

APPENDIX B
Adminstrative Record
Burroughs-Unisys, Site #828-075
City of Rochester, Monroe County

- Record of Decision, Burroughs-Unisys, Site # 8-82-075, March 1994.

- Proposed Remedial Action Plan, Burroughs Unisys, Site #8-28-075 , January 1994.

- Public Meeting Announcement, Burroughs-Unisys Inactive Hazardous Waste Site, Site #8-27-075, City of Rochester, Monroe County, dated January 24, 1994.

- Public Meeting Announcement, Burroughs-Unisys Inactive Hazardous Waste Site, Site #8-28-075, City of Rochester, Monroe County, dated January 24, 1994.

- Letter to Keith Rapp, Unisys Corporation from David A. Crosby, NYSDEC, subject, Burroughs-Unisys, Site #828075, Monroe Co. - Approval of Remedial Investigation-Feasibility Study, dated December 21, 1993.

- Report, Feasibility Study, Burroughs-Unisys Facility, Rochester, New York, Site #828075, prepared by Integrated Environmental Solutions, Inc., dated August 6, 1993.

- Report, Preliminary Screening Document Feasibility Study for Burroughs/Unisys Site Rochester, New York, prepared by Integrated Environmental Solutions, Inc., dated May 3, 1993.

- Report Addendum II Remedial Investigation Report, Burroughs-Unisys Site #828075, Rochester, New York, prepared by Integrated Environmental Solutions Inc., dated May 3, 1993.

- Press release, Public Meeting set on Hazardous Waste Site in Rochester, dated April 14, 1993.

- Fact sheet/meeting announcement, Burroughs Unisys, Site #828075, Rochester, Monroe County, New York, dated April 14, 1993.

- Report, Addendum, Remedial Investigation Report, Burroughs-Unisys Site #828075, prepared by Integrated Environmental Solutions Inc., dated February 12, 1993.

- Report, Addendum, Remedial Investigation Report, Burroughs-Unisys Site #828075, prepared by Integrated Environmental Solutions Inc., dated February 12, 1993.

- Report, Remedial Investigation Report, Burroughs-Unisys Site, Rochester, New York, NYSDEC Site No. 828075, Volumes 1 through 17, prepared by Unisys Corporation, dated November 2, 1992.

- Letter to Kevin Earley, Unisys Corporation from David A. Crosby, NYSDEC, subject, Burroughs-Unisys, Site #828075, Monroe Co.-Removal of IRM System Air Controls, dated October 15, 1991.

- Letter to Mr. Kevin Earley, Unisys Corporation from David Crosby, NYSDEC, subject, Burroughs-Unisys, Site #828075, Monroe Co., Approval of RI/FS work plan, dated October 2, 1991.

- Report, Revised RI/FS Management Plan, Unisys-Nukote Rochester New York, prepared by Bruck, Hartman & Esposito, Inc., dated July 25, 1991.

- Report, Air Control Considerations for the Soil Vapor/Groundwater Extraction Process at the Unisys/Nu-Kote International Site in Rochester, New York, prepared by Environmental Standards, Inc., dated July 9, 1991.

- Fact Sheet, Burroughs-Unisys, Site #828075, Monroe County, dated March 22, 1991.

- Letter to Kevin Earley, Unisys Corporation from David A. Crosby, subject, Burroughs-Unisys, Site #828075, Monroe County-Approval of the Interim Remedial Measures Work Plan, dated December 7, 1990.

- Letter to Kevin Earley, Unisys Corporation from Michael B. Schifano, Monroe County Department of Public Works, subject, Discharge Conditions Nu-Kote/Unisys Facility, dated October 25, 1990.

- Report, The Soil Gas Survey and Soil Borings Analytical Analysis for Nu-Kote International Facility, prepared by Hydro Soil Tech, Inc., dated April 26, 1990.

- Order on Consent, Index #B8-0262-89-03, Site #828075, in the matter of the Development and Implementation of an Interim Remedial Measure and a Remedial Investigation/Feasibility Study for an Inactive Hazardous Waste Disposal Site Pursuant to Article 27, Title 13 of the Environmental Conservation Law of the State of New York by Unisys Corporation, Respondent, dated February 12, 1990.

- Memorandum, to David Markell, Director, DEE from Michael O'Toole, Director, DHWR, Sub: Referral of Burroughs-Unisys Site, dated March 17, 1989.

- Memorandum, to Michael O'Toole, Director, DHWR from Mike Khalil, Regional Hazardous Waste Remediation Engineer, Sub: Referral of Burroughs-Unisys to Division of Environmental Enforcement, dated February 23, 1989.

- Letter, to Unisys Corporation form Kernan Davis, Acting Director, Bureau of Hazardous Site Control, DHWR, NYSDEC, Subject Notice of Site Inclusion on the Registry of Inactive Hazardous Waste Disposal Sites, January 17, 1989.