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ERP - E
VCP - V
BCP - C

932039

NGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES

PHASE I INVESTIGATION

Van De Mark Chemical
City of Lockport

Site No. 932039
Niagara County

Date: January 1986

Prepared for:

New York State Department of Environmental Conservation

50 Wolf Road, Albany, New York 12233
Henry G. Williams, *Commissioner*

Division of Solid and Hazardous Waste
Norman H. Nosenchuck, P.E., *Director*

By:
ENGINEERING-SCIENCE
In Association With
DAMES & MOORE

ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES IN THE STATE OF NEW YORK PHASE I INVESTIGATIONS

VAN DE MARK CHEMICAL

MILL STREET

NYS SITE NUMBER 932039

TOWN OF LOCKPORT

NIAGARA COUNTY

NEW YORK STATE, 14094

Prepared For

DIVISION OF SOLID AND HAZARDOUS WASTE
NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
50 WOLF ROAD
ALBANY, NEW YORK 12233-0001

Prepared By

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BALDWINSVILLE, NEW YORK 13027

DATE OF SUBMITTAL: JANUARY, 1986

VAN DE MARK CHEMICAL

TABLE OF CONTENTS

SECTION I

EXECUTIVE SUMMARY
VAN DE MARK CHEMICAL SITE

This report, prepared for the New York State Department of Environmental Conservation (NYSDEC), presents the results of the Phase I investigation for the Van De Mark Chemical site (NYS Site Number 932039, EPA Site Number D002116192), located in the Town of Lockport, Niagara County, New York (see Figure I-1).

SITE BACKGROUND

The 2-acre site was purchased in the 1950's by the Van De Mark Chemical Company and was used for drum storage (1953 to 1975) and the in-situ neutralization of hydrochloric acid generated by the reaction of water with buried wastes from silicon tetrachloride production (1975 to 1982). The previous owner of the site was Cowles Chemical Company, a Division of Stauffer Chemical. No records exist concerning previous usage of the site; however, Van De Mark Chemical believes that the site was not used for waste disposal. A site plan is provided in Figure I-2.

Groundwater sampling and analyses conducted in March, 1984, showed groundwater at a downgradient well from the site to have a lower pH and higher metals concentration than groundwater from an upgradient well. Additionally, several organic contaminants, including methylene chloride, chloroform, and phenols, were found at detectable levels in groundwater samples collected at the downgradient wells.

ASSESSMENT

In an attempt to quantify the risk associated with this site, the Hazard Ranking Scoring system (HRS) was applied as currently being used by the NYSDEC to evaluate abandoned hazardous waste sites in New York State. This system takes into account the types of wastes at the site, receptors, and transport routes to apply a numerical ranking of the site. As stated in 40 CFR Subpart H Section 300.81, the HRS scoring system was developed to be used in evaluating the relative potential of uncontrolled hazardous disposal facilities to cause health or safety problems or ecological or environmental damage. It is assumed by the EPA that a uniform application of the ranking system in each state will permit EPA to identify those releases of hazardous substances that pose the greatest hazard to humans or the environment.

Under the HRS, three numerical scores are computed for each site, to express the relative risk or danger from the site, taking into account the population at risk, the potential for contamination of drinking water supplies, for direct human contact, and for destruction of sensitive ecological systems and other appropriate factors. The three scores are:

- S_M reflects the potential for harm to humans or the environment from migration of a hazardous substance away from the facility by routes involving groundwater, surface water or air. It is a composite of separate scores for each of the three routes (S_{GW} = groundwater route score, S_{SW} = surface water route score, and S_A = air route score).

- S_{FE} reflects the potential for harm from substances that can explode or cause fires.

- S_{DC} reflects the potential for harm from direct contact with hazardous substances at the facility (i.e., no migration need be involved).

The preliminary HRS score was:

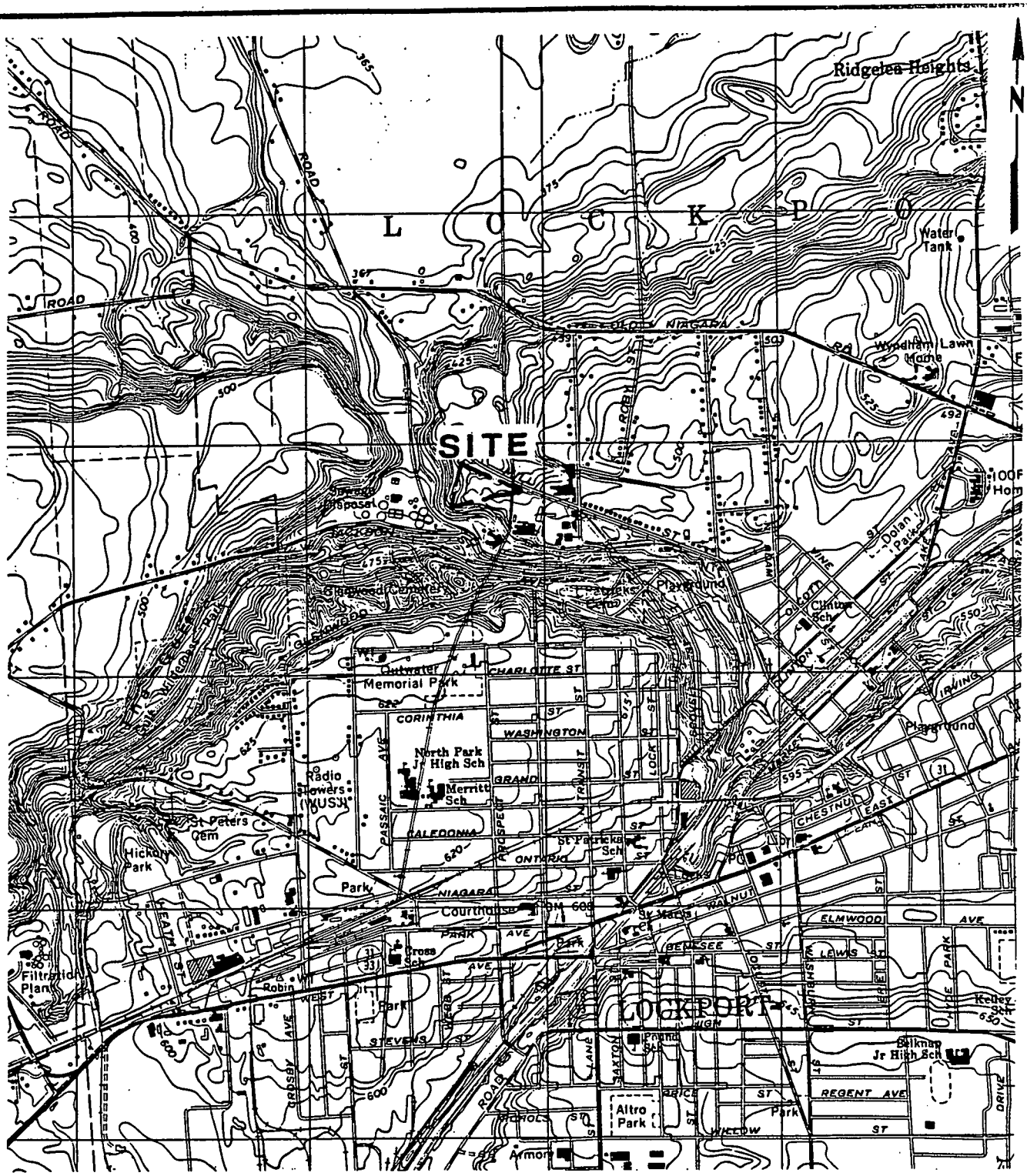
S_M	=	8.28	S_A	=	0
S_{GW}	=	5.89	S_{FE}	=	0
S_{SW}	=	13.05	S_{DC}	=	0

These scores reflect the fact that contaminants have been observed in the groundwater (intentional design) and that nearby workers were injured during a recent accidental release of air contaminants.

RECOMMENDATIONS

Based on this Phase I assessment, sufficient data exists to complete the HRS score. A closure plan has been submitted to the NYSDEC (Region 9) and the USEPA; however, no final determination concerning the closure plan has been made to date.

It is recommended that a remedial investigation and feasibility study not be conducted under the State of New York Superfund Program to eliminate the possible duplication of effort. Presently, Van De Mark Chemicals is negotiating with the NYSDEC and USEPA concerning the closure of the site.



REFERENCE: U.S.G.S. 7.5' Topographic Map
Lockport, NY (1980) Quadrangle

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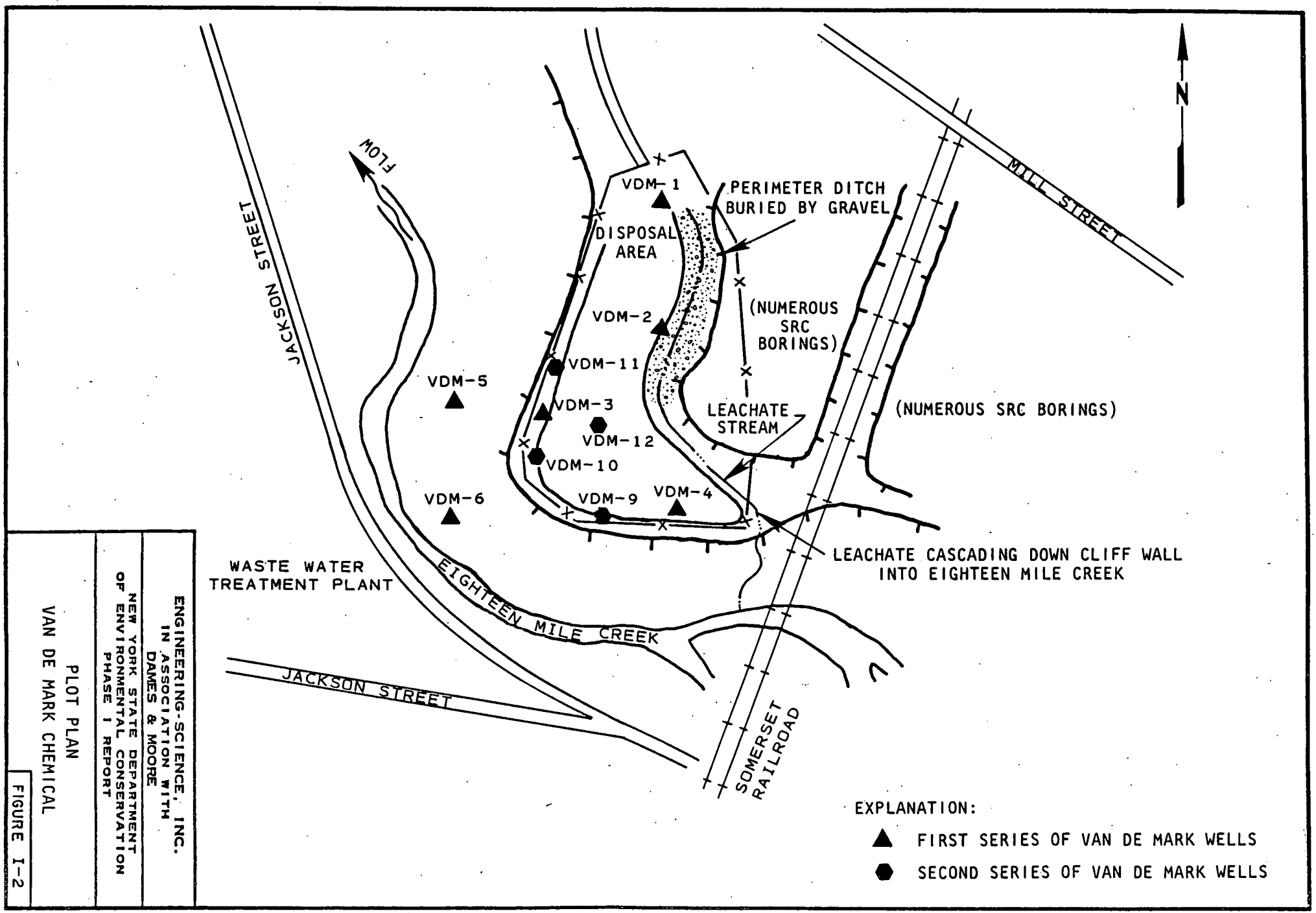
SITE LOCATION MAP
VAN DE MARK CHEMICAL

FIGURE I-1



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PLOT PLAN
VAN DE MARK CHEMICAL

FIGURE I-2

SECTION II

PURPOSE

The purpose of the Phase I investigation at the Van De Mark Chemical site was to assess the hazard to the environment caused by the present condition of the site. This assessment is based on the Hazard Ranking System, which involves the compilation and rating of numerous geological, toxicological, environmental, chemical, and demographic factors and the calculation of an HRS score. Details of HRS implementation are included in Section V. During the initial portion of the investigation, available data and records, combined with information collected from a site inspection, were reviewed and evaluated. The investigation at this site focused on the burial of reactive wastes in an unlined landfill. Based on this initial evaluation of the Van De Mark site, sufficient data is available to complete an HRS score. No Phase II work plan or cost estimate is recommended; however, a remedial investigation and feasibility study is recommended to determine the best closure plan.

SECTION III

SCOPE OF WORK

The scope of work for the New York State Inactive Site Investigation Program (Phase I) was to collect and review all available information necessary for the documentation and preparation of a Hazard Ranking System score and a Phase II work plan and cost estimate if required. The work activities performed included data collection and review, a site inspection, and interviews with knowledgeable individuals of past and present disposal activities at the site.

The sources contacted during this Phase I investigation included government agencies (federal, state and local), present site owners and operators, and any other individuals that may have knowledge of the site, as identified during the performance of the investigation. These sources are listed in Appendix A. The intent of the list is to identify all persons, departments, and/or agencies contacted during the third round of the Phase I investigations even though useful information may not have been collected from each source contacted.

SECTION IV

SITE ASSESSMENT

SITE HISTORY

The 2-acre Van De Mark site, located on Mill Street in the Town of Lockport, New York, was purchased by the Van De Mark Chemical Company in 1953. The previous owner was Cowles Chemical Company, a Division of Stauffer Chemical (Matthews, 1985). Based on the information provided by Van De Mark personnel, it is not likely that the site was used for disposal of waste prior to its purchase by Van De Mark Chemical (Matthews, 1985). The site was formerly an open pit limestone quarry (WWW Engineers, 1977). From 1953 to late 1975, an estimated 2,000 drums containing wastes from Van De Mark Chemical's silicon tetrachloride plant located on North Transit Road were stored at the site. These drums gradually deteriorated, resulting in the release of HCl fumes. Following an order to remove the drums in 1975, Van De Mark Chemical buried the drums on the western portion of the site.

Following a fire at the site in 1976, the NYSDEC and the Niagara County Health Department (NCHD) requested that Van De Mark Chemical submit a detailed landfill design. The submittal was made in 1977 and a permit to construct was issued in 1978, followed by a permit to operate in 1979.

As proposed and operated by Van De Mark Chemical, the new landfill consisted of several unlined trenches. Each trench was dug as needed, a layer (6 to 8") of lime was added, and the drums were placed upright in the trench, punched with holes, and covered with limestone. Finished trenches were covered with clay and graded to direct water to the center

of the site. The overall purpose of this design was to allow rainwater to percolate downward and react with the wastes to produce hydrochloric acid. The acid would then be neutralized by the lime and limestone in the trenches (WWW Engineers, 1977).

Operations at the landfill ceased in 1982, following the expiration of Van De Mark's permit. Since then, process wastes have been treated within the manufacturing plant. Van De Mark Chemical has submitted several closure plans to the NYSDEC and USEPA Region II. None of these plans has yet received regulatory approval.

SITE TOPOGRAPHY

The Van De Mark Chemical landfill is located on top of a cliff, north of the headwaters of Eighteen-Mile Creek in the Town of Lockport, Niagara County, New York State. The ground surface of the site has been modified by the disposal operation to be a relatively flat surface surrounded to the west, south, and east by steep embankments. The site is essentially a butte with adjoining property to the north. The surface water on the site drains to a collection ditch on the eastern side near the eastern perimeter, travels southeast across the top of the flat site surface, cascades over the cliff, and enters Eighteen-Mile Creek at the base of the cliff.

The 2-acre rectangular site is located in an industrial section of Lockport. It is surrounded on the west and south by Eighteen-Mile Creek (which is located at the bottom of the cliff), to the east by a recently built spur of the Somerset Railway, and to the north by property owned by Mr. Weston.

Local Sensitive Environments

There is a NYS recognized wetland 0.4 miles from the site. There are no critical habitats for endangered species near this site. There are no private drinking water supply wells within 3 miles of the site (Burmaster, 1985).

SITE HYDROLOGY

This summary of site geology is based on USGS topographic maps, NYS Museum and Science Service Bedrock Geology Map and Quaternary Geology Map, NYSGA (1982), Site Visit in March, 1985, Somerset Railroad Corporation (1984 Bechtel Consulting Report), and on-site boring logs (1977).

Regional Geology and Hydrology

The site is located in the Erie-Ontario lowlands physiographic province. The bedrock of this region is predominantly limestone, dolostone, and shale. Most of the rocks are deep aquifers with regional flow to the south.

In the recent past, most of New York State, including the site, has been repeatedly covered by a series of continental ice sheets. The activity of the glacier widened pre-existing valleys, and deposited widespread accumulations of till. The melting of ice, ending approximately 12,000 years ago, produced large volumes of meltwater; this water subsequently shaped channels and deposited thick accumulations of stratified, granular sediments.

As glacial ice retreated from the region, meltwater formed lakes in front of the ice margin. This region is covered by lake sediments, the most recent being from Lake Iroquois (a larger predecessor to Lake Ontario) and from Lake Tonawanda (an elongate lake which occupied an east-west valley and drained north into Lake Iroquois). The sediments consist of blanket sands and beach ridges which are occasionally underlain by lacustrine silts and clays (indicating quiet or deeper water deposition). Drainage channels carved into the Niagara Escarpment indicate positions of former outlets from Lake Tonawanda.

Granular deposits in this region frequently act as shallow aquifers, whereas lacustrine clays, as well as tills, often inhibit groundwater movement. However, fine-grained, water-lain sediments, such as silts and clays, frequently contain horizontal laminations and sand

seams. These internal features facilitate lateral groundwater movement through otherwise low permeability materials.

Site Hydrogeology

The geology of the landfill site is described by the following summary (SRC, 1984) of the adjacent railroad site:

> "The Bluff on which the study area is situated is near the base of the Niagara escarpment, a major geomorphic feature that extends in an east-west direction across northern Niagara County. The bedrock consists of nearly flat-lying (horizontal) sedimentary beds with a thin cover of unconsolidated glacial deposits, soil, and talus. The glacial deposits consist of unsorted fine to coarse sand with some traces of fine gravel, silt, and clay. The materials are commonly stiff and very compact. The formations underlying the bluff are well-exposed in the road cut along west Jackson Street directly south of the landfills. These formations include, from oldest to youngest, the Queenston Formation of Ordovician age, and the Whirlpool, Power Glen, and Grimsby Formations of Silurian age.
>
> The Queenston Formation, the lowermost formation exposed in the area, consists of reddish-brown shale with thin interbeds of greenish-gray shale and siltstone. The Whirlpool Formation is a gray to white sandstone. This unit is very hard and fine to medium grained with thin bands of gray shale. The Power Glen Formation is a greenish-gray shale and siltstone interbedded with limestone, dolomite, and calcareous sandstone. The Grimsby Formation includes a lower white to palegreen fine-grained sandstone and an upper reddish-brown sandstone with interbedded siltstone and shale.

Jointing in exposures of bedrock is uniform in orientation and character. Observations from rock cores indicate the joints tend to be more open to the east near the bluff. The frequency of jointing ranges from 3 to 6 foot spacing. Three near-vertical joint sets present have orientations of N45W to N70W, N55E to N75E, and N10E to N30E. In addition, horizontal bedding joints are present. The near-vertical joints dip predominantly from 85° to vertically. Joint openings measured at outcrops near the Van De Mark Landfill ranged from closed to as much as 2 inches."

On-site borings show that the site soil is granular, permeable, and does not form a soil aquifer (permeability range of 10^{-3} cm/sec to 10^{-5} cm/sec has been assumed for HRS scoring). However, according to SRC, the bedrock appears to form possibly three aquifers (water-bearing zones) on the Van De Mark site. These are:

Zone	Depth	Contact Between
Zone 2	25'	Grimsby/Power Glen
Zone 3	45'	Power Glen/Whirlpool
Zone 4	Greater than 100'	Whirlpool/Queenston

Based on previous investigations by SRC, groundwater movement within these zones appears to be westward. Additionally, there may be vertical movement between these zones due to the presence of vertical fractures.

It appears that the construction of the Somerset Railroad cut may have intercepted Zone 2 upgradient from the Van De Mark landfill, thereby cutting off the recharge water for Zone 2 in the landfill and causing Zone 2 within the site boundaries to dry up (ES and D&M, 1985; NCHD, 1985).

SITE CONTAMINATION

The Van De Mark Chemical site was used from 1953 to 1975 for the storage of an estimated 2,000 drums containing wastes from the production of silicon tetrachlorides. The waste composition consists of hexachlorodisiloxane (30-70%), silicon tetrachloride (10-50%), and carbon and silicon carbide (5-30%).

During this period, many of the stored drums deteriorated resulting in the release of toxic (HCl) fumes. These drums were subsequently buried on-site. Starting in 1975, all drums (containing still bottom wastes) brought on-site were placed in lime-lined trenches (6 to 8 feet deep). The drums were placed upright in the trench, punched with holes, and covered with limestone. Drum-filled trenches were covered with clay and graded to direct surface water runoff to the drum disposal pits, where it would react with the wastes to produce hydrochloric acid. The acid, in turn, would be neutralized by the lime and limestone in the trenches. Based on projections made by Van De Mark Chemical in 1977, an estimated 50 to 60 drums of waste per month would be disposed in this manner in the landfill trenches (WWW Engineers, 1977). Therefore, for purposes of rating the site, the total number of drums disposed at the Van De Mark Chemical Site, including the 2,000 drums containing wastes from the production of silicon tetrachlorides that were previously buried on-site, is estimated to range from 6,800 to 7,800 drums.

As part of a subsurface investigation conducted in support of Van De Mark Chemical's application to operate a solid waste landfill, four ground water wells were installed to depths of 90 feet (WWW Consulting Engineers, 6/29/77). Because these wells were thought to be too deep to intersect the water bearing zone of interest, a second set of four additional wells was installed in 1984 (NCHD, 1985).

Of this second set, one well (VDM-12) is placed within the landfill area. The remaining three wells (VDM-9, 10, 11) are considered downgradient wells, as groundwater in the area generally flows from east to west. A fifth well, D-55, drilled as part of two subsurface investigations on adjacent property to the east, is designated as an upgradient

well. Well D-55 is screened over a 10-foot interval. Wells VDM-9 through VDM-12 are screened over a 5-foot interval straddling the Grimsby-Power Glen Contact, believed to represent the uppermost water-bearing zone of interest (Advanced Environmental Systems, 1983). According to the NYSDEC, several of the wells have extremely long sand pack intervals (VDM-10) so that several intervals are actually being monitored. As a result, the groundwater elevation may be composites of discrete aquifers and groundwater flow direction may vary from that indicated in the closure plan (NYSDEC, 1985). However, based on information presented in the closure plan, groundwater flow in this particular zone appears to be from the southeast to the northwest, and is not thought to have been affected by the nearby "Mill Street Rock Cut" constructed during expansion of the Somerset Railroad system (Somerset Railroad Corporation, 1984). Figure IV-1 shows the location of the groundwater monitoring wells on-site.

Presented in Table IV-1 are the groundwater monitoring results from March 1984. These results show the pH of groundwater in the upgradient well to be higher than in any of the other wells. As would be expected, the concentrations of heavy metals are lower in this well and much higher in the downgradient wells.[1] As indicated in the table, several of the heavy metals detected in the downgradient wells were significantly higher than the acceptable water quality standards for Class GA water in New York State.

In all cases, metals and chlorides are highest in VDM-12, in the center of the landfill, and lowest in D-55, the upgradient well. The cause of the extremely low pH in VDM-11 is not known at this time.

Sampling for selected organics showed the presence of methylene chloride, chloroform and phenols at significant levels in the on-site (VDM-12) and downgradient (VDM-9, 10, 11) wells (see Table IV-2). Other organics (chloromethane, carbon tetrachloride and tetrachloroethylene) were found in VDM-11 and/or VDM-12.

---

[1] In highly acidic (low pH) environments, any metals present tend to exist in the soluble form.

Attempts have been made to assess the potential for contamination of Eighteen-Mile Creek; however, no significant differences were located between upstream and downstream samples taken in April 1984. The analysis of drainage ditch water and the bedrock seep above the creek showed both to have relatively high concentrations of chloroform (186 and 25 ppb, respectively). Additionally, carbon tetrachloride and tetrachloroethylene were found at 4.98 and 11.98 ppb, respectively, in ditch water (Advanced Environmental Systems, 1983).

HNu meter readings taken on-site to measure the presence of organic contaminants were all below 1 ppm (ES and D&M, 1985).

TABLE IV-1

ANALYSIS OF INORGANIC CONSTITUENTS IN GROUNDWATER AT
VAN DE MARK SITE (MARCH 21, 1984)

Parameter (ug/liter)	Water Quality Standards[a] (ug/l)	Well Number VDM-9[b]	VDM-10[b]	VDM-11[b]	VDM-12[c]	D-55[d]
PH	6.5-8.5	4.793	6.358	2.365	4.014	6.671
Chlorides	250,000	15,068	5,039	1,859	53,593	636
Soluble Iron	300	880	< 0.1	228	17,500	< 0.1
Cadmium	10	96	40	17	204	9
Copper	1,000	7,800	290	510	57,000	80
Lead	25	750	70	100	22,200	30
Nickel	---	1,730	310	600	26,600	< 100
Silver	50	210	60	60	210	50
Thallium	---	850	300	200	1,230	< 200
Zinc	5,000	3,050	1,140	2,920	222,600	0.25
Beryllium	---	28	< 10	16	182	< 10

SOURCE: Advanced Environmental Systems, Inc., 1984

[a] NYS Water Quality Standards for Class GA Water.

[b] Downgradient wells.

[c] Well VDM-12 is placed within the landfill area.

[d] Upgradient well.

TABLE IV-2

ANALYSIS OF ORGANIC CONSTITUENTS IN GROUNDWATER AT VAN DE MARK SITE (MARCH 21, 1984)

Parameter (ug/l)	Water Quality Standards[a] (ug/l)	Well Number VDM-9[b]	VDM-10[b]	VDM-11[b]	VDM-12[c]	D-55[d]
Chloromethane	---	< 1.31	< 0.26	< 0.26	858.21	< 0.26
Methylene Chloride	---	263.13	41.70	231.76	897.64	3.76
Chloroform	100.0	169.21	97.60	196.36	615,83	< 0.13
Carbon Tetrachloride	5.0	< 1.11	< 0.22	71.57	< 5.56	< 0.22
Tetrachloroethylene	---	< 0.68	< 0.14	230.43	33.59	< 0.14
Phenols (mg/liter)	0.001	0.010	0.200	0.013	0.043	0.005

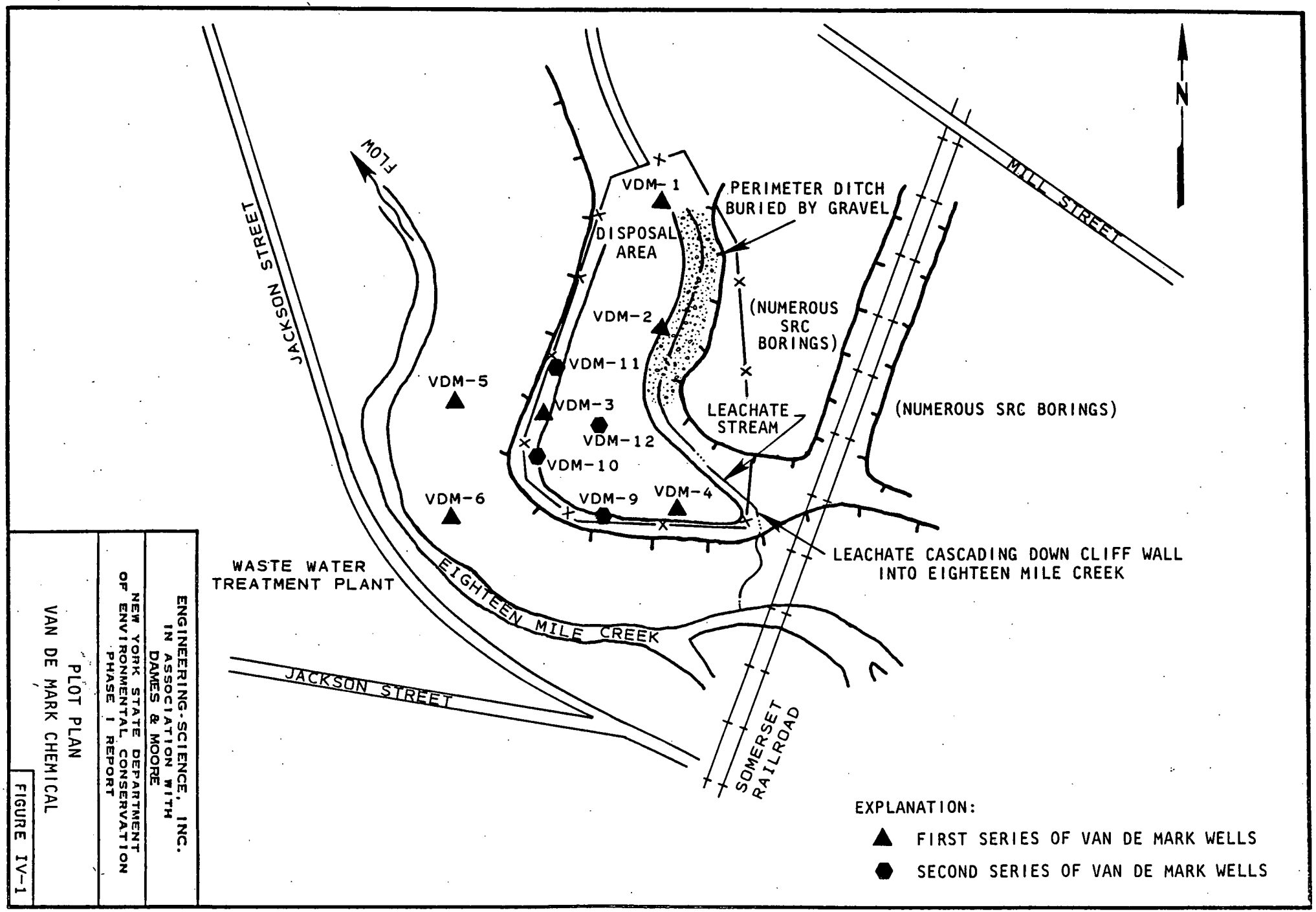
SOURCE: Advanced Environmental Systems, Inc., 1984.

[a] NYS Water Quality Standards for Class GA Water.

[b] Downgradient wells.

[c] Well VDM-12 is placed within the landfill area.

[d] Upgradient well.



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PLOT PLAN
VAN DE MARK CHEMICAL

FIGURE IV-1

PRELIMINARY APPLICATION OF THE HAZARD RANKING SYSTEM

NARRATIVE SUMMARY

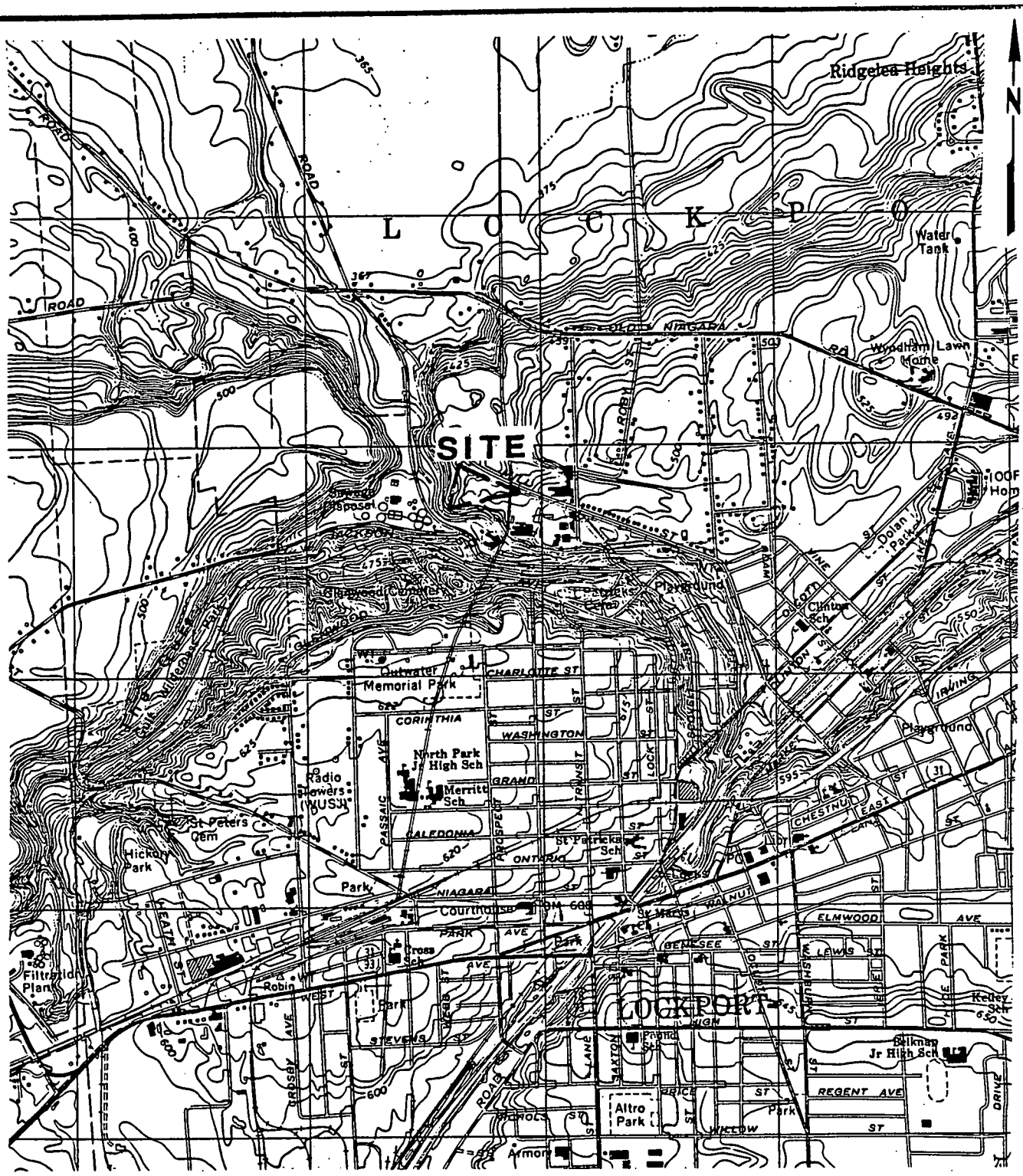
The 2-acre Van De Mark Chemical disposal site, located on Mill Street in the Town of Lockport, Niagara County, New York, was purchased by the Van De Mark Chemical Company in 1953. According to Van De Mark personnel, the site was not previously used for disposal. From 1953 to 1975, an estimated 2,000 drums containing silicon tetrachloride, hexachlorodisiloxane, and silicon carbide were stored then buried on-site following the determination of the contents of the drums. Beginning in 1975 until 1982, the drummed wastes were perforated and buried in lime-lined trenches. An estimated 4,800 to 5,800 55-gallon drums were disposed on-site in this manner. Therefore, the total number of drums disposed of on-site ranges from 6,800 to 7,800. The purpose of this operation was to promote the generation of hydrochloric acid by reaction of the wastes with water, which would then be neutralized by the lime.

Results of groundwater monitoring at the site showed low pH and high metals concentrations as compared to the off-site upgradient well. Organic contaminants were also detected in on-site and downgradient wells, although their source is not known (Advanced Environmental Systems, 1983).

Several site closure plans have been submitted by Van De Mark Chemical to the USEPA and NYSDEC; however, none have yet met with the approval of regulatory personnel (NCHD, 1985).

HNu meter readings taken on-site did not detect volatile organics in concentrations greater than 1 ppm (ES and D&M, 1985).

LOCATION



LATITUDE: 43°11'11"
LONGITUDE: 78°42'08"

SCALE
0 1000 2000 3000 4000 FEET

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SITE LOCATION MAP
VAN DE MARK CHEMICAL

FIGURE ii-1

REFERENCE: U.S.G.S. 7.5' Topographic Map
Lockport, NY (1980) Quadrangle

HRS COVER SHEET

Facility Name: Van De Mark Chemical Co.

Location: Mill Street, Lockport, NY 14094

EPA Region: II

Person(s) in charge of the facility: Mr. Harry Sherriff, VP Manufacturing, 1 North Transit Road, Lockport, NY 14094

Name of Reviewer: S. J. Tiffany Date: 4/16/85

General Description of the facility:

The landfill was used for in-situ neutralization of hydrochloric acid generated by reaction of water with buried wastes. An estimated 4,800 to 5,800 55-gallon drums were disposed on-site from 1975 until closure in 1982. An estimated 2,000 drums were previously disposed on-site from the Van De Mark Chemical silicon tetrachloride production operations. Therefore, a total of 6,800 to 7,800 drums have been disposed on-site. Contaminants detected in groundwater samples collected from the site's downgradient wells had low pH's and elevated levels of heavy metals and organic contaminants. Many of the constituents detected exceeded the NYS water quality standards for Class GA waters. Final closure of the disposal site is pending approval by the NYSDEC and USEPA.

Scores: $S_M = 8.28$ ($S_{gw} = 5.89$ $S_{sw} = 13.05$ $S_a = 0$)

$S_{FE} = 0$

$S_{DC} = 0$

Facility Name: Van de Mark Date: 5/23/85

Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	0 (45)	1	45	45	3.1
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.					
2 Route Characteristics					3.2
Depth to Aquifer of Concern	0 1 (2) 3	2	4	6	
Net Precipitation	0 1 (2) 3	1	2	3	
Permeability of the Unsaturated Zone	0 1 (2) 3	1	2	3	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			11	15	
3 Containment	0 1 2 (3)	1	3	3	3.3
4 Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	0 1 2 3 4 5 6 [7] 8	1	7	8	
Total Waste Characteristics Score			25	26	
5 Targets					3.5
Ground Water Use	0 (1) 2 3	3	3	9	
Distance to Nearest Well/Population Served	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			3	49	
6 If line 1 is 45, multiply 1 x 4 x 5. If line 1 is 0, multiply 2 x 3 x 4 x 5			3375	57,330	
7 Divide line 6 by 57,330 and multiply by 100			S_{gw} = 5.89		

GROUND WATER ROUTE WORK SHEET

Facility Name: Van de Mark Date: 5/23/85

Surface Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.					
2 Route Characteristics					4.2
Facility Slope and Intervening Terrain	0 1 2 (3)	1	3	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3	
Distance to Nearest Surface Water	0 1 2 (3)	2	6	6	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			14	15	
3 Containment	0 1 2 (3)	1	3	3	4.3
4 Waste Characteristics					4.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	0 1 2 3 4 5 6 [7] 8	1	7	8	
Total Waste Characteristics Score			25	26	
5 Targets					4.5
Surface Water Use	0 1 (2) 3	3	6	9	
Distance to a Sensitive Environment	0 (1) 2 3	2	2	6	
Population Served/ Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			8	55	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			8400	64,350	
7 Divide line 6 by 64,350 and multiply by 100			S_{sw} = 13.05		

SURFACE WATER ROUTE WORK SHEET

Facility Name: Van de Mark Date: 5/23/85

Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Release	(0) 45	1	0	45	5.1
Date and Location: March/April 1985 (ES + D+M Site Visit)					
Sampling Protocol: HNu Meter Survey					
If line [1] is 0, the S_a = 0. Enter on line [5] . If line [1] is 45, then proceed to line [2] .					
[2] Waste Characteristics					5.2
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste	0 1 2 3 4 5 6 7 8	1		8	
	Total Waste Characteristics Score			20	
[3] Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
	Total Targets Score			39	
[4] Multiply [1] x [2] x [3]			0	35,100	
[5] Divide line [4] by 35,100 and multiply by 100			S_a = 0		

AIR ROUTE WORK SHEET

Facility Name: Van de Mark Date: 5/23/85

Worksheet for Computing S_M

	S	S^2
Groundwater Route Score (S_{gw})	5.89	34.69
Surface Water Route Score (S_{sw})	13.05	170.30
Air Route Score (S_a)	0.00	0.00
$S_{gw}^2 + S_{sw}^2 + S_a^2$		204.99
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		14.32
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		8.28

WORK SHEET FOR COMPUTING S_M

Facility Name: Van de Mark Date: 5/23/85

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max. Score	Ref. (Section)
[1] Containment	1 3	1		3	7.1
[2] Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
[3] Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1		5	
Distance to Nearest Building	0 1 2 3	1		3	
Distance to Sensitive Environment	0 1 2 3	1		3	
Land Use	0 1 2 3	1		3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Total Targets Score				24	
[4] Multiply [1] x [2] x [3]				1,440	
[5] Divide line [4] by 1,440 and multiply by 100			S_{FE} = 0		

FIRE AND EXPLOSION WORK SHEET

Facility Name: VAN de mark Date: 5/23/85

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	(0) 45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	(0) 1 2 3	1	0	3	8.2
3 Containment	0 (15)	1	15		8.3
4 Waste Characteristics Toxicity	0 1 2 (3)	5	15	15	8.4
5 Targets					8.5
Population Within 1-Mile Radius	0 1 2 3 (4) 5	4	16	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			16	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			0	21,600	
7 Divide line 6 by 21,600 and multiply by 100			S_{DC} = 0		

DIRECT CONTACT WORK SHEET

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

FACILITY NAME: Van De Mark Chemical Co.

LOCATION: Mill Street, Town of Lockport, New York 14094

GROUNDWATER ROUTE

1. OBSERVED RELEASE

Contaminants detected (5 maximum):

Iron, Copper, Lead, Nickel, Zinc - solubilized under low pH conditions (Advanced Environmental Systems, 1983).

Rationale for attributing the contaminants to the facility:

Increase in contaminant concentrations observed between upgradient and downgradient wells (Advanced Environmental Systems, 1983).

* * *

2. ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifer(s) in concern:

Bedrock aquifer in sandstone and fractured shale.

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

25 to 100 feet (SRC, 1984).

Depth from the ground surface to the lowest point of waste disposal/ storage:

Unknown.

Net Precipitation

(U.S. Dept. of Commerce, National Climatic Center, Climatic Atlas of the United States, 1979).

Mean annual or seasonal precipitation (list months for seasonal):

Mean annual precipitation is 36".

Mean annual lake or seasonal evaporation (list months for seasonal):

Mean annual lake evaporation is 27".

Net precipitation (subtract the above figures):

9" (36" - 27" = 9").

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Silt, little sand and gravel (subsurface logs by Empire Soils Investigations, 5/77).

Permeability associated with soil type

$< 10^{-3}$ $> 10^{-5}$ cm/sec (Freeze, R.A., and J.A. Cherry, Groundwater, 1979).

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

Liquid, Solid (NYSDEC Registry Sheet, 12/83).

3. CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Lime-lined landfill (i.e., no clay or synthetic liner) (WWW Engineers, 1977).

Method with highest score:

Unlined landfill - 3.

4. WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Heavy metals (i.e., cadmium, copper, lead, silver, zinc)
Hexachlorodisiloxane
Silicon Tetrachloride
Silicon Carbide
Hydrochloric Acid
(WWW Engineers, 1977; Advanced Environmental Systems, 1984)

Compound with highest score:

Heavy metals (toxicity = 3, persistence = 3) - 18.

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

6,800 to 7,800 55-gallon drums.

Basis of estimating and/or computing waste quantity:

An estimated 50 to 60 drums/month were landfilled on-site from 1975 until 1982. Approximately 2,000 drums were stored on-site from 1953 until 1975 and were also reported to be buried on-site (WWW Engineers, 1977).

5. TARGETS

Groundwater Use

Uses(s) of aquifer(s) of concern within a 3-mile radius of the facility:

No private drinking water wells are within 3 miles of the site; the entire area is supplied with municipal water (Burmaster, 12/10/85).

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

Not applicable, none within 3 miles (Burmaster, 12/10/85).

Distance to above well or building:

Not applicable.

Population Served by Groundwater Wells Within a 3-Mile Radius

(NYS Atlas of Community Water System Sources, 1982)

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

Not applicable, none within 3 miles.

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

Not applicable, none within 3 miles.

Total population served by groundwater within a 3-mile radius:

None (Burmaster, 12/10/85).

SURFACE WATER ROUTE

1. OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

Surface water sampling has not shown significant differences in water quality between upstream and downstream sampling locations that can be attributed to Van De Mark (Advanced Environmental Systems, 1983).

Rationale for attributing the contaminants to the facility:

Surface water sampling was conducted up and downstream of the site and no observed release was found.

2. ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

5%.

Name/description of nearest downslope surface water:

Eighteen-Mile Creek.

Average slope of terrain between facility and above-cited surface water body in percent:

60%.

Is the facility located either totally or partially in surface water?

No.

Is the facility completely surrounded by areas of higher elevation?

No.

1-Year 24-Hour Rainfall in Inches

2.1" (U.S. Department of Commerce Technical Paper No. 40).

Distance to Nearest Downslope Surface Water

0.04 mile.

Physical State of Waste

Liquid, solid (NYSDEC Registry Sheet, 12/83).

3. CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Lime-lined landfill (i.e., no clay or synthetic liner) (WWW Engineers, 1977).

Method with highest score:

Unlined landfill - 3.

4. WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Heavy metals (i.e., cadmium, copper, lead, silver, zinc) detected in high concentrations in groundwater samples disposed in drums on-site.
Hexachlorodisiloxane
Silicon Tetrachloride
Silicon Carbide
Hydrochloric Acid
(WWW Engineers, 1977; Advanced Environmental Systems, 1983).

Compound with highest score:

Heavy metals (toxicity = 3, persistence = 3) - 18.

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

6,800 to 7,800 55-gallon drums.

Basis of estimating and/or computing waste quantity:

An estimated 50 to 60 drums/month were landfilled on-site from 1975 until 1982. Approximately 2,000 drums were stored on-site from 1953 until 1975 and were buried on-site once they began to leak (ES and D&M, 1985; WWW Engineers, 1977).

* * *

5. TARGETS

(USGS Topographic Map: Lockport, NY Quadrangle, 1980)

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

Recreation.

Is there tidal influence?

No.

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

None within 2 miles (western NYS not a coastal area).

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

0.4 miles (NYS Wetlands Maps).

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

None within 1 mile (NYSDEC Region 9, Division of Fish & Wildlife Files).

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

None within specified distances (NYS Atlas of Community Water System Sources, 1982).

Computation of land area by above-cited intake(s) and conversion to population (1.5 people per acre):

Not applicable.

Total population served:

Not applicable.

Name/description of nearest of above water bodies:

Not applicable.

Distance to above-cited intakes, measured in stream miles:

Not applicable.

AIR ROUTE

1. OBSERVED RELEASE

Contaminants detected:

HNu meter readings were taken up and downwind of the site and all readings were less than 1 ppm, indicating no air releases .

Date and location of detection of contaminants:

ES and D&M site visit, 3/25/85.

Methods used to detect the contaminants:

HNu meter.

Rationale for attributing the contaminants to the site:

Not applicable.

* * *

2. WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Silicon tetrachlorides.

Most incompatible pair of compounds:

Silicon tetrachlorides and water.

Toxicity

Most toxic compound:

HCl fumes.

Hazardous Waste Quantity

Total quantity of hazardous waste:

Not applicable, no air releases detected.

Basis of estimating and/or computing waste quantity:

Not applicable, no air releases detected.

* * *

3. TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

(0 to 4 mi) 0 to 1 mi 0 to 1/2 mi 0 to 1/4 mi

34,647 people (Compiled from 1980 US Bureau of the Census Data).

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

None within 2 miles (western NYS not a coastal area).

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

0.4 mile (NYS Wetlands Maps).

Distance to critical habitat of an endangered species, if 1 mile or less:

None within 1 mile (NYSDEC Region 9, Division of Fish & Wildlife Files).

Land Use

(ES and D&M site visit, 3/25/85).

Distance to commerical/industrial area, if 1 mile or less:

0.3 mile.

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

More than 2 miles.

Distance to residential area, if 2 miles or less:

More than 2 miles.

Distance to agricultural land in production within past 5 years, if 1 mile or less:

More than 1 mile.

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

More than 2 miles.

Is a historic or landmark site (National Register of Historic Places and National Natural Landmarks) within view of the site?

No.

FIRE AND EXPLOSION

1. CONTAINMENT

Hazardous substances present:

No records were found during the Phase I investigation which indicate that a present fire and explosion hazard exists at the site.

Type of containment, if applicable:

Not applicable, no fire or explosion hazard exists on-site.

* * *

2. WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

No measuresments for fire/explosion were taken on-site (ES and D&M Site Visit).

Ignitability

Compound used:

No ignitable compounds are known to exist on-site (WWW Engineers, 1977).

Reactivity

Most reactive compound:

Silicon tetrachloride (WWW Engineers, 1977).

Incompatibility

Most incompatible pair of compounds:

Silicon tetrachloride and water (WWW Engineers, 1977).

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

An estimated 6,800 to 7,800 55-gallon drums of wastes from the production of silicon tetrachloride were buried on-site (WWW Engineers, 1977; Advanced Environmental Systems, 1983).

Basis of estimating and/or computing waste quantity:

An estimated 50 to 60 drums/month were landfilled on-site from 1975 to 1982. An additional 2,000 drums were also reported to be previously landfilled on-site. Note that the wastes do not pose a fire or explosion hazard on-site (WWW Engineers, 1977; Advanced Environmental Systems, 1983).

* * *

3. TARGETS

Distance to Nearest Population

The distance to the nearest residential area is more than two miles (ES and D&M Site Visit, 3/25/85).

Distance to Nearest Building

0.3 miles (ES and D&M Site Visit, 3/25/85).

Distance to Sensitive Environment

Distance to wetlands:

0.4 miles (NYS Wetlands Maps).

Distance to critical habitat:

None within 1 mile (NYSDEC Region 9, Division of Fish and Wildlife Files).

Land Use

Distance to commercial/industrial area, if 1 mile or less:

0.3 miles (ES and D&M Site Visit, 3/25/85).

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

More than 2 miles (ES and D&M Site Visit, 3/25/85).

Distance to residential area, if 2 miles or less:

More than 2 miles (ES and D&M Site Visit, 3/25/85).

Distance to agricultural and in production within past 5 years, if 1 mile or less:

More than 1 mile (ES and D&M Site Visit, 3/25/85).

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

More than 2 miles (ES and D&M Site Visit, 3/25/85).

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

No.

Population with 2-Mile Radius

19,179 people (U.S. Census Data, 1980).

Buildings Within 2-Mile Radius

5,047 Buildings (USGS Topographic Maps).

DIRECT CONTACT

1. OBSERVED INCIDENT

Date, location, and pertinent details of incident:

During the Phase I site visit, Van de Mark Chemical personnel indicated that while the landfill was in operation, several railroad employees working adjacent to the site inhaled acid fumes eminating from drums at the landfill. However, no records were found during the Phase I investigation addressing this incident. Therefore, because the landfill is closed and does not presently pose a direct contact threat and adequate documentation does not exist for the past incident, an observed release is not scored for this site.

* * *

2. ACCESSIBILITY

Describe type of barrier(s):

Access to site restricted by fence = 2 (ES/D&M Site Visit).

* * *

3. CONTAINMENT

Type of containment, if applicable:

Lime-lined landfill (i.e., no clay or synthetic liner) (WWW Engineers, 1977).

* * *

4. WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

Heavy metals (i.e., cadmium, copper, lead, silver, zinc) detected in high concentrations in groundwater samples disposed in drums on-site. Hexachlorodisiloxane, silicon tetrachloride, silicon carbide, and hydrochloric acid (WWW Engineers, 1977; Advanced Environmental System, 1983).

Compound with highest score:

Heavy metals (toxicity = 3, persistence = 3) - 18.

5. TARGETS

Population within one-mile radius

5,048 (US Census Data, 1980).

Distance to critical habitat (of endangered species)

None within one mile (NYSDEC, Region 9).

LATITUDE: 43°11'11"
LONGITUDE: 78°42'08"

SCALE
0 1000 2000 3000 4000 FEET

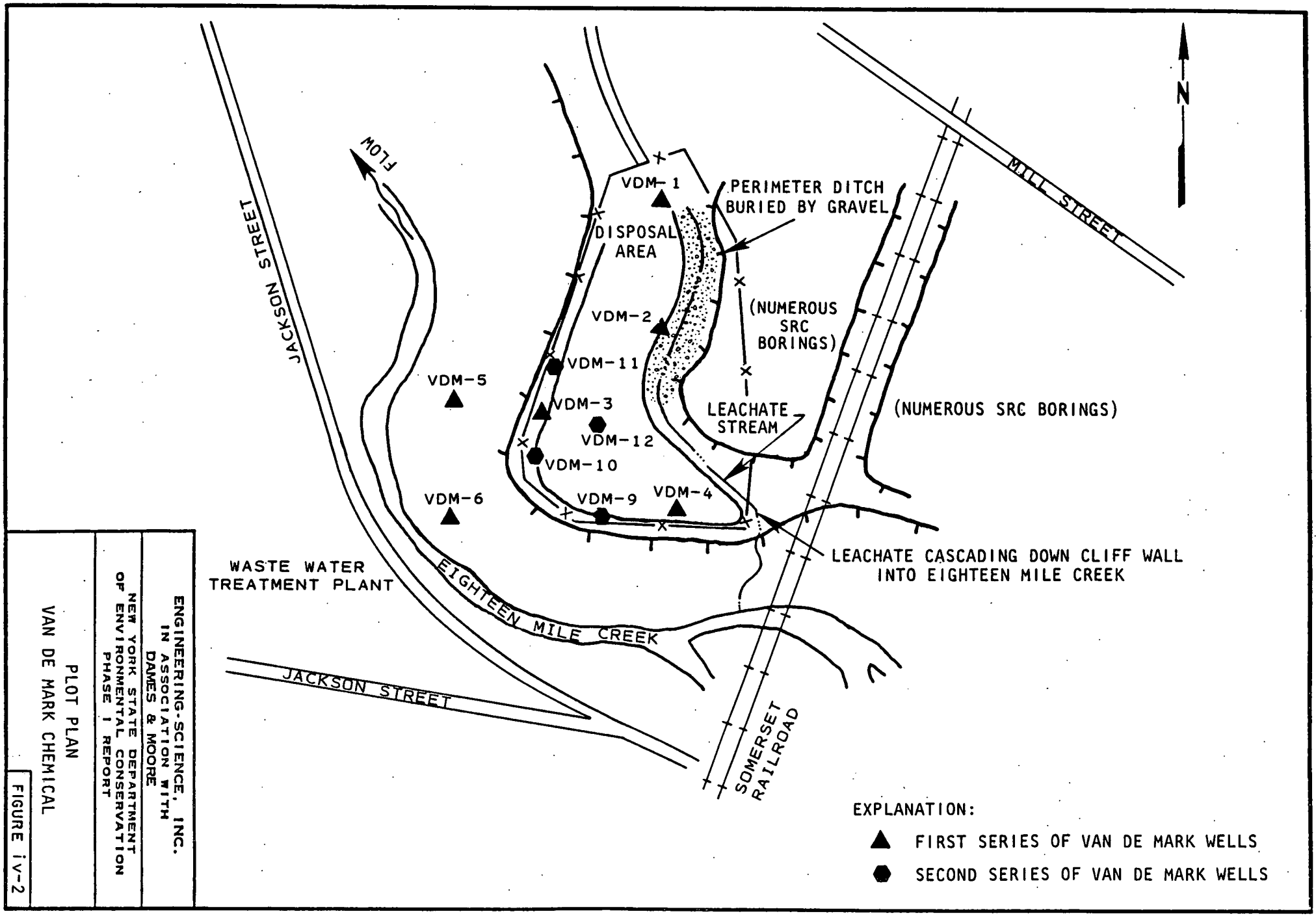
ENGINEERING-SCIENCE, INC.
IN ASSOCIATION WITH
DAMES & MOORE

NEW YORK STATE DEPARTMENT
OF ENVIRONMENTAL CONSERVATION
PHASE I REPORT

SITE LOCATION MAP
VAN DE MARK CHEMICAL

FIGURE iv-1

REFERENCE: U.S.G.S. 7.5' Topographic Map
Lockport, NY (1980) Quadrangle



ENGINEERING-SCIENCE, INC.
IN ASSOCIATION WITH
DAMES & MOORE

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
PHASE I REPORT

PLOT PLAN
VAN DE MARK CHEMICAL

FIGURE iv-2

HRS REFERENCES

1. Advanced Environmental Systems, Inc., and Conestoga-Rivers and Associates, Ltd., October 15, 1983.

2. Burmaster, John, Niagara County Water District, Personal Communication, December 10, 1985.

3. Freeze, R. A., and Cherry, J. A., Groundwater, 1985.

4. NYS Atlas of Community Water System Sources, NYS Department of Health, 1982.

5. NYS Wetlands Maps (Not Provided in Report).

6. NYSDEC Registry Sheet, 12/83.

7. NYSDEC, Region 9, Division of Fish and Wildlife Files.

8. US Census Data, 1980.

9. US Department of Commerce. "Climatic Atlas of the United States". 1979.

10. US Department of Commerce Technical Paper No. 40. "Rainfall Frequency Atlas of the United States". 1963.

11. USGS Topographic Maps: Lockport, NY Quadrangle, 1980 (Provided in Report).

12. WWW Consulting Engineers, June 29, 1977.

REF 1

REVISED MONITORING PROGRAM
VAN DE MARK LANDFILL SITE

Provided per schedule outlined in report entitled

"Response to Request for Information -

Van De Mark Chemical Co., Inc.

Docket No. II RCRA-83-0222"

October 15, 1983

Advanced Environmental Systems, Inc.

Conestoga-Rovers & Associates Limited

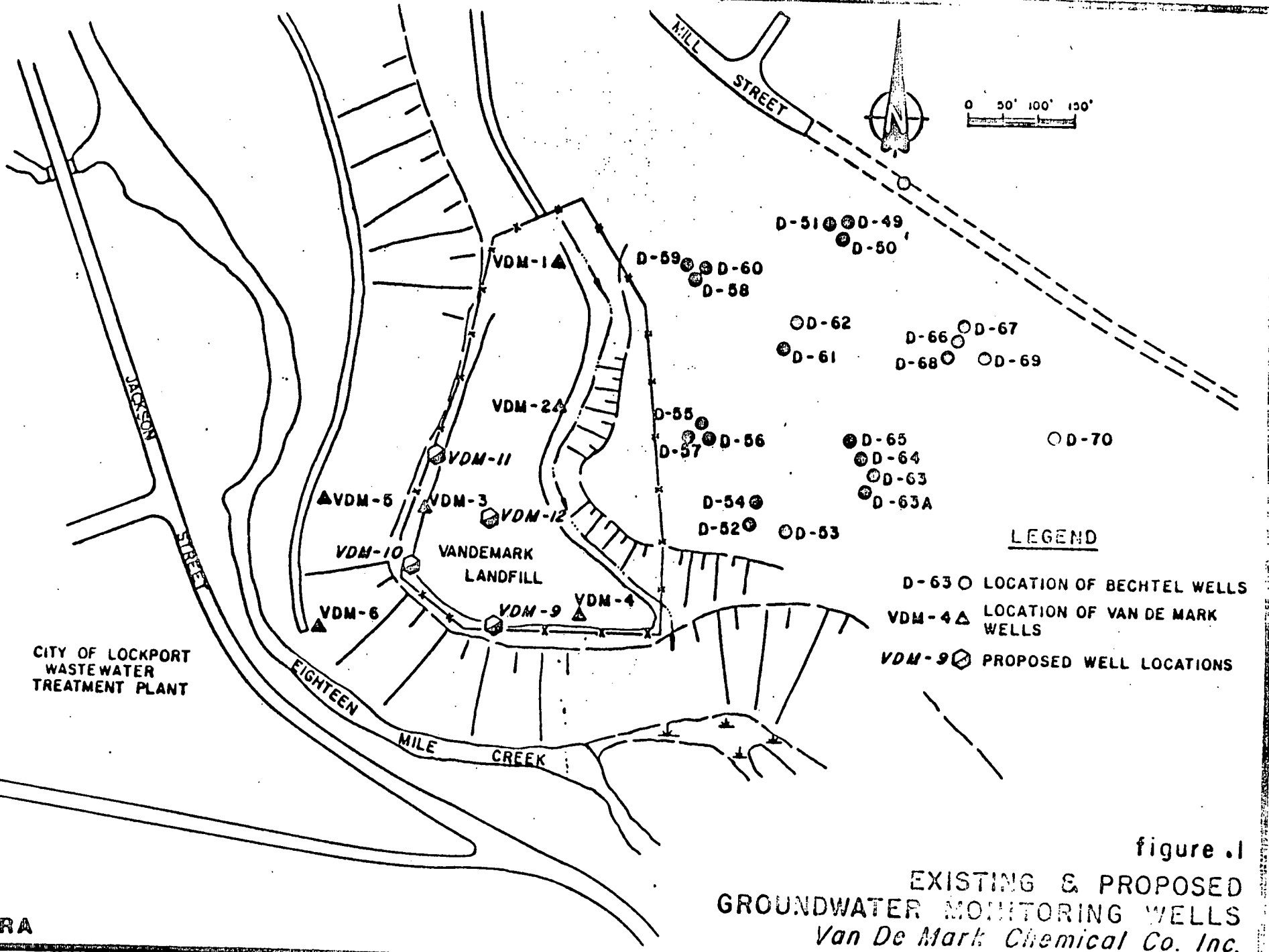


figure .1

EXISTING & PROPOSED
GROUNDWATER MONITORING WELLS
Van De Mark Chemical Co. Inc.

CRA

1277-14/10/83

GROUND WATER OBSERVATION WELL REPORT

PROJECT Somerset Railroad - Van De Mark

LOCATION N1,160,756 E468,241 '

Date Completed 10/19/81 Original Depth 46.7 (cored)

Inspected By J. C. Isham Date 10/19/81

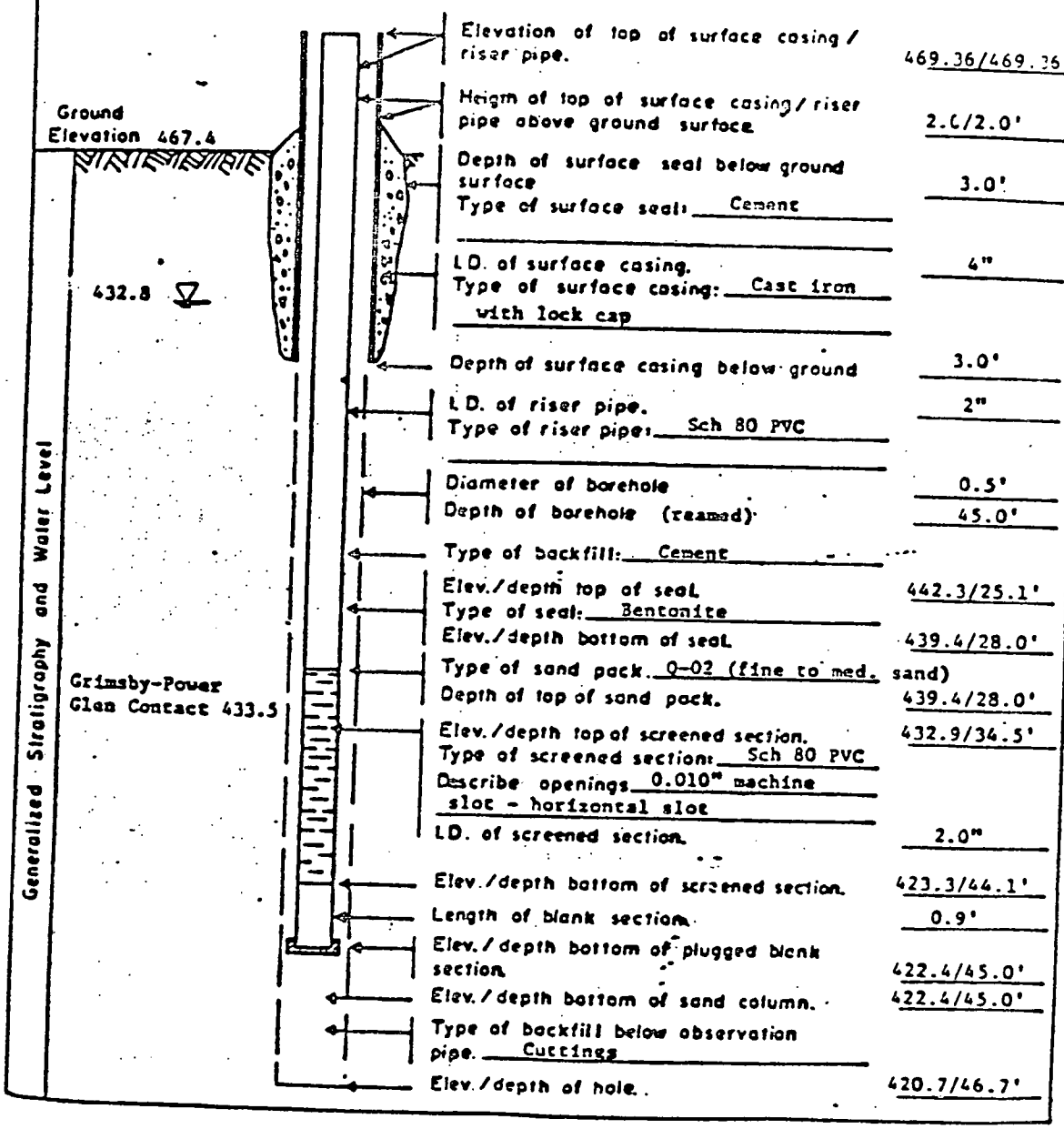
Checked By _____ Date _____

Page 7 of 23

Well No. D-55

Aquifer Grimsby-Power Glen Contact

Elev. Interval 420.7-439.4'



Elevation of top of surface casing / riser pipe.	469.36/469.36'
Height of top of surface casing / riser pipe above ground surface	2.0/2.0'
Depth of surface seal below ground surface	3.0'
Type of surface seal: Cement	
I.D. of surface casing.	4"
Type of surface casing: Cast iron with lock cap	
Depth of surface casing below ground	3.0'
I.D. of riser pipe.	2"
Type of riser pipe: Sch 80 PVC	
Diameter of borehole	0.5'
Depth of borehole (reamed)	45.0'
Type of backfill: Cement	
Elev./depth top of seal	442.3/25.1'
Type of seal: Bentonite	
Elev./depth bottom of seal	439.4/28.0'
Type of sand pack. 0-02 (fine to med. sand)	
Depth of top of sand pack.	439.4/28.0'
Elev./depth top of screened section.	432.9/34.5'
Type of screened section: Sch 80 PVC	
Describe openings 0.010" machine slot - horizontal slot	
I.D. of screened section.	2.0"
Elev./depth bottom of screened section.	423.3/44.1'
Length of blank section.	0.9'
Elev./depth bottom of plugged blank section.	422.4/45.0'
Elev./depth bottom of sand column.	422.4/45.0'
Type of backfill below observation pipe. Cuttings	
Elev./depth of hole.	420.7/46.7'

figure 2

PREVIOUS MONITORING WELL INSTALLATION

Van De Mark Chemical Co. Inc.

CRA

INTERVIEW FORM

INTERVIEWEE/CODE John Burmaster /

TITLE - POSITION Niagara Co Water District

ADDRESS 5450 Ernest Rd. P.O. Box 315

CITY Lockport STATE N.Y. ZIP 14094

PHONE (716) 434-8835 RESIDENCE PERIOD TO

LOCATION phone conversation INTERVIEWER Lisa A. Ryan

DATE/TIME Dec. 10, 1985 @ 10:35

SUBJECT: Water supply to the Lockport area.

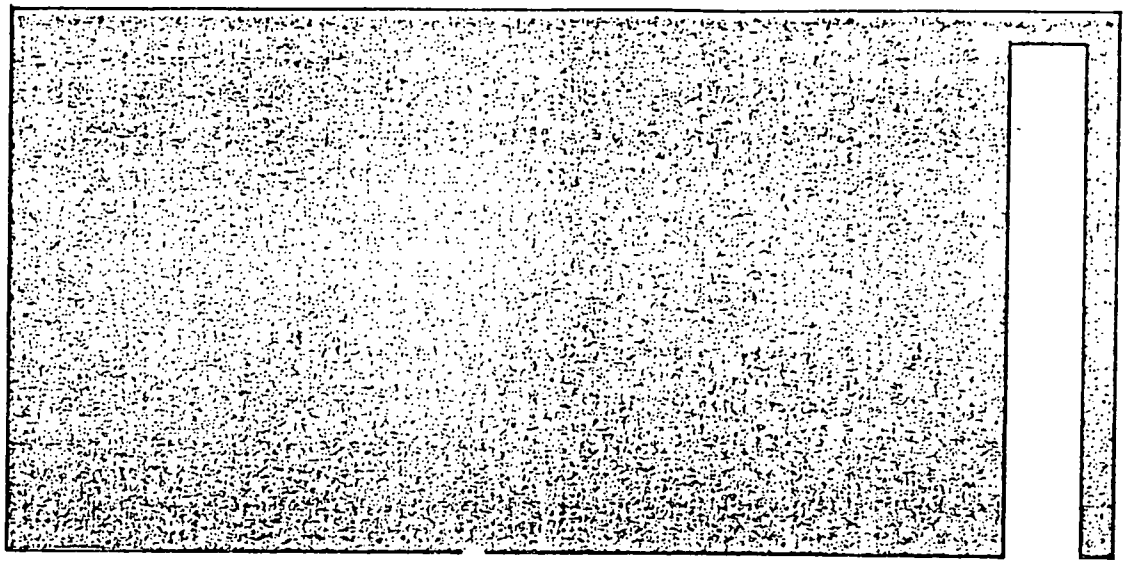
REMARKS: Mr. Burmaster provided us with the information that the city of Lockport is supplied with municipal water. The entire area within a three mile radius of the VanDe Mark Chemical site is within the Town of Lockport and is also supplied with municipal water. To his knowledge there are no homes within the area of concern that have private drinking water wells.

I AGREE WITH THE ABOVE SUMMARY OF THE INTERVIEW:

SIGNATURE

COMMENTS:

REF-3



R. Allan Freeze

Department of Geological Sciences
University of British Columbia
Vancouver, British Columbia

John A. Cherry

Department of Earth Sciences
University of Waterloo
Waterloo, Ontario

GROUNDWATER

Prentice-Hall, Inc.
Englewood Cliffs, New Jersey 07632

Table 2.2 Range of Values of Hydraulic Conductivity and Permeability

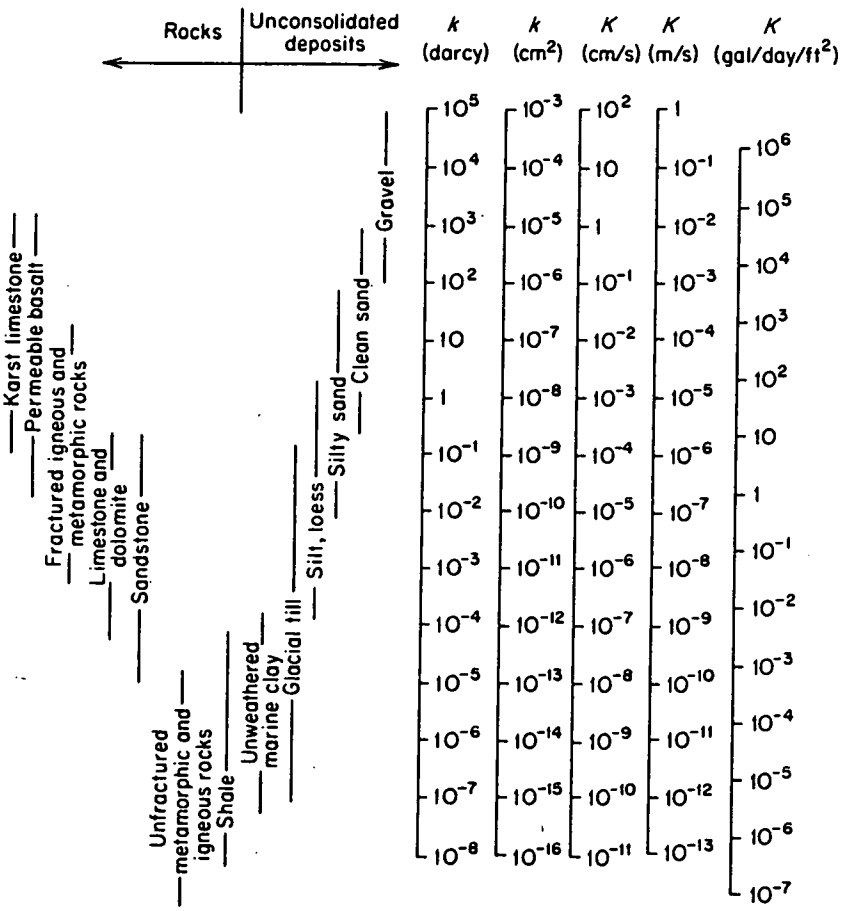


Table 2.3 Conversion Factors for Permeability and Hydraulic Conductivity Units

	Permeability, k*			Hydraulic conductivity, K		
	cm^2	ft^2	darcy	m/s	ft/s	gal/day/ft^2
cm^2	1	1.08×10^{-3}	1.01×10^{8}	9.80×10^{2}	3.22×10^{3}	1.85×10^{9}
ft^2	9.29×10^{2}	1	9.42×10^{10}	9.11×10^{5}	2.99×10^{6}	1.71×10^{12}
darcy	9.87×10^{-9}	1.06×10^{-11}	1	9.66×10^{-6}	3.17×10^{-5}	1.82×10^{1}
m/s	1.02×10^{-3}	1.10×10^{-6}	1.04×10^{5}	1	3.28	2.12×10^{6}
ft/s	3.11×10^{-4}	3.35×10^{-7}	3.15×10^{4}	3.05×10^{-1}	1	5.74×10^{5}
gal/day/ft^2	5.42×10^{-10}	5.83×10^{-13}	5.49×10^{-2}	4.72×10^{-7}	1.74×10^{-6}	1

*To obtain k in ft^2, multiply k in cm^2 by 1.08×10^{-3}.

New York State Atlas of Community Water System Sources

1982

NEW YORK STATE
DEPARTMENT OF HEALTH

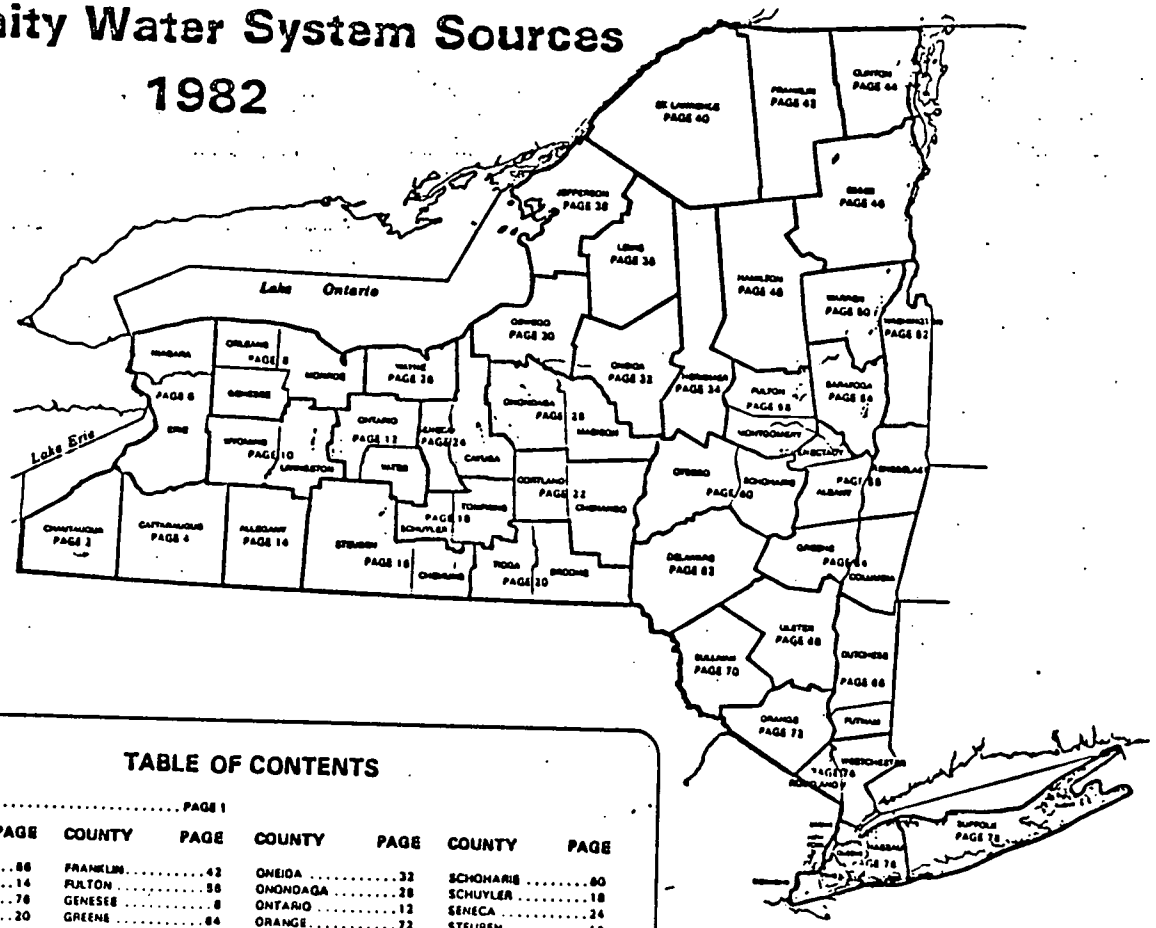


TABLE OF CONTENTS

LEGEND

BOUNDARIES AND PLACES

International
State
County
Town
Indian Reservation
City
Village
Unincorporated Place
Federal Reservation
Built-up Area (Over 25,000 population including any contiguous city or village)

CLASSIFICATION OF POPULATED PLACES

100,000 or more ..... YONKERS
50,000 to 100,000 ..... Levittown
12,500 to 50,000 ..... Poughkeepsie
2,500 to 12,500 ..... Harriman Village
250 to 2,500 ..... Ilion
250 or less ..... Lyme

TRANSPORTATION

Highways
- Divided Highways
  - Full Control of Access
  - Partial or No Control of Access
- Undivided Highway
- Interchange
- Touring Route (State, U.S., Interstate or State Parkway)
- Touring Route Markers
  - State
  - U.S.
  - Interstate

Railroads
- Operating Line
- Service Discontinued
- Operator
- Owner (If Other than Operator)
- Company Having Trackage Rights

Airports (Open to the Public, Military)
- Runway under 4000'
- Runway over 4000'

Rest Areas
- Food, Gas, Rest Rooms
- Rest Rooms
- Gas, Rest Rooms
- Parking Only

RECREATION FACILITIES

- State or National Recreation Area
- State Campground
- State Boat Launching Site
- State Canal Park
- State Fish Hatchery
- Other State Recreation Site

REF - 4

REF-5

NYS WETLANDS MAPS

NYS Wetlands Maps were reviewed during the Phase I investigation. Individual maps for each site were not obtained and are, therefore, not included in the Phase I reports. Site specific information collected concerning the location of a wetland within 1 mile of a given site is recorded in the documentation section of each report.

REF-6

(47-15-11 (10/83)

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

DIVISION OF SOLID AND HAZARDOUS WASTE

INACTIVE HAZARDOUS WASTE DISPOSAL SITE REPORT

PRIORITY CODE: 2a SITE CODE: 932039

NAME OF SITE: Van De Mark Chemical Company, Incorporated REGION: 9

STREET ADDRESS: Mill Street

TOWN/CITY: Lockport COUNTY: Niagara

NAME OF CURRENT OWNER OF SITE: Van De Mark Chemicals Company, Incorporated

ADDRESS OF CURRENT OWNER OF SITE: One North Transit Street, Lockport, NY 14094

TYPE OF SITE: OPEN DUMP ☐ STRUCTURE ☐ LAGOON ☐
LANDFILL ☐ TREATMENT POND ☐

ESTIMATED SIZE: 5+ ACRES

SITE DESCRIPTION:

Located North and East of 18 mile creek N 100'' above creek bed. Drums of silicontetrachloride and chloro disiloxane buried in limestone (imported) to react with decomposition products(HCl.) Construction of railroad East of landfill has delayed commencement of monitering program.

HAZARDOUS WASTE DISPOSED: CONFIRMED ☒ SUSPECTED ☐

TYPE AND QUANTITY OF HAZARDOUS WASTES DISPOSED:

TYPE	QUANTITY (POUNDS, DRUMS, TONS, GALLONS)
$2i\ Cl_4$ chlorodisiloxane	131 Tons/yr

TIME PERIOD SITE WAS USED FOR HAZARDOUS WASTE DISPOSAL:

_____, 19 68 TO _____, 19 82

OWNER(S) DURING PERIOD OF USE: Van De Mark Chemicals

SITE OPERATOR DURING PERIOD OF USE: Van De Mark Chemicals

ADDRESS OF SITE OPERATOR: One North Transit Road, Lockport, NY 14094

ANALYTICAL DATA AVAILABLE: AIR [ ] SURFACE WATER [ ] GROUNDWATER [X]
SOIL [ ] SEDIMENT [ ] NONE [ ]

CONTRAVENTION OF STANDARDS: GROUNDWATER [X] DRINKING WATER [ ]
SURFACE WATER [ ] AIR [ ]

SOIL TYPE: Grinsby formation (shale & siltstone)

DEPTH TO GROUNDWATER TABLE: 25'+

LEGAL ACTION: TYPE: Complaint under sec. 3008 STATE [ ] FEDERAL [X]
STATUS: IN PROGRESS [X] COMPLETED [ ]

REMEDIAL ACTION: PROPOSED [X] UNDER DESIGN [ ]
IN PROGRESS [ ] COMPLETED [ ]

NATURE OF ACTION: Installation of groundwater monitering wells and implementation of monitering program. Corrective action to follow as required.

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:

Possible leachate of decomposition products into 18 Mile Creek and ground waters. Remediation Program to be submitted to Department, If Warranted

ASSESSMENT OF HEALTH PROBLEMS:

INSUFFICIENT INFORMATION

PERSON(S) COMPLETING THIS FORM:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

NAME _____
TITLE John S. Tygert P.E.
NAME Sr. Sanitary Engr.
TITLE Roberto A. Olazagasti
DATE: Solid Waste Management Spec.
11/15/83

NEW YORK STATE DEPARTMENT OF HEALTH

NAME _____
TITLE R. Tramontano
NAME Bur. Tox. Subst. Assess.
TITLE _____
DATE: _____
12/83

REF-7

INTERVIEW FORM

INTERVIEWEE/CODE Jim Snyder Mike Wilkenson / /

TITLE - POSITION NYSDEC, Div of Fish & Wildlife

ADDRESS Delaware Ave.

CITY Buffalo STATE NY ZIP

PHONE ( ) . RESIDENCE PERIOD TO

LOCATION in DEC office INTERVIEWER Eileen Hilligan

DATE/TIME 1/10/85 & 1/11/85

SUBJECT: Phase I site information

REMARKS: The above-named interviewees provided us with the following information regarding our Phase I site. (see attached list)

1) Wetlands in Niagara Co. & proximity to sites
2) Types of fish & wildlife in Erie/Niagara area
3) Use by fish & wildlife of Niagara River & tributaries
4) Sensitive environments & proposed wetlands in the Erie/Niagara area

VAN de mark chemical

- critical habitat does not exist within one mile of site
- sensitive environment does not exist within 2 miles of site

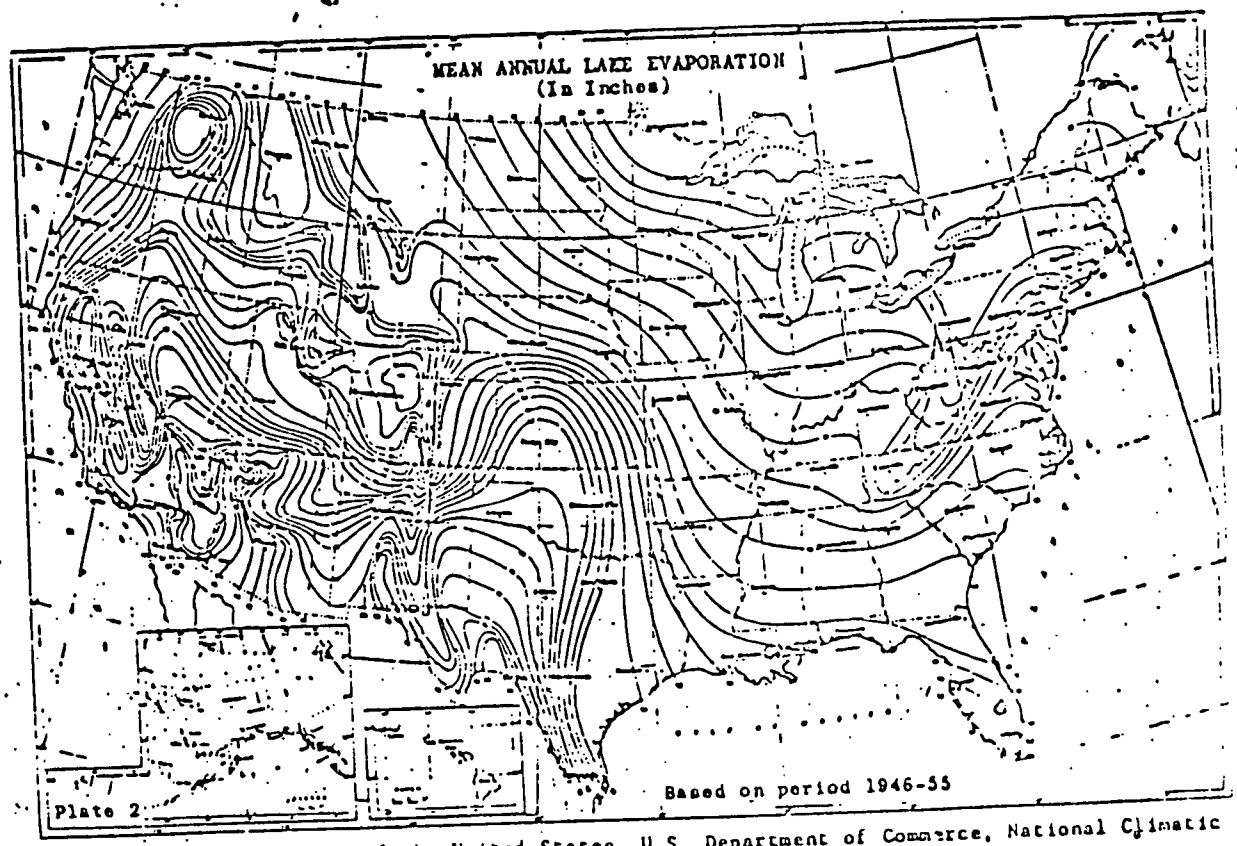
I AGREE WITH THE ABOVE SUMMARY OF THE INTERVIEW:

SIGNATURE: James R. Snyder - Jr. Wildlife Biologist
Michael A. Wilkinson - Conservation Biologist (Cty Bike)

COMMENTS: No discussion of wetlands / wildlife regarding Niagara Landfill site - referred to Olean Office

US CENSUS DATA, 1980

US Census Data used in the HRS scoring was obtained from various County Planning Offices. This data was not obtained from a report. The raw census data combined with County Planning Maps was used to estimate the population within 1, 2, 3, and 4 miles of the Phase I site being investigated. Because of the voluminous amount of data used, the data is not provided in this Appendix.

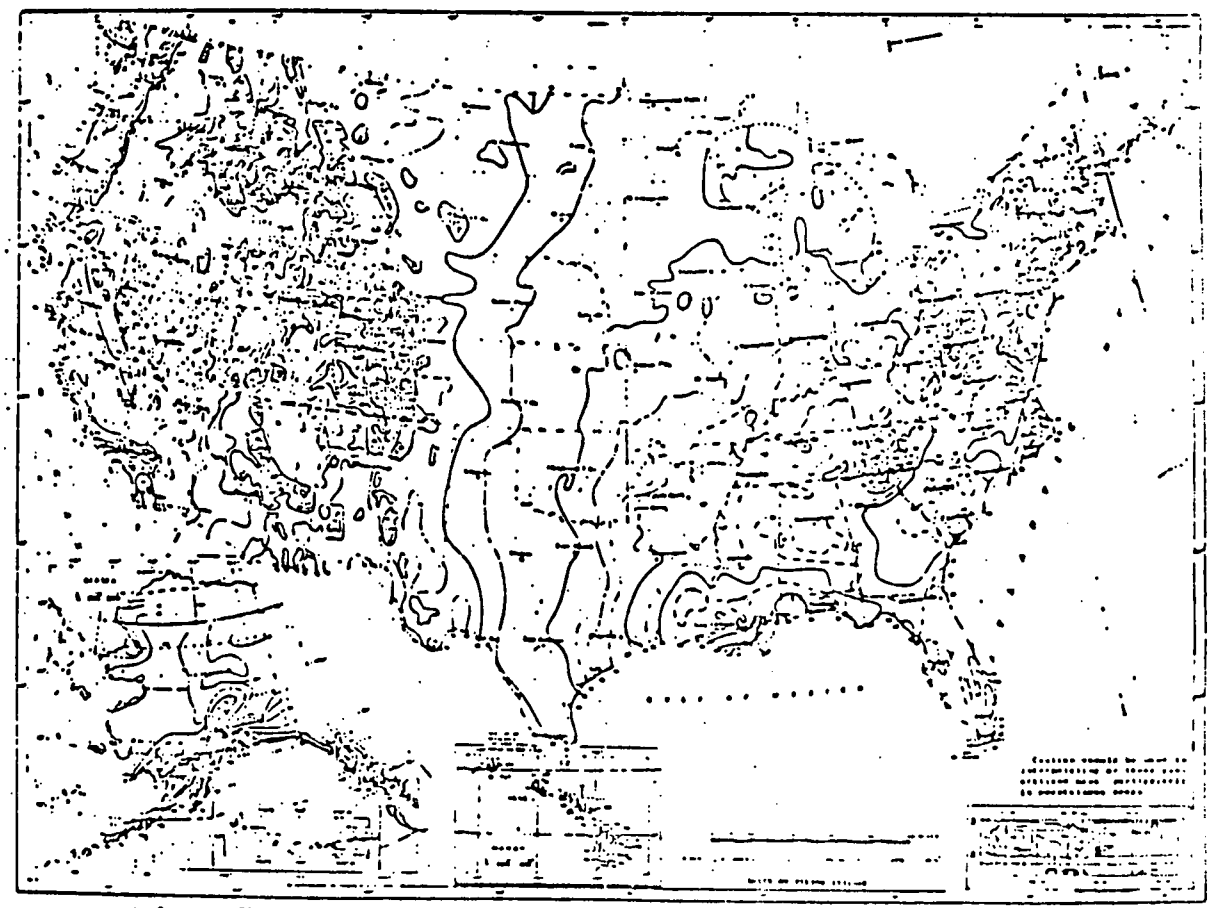


Source: Climatic Atlas of the United States, U.S. Department of Commerce, National Climatic Center, Ashville, N.C., 1979.

Figure 4

Mean Annual Lake Evaporation (In Inches)

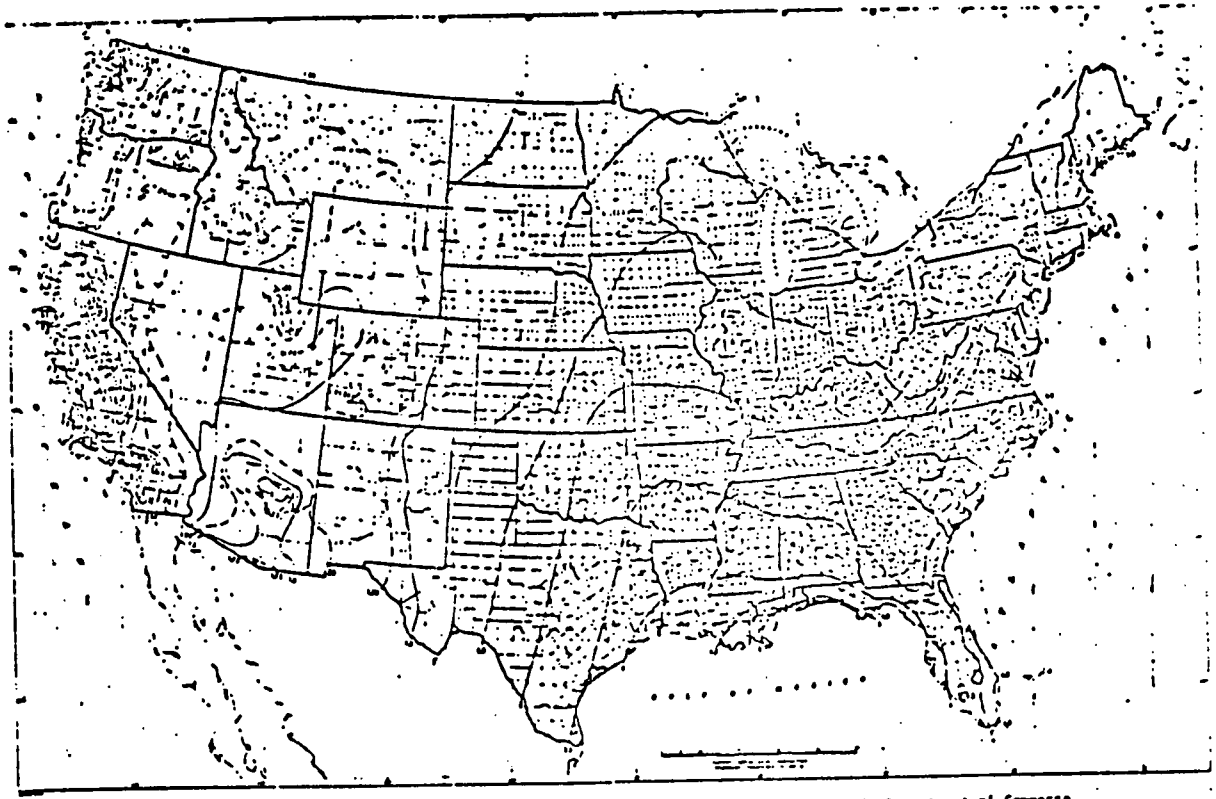
REF-9



Source: Climatic Atlas of the United States, U.S. Department of Commerce, National Climatic Center, Asheville, N.C., 1979.

Figure 5

Normal Annual Total Precipitation (inches)

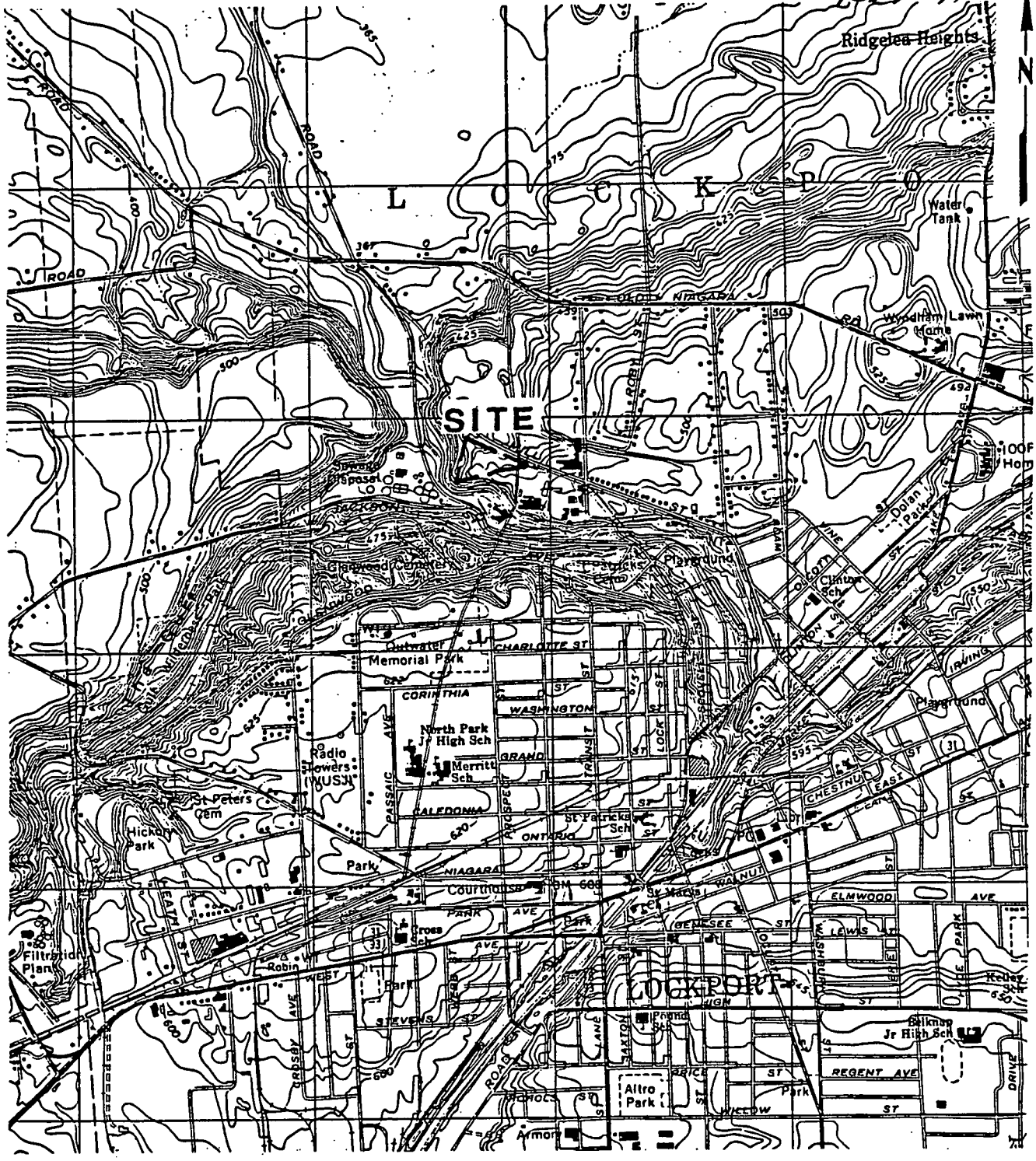


Source: Rainfall Frequency Atlas of the United States, Technical Paper No. 40, U.S. Department of Commerce, U.S. Government Printing Office, Washington, D.C., 1963.

Figure 8

1-Year 24-Hour Rainfall (Inches)

REF-D



ENGINEERING-SCIENCE, INC.
IN ASSOCIATION WITH
DAMES & MOORE

NEW YORK STATE DEPARTMENT
OF ENVIRONMENTAL CONSERVATION
PHASE I REPORT

SITE LOCATION MAP
VAN DE MARK CHEMICAL

FIGURE I-1

REFERENCE: U.S.G.S. 7.5' Topographic Map
Lockport, NY (1980) Quadrangle

Van de Mark

REF-12

WATER QUALITY INVESTIGATION AT THE PROPOSED VAN DE MARK CHEMICAL CO., INC. WASTE DISPOSAL SITE, LOCKPORT, NEW YORK

FOR

W.W.W. Consulting Engineers
50 West Genesee Street
Lockport, New York 14094

BY

Great Lakes Laboratory
State University College at Buffalo
1300 Elmwood Avenue
Buffalo, New York 14222

June 1977

WILLIAM W. [illegible] JR. P.E.
HAL G. ROGERS, P. E.

CIVIL
STRUCTURAL
MECHANICAL
ELECTRICAL

CONSULTING ENGINEERS

MEMBER

INDUSTRIAL . COMMERCIAL . MUNICIPAL . INSTITUTIONAL 80 WEST GENESEE STREET P.O. DRAWER J. . LOCKPORT, N. Y. 14094 . 716 . 434-0242

June 29, 1977

New York State Department of Environmental Conservation
Region 9 Environmental Quality Office
584 Delaware Avenue
Buffalo, New York 14202

ATTENTION: Mr. John McMahan P.E.
Mr. Paul Foersch P.E.

RE: Van De Mark Chemical Company, Inc., File No. 76-37

SUBJECT: Transmittal of Engineering Report for Solid Waste Disposal Site

Gentlemen:

At the request of Van De Mark Chemical Company, Inc., we have prepared the following Engineering report for application and approval for the use of an existing site on their property in Lockport for the disposal of chemical waste from the plant. This application is made on the basis of the requirements of NYCRR Part 360 of Title 6 of Official Compilation of Codes, Rules and Regula- of the State of New York, Environmental Conservation Laws Section 27-0501.

The following information is submitted on the basis of the Tentative Check List for Sanitary Landfill Design Submissions, New York State Department Environmental Conservation, Division of Solid Waste Management, dated 1973 as a guide. This report consists of the following items;

Item 1 - General description of the site and surrounding area, identification of the waste, method of handling to the site, expected life to the site, operating period, record of dumping, site access and final site use.

Item 2 - Transmittal of scale aerial photograph, VDM-1965, showing location of the site in the City of Lockport and relative to adjacent developed properties and the chemical plant.

Item 3 - Transmittal of the topographic maps of the disposal area and surrounding land areas with location of soil borings, existing elevations and proposed elevations, outline of site and surface drainage.

Item 4 - Transmittal VDM-1967, disposal site cross section showing existing ground elevations and proposed changes, details of method of filling proposed.

Item 5 - Transmittal of Empire Soils Investigations, Inc. Site Investigation report No. 77-BD-21 dated June, 1977 with subsurface logs, soils analysis-chemical tests.

Item 6 - Transmittal of reports from the consulting biologist, Dr. Robert Sweeney, Director, Great Lakes Laboratory, Buffalo, New York, as follows:

a. Chemical report describing water quality of the stream and ground water during the several test periods of the investigation.
b. Vegetative-landscaping report of the site with recommendations for site management.
c. Discussion of the adaptability of this site for the proposed solid waste disposal of the chemical waste without major impact on the aquatic or terrestrial environment of the area and/or ground water. This includes a detailed proposal for design of the disposal area, operational program and site for optimum use of the site while maintaining protection to the environment.

Based on the conclusion of the soil, chemical, biological and environmental investigations, we feel that the site is suitable for its intended use and therefore request immediate approval of application and proposed operation/management plan as presented.

Should additional investigations or data be required, including changes in the method of operation, or details of site preparation be required for final approval, we will prepare them immediately and submit for further discussion and approval. Please advise if you will require further conference on this matter.

Respectfully submitted,

William W. Whitmore III, P.E.P.C.
Consulting Engineers, for
Van De Mark Chemical Company, Inc.

Enclosures: Descriptions, reports, photographs, applications, Application Form SW-7
cc: Van De Mark Chemical Company, Inc.
Mr. Ernest Gedeon, Niagara County Health Department

June 29, 1977
PROJECT: Solid Waste Disposal Site
OWNER: Van De Mark Chemical Company, Inc.
1 North Transit Road, Lockport, New York 14094
SUBJECT: General Information and Site Details

A. GENERAL

1. Location: The existing solid waste disposal site which will be reused for this project, is west of the existing Van De Mark Chemical Company, Inc. Plant in an unpopulated area, partially wooded and formerly the sandstone, limestone open pit quarry of approximately 2.10 plus or minus acres. The site is in the northwest section of the City of Lockport in an industrial zoned area in the City Limits. Access is gained from a controlled section of Mill Street and private road to the site. The portion of Mill Street to be used for access is closed to the general public by a locked gate approximately one thousand feet west of the intersection of Mill and North Transit Road. It is located on an escarpment area bounded on the south and west sides by Eighteen Mile Creek. Elevation of the Creek of 359 is considerably lower than the bottom elevation of the proposed dump site of approximately 438 plus or minus USGS. There are no residential dwellings within approximately fifteen hundred feet of this site. The City of Lockport Waste Treatment Plant is approximately five hundred feet west of the site at elevation 362 plus or minus USGS. McGonigle & Hilger Roofing, Inc. warehouse and office east of the site at elevation 474 plus or minus. & Norton Laboratories Manufacturing Plant is approximately thirteen hundred feet due east of the disposal site at elevation 475 plus or minus. Van De Mark Chemical Corporation Plant on Eighteen Mile Creek is approximately five hundred feet southeast of the site and the chlorine plant is approximately fifteen hundred feet east of the site. New York State Electric and Gas Corporation Sub-station is four hundred feet north of the plant and the remaining property between Mill Street and Old Niagara Road is vacant wooded property owned by C.B. Whitmore Company, Inc. There are no water, sanitary or power facilities immediately available to the disposal site.

2. Waste materials for disposal: Van De Mark Chemical Company intends to dispose of approximately fifty to sixty steel drums of waste (375 cu.ft) plus or minus per month. The material consists of thirty to seventy per cent Hexachlorodisiloxane, ten to fifty per cent Silicon Tetrachloride, and five to thirty per cent Carbon and Silicon Carbide. The Hexachlorodisiloxane and Silicon Tetrachloride decompose into sand (Silicon Dioxide) and Hydrochloric Acid. Carbon and Silicon Carbide remain unchanged. With Limestone soil the resultant product from the interaction of the above chemicals decomposition is instant with water. If residue is buried in drums the owner reports that in four to eight months, the only visible remains are part of the drums rings used to seal the open head drum tops. Their experience indicates that eventually the entire mass will become a sand pile with some salt content. The material is to be hauled in the steel drums from the plant in the bucket of a rubber tired highlift to minimize possibility of accidental dropping of the drums or opening during handling. This method has proven to be the best and safest of several methods previously tried by the owner. No treatment before packaging in the steel drums with sealed tops is contemplated prior to burial.

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D002116192

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Van de Mark Chemical Co.	Mill Street

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Lockport	NY	14094	Niagara	063	36

09 COORDINATES LATITUDE	LONGITUDE
43 11 11.-	078 42 08.-

10 DIRECTIONS TO SITE (Starting from nearest public road)
Northeast on Mill Street from Lockport, left onto access road 1000 feet past the intersection of Mill & N. Transit streets

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)
Van de Mark Chemical Co.	1 North Transit St

03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
Lockport	NY	14094	(716) 433-6764

07 OPERATOR (If known and different from owner)	08 STREET (Business, mailing, residential)
same	

09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
			( )

13 TYPE OF OWNERSHIP (Check one)
☒ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)
☐ A. RCRA 3001 DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☒ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION
☒ YES ☐ NO DATE 7/27/83 (MONTH DAY YEAR)

BY (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR ☐ C. STATE ☐ D. OTHER CONTRACTOR
☒ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)
CONTRACTOR NAME(S): _____

02 SITE STATUS (Check one)	03 YEARS OF OPERATION
☐ A. ACTIVE ☒ B. INACTIVE ☐ C. UNKNOWN	1953 / 1982 (BEGINNING YEAR / ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
Drums containing hexachlorodisiloxane, silicon tetrachloride, & silicon carbide were buried in lime-lined trenches. Contact of wastes w/water generates hydrochloric acid, to be neutralized by the lime

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
Lime neutralization may not be sufficient to raise pH of leachate, thus creating an acidic environment which might result in the leaching of heavy metals into groundwater

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)
☐ A. HIGH (Inspection required promptly) ☒ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NUMBER
S R Steele	Engineering-Science (ES)	(703) 591-7575

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
S Q Tiffany		ES	(703) 591-7575	4 / 10 / 85 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D002116172

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- [X] A. SOLID
- [ ] B. POWDER, FINES
- [ ] C. SLUDGE
- [ ] D. OTHER (Specify) _____
- [ ] E. SLURRY
- [ ] F. LIQUID
- [ ] G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS _____

CUBIC YARDS _____

NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

- [ ] A. TOXIC
- [X] B. CORROSIVE
- [ ] C. RADIOACTIVE
- [ ] D. PERSISTENT
- [ ] E. SOLUBLE
- [ ] F. INFECTIOUS
- [ ] G. FLAMMABLE
- [ ] H. IGNITABLE
- [ ] I. HIGHLY VOLATILE
- [ ] J. EXPLOSIVE
- [X] K. REACTIVE
- [ ] L. INCOMPATIBLE
- [ ] M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			Wastes are solids which
OLW	OILY WASTE			react w/water to
SOL	SOLVENTS			produce silicon dioxide
PSD	PESTICIDES			& hydrochloric acid.
OCC	OTHER ORGANIC CHEMICALS			
(IOC)	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
IOC	hexachlorodisiloxane	999	drummed & landfilled	30-70	percent
IOC	silicon tetrachloride	10026-29-7	"	10-50	"
IOC	silicon carbide	409-21-2	"	5-30	"

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Allen B. Van de Mark, Application for Approval to Conduct a Solid Waste Management Facility 6/29/77

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NV	0002116192

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — [X] POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

Site was designed to be slowly leaking/neutralizing system, using bedrock/waste interaction

01 [X] B. SURFACE WATER CONTAMINATION — 02 [X] OBSERVED (DATE: 1965) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

Leachate leaving site entering Eightmile Creek

01 [X] C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

Not at present time

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

No

01 ☐ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

No

01 [X] F. CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE: _____) — [X] POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ (Acres) — 04 NARRATIVE DESCRIPTION

Due to leaking design

01 ☐ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

No

01 ☐ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

No

01 ☐ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

No

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NV	D 002116192

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☒ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Due to migration of contaminated groundwater + leachate

01 ☒ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

01 ☒ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff/Standing liquids, Leaking drums) — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
Leaking design

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
unknown

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
ND

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
ND

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
ND

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e. g., state files, sample analysis, reports)
Site visit 1985

EPA FORM 2070-13 (7-81)

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D002116192

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Van De Mark Chemical Co.	Mill Street

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Lockport	NY	14094	Niagara	063	36

09 COORDINATES LATITUDE	LONGITUDE
43 11 11.-	078 42 08.-

10 TYPE OF OWNERSHIP (Check one)
☒ A. PRIVATE ☐ B. FEDERAL _____ ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION (MONTH DAY YEAR)	02 SITE STATUS	03 YEARS OF OPERATION (BEGINNING YEAR / ENDING YEAR)
3 25 85	☐ ACTIVE ☒ INACTIVE	1953 / 1982 ☐ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☒ F. STATE CONTRACTOR Dames & Moore (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
S. Robert STEELE II	Environmental Scientist	ES	(703) 471-7575
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Eileen Gilligan	Geologist	OEM	(315) 638-2512
Mike Hopkins	Niagara Co. Health Department		( )
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Mr. Harry Sherriff	V.P. Mnftg.	1 North Transit Lockport NY 14094	(716) 433-6764
Mr Norman Matthews	Technical Director	Same as above	(716) 433-6764
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	1 15 PM	Cool, Sunny

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
S. Robert STEELE, II	Engineering - Science	(703) 471-7575

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE (MONTH DAY YEAR)
S. Robert Steele II		ES	Same	3 25 85

EPA FORM 2070-13 (7-81)

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D002116192

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- [X] A. SOLID
- [ ] B. POWDER, FINES
- [ ] C. SLUDGE
- [ ] D. OTHER (Specify)
- [ ] E. SLURRY
- [ ] F. LIQUID
- [ ] G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS _____

CUBIC YARDS _____

NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

- [ ] A. TOXIC
- [X] B. CORROSIVE
- [ ] C. RADIOACTIVE
- [ ] D. PERSISTENT
- [ ] E. SOLUBLE
- [ ] F. INFECTIOUS
- [ ] G. FLAMMABLE
- [ ] H. IGNITABLE
- [ ] I. HIGHLY VOLATILE
- [ ] J. EXPLOSIVE
- [X] K. REACTIVE
- [ ] L. INCOMPATIBLE
- [ ] M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			Wastes are solids which
OLW	OILY WASTE			react with water to
SOL	SOLVENTS			produce Silicon oxide
PSD	PESTICIDES			& Hydrochloric Acid
OCC	OTHER ORGANIC CHEMICALS			
(IOC)	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
IOC	hexachlorodisiloxane	999	drummed and landfilled	30-70	percent
IOC	silicon tetrachloride	10026-24-7	"	10-50	"
IOC	silicon carbide	409-21-2	"	5-30	"

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

- Allan B. Van De Mark, Application for Approval to Conduct a Solid Waste Management Facility, 6/29/77

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NV	D0021161 92

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — [X] POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

Site was designed to be slowly leaking/neutralizing system, using bedrock/waste interaction

01 [X] B. SURFACE WATER CONTAMINATION — 02 [X] OBSERVED (DATE: 1985) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

Leachate leaving site entering Eighteenmile Creek

01 [X] C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

Not at present time

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

No

01 ☐ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

No

01 [X] F. CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE: _____) — [X] POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ (Acres) — 04 NARRATIVE DESCRIPTION

Due to leaking design

01 ☐ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

No

01 ☐ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

No

01 ☐ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

No

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NV	D 002116192

II. HAZARDOUS CONDITIONS AND INCIDENTS *(Continued)*

01 ☒ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Due to migration of contaminated groundwater + leachate

01 ☒ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION *(Include name(s) of species)*

01 ☒ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES *(Spills/Runoff/Standing liquids, Leaking drums)* — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
Leaking design

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
unknown

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
ND

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
ND

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
ND

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

V. SOURCES OF INFORMATION *(Cite specific references, e. g., state files, sample analysis, reports)*
Site visit 1985

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D002116192

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☒ G. STATE (Specify)	—	2/15/78	8/15/78	to construct a solid waste mgmt facil.
☐ H. LOCAL (Specify)				
☒ I. OTHER (Specify) State	211	2/9/79	2/9/82	permit to operate
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☒ F. LANDFILL		DR
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCINERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☒ H. OTHER (Specify) neutralization

05 OTHER

- ☐ A. BUILDINGS ON SITE

06 AREA OF SITE

8 (Acres)

07 COMMENTS

Drums containing corrosive, reactive materials were placed in trenches & covered w/lime. Prior to burial, the drums were punctured to allow neutralization of drum contents by the lime. Filled trenches were then backfilled.

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☐ C. INADEQUATE, POOR ☒ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

The disposal trenches were unlined prior to the disposal of the corrosive materials. The intended disposal practice was to mix the [illegible] lime and limestone bedrock to neutralize the corrosive [illegible]

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☑ NO

02 COMMENTS

Site was enclosed by a six-foot guard fence topped by 3 strands of barbed wire.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Site Inspection conducted by ES and OEM, 3/25/85

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: D002116192

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

	SURFACE	WELL
COMMUNITY	A. ☒	B. ☐
NON-COMMUNITY	C. ☐	D. ☒

02 STATUS

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE
A. > 3 (mi)
B. Unknown (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☒ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER: 0
03 DISTANCE TO NEAREST DRINKING WATER WELL: N/A (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
~25 (ft)	N - NW	> 30 (ft)	Unknown (gpd)	☐ YES ☐ NO

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)
Occasional private residential wells in rural area adjacent to City of Lockport

10 RECHARGE AREA		11 DISCHARGE AREA	
☐ YES ☐ NO	COMMENTS: Unknown	☐ YES ☐ NO	COMMENTS: Unknown

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☒ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Eighteenmile Creek	☐	0.04 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 5048 NO. OF PERSONS	B. 19,179 NO. OF PERSONS	C. 30,350 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION: 0.5 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: 5,047

04 DISTANCE TO NEAREST OFF-SITE BUILDING: 0.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)
Sparcely populated. Area is industrial section of small city adjacent to rural outskirts

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D002116192

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☒ B. $10^{-4} - 10^{-6}$ cm/sec ☐ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☐ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☒ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH
5-13 (ft)	< 13 (ft)	> 7

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
9 (in)	2.1 (in)	5 %	N-NW	4.0 %

09 FLOOD POTENTIAL

SITE IS IN > 500 YEAR FLOODPLAIN

10

☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE	OTHER
A. > 2.0 (mi)	B. 0.4 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

MIGRATORY BIRDS > 1 (mi)

ENDANGERED SPECIES: HALIAEETUS LEUCOCEPH AQUILA CHRYSAETOS FALCO PEREGRENES

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AG LAND
A. 0.1 (mi)	B. 0.3 (mi)	C. unknown (mi)	D. 0.7 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

Site is surrounded on 3 sides by cliffs, and is located on a peninsula. Adjacent ground to the north is unused. Surface water drains to the south, over the edge of the cliff

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Site visit 1985
Boring Logs 1977

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D002116192

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
HNu	Readings were taken in the vicinity of the disposal site and all were less than 1 ppm

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL

02 IN CUSTODY OF Engineering - Science
(Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS Site map upgraded during site inspection

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

NONE

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Site inspection conducted by ES and O&M, 3/25/85

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D002116192

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Van de Mark Chemical Co, Inc		1 N. Transit Rd		Lockport	NY	14094

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Coules Chemical Co, Division of Stauffer Chemical		No longer in existence (?)				

IV. REALTY OWNER(S) (If applicable; list most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

- Interview of Mr. Harry Sherriff of Van De Mark Chemical Co, Inc during SI inspection conducted by ES and OEM, 3/25/85
- Interview w/ Mike Hopkins, NCHD, 4/8/85

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D002116192

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
Van Demark Chemical	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
1 North Transit Road	

05 CITY	06 STATE	07 ZIP CODE
Lockport	NY	14094

08 YEARS OF OPERATION	09 NAME OF OWNER
1953-present	(SAME)

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER
Cowles Chemical Co	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
No landfill operation	same

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER
Stauffer Chemical Co.	

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
Old Lewiston Rd	

14 CITY	15 STATE	16 ZIP CODE
Lewiston	NY	14092

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

- Interview with Mr. Harry Sheriff during site inspection conducted by ES and DEM, 3/25/85
- Interview w/Mike Hopkins, NCHD, 4/8/85

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D002116192

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
Van de Mark Chemical	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
One North Transit Road	

05 CITY	06 STATE	07 ZIP CODE
Lockport	NY	14094

The disposal site is presently inactive pending closure. Wastes are currently treated at Van De Mark's N. Transit Rd facility.

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
NONE			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Interview with Mr Harry Sherat during site inspection conducted by ES and DEC, 3/25/85

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D002116142

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ C. PERMANENT WATER SUPPLY PROVIDED 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ D. SPILLED MATERIAL REMOVED 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ E. CONTAMINATED SOIL REMOVED 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ F. WASTE REPACKAGED 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ G. WASTE DISPOSED ELSEWHERE 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ H. ON SITE BURIAL 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ I. IN SITU CHEMICAL TREATMENT 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ J. IN SITU BIOLOGICAL TREATMENT 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ K. IN SITU PHYSICAL TREATMENT 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ L. ENCAPSULATION 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ M. EMERGENCY WASTE TREATMENT 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ N. CUTOFF WALLS 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ P. CUTOFF TRENCHES/SUMP 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ Q. SUBSURFACE CUTOFF WALL 04 DESCRIPTION No	02 DATE	03 AGENCY

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: D002116192

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NO

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NO

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NO

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NO

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NO

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NO

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NO

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NO

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NO

01 ☑ 1. ACCESS TO SITE RESTRICTED — 02 DATE 1981 — 03 AGENCY _____
04 DESCRIPTION
Access to the site is restricted by a 6-foot fence

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NO

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

Van De Mark Chemical is presently negotiating the closure of the inactive disposal site with the USEPA.

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Site inspection conducted by ES and NUS, 3/25/85

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D002116192

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

No legal actions have yet been taken against Van De Mark Chemical regarding past disposal activities. Van De Mark is currently negotiating the closure of the inactive disposal site w/USEPA. Also, USEPA is currently determining what fine, if any, will be assessed against Van De Mark regarding an explosion of a drum during landfill operations that injured 8-10 railroad workers

III. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

Site visit, 1985
M Hopkins, NCHD, personal communication, 4/11/85
NYSDEC Environmental Enforcement Division
NYS Attorney General's Office

EPA FORM 2070-13 (7-81)

SECTION VI

ASSESSMENT OF DATA ADEQUACY AND RECOMMENDATIONS

ASSESSMENT OF DATA ADEQUACY

Based on this Phase I assessment, sufficient data exists to complete the HRS score. A closure plan has been submitted to the NYSDEC (Region 9) and the USEPA; however, no final determination concerning the closure plan has been made to date.

It is recommended that a remedial investigation and feasibility study not be conducted under the State of New York Superfund Program to eliminate the possible duplication of effort. Presently, Van De Mark Chemicals is negotiating with the NYSDEC and USEPA concerning the closure of the site.

TABLE IV-1

ASSESSMENT OF DATA ADEQUACY

Data Requirement	Comments on Data
Observed Release	
Groundwater	Adequate for HRS score
Surface Water	No observed release, adequate for HRS score
Air	No observed release, adequate for HRS score
Route Characteristics	
Groundwater	Adequate for HRS score
Surface Water	Adequate for HRS score
Air	Not applicable, no observed release
Containment	Adequate for HRS score
Waste Characteristics	Waste type known and total quantity estimated, adequate for HRS score
Targets	Adequate for HRS score
Observed Incident	Adequate for HRS score
Accessibility	Adequate for HRS score

APPENDIX A

REFERENCES

Sources Contacted

Documentation

SOURCES CONTACTED FOR
VAN DE MARK CHEMICALS INVESTIGATION

CONTACT	DATE CONTACTED	PERSON CONTACTED	TELEPHONE NUMBER	LOCATION	INFORMATION COLLECTED
USEPA Headquarters, Superfund Office	4/2/85	Hamid Saebfed	(202) 382-4839	401 M Street, NW Washington, D.C. 20460	Reviewed list of sites to determine if additional information was available.
USEPA - Region II, OERR	3/22/85	Mel Hauptman	(212) 264-7681	Room 402 26 Federal Plaza NY, NY 10278	General information from site files.
NYSDEC - Division of Solid and Hazardous	12/19/84	Marsden Chen	(518) 457-0639	50 Wolf Road Albany, NY 12233	General information from site files.
NYSDEC - Division of Water	12/19/84	Sal Pagano	(518) 457-6675	50 Wolf Road Albany, NY 12233	Mr. Pagano set up meetings with three bureaus within Division of Water.
NYSDEC - Division of Water SPDES Files	12/20/84	Bob Hannaford	(518) 457-6716	50 Wolf Road Albany, NY 12233	Reviewed SPDES Files for permit numbers and conditions.
NYSDEC - Division of Water DMR Files	12/21/84	George Hansen	(518) 457-2010	50 Wolf Road Albany, NY 12233	Reviewed DMR files for discharge violations.
NYSDEC - Division of Air Toxics	12/21/84	Art Fossa	(518) 457-7454	50 Wolf Road Albany, NY 12233	Reviewed site list to identify sites with potential air emissions.
NYSDEC - Division of Monitoring and Assessment	12/21/84	Bill Berner Frank Estabrook Fred Van Alstyne	(518) 457-7363 (518) 457-7363 (518) 457-7363	50 Wolf Road Albany, NY 12233	Reviewed geology and monitoring information for specific sites.

SOURCES CONTACTED FOR
VAN DE MARK CHEMICALS INVESTIGATION

CONTACT	DATE CONTACTED	PERSON CONTACTED	TELEPHONE NUMBER	LOCATION	INFORMATION COLLECTED
NYSDEC - Division of Environmental Enforcement	12/20/84	Kevin Walters	(518) 457-4346	50 Wolf Road Albany, NY 12233	Reviewed list of sites to determine if legal action has occurred in the past, is in progress, and/or is scheduled in the near future.
NYS - Attorney General's Office, Dept. of Law	1/7/85	Val Washington	(518) 473-3105	Empire State Plaza Justice Building Albany, NY 12233	Reviewed list of sites to determine if legal action has occurred in the past, is in progress, and/or is scheduled in the near future.
NYS - Attorney's Office	1/3/85	Albert Bronson	(716) 847-7196	Buffalo State Office Bldg. Buffalo, NY 14202	Reviewed list of sites to determine if legal action has occurred in the past, is in progress, and/or is scheduled in the near future.
NYSDEC - Division of Solid and Hazardous Waste	1/7/85	Ahmad Tayyebi Larry Clare Peter Buechi Jack Tygert	(716) 847-4615 (716) 847-4615 (716) 847-4590 (716) 847-4585	600 Delaware Ave. Buffalo, NY 14202	Collected information from site files.
NYSDEC - Region 9 Division of Air	1/8/85	Henry Sandonato Robert Armbrust	(716) 847-4565	600 Delaware Ave. Buffalo, NY 14202	Collected information concerning previous air emissions from inactive disposal sites.

SOURCES CONTACTED FOR
VAN DE MARK CHEMICALS INVESTIGATION

CONTACT	DATE CONTACTED	PERSON CONTACTED	TELEPHONE NUMBER	LOCATION	INFORMATION COLLECTED
NYSDEC - Regional Attorney	1/10/85	Peter J. Burke	(716) 847-4551	600 Delaware Ave. Buffalo, NY 14202	Reviewed list of sites to determine if legal action has occurred in the past, is in progress, and/or is scheduled in the near future.
NYS Dept. of Health, Buffalo Region, Public Health Engineering	1/8/85	Lou Violanti	(716) 847-4500	584 Delaware Ave. Buffalo, NY 14202	Collected information from site files.
NYSDEC - Region 9 Division of Fish and Wildlife	1/10/85 & 1/11/85	Mike Wilkinson Jim Sneider	(716) 847-4600 (716) 847-4600	600 Delaware Ave. Buffalo, NY 14202	Collected information from site files
Niagara County Dept. of Health	1/9/85	Mike Hopkins	(716) 284-3124	Tenth & East Falls Street Niagara Falls, NY 14302	Collected information from Niagara County site files. Obtained additional information through interview.
Niagara County Dept. of Planning and Industrial Development	2/22/85	Dave Urso	(716) 439-6033	59 Park Ave. Lockport, NY 14094	Obtained 1980 U.S. Census Data.
Van De Mark Chemical Co.	3/25/85	Harry Sherriff	(716) 433-6764	1 North Transit Rd. Lockport, NY 14094	Conducted site inspection and reviewed past waste management practecs at site.
Van De Mark Chemical Co.	3/25/85 4/18/85	Norman Matthews	(716) 433-6764	1 North Transit Rd. Lockport, NY 14094	Reviewed site ownership history and discussed past waste disposal practices at the site.

REFERENCES

1. Empire Soils Investigations, May, 1977.

2. ES and D&M Site Inspection, March/April, 1985.

3. Matthews, D., Personal Communication, April 18, 1985.

4. NYS Museum and Science Service Bedrock Geology Map, Map and Chart Series, No. 15 (compiled by Rickard, L. V., and Fisher, D. W.).

5. NYS Geological Association, Buidebook for Field Trips in Western New York, Northern Pennsylvania, and Adjacent Southern Ontario, Buehler, Edward, J., Calkin, Parker, E., Editors, 1982.

6. NYSDEC, McIntosh, M., Memorandum to Y. Erk, August 5, 1985.

7. Niagara County Health Department, Hopkins, M., Personal Communication, April 4, 1985.

8. Niagara County Health Department, Inspection Reports, September 9, 1980 and February 19, 1981.

9. Summerset Railroad Corporation, 1984.

10. Van De Mark Chemical, Matthews, N.M., Letter to Mr. William K. Sawyer, USEPA, October 17, 1983.

REF-1

EMPIRE SOILS INVESTIGATIONS, INC.

MAIN OFFICE
607-[illegible]
105 Corning Avenue
Quaker, N.Y. 13073

BUFFALO OFFICE
716-[illegible]-8118
P.O. Box 329
Orchard Park, N.Y. 14127

ROCHESTER OFFICE
716-342-5320
1184 Ridge Road East
Rochester, N.Y. 14621

SYRACUSE OFFICE
315-475-0717
930 East Brighton Avenue
Syracuse, N.Y. 13210

ALBANY OFFICE
518-783-1338
8 Northway Lane
Latham, N.Y. 12110

WASHINGTON OFFICE
301-[illegible]-8131
7308 Old Alexandria Ferry Rd
Clinton, Md. 20735

SITE INVESTIGATION REPORT
LOCKPORT STONE QUARRY
LOCKPORT, NEW YORK

FOR
W. W. WHITMORE III
LOCKPORT, NEW YORK

JOB NO.: 77-ED-21
JUNE 1977

ES AND D&M SITE INSPECTION

Observations made during the ES and D&M Site Inspections are provided on US EPA Forms 2070-12 and 2070-13. Field notes were used to complete these EPA Forms, and are not included herein.

REF-3

INTERVIEW FORM

INTERVIEWEE/CODE Norman Matthews /

TITLE - POSITION Van De Mark Chemical Co.

ADDRESS 1 North Transit Rd

CITY Lockport STATE NY ZIP 14094

PHONE ( )(716) 433-6764 RESIDENCE PERIOD ____ TO ____

LOCATION ____ INTERVIEWER ____

DATE/TIME 3/25/85 / 4/18/85

SUBJECT: Reviewed site ownership / Disposal Practices

REMARKS: Van De Mark purchased 2-acre site in 1953 from Cowles Chemical Company (Division of Stauffer Chemical).

It is not likely that the 2-acre site had been used for waste disposal prior to its purchase.

Discussed waste disposal volumes / practices as presented in WWW Engineers Report and Advanced Environmental Systems Report).

Railroad workers were exposed to acidic fumes coming from the landfill while the landfill was in operation. No other information is available.

I AGREE WITH THE ABOVE SUMMARY OF THE INTERVIEW:

SIGNATURE:

COMMENTS:

GEOLOGIC MAP OF NEW YORK

1970

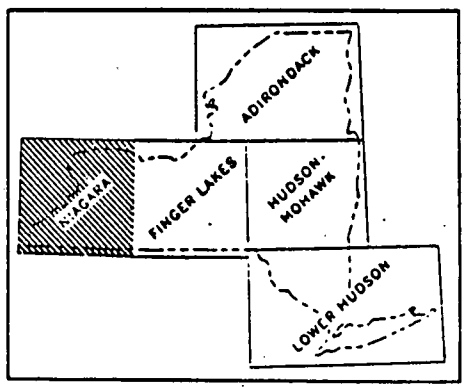
Niagara Sheet

Scale 1:250,000

5 0 5 10 15 Statute Miles 20

5 0 5 10 15 20 25 Kilometers 30

CONTOUR INTERVAL 100 FEET



Topographic Base from AMS Quadrangles 1:250,000 scale.

NEW YORK STATE MUSEUM AND SCIENCE SERVICE

MAP AND CHART SERIES NO. 15

COMPILED AND EDITED BY

Lawrence V. Rickard

Donald W. Fisher

March, 1970

REF-4

LOCATION OF COMMUNITY WATER SYSTEM SOURCES-1982

BUREAU OF PUBLIC WATER SUPPLY PROTECTION

ERIE and NIAGARA COUNTIES

REF-5

N

NEW YORK STATE GEOLOGICAL ASSOCIATION
54th ANNUAL MEETING
October 8-10, 1982
Amherst, New York

GUIDEBOOK FOR FIELD TRIPS IN WESTERN NEW YORK, NORTHERN PENNSYLVANIA AND ADJACENT, SOUTHERN ONTARIO

Edward J. Buehler
and
Parker E. Calkin
Editors

Department of Geological Sciences
State University of New York at Buffalo

Held in Conjunction with
11th Annual Meeting Eastern
Section American Association
of Petroleum Geologists

Published by the New York State Geological Association. Guidebook available from the executive secretary: M.P. Wolf, Geology Department, Gittleson Hall, Hofstra University, Hempstead, New York 11550.

REF-6

New York State Department of Environmental Conservation

MEMORANDUM

TO: Mr. Yavuz Erk YEE
FROM: Ms. Mary McIntosh MM
SUBJECT: VAN DE MARK CHEMICAL PHASE I INVESTIGATION, ENGINEERING SCIENCE IN ASSOCIATION WITH DAMES AND MOORE, MAY 1985
DATE: August 5, 1985

I have reviewed this document in relation to the other activities which are going on at this site and have the following comments:

1. EPA has recently sent to Van De Mark's lawyer, George Muscato, a consent order in which Van De Mark is to agree to comply with all relevant regulations within 40 CFR Parts 261 through 265. Van De Mark also is to comply immediately with any applicable groundwater monitoring requirements, and with closure and post-closure requirements in 40 CFR Part 265, Subpart G and 40 CFR 265.310 (or New York State regulations). Van De Mark is also to pay a $6000 penalty within 2 months and another $5000 within 5 months. The order does not spell out specific requirements for the groundwater monitoring and closure/post-closure. This would presumably be the subject of subsequent technical discussions.

2. A closure plan was submitted to EPA and the State in April 1984. This plan was prepared to satisfy an outstanding complaint EPA had on this site, dated July 15, 1983. To date, only Region 9 has reviewed the closure plan in detail, and no comments on the plan have been sent back to the company through EPA. The writer and William Wertz of the Central Office wrote a list of deficiencies on the closure plan to be incorporated into EPA's current consent order, but these were not included in EPA's order. The deficiencies include:

   a. lack of a thorough characterization of groundwater migration in the vicinity of the site, including horizontal and vertical gradients and flow rates

   b. lack of a thorough characterization of the uppermost aquifer

   c. lack of a thorough characterization of groundwater quality up and down gradient of the landfill; analyses should be run for all Appendix VII constituents

   d. lack of a thorough characterization of all waste streams which were deposited in the landfill

   e. need for remedial measures at the site

3. Some of the deficiencies are the result of the way in which the newer wells (VDM 9, 10, 11, 12) were installed. Although the Phase I report states on Page IV-6 that all five wells are screened over a 10-foot interval straddling the Grimsby-Power Glen contact, Wells VDM 9 through VDM 12 have only 5 foot screens. Well D-55 is the only well with a 10 foot screen. More importantly, however, several of the wells have extremely long sand pack intervals (eg. well VDM 10) so that several intervals are actually being monitored. Thus, the groundwater elevations recorded may be composites of discrete aquifers, and groundwater flow directions may vary somewhat from the direction shown in the closure plan. Thus, it is not clear from the data generated to date that groundwater flow directions are as indicated, there is little data on gradients between and among aquifers and the chemical data are likely also composites from several flow zones. The remedial investigation should involve the installation of cluster wells screened within each discrete flow zone so as to determine flows and chemical characteristics of each zone. In order to close under RCRA the company must install wells capable of determining contamination in the uppermost aquifer. The activities under the two programs (RCRA closure and remedial investigation) should be coordinated.

vas

cc: Mr. Robert Mitrey
Mr. Peter Buechi
Mr. Nelson Schnabel
Mr. William Wertz

REF-7

INTERVIEW FORM

INTERVIEWEE/CODE Mike Hopkins /
TITLE - POSITION Niagara County Dept of Health
ADDRESS 10th St
CITY Niagara Falls STATE NY ZIP
PHONE ( ) RESIDENCE PERIOD TO
LOCATION in DOH office INTERVIEWER Eileen Gilligan
DATE/TIME 1/9/85 - 10:00am - 4pm Sue Tiffany
SUBJECT: Phase I information Lynne Baumgras

REMARKS: The above-named interviewee provided us with Niagara Co DOH files pertaining to the Phase I investigation of several hazardous waste disposal sites in Niagara County (see attached list). He also reviewed with us the current status of each site (closed, covered, etc.) We made photocopies of portions of these files.

We were referred to the EPA Information Office for the recent reports on the Hyde Park landfill

I AGREE WITH THE ABOVE SUMMARY OF THE INTERVIEW:

SIGNATURE:

COMMENTS:

REF-8

NIAGARA COUNTY
DEPARTMENT OF HEALTH

Code Activity .....

Code Location .....

Service Request No. .....

Date Received Complaint 2/19/82

Service Request Inspection of Van der Mark Landfill

Originator of Complaint ..... Address .....

Owner Van der Mark Address 11 Mill St., Lockport N.Y.

Occupant same Address same

te	Hours	REPORT OF INVESTIGATION
19/82	11:45	In response to a compliant received by M. Vaughan, the writer (N. Hopkins) and Jack Landrigan met with Mr Norman Mathews and Mr Allen Van der Mark at the Van der Mark plant. Mr Mathews and Mr VanderMark were informed of the compliant.
		The permit to operate expired on 2/9/82. When asked to produce a renewed or otherwise valid permit, Mr Mathews stated that a renewed permit was applied for but not received. I informed Messrs Mathews and Van der Mark that if they couldnot produce a valid permit, that the landfilling operations would have to be ceased. Mr VanderMark agreed to stop landfilling.
	12:05	The landfill was inspected at this time. An open excavation containing roughly 40 to 50 drums was found near the center of the landfill. Approximately one half of the drums were covered with 6" to 8" of limestone, presumably over lime. The remaining drums were lined but not ~~time~~ covered with limestone. The drums were orderly, none were fuming or showed signs of leakage. It was noted that holes are punched in the drums to allow moisture neutralization with the lime. This procedure is authorized in the expired permit.
		The previous days working face was now covered with clay. The drainage ditch along the north side of the landfill has been lined with crushed stone. The observations of this inspector indicate that the landfill was being operated in compliance with Part 360.

Date Abated ..... By .....

NIAGARA COUNTY
DEPARTMENT OF HEALTH

Code Activity .....

Code Location .....

Service Request No. .....

Date Received Complaint .....

Service Request ..... Van der Mark Inspection (page 2) .....

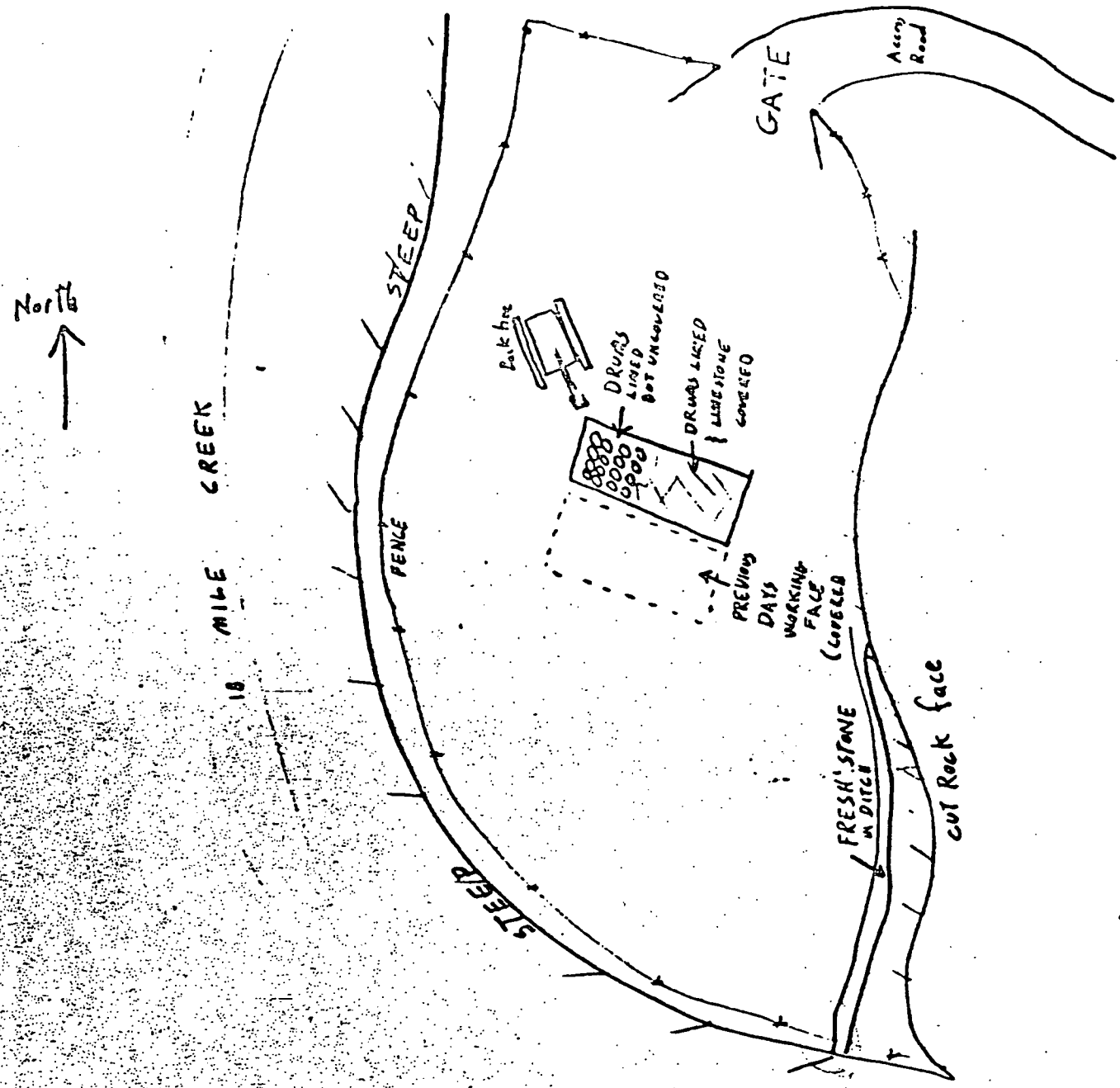
iginator of Complaint ..... Address .....

Owner ..... Address .....

cupant ..... Address .....

ate	Hours	REPORT OF INVESTIGATION
		According to a Van der Mark employee, about 110 drums were landfilled yesterday and today, including those noted above. It is estimated that about 50 more drums of waste are in storage. Van der Mark had planned to landfill these Monday (2/22/01)
		The writer informed the company to cover any still exposed drums. A Van der Mark employee named Harry agreed and ordered an equipment operator on-site to close the excavation.
		Michael Kyles 2/19/01

Date Abated ..... By .....



VAN DER MARK LANDFILL

NOT TO SCALE

M. Hopkins

2/19/81 12:10 PM

Code Activity ...

Code Location ... Sheet 1 of 1

Service Request No. ...

Date Received Complaint 9/9/80

NIAGARA COUNTY
DEPARTMENT OF HEALTH

Service Request Van De Mark Chem. Co. Inc. Landfill Meeting

Complainant CPN NCHD Lpt Office Address ...

Owner ... Address ...

Occupant ... Address ...

Date	Hours	REPORT OF INVESTIGATION
9/9		Meeting was held this date in the offices of the NCHD and Dept. to discuss the problems at the Van De Mark Chem. Co. Inc. landfill site located on Mill St. in the City of Lockport. Specific problems include ponding, leachate, well sampling results, and other pertinent items. Those in attendance included the writer & Mr. Pratt of this Dept., Mr. Jack Tiger of the NYSDEC, and Mr. Allen & Van De Mark & Mr. Norman Mathews of the Van De Mark Chem. Co. Inc..
		Discussion was initiated with a brief history of the landfill and revolved around past operation, landfill design, and present operations to include monitoring. The landfill was initiated in 1953 when drummed still bottom residues (were placed in the site and left buried. Over a period of time the drums deteriorated and the material was released into the ground and into the atmosphere. Starting in 1975 the drums were actually burned on the site and the ash buried. In 1976 VDM Chem Co. was sited and a landfill designed reviewed by the NCHD & the NYSDEC. Plans were prepared by Great Lake Lab & Engr. PE and submitted to the NYSDEC for approval. The landfill is partially lined & channel water to the landfill should it percolate from the soil. Mr. Van De Mark requested and was given a variance granted for this procedure and incorporated in the company's Landfill Permit.
		Well monitoring results were discussed in relation to ground water standards. It appeared that the company needs specific direction as to the proper sampling technique to be utilized. The company was advised to begin water surface measurements in all wells at the time of well sampling. Groundwater standards apparently being violated in the site for pH, Alkalinity, and total dissolved solids. Explanation was offered as to past landfill practices, pre sampling techniques, etc. (Norm) subsequent by the Dept. and DEC-9 on the matter and it was

Date Abated ... By ...

NIAGARA COUNTY
DEPARTMENT OF HEALTH

Code Activity
Code Location ..... Area 12
Service Request No. .....
Date Received Complaint 7/9/80

Service Request VDN Gen. Landfill
Originator of Complaint ..... Address .....
Owner ..... Address .....
Occupant ..... Address .....

Date	Hours	REPORT OF INVESTIGATION

agreed that the problem would be examined by a competent consultant. The company appears to be inclined to find Wendel Engr. Dept. Since they contended that the aquifer being measured was a confined aquifer and was in fact going westward.

The leachate problem was not discussed and it was stated by the company that they are of the opinion that the material in the site was not leachable & that nothing is coming from the area. This will be studied also and other pumping wells proven desirable. The company contends that a synthetic liner will prevent around the perimeter of the landfill. This will have to be verified also.

The summary company will submit reports to DEC-9 & Co dealing with

(1) zoning - deed review
(2) leachate - sampling, causes, etc.
(3) groundwater violation, effect, causes, etc
(4) well sampling, ground water movement

and their strategy on each. Report due 11/1/80. DEC-9 to confirm with letter

Date Abated ..... By .....

1/4 operation - still bottoms

1, Silica Dioxide - decomp products of still bottoms

drummed, buried - 1975 on own site

1953 origin

WWIII RE lined after fire incident 1976-77

F. Franks
J. Tygert
J. Heald

polyethylene liner full length

high levels - liquid - runoff?
Control Pond 1 water

Groundwater - classification - beneficial uses

material in swale is not hazardous

heavy metals - indicate movement

4/1/03 - permit expires

check levels (water) - water surface

sampling technique important bailing 1st
remove 1x's volume

RI Report approved,
10/1/00 to be submitted
to Co by DEC

well 3 initial landfill (new)
4 - old drums

split in middle

well depth 3 - 90' 1 - 11'
4 - 90' 2 - 23'

Continue
pending by design → guide to enter
water in swale not hazardous → address variance
water quality - existing ??

report submittal 1/30/00
permit renewal now

were once drummed?
clean fill?

(Vandenburgh?)

REF-9

Somerset Railroad Corporation

Subsidiary of New York State Electric & Gas Corporation 4500 Vestal Parkway East, Binghamton, New York 13903 • (607) 729-2551

June 14, 19

SRCR - 29

RECEIVED
JUN 18 1984
NYS DEPARTMENT OF
ENVIRONMENTAL CONSERVATION
REGION 9 HEADQUARTERS

Mr. Steven J. Doleski
Regional Permit Administrator
Division of Regulatory Affairs - Region 9
New York State Department of
Environmental Conservation
600 Delaware Avenue
Buffalo, NY 14202

SUBJECT: Somerset Railroad Corporation
Freshwater Wetlands Permit No. 90-82-0041

Dear Mr. Doleski:

Somerset Railroad Corporation (SRC) herein submits a report entitled "A Hydrogeologic Assessment of Post-Construction Conditions Along the Mill Street Cut". This submittal is intended to fulfill the requirements of the "Water Quality Monitoring Protocol" as outlined within the New York State Department of Environmental Conservation's (DEC) Freshwater Wetlands Permit dated June 11, 1982.

This report presents the results of SRC's Water Quality Monitoring Program, and provides an evaluation of the effects of railroad construction on the hydrogeologic regime in the vicinity of the Mill Street Cut. Based on the body of evidence presented in the report SRC recommends that the Water Quality Monitoring Program be discontinued.

Should you have any questions concerning the enclosed report, please contact Mr. Joseph Campisi of our staff at (607)-729-2551 extension 4314.

Sincerely,

A. E. Kintigh
President

Enclosure
xc: PGCarney w/a
[redacted]
RWHaddix w/o
VWRider w/o
JTygert, DEC Region 9 w/a

TABLE OF CONTENTS

A HYDROGEOLOGIC ASSESSMENT
OF
POST-CONSTRUCTION CONDITIONS
ALONG THE MILL STREET CUT
(Station 52 + 250 to 51 + 650)

Somerset Railroad Corporation

June, 1984

3.0 PREVIOUS INVESTIGATIONS

Before evaluating the WQMP results in-depth it is useful to briefly review the conclusions of previous investigations by Bechtel and Woodward-Clyde. Bechtel conducted detailed geologic and hydrogeologic investigations of the area in October and November 1981. The investigations included the installation of 22 observation wells completed in four geologic horizons. At this point it is useful to briefly describe site geology and define the four geologic horizons mentioned.

The bluff on which the study area is situated is near the base of the Niagara escarpment, a major geomorphic feature that extends in an east-west direction across northern Niagara County. The bedrock consists of nearly flat-lying (horizontal) sedimentary beds with a thin cover of unconsolidated glacial deposits, soil, and talus. The glacial deposits consist of unsorted fine to coarse sand with some traces of fine gravel, silt, and clay. The materials are commonly stiff and very compact. The formations underlying the bluff are well-exposed in the road cut along west Jackson Street directly south of the landfills. These formations include, from oldest to youngest, the Queenston Formation of Ordovician age, and the Whirlpool, Power Glen, and Grimsby Formations of Silurian age.

The Queenston Formation, the lowermost formation exposed in the area, consists of reddish-brown shale with thin interbeds of greenish-gray shale and siltstone. The Whirlpool Formation is a gray to white sandstone. This unit is very hard and fine to medium grained with thin bands of gray shale. The Power Glen Formation is a greenish-gray shale and siltstone interbedded with limestone, dolomite, and calcareous sandstone. The Grimsby Formation includes a lower white to pale-green fine-grained sandstone and an upper reddish-brown sandstone with interbedded siltstone and shale.

Jointing in exposures of bedrock is uniform in orientation and character. Observations from rock cores indicate the joints tend to be more open to the east near the bluff. The frequency of jointing ranges from 3 to 6 foot spacing. Three near-vertical joint sets present have orientations of N45W to N70W, N55E to N75E, and N10E to N30E. In addition, horizontal bedding joints are present. The near-vertical joints dip predominantly from 85° to vertically. Joint openings measured at outcrops near the Van De Mark Landfill ranged from closed to as much as 2 inches. (Bechtel, 1982)

From the comprehensive hydrogeologic investigations performed by Bechtel and WCC in the latter part of 1981, it was established that the local ground water gradients are generally from east to west in four distinct zones between

the existing ground surface to a depth of about 109 feet, which approximates the elevation of Eighteenmile Creek. The two lower zones found along the contacts between the Power Glen and Whirlpool Formations (Zone 3), and the Whirlpool and Queenston Formations (Zone 4) would not be intercepted in this vicinity by the rock cut. The shallow ground water zone (Zone 1) found only in the area of the Norton Landfill to the east of the railroad cut, and a somewhat deeper zone (Zone 2), which occurs along the contact between the Grimsby and Power Glen Formations, would be intercepted by the cut.

Bechtel's analysis of groundwater level data indicated that flows are generally moving east to west within Zone 2. Due to the direction of groundwater flow and the relative elevations of the Van De Mark landfill and the railroad, Bechtel did not expect the Mill Street Cut to receive groundwater from the Van De Mark landfill. Chemical analyses of groundwater samples for parameters indicative of inputs from the Van De Mark landfill further confirmed this conclusion. Results from Bechtel's 1981 groundwater quality sampling can be found in Appendix A.

Bechtel indicated that the railroad cut would only intercept the upper two water bearing zones (Zones 1 and 2). Since the strata within Zone 2 evidenced low permeability, it was thought that the quantity of Zone 2 groundwater reaching the cut would be limited.

Data from the two shallow wells (D-69 and D-70) which were completed in the Norton Landfill indicated that groundwater in the unconsolidated material of the landfill was perched above the water in the lower part of the Grimsby Formation (Zone 2). Bechtel also indicated that the groundwater found in this perched water table may or may not reach the cut. Groundwater that may move into the railroad cut from the east was expected to have a chemical quality similar to that found in the Zone 1 and 2 wells.

In addition to the detailed hydrogeologic investigations conducted by Bechtel, Woodward-Clyde Consultants (WCC) analyzed Zone 1 and 2 water quality and conducted a terrain conductivity survey in the vicinity of the Mill Street Cut. Appendix B and C provide the results from WCC's 1981 and 1982 water quality sampling efforts. WCC concluded that groundwater occurs in the unconsolidated fill materials of the Norton landfill and in the bedrock below the landfills. Based on the data from the terrain conductivity survey, and the water levels in the landfill materials, groundwater within the Norton landfill appeared to be flowing northward toward Mill Street. Based upon preliminary data provided by the conductivity survey and water levels, WCC indicated that the water in the landfill materials was effectively isolated from groundwater within the bedrock.

WCC expected that some groundwater in the vicinity of the cut, which would act as a linear drain, will flow toward the cut and seep into it. Groundwater at the base of the Grimbsy Formation (Zone 2) was expected to flow westward toward the rock cut. Groundwater flow from the Van De Mark landfill toward the proposed cut was considered improbable.

Because the rock cut would intercept groundwater flow in the Grimbsy formation, groundwater elevations were expected to decline west of the cut after construction. Some seepage of groundwater was expected to enter the cut although based on water quality analyses from the Zone 1 and 2 observation wells, the seepage was not projected to adversely affect surface water quality.

4.0 WATER QUALITY MONITORING PROGRAM - BACKGROUND

Based upon the "Water Quality Monitoring Protocol" outlined within the Freshwater Wetlands Permit dated June 11, 1982, SRC proposed via June 24, 1982 letter to implement a water quality monitoring program made up of two separate components; Ground Water Level Monitoring and Water Quality Monitoring which are described below. DEC approved this proposal in July, 1982.

4.1 Groundwater Level Monitoring

Groundwater level monitoring provided data for the evaluation of groundwater level changes resulting from the excavation of the rock cut from the Lockport Gulf on the south to Mill Street on the north. This segment of the railroad passes between two landfills; the Norton Laboratories/McGonigle-Hilger (Norton) on the east, and the Van De Mark Chemical on the west. The railroad is in cut section through the Study Area (up to about 30 feet in depth). It was anticipated that the excavation would intercept groundwater flow which occurs in the rock fractures and along the contacts between geologic formations.

Of the twenty-two (22) wells installed in the fall of 1981 to monitor ground water levels, only six (6) were removed due to construction. Water level measurements were taken on a weekly basis from November, 1981 through completion of the cut section in April, 1983. Water level monitoring at the sixteen (16) remaining wells continued on a monthly basis through the end of construction (November, 1983).

4.2 Water Quality Monitoring

SRC monitored the remaining Zone 1 and Zone 2 wells to evaluate groundwater quality changes following completion of the Mill Street Cut.

1) Zone 1 Observation Wells - D-69, D-70
2) Zone 2 Observation Wells - D-66, D-61, D-58, D-55, D-51

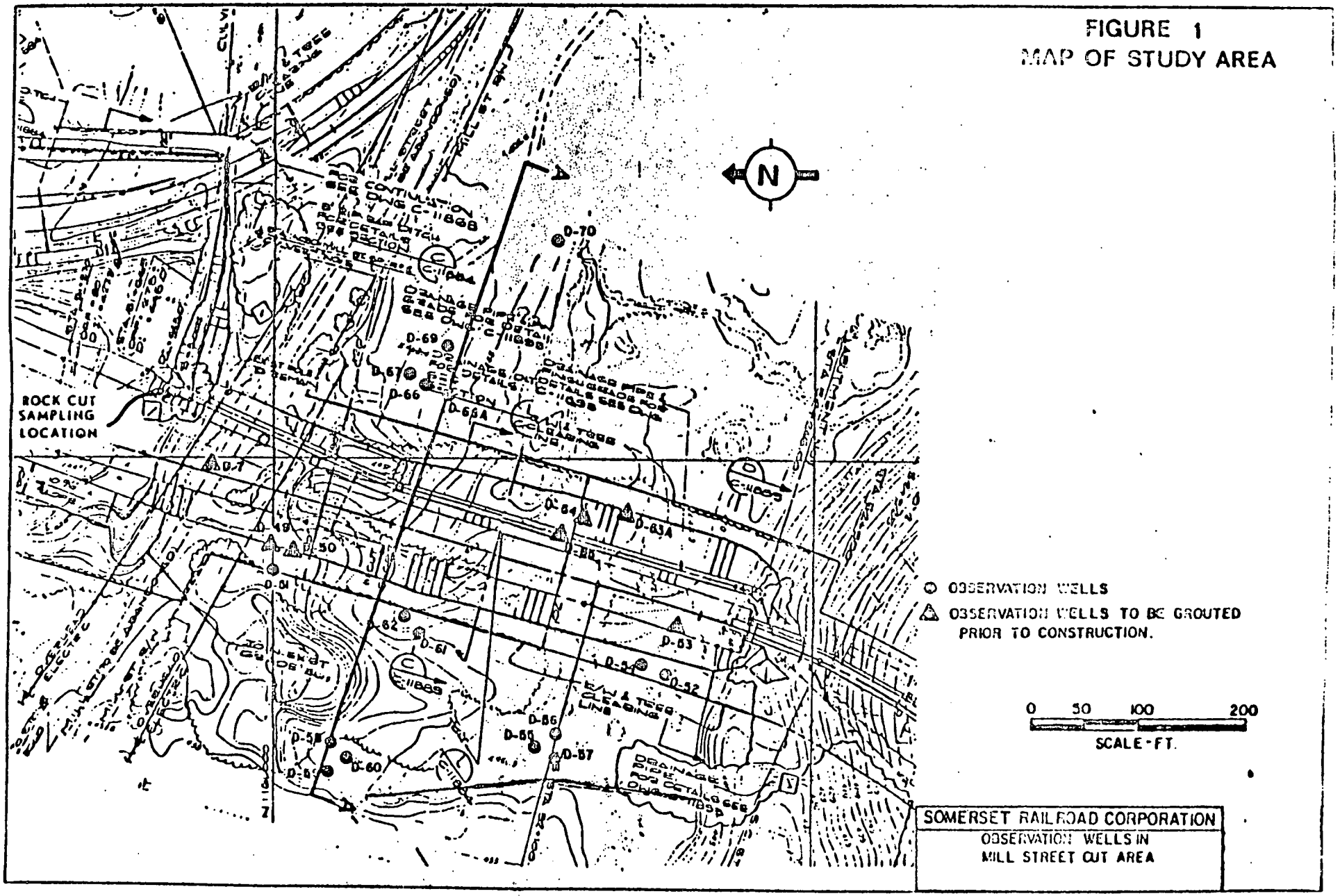
Originally, the WQMP provided for water quality monitoring of the seepage from the east and west sides of the Mill Street Cut utilizing a sampling basin and V-notch weir. After reaching final grade in the Mill Street Cut, it became evident that there was negligible seepage on the west side of the cut and only minor seepage on the east side of the cut. The quantity of seepage emanating from either side of the cut was determined insufficient to justify installation of seepage flow measurement devices. Instead of attempting to sample rock cut seepage, a surface water sample location was substituted. This surface water sample was collected at the Rock Cut Sampling Location (see Figure 1). This

location was chosen because the runoff at this point was fairly continuous and would offer a location where seepage from the east side of the cut might be contributing to surface runoff. For purpose of comparison an upstream sample was collected at the head of the drainage ditch which parallels Mill Street (see Figure 7). In addition, weekly observations (including photographs) of the seepage emanating from either side of the cut were documented.

Sampling of the wells and surface water locations were conducted simultaneously to allow for more useful correlation of the test results. The seven Zone 1 and Zone 2 observation wells and the two surface water sampling points were sampled four times during 1983 (June 9, July 20, September 8, November 17). Below are the chemical parameters which were monitored at the seven (7) observation wells and the two (2) surface water locations:

Arsenic (As)
Barium (Ba)
Beryllium (Be)
Cadmium (Cd)
Chromium (Cr)
Copper (Cu)
Iron (Fe)
Lead (Pb)
Nickel (Ni)
Mercury (Hg)
Zinc (Zn)
Conductivity (Cond)
Ammonia (NH_3)
Phenols
Oil & Grease
pH
Total Halogenated Organics (TOX)
Total Organic Carbon (TOC)

FIGURE 1
MAP OF STUDY AREA



ANALYTICAL RESULTS

BECHTEL CIVIL & MINERALS, INC.

Report Date: 11/11/81

PARAMETER	UNITS OF MEASURE	SAMPLE IDENTIFICATION (DATE)			
		D-55A (11/2/81)	D-55B (11/2/81)	D-56A (11/3/81)	D-56B (11/3/81)
pH (field)	Standard Units	6.55	6.80	10.45	10.70
Specific Conductance (field)	umhos/cm	430	430	500	600
Temperature (field)	°C	12	11.5	11	11
Total Organic Carbon	mg/l	4.8	4.7	6.4	5.0
Total Filterable Residue (180°C)	mg/l	370	360	460	480
Chloride	mg/l	37	37	79	79
Total Iron	mg/l	7.1	4.8	5.6	7.2
Total Recoverable Oil and Grease	mg/l	<5	<5	<5	<5

COMMENTS: Values reported as "less than" (<) indicate the working detection limit for the particular sample or parameter.

FOR RECRA RESEARCH, INC. R. V. Fmm

DATE 11/11/81

RECRA RESEARCH, INC.
I.D. #81-1000

ANALYTICAL RESULTS

BECHTEL CIVIL & MINERALS, INC.

Report Date: 11/11/81

PARAMETER	UNITS OF MEASURE	SAMPLE IDENTIFICATION (DATE)			
		D-57A (11/3/81)	D-57B (11/3/81)	D-59A (11/2/81)	D-59B (11/2/81)
pH (field)	Standard Units	8.10	8.15	8.30	8.25
Specific Conductance (field)	umhos/cm	483	415	249	251
Temperature (field)	°C	10	10	10.5	10.5
Total Organic Carbon	mg/l	3.8	3.7	4.5	7.9
Total Filterable Residue (180°C)	mg/l	540	660	220	220
Chloride	mg/l	39	40	22	22
Total Iron	mg/l	9.8	11	2.6	2.8
Total Recoverable Oil and Grease	mg/l	<5	<5	<5	<5

COMMENTS: Refer to pages 1 through 4.

FOR RECRA RESEARCH, INC. R. V. Finn

DATE 11/11/81

RECRA RESEARCH, INC.

I.D. #81-1000

Van De Mark Chemical Co., Inc.

1 N TRANSIT ROAD • LOCKPORT, NEW YORK 14094-2399 • 716 - 433-6764

REF-10

October 17, 1983

Mr. William K. Sawyer, Attorney
Waste & Toxic Substances Branch
Office of Regional Counsel
U.S. Environmental Protection Agency
Region II
26 Federal Plaza
New York, New York 10278

Dear Mr. Sawyer:

RE: Revised Monitoring Program - Van De Mark Landfill Site
Docket No. II RCRA-83-0222

Attached as promised is the revised monitoring program concerning the Van De Mark industrial landfill site. The monitoring program will be implemented on October 24, 1983, subject to the approval of N.Y.S. Department of Environmental Conservation and U.S. EPA II.

Mr. Don Owens, Earth Dimensions, Inc., (soil consultants) of East Aurora, New York, is available to initiate required well installations on October 24, 1983.

Very truly yours

Norman M. Matthews

Norman M. Matthews
Technical Director

mad

XC: J. Devald - Niagara Co. Health Dept.
J. Tygert - N.Y.S. D.E.C.

APPENDIX B

PROPOSED UPDATED NYS REGISTRY SHEET

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID AND HAZARDOUS WASTE
INACTIVE HAZARDOUS WASTE DISPOSAL SITE REPORT

CLASSIFICATION CODE: 2a REGION: 9 SITE CODE: 932039

NAME OF SITE : Van De Mark Chemical Company, Inc.
STREET ADDRESS: Mill Street

TOWN/CITY:	COUNTY:	ZIP:
Lockport	Niagara	

SITE TYPE: Open Dump- Structure- Lagoon- Landfill- Treatment Pond-
ESTIMATED SIZE: 5+ Acres

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER NAME....: Van De Mark Chemicals Company, Inc.
CURRENT OWNER ADDRESS.: 1 North Transit St., Lockport, NY 14094
OWNER(S) DURING USE...: Van De Mark Chemicals
OPERATOR DURING USE...: Van De Mark Chemicals
OPERATOR ADDRESS.....: 1 North Transit Rd, Lockport, NY 14094
PERIOD ASSOCIATED WITH HAZARDOUS WASTE: From 1968 To 1982

SITE DESCRIPTION:
Located North and East of 18 mile creek, 100' above creek bed. Drums of silicontetrachloride and chloro disiloxane buried in limestone (imported react with decomposition products (HCl.) Construction of railroad East landfill has delayed commencement of monitoring program.

HAZARDOUS WASTE DISPOSED: Confirmed-X Suspected -

TYPE	QUANTITY (units)
2i Cl4 chlorodisiloxane	

SITE CODE: 932039

ANALYTICAL DATA AVAILABLE:

Air- Surface Water- Groundwater-X Soil- Sediment- None-

CONTRAVENTION OF STANDARDS:

Groundwater-X Drinking Water- Surface Water- Air-

LEGAL ACTION:

TYPE..: Complaint-Sec3008SWP State- Federal- X
STATUS: In Progress-X Completed-

REMEDIAL ACTION:

Proposed-X Under Design- In Progress- Completed-
NATURE OF ACTION: Gw mon wells & mon pro.Corr act. to follow.

GEOTECHNICAL INFORMATION:
SOIL TYPE: Grimsby form - shale & siltstn
GROUNDWATER DEPTH: 25'

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:

Possible leachate of decomposition products into 18 Mile Creek & ground waters.Remediation Program to be submitted to Department, if Warranted.

ASSESSMENT OF HEALTH PROBLEMS:

Insufficient Information

PERSON(S) COMPLETING THIS FORM:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

NAME.: John S. Tygert P.E.
TITLE: Sr. Sanitary Engr.

NAME.: Roberto A. Olazagsti
TITLE: Solid Waste Mgmt. Spe c.

DATE.: 01/24/85

NEW YORK STATE DEPARTMENT OF HEALTH

NAME.: R. Tramontano
TITLE: Bur. Tox. Subst. Assess.

NAME.:
TITLE:

DATE.: 01/24/85